ज्ञान-विज्ञान विमुक्तये

सत्यमेव जयते

विश्वविद्यालय अनुदान आयोग
University Grants Commission
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सचिव

Secretary

D.O.No.2-1/2021(CPP-II) **September, 2021**

22 SEP 2021

Subject : Visits by students to 100 identified tourist destinations under Ek Bharat Shreshtha Bharat (EBSB) related to implementation of NEP 2020

Respected Madam/Sir,

The National Education Policy (NEP), 2020 proposes to strengthen and promote the spirit of Ek Bharat Shreshtha Bharat (EBSB) among students. An activity related to EBSB for implementation of NEP, 2020 is "visit of students to 100 identified tourist destinations in the country".

A list of 100 tourist destination shared by the Ministry of Tourism is enclosed. Educational institutions are required to send students under EK Bharat Shreshtha Bharat Programme to study the destinations and their history, scientific contributions, traditions, indigenous literature and knowledge, etc. as a part of augmenting their knowledge about different areas to understand the rich culture and diversity of the country.

All the Higher Educational institutions are requested that the visits may be organized only when COVID restrictions are lifted fully. Meanwhile students can be encouraged to learn about these locations and have activities digitally. A report of the activities undertaken may be sent to Ministry of Education on the email ebsbmhrd19@gmail.com.

With kind regards,

Yours sincerely,

(Rajnish Jain)

Encl : As above

The Vice Chancellors of All Universities

SUGGESTED TOURIST DESTINATIONS FOR IMPROVING ROAD CONNECTIVITY

Sl. No.	Tourist Destination	State / UT	Remarks
1.	Lepakshi	Andhra Pradesh	Identified for wi-fi based on footfalls
2.	Nagarjunakonda	Andhra Pradesh	Identified for wi-fi based on footfalls
3.	Nellore	Andhra Pradesh	Sites identified for wi-fi based on footfalls
4.	Vizag	Andhra Pradesh	Identified for wi-fi based on footfalls
5.	Itanagar	Arunachal Pradesh	Capital of State
6.	Kaziranga National Park	Assam	World Heritage and Iconic Site
7.	Manas Wildlife Sanctuary	Assam	World Heritage Site
8.	Silchar	Assam	Airport
9.	Dibrugarh	Assam	Airport
10.	Nalanda	Bihar	World Heritage Site
11.	Bodhgaya	Bihar	Iconic Site & Buddhist Circuit
12.	Vaishali	Bihar	Buddhist Circuit
13.	Rajgir	Bihar	Buddhist Circuit
14.	Sasaram	Bihar	Identified for wi-fi based on footfalls
15.	Chandigarh	Chandigarh	Monuments included in World Heritage List
16.	Raipur	Chhattisgarh	Capital of State
17.	Diu Fort	UT of Daman & Diu	Identified for wi-fi based on footfalls
18.	Colva Beach	Goa	Iconic Site
19.	Old Goa	Goa	Identified for wi-fi based on footfalls
20.	Ahmedabad	Gujarat	World Heritage Site
21.	Champaner-Pavagadh Archaeological Park	Gujarat	World Heritage Site
22.	Rai-ki-Vav, Patan	Gujarat	World Heritage Site
23.	Somnath	Gujarat	Iconic Site
24.	Dholavira	Gujarat	Iconic Site
25.	Modhera	Gujarat	Identified for wi-fi based on footfalls
26.	Kurukshetra	Haryana	Identified for wi-fi based on footfalls
27.	Pinjore Gardens	Haryana	Identified for wi-fi based on footfalls
28.	Great Himalayan National Park	Himachal Pradesh	World Heritage Site
29.	Shimla	Himachal Pradesh	Identified for wi-fi based on footfalls
30.	Gulmarg	J&K	New UT
31.	Pahalgam	J&K	New UT
32.	Patnitop	J&K	New UT
33.	Aihole	Karnataka	Identified for wi-fi based on footfalls

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34.	Belur	Karnataka	Identified for wi-fi based on footfalls
35.	Bijapur	Karnataka	Identified for wi-fi based on footfalls
36.	Hampi	Karnataka	World Heritage and Iconic Site
37.	Pattadakal	Karnataka	World Heritage Site
38.	Sravanabelagola	Karnataka	Identified for wi-fi based on footfalls
39.	Srirangapatnam	Karnataka	Identified for wi-fi based on footfalls
40.	Kumarakom	Kerala	Iconic Site
41.	Bekal Fort	Kerala	Identified for wi-fi based on footfalls
42.	Fort Kochi	Kerala	Identified for wi-fi based on footfalls
43.	Pangong Lake	Ladakh	New UT
44.	Kargil	Ladakh	New UT
45.	Amarkantak	Madhya Pradesh	Identified for wi-fi based on footfalls
46.	Bhimbetka	Madhya Pradesh	World Heritage Site
47.	Gwalior Fort, Gwalior	Madhya Pradesh	Identified for wi-fi based on footfalls
48.	Jabalpur	Madhya Pradesh	Identified for wi-fi based on footfalls
49.	Khajuraho	Madhya Pradesh	World Heritage and Iconic Site
50.	Mandu	Madhya Pradesh	Identified for wi-fi based on footfalls
51.	Pachmarhi	Madhya Pradesh	Identified for wi-fi based on footfalls
52.	Sanchi	Madhya Pradesh	World Heritage Site
53.	Daulatabad Fort, near Aurangabad	Maharashtra	Identified for wi-fi based on footfalls
54.	Ajanta Caves	Maharashtra	World Heritage and Iconic Site
55.	Ellora Caves	Maharashtra	World Heritage and Iconic Site
56.	Kanheri Caves	Maharashtra	Identified for wi-fi based on footfalls
57.	Mahabaleshwar	Maharashtra	Identified for wi-fi based on footfalls
58.	Imphal	Manipur	Capital of State
59.	Loktak Lake	Manipur	Popular tourist destination
60.	Shillong	Meghalaya	Identified for wi-fi based on footfalls
61.	Aizawl	Mizoram	Capital of State
62.	Dimapur	Nagaland	Airport
63.	Itanagar	Nagaland	Capital of State
64.	Chilika Lake	Odisha	Identified for wi-fi based on footfalls
65.	Konarak	Odisha	World Heritage Site
66.	Udaigiri – Khandagiri Caves	Odisha	Identified for wi-fi based on footfalls
67.	Patiala	Punjab	Identified for wi-fi based on footfalls
68.	Jaipur	Rajasthan	World Heritage Site
69.	Keoladeo National Park	Rajasthan	World Heritage Site
70.	Chittorgarh Fort	Rajasthan	Included in list of World Heritage Sites under ' Hill Forts of Rajasthan'
71.	Kumbhalgarh Fort	Rajasthan	
72.	Sawai Madhopur	Rajasthan	
73.	Jhalawar	Rajasthan	
74.	Jaisalmer	Rajasthan	

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75.	Amer Fort	Rajasthan	Iconic Site
76.	Gangtok	Sikkim	Identified for wi-fi based on footfalls
77.	Khangchendzonga National Park	Sikkim	World Heritage Site
78.	Courtallam Water Falls	Tamil Nadu	Identified for wi-fi based on footfalls
79.	Kanchipuram	Tamil Nadu	Identified for wi-fi based on footfalls
80.	Kanyakumari	Tamil Nadu	Identified for wi-fi based on footfalls
81.	Mahabalipuram	Tamil Nadu	World Heritage and Iconic Site
82.	Thanjavur	Tamil Nadu	Monuments included in list of World Heritage Site
83.	Yercaud	Tamil Nadu	Identified for wi-fi based on footfalls
84.	Golconda Fort, Hyderabad	Telangana	Identified for wi-fi based on footfalls
85.	Warangal Fort	Telangana	Identified for wi-fi based on footfalls
86.	Agartala	Tripura	Airport
87.	Agra	Uttar Pradesh	Monuments included in list of World Heritage and Iconic Sites
88.	Allahabad	Uttar Pradesh	Identified for wi-fi based on footfalls
89.	Jhansi	Uttar Pradesh	Identified for wi-fi based on footfalls
90.	Sarnath	Uttar Pradesh	Buddhist Circuit
91.	Shravasti	Uttar Pradesh	Buddhist Circuit
92.	Kushinagar	Uttar Pradesh	Buddhist Circuit
93.	Kapilavastu	Uttar Pradesh	Buddhist Circuit
94.	Mussoorie	Uttarakhand	Identified for wi-fi based on footfalls
95.	Rishikesh	Uttarakhand	Identified for wi-fi based on footfalls
96.	Nainital	Uttarakhand	Identified for wi-fi based on footfalls
97.	Bishnupur	West Bengal	Identified for wi-fi based on footfalls
98.	Kooch Bihar	West Bengal	Identified for wi-fi based on footfalls
99.	Murshidabad	West Bengal	Identified for wi-fi based on footfalls
100.	Shantiniketan	West Bengal	Identified for wi-fi based on footfalls

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महाराष्ट्र शासन
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चौथा मजला, मादाम कामा मार्ग, हुतात्मा राजगुरु चौक, मुंबई-४०० ०३२

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दिनांक:- ४ नोव्हेंबर,२०२२

प्रति,

मा. कुलगुरु,
सर्व अकृषी विद्यापीठे/ अभिमत विद्यापीठे/ समूह विद्यापीठे

विषय- सध्या सुरु असलेल्या ३ वर्षाच्या अभ्यासक्रमावरुन ४ वर्षाच्या अभ्यासक्रमाकडे स्थलांतर करण्याची योजना व त्याबाबतचा आराखडा तयार करणे, एकसमान शैक्षणिक अभ्यासक्रम आराखडा तयार करणे, सामान्य अध्यापनशास्त्राऐवजी विधायक अध्यापनशास्त्राचा वापर करणे आणि विद्यार्थ्यांच्या सर्वांगीण विकासासाठी वैयक्तिकृत शिक्षणाचा आराखडा तयार करण्याबाबत.

संदर्भ- १. शासन निर्णय क्रमांक एनईपी-२०२२/ प्र.क्र.१०५/ विशि-३ दिनांक २६.०४.२०२२ व
शासन पुरकपत्र क्र. एनईपी-२०२२/ प्र.क्र.१०५/ विशि-३ दिनांक ०१.०६..२०२२
२. शासनाचे समक्रमांकाचे दिनांक २०.१०.२०२२ चे पत्र.

महोदय/ महोदया,

राष्ट्रीय शैक्षणिक धोरण-२०२० ची राज्यात अंमलबजावणी करण्याच्या दृष्टीने या धोरणाचा अभ्यास करण्यासाठी दिनांक १६ ऑक्टोबर, २०२० च्या शासन निर्णयानुसार डॉ.रघुनाथ माशेलकर, माजी महासंचालक, वैज्ञानिक आणि औद्योगिक संशोधन परिषद, नवी दिल्ली यांच्या अध्यक्षतेखाली स्थापन करण्यात आलेल्या कार्यबल गटाने आपला अहवाल शासनास दि.३० जून, २०२१ रोजी सादर केला होता. दि.२७ जानेवारी, २०२२ रोजी झालेल्या मंत्रिमंडळ बैठकीत डॉ.रघुनाथ माशेलकर समितीच्या अहवालातील शिफारशींप्रमाणे विभागाने सादर केलेल्या प्रस्तावास मान्यता देण्यात आली होती.

त्यानुसार विषयांकीत प्रकरणी संदर्भाधीन शासननिर्णयान्वये व पुरकपत्रान्वये तयार करण्यात आलेल्या डॉ.रविंद्र कुलकर्णी, प्र-कुलगुरु, मुंबई विद्यापीठ, मुंबई यांच्या अध्यक्षतेखालील समितीने सादर केलेल्या अहवालातील शिफारशी शासनाने स्विकारल्या असून या शिफारशीची विहित प्राधिकरणांची मान्यता घेऊन अंमलबजावणी करण्याबाबत आपणांस संदर्भ क्र.२ येथील दिनांक २०.१०.२०२२ च्या पत्रान्वये कळविण्यात आले होते.

आता, सदर समितीने राष्ट्रीय क्रेडीट फ्रेमवर्कच्या अनुषंगाने शिफारशी समाविष्ट करुन सुधारीत अहवाल शासनास सादर केला आहे. (प्रत सोबत जोडली आहे.) या अहवालातील शिफारशी शासनाने स्विकारल्या आहेत. तरी, या शिफारशीची विहित प्राधिकरणांची मान्यता घेऊन तातडीने अंमलबजावणी करण्याबाबत विद्यापीठांनी निर्णय घ्यावा.

आपला,

(प्र.ना. ढवळे)
कक्ष अधिकारी, महाराष्ट्र शासन

सोबत- सुधारीत अहवाल

प्रत:-

१. संचालक, उच्च शिक्षण, महाराष्ट्र राज्य, पुणे
२. संचालक, तंत्र शिक्षण, महाराष्ट्र राज्य, मुंबई

३. संचालक, कला, महाराष्ट्र राज्य, मुंबई
४. संचालक, ग्रंथालय, महाराष्ट्र राज्य, मुंबई
५. निवडनस्ती (विशि-३)

NEP 2020

Report on Structure and Curriculum of Four Year and Dual Multidisciplinary Degree Programme with Multiple Entry and Exit Options for Implementation in State Universities of Maharashtra

Submitted to

Ministry of Higher and Technical Education,
Government of Maharashtra,
Maharashtra State

October 2022



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Foreword

The NEP-2020 is aimed to make India a global knowledge superpower with equitable access to the highest-quality education for all learners. The holistic and multidisciplinary education proposed under NEP-2020 is expected to facilitate the all-round development of learners with enhancement in employability potential and skills for new jobs in emerging fields. NEP envisages the development of guidelines for curriculum and credit framework for four year undergraduate programmes, regulations prescribing a minimum standard and the procedure for the award of the one year Certificate, two year Diploma, three years Bachelor Degree, four years Bachelor Degree (Research/ Honors) and Master's degree with multiple entry and exit options and transformation of HEIs into multidisciplinary institutions. In line with these directions, various committees were constituted on the basis of recommendations given by the Taskforce for Implementation of NEP in Maharashtra through the Report of Dr. R.A. Mashelkar Committee (October 2020- June 2021).

The Committee constituted by Government of Maharashtra for design of multidisciplinary four year degree programme has developed modules and credit framework for different levels of multidisciplinary four year degree and five year integrated PG programme. In order to promote holistic and multidisciplinary education, due stress has been given for inclusion of courses on environmental studies, value education, professional ethics, life skills, cocurricular activities besides various combinations of Major and Minor. The guidelines for dual degree programme and internationalization of higher education in Maharashtra State have been illustrated.

I congratulate the Committee for submitting the Report with Roadmap for transformation of three year degree programme to four year Multidisciplinary Programme with relevant guidelines for BoS and Academic Council of State Universities and Autonomous Colleges in terms of admission path under multiple entry system, design of outcome based curriculum, reforms in examination, evaluation and assessment with respect to multiple exits in the academic programmes and credit mobility mechanism through ABC. I am sure this report will help the Statutory Bodies of various State Universities of Maharashtra to undertake execution of four year multidisciplinary degree programme with multiple entry and exit options with effect from academic year 2023-24.

Vikas Chandra Rastogi IAS
Principal Secretary,
Department of Higher
and Technical Education,
Government of Maharashtra

Preface

Amidst rapid demands of constant change put forth by a globalized economy, the higher education sector in India is going through its transformation stage. India has been forecast to be one of the youngest countries in the world gearing towards knowledge-based leadership. Aligning this, the National Education Policy-2020 (NEP-2020) aims to meet the changing educational requirements, innovation, and research through bringing in the host of changes in the education system, right from the pre-primary years to higher education. NEP-2020 promotes rigorous research-based specialization and opportunities for multidisciplinary work and interdisciplinary thinking at the graduate, Master's and doctoral level education in large multidisciplinary universities. One of the major changes was changing the 3-year undergraduate (UG) or Bachelor's degree programme to 4 year Multidisciplinary UG Programme with multiple entry and exit options to orient the students with right skill, attitude and employability. With introduction of Academic Bank of Credits, students can move between different universities if they need and collect credits based on their work. These credits can be collected, transferred and go into the final degree earned. In order to fulfill the objectives of expansion, access, equity and inclusion, quality and excellence in higher education, all university and college campuses would need to be transformed to become more holistic learning environments that enrich students with new knowledge and skills to engage meaningfully in the emerging socio-economic transformation. More importantly, the university and college campuses should nurture education and research activities that are alive to the dynamics of the society and industry in the neighborhood and guide and support them not just in terms of human resource but also through relevant studies, research and innovation on the campus and in the university at large. Thus, the NEP 2020 envisages a holistic and multidisciplinary education system that would aim to develop all capacities of human beings - intellectual, aesthetic, social, physical, emotional, ethical, and moral - in an integrated manner.

This report presents the credit structure and curricular development in reference to introduction of the Four-year multidisciplinary UG courses (Bachelor's degree-research/ honours) in state universities of Maharashtra in line with NEP-2020, NHEQF and all related UGC guidelines. There will be much more flexibility in structure and design of curriculum under Four-year multidisciplinary UG Programme and students could choose how long they wanted to study the courses with required credit structures. Depending on how long a course they study, they will be awarded a certificate or diploma or a degree. Students can get a certificate after a One-year programme, a diploma after Two years, a bachelor's degree after Three years, and a Bachelor's degree with research or honours after Four years. Students will have the flexibility to join a programme in odd semesters or leave a programme after successful completion of even semesters as per their future career needs. On exit, the students will have the option to re-enter the programme from where they had left off, at the same or in a different institution. This is a big boon for students, and they don't need to think about losing a year or two if they have been studying one programme for two years already when they plan to move into a different one. This Four-year multidisciplinary undergraduate degree

option allows students to focus on their chosen minors and major. The different courses under curriculum of Four-year multidisciplinary UG Programme are skill-based, choice-based and cross-disciplinary, trans-disciplinary and multi-disciplinary in nature that would provide the students the option of electives across the disciplines as per the objectives of the NEP 2020. Various Combinations of major and minor, based on subject/ school/ faculty specific domain and distribution of credits amongst major subjects, minor courses, vocational courses, ability enhancement courses, modules on Indian Knowledge System and other courses are delineated through suitable examples. Apprenticeship and internship, proposed under NEP-2020 will have a huge role to play in institutionalizing the curriculum framework for industry-academia linkage to increase the employability of the students. World over, apprenticeship is considered as the most efficient and promising structured training for exposure to the real working environment. This has enormous potential to combine work-based learning with theoretical knowledge of related disciplines. Students can pursue specialisation in a particular subject (4 year honours degree) or study research (4 year research degree) for one year after they had completed their three-year degree. This kind of flexibility gives students adequate options in planning their careers, taking care of life events that may require them to discontinue their studies temporarily at any juncture. There would be no hard separations between 'arts' and 'sciences', between 'curricular' and 'extracurricular' activities, between 'vocational' and 'academic streams', etc. The Report presents a multi-disciplinarity and a holistic approach to education across the professional courses, sciences, social sciences, arts, humanities, and sports in terms of curricular development and distribution of credits. The necessity of design of the learning outcomes-based curriculum framework for undergraduate education based on the expected learning outcomes and academic standards that are expected to be attained by graduates of a programme of study and holder of a qualification are illustrated on the basis of UGC guidelines. A whole new format of assessment tools using digital platforms need to be utilized to build the requisite skills that is required of a growing economy. It is expected that the curriculum design will enable all students who have enrolled in higher education programmes to attain the requisite skills of higher order through the intended learning outcomes. The dual/joint/ twining degree programme provides the additional mechanism of skill upgradation and employability enhancement. A multidisciplinary institution should not only have different departments covering multiple disciplines, but also should have innovative programmes of a multi- and inter-disciplinary nature to help widen learners' thinking and learning capability and enable students to become well-rounded individuals. All HEIs will develop IDPs to assess human resources requirements, in terms of faculty and administrative staff shortages, the physical infrastructural facilities, ICT related technology requirements, Learning infrastructure such as labs, libraries, CPD requirements, Student Support related areas and Teaching infrastructure. The HEIs must be committed to the holistic development of students and faculty training and should work on establishment of quality learner support system, infrastructure upgradation and end to end digitization.

I am thankful to all the esteemed members of the Committee for providing persistent support, and giving their valuable inputs and insights on various aspects of holistic and multidisciplinary education while preparing draft of the report at various stages.

I acknowledge their valuable contribution in bringing this report within due time frame and as per the mandate given to the Committee by Government of Maharashtra.

The Committee offers sincere gratitude and wholehearted thanks to Hon'ble Minister of Higher and Technical Education Shri Chandrakantdada Patil, the then Hon'ble Minister of Higher and Technical Education Shri Udayji Samat, Shri Vikas Chandra Rastogi, Principal Secretary, Higher and Technical Education and all the Vice-Chancellors of State Universities for their valuable guidance and unstinted support in conceiving this report in best possible manner.

Prof. R. D. Kulkarni,
Committee Chairman

राष्ट्रीय शैक्षणिक धोरण, २०२० अंतर्गत (१)सध्या सुरु असलेल्या ३ वर्षाच्या अभ्यासक्रमावरुन ४ वर्षाच्या अभ्यासक्रमाकडे स्थलांतर करण्याची योजना व त्याबाबतचा आराखडा तयार करणे, (२) एकसमान शैक्षणिक अभ्यासक्रम आराखडा तयार करणे, (३) सामान्य अध्यापनशास्त्राऐवजी विधायक अध्यापनशास्त्राचा वापर करणे, (४)विद्यार्थ्यांच्या सर्वांगीण विकासासाठी वैयक्तिकृत शिक्षणाचा आराखडा तयार करणे यासंदर्भात समिती स्थापन करण्याबाबत.

महाराष्ट्र शासन

उच्च व तंत्र शिक्षण विभाग

शासन निर्णय क्रमांक: एनईपी-२०२२/प्र.क्र.१०५/विशि-३,

मंत्रालय, मुंबई ४०० ०३२,

दिनांक:- २६ एप्रिल, २०२२

संदर्भः-शासन निर्णय, उच्च व तंत्र शिक्षण विभाग, क्र. संकीर्ण-२०२०/ प्र.क्र.१७६/विशि-३, दि. १६ ऑक्टोबर, २०२०

प्रस्तावनाः-

मानव संसाधन विकास मंत्रालय, भारत सरकार यांनी राष्ट्रीय शैक्षणिक धोरण-२०२० लागू केलेले आहे. त्यामुळे राष्ट्रीय शैक्षणिक धोरण-२०२० ची राज्यात अंमलबजावणी करण्याच्यादृष्टीने या धोरणाचा अभ्यास करुन राज्य शासनास अहवाल सादर करण्यासाठी संदर्भ क्र.(१) येथील दिनांक १६ ऑक्टोबर, २०२० च्या शासन निर्णयानुसार डॉ.रघुनाथ माशेलकर, माजी महासंचालक, वैज्ञानिक आणि औद्योगिक संशोधन परिषद, नवी दिल्ली यांच्या अध्यक्षतेखाली कार्यबल गट स्थापन करण्यात आला. सदर समितीने आपला अहवाल शासनास दि.३० जून, २०२१ रोजी सादर केला आहे. सदर धोरणाची राज्यात अंमलबजावणी सुलभ करण्यासाठी, अहवालातील शिफारशींचे, त्यांची निकड, प्रभाव, अंमलबजावणीची सुलभता, गुंतवणूक आणि निधीची गरज, कार्यवाहीमधील प्राधान्य या घटकांचा विचार करुन तीन टप्प्यात खालीलप्रमाणे वर्गीकरण करण्यात आले आहेः

(१) तातडीने हाती घ्यावयाचा/किमान संसाधनांची आवश्यकता असलेला कार्यक्रम;

(२) मध्यम मुदतीचा/मध्यम संसाधनांची आवश्यकता असलेला कार्यक्रम;

(३) दीर्घकालीन/ज्यासाठी मोठ्या प्रमाणावर निधीची आवश्यकता असलेले कार्यक्रम.

राष्ट्रीय शैक्षणिक धोरण, २०२० च्या धोरणाची राज्यात अंमलबजावणी करण्याच्या अनुषंगाने सदर शिफारशी व त्यावर शासनाने करावयाची कार्यवाही याबाबतच्या प्रस्तावास दिनांक २७ जानेवारी, २०२२ रोजीच्या मंत्रीमडंळाच्या बैठकीत मान्यता देण्यात आली. त्यास अनुसरुन समिती स्थापन करण्याची बाब शासनाच्या विचाराधीन होती.

शासन निर्णय:

डॉ. माशेलकर समितीच्या शिफारशीस अनुसरुन, विभागाने प्रस्तावित केलेल्या कार्यवाहीस मंत्रिमंडळाच्या बैठकीत दिलेल्या मान्यतेनुसार, (१) सध्या सुरु असलेल्या ३ वर्षाच्या अभ्यासक्रमावरुन ४ वर्षाच्या अभ्यासक्रमाकडे स्थलांतर करण्याची योजना व त्याबाबतचा आराखडा तयार करणे, (२) एकसमान शैक्षणिक अभ्यासक्रम आराखडा तयार करणे, (३) सामान्य अध्यापनशास्त्राऐवजी विधायक अध्यापनशास्त्राचा वापर करणे, (४) विद्यार्थ्यांच्या सर्वांगीण विकासासाठी वैयक्तिकृत शिक्षणाचा आराखडा तयार करणे यासंदर्भात खालीलप्रमाणे समिती स्थापन करण्यात येत आहेः-

अ.क्र.	मान्यवरांचे नाव	समितीतील पदनाम
१.	डॉ. रविंद्र कुलकर्णी, प्र-कुलगुरु, मुंबई विद्यापीठ, मुंबई	अध्यक्ष
२.	डॉ.पराग चं.काळकर, अधिष्ठाता, वाणिज्य व व्यवस्थापन विद्याशाखा, सावित्रीबाई फुले पुणे विद्यापीठ, पुणे	सदस्य
३.	डॉ.मनोहर ग. चासकर, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा, सावित्रीबाई फुले पुणे विद्यापीठ, पुणे	सदस्य
४.	डॉ.अजय भामरे, अधिष्ठाता, वाणिज्य व व्यवस्थापन विद्याशाखा, मुंबई विद्यापीठ, मुंबई	सदस्य
५.	डॉ.अंजली दि. कुरणे, अधिष्ठाता, मानव्य विज्ञान विद्याशाखा, सावित्रीबाई फुले पुणे विद्यापीठ,	सदस्य
६.	प्रा.राजेश खरात, अधिष्ठाता, मानव्य विज्ञान विद्याशाखा, मुंबई विद्यापीठ, मुंबई.	सदस्य
७.	डॉ.एस.बी.रेवटकर, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा, गोंडवाना विद्यापीठ, गडचिरोली.	सदस्य
८.	डॉ.एल.एम.वाघमारे, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड.	सदस्य
९.	डॉ.अजय आर टेंगसे, अधिष्ठाता, मानव्य विद्याशाखा, स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड	सदस्य
१०.	डॉ.भालचंद्र बी वायकर, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद	सदस्य
११.	डॉ.वाल्मिक सरवदे, अधिष्ठाता, वाणिज्य व व्यवस्थापन विद्याशाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद	सदस्य

पृष्ठ **६** पैकी **२**

१२.	प्रा.प्रशांत अमृतकर, अधिष्ठाता, मानव्य विद्याशाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद	सदस्य
१३.	डॉ.चेतना सोनकांबळे, अधिष्ठाता, आंतरविद्याशाखीय शाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद.	सदस्य
१४.	डॉ.जीवन आर. दौंतुलवार, प्राचार्य, श्री मथुरादास मोहता विज्ञान महाविद्यालय, नागपूर	सदस्य
१५.	डॉ.संजीव सोनवणे, अधिष्ठाता, आंतरविद्याशाखीय अभ्यास विद्याशाखा, सावित्रीबाई फुले पुणे विद्यापीठ, पुणे	सदस्य
१६.	प्रा.श्रीरंग जोशी, विभाग प्रमुख, फार्मास्युटिकल विज्ञान आणि तंत्रज्ञान विभाग, रासायनिक तंत्रज्ञान संस्था (ICT), मुंबई	सदस्य
१७.	प्रा. सुनिल भिरुड, उपसंचालक, (संगणक अभियांत्रिकी विभाग) वीरमाता जिजाबाई तंत्रज्ञान संस्था (VJTI), मुंबई	सदस्य
१८.	डॉ.विजय जोशी, वरिष्ठ सल्लागार, राष्ट्रीय उच्चतर शिक्षा अभियान (रुसा), मुंबई	सदस्य
१९.	डॉ. राहुल शाम खराबे, व्यवसाय व्यवस्थापन विभाग, राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर	सदस्य
२०.	श्री. शशिकांत झोरे, सिनेट सदस्य, मुंबई विद्यापीठ, मुंबई	सदस्य
२१.	कुलसचिव, मुंबई विद्यापीठ, मुंबई	सदस्य-सचिव

२. सदर समितीची कार्यकक्षा खालीलप्रमाणे असेल:-

(१) सदरची समिती ४ वर्षीय पदवी अभ्यासक्रमासाठी अध्यापन पध्दती व परीक्षेसाठी समग्र योजना तयार करेल. या समग्र योजनेत सैध्दांतिक, प्रात्यक्षिक आणि प्रकल्प अभ्यास, तसेच मुख्य आणि वैकल्पिक विषयांना अंतर्गत व बहिस्थ पध्दतीने मूल्यमापन गुणांकन आणि श्रेयांक परिगणना पध्दतीचा समावेश असेल.

(२) ४ वर्षीय पदवी अभ्यासक्रम तयार करतांना राष्ट्रीय व आंतरराष्ट्रीय मापदंडांचाही विचार करुन अभ्यासक्रमात समाविष्ट केलेल्या प्रत्येक विषयाची निश्चित उद्दिष्टे परिणामांसह नमूद करण्यात येतील.

(३) ४ वर्षीय पदवी अभ्यासक्रम तयार करताना प्रत्येक वर्षाची किमान कौशल्य पातळी काय असावी याबाबत निश्चित मार्गदर्शक सूचना देईल.

(४) विद्यार्थ्यांना स्वप्रेरणेने ज्ञानसंपादन करता येईल, नवोन्मेषी आणि सर्जनशील संशोधक निर्माण होतील यासाठी अभ्यासक्रमाचे स्वरुप निश्चित करेल.

(५) अभ्यासक्रम बहुविद्याशाखीय व संशोधनावर आधारित राहिल यासाठी मार्गदर्शक सूचना देईल. चार वर्षाच्या पदवी अभ्यासक्रमाच्या संशोधन घटक व औद्योगिक प्रशिक्षण कसे असेल याबाबत मार्गदर्शक सूचना देईल.

(६) अभ्यासक्रम स्वयंरोजगाराभिमुख व व्यवसायाभिमुख कसा राहिल याबाबत निश्चित मार्गदर्शक सूचना देईल.

(७) ४ वर्ष अभ्यासक्रमाची एकसमान शैक्षणिक संरचना निर्धारीत करण्यासाठी आराखडा तयार करेल. यामध्ये मल्टीपल एन्ट्री-एक्झिट व श्रेयांक हस्तांतर (क्रेडिट्स ट्रान्सफर) संदर्भात शैक्षणिक संरचना काय असेल याबाबत समावेश असेल.

(८) या आराखड्यात अध्यापन, परीक्षा योजना, मुख्य व वैकल्पिक विषयांच्या गुणदान पध्दती, ग्रेडिंग पध्दतीचा समावेश असेल. तसेच निरंतर निर्धारण व मूल्यमापन (Evaluation & Assessment) पध्दतीचा समावेश असेल.

(९) सामान्य अध्यापनशास्त्राऐवजी विधायक अध्यापनशास्त्राचा वापर करुन अभ्यासक्रमासाठी तसा बदल सुचवेल.

(१०) कार्यरत शिक्षकसंख्या व सध्या अस्तित्वात असलेल्या पायाभूत सुविधा कायम ठेवून ३ वर्षीय अभ्यासक्रमाऐवजी ४ वर्षीय अभ्यासक्रम निश्चित करताना काय नियोजन असावे याबाबत आवश्यक आराखडा तयार करेल.

(११) यासंदर्भात विद्यापीठ अनुदान आयोगाने वेळोवेळी निर्गमित केलेल्या मार्गदर्शक सूचनांचा विचार करुन शासनास शिफारस करेल.

(१२) डॉ. माशेलकर समितीच्या अहवालातील उपरोक्त मुद्द्यांशी संबंधित शिफारशींचाही सदर समिती विचार करुन मार्गदर्शक सूचना निश्चित करेल.

३. सदर समितीने आपला अहवाल शासनास तीन महिन्यांत सादर करावा.

सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा सांकेतांक २०२२०४२६१७२७३८४००८ असा आहे. हा शासन निर्णय डिजीटल स्वाक्षरीने साक्षांकित करून काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नांवाने,

(प्रविणकुमार पवार)
कार्यासन अधिकारी, महाराष्ट्र शासन

प्रत,

(१) मा. राज्यपाल यांचे प्रधान सचिव, राजभवन, मुंबई,

(२) मा. मुख्यमंत्री यांचे प्रधान सचिव, मंत्रालय, मुंबई,

(३) मा. उपमुख्यमंत्री यांचे उप सचिव, मंत्रालय, मुंबई,

(४) मा. मंत्री, उच्च व तंत्र शिक्षण विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई,

(५) मा. राज्यमंत्री, उच्च व तंत्र शिक्षण विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई,

(६) डॉ. रविंद्र कुलकर्णी, प्र-कुलगुरु, मुंबई विद्यापीठ, मुंबई,

(७) डॉ.पराग चं.काळकर, अधिष्ठाता, वाणिज्य व व्यवस्थापन विद्याशाखा, सावित्रीबाई फुले पुणे विद्यापीठ, पुणे,

(८) डॉ.मनोहर ग. चासकर, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा, सावित्रीबाई फुले पुणे विद्यापीठ, पुणे,

(९) डॉ.अजय भामरे, अधिष्ठाता, वाणिज्य व व्यवस्थापन विद्याशाखा, मुंबई विद्यापीठ, मुंबई,

(१०) डॉ.अंजली दि. कुरणे, अधिष्ठाता, मानव्य विज्ञान विद्याशाखा, सावित्रीबाई फुले पुणे विद्यापीठ, पुणे,

(११) प्रा.राजेश खरात, अधिष्ठाता, मानव्य विज्ञान विद्याशाखा, मुंबई विद्यापीठ, मुंबई,

(१२) डॉ.एस.बी.रेवटकर, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा, गोंडवाना विद्यापीठ, गडचिरोली,

(१३) डॉ.एल.एम.वाघमारे, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा, स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड,

(१४) डॉ.अजय आर. टेंगसे, अधिष्ठाता, मानव्य विद्याशाखा, स्वामी रामानंद तीर्थ मराठवाडा विद्यापीठ, नांदेड,

(१५) डॉ.भालचंद्र बी. वायकर, अधिष्ठाता, विज्ञान व तंत्रज्ञान शाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद,

(१६) डॉ.वाल्मिक सरवदे, अधिष्ठाता, वाणिज्य व व्यवस्थापन विद्याशाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद,

(१७) प्रा.प्रशांत अमृतकर, अधिष्ठाता, मानव्य विद्याशाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद,

(१८) डॉ.चेतना सोनकांबळे, अधिष्ठाता, आंतरविद्याशाखीय शाखा, डॉ.बाबासाहेब आंबेडकर मराठवाडा विद्यापीठ, औरंगाबाद,

(१९) डॉ.जीवन आर. दौंतुलवार, प्राचार्य, श्री मथुरादास मोहता विज्ञान महाविद्यालय, नागपूर,

(२०) डॉ.संजीव सोनवणे, अधिष्ठाता, आंतरविद्याशाखीय अभ्यास विद्याशाखा, सावित्रीबाई फुले पुणे विद्यापीठ, पुणे,

(२१) प्रा.श्रीरंग जोशी, विभाग प्रमुख, फार्मास्युटिकल विज्ञान आणि तंत्रज्ञान विभाग, रासायनिक तंत्रज्ञान संस्था (ICT), मुंबई,

(२२) प्रा. सुनिल भिरुड, उपसंचालक, (संगणक अभियांत्रिकी विभाग) वीरमाता जिजाबाई तंत्रज्ञान संस्था (VJTI), मुंबई,

(२३) डॉ.विजय जोशी, वरिष्ठ सल्लागार, राष्ट्रीय उच्चतर शिक्षा अभियान (रुसा), मुंबई,

(२४) डॉ. राहुल शाम खराबे, व्यवसाय व्यवस्थापन विभाग, राष्ट्रसंत तुकडोजी महाराज नागपूर विद्यापीठ, नागपूर,

(२५) श्री. शशिकांत झोरे, सिनेट सदस्य, मुंबई विद्यापीठ, मुंबई,

(२६) कुलसचिव, मुंबई विद्यापीठ, मुंबई

(२७) प्रधान सचिव, उच्च व तंत्र शिक्षण विभाग, यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई,

(२८) उप सचिव (विशि), उच्च व तंत्र शिक्षण विभाग, यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई,

(२९) निवडनस्ती (विशि-३).

Glossary

Academic Credit: An academic credit is a unit by which the course work (theory/ practical/ training) is measured. Each course may be allotted credits in proportion to the time expected to be devoted by the student for that course. Thus, it determines the number of hours of instructions required per week. One credit means the standard methodology of calculating one hour of theory or one hour of tutorial or two hours of laboratory work or one week of internship per week for a duration of a semester (13-15 weeks) resulting in the award of one credit; which is awarded by a higher educational institution on which these regulations apply.

Academic Bank of Credits (ABC): ABC is an academic service mechanism as a digital/virtual/online entity established and managed by MoE/UGC to facilitate students to become its academic account holders and paving the way for seamless student mobility. between or within degree-granting Higher Education Institutions (HEIs) through a formal system of credit recognition, credit accumulation, credit transfers and credit redemption to promote distributed and flexible teaching-learning.

Academic Year: Two consecutive (one odd + one even) semesters constitute one academic year.

Assessment: It is the process of collecting, recording, scoring, describing and interpreting information about learning

Academic Flexibility: It is the provision for innovative and interchangeable curricular structures to enable creative combinations of Courses/Programmes in Disciplines of study leading to Degree/Diploma/PG Diploma/Certificate of Study offering multiple entry and multiple exit facilities in tune with National Education Policy-2020, while removing the rigid curricular boundaries and creating new possibilities of life-long learning.

Affiliated College: It implies any higher education institution approved by the affiliating university on the basis of the stipulated norms and guidelines by virtue of which it provides for a course/programme of study for obtaining any qualification from a university.

Autonomous College: It means any institution, whether known as such or by any other name accorded with autonomous status by the UGC upon the recommendations of the affiliating university and the State Government concerned, by virtue of which it provides for a course/programme of study with academic and innovation flexibility for obtaining any qualification from a university and which, in accordance with the Rules and Regulations of such university, is recognized as competent to provide for such course/programme of study and present students undergoing such course/programme of study for the examination leading to the award of such qualification.

Choice Based Credit System (CBCS): The CBCS provides choice for students to select from the prescribed courses (core major, electives, minor, soft skill courses etc)

Code: Each course shall bear a distinguishing code (three letters and three digits) that identifies the discipline from which it is being offered.

Conventional Mode of Learning: It means a mode of providing learning opportunities through face to face interaction between the teacher and learner in regular class room environment but does not exclude supplementary instructions if any for the learner through use of online.

Core or Major Course: A course, which should compulsorily be studied by the student as a requirement of core or major subject is termed as a Core Course.

Course: A basic unit of education and/or training. It means a paper which is taught for at least one semester as a part of a subject and is a component of a program. All courses need not carry the same weightage. A collection of courses forms a program of study.

Credit Point: It is the product of grade point and number of credits for a course.

Cumulative Grade Point Average (CGPA): Weighted average of the grade points obtained in all courses registered by the student across semesters.

Elective Course: Generally, a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

Evaluation: It is the process of making judgments based on evidences and interpretations gathered through examination and assessment and on the basis of agreed upon criteria.

Foreign Higher Educational Institution: It represents a Higher Educational Institution duly established or incorporated or recognised in a foreign country and offering academic and research programmes at the undergraduate and/or higher levels.

Generic Elective (GE) or Open Elective (OE) Course: An elective course chosen generally from an unrelated discipline/subject, with an intention to seek multidisciplinary exposure is called a Generic Elective.

Grade Point: Numeric weightage attached to each letter grade.

Grade Point Average (GPA): A system of calculating academic achievement based on an average, calculated by multiplying the numerical grade point received in each course by the number of credits.

Graduate Attributes (GAs): It is a set of individually assessable outcomes that are indicative of the graduate's potential to acquire competencies in that programme.

Higher Education Institutions: The Higher Education Institutions (HEIs) who are empowered to award degrees by themselves or through their affiliating universities in accordance with Section 22 of the UGC Act, 1956.

Lateral Entry: Lateral entry or admission is granted to those students who have exit after award of Certification, Diploma, or a Basic Bachelor's Degree and are eligible for and desirous of re-entering into the second year/ third year/ fourth year, respectively of same four year multidisciplinary degree programme at any ABC registered HEI within stipulated/ permissible period of years as decided by Statutory Councils of that HEI. Lateral entry is also open to those students, if he/she has already successfully completed a

multidisciplinary four year first degree programme and is desirous of and academically capable of pursuing another multidisciplinary four year first degree programme in an allied subject.

Learning Management System (LMS): It means a system to keep track of delivery of e-Learning Programmes, learner's engagement, assessment, results, reporting and other related details in one centralized location

Learning Outcome Based Education (LOBE): Adherence to student-centric learning approach to measure student's performance based on pre-determined set of outcomes.

Letter Grade: Index of performance resulting from the transformation of actual marks obtained by a student in a course.

Major Courses: The discipline in which the student shall pursue major study in his/her Undergraduate/Master's Programme.

Proctored Examination: It means the examination conducted under the supervision of approved person or technology enabled proctoring which ensures the identity of the test taker and the integrity of the test taking environment, either in pen-paper mode or in computer based testing mode or in full-fledged online mode, as may be permissible.

Programme: Programme /Programme of study means a higher education programme pursued for a degree specified by the Commission under Section 22 (3) of the UGC Act. It also refers to a collection of courses in which a student enrolls and which contributes to meeting the requirements for the awarding of one or more Certificates/ Diplomas/ Degrees.

Programme Education Objectives (PEOs): PEOs are broad statements that describes what graduates are expected to attend within few years of graduation.

Programme Learning Outcomes (PLOs): They represent the knowledge, skills and attitudes a student should attain at the end of the programme.

Qualifications: Qualifications are formal 'awards' such as a certificate, diploma or a degree. Qualifications are awarded by a competent authority such as a college or university in recognition of the attainment by students of the expected learning outcomes on the successful completion of a particular programme of study. Qualifications can also signify the competence to follow an occupational practice.

Research Project/ Dissertation: Project work is considered as a special course involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem. The student undertakes research in specific areas of his Major/ Core Subject with an advisory support by a teacher/faculty member.

Rubric (Assessment Rubric): A rubric for assessment, also called a scoring guide, is a tool used to interpret and grade students on any kind of work against criteria and standards.

Semester Grade Point Average (SGPA): Performance of a student in a given semester.

Abbreviations

ABC	:	Academic Bank of Credits
AICTE	:	All India Council for Technical Education
AISHE	:	All India Survey of Higher Education
AIU	:	Association of Indian Universities
B.A.	:	Bachelor of Arts
B. Com.	:	Bachelor of Commerce
B.Ed.	:	Bachelor of Education
B.Sc.	:	Bachelor of Science
B.Voc.	:	Bachelor of Vocation
BCI	:	Bar Council of India
BLA	:	Bachelor of Liberal Arts
BLE	:	Bachelor of Liberal Education
BoD	:	Board of Deans
BoS	:	Board of Studies
BoG	:	Board of Governors
CAD/CAM	:	Computer-Aided Design/ Computer-Aided Manufacturing
CBCS	:	Choice Based Credit System
CDAC	:	Centre for Development of Advanced Computing
CEP	:	Continuing Education Programme
CIET	:	Central Institute of Educational Technology
CSIR	:	Council of Scientific and Industrial Research
CUET	:	Common University Entrance Test
CSR	:	Corporate Social Responsibility
CSTT	:	Commission for Scientific and Technical Terminology
CTE	:	College of Teacher Education
CU	:	Central Universities
DAE	:	Department of Atomic Energy
DARE	:	Department of Agricultural Research and Education
DBT	:	Department of Biotechnology
DSC	:	Department/ Subject Specific Course
DSE	:	Department/ Subject Specific Electives

DST	:	Department of Science and Technology
DTE	:	Department/ Directorate of Technical Education
EVLSC	:	Professional Ethics, Value Education and Life Skills courses
FSC	:	Faculty/ Discipline Specific Course
FSE	:	Faculty/ Discipline Specific Electives
FOSSEE	:	Free and Open-Source Software in Education
GA	:	Graded Accreditation
GCCs	:	Global Capability Centers
GEC	:	General Education Council
GEs	:	Generic Electives
GER	:	Gross Enrolment Ratio
GoI	:	Government of India
HBCSE	:	Homi Bhabha Centre for Science Education
HEI	:	Higher Education Institutions
HRDC	:	Human Resource Development Centre
IAF	:	Institutional Accreditation Framework
IASE	:	Institute of Advanced Studies in Education
ICAR	:	Indian Council of Agricultural Research
ICT	:	Information and Communication Technology
IDP	:	Institutional Development Plan
IIEC	:	India International Education Centre
IIT	:	Indian Institute of Technology
IKS	:	Indian Knowledge System
INI	:	Institutions of National Importance
INSA	:	Indian National Science Academy
ITI	:	Industrial Training Institute
IUC	:	Inter-University Consortium
MERU	:	Multidisciplinary Education and Research Universities
MoE	:	Ministry of Education
MOOC	:	Massive Open Online Course
MoU	:	Memorandum of Understanding
MSDE	:	Ministry of Skill Development and Entrepreneurship
MSRIC	:	Maharashtra State Research and Innovation Council

MSME	:	Micro, Small and Medium Enterprises
NAAC	:	National Assessment and Accreditation Council
NASSCOM	:	National Association of Software and Services Companies
NCC	:	National Cadet Corps
NCERT	:	National Council of Educational Research and Training
NCF	:	National Curriculum Framework
NCrF	:	National Credit Framework
NCTE	:	National Council for Teacher Education
NCVET	:	National Council for Vocational Education and Training
NCVIE	:	National Committee for the Integration of Vocational Education
NEET	:	National Eligibility cum Entrance Test
NETF	:	National Educational Technology Forum
NGO	:	Non Governmental Organization
NHEQF	:	National Higher Education Qualifications Framework
NHERA	:	National Higher Education Regulatory Authority
NIEPA	:	National Institute of Educational Planning and Administration
NIOS	:	National Institute of Open Schooling
NIT	:	National Institutes of Technology
NITI	:	Aayog National Institution for Transforming India
NMEICT	:	National Mission on Education through ICT
NPSDE	:	National Policy on Skills Development and Entrepreneurship
NQR	:	National Qualifications Register
NRED	:	National Repository of Educational Data
NRF	:	National Research Foundation
NROER	:	National Repository of Open Educational Resources
NSDA	:	National Skill Development Agency
NSDC	:	National Skill Development Corporation
NSQF	:	National Skills Qualifications Framework
NSS	:	National Service Scheme
NTA	:	National Testing Agency
ODL	:	Open and Distance Learning
OEs	:	Open Electives
OER	:	Open Educational Resources
PG	:	Postgraduate

PSSB	:	Professional Standard Setting Body
PTO	:	Patent and Trademark Office
RCI	:	Rehabilitation Council of India
RHEI	:	Registered Higher Education Institutions
RSA	:	Rashtriya Shiksha Aayog
RUSA	:	Rashtriya Uchchtar Shiksha Abhiyan SC Scheduled Caste(s)
SAMVAY	:	Skill Assessment Matrix for Vocational Advancement of Youth
SCERT	:	State Council of Educational Research and Training
SDG	:	Sustainable Development Goals
SEC	:	State Education Commission
SEZ	:	Special Education Zone
SHEC	:	State Higher Education Council
SKP	:	Skill Knowledge Provider
SSC	:	School Specific Course
SSE	:	School Specific Electives
SSD	:	Ms State Skill Development Mission
SSRA	:	State School Regulatory Authority
STEAM	:	Science, Technology, Engineering, Art & Design, and Mathematics
STEM	:	Science, Technology, Engineering, and Mathematics
SVE	:	School of Vocational Education
SWAYAM	:	Study Webs of Active Learning for Young Aspiring Minds
TEI	:	Teacher Education Institution
U-DISE	:	Unified District Information System for Education
UG	:	Undergraduate
UGC	:	University Grants Commission
UHV	:	Universal human values
VESB	:	Vocational Education Skills Board

Chapter I

Multiple Entry and Admission Path at different Levels for Multidisciplinary Four Year Degree and Five Year Integrated PG Programme in line with NEP-2020

Chapter I

Multiple Entry and Admission Path at different Levels for Multidisciplinary Four Year Degree and Five Year Integrated PG Programme in line with NEP-2020

The higher education qualifications leading to a certificate/degree/diploma, in line with multidisciplinary four year degree programme, detailed level descriptors and learning outcomes are well described by the UGC guidelines for Multiple Entry and Exit in Academic Programmes offered in Higher Education Institutions and National Higher Education Qualification Framework (NHEQF). It also envisages multiple entry and exit points and re-entry options thus, facilitating holistic multidisciplinary education and creating new possibilities for life-long learning. For creditisation and integration of all learning, the National Credit Framework (NCrF) shall encompass the qualification frameworks for higher education, vocational & skill education and school education, namely NHEQF, National Skills Qualification Framework (NSQF) and National School Education Qualification Framework (NSEQF) respectively. NCrF enables seamless integration and coordination across regulators and institutions to enable broad based, multi-disciplinary, holistic education across sciences, social sciences, arts, humanities and sports, allows imaginative and flexible curricular structures, enables creative combinations of disciplines and integration of vocational education and skilling into academics with multiple entry and exit options.

The NCrF credit levels for school education are upto level 4 (the credit level that can be attained after completion of school education i.e., grade 12^{th} will be level 4.), while for higher education from Level 4.5 to Level 8 [UG Levels 4.5, 5.0, 5.5 & 6.0, PG Levels 6.0, 6.5 & 7.0, and PhD Level 8] and for vocational education & training level 1 to level 8 (the level 1 is of lowest level of competence and complexity while level 8 indicates highest level of competence and complexity). The Credit levels to be assigned across higher and vocational education/ skilling (independent of the streams, subjects etc.) will be based on the cumulative numbers of years of learning with assessment.

1.1 Structure of Four-Year Multidisciplinary Degree Programme with Multiple Entry and Exit Options

To enable multiple entry and exit points in the academic programmes, qualifications such as certificate, diploma, degree are organized in a series of levels, as presented in

Table 1.1, in an ascending order from level 4.5 to level 6; Level 4.5: represents certificate and level 6 represents 4 year bachelor degree with honors/ research.

Table: 1.1
Qualification Type and Credit Requirements of Four Year Multidisciplinary Degree Programme with Multiple Entry and Exit Options

Levels	Qualification Title	Min. Credit Requirements	Year and Semester
4.5	UG Certificate	40	1 year, 2 Sem
5.0	UG Diploma	80	2 years, 4 Sem
5.5	Bachelor's Degree	120	3 years, 6 Sem
6.0	Bachelor's Degree-Honors	160	4 years, 8 Sem
6.0	Bachelor's Degree- Research	160	4 years, 8 Sem
6.0	Bachelor's Degree- Engineering	160	4 years, 8 Sem

a) **Level 4.5**

Undergraduate Certificate (in the field of learning/discipline) is awarded for those who exit after the first year (two semesters) of the 4 year Multidisciplinary UG programme (Programme duration: first year or two semesters of the UG programme) and earn min. 40 credits.

b) **Level 5.0**

Undergraduate Diploma (in the field of learning/discipline) is awarded for those who exit after two years (four semesters) of the 4 year Multidisciplinary UG programme programme (Programme duration: First two years or four semesters of the UG programme) and earn min. 80 credits

c) **Level 5.5**

UGC: Bachelor's Degree (Programme duration: Three years or six semesters): min. 120 credits

In case of Engineering and Technology Programme regulated by AICTE, it will be 3-Years Bachelor's degree in Vocation (B.Voc.)

d) **Level 6.0**

i. UGC: Bachelor's degree 'with honors' after a 4-year (eight semesters) programme; min. 160 credits.

ii. UGC: Bachelor's degree 'with research' after a 4-year (eight semesters) programme if the student completes a rigorous research project in her/his major area(s) of study as specified by the HEI; min. 160 credits.

iii. AICTE: 4-Years (eight semesters) Bachelor's degree (B.E./ B.Tech.) in Engineering/ Technology; min. 160 credits.

Thus, the structure of the 4-year multidisciplinary bachelor's degree programme allows the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student and the feasibility of exploring learning in different institutions.

1.2 Structure of 1 or 2-Year and 5-Year Integrated PG Multidisciplinary Programme with Multiple Entry and Exit Options

In addition to 4-year multidisciplinary degree programme, the NEP 2020 also envisages flexibility in the design and duration of Post-Graduate Diploma (PGD) and Master's degree programmes.

a. **Post-Graduate Diploma (PGD)**: Programme duration- One year (2 semesters) after any bachelor's degree, min. 40 credits

i. UGC: 1-Year (2 semesters) Post-Graduate Diploma (PGD) after 3-years Bachelor's degree: **Level 6.0**

ii. UGC: 1-Year (2 semesters) PGD after 4 year Bachelor's degree (Honors/Research): **Level 6.5**

iii. AICTE: 1-Year (2 semesters) PGD after 4 year Bachelor's degree (Engg.): **Level 6.5**

b. **Master's Degree:**

i. UGC: 2-Years (four semesters) Master's Degree after obtaining a 3-years Bachelor's degree, Min. 40 credits/ year, second year devoted entirely for research, PG – 2nd year: **Level 6.5**

OR

1-Year (two semesters) Master's Degree after obtaining a 4-year Bachelor's degree (Honors/Research): Min. 40 credits, **Level 6.5**

A 5-year Integrated Bachelor's and Master's program shall have minimum of 200 credits. The exact number of credits for different UG and PG programs will be determined by the individual Universities but shall lie within the stated limits.

ii. AICTE: 2-Years (four semesters) Master's Degree ME/ M.Tech. after obtaining a 4 year Bachelor's degree in Engg. and Tech.), Min. 40 credits/year PG 1st yr (Engg.): **Level 6.5**; PG- 2nd (Engg.): **Level 7.0**

Learner after completing first year of M.Tech. program, shall be eligible for an M.Voc. degree, upon exit. Having M.Voc. degree, however, is not mandatory for entry into an M.Tech. program.

c. **Level 8** represents Ph.D. Research Degree.

1.3 Codes and Levels of Courses for UG, PG and Ph.D. Programme

As per UGC draft on 'Curricular Framework and Credit System for the Four-Year Undergraduate Programme', Courses in four-Year Undergraduate Programme are structured in the form of codes, which are segregated based on learning outcomes, level of difficulty and academic rigor.

i. Courses in the 0-99 code will be the pre-requisite courses required to be undertaken by the student. It will be an introductory course which will be a pass or fail course with no credits. Students will have to clear these courses in order to move ahead in their programme. These will include basic courses which will prepare the students for the advanced subjects that will be taught to them in the future. These courses will replace the existing informal way of offering bridge courses based on gap analysis.

ii. 100-199 codes will include foundational courses that will make students gain basic knowledge of subjects and help them decide the subject or discipline of interest. These courses may also be prerequisites for courses in the 'major' subject. These courses will equip the student with the foundational theories, concepts,

perspectives, principles, methods, and procedures of critical thinking to provide a broad basis for taking up more advanced courses.

iii. 200-299 codes will include intermediate-level courses including subject-specific courses intended to meet the credit requirements for 'minor' or 'major' areas of learning. These courses can be prerequisite courses for advanced level major courses.

iv. 300-399 codes will have higher-level courses which are required for majoring in a disciplinary/interdisciplinary area of study for a degree.

v. 400-499 codes will include the advanced courses. These would include taught courses with practicum, seminar-based course, term papers, research methodology, advanced laboratory experiments/software training, research projects, hands-on-training, internship / apprenticeship projects at the under-graduate level or First year post-graduate theoretical and practical courses.

vi. 500-599 codes will include the courses at first year Master's degree level for the 2-year Master's degree programme.

vii. 600-699 codes will be the courses for the second year of a 2-year Master's or 1-year Master's degree programme,

viii. Codes 700-799 and above will include courses for doctoral students.

1.4 Rationalization of Existing Programmes/Courses in Accordance with NEP-2020, and Preparation of the Plan for Transition from Pre to Post NEP-2020 with Effect from Academic Year (AY) 2022-23 OR 2023-24

(a) University and Colleges Offering PG Progrmme

Transformation of two-year PG programme either to a two-year PG programme with entry and exit options or to five year Integrated PG programme with multiple entry and exit options will have to be carried out in phase wise manner.

Complete conversion of two-year PG programme to 5-year Integrated PG programme will require at least three years: from 2022-23 to 2025-26. With an understanding that four-year Degree programme is being launched in some Central Universities or state universities in other states of India in the AY 2021-22, these students after successful completion of four-year degree course will be allowed to join second year of two year PG programme or final year of five year integrated PG programme in 2025-26.

Current UG Degree holders will join as usual to first year of the PG Programme. In any case, the credits will be deposited in the ABC for credit mobility. Meanwhile the ABC registered HEIs should initiate framing MoUs with other registered HEIs for Credit Transfer arrangements, recognition of different course modules under the Programme offered by HEIs and sharing of resources for Multidisciplinary Teaching, Learning and Evaluation.

(b) Autonomous Colleges

The Autonomous Colleges should start undertaking phase wise conversion of three- year degree programme to -

i. four-year degree programme with honors,
ii. four-year degree programme with research, if the student completes a rigorous research project in their major areas of study

Currently (2022-23) there will be no exit option, with a certificate or a diploma, during the first two years viz. 2022-24. The current exit option after three years, with a B.A./B.Sc./ B.Com./ B.B.S. degree in the relevant subject will continue. The exit options will be introduced from 2024 onwards with due changes in programme.

Since NEP 2020 is promoting the concept of interdisciplinary exchange of knowledge and research themes and thereby abolishing the compartmentalization of Education, different Departments in Universities and Colleges, with common areas of academic and research themes, may come together to offer disciplinary courses and electives in Major/ Core domain as well as in multidisciplinary domain. This will provide good eco-system for the transition from the conventional three year degree programme to the Multidisciplinary Four-Year Degree and Five-Year Integrated PG Programme in line with NEP-2020.

1.5 Admission Path at different Levels for Four-year Multidisciplinary Degree Programme

a. First Year Entry 1, Level 4.5

Students who have successfully completed Grade 12 School Leaving Certificate (in 5+3+3+4) or equivalent shall be eligible for admission to a first-year degree programme. The entry requirement for Level 4.5 is Secondary School Leaving

Certificate obtained after the successful completion of Grade 12 or **Level 4.** A programme of study leading to entry into the first year of the bachelor's degree is open to those who have met the entrance requirements, including specified levels of attainment at the secondary level of education specified in the programme admission regulations of respective University. Admission to the bachelor's degree programme of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake and complete a Bachelor's degree programme. The admission shall be made on merit on the basis of criteria notified by the university, keeping in view the guidelines/norms in this regard issued by the UGC and other statutory bodies concerned and taking into account the reservation policy as and when issued by the Government of Maharashtra from time to time.

In order to maintain uniform standards for teacher education (four year B.Ed. Programme), the admission to pre-service teacher preparation programmes shall be through suitable subject and aptitude tests conducted by the National Testing Agency, and shall be standardized keeping in view the linguistic and cultural diversity of the country.

b. In-take Capacity and Student Enrolment at Level 4.5

Overall intake capacity shall be defined in accordance with the academic and physical facilities available keeping in mind the norms pertaining to the student-teacher ratio, the teaching-non-teaching staff ratio, laboratory, library, teaching-learning tools and permitted batch size for the courses (theory/ Practical) as decided by Academic Council of respective Universities. The in-take capacity shall be determined at least three months in advance by the university/institution through its academic bodies in accordance with the guidelines/norms in this regard issued by the UGC and other statutory bodies concerned so that the same could be suitably incorporated in the admission brochure for the information of all concerned and uploaded on the institutional website. Reservation for admissions will have to be executed as per Government of Maharashtra Norms. Besides defining titles for common fees for the programme, the fee structure needs to be defined for individual courses which will enable the mechanism for working out

the overall fees structure based on the combinations of courses selected by the students for the particular programme.

c. **2nd Year Entry 2 Level 5.0**

The entry requirement for Level 6 is a certificate obtained after completing the first year (two semesters) of the undergraduate programme. A programme of study leading to the second year of the bachelor's degree is open to those who have met the entrance requirements, including specified levels of attainment, in the programme admission regulations. Admission to a programme of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake and complete a bachelor's degree programme.

d. **3rd Year Entry 3 Level 5.5**

The entry requirement for Level 5.5 is a diploma obtained after completing two years (four semesters) of the undergraduate programme. A programme of study leading to the bachelor's degree is open to those who have met the entrance requirements, including specified levels of attainment, in the programme admission regulations. Admission to a programme of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake and complete a bachelor's degree programme.

e. **4th Year Entry 4 Level 6**

An individual seeking admission to a Bachelor's degree (Honors) and Bachelor's degree (Research) (Level 6) in a specified field of learning would normally have completed all requirements of the relevant three-year bachelor degree (Level 5.5). After completing the requirements of a three year Bachelor's degree, candidates who meet the minimum CGPA of 7.5 or the minimum eligibility criteria decided by the University Academic Council shall be allowed to continue studies in the fourth year of the undergraduate programme to pursue and complete the Bachelor's degree with Research.

f. **Establishing Entry Eligibility through Credit Framework**

The credit points earned and accumulated can be used to determine the eligibility

for taking admission in various programs at multiple levels, subject to fulfillment of the broad principles laid down under NCrF (Section 3.4.2. and 3.4.3. Page No. 68-70 of High-Level Inter-Ministerial Committee Report on National Credit Framework (Sept. 2022)) and the acceptance of these credit points by the concerned agencies. For example, the HEI providing the credits and the HEI accepting the credits are required to be in mutual agreement while transferring the credits, without the need for further equivalence certificate for each student. Since a similar program being offered by two different HEIs may have variation, it is expected that the HEIs permitting transfer of credits will have mutual understanding. The accepting HEIs, if they so desire, may also supplement their program with a bridge course.

1.6 Master's Programme Admission Path

- Students shall be admitted to a two-year programme with the second year devoted entirely to research for those who have completed the three-year Bachelor's programme.
- Students completing a four-year bachelor's programme with Honors/Research, may be admitted to a one-year Master's programme,

  The admission requirements for **Entry 5, level 6.5** are as given below:
  - A four year Bachelor's Degree (Honors/Research) for the one-year/two-semester Master's degree programme.
  - A three year Bachelor's Degree for the two-year/four-semester Master's degree programme with exit option after successful completion of first year of PG Programme.
  - A three year Bachelor's Degree for the one-year/two-semester Post-Graduate Diploma programme.

A programme of study leading to the Master's degree and Post-Graduate Diploma (PGD) is open to those who have met the entrance requirements, including specified levels of attainment, in the programme admission regulations. Admission to a programme of study is based on the evaluation of documentary evidence (including the academic record) of the applicant's ability to undertake postgraduate study in a specialized field of enquiry.

Students, who wish to pursue a Master's degree in a subject other than the major/core subject studied by him/her in four year multidisciplinary UG programme, must take additional course/s of equivalent credits of that subject, which are not pursued in the previously completed UG programme for the purpose of admission eligibility.

1.7 Lateral Entry/ Re-entry at Higher Levels after Exit from Lower Levels of Four Year Multidisciplinary UG Degree Programme

Students who leave with a Certification, Diploma, or a Basic Bachelor's Degree will be eligible to re-enter the programme at the exit level to complete or progress to the next level through lateral entry mode. Depending upon the academic and physical facilities available, the HEIs may earmark specific seats/ intake for lateral entry in to the second year/ third year/ fourth year of a four year multidisciplinary UG degree programme as approved by PSSB/Govt of Maharashtra/ statutory council of affiliating University plus any consequential vacancies caused by exits to an ongoing programme (four-year Degree Programme and Integrated Master's or second year Master's) plus vacancies created due to % failure in previous year. Lateral entry is open to those students, if he/she has either

a. successfully completed the first year/second year/third year of the particular four year multidisciplinary degree programme in any ABC registered HEI with valid credits in ABC and re-entering into second year/third year/fourth year, respectively of the same four year degree programme of any ABC registered HEI, within stipulated/ permissible period of years as decided by Statutory Councils of that HEI

OR

b. already successfully completed a multidisciplinary four-year first-degree programme and is desirous of and academically capable of pursuing another multidisciplinary four year first-degree programme in an allied subject.

A student will be allowed to enter/re-enter only at the odd semester. Re-entry at various levels for lateral entrants in academic programmes should be based on the earned and valid credits as deposited and accumulated in Academic Bank of Credits (ABC) through Registered Higher Education Institutions (RHEI) and proficiency test records. Hence, the University/ College will have to work out prerequisites and entry norms for lateral admissions such as previous year CGPA, a written test and/or interview, requirement of bridge courses etc. In case the

lateral entrant is desirous of joining to four year degree programme different from his/her earlier Programme (i.e. with different combinations of Major and Minor), then the BoS of that HEI should decide the requirements of bridge courses, prerequisite courses and additional credit requirements for new combinations of Major and Minor which the lateral entrant must fulfill for the purpose of joining new Programme. However, in terms of the admission eligibility requirements, the student must belong to the same faculty/ discipline in terms of Major Subject i.e., the Major subject of his/her earlier Programme and the Major subject of new Programme for which he/she is seeking admission must be from the same faculty/discipline. Reservation for lateral entry will have to be executed as per Government of Maharashtra Norms. Lateral entry for Diploma Engineering/ Pharmacy holders (in the relevant subject) is already allowed upto 10% of the original intake plus consequential vacancies into second year of Integrated Programme of Engineering and Technology/ Pharmacy (M.Tech. / M.Pharm.) or Four Year Degree Programme in Engineering and Technology/ Pharmacy as per the norms/ regulations of DTE, Government of Maharashtra.

The credit transfer mechanism through CBCS and ABC will also enable a student to enter, exit and re-enter the educational ecosystem both general and vocational at any point of time. In such cases, NCrF proposes that due weightage be given to the work experience gained or any other training undertaken by the learner, in offline or online mode, subject to assessment. The proposed equivalence by virtue of this enables a learner (whether from a general education background or from a vocational education and training/ skilling background) to accumulate necessary credits that will allow him/her to re-enter the mainstream education.

1.8 Common University Entrance Test (CUET) as basis for Admission Path for UG and PG Programmes across Country and CET (Common Entrance Test) for Admission Path across Maharashtra State

Ministry of Education (MoE), Government of India (GOI) has established the National Testing Agency (NTA) as an independent, autonomous, and self-sustained premier testing organization under the Societies Registration Act (1860) for conducting efficient, transparent and international standards tests in order to assess the competency of

candidates for admissions to HEIs. The NTA has been assigned the task of conducting the Common University Entrance Test (CUET) for Post Graduate (PG) and Undergraduate (UG) programmes, for admission to different programmes of the participating Central/ State Universities. The objective is to provide a single window opportunity to the students to seek admission in these participating Universities / Institute(s) across the country. NTA engages with its stakeholders viz. students, parents, teachers, experts, and partner institutions on a regular basis in order to practice the values of quality, efficiency, effectiveness, equity, and security of assessments.

Common University Entrance Test (CUET) was introduced for admission into UG/ PG programmes in Central and participating State Universities with effect from the academic session 2022-23. It is expected that the CUET will provide a common platform and equal opportunities to candidates across the country, especially those from North-East and from rural and other remote areas and help to establish better connect with the Universities. A single Examination will enable the Candidates to cover a wide outreach and be part of the admissions process to various Central as well as participating State Universities.

State Universities may utilize normalized scores and conduct their individual counselling on the basis of the score card of CUET (UG and PG) provided by the NTA. Based on normalized scores, the Merit list will be prepared by participating Universities/ organizations for admission to various UG and PG programme.

A similar state level mechanism can be thought of by Government of Maharashtra as additional supporting system for admission to multidisciplinary four year Degree and five year integrated PG Programme. State CET Cell (State Common Entrance Test Cell) of Government of Maharashtra is already involved for conducting Entrance Test for admission to various UG and PG professional programmes across Maharashtra State Colleges and Universities. The Government of Maharashtra and statutory bodies of Universities should decide on extending the jurisdiction of State CET Cell for working out the state level system for admission to various nonprofessional multidisciplinary four year Degree and five year integrated PG Programme as additional supporting mechanism to CUET (UG and PG).

Chapter II

Credit Structures and Outcome based Curriculum Development for Multidisciplinary Four Year Degree and Five Year Integrated PG Programmes as per NHEQF Guidelines

Chapter II

Credit Structures and Outcome based Curriculum Development for Multidisciplinary Four Year Degree and Five Year Integrated PG Programmes as per NHEQF Guidelines

The NEP 2020 envisages imaginative and flexible curricular structures with multiple entry and exit options, to enable the creative combinations of disciplinary areas for study in multidisciplinary contexts (including vocational courses), thus, removing the currently prevalent rigid boundaries and creating new possibilities for life-long learning. The National higher education qualification framework (NHEQF) has made provisions for flexibility and innovation in

i) programme design and syllabi development,
ii) teaching-learning process,
iii) assessment of students' learning levels, and
iv) periodic programme reviews within a broad framework of agreed expected programme/course learning outcomes and academic standard. Thus, it is essential to design the multidisciplinary curriculum for graduate-level, master's, and doctoral programmes of study in multidisciplinary universities, while providing rigorous research-based specialization, in line with NHEQF guidelines.

The National Credit Framework (NCrF) relies on a unified approach across the education and skilling frameworks enabling the education and skilling ecosystem in implementing a comprehensive credit-based framework. While catering to multi-disciplinarity and holistic education across sciences, social sciences, arts, humanities and sports, NCrF enables multiple entry - multiple exit pathways in general and vocational education; ensures flexibility for students to choose their learning trajectories and career choices, including option for mid-way course correction or modification, as per their talents and interests. For effective implementation of multidisciplinary four-year degree programme, the curriculum is required to be more flexible, with greater choices of credits across different streams. Various Combinations of Major / Minor Subjects are required to be identified and defined to realize the 'unique blend' of research in science and technology, commerce and management, humanities and arts and other interdisciplinary studies. A major subject/ core subject is the

subject that represents the main focus of a degree. The degree in Major is permitted if the student opts and accrues courses with minimum of 50% credits corresponding to the Major. A minor is a secondary subject that may complement the major or can have interdisciplinary bandwidth. Minors are a bunch of courses and can be related or unrelated to the major. A university must declare the minors and make it available for the students to choose from. In addition to major and minor courses, the flexible and innovative curricula of all HEIs shall include credit-based courses on ability enhancement, environmental education, Indian Knowledge System (IKS), value-based education and professional ethics, skill based and vocational courses, co-curricular courses, projects in the areas of community engagement and service, and internships. As part of a holistic education, students at all HEIs will be provided with opportunities for internships with local industries, businesses, banks, artists, crafts persons, and so on, as well as research internships with faculty and researchers at their own or other HEIs / research institutions, so that students may actively engage with the practical side of their learning and, as a byproduct, further improve their employability.

2.1 Distribution of Credits across Multidisciplinary Four Year Degree and Five Year Integrated PG Programmes

(a) Four Year Multidisciplinary Degree Programme

For the four-year multidisciplinary bachelor degree programme, the distribution of credits will be as follows:

- Disciplinary/interdisciplinary major (minimum of 40-56 credits)
- Disciplinary/interdisciplinary minor (maximum of 20-28 credits)
- Skill based/Vocational studies (12-18 credits)
- Field projects/internship/apprenticeship/community engagement and service (24- 32 credits) with maximum six credits per Semester
- Remaining credits covering Generic or open electives, Ability enhancement course (AEC) including Languages and Environmental Studies, Indian Knowledge System (IKS), Value-based education, Life Skills and Professional Ethics, Co-curricular courses such as Sports and Culture, NSS/NCC etc.

Four-year multidisciplinary degree programme with Honors/ Specialization Degree will have Internship and Core /Major Courses with minimum of 20 credits per Semester in the Fourth Year.

Four-year multidisciplinary degree programme with Research will have Research Projects, Seminar, Dissertation and Internship with minimum of 20 credits per Sem. in the Fourth Year.

Every four year degree multidisciplinary program curriculum design must specify prerequisite courses, mandatory courses, credit distribution among core/ major, optional core, subject-specific and open-electives and it should also specify how many and which credits can be transferred and other eligibility criteria. Every course must specify the requirement of pre-requisites and number of credits.

(b) **For the Master's Programmes**, the Universities will have the flexibility to offer different designs:

i) A two-year programme with the second year devoted entirely to research for those who have completed the three-year Bachelor's programme;

ii) A one-year Master's programme for students who are completing a four-year Bachelor's programme with Research;

iii) A one-year/two-semester Post-Graduate Diploma programme builds on a Bachelor's degree and requires min. of 40 credits for individuals who have completed a Bachelor's degree

iv) An integrated five-year Master's programme with multiple entry and exit options at different levels e.g., the student may exit at the end of the third year with a Bachelor's degree, with an entry to a Master's programme in another HEI.

The Overall Structure for the 5-Year Integrated PG Programme with the broad-based multidisciplinary curriculum will be as follows:

i) core component consisting of the major discipline and a minor/allied discipline contributing to 60-70%

ii) a multidisciplinary component at different levels (in line with distribution of credits for four year multidisciplinary degree programme) accounting for the remaining 30-40% of the credits

iii) Multiple entries and exits within a program: Student will earn minimum of 20 credits per semester and minimum of 40 credits per year in every program. Students can have multiple entry and exit options in Five-Years Integrated Master's Degree programme with exit at the end of the first year with Certificate, exit at the

end of second year with Diploma, exit at the end of third year with a Bachelor's degree and exit at the end of the fourth year with a Bachelor's Honors/ Research degree.

iv) Students who leave with a Certification, Diploma, a Basic Bachelor's Degree or a Bachelor's Honors/ Research degree will be eligible to re-enter the 5-year Integrated PG Programme at the exit level to complete or progress to the next level.

Master's and doctoral programmes, while providing rigorous research-based specialization, should also provide opportunities for multidisciplinary work, in academia, government, research institutions, and industry.

2.2 Disciplinary Major/Core-Mandatory and Electives and Disciplinary/ Interdisciplinary Minor

Students must select a 'major subject/ discipline' and a 'minor subject/discipline' from the lists of various course combinations and options provided by the HEI. The Courses of study indicate pursuance of study in a particular discipline/faculty. Every discipline/faculty shall offer different categories of subjects of study, viz. Department/Subject Specific Core courses (DSCs) or School Specific Cores (SSC) or Faculty Specific Cores (FSC), Minor Subject courses and different categories of courses as Electives viz. Discipline/ Department/Subject Specific Electives (DSE) or School Specific Elective (SSE) or Faculty Specific Electives (FSE), and Generic/ Open Electives (GEs or OEs). Various combinations of Major / Minor can be worked out based on Baskets of courses to be offered to the students by the University/ Colleges.

a) Department/ Subject Specific Core or Major (DSC)

Department/Subject Specific Core (DSC) is a single discipline course of study or specific subject course of study, which should be pursued by a student as a mandatory requirement of his/her programme of study. DSCs shall be the core credit courses of that particular Subject which will be appropriately graded and arranged across the semesters of study, being undertaken by the student, with multiple exit options as per NEP 2020. The DSCs specified in the framework would be identified by the concerned Department/ School of College/ University as core/ major courses to be taught in a Programme.

For example, for the award of single subject specific degree, such as four year B.A. (Honors/ Research)-Philosophy, B.A. (Honors/ Research)-History, B.Com. (Honors/ Research), B.Sc. (Honors/ Research)- Mathematics, B.Sc. (Honors/Research) Chemistry, B.A. (Honors/ Research)- Music and similar such programmes, DSCs shall be the core courses of Philosophy, History, Commerce, Mathematics, Chemistry and Music subjects respectively.

b) School Specific Core/ Major (SSC)

School Specific Cores (SSC) are more relevant to Honors degree programme in a 'Field of Multidisciplinary courses of Study' (choice of interrelated subjects rather than a single subject major) such as B.Sc. (Honors)- Life Sciences, B.Sc. (Honors)- Mathematical Sciences, B.A. (Honors)-Social Sciences, B.A. (Honors)- Performing Arts. Thus, the SSCs shall comprise of core/major credit courses of more than one but interrelated subjects. For example, in a B.Sc. (Honors) Life Sciences programme, the student shall study credit courses of following disciplines: Botany, Zoology and Biochemistry/ Microbiology. SSC 1 may be of Discipline A1 (Botany), SSC 2 may be of Discipline B1 (Zoology) and SSC 3 may be of Discipline C1 (Biochemistry/ Microbiology). However, the fourth year of such honors/research degree programme shall be devoted to the study of only one subject and hence the SSC courses in the VII and VIII semesters shall be of Subject A/B/C and not a combination of these three subjects. Similarly, B.A. (Honors/ Research)- Performing Arts will involve combinations of Theatre Arts, Music and Dance for the first three years and specific core subject in the final year. B.A. (Honors/ Research)- Social Sciences will involve combinations of History, Sociology and Philosophy for first three years and specific core subject in the final year.

c) Faculty/Discipline Specific Core/ Major (FSC)

Faculty/Discipline Specific Cores (FSC) permits choice of two different subjects as core /major for first three years. These subjects are not necessarily interrelated like School Specific Core (SSC) but they belong to one faculty/Discipline. For example: Physics and Chemistry in Science Faculty;

Sociology and Marathi in Humanity and Arts faculty etc. However, the fourth year of such honors/research degree programme shall be devoted to the study of only one subject out of the two subjects chosen by the student. Thus, the first subject (the one which is continued in final year) becomes major subject under FSC and the second subject (the one which is discontinued in final year) becomes auxiliary/ supplementary subject.

The choice of Department/Subject Specific Core (DSC) as Major is built on intensive specializations in Multidisciplinary domain while the choice of SSC as Major is based on School concept (i.e., interdisciplinary studies/ research in multidisciplinary domain). Thus, the choice of SSC as Major mandatorily requires choosing three inter-related subjects in that faculty/ discipline. On the other hand, FSC permits choosing any two subjects from that faculty/ Discipline which according to the student fulfills his/ her career aspirations. For example, a student, aspiring for career in Computational Chemistry, will select Chemistry as a major subject and Computer Sciences (or even Mathematics) as auxiliary/ supplementary subject.

d) **Department/Subject Specific Electives (DSE), School Specific Elective (SSE) and Faculty Specific Electives (FSE)**

There shall be a pool/ basket of DSEs/ SSEs/FSEs from which a student may choose a course of study. Thus, the Department/Subject Specific Electives (DSEs) shall be a pool/ basket of credit courses of that particular department/subject (single discipline course of study or specific subject course). The DSEs specified in the framework should be identified by the concerned Department as elective courses to be taught in a Programme. For example, to pursue B.Sc. (Honors/ Research) Physics, DSEs chosen should be from a pool/ basket of DSEs of Physics.

School Specific Elective (SSE) shall be a pool/ basket of credit courses from related disciplines (e.g., social sciences, life sciences, performing arts) for multidisciplinary programme of study. For example, to pursue B.Sc. (Honors) Life Sciences programme, the SSEs chosen should be a pool/ basket of courses of respective DSEs of Botany, Zoology and Biochemistry/ Microbiology/ Biophysics (the core subjects for this programme of study). However, to

pursue Honors/Research degree programme such as B.Sc. (Honors/ Research) Life Science, B.A. (Honors/ Research) Social Sciences/Humanities, B.A. (Honors/ Research)- Performing Arts, in the fourth year of such honors/research degree programme in the VII and VIII semesters, the student shall be required to choose DSEs from any one of the subject courses A/B/C and not a combination of these three subjects.

Faculty Specific Electives (FSE) shall be a pool/ basket of credit courses of respective DSEs (i.e., DSEs of two subjects chosen under FSC) from concerned faculty (Science, Engineering, Humanities and Arts, Commerce, interdisciplinary etc.). However, the fourth year of such honors/research degree programme shall be devoted to the study of DSEs of only one subject out of the two subjects chosen by the student.

e) **Minor Courses**

Students are expected to gain in-depth multi-/ inter-disciplinary understanding through theoretical and practical experiences, as well as an adequate knowledge base through the choice of minor subject and discipline. A list of minors could be drawn out from pool/ basket of courses by bunching up to 6-8 courses of the particular subject/s of roughly two to four credits each leading to a Minor. Minors should be used to bring focus on multi-disciplinary education as envisaged in the NEP 2020. The student choosing Department/ Subject Specific core (DSC) may choose minors from faculty/discipline unrelated to the major but something that complements the major. For example, students opting for Botany as DSC may choose Horticulture/ Crop Science as elective/ minor. However, students choosing School Specific and Faculty Specific Major (SSC and FSC) will have to compulsorily choose a Minor from other faculty/discipline.

2.3 Award of Major and Minor Degree in Four Year Multidisciplinary Degree Programme

a) A student pursuing four-year multidisciplinary UG programme in Department/Subject Specific Core (DSC) (Core/ Major Subject) shall be awarded an appropriate Honors/ Research degree with Major in the Subject on

completion of VIII Semester, if he/she secures in that subject (or that DSC) at least 50% of the total credits for that programme. He/she shall thus study specific number of DSCs and DSEs in that subject in eight semesters so as to cover at least 50% of the total credits. In case of Research Degree, he/she shall pursue research project and write dissertation in that Major in the VII and VIII semesters. Thus, a student pursuing four-year multidisciplinary UG programme in Physics as DSC, covering at least 50% of the total credits of the Programme in Physics and undertaking research project in Physics in the VII and VIII semesters, shall be awarded B.Sc. (Research) (Physics Major) degree on successful completion of the four year Multidisciplinary Degree Programme with minimum of 160 credits.

b) A student pursuing four-year undergraduate programme in School Specific Core/ Major (SSC) as Core (e.g., B.A. Social Sciences, B.Sc. Life Sciences, B.Sc. Physical Sciences, B.Sc. Mathematical Sciences, B.Com., B.A. Performing Arts and such other programmes) shall be awarded Honors/ Research degree with SSC-DSC (only subject continued in final year out of three SSC subjects) on completion of VIII Semester, if he/she secures in SSC at least 50% credits and in DSC at least 25% out of the total credits for that programme. He/she shall thus study specific number of SSCs and SSEs (i.e., DSCs and DSEs of the three subjects under SSC) in eight semesters so as to cover at least 50% of the total credits. He/she has to pursue studies in one DSC out of the three SSC subjects in the fourth year (Sem VII and VIII) and should secure at least 25% of the total credits in that DSC over a period of the four years. For instance, a student who pursues four-year B.Sc. (Honors) in Life Sciences (Biochemistry, Biotechnology and Microbiology) and studies Microbiology in fourth year, shall be eligible for the award of B.Sc. (Honors) [Life Sciences-Microbiology Major] degree on successful completion of four year Multidisciplinary Degree Programme with minimum of 160 credits, if he/she earns minimum of 50% credits in Life Sciences and minimum of 25% credits in Microbiology alone. If he/ she undertakes research project in that DSC (e.g., Microbiology in the above example) in the VII and VIII semesters, then a Research Degree will be awarded.

If the student wishes to possess another Honors/ Research degree in the second SSC subject studied (e.g., Biochemistry or Biotechnology in above example), he/she must repeat the fourth year (VII and VIII semesters) with the second subject as DSC. Thus, to be eligible for the award of second degree of B.Sc. (Honors/ Research) [Life Sciences-Biochemistry Major], the student must repeat the fourth year (VII and VIII semesters) with Biochemistry as DSC and secure minimum of 25% credits of the total Programme Credits in Biochemistry alone.

c) A student pursuing four-year undergraduate programme in Faculty/Discipline Specific Cores (FSC) as Core (e.g. For example: Zoology and Mathematics from Science Faculty; Economics and Hindi from Humanity and Arts faculty etc. and such other combinations belonging to the same faculty) shall be awarded Honors/ Research degree with FSC-DSC (the subject continued in final year out of the two FSC subjects) on completion of VIII Semester, if he/she secures in FSC at least 50% credits and in DSC at least 30% out of the total credits for that programme. He/she shall thus study specific number of FSCs and FSEs in eight semesters (i.e., DSCs and DSEs of the two subjects in six semesters and DSCs and DSEs of one subject in remaining two semesters) so as to cover at least 50% of the total credits. He/she has to pursue studies in one DSC out of the two FSC subjects in fourth year (Sem VII and VIII) and should secure at least 30% of the total credits in that DSC over four years. For instance, a student who pursues four-year B.Sc. (Honors) with Physics as Major (i.e., he/she continues studies of Physics in fourth year) and Chemistry as Supplementary/ Auxiliary subject (i.e., he/she discontinues studies of Chemistry in fourth year), shall be eligible for the award of B.Sc. (Honors) [Physics- Major and Chemistry- Auxiliary] degree on successful completion of four year Multidisciplinary Degree Programme with minimum of 160 credits, if he/she earns minimum of 50% credits in Physics and Chemistry subjects together and minimum of 30% credits in Physics alone. If he/ she undertakes research project in that DSC (e.g., Physics in above case) in the VII and VIII semesters, then a Research Degree will be awarded.

If the student wishes to possess another Honors/ Research degree in the second FSC subject studied (e.g., Chemistry in above example), he/she must repeat the fourth year (VII and VIII semesters) with the second subject as DSC. Thus, to be eligible for the award of second degree of B.Sc. (Honors/ Research) [Physics and Chemistry-Major], the student must repeat the fourth year (VII and VIII semesters) with Chemistry as DSC and secure minimum of 30% credits of the total Programme Credits in Chemistry alone.

d) A student may be awarded a Minor Degree under four year multidisciplinary degree programme. The student is eligible for the award of Minor Degree on successful completion of four year Multidisciplinary Degree Programme with minimum of 160 credits, if he/she earns 20-28 credits in that Minor Subject. Award of Minor Degree is independent of award of Major Degree (i.e., whether the student is pursuing DSC/SSC/FSC as core/ Major).

2.4 Generic/ Open Electives (GE or OE) and Baskets of Elective Courses in various Faculties/ Disciplines

Generic or open Electives shall be a pool/ basket of courses which is meant to provide multidisciplinary or interdisciplinary education to students. GEs or OEs shall consist of a pool/ basket of courses offered by the various departments under different discipline/faculty of study, in groups of odd and even semesters, from which a student can choose the appropriate GE/OE (excluding the GEs offered by the parent DSC/SSC/FSC Departments) which fulfils his/her career aspirations. Students can choose GE or OE subject combinations across the streams/ disciplines/ faculties. For example, a student who desires to make Entrepreneurship as a part of his career, can pick the appropriate combination of courses of Generic Electives, Skill and Vocational Courses, Value Education Courses, and Internship /Apprenticeship which shall be offered in the form of various modules as specified in the scheme of studies.

In case a student opts for DSEs beyond his/her subject/ discipline/ faculty (or school) specific course(s) of study, such DSEs shall be treated as GEs for that student.

As per the AICTE's Approval Process Handbook-2020-21: Chapter VII- clause 7.3.2 (Page 99-101), all programmes of Engineering and Technology shall offer Elective Courses in the Emerging Areas viz., Artificial Intelligence (AI), Internet of Things

(IoT), Blockchain, Robotics, Quantum Computing, Data Sciences, Cyber Security, 3D Printing and Design, Augmented Reality/ Virtual Reality (AR/VR), as specified in Annexure 1 of the Approval Process Handbook.

The GEs /OEs specified in the framework will be identified by the concerned Department/ School of the University/ College as GEs/OEs to be taught in a Programme and will be provided in the form of Basket of Elective Courses in Science Faculty, Basket of Elective Courses in Commerce, Liberal Arts basket, Basket of Electives/ Ability Enhancement Courses (AEC) in Language and Literature, Basket of Elective Courses in Education, Physical Education and Special Education, Basket of Elective Courses in Fine and Visual Arts, Basket of Courses in Life Skills and Value Education, Basket of Courses in Environmental Studies etc.

For example the Baskets of Elective courses in Science Faculty could comprise of following GEs /OEs identified by the different Departments/ Schools of the University/ College under Science Faculty as GEs/OEs to be taught in a Programme: Entrepreneurship Development, Introduction to Nanoscience and Nanotechnology, Basic knowledge in statistics, Statistical Packages, Astronomy and Astrophysics, Data Science, Earth and Environmental Sciences, Data analytics, Data Mining, Artificial Intelligence, Basic IT/coding skills, Computer Vision and Image Processing, Cyber security and Machine Learning etc. The courses related to Natural Sciences will focus on the development of an understanding of the natural world through application of scientific method characterized by observation, the experimentation, and formulation, testing and establishment of hypotheses based on natural phenomena.

The Baskets of Elective courses in the Social Sciences could include courses related to Anthropology, Communication and Media, Economics, History, Linguistics, Political Science, Psychology, Social Work, Sociology, etc. Social Sciences-related courses would focus on the study of the social behavior of individuals, groups, societies, nations, and states. Students will be introduced to the use of qualitative methods, such as ethnography, oral history, and descriptive analysis of archival materials and artifacts. They will also be introduced to the use of quantitative tools to collect and analyze data associated with social phenomena, and formulation of testable hypotheses based on social phenomena. They will provide opportunities to students to examine relationships among individuals, as well as relationships between groups of people and their societies.

2.5 Ability Enhancement Courses (AEC)-Languages, Literature, and Environmental Studies

AEC courses are the courses based upon the content that leads to knowledge enhancement through various areas of study. They are Language and Literature and Environmental Science and Sustainable Development which will be mandatory for all disciplines. Around 3-5 AEC courses will be offered in the first two years with a total of 6-10 credits. Students will pick up courses from the pool/ basket of Languages, Literature, and Environmental Studies.

As per section 22.4. of NEP 2020, language is inextricably linked to art and culture. Different languages 'see' the world differently, and the structure of a language, therefore, determines a native speaker's perception of experience. Art, in the form of literature, plays, music, film, etc. cannot be fully appreciated without language. The 22 languages of Eighth Schedule of the Constitution of India and dialects should be offered as language courses of 2-3 credits under AEC. Teaching and learning of Indian languages, dialects and comparative literature need to be integrated with school and higher education at every level. Government of Maharashtra, in line with NEP, should support HEIs to undertake the due initiatives for a steady stream of high-quality learning and print materials in Marathi and other languages including textbooks, workbooks, videos, plays, poems, novels, magazines, etc. The Marathi and other Language Departments across state Universities in Maharashtra must come together to provide and disseminate widely the consistent official updates in language vocabularies and dictionaries, so that the most current issues and concepts can be effectively discussed in these languages. Language-teaching should be more experiential, and it must focus on the ability to converse and interact in the language in addition to the teaching of literature, vocabulary, and grammar of the language. Languages must be used more extensively for conversation and for teaching-learning.

In tune with the directions given by NEP for promotion of local languages/ Mother Tongue, the HEIs in Maharashtra will facilitate, wherever possible, the use of Marathi as a medium of instruction in order to increase access and GER. In addition, some programmes can be offered bilingually to promote the strength, usage, and vibrancy of all Indian languages. Creating programmes and degrees in higher education across arts, languages, and humanities, will also come with expanded high-quality opportunities for employment that can make effective use of these qualifications for employment

opportunities in academies, museums including virtual museums/e-museums, art galleries, and heritage sites as well as tourism industry. The Indian and Foreign Language Departments should also offer basic courses to fulfil the language literacy requirements as per the NEP guidelines.

Environmental Studies should be offered as one course under AEC to promote the knowledge of ecosystem that surrounds us and stress the necessity of preservation of the same based on Sustainable Development Goals (SDG). Environment education will include areas such as climate change, pollution, waste management, sanitation, conservation of biological diversity, management of biological resources and biodiversity, forest and wildlife conservation, and sustainable development and living. The Environmental Studies course will also deepen the knowledge and understanding of India's environment in its totality, their interactive processes, and effects on the future quality of people's lives.

Combination of courses on English, Indian language (Marathi/ Hindi/ Sanskrit or other regional languages if offered in that college) (4-6 credits each) and Environment Studies (2 credits) can be taken as an example on AEC courses.

2.6 Professional Ethics, Value Education and Life Skills Courses (EVLSC)

For the progress and development of a civil society, Human Values and Professional Ethics are inevitable. According to the Great Indian Philosopher and Second President of India Bharat Ratna Dr. Sarvepalli Radhakrishnan, Education is not limited to the imparting of information or training of skills. It has to give the educated a proper sense of values. Thus, HEIs indeed have a responsibility to build a strong society. Therefore, Board of Studies (BoS) of HEIs should develop courses based on high quality practices and environment backed with human values and professional ethics as a part of four year multidisciplinary programmes in HEIs.

Value Education Courses are common pool of courses offered by different faculties/disciplines and are aimed at personality building embedding ethical, cultural and constitutional values promoting critical thinking and scientific temperament. Value-based education is expected to accomplish the development of humanistic, ethical, constitutional, and universal human values (UHV) of truth, righteous conduct, peace, love, nonviolence, scientific temper, citizenship values, and life- skills. Lessons in service and participation in community service programmes could also be included as an

integral part of the holistic education. Global Citizenship Education and education for sustainable development will form an integral part of the curriculum to empower learners to become aware of and understand global and sustainable development issues and to become active promoters of more peaceful, tolerant, inclusive, secure, and sustainable societies.

Courses on Life skills should be added to increase the employability as well as self-esteem of the students. These may include communication and presentation skills, interpersonal skills, time management, team work, flexibility, problem solving, professional skills, decision making skills, leadership abilities and universal values among others.

Combination of courses on Constitution, Gender, Diversity, and Inclusion (2 credits), Ethics and Values (2 credits) Soft Skills (2 credits) can be taken as one example on design of EVLS courses.

2.7 Courses or Modules on Indian Knowledge System (IKS)

As per NEP 2020, India, the world's third-largest economy on a purchasing power parity basis, is a nation with long civilizational history with more than 5000 years of recorded history, abundant cultural and archaeological artifacts, literature, and social and community practices which defines the base for Indian Knowledge. The Board of Studies (BoS), while defining the curriculum for modules/ courses on IKS, should understand that the historical accounts of science in India are woefully inadequate and need to see beyond the colonial lens. India's sciences are based on fundamental principles, axioms, logical inference, and empirical observations and were generally written down in texts called 'sastras and sutras'. Panini's astonishing grammar describes the Sanskrit language in 4000 algebraic rules with a structure that is now compared to a computer program. Kanada's physics has its laws of motion, and it speaks of nine classes of substances, some of which are non-atomic and some atomic. The ancient Ayurveda texts include the notion of germs and inoculation and postulate mind- body connection, which has become an important area of contemporary research. Indian disciplinary knowledge systems include fields as diverse as philosophy, architecture, grammar, mathematics, astronomy, metrics, sociology, economy and politics, ethics, geography, logic, military science, weaponry, agriculture, mining, trade and commerce, metallurgy, mining, shipbuilding, medicine, poetics, biology and veterinary science.

However, while designing the curriculum, it needs to be understood that the IKS is not about merely knowing some ancestral knowledge. If we closely follow the emerging patenting regime and the economic power arising out of a knowledge society, it becomes clear that the IKS is also about protecting received wisdom, economic security, and national pride. The patenting of traditional remedies from developing countries became a global issue after patents were granted for neem. After a legal battle for more than a year, Council of Scientific and Industrial Research (CSIR) has successfully forced the US Patent and Trademark Office (PTO) to revoke a contentious patent it granted two years ago to researchers in the United States on the use of powdered turmeric (*curcuma longa*) for wound healing. Thus, the IKS is a generic phrase that covers practically everything about India. Few courses in Indian Knowledge System, thus, may be offered in each Programme. For example, when the student selects Chemistry/ Material Science/ Metallurgical Engineering as DSC/SSC/FSC, then the courses of these subjects in first/ second year could include modules/ units on Rasa Ratna Samuccaya that details the complex Metallurgy, steel-making and zinc-smelting. The schools of thought, notably, Brahmasutra Bhashya by Sankaracharya, Sri Bhashya by Ramanujacharya, Gita Bhashya by Madhwacharya, Mulamadhyamakarika by Nagarjuna, and Pramana Samucchaya by Dignaga could be included as modules in the curriculum of philosophy. Similarly the various units/ modules of IKS that can be incorporated in different subjects could be as follows: Aryabhatiya and Varahamihira's Brithat Samhita and planetary movements, solar-centric world, shape and diameter of the Earth for Astronomy; Patanjali's Yogasutras for Yoga; Sushruta's Sushruta Samhita, surgical procedures, Health and Well-being, plants and herbs in Ayrveda, Kshemasarma's Kshemakutulam on Dietetics and Well-being for Pharmacy, Medicine and Surgery; Narada's Shilpasartra, Mayamuni's Mayamata for Architecture and Civil Engineering; Bhoja's Yuktikalpataru for Ship-building; the discovery of zero, decimal system of numerals, and approximation algorithms for computation of Pi, Shulba Sutras on Geometry, Lilavati of Bhaskarcharya a treatise on Mathematics for Mathematics and Computing; Panini's Ashtadhyayi on Sanskrit Grammar Languages and Linguistics; Public Administration including Good Governance and Taxation for Civics and Politics, Sayana's Sayana Bhashya on Vedas, Bharata's Natyasastra for Dance; Kautilya Arthasastra for Economics; Vishnu Sharma's Pancha Tantra Stories for Moral Sciences/ Value Education, Gautama's Nyaya Sutra on Logic and Law, Kanada's Vaiseshika

Sutras for Ontology etc. (Reference: 'Introduction to Indian Knowledge System: Concepts and Applications', B. Mahadevan, Vinayak Rajat Bhat, Nagendra Pavana R.N., PHI Learning Private Limited, Delhi, 2022). Alternatively, the IKS can be offered as separate course of two credits. All India Council for Technical Education (AICTE), while revising the curricula in 2018, introduced a mandatory non-credit course on Indian Knowledge Systems (IKS) along with courses on the Constitution of India and Environment Science.

In addition, Sanskrit studies can be connected to other contemporary and relevant subjects such as mathematics, astronomy, philosophy, linguistics, dramatics, yoga, etc. for development of Modules in IKS. Departments of Sanskrit should conduct teaching and outstanding interdisciplinary research on Sanskrit and Sanskrit Knowledge Systems across the new multidisciplinary higher education system.

2.8 Cocurricular Courses on Sports, Fine/Applied/Visual Arts and Cultural Activities

Cultural awareness and expression are among the major competencies considered important to develop in children, in order to provide them with a sense of identity and belonging, as well as an appreciation of other cultures and identities. The arts - besides strengthening cultural identity, awareness, and uplifting societies - are well known to enhance cognitive and creative abilities in individuals and increase individual happiness. The happiness/well-being, cognitive development, and cultural identity of individuals are important reasons for Indian arts of all kinds to be offered to students at all levels of education. HEIs should invite outstanding local artists and craftspersons as guest faculty to promote local music, art, languages, and handicraft, and ensure awareness of the culture and local knowledge amongst the students. BoS of HEIs should develop high-quality courses in Translation and Interpretation, Art and Museum Administration, Archaeology, Artifact Conservation, Graphic Design, and Web Design to develop highly qualified individuals to curate and run museums and heritage or tourist sites. This will also vastly strengthen the tourism industry. HEIs should also undertake efforts for conservation of artifacts and development of high-quality materials in Marathi and other Indian languages.

Course components relating to health and wellness seek to promote an optimal state of physical, emotional, intellectual, social, spiritual and environmental wellbeing of a person. Sports and fitness activities will be organized outside the regular institutional

working hours. Yoga education should focus on preparing the students physically and mentally for the integration of their physical, mental, and spiritual faculties, and equipping oneself with basic knowledge about one's personality, to maintain self-discipline and self-control, to learn to handle oneself well in all life situations. Sports and fitness components of the courses should focus on the improvement of physical fitness including the improvement of various components of physique and skills related to fitness like strength, speed, coordination, endurance and flexibility; acquisition of sports skills including motor skills as well as basic movement skills relevant to a particular sport; improvement of tactical abilities; and improvement of mental abilities.

Following activities may be undertaken under cocurricular courses to be offered as a part of four-year multidisciplinary degree programme:

i) Physical Education
ii) Activities related to Yoga/ Sports and Games
iii) Involvement in campus publication or other publications
iv) Publication of articles in newspapers, magazines
v) Community work such as promotion of values of National Integration, Environment, Human rights and duties, Peace, Civic sense etc.
vi) A Small project work concerning the achievements of India in different fields
vii) Evolution of study groups/seminar circles on Indian thoughts and ideas
viii) Activity exploring different aspects of Indian civilizations
ix) Involvement in popularization programmes such as scientific temper
x) Innovative compositions and creations in dance/music/theatre and visual arts.
xi) Any other activities such as Cultural/ Sports Activities as prescribed by the University.
xii) Evaluation of Co-curricular and Extension Activities/ Courses shall be as per the procedure prescribed by the university.

2.9 Open and Distance Learning (ODL) and Online Education

Open and Distance Learning (ODL) Mode provides flexible learning opportunities by overcoming separation of teacher and learner using a variety of media, including print, electronic, online and occasional interactive face-to-face meetings with the learners or Learner Support Services to deliver teaching-learning experiences, including practical or work experiences. Online Education mode offers the flexible learning opportunities

using internet, e-Learning Materials and full-fledged programme delivery through the internet using technology assisted mechanism and resources. As per section 12.5 of NEP 2020, the ODL and online education provide a natural path to increase access to quality higher education. Universities/ HEI should leverage the potential of ODL completely through concerted, evidence-based efforts while ensuring the adherence to the clearly articulated standards of quality. It should also ensure that ODL programmes are equivalent to the highest quality in-class programmes available. UGC (Open and Distance Learning Programmes and Online Programmes) Regulations, 2020 laid down the minimum standards of instruction for the grant of degrees at the undergraduate and post graduate levels and grant of post graduate diploma, through Open and Distance Learning (ODL) mode and Online mode.

The UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulations, 2021 permits up to 40 per cent of the total courses being offered in a particular programme in a semester through the online learning courses offered through the SWAYAM (Study Webs of Active–Learning for Young Aspiring Minds) platform. The courses hosted on SWAYAM are in 4 quadrants:

i) an e-Tutorial containing video and audio content in an organised form, animations, simulations, virtual labs;

ii) an e-Content containing e-Books or glossary, case study, frequently asked questions transcriptions of video lectures and any other specially prepared reading or study materials that can be downloaded/printed;

iii) a discussion forum, for discussion of doubts, opinions and comments with course-coordinators and others and

iv) a self-assessment process that shall contain multiple choice questions, problems, quizzes, assignments and solutions.

The schedule of the SWAYAM based online credit courses shall be aligned with the conventional education semester. The academic council of University will monitor the process of transfer of credit earned by the student at their parent institution. The academic council may allow the concerned Faculty Dean to approve the online credit courses of SWAYAM platform for credit transfer on the recommendation of the Head of the Department and Chairman, Board of Studies.

National Programme on Technology Enhanced Learning (NPTEL) (initiated by seven Indian Institutes of Technology (Bombay, Delhi, Kanpur, Kharagpur, Madras, Guwahati

and Roorkee) along with the Indian Institute of Science, Bangalore in 2003) provides quality MOOC in all major branches of engineering and physical sciences at the UG and PG levels and management courses at the PG level to anyone interested in learning from the IITs.

In addition, each state University may float individual Massive Open Online Courses (MOOCs) for enrollment by students outside the University for a fee to be decided by the University. These MOOCs must be developed as per the pedagogy following the four-quadrant approach.

2.10 Vocational Courses and Skill based Education

Vocational and Skill-based courses (VSC) in all disciplines/ faculties are aimed at providing hands-on-training, competencies, proficiency and skills to students. Every discipline may provide skill-based course, some of which may be offered to students of its discipline while the rest can be open to students of all other disciplines'.

The basic purpose of Vocational Courses is to enhance the skill and employability. The details on vocational courses and education are covered as a part of Professional Education in Chapter III while the mode of assessment of VSC are illustrated in Chapter IV. Skill supporting facilities and organizations are presented in Chapter VII. Besides vocational courses, some of the advanced lab courses in Chemistry/ Physics/ Electronics/Nanotechnology or similar skill-based courses under other subjects will also be considered as skill-based courses.

Few examples of Vocational Subjects are: Advertising, Computer Applications, Communicative English, Electronic Equipment Maintenance, Mobile, TV and Computer Maintenance, Analytical Instrumentation Operations, Entrepreneurship Development, Office/Home Management and Secretarial Practice, Sales Promotion and Management, Tax Procedure and Practice, Tourism and Travel Management, Hospitality, Solar System Maintenance, Agriculture (Organic Farming, Protected Cultivation, Production of Horticulture Crops, Floriculture, etc), Banking, Financial Services and Insurance, Construction, Health Care, Bakery Products, Dairy Technology, Soaps and Detergents, Cosmetic Formulations, Web design and animation, Media and Entertainment etc.

2.11 Internship, Apprenticeship, Field Projects, and Community Engagement Projects

a) Internship and Apprenticeship

India is going to have the largest working age population in the world by 2030, but gainful employment for general stream students is a major challenge. Improving employability of these students requires a new vision with curricular support for employment. Apprenticeship/Internship has a prominent role to play in linking higher education with the requirements of the industry and the world of work. This is considered to be one of the most effective ways to develop skilled manpower for the country. It provides for an industry led, practice oriented and outcome based learning. Striving to fulfill this objective of improving employability and forming robust industry-academia linkage, the UGC has framed Guidelines for Higher Education Institutions to offer Apprenticeship/Internship embedded Degree Programme. All four year UG students must complete a 4-6 credit requirement of Internship / Project in each year where they are engaged in 4-6 weeks of structured summer internship in research institutions/ industries. This will focus on outcome-based learning in degree programme and will enable students to demonstrate workforce professional abilities for potential employment. Every University will undertake MoUs with industry for industry-institute linkage for promotion of apprenticeship/ internship/ research/entrepreneurship/employment opportunities. AICTE has created a portal on its website: **https://internship.aicte-india.org** to support students to find internships as well as to help organizations to find best Interns on PAN India. While internship with an external organization is the most desirable option, alternatively a student may undertake minimum of 4-6 weeks of Project Work either at University Research Centers or at any pre-approved external Research Institutions/ CSIR Laboratories.

b) Community Engagement and Field Projects

The field-based learning/project should attempt to provide opportunities for students to understand the different socio-economic contexts. It should aim at giving students exposure to development-related issues in rural and urban settings. It will provide opportunities for students to observe situation in rural and urban contexts, and to observe and study actual field situations regarding issues related to socio-economic development. Students should be given opportunities to gain a

first-hand understanding of the policies, regulations, organizational structures, processes, and programmes that guide the development process. They should have opportunity to gain an understanding of the complex socio-economic problems in the community, and innovative practices required to generate solutions to the identified problems.

The curricular component of 'community engagement and service' seeks to expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. This component will include participation in activities related to National Service Scheme (NCC), National Cadet Corps (NCC), adult education/literacy initiatives and mentoring school students.

A minimum of 4-6 weeks of summer work, either on university campus in activities related to preservation of environment/biodiversity or community-based work in the neighboring community (through NSS unit) or field-level work with a recognized NGO or regional case studies programme at Villages may be undertaken as a part of Field projects.

As per UGC guidelines, Regional Case Study Course or Social Entrepreneurship Course, with 02 Credits, can be floated an optional mode or as add-on-credit with total duration of 30 hours. At least 50% of the course is to be done compulsorily in the field for all students.

c) **Study Tours**

The NEP 2020 (Section 22.12.) recognizes that the knowledge of the rich diversity of India should be imbibed first hand by learners. This would mean including simple activities, like touring by students to different parts of the country, which will not only give a boost to tourism but will also lead to an understanding and appreciation of diversity, culture, traditions and knowledge of different parts of India. HEIs can plan study tours under 'Ek Bharat Shrestha Bharat' concept and send students to visit various important destinations and study their history, scientific contributions, traditions, indigenous literature and knowledge, etc., as a part of augmenting their knowledge about our country.

2.12 Learning Outcomes-based Approach to Curriculum Planning and Development, Key Qualification Descriptors and Graduate Attributes

The fundamental premise underlying the learning outcomes-based approach to curriculum planning and development is that higher education qualifications such as a Bachelor's Degree programmes are awarded on the basis of demonstrated achievement of outcomes (expressed in terms of knowledge, understanding, skills, attitudes and values) and academic standards expected of graduates of a programme of study. Learning outcomes specify what graduates, completing a particular programme of study are expected to know, understand and be able to do at the end of their programme of study. The expected learning outcomes are used as reference points that would help formulate graduate attributes, qualification descriptors, programme learning outcomes and course learning outcomes which in turn will help in curriculum planning and development, and in the design, delivery and review of academic programmes. They provide general guidance for articulating the essential learnings associated with programmes of study and courses within a programme. UGC report on Evaluation Reforms in Higher Education Institutions (2019) and UGC Draft on Curricular Framework and Credit System for the Four-Year Undergraduate Programme (2022) have delineated the Framework for Outcome based Education and Assessment. The learning outcomes-based curriculum framework is intended to allow for flexibility and innovation in (i) programme design and syllabi development by higher education institutions (HEIs), (ii) teaching-learning process, (iii) assessment of student learning levels, and (iv) periodic programme review within a broad framework of agreed expected graduate attributes, qualification descriptors, programme learning outcomes and course learning outcomes. The overall objectives of the learning outcomes-based curriculum framework are to:

i) help formulate graduate attributes, qualification descriptors, programme learning outcomes and course learning outcomes that are expected to be demonstrated by the holder of a qualification;

ii) enable students, parents, employers and others to understand the nature and level of learning outcomes (knowledge, skills, attitudes and values) or attributes. A graduate of a programme should be capable of demonstrating the skills/knowledge/understanding on successful completion of the programme of study;

iii) maintain national standards and international compatibility of learning outcomes and academic standards to ensure global competitiveness, and to facilitate student/graduate mobility; and

iv) provide higher education institutions an important point of reference for designing teaching-learning strategies, assessing student learning levels, and periodic review of programmes and academic standards.

The graduate attributes reflect the particular quality and feature or characteristics of an individual, including the knowledge, skills, attitudes and values that are expected to be acquired by a graduate through studies at the colleges or universities. The graduate attributes include capabilities that help strengthen one's abilities for widening current knowledge base and skills, gaining new knowledge and skills, undertaking future studies, performing well in a chosen career and playing a constructive role as a responsible citizen in the society. The graduate attributes define the characteristics of a student's university degree programme(s), and describe a set of characteristics/competencies that are transferable beyond study of a particular subject area and programme contexts in which they have been developed. Graduate attributes are fostered through meaningful learning experiences made available through the curriculum, the total college/university experiences and a process of critical and reflective thinking. Learning Outcomes-based Curriculum Framework for Undergraduate Education is based on the premise that every student and graduate is unique. Each student or graduate has his/her own characteristics in terms of previous learning levels and experiences, life experiences, learning styles and approaches to future career-related actions. The quality, depth and breadth of the learning experiences made available to the students while at the higher education institutions help develop their characteristic attributes. The graduate attributes reflect both disciplinary knowledge and understanding, generic skills, including global competitiveness in all students in different academic fields of study which they should acquire/attain and demonstrate. Some of the characteristic attributes that a graduate should demonstrate are as follows:

i) Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.

ii) Communication Skills: Ability to express thoughts and ideas effectively orally and in writing, communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

iii) Critical thinking: Capability to apply analytic thought to a body of knowledge; analyze and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

iv) Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations.

v) Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

vi) Research-related skills: A sense of inquiry and capability for asking relevant/ appropriate questions, problematizing, synthesizing and articulating; Ability to recognize cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyze, interpret and draw conclusions from data, establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation.

vii) Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team.

viii) Scientific reasoning: Ability to analyze, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences from an open-minded and reasoned perspective.

ix) Reflective thinking: Critical sensibility to lived experiences, with self awareness and reflexivity of both self and society.

x) Information/digital literacy: Capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources and use appropriate software for analysis of data.

xi) Self-directed learning: Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion.

xii) Multicultural competence: Possess knowledge of the values and beliefs of multiple cultures and a global perspective; and capability to effectively engage in a multicultural society and interact respectfully with diverse groups.

xiii) Moral and ethical awareness/reasoning: Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. Capable of demonstrating the ability to identify ethical issues related to one's work, avoid unethical behavior such as fabrication, falsification or misrepresentation of data or committing plagiarism, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work.

xiv) Leadership readiness/qualities: Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, in a smooth and efficient way.

xv) Lifelong learning: Ability to acquire knowledge and skills, including 'learning how to learn', that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.

Expected graduate attributes/profile at different levels on National Higher Education Qualifications Framework (NHEQF) are presented under section 4.2.2 of UGC Draft on NHEQF (2022). Linkage between NHEQF Level Descriptors and Programme Learning Outcomes are presented under section 4.2.6. of NHEQF. NSQF (National Skills Qualifications Frame work) Level Descriptors are presented in Annexure I of NHEQF document. The NSQF organises qualifications according to a series of levels of knowledge, skills, and aptitude. It comprises 8 levels, representing increasing levels of

complexity in terms of the knowledge, competence and autonomy that must be demonstrated by the learner. Certificate /Diploma/ Degree is awarded to students who have demonstrated the achievement of the outcomes associated with the specific NHEQF level. Learning Outcomes Descriptors for higher education qualification at levels 4.5-8 on the NHEQF are presented in Annexure II of NHEQF document. As an example, in terms of the Knowledge and understanding at Level 5.5-basic three years Bachelor' s Degree, the graduates should be able to demonstrate the acquisition of:

- comprehensive, factual, theoretical, and specialized knowledge in broad multidisciplinary contexts with depth in the underlying principles and theories relating to one or more fields of learning.
- knowledge of the current and emerging issues and developments within the chosen fields of learning.
- procedural knowledge required for performing and accomplishing professional tasks associated with the chosen fields of learning.

One of the examples for the Programme Learning Outcomes (PLOs) for Generic Learning Outcomes in reference to Communication skills for physics (Annexure III NHEQF) could be the ability to communicate accurately the findings of the experiments/ investigations while relating the conclusions/findings to relevant theories of Physics. University BoS should refer NHEQF document and UGC Draft on Curricular Framework and Credit System for the Four-Year Undergraduate Programme (2022) for additional details on Outcome based Education.

2.13 Execution of Design of Curriculum of Multidisciplinary Four Year Degree and Five Year Integrated PG Programme through University BoS and Academic Council and State Level Academic Bodies

The Maharashtra Public Universities Act 2016, through Sections 32 and 33 (Academic Council), 34 and 35 (Faculty), 36 and 37 (Board of Deans), 38 and 39 (Board of Sub-campuses), 40 and 41(Board of Studies), 42 and 43 (Board of University Departments and Interdisciplinary studies), and 44 (Board of Post-Graduate Education in Colleges), describes the mechanism of curriculum development, upgradation/ revisions and reforms and the course syllabi, course structures and evaluation schemes of various courses so as to ensure that the university becomes a vibrant hub for promotion of teaching and learning, skill development, research and development, interactions and

linkages with industries, cultivation of intellectual property rights and entrepreneurship and incubation of knowledge linked industries. Thus, these statutory authorities are the principal bodies for the execution of rigorous research-based specialization and opportunities for multidisciplinary work and interdisciplinary thinking at the Graduate, Master's and Doctoral level education as recommended by NEP-2020. University BoS, while designing the curriculum of multidisciplinary four year degree and five year integrated PG programme, should pay attention to the following:

i) Exit options are provided with certification, diploma and basic Bachelor's degrees to the students at the end of the second, fourth and sixth semester of a four year multidisciplinary degree programme. Students will receive a Bachelor's degree with Honors/ Research on successfully completing of all eight semesters of the UG Program either at a stretch or with opted exits and re-entries.

ii) Under the Choice Based Credit System (CBCS), which is operational in several universities across States in India, the requirement for awarding a certificate or diploma or degree is prescribed in terms of number of credits to be earned by the students. The curriculum must be designed to provide coherent understanding of subjects, procedural knowledge, relevant skills and application to real life situations. The NEP 2020 envisages the revision of the CBCS for instilling innovation and flexibility as the four year multidisciplinary curriculum combines conceptual understanding with practical involvement and thinking to impart applicable knowledge through theory knowledge, laboratory experiences, seminar presentations, field work, internships, workshops, and research projects.

iii) Refer Chapter I for admission guidelines for normal progression and lateral entry Path for Multidisciplinary Four Year Degree and Five Year Integrated PG Programme in line with NEP-2020.

   a) The Programme curriculum design under CBCS should have flexibility for learners to move from one institution to another to enable them to have a multi and/or interdisciplinary learning. It should offer flexibility for students to study at different times and at different institutions to complete one Programme (ease mobility of students). Credits earned at one institution can be transferred. Hence, the University/ College will have to work out

prerequisites and entry norms for lateral admissions such as previous year CGPA, a written test and/or interview, requirement of bridge courses etc.

b) Lateral entry into the programme of study leading to the UG Diploma/ Three year UG Degree/ four year Bachelor's Degree with Honors /Research will be based on the validation of prior learning outcomes achieved, including those achieved outside of formal learning or through learning and training in the workplace or in the community, or through continuing professional development activities, or through independent/self-directed learning activities.

c) In case the lateral entrants is desirous of joining the four year degree programme different from his/her earlier Programme (i.e. with different combinations of Major and Minor), then the BoS of that HEI should decide the requirements of bridge courses, prerequisite courses and additional credit requirements for new combinations of Major and Minor which the lateral entrant must fulfill for the purpose of joining a new Programme. However, in terms of the admission eligibility requirements, the student must belong to the same faculty/ discipline in terms of Major Subject i.e., the Major subject of his/her earlier Programme and the Major subject of new Programme for which he/she is seeking admission must be from the same faculty/discipline.

iv) Credits against Total Notional Hours: In accordance with the international best practice and the current recommendations of NHEQF, the framework proposes that the number of credits per year for 1200 learning hours will be 40. Accordingly, every semester will comprise of 20 credits. Any additional program/ course undertaken by the student/ learner beyond the 1200 learning hours or beyond the purview of the course syllabus, shall be considered for additional credits that can be earned by the student/ learner. Therefore, the minimum credits that a student/learner can earn in a year shall be 40. Thus, the number of notional hours leading to one credit unit= 1200/ 40 = 30

v) Wherever necessary, if the curriculum so demands, the concerned regulator/ autonomous institution may consider having more than 40 credits for a particular program. However, the minimum credits for any program against 1200 hours of learning in a year will be 40.

vi) Any additional program/ course undertaken by the student/ learner beyond the prescribed 1200 learning hours or beyond the purview of the course syllabus, shall be considered for assignment of additional credits that can be earned by the student/ learner. Such programs could be custom programs to cater to the industry requirements run either directly by the institutions or through the industry/ organization. Hence depending on his or her interest, talent and capability, a student may earn credits beyond the ceiling of 40 credits. This provision will enable the student to undertake the dual degree/ dual Qualification programs as notified by UGC/ permitted by NCVET.

vii) Refer NHEQF document and UGC Draft on Curricular Framework and Credit System for the Four-Year Undergraduate Programme (2022) for working out the details on learning outcomes-based approach to curriculum planning and development.

viii) Specify for each academic programme considered at the Certificate / Diploma/Degree level (UG or PG level), the programme structure (core courses, optional courses, minor, ability enhancement courses, vocational courses etc and their year wise distribution), entry level requirements, minimum and maximum duration for successful completion, programme objectives, teaching-learning strategies (number of teaching hours/lecture hours, tutorial hours, practical conduct hours, etc. involved) and evaluation components (Summative and Formative type of assessment, nature and number of assignments, tutorials, tests, etc.) for the entire programme. Identify also the modules / courses that may be studied either as part of the programme or may be taken up independently.

ix) The HEIs shall offer different categories of subjects of study through every discipline/faculty, viz. Department/Subject Specific Core courses (DSCs) or School Specific Cores (SSC) or Faculty Specific Cores (FSC), Minor Subject courses and different categories of courses as Electives viz. Discipline/ Department/Subject Specific Electives (DSE) or School Specific Elective (SSE) or Faculty Specific Electives (FSE), and Generic/ Open Electives (GEs or OEs). Various combinations of Major and Minor should be worked out as per the guidelines given under Section 2.2 of this chapter so that the Learners will have

the flexibility to choose their learning trajectories and programmes, and thereby choose their own paths in life according to their talents and interests.

x) Conduct a comprehensive survey and decide on courses to be offered through the baskets of Elective courses in Various Faculties/ Disciplines, understand the outcomes sought by industries and society at large around the university area and the state overall. Due attention be given to the international standard adopted in curriculum design by the universities across the globe.

xi) Work out details on ODL and online courses under SWAYAM in terms of choice of courses in line with curriculum requirement, permissible credits to be offered and mechanism of credit awards and transfer. This will facilitate switching to alternative modes of learning (face-to-face, ODL and On-line learning, and hybrid modes of learning).

xii) Ability Enhancement courses (AEC), Value Education courses, Vocational and Skill based courses, and courses on Indian Knowledge System, Sports and Culture shall be a pool of courses offered by all the Department in groups of odd and even semesters from which students can choose.

xiii) A summer term is normally for eight weeks, and summer term courses may be offered on a fast- track mode to enable students to complete the arrears and do a 0-99 or 100-199 level courses. The HEI BoS can decide on the kind of courses to be offered in the summer term.

xiv) Internship / apprenticeship can be carried out during the summer term, especially for students who exit after two semesters or four semesters of study.

xv) Courses such as Artificial Intelligence (AI), 3-D machining, big data analysis, and machine learning, in addition to genomic studies, biotechnology, nanotechnology, neuroscience, with important applications to health, environment, and sustainable living need to be woven into multidisciplinary UG education for enhancing the employability of the youth and preparing professionals in cutting-edge areas.

xvi) Due stress should be given for diversity and local context in planning of all curricula, and pedagogy.

xvii) Refer section 1.3 of Chapter I for Codes and Levels of Courses for UG, PG and Ph.D. Programme.

xviii) A course, as a component of programme, may be designed to comprise lectures/ tutorials/laboratory work/ field work/outreach activities/project work/vocational training/viva/seminars/term papers/ assignments / presentations/self-study etc. or a combination of some of these.

xix) The courses should have well defined learning objectives and learning outcomes. Divide the syllabus of each course into smaller components called 'Units' and state the Specific Learning Outcomes (SLO) for each Unit.

xx) Define batch size for practical courses, class size for theory courses, total intake capacity and fee structure for each course (to be approved by Board of Deans, Fee Fixation Committee and Academic Council of respective Universities).

xxi) Specify the objectives and prerequisites of each course for inclusion under different multidisciplinary four year degree programme.

xxii) NCrF has provisions for educational acceleration for gifted students with special learning abilities who would like to move through traditional curriculum at rates faster than the normal pace. However, the specialised assessment methods, to be devised for evaluation of the exceptional learning abilities/ capabilities/ competencies of gifted students, have to be very strict, objective, above board and adhere to high-standard so as to keep the credibility of the NCrF intact. (Reference: Section 2.3.6, Page 27: Enabling Educational Acceleration of NCrF, Section 4.1, Page 73: Provisions for Creditisation of Special Cases of learning: Educational Accelerations, High-Level Inter-Ministerial Committee Report on National Credit Framework (Sept. 2022)).

xxiii) NCrF has provisions for Recognition of Prior Learning (RPL) for workforce who have acquired the knowledge and skills informally, through family inheritance, work experience, traditional or other methods, thereby allowing them progression and mobility into the formal education and learning ecosystem. Therefore, NCrF shall provide a gateway to the student/ learners/ persons/ workers to creditise their informal or mix of formal and informal experiential learning including relevant experience and professional levels acquired, or learning through other methods into credits at designated NCrF levels through a well-established outcome-based assessment process called Recognition of Prior Learning (RPL). (Reference: Section 4.2, Page 74-76: Provision for Recognition

for Prior Learning, High-Level Inter-Ministerial Committee Report on National Credit Framework (Sept. 2022)).

xxiv) The National Credit Framework (NCrF) also enables creditisation of Experiential learning including relevant experience and professional levels acquired, based on the weightage for relevant experience and proficiency levels achieved, subject to assessment. This means that the experience attained by a person after undergoing a particular education (including vocational) shall be considered for assignment of credits. A diagrammatic view of the dimensions of the credit assignment are illustrated in figure I, page no. 44 of High-Level Inter-Ministerial Committee Report on National Credit Framework (Sept. 2022). The principle of calculating credits acquired by a candidate by virtue of relevant Experiential learning including relevant experience and professional levels acquired and attaining/gaining proficiency levels (post completion of an academic grade/ skill based program) by the learner/student in the industry is delineated in the Table 7, page no. 56 of this NCrF Report.

In order to facilitate the exchange of philosophy of curriculum developments, uniform terminologies for Course Nomenclature and Common Academic Schedule/Calendar for admissions and examinations amongst the State Universities, a state level forum comprising of Deans and Chairman of Board of Studies of different Universities may be established.

A tentative curriculum structure and credit distributions for four year Multidisciplinary Degree Programme could be as given in Table 2.1 (Individual state universities can vary credit structure within limits defined by Multiple Entry and Exit and NHEQF document). Table 2.2 highlights the proposed structure for Four Year Multidisciplinary UG Program with DSC as Major (e.g., Four Year B.Sc. Honors/ Research Programme). Table 2.3 illustrates the proposed structure for level 4.5-8 Multidisciplinary Programmes [4 Year UG with SSC as Major, 5 Year Integrated PG and Ph.D.].

Table: 2.1

The Credit Distribution Structure for Four Year Multidisciplinary Degree Programme with Multiple Entry and Exit Options

Sem.	Major (DSC / SSC / FSC, DSE / SSE / FSE)	Minor	Generic (GE/OE)	Vocational and Skill	AEC, IKS, EVLSC	Internship, Project, Cocurricular	Total, Min
I	4-6	4-6	3-4		4-6		20
II	6-8	6	3-4		4-6	2	20
III	6-8	6	4	4	4-6		20
IV	6-8	4-6	2-4	4-6		4-6	20
V	8-10	2-4		4		4-6	20
VI	10-12			2-4		6(DSC)	20
VII	14					6 (DSC)	20
VIII	10					10(DSC)	20
Total	64-76	22-28	14-16	14-16	12-14	32-34	160

Table 2.2
Proposed Structure and Credit Distributions for Four Year Multidisciplinary UG Program with DSC as Major (e.g. Four Year B.Sc. Honors/ Research Programme)

Level	Sem.	Faculty			Any Faculty	Vocational and Skill Enhancement Course (VSC)	Ability Enhancement Course (AEC)	Field Projects / Internship / Apprenticeship / Community Engagement and Services	Credits	Cumulative Credit
		Subject -1 Major		Subject -2	Subject-3 Generic Elective Course			Inter-intra faculty		
		DSC	DSE	Minor						
Level 4.5	1	1 (6 Credits)		1 (6 Credits)	1 (4 Credits)		2 (L1, L2) (4 Credits)	NCC / NSS / Sports / Cultural (2Credits)	6+6+4+4+2 =22	44 Certificate
	2	1 (6 Credits		1 (6 Credits)	1 (4 Credits)		2 (L1, L2) (4 Credits) +1 (2 Credits) Environment		6+6+4+4+2 =22	
Exit Option with Certificate with Additional 10 Credit Bridge Course Corresponding to Skill-based and Vocational Courses and Internship on DSC										
Level 5.0	3	1 (6 Credits)		1 (6 Credits)	1 (4 Credits)	1 (4 Credits)		NCC / NSS / Sports / Cultural (2 Credits)	6+6+4+4+2 =22	88 Diploma
	4	1 (6 Credits		1 (6 Credits)	1 (4 Credits)	1 (4 Credits)	1 (2 Credits) Constitution of India		6+6+4+4+2 =22	

Table 2.2
Continued...

Level	Sem.	Faculty			Any Faculty	Vocational and Skill Enhancement Course (VSC)	Ability Enhancement Course (AEC)	Field Projects / Internship / Apprenticeship / Community Engagement and Services	Credits	Cumulative Credit
		Subject -1		Subject -2	Subject-3 Generic Elective Course			Inter-intra Faculty		
		Major		Minor						
		DSC	DSE							
Exit Option with Diploma with Additional 10 Credit NSQF Course and Internship on DSC										
Level 5.5	5	1 (6 Credits)	1 (6 Credits)			1 (4 Credits)		1 Field Projects / Internship / Apprenticeship / Community Engagement and Services (6 Credits) Related to DSC	6+6+4+6 = 22	132 Three Year Bachelor degree
	6	1 (6 Credits)	1 (6 Credits) + 1 (4 Credits)					1 Field Projects / Internship / Apprenticeship / Community Engagement and Services (6 Credits) Related to DSC	6+6+4+6 = 22	

Table 2.2
Continued...

Level	Sem.	Faculty			Any Faculty	Vocational and Skill Enhancement Course (VSC)	Ability Enhancement Course (AEC)	Field Projects / Internship / Apprenticeship / Community Engagement and Services	Credits	Cumulative Credit
		Subject -1		Subject -2	Subject-3 Generic Elective Course			Inter-intra Faculty		
		Major		Minor						
		DSC	DSE							
Exit Option Three Year Bachelor of Science B.Sc. Additional 10 Credits Bridge Courses Corresponding to Skill-based and Vocational Courses and Internship on DSC										
Level 6.0	7	1 (6 Credits)	1 (6 Credits)	1 Research Methodology (4 Credits)				Field Projects / Internship / Apprenticeship/ Community Engagement and Services (6 Credits) Related to DSC	6+6+4+6 = 22	176 Four Year Bachelor (Honors) Degree in Main Faculty
	8	1 (6 Credits)		1 (6 Credits)				1 Field Projects / Internship / Apprenticeship (10 Credits) Related to DSC	6+6+10= 22	
		48 Credits	22 Credits	34 Credits	16 Credits	12 Credits	12 Credits	28 Credits	132 Credits	

Table 2.2
Continued...

Level	Sem.	Faculty			Any Faculty	Vocational and Skill Enhancement Course (VSC)	Ability Enhancement Course (AEC)	Field Projects / Internship / Apprenticeship / Community Engagement and Services	Credits	Cumulative Credit
		Subject -1		Subject -2	Subject-3 Generic Elective Course			Inter-intra Faculty		
		Major		Minor						
		DSC	DSE							
Level 6.0	7	1 (6 Credits)	1 (6 Credits)	1 Research Methodology (4 Credits)				1 Research Project / Dissertation (6 Credits) Related to Major Subject	6+6+4+6 =22	176 Four Year Bachelor Degree by Research in Main Faculty
	8	1 (6 Credits)		1 (6 Credits)				1-Research Project / Dissertation (10 Credits) Related to Major subject	6+6+10= 22	
		48 Credits	22 Credits	34 Credits	16 Credits	12 Credits	12 Credits	28 Credits	176 Credits	
		70 Credits								

Table: 2.3:
Proposed Structure and Credit Distributions for Level 4.5-8 Multidisciplinary Programmes [4 Year UG with SSC as Major, 5 Year Integrated PG and Ph.D.]

Year (Level) and Semester		Subject I	Subject II	Subject III	Subject IV	Vocational & Skills (VSC), Ethics &Value Ed. (EV), Life Skills (LS)	GE, AEC, Co-Curricular Courses (CCC)	Internship / Regional Case Studies (RSC)/ Research Project	Min. Credits For the year (Sem)	Cumulative Min. Credits Required for Award of Certificate/ Diploma/ Degree
		SSC-I	SSC-II	SSC-III	Minor Subject			SSC		
		2/3/4 Credits	2/3/4 Credits	2/3/4 Credits	2/3/4 Credits	3 Credits	AEC:2, GE:2 credits, CCC (Non-Credit Qualifying (NCQ))	2/4/6/12 Credits		
Year (Level)	Sem.	SSC& SSE: Interrelated subjects from Same Faculty (School concept: Botany, Zoology, Biochemistry under Science; Sociology, Political Science, Economics under Humanities)			Other Faculty	VSC, EV, LS		Inter/Intra Faculty related to SSC		
1 (4.5)	I	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(2)	VSC: 1(2), EV: 1(2)	AEC: 2(2), CCC (NCQ)		44 (22+22)	{44} Certificate in Faculty
	II	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(2)	VSC: 1(2), EV: 1(2)	AEC: 1(2), GE:1(2)			
2 (5)	III	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	VSC: 1(2), LS: 1(2)	AEC: 1(2), CCC (NCQ)	RSC 1(2)	48 (24+24)	{92} Diploma in Faculty
	IV	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(2) + Pr.-1(2)	VSC: 1(2), LS: 1(2)	GE:1(2)	Internship 1(2)		

Table 2.3
Continued...

Year (Level) and Semester		Subject I	Subject II	Subject III	Subject IV	Vocational & Skills (VSC), Ethics &Value Ed. (EV), Life Skills (LS)	GE, AEC, Co-Curricular courses (CCC)	Internship / Regional Case Studies (RSC)/ Research Project	Min. Credits For the year (Sem)	Cumulative Min. Credits Required for Award of Certificate/ Diploma/ Degree
		SSC-I	SSC-II	SSC-III	Minor Subject			SSC		
		2/3/4 Credits	2/3/4 Credits	2/3/4 Credits	2/3/4 Credits	3 Credits	AEC:2, GE:2 credits, CCC (Non-Credit Qualifying (NCQ))	2/4/6/12 Credits		
Year (Level)	Sem.	SSC& SSE: Interrelated subjects from Same Faculty (School concept: Botany, Zoology, Biochemistry under Science; Sociology, Political Science, Economics under Humanities)			Other Faculty	VSC, EV, LS		Inter/Intra Faculty related to SSC		
3 (5.5)	V	Th-2(4) or Th-[1(4)+ 1(2)] + Pr.-1(2)	Th-2(4) or Th-[1(4)+ 1(2)] + Pr.-1(2)	Th-2(4) or Th-[1(4)+ 1(2)] + Pr.-1(2)					48 (24+24)	{140} Three Year Bachelor-Major Degree in SSC and Minor Degree
	VI	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(3) + Pr.-1(1)	Th-1(4) or Th- 1(2) + Pr.-1(2)	VSC: 2(2)		Internship 1(4)		
4 (6)	VII	Th-4(3) or Th-2(4)+ Pr.-2(2)	Research Methodology1(4)		Th-1(2) or Pr.-1(2)			Internship 1(2), Research Project (4)	46 (24+22)	{186} Four Year Bachelor Research Degree in SSC-SSC1 and Minor Degree
	VIII	Th-4(2) or Th-1(4)+ Pract-2(2)			Th-1(2)			Research Project (12)		
	Course Work 3 (4)									

Table 2.3
Continued...

Year (Level) and Semester		Subject I	Subject II	Subject III	Subject IV	Vocational & Skills (VSC), Ethics &Value Ed. (EV), Life Skills (LS)	GE, AEC, Co-Curricular courses (CCC)	Internship / Regional Case Studies (RSC)/ Research Project	Min. Credits For the year (Sem)	Cumulative Min. Credits Required for Award of Certificate/ Diploma/ Degree
		SSC-I	SSC-II	SSC-III	Minor Subject			SSC		
		2/3/4 Credits	2/3/4 Credits	2/3/4 Credits	2/3/4 Credits	3 Credits	AEC:2, GE:2 credits, CCC (Non-Credit Qualifying (NCQ))	2/4/6/12 Credits		
Year (Level)	Sem.	SSC& SSE: Interrelated subjects from Same Faculty (School concept: Botany, Zoology, Biochemistry under Science; Sociology, Political Science, Economics under Humanities)			Other Faculty	VSC, EV, LS		Inter/Intra Faculty related to SSC		
5 (6.5)	IX	Th-4(4)+1(2) or Th-3(4) + Pr.-3(2)						Research Project (4)	44 (22+22)	{230} Master in Faculty SSC1
	X	Th-4(4) or Th-3(4)+ Pr.-2(2)						Research Project (6)		
Level 8		Course Work 3 (4)	Research Methodology1(4)		Education Course on Teaching Methodology 1(4)			Ph.D. Thesis	16 + Ph.D. Work	Ph.D. in Subject

Note: Th-Theory, Pr.-Practical; GE-Generic Electives, AEC: Ability Enhancement Courses- Languages and ES, Th-1(4): 1 Theory course or paper with 4 credits; Th- 1(3) + Pr.-1(1): The paper comprises 1 Theory course with 3 credits and Practical Course with 1 credit; VSC:1(2)-1 Vocational and Skill course with 2 credits

Chapter III

Credit Structures and Curriculum Development for Professional Multidisciplinary Programmes with NVEQF and AICTE / PCI / ACI / BCI / NCT Guidelines

Chapter III

Credit Structures and Curriculum Development for Professional Multidisciplinary Programmes with NVEQF and AICTE / PCI / ACI / BCI / NCT Guidelines

The duration and specialisations have wide variations in the professional undergraduate (UG) and postgraduate (PG) education in engineering, medical, pharmacy, architecture, legal studies and Education. As per section 18.7 of NEP 2020, the professional councils, such as the National Council for Teacher Education (NCTE), Council of Architecture (CoA), National Council for Vocational Education and Training (NCVET), Indian Council for Agricultural Research (ICAR), Veterinary Council of India (VCI), etc., will act as Professional Standard Setting Bodies (PSSBs). The PSSBs will lay down academic standards and coordinate between teaching, research and extension of their domain/discipline and will also set the standards or expectations in particular fields of learning and practice. All HEIs will plan their educational programmes in reference to these standards. NCrF shall act as a broad enabling framework for all regulatory organizations (UGC, AICTE, NCVET, NCERT etc.), and autonomous institutions, including Universities, INIs, CBSE, NIOS, State School Boards, State Technical Education Boards, etc..

3.1 Technical Education

Technical education includes degree and diploma programmes in, engineering, technology, management, architecture, town planning, pharmacy, hotel management, catering technology etc., which are critical to India's overall development. Considering the technological development, the world is witnessing, there will not only be a greater demand for well-qualified manpower in these sectors, it will also require closer collaborations between Industries and HEIs to drive innovation and research in these fields. Furthermore, influence of technology on human endeavors is expected to erode the silos between technical education and other disciplines too. Technical education will, thus, also be offered within multidisciplinary education institutions and programmes to have a renewed focus on opportunities to engage deeply with other disciplines. India must also take the lead in preparing professionals in cutting-edge areas that are fast gaining prominence, such as Artificial Intelligence (AI), 3-D Machining, Big Data Analysis, and Machine Learning, in addition to Genomic Studies,

Biotechnology, Nanotechnology, Neuroscience, with important applications to health, environment, and sustainable living that will be woven into undergraduate education to enhance the employability of the youth.

The duration of the Bachelor's and Master's degree programmes in technical education are four and two years, respectively. The Prerequisite School Education and/ or vocational education for Engineering and Technology education with multiple entry-exit options, as per NHEQF and recently floated guidelines, are given in Table 3.1 and Table 3.2.

Table 3.1:
Prerequisite School Education and/or Vocational Education for Professional Courses

Levels	Qualification title	Remark
3.0	10^{th} Standard	—
3.5	11^{th} Std. or certificate of vocation	The subject with max. marks secured + bridge course on skills
4.0	12^{th} Std. or ITC	ITC+ Bridge course on PCMB 12^{th} Std.+ bridge course on skills

Table: 3.2:
Multidisciplinary Engineering and Technology Education with Multiple Entry-Exit Options

Levels	Qualification title	Credit requirements (min.)	Years/ Sem	Remark
4.5	UG Certificate (Engg)	40	1 year, 2 Sem	The subject with max. marks secured + bridge course on skills
5.0	UG Diploma (Engg)	80	2 years, 4 Sem	by mapping credits and courses equivalent to Diploma secured after 10+2
5.5	Bachelor of Vocation (B.Voc.) Degree	120	3 years, 6 Sem	By mapping credits and specialized skill training on particular domain
6.0	BE/ B.Tech. (Degree in Engg. & Tech)	160	4 years, 8 Sem	Bachelor's Degree with specialization
6.5	PG Diploma / M.Voc.	200	5 years, 10 Sem	Certificate on Specialization given after undergoing additional courses in blended mode
7.0	PG Degree/ ME or M.Tech.	240	6 years, 12 Sem	PG Degree with specialization

The details on Honors and Minor Degree Programs in Engineering and Technology are presented in section 5.3 of Chapter V.

At each entry, the HEIs need to identify the educational skill gaps with suitable bridge courses designed on the basis of gap analysis. To make the students more employable after each exit, the skill component with progressive enhancement in skills in respective disciplines may be added by concerned BoS in the curriculum right from the first year of the programme. Academic Council of state universities may take initiatives to offer Technical and Professional Courses in State Language-Marathi.

3.2 Vocational Education

Stress on vocational education is in alignment with Sustainable Development Goal 4.4 and will help to realize the full potential of India's demographic dividend. As per section 16.1. of NEP 2020, the 12th Five-Year Plan (2012–2017) estimated that only a very small percentage of the Indian workforce in the age group of 19–24 (less than 5%) received formal vocational education whereas, in countries such as the USA the number is 52%, in Germany 75%, and in South Korea it is as high as 96%. These numbers only underline the urgency of the need to hasten the spread of vocational education in India, an issue that has been addressed initially by launching the National Vocational Education Qualification Framework (NVEQF) which was later on assimilated into the National Skills Qualifications Framework (NSQF). Subsequently UGC decided to implement the scheme of Community Colleges as one of its independent schemes. Another scheme of B.Voc. Degree programme was also launched to expand the scope of vocational education and also to provide vertical mobility to the students admitted into Community Colleges from Diploma programmes to a degree programme in the Universities and Colleges. All these schemes are merged into a single framework for providing skill-based education. National Skills Qualifications Framework (NSQF) is a national competency-based framework that organizes qualifications according to the series of knowledge, skills and aptitude and provides for multiple pathways, horizontal as well as vertical to facilitate mobility both within vocational education and training/ skilling and between vocational education and training/ skilling and general education thus linking one level of learning to another higher level. The NSQF is also a quality assurance framework as it organizes qualifications in a series of 8 levels based on professional knowledge, professional skills, core skills and responsibilities, in the

increasing order of complexity and competency. These levels are defined in terms of learning outcomes which are an explicit description of what a learner should know, understand and be able to do as a result of learning, regardless of whether these competencies were acquired through formal, non-formal or informal learning. This enables learners to acquire desired competency levels, transit to the job market, and at an opportune time, return for acquiring skills as required to further upgrade their competencies.

NSQF has 5 level descriptors namely Professional Theoretical Knowledge, Professional and Technical Skills/ Expertise, Employment Readiness & Entrepreneurship Skills & Mind-set, Broad Learning Outcomes, and Responsibility for deciding the NCrF level to be assigned. NSQF also has entry requirements, notional hours, NCrF credit levels earned (which is in line with NCrF). Similarly, for National Higher Education Qualification Framework (NHEQF), the element of the Descriptor includes knowledge and understanding, skills required to perform and accomplish tasks; application of knowledge and skills; generic learning outcomes; Constitutional, humanistic, ethical, and moral values; employment- ready skills and entrepreneurship skills and mindset; Credit requirements, Entry requirements for deciding the NCrF level to be assigned. Thus, the credit-based Framework-NCrF will facilitate mobility across 'general' and vocational education.

HEIs can offer vocational education either on their own or in partnership with industries and NGOs. The B.Voc. degrees introduced in 2013 will continue to exist, but vocational courses will also be made available to students enrolled in all other Bachelor's degree programmes, including the 4-year multidisciplinary Bachelor 's programmes. HEIs will also be allowed to conduct short-term certificate courses in various skills including soft skills. 'Lok Vidya', i.e., important vocational knowledge developed in India, will be made accessible to students through integration into vocational education courses. The possibility of offering vocational courses through ODL mode, different models of vocational education, and apprenticeships will have to be explored by HEIs. Assignment of Credits has been enabled for online, digital and blended learning in vocational education and skilling to expand the open /distance learning options and to promote extensive use of technology in learning and skilling. This would help in overcoming the

constraints of physical infrastructure and scalability while enhancing access, equity, and affordability and ensuring quality and accountability. The blended learning option shall also enhance accessibility of learning in Indian language for non-English medium students as well as for Divyangs.

State Universities in Maharashtra have already established Incubation centers and their partnership with industries need to be strengthened for promotion of Vocational and Skill Based Education.

The credit assignment for vocational/ skill education as per NSQF levels and credit assignment at different levels are well illustrated in the Table 3 (Page No. 41) and Table 6 (Page No. 48-54) presented in High-Level Inter-Ministerial Committee Report on National Credit Framework (Sept. 2022). These depictions would form the basis of Long Term Training/ Short Term Training (LTT/STT) requirements in reference to NSQF Levels, NSQF/ NCrF level attained after VET/ STT/ LTT, Minimum entry criteria for undergoing STT at the given level, and Credit Points earned.

3.3 Teacher Education

As per section 15.1 of NEP 2020, Teacher education is vital in creating a pool of school teachers that will shape the next generation. Teacher preparation is an activity that requires multidisciplinary perspectives and knowledge, formation of dispositions and values, and development of practice under the best mentors. Teachers must be grounded in Indian values, languages, knowledge, ethos, and traditions including tribal traditions, while also being well-versed in the latest advances in education and pedagogy. As teacher education requires multidisciplinary inputs, and education in high-quality content as well as pedagogy, all teacher education programmes must be conducted within composite multidisciplinary institutions.

All multidisciplinary universities and colleges should establish education departments which, besides carrying out cutting-edge research in various aspects of education, will also run B.Ed. programmes, in collaboration with other departments such as psychology, philosophy, sociology, neuroscience, Indian languages, arts, music, history, literature, physical education, science and mathematics. The 4-year integrated B.Ed. offered by such multidisciplinary HEIs will, by 2030, become the minimal degree qualification for school teachers. The 4-year integrated B.Ed. will be a dual-major holistic Bachelor's

degree, in Education as well as a specialized subject such as a language, history, music, mathematics, computer science, chemistry, economics, art, physical education, etc. Beyond the teaching of cutting-edge pedagogy, the teacher education will include grounding in sociology, history, science, psychology, early childhood care and education, foundational literacy and numeracy, knowledge of India and its values/ethos/art/traditions, and more. The HEI offering the 4-year integrated B.Ed. may also run a 2-year B.Ed., for students who have already received a Bachelor's degree in a specialized subject. A 1-year B.Ed. may also be offered for candidates who have received a 4-year undergraduate degree in a specialized subject. HEIs offering teacher education programmes will ensure the availability of a range of experts in education and related disciplines as well as specialized subjects. Each higher education institution will have a network of government and private schools to work closely with, where potential teachers will teach students along with participating in other activities such as community service, adult and vocational education, etc.

Faculty with training in areas of social sciences that are directly relevant to school education e.g., psychology, child development, linguistics, sociology, philosophy, economics, and political science as well as from science education, mathematics education, social science education, and language education programmes will have to be attracted and retained in teacher education institutions, to strengthen multidisciplinary education of teachers and provide rigor in conceptual development.

In-service continuous professional development for college and university teachers will continue through the existing institutional arrangements and ongoing initiatives. These will be strengthened and substantially expanded to meet the needs of enriched teaching-learning processes for quality education. The use of technology platforms such as SWAYAM/DIKSHA for online training of teachers will be encouraged, so that standardized training programmes can be administered to large numbers of teachers within a short span of time.

3.4 Law Education

As per section 20.4. of NEP 2020, legal education needs to be competitive globally, adopting best practices and embracing new technologies for wider access to and timely delivery of justice. At the same time, it must be informed and illuminated with Constitutional values of Justice - Social, Economic, and Political - and directed towards

national reconstruction through instrumentation of democracy, rule of law, and human rights. The curricula for legal studies must reflect socio-cultural contexts along with, in an evidence-based manner, the history of legal thinking, principles of justice, the practice of jurisprudence, and other related content appropriately and adequately. State institutions offering law education must consider offering bilingual education for future lawyers and judges - in English and in the language of the State in which the institution is situated.

Chapter IV

Examination and Assessment Process and Multiple Exit Path for Four Year Multidisciplinary Degree and Five Year Integrated PG Programme in line with NEP-2020

Chapter IV

Examination and Assessment Process and Multiple Exit Path for Four Year Multidisciplinary Degree and Five Year Integrated PG Programme in line with NEP-2020

As per NHEQF, Qualifications are formal 'awards' such as a certificate, diploma or a degree, awarded by a competent authority such as a college or a university in recognition of the attainment by students of the expected learning outcomes on the successful completion of a particular programme of study. Qualifications in the traditional sense implies that someone has successfully completed a prescribed programme of study or training programme offered by an educational institution.

4.1 Exit Path for Multidisciplinary four year Degree and Five Year PG Degree Programme:

a) 1st Year Exit 1 of Level 4.5

A certificate will be awarded when a student exits at the end of year 1 (Level 4.5). The first year of the undergraduate programme builds on the secondary education and requires a min. of 40 credits during the first year of the undergraduate programme for qualifying for an undergraduate certificate. An exit 10- credit bridge course(s)lasting two months, including at least 6- credit job-specific internship/apprenticeship that would help the graduates acquire job-ready competencies required to enter the workforce would be an additional requirement for award of the undergraduate certificate.

b) 2nd Year Exit 2, Level 5.0

At the end of the 2nd year, if a student exits, a diploma shall be awarded (Level 5). A diploma requires min. of 80 credits from levels 4.5 to 5.0, with a min. of 40 credits at level 5.0, followed by an exit 10- credit NSQF compliant skill-based course(s) lasting two months, including at least 6-credit job-specific internship/apprenticeship that would help the graduates acquire job-ready competencies required to enter the workforce.

c) 3rd Year Exit 3, Level 5.5

On successful completion of three years, a relevant degree shall be awarded (Level 5.5). A Bachelor's degree requires min. of 120 credits from levels 4.5 to 5.5, with a min. of 40 credits at level 4.5, a min. of 40 credits at level 5, and a min. of 40 credits at level 5.5, followed by an exit 10-credit bridge course(s) lasting two months, including at least 6-credit job-specific internship/apprenticeship that would help the graduates acquire job-ready competencies required to enter the workforce.

d) 4th Year Exit 4, Level 6

On the successful completion of the fourth year, a student shall be awarded a degree (Honors/Research). A Bachelor's degree (Honors/Research) requires a minimum total of 160 credits from levels 4.5 to 6, with a min. of 40 credits at level 4.5, a min. of 40 credits at level 5, and a min. of 40 credits at level 5.5, and a min. of 40 credits at level 6. Bachelor's degree 'with research' would be awarded if the student completes a rigorous research project in her/his major area(s) of study in line with the requirements specified under section 2.3 of Chapter 2.

Thus, exit options are provided with certification, diploma and basic Bachelor's degrees to the students at the end of the second, fourth and sixth semester of a four year multidisciplinary degree programme. Students will receive a Bachelor's degree with Honors/ Research on successfully completing all eight semesters of the UG Program either at a stretch or with opted exits and re-entries.

A student will be allowed to exit only after the even semester and enter in odd semester.

An exit 10- credit skill-based bridge course(s) lasting two months are prescribed at different levels of exit to acquire job-ready competencies required to enter the work force. **Table 4.1** presents the examples of skill -based bridge courses that can be suggested by HEI for multiple exits at different levels for a four year multidisciplinary B.Com. Degree.

Table 4.1:

Examples of Skill-based Bridge Courses to be Pursued for Exit at different Levels for a Four Year Multidisciplinary B.Com. Degree

1. Foundation Course on Share Market	38 Data Science and Machine Learning using Python
2. English Communication Skills	39 Ethical Hacking & Cyber Security (Foundation Program)
3. Personality Grooming	40 Fashion Design, Merchandising & Entrepreneurship
4. Foreign Language (German)	41 Photography for Fashion & E-commerce
5. Cyber Security	42 Event Management, Marketing & Public Relations
6. Management of E-Commerce Store	43 Fashion Modeling & Beauty Pageant Grooming/ Fashion Styling
7. Supply Chain Management	44 Interior Design & Architecture Planning
8. Block Chain Management	45 Filmmaking, Direction & Screenplay
9. Salon and Spa Management	46 Mass Communication & Digital Media Productions
10. Sports Commentary	47 Fine Arts and Digital Arts
11. Intellectual Property Rights	48 Photography (Still & Video)
12. ERP Management	49 Acting For Films, TV& Theatre
13. Franchise Management	50 Radio Jockeying, Anchoring, TV Journalism
14. Brand Building/Management	51 Animation, Motion Graphics & Video Editing
15. Direct Marketing	52 3d Animation & Video Editing
16. International Business Environment	53 Digital Marketing & Social Media Advertising
17. Information Technology in Business	54 Graphic Designing, DTP& Video Editing
18. Business Analytics	55 Insurance Marketing and Client Management
19. Financial Modelling	56 Life Insurance – Underwriting and claims
20. Corporate Governance	57 Business Analytics
21. Financial Management	58 Financial Modeling
22. Fundamentals of Quality Management	59 Tax Planning
23. Entrepreneurship Management	60 Green and Rural Marketing
24. Tax Planning	61 Logistic and supply Chain Management
25. Green and Rural Marketing	
26. E Business and Cyber Laws	
27. International Human Resource Management	
28. Financial Planning	
29. GST	
30 Advanced Excel and Tally	
31 Social Marketing	
32 Spanish / German/ French Language	
33 Data Analytics Web Designing and Animation	
34 Travel and Tourism	
35 Airfare and Ticketing	
36 Office Automation & E-Accounting	
37 Secretarial Practices and Administration	

e) Learning Outcomes for Multidisciplinary Four Year UG Degree

The NEP 2020 has proposed a renewed Graduate Student outcome and here the student is expected to be a well-rounded, self-driven knowledge seeking, innovative and creative researcher. A National Qualifications Framework (NQF) is an instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved, which would integrate and coordinate the qualifications from each education and training sector into a single comprehensive qualification framework. Qualifications such as Certificate, Diploma, Degree are awarded after an assessment and evaluation of learning levels that determine the achievement by students of the expected learning outcomes to the given standards. Qualifications can also signify the competence to follow an occupational practice. The pedagogy in a four year degree programme also has an increased emphasis on communication, discussion, debate, research, and opportunities for cross-disciplinary and interdisciplinary thinking. The Learning Outcomes for Multidisciplinary four year UG Degree, as per NHEQF, would be as follows

i) have demonstrated knowledge and understanding in a field of study that builds upon their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study;

ii) can apply their knowledge and understanding in a manner that indicates a professional approach to their work or vocation, and have competences typically demonstrated by devising and sustaining arguments and solving problems within their field of study.

iii) have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical issues.

iv) can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

v) have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.

f) **Master's Programme Exit Path: Exit 5, level 6.5 and Learning Outcomes for PG Degree**

For postgraduate programmes, there shall only be one exit point for those who join the two-year Master's programme, that is, at the end of the first year of the Master's programme. Students who exit after the first year shall be awarded the Post-Graduate Diploma.

For Five-Years Integrated Master's Degree programme, students can have exit options at the end of the first year with award of Certificate, at the end of the second year with award of Diploma, at the end of the third year programme with award of Bachelor's degree and at the end of the fourth year with award of Bachelor's Honors/Research degree.

The Learning Outcomes for PG Degree as per NHEQF, would be as follows

i) have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with the first cycle, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research context;

ii) can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study;

iii) have the ability to integrate knowledge and handle complexity, and formulate judgments with incomplete or limited information, and that includes reflecting on social and ethical responsibilities linked to the application of their knowledge and judgments;

iv) can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously;

vi) have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.

4.2 Credit Based Assessment

Credit' is recognition that a learner has completed a prior course of learning, corresponding to a qualification at a given level. Credits quantify learning outcomes that

are subject to valid, reliable methods of assessment. The basic principle of the credit framework is that credits are a function of successful completion of a program of study/ vocational education/ training and assessment. No credit can be earned by the student unless the student is assessed for the achievement of the desired competencies and outcome of a program. Therefore, in general education there are major assessment stages which are mandatory before the student goes to the next step. In addition, to enable implementation of multiple entry- multiple exit options, assessment is a compulsory element after each year of graduation and post-graduation and also after a skilling course. This means that the student will be earning credit/s after every year/ semester/ Qualification of education/ vocational education/ skilling which they go through and hence the framework needs to cater to this requirement.

The learning shall not be limited to only instructional hours but also encompass all other activities in the educational institutions, earlier categorized as curricular, co-curricular, and extra-curricular. In the true spirit of National Education Policy 2020, the total outcome based learning hours for credits (1200 hours of learning in a year for 40 credits) shall, subject to assessment, include:

i. Classroom teaching/ learning hours
ii. Lab work/ innovation labs/ projects
iii. Yearly and half-yearly examinations/ class tests/ quiz/ assessments including formative assessments
iv. Experiential learning including relevant experience and professional levels acquired activity hours
    a. Performing arts, music, handicraft work,
    b. Debate and Discussion/ Essay Writing / Recitation Competition
    c. Story Writing competition
    d. Celebration of festivals in institutes, music performance, Drama.
    e. Other Contests
v. Sports/ games / physical activity / yoga
vi. Life skills including employment skills
vii. Social/ community work / NCC / shramdan: campus cleaning, building, decoration
viii. Bag less days, field visits organised by the institution
ix. Vocational education/ training, skilling, minor/ major project work, assignments

x. Field visits/ Industry attachment by institutions

xi. Internship and apprenticeship hours, on the job training (OJT), and Experiential learning including relevant experience and professional levels acquired

xii. Blended/ online/ digital learning

xiii. Self-study/ Home assignments (for National Institute of Open Schooling (NIOS)) [In NIOS, self-study forms a major component for a learner].

xiv. Any other type of learning as may be notified by the regulators concerned

Such an approach would also close the gap in achievement of learning outcomes, shifting the classroom education towards competency and learning outcome-based learning and education.

Section 3.2.7, Table 3, Page No. 41 of High-Level Inter-Ministerial Committee Report on National Credit Framework (Sept. 2022) describes NCrF levels for different academic grades (Hours of Learning per year, Academic Grade and NCrF Credit Levels) for Higher Education, for Vocational Education & Training/ Skilling (Long Term Training/ Short Term Training (LTT/STT) and NSQF Level) and Assessment Bands (Credit Points Earned for each NCrF level and Assessment Stage and equivalence).

4.3 Examination Approaches and Assessment of Learning Levels and Outcome

In India, the higher education has so far has been largely examination oriented. Examinations play a pivotal role and determine the degree of knowledge possessed. They are the deciding factors of career choice of students as well as the ability to pursue the right higher qualifications. The conventional examination pattern that currently exists in a university structured test is memory learning with more focus on remembering and reproducing. The term-end examination is usually based on the question paper which tests only memory recall as a skill. This system, more often than not, insulates students from the quest of knowledge, excitement of discovery and joy of learning. On the other hand, demands from professions require students not just to possess information but an ability to apply to every situation either routine or complex. NEP expects evaluation and assessment of the students through execution of innovative trends in formative as well as summative examination modes for smooth success of

four-year multidisciplinary degree programme with multiple entry and exit system. Thus, the third dimension of higher education must get due recognition in main stream education. The methods of assessment also have to be multipronged.

Thus, the parameters of examination, evaluation and assessment need review and reorientation so as to create the next generation knowledge workers. Of foremost concern is to ensure that the students are equipped with 21st century skills for the new age enterprises and to play lead roles in sophisticated ways of conduct of business. A whole new format of assessment tools using digital platforms need to be utilized to build the requisite skills that is required of a growing economy.

The UGC Report on 'Evaluation Reforms in Higher Educational Institutions' (2019) emphasizes the fact that to accomplish meaningful learning, the examination and evaluation should be linked to 'Learning Outcomes' and 'Institutional goals'. The essence of the report is that the assessment process should test the learning outcomes, knowledge gained, attitudes developed and skills mastered by a student during an academic programme. A Program Learning Outcome may lead to one or many different competencies and each competency may have one or more measurable components called Indicators/ Performance Indicators. The curriculum must be linked to the program objectives and outcomes and further the course level assessment strategies must be linked to identified program level assessment strategies. Examination and Evaluation types include-

i) Summative (evaluation of students learning at the end of an instructional unit) and

ii) Formative (informal and formal tests administered during the learning process).

These types of assessments are related to direct measurement of learning which is based on a sample of actual student work and it includes reports, exams, demonstrations, performances, and completed works. Thus, direct measurement of learning requires students to produce work so that the teacher can assess how well the students' meet the expectations. Assessments must be continuous to include both formative (weekly class and home assignment, case studies, weekly/ interim quiz tests) and summative (class tests, Open Book Exams, Quarterly/ Mid-term Exam, semester end Exam) examination components in a timely fashion for continuous feedback.

a) Summative Examination and Evaluation Strategies

i. **Class Tests:** These should be conducted 2-3 times in a semester including make-up test and must be designed to test all levels of cognitive domain.

Marking Criteria be made known to the students. Teacher should discuss answers in the class.

ii. **Open Book Examination:** In real functioning beyond formal education, life is all about open book examination. In order to prepare students for real situations in actual work life, students must be prepared for open book examinations. In this examination, students are allowed to get books of their choice for reference. The questions need to be based not simply on retrieval of information but they ought to be creative. The exam measures what students can do with the available resources and not just what they can remember. One of the class tests or some class assignments (say 30%) could be of this type. It will also facilitate better understanding and application of the knowledge with a better potential for its positive impact.

iii. **Spoken / Oral Examinations:** These types of examinations can be introduced with the support of new generation of technologies. They can make examinations faster and easier and be helpful to students with different abilities.

iv. **Group Tasks- Group Discussion/ Fishbowl Technique / Role Play / Authentic Problem Solving:** It comprises small groups of 2 to 5 members who work on a task jointly. It encourages team work (collaboration and co-operation) and provides an opportunity for authentic skill development. Groups formed must be roughly equal in size, problems assigned should be similar and of same difficulty level and each team member must have a specific role. Rubrics for marking must be mutually decided and should include all domains of education. Such an approach is followed some times for projects and also for laboratory assessments. But it is generally not followed for theory type examinations. However, the group examinations, for theory papers, can improve the average performance of a class as students would be encouraged to share their knowledge with each other and it would also help them to improve their general understanding.

v. **Semester End Examination:** It is traditional and requires essay type answers and it also has time- constrains. It tests memory most of the time more than higher level thinking. But the semester end question paper must be designed to test all levels of cognitive domain and should include all types of

questions-essay, short answer, quantitative problems, objective type etc. Model Answers should be prepared for guidance in assessment of essay type answers so that subjectivity in evaluation is minimized. Marking Criteria should be made known to students.

b) Formative Examinations and Evaluation Strategies

i) **Portfolios:** This method monitors the growth and learning of students. It can contain many different forms of assessments as it is a collection of student's work. These methods are followed usually in practical courses to display an overview of the sectional work or some creative endeavor. It can contain evidence of a wide range of skills and attributes and can be very effective in combination with a quick viva exam.

ii) **ePortfolio,** a comprehensive assessment tool, showcases the students learning progression. It is not only a compilation of a few best assignments and the activities of a learner throughout the programme, but it is also his/her reflections about the assignments, experiences and challenges faced during the process of working on these assignments, overall approach, attitude, philosophy towards life as a learner and also his/her academic resume. ePortfolio is which becomes a mirror to the learner for the world.

iii) **Classroom/Online Quizzes/ Objective Tests / Recognition Type (such as MCQs; True or False; Matching; Classifying) /Recall Type -Filling Blanks; One word / Phrase Answers:**

These are short duration structured Tests and can be used to test interpretation and decision skills. Teachers need to be trained in construction of such Tests. It also needs careful planning to ensure that the answer choices are clear. Paper-pencil tests and over-use of question-answers may be discouraged for formative assessments. They may be conducted at a frequency of four per semester including one for Makeup and one for Surprise Quiz. A few ICT tools for quizzes and games can be used for formative assessment.

c) Assessment Rubrics

A rubric for assessment, also called a scoring guide, is a tool used to interpret and grade students on any kind of work against criteria and standards. An assessment

rubric provides the means to increase objectivity in assessment and reduce subjectivity. It also presents a clear expectation on the assessments, and relates it to learning outcomes and ensures consistency, transparency, efficiency and fairness in the evaluation process across course instructors for uniform assessment with same scores assigned to answers having same/similar values for a large group of students. It defines clear guidelines for moderation and provides more objective data for analytics. Usually in the form of a grid, a grading/ marking/ scoring rubric combines the elements of performance, criteria and descriptors to create an assessment tool for the course instructor. The assessment criteria define the characteristics or traits, to be judged, which should be derived from the course learning outcomes and indicate what is expected to be demonstrated. Level of performance is the rating or measure on the degree of achievement on a particular criterion as specified by the rubric, i.e., excellent/good/satisfactory/poor etc. Descriptors identify the qualities required to demonstrate the achievement of each level of performance for each criterion. Listed in the form of short explanations, they provide guidance on the actual judgement on the assessment to match students' performance.

d) Other Approaches

An indirect method of examination and evaluation is based upon a report of perceived student learning which include surveys, exit interviews, and focus groups. In addition, the assessment components may include exercises for soft skill development and reading-analyzing-interpretation-presentation ability enhancement (self-study, article/book Review, seminars, paper/poster presentations, group discussions, viva/ oral exam), work-based training (craft work, field work/ assignments, internship, projects) and solving techniques (tutorials).

The assessment tools (internal and external) for each course must be mapped to the revised Bloom's taxonomy action verbs (refer http://thesecondprinciple.com/teaching-essentials/beyond-bloom-cognitive-taxanomy -revised/) to help measure student performance. Appendix 2 under 2.5 of the UGC Report on 'Evaluation Reforms in Higher Educational Institutions'

provides the detailed process of determination of attainment of Program Education Objectives while Appendix-3 provides the critical overview of Assessment Types along with learner attributes.

4.4 Evaluation and Assessment under Multidisciplinary Four Year Degree Program

Assessment is an integral part of the teaching learning process. A multidisciplinary program requires a multidimensional assessment to measure the effectiveness of the diverse courses. The assessment process acts as an indicator to both faculty and students to improve continuously. Evaluation and Assessment should be a combination of continuous formative evaluation and an end-point summative evaluation. A range of tools and processes for evaluation and assessment, as illustrated in previous section, should be used (e.g., open book tests, portfolios, case study/assignments, seminars/presentations, field work, projects, dissertations, peer and self-assessment) in addition to the standard examination modes. Paper-pencil tests should be designed rigorously using a range of tools and processes (e.g., constructed response, open ended items, multiple-choice with more than one correct answer). Faculty may provide options for a student to improve his / her performance in the continuous assessment mode. It is possible to administer many or one type of assessment at regular intervals or choose the best out of the many. This will encourage a student to improve on skills and performance.

Artificial Intelligence (AI) tools can be used for Proctoring as well as many more assessments like, attention levels, speed of learning, level of learning etc. Hence new tools should be experimented with for examinations and assessments.

Based on the types of assessment and triangulation of assessments, University/ Autonomous College BoS, BOEE, and AC can work out various models of Assessment for theory courses, practical courses, vocational/ skill-based courses, internship, regional case studies, cocurricular courses, and research project/dissertations with due focus on continuous assessments, mixing types, so that ongoing feedback is obtained for both the teacher and the student. The following paragraph provides the mechanism of evaluation and assessment used for courses on Life Skills, Vocational courses, MOOCs, and Field Projects.

a. Assessment of Life Skills

The Life Skill course requires active participation of the students and the faculty as Facilitator, Mentor and Trainer. For this purpose, various activities are required to be incorporated into the courses - oral presentations, impromptu speaking, quiz, debates, case studies, creative thinking, team building exercises, field visits, projects, psychometric analysis etc. These are required to be assessed using innovative techniques.

b. Assessment of Skill Component of the Vocational Courses

The Skill component of the vocational courses will be generally assessed by the respective Sector Skill Councils (SSC). In case, there is no SSC for a specific trade, the assessment may be done by an allied Sector Council or the Industry partner or a recognized Skill University. Further, if the SSC in the concerned/relevant trade has no approved Qualification Pack/set of competencies, which can be mapped progressively or due to any other reason the SSC expresses its inability to conduct the assessment or cannot conduct the skill assessment in stipulated time frames as per an academic calendar, the institutions may conduct the skill assessment through a Skill Assessment Board by "Certified Assessors" as per the provisions enumerated in MoE Skill Assessment Matrix for Vocational Advancement of Youth (SAMVAY). SAMVAY defines the rules for credit allotment and follows the NSQF regulatory framework while stating the credit assessment requirements for skills. The skill based courses, under SAMVAY, generally, have both the skills and general education components. As per SAMVAY, the credits regarding skill component may be awarded in terms of NSQF level certification which will have more than 50% weightage of total credits of the course based on the assessment in a manner prescribed by the concerned regulatory body.

The Skill Assessment Board in HEI may have a Vice-Chancellor / Principal / Director / Nodal Officer / Coordinator of the programme/center, representatives of the partner industry(s), one nominee of the Controller of Examination or his/her nominee of the university/autonomous college and at least one external expert.

c. Evaluation and Certification of Credit-based MOOCs on SWAYAM Platform

As per UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulations, 2021,

i. The HEI and the course-coordinator shall be responsible for evaluating the student registered for the credit-based MOOCs offered on SWAYAM platform.

ii. The final evaluation of a course shall be based on internal assessment and semester end examination and the internal assessment (with a maximum of 30% marks) based on instruments such as discussion forums, quizzes, assignments, sessional examinations and the complete evaluation scheme of a course shall be announced at the time of launch of the course.

iii. Online semester end examination shall be the preferred mode provided that the course-coordinator shall be authorized to decide on the mode of conducting the final examination, either through online mode or pen and paper mode and this shall be announced in the overview of the course at the time of offering of the course.

iv. The term end proctored examination for all the SWAYAM based credit courses shall be conducted either by the SWAYAM Board or by any other agency authorized by the GoI in the MoE, across the country.

v. After conduct of the examination and completion of evaluation, the course-coordinator, through the HEI, shall award marks or grades, as per the evaluation scheme announced.

vi. A certificate regarding successful completion of the SWAYAM based credit course shall be signed by the National Coordinator and authorized signatory of the HEI and shall be made available on SWAYAM platform within four weeks from the date of declaration of the semester end examination result.

vii. The HEI shall incorporate the marks or grades obtained by the student in the marks sheet that counts for final award of the certificate or diploma or degree by the university.

d. Evaluation of Field Projects

The field-based learning/project attempts to provide opportunities for students to understand the different socio-economic contexts and observe situation in rural

and urban contexts. Hence the mode of assessment of progress of Field Projects would be different and will follow steps as illustrated in Table 4.2.

Table: 4.2
Evaluation of a Regional Case Study Course or Field Projects

Module	Unit	% Distribution of Credit
1	Basic structure of society, key definitions of problem area, analysis of preliminary data	30
2	Classroom-work - correspondence, formats, interactions, liaising	10
3	Field-work and data gathering	30
4	Analysis and Reporting	20
5	Feedback to Community	10

For effective assessment of the various courses under four year degree program, the student assessment should be as comprehensive as possible and provide meaningful and constructive feedback to faculty and student on the teaching-learning process. Assessment tasks need to evaluate the capacity to analyze and synthesize new information and concepts rather than simply recall information previously presented. The process of assessment should be carried on in a manner that encourages better student participation and rigorous study.

e) **Continuous Assessment Tests (CAT) and End Semester Examinations**

Total marks for each course shall be based on continuous assessments and semester end examinations. It is necessary to have uniform pattern of 40 : 60 for Continuous Assessment Tests (CAT) and Semester End theory examinations respectively and 50 : 50 for CAT and Semester End practical examinations respectively, in all the Universities, their Affiliated and Autonomous Colleges across Maharashtra State.

Three CAT, each of 20% marks, would be conducted at different phases (25%, 50% and 75% of completion of syllabus or 25, 50, and 75 working days out of 90 working days of Semester) throughout the Semester. Each concurrent assessment (CAT- I, II, III) will be mapped to relevant course learning outcomes. Total Performance in CAT (i.e., 40%) would be based on best two out of three CAT examinations.

Course Teacher will have the liberty to choose from a variety of assessment tools/ methods (class test, assignment, Record book, Tutorials, Seminar, Case study, Field work, Project work, Quiz) which may be deemed to be appropriate for assessing the relevant course outcome.

The question paper for **Semester End Examination** must be designed to test all levels of cognitive domain and should include all types of questions- essay, short answer, quantitative problems, objective type etc. Model Answers for marking essay type questions should be prepared for minimizing subjectivity in evaluation. Marking Criteria should be made known to the students.

Repeat End Semester Examinations within 15 days/one month of regular even semester examinations and On demand examinations: With advent of new methods which are technology based and also blending of teaching-learning and examinations in new form, it would be a good approach and practice to offer Repeat End Semester Examinations within 15 days/one month of regular even semester examinations and Examination on demand to offer more flexibility and student centricity.

4.5 Determination of CGPA and Grading and Declaration of Results

The courses under Programme should be evaluated by following the grading system, which is considered to be better than the conventional marks system. The uniform grading system across India in general and the State Universities in Maharashtra in particular will facilitate the mobility of students across institutions within India to begin with and across countries in due time. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations, the UGC has formulated the guidelines which needs to be followed.

The total Credit Points earned by the student could be obtained by multiplying the credits earned with the NCrF Level at which the credits have been earned. Thus, the total Credit Points Earned for four year multidisciplinary UG programme with level 6 and minimum of 40 Credits Earned/ year will be 240. Similarly for the three year Degree, two year Diploma and 1 year Certificate Programme, the total Credit Points Earned would be 220, 200 and 180, respectively.

a) Computation of SGPA and CGPA

The UGC (UGC Draft on Curricular Framework and Credit System for the Four-Year Undergraduate Programme, 2022) recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA).

i. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student:

SGPA $(S_i) = [\sum (C_i \times G_i)] / (\sum C_i)$

Where, C_i is the number of credits of the i^{th} course and G_i is the grade point scored by the student in the i^{th} course.

ii. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme.

CGPA $= [\sum (C_i \times S_i) / (\sum C_i)$

Where S_i is the SGPA of the i^{th} semester and C_i is the total number of credits in that semester.

iii. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

b) Grading and Declaration of Results

Currently the title/nomenclature and programme duration of Bachelor's and PG degree are as follows:

- Bachelor of Arts (B.A.), Bachelor of Science (B.Sc.), Bachelor of Commerce (B.Com.), Bachelor of Vocation (B.Voc.), Bachelor of Business Administration (BBA). Programme duration: Three years (six semesters).
- Bachelor of Education (B.Ed.): Programme duration: Two years (four semesters) after completing a Bachelor's degree programme)
- Bachelor of Education (B.Ed.). Programme duration: One year (two semesters) after completing a Bachelor's degree (Honors/Research) or Master's degree.
- Integrated Teacher Education Programme (ITEP): Programme duration: Four years (eight semesters).
- Bachelor of Engineering (B.E.), Bachelor of Technology (B.Tech.). Programme duration: Four years (eight semesters).

- Bachelor of Architecture (B.Arch.): Five years (ten semesters).
- Bachelor of Pharmacy (B.Pharm.): Four years (8 semesters).

The declaration of result is based on the Semester Grade Point Average (SGPA) earned towards the end of each semester or the Cumulative Grade Point Average (CGPA) earned at the completion of all the eight semesters of the programme and the corresponding overall alpha-sign or letter grades as given under NHEQF. If some candidates exit at the completion of first, second or third year of the four years Undergraduate Programmes, with Certificate, Diploma or the Basic Degree, respectively, then the results of successful candidates at the end of second, fourth or sixth semesters shall also be classified on the basis of the CGPA obtained in the two, four, six or eight semesters, respectively for award of

- Certificate in Arts/ Science/ Commerce
- Diploma in Arts/ Science/ Commerce
- Bachelor's Degree in Arts/ Science/ Commerce
- Bachelor's Degree with Honors in DSC/SSC/FSC.
- Bachelor's Degree with Research in DSC/SSC/FSC

In addition to what is stated above, successful candidates at the end of tenth semester of the integrated Master's Degree Programmes, shall also be classified on the basis of CGPA obtained in the ten semesters of the Programmes. Likewise, the successful candidates of one year or two semesters Master's Degree Programme are also classified on the basis of CGPA of two semesters of the Master's Degree Programme.

Table 4.3:
Letter Grades and Grade Points

Semester GPA/ Program CGPA Semester/Program	% of Marks	Alpha-Sign / Letter Grade Result
9.00-10.00	90.0-100	O (Outstanding)
8.00-<9.00	80.0-<90.0	A+ (Excellent)
7.00-<8.00	70.0-<80.0	A (Very Good)
6.00-<7.00	60.0-<70	B+ (Good)
5.50-<6.00	55.0-<60.0	B (Above Average)
5.00-<5.50	50.0-<55.0	C (Average)
4.00-<5.00	40.0-<50.0	P (Pass)
Below 4.00	Below 40	F (Fail)
Ab (Absent)	-	Absent

A student obtaining Grade F shall be considered failed and will be required to reappear in the examination. For non credit courses 'Satisfactory' or "Unsatisfactory' shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA. The process of continuous evaluation of a student's performance/progress and flexibility is allowed to students to progress at an optimum pace suited to their ability or convenience, subject to fulfilling minimum requirements for continuation and within the maximum allowable period for completion of a degree. The Universities can decide on the grade or percentage of marks required to pass in a course and also the CGPA required to qualify for a degree taking into consideration the recommendations of the statutory professional councils such as AICTE, MCI, BCI, NCTE etc.

Based on the above recommendations on Letter grades, grade points and SGPA and CGPA, the HEIs may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

4.6 Credit Transfer Mechanism-Academic Bank of Credits (ABC)

Credit transfer is the key to successful interdisciplinary/multidisciplinary academic mobility of students across the HEIs in the country. In order to pave the way for seamless student mobility between or within registered degree-granting HEIs through multiple entry and exit options at the multidisciplinary four year UG and Master's levels, the Academic Bank of Credits (ABC), the virtual storehouse drafted on the lines of the National Academic Depository (NAD), will work as academic service mechanism through a formal system of credit recognition, credit accumulation, credit transfers, and credit redemption to promote distributed and flexible teaching-learning. The UGC Regulations on ABC has elaborated these terms as given below:

"Credit accumulation" means the facility created by ABC in the 'Academic Bank Account' opened by students across the country in order to transfer and consolidate the 'credits' earned by them by fully or partially completing "courses" in any of the eligible and registered HEIs.

"Credits recognition" would mean the credits earned through eligible/partnering HEIs and transferred directly to the ABC by the concerned HEI.

"Credit redemption" means the process of commuting the accrued 'credits' in the 'Academic Bank Account' of the students maintained in ABC for the purpose of fulfilling the 'credits requirements' for the award of Certificates / Diplomas/ Degrees etc., by the degree-awarding HEIs.
"Credit-transfer" means the mechanism by which the eligible HEIs registered (RHEI) with ABC are able to receive or provide prescribed 'credits' to individual registered ABC account in adherence to the UGC credit norms for the 'course/s' registered by the desirous students in any eligible HEI within India.

The National Credit Framework (NCrF) provides for creditisation of all learning and Assignment, Accumulation, Storage, Transfer & Redemption of Credits in alignment with the National Higher Education Qualification Framework (NHEQF), National School Education Qualifications Framework (NSEQF), which is a new concept, and National Skill Qualification Framework (NSQF) which are the comprehensive credit-based Academic & Skill Qualification frameworks. Thus, there would be only one credit framework for higher education, school education and skill education, namely the National Credit Framework (NCrF) and only single credit system would be operationalized through Academic Bank of Credits (ABC). The credit points may be redeemed as per ABC guidelines for entry or admission in school, higher, technical or Vocational Education programs/ courses at multiple levels enabling horizontal and vertical mobility with various lateral entry options.

HEIs offering programmes with the multiple entry and exit system need to register in the ABC to enable acceptance of multidisciplinary courses, credit transfer, and credit acceptance. ABC will facilitate students to become its academic account holders across the country to transfer and consolidate the credits earned by them by fully or partially completing courses in any of the eligible HEIs. Courses undergone by the students through the online modes are also accepted. Credits from skill courses can be earned from RHEI offering vocational courses. The ABC shall maintain a dynamic online directory of RHEIs which satisfy the eligibility criteria stipulated under regulation. With the approval of its statutory authorities, a RHEI shall be encouraged by ABC to allocate the structure of courses offered by it as core courses or core electives or open electives or skill enhancement electives or ability enhancement electives etc. with appropriate

credit requirements, in order to promote multi-disciplinary or interdisciplinary higher education. Credits earned and deposited with ABC shall be valid to a maximum duration of seven years. Credits earned and deposited with ABC shall be valid for the purpose of redemption for fulfilling the credits requirements for the award of certificate/diploma/degree/PG Diploma/ PG Degree by the authorized HEIs for varying duration as specified by the credit awarding and credit accepting HEI subject to a maximum duration of seven years. Upon collecting a certificate, diploma or degree, all the credits earned till then, in respect of that certificate, diploma or degree, shall stand debited and deleted from the account concerned.

The State Universities in Maharashtra are uploading the data of all students who are graduating from their institutes in Digi locker facility which allows the storage of soft copies of relevant documents. The facility is equipped with security features and can be accessed by stake holders, especially by students, 24 x 7. Digi lockers can be personalized and protected with a password.

Chapter V

Multidisciplinary Dual, Joint and Twinning Degree Programme and Internationalization of Higher Education

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Multidisciplinary Dual, Joint and Twinning Degree Programme and Internationalization of Higher Education

NEP 2020 emphasizes the need to facilitate multiple pathways to learning involving both formal and non-formal education modes. NEP 2020 also underlines the need of offering the students, a range of disciplines including sciences, social sciences, arts, humanities, languages, as well as professional, technical, and vocational subjects to make them thoughtful, well-rounded, and creative individuals. It also stresses the need of enabling an individual to study one or more specialized areas of interest at a deep level. With the rapid increase in demand for higher education and limited availability of seats in regular stream, several Higher Education Institutions (HEIs) have started a number of programmes in Open and Distance Learning (ODL) mode to meet the aspirations of students. Thus, implementation of Multidisciplinary Dual/ Joint/ Twinning Degree Programme at Maharashtra State HEIs, in both formal and non-formal education modes, assumes major significance.

5.1 Multidisciplinary Dual Degree Programme

UGC has recently asked all HEIs to make appropriate changes to enable students to pursue two degrees simultaneously and issued guidelines for students desirous of pursuing two academic programmes simultaneously:

1. A student can pursue two full time academic programmes in physical mode provided that in such cases, class timings for one programme does not overlap with the class timings of the other programme.
2. A student can pursue two academic programmes, one in full time physical mode and another in Open and Distance Learning (ODL)/Online mode; or up to two ODL/Online programmes simultaneously.
3. Degree or diploma programmes under ODL/Online mode shall be pursued with only such HEIs which are recognized by UGC/Statutory Council/Govt. of India for running such programmes
4. Degree or diploma programmes under these guidelines shall be governed by the Regulations notified by the UGC and also the respective statutory/professional councils, wherever applicable.

These guidelines shall be applicable only to the students pursuing academic programmes other than Ph.D. programme. Based on the above guidelines, the state universities in

Maharashtra can devise mechanisms, through their BoS, BoD and Academic Council, to allow their students to pursue two academic programmes simultaneously.

Students enrolled in one University/ College can take up the first degree at the host institution and the second degree at the partnering institution leading to dual degree. Pursuing two degrees simultaneously will improve students' employability potential, problem solving ability, and appreciation of different perspectives. For example, a student of M.Sc. (Maths) may additionally do a B.Sc. (Life Sciences/ Biological Sciences) for a career in the specialization of Computation Biology. Thus, the choice of second degree should be made depending on what the student wants to do in future. To encourage Dual Degree Programme across Multidisciplinary domain, HEIs need to make appropriate changes with respect to admission policy and academic rules and regulations. The students should also need to understand the policies of each HEI before making the decisions about pursuing dual degree programme. The collaborating HEIs shall ensure that the credits earned by the students shall not be from the overlapping course contents/curriculum, and the student shall submit to only one examination and evaluation process for each of the courses by the institutions in which he/she has registered for that course. The collaborating HEIs shall make provisions for exit pathways for students who are unable to complete the Dual Degree programme with clear specification with respect to future acceptance of credits earned by the students.

5.2 Multidisciplinary Joint Degree and Twinning Degree Programme

Joint Degree Programme curriculum shall be designed jointly by the collaborating Higher Educational Institutions. Students enrolled in one University/ College can pursue some semesters at the host institution and remaining semesters at the partnering institution leading to a joint degree. A student can thus pursue part of the academic programme in the host Institution and remaining part of the other programme in the partnering institution with due credit transfer mechanism. Credits earned for the course(s) in an institution shall count towards the degrees jointly awarded by both the institutions. On completion of the programme, the degree shall be awarded by both the participating educational institutions with a single certificate.

The Twinning Programme shall be collaboratively designed by two HEIs. Under a Twinning arrangement, students are enrolled with a State Public Universities in Maharashtra but they complete part of their programme at a partnering

institution/University in India complying with relevant UGC regulations. The credit transfer mechanism under twinning arrangement will have to be worked by the collaborating HEIs through entering into MoUs. However, the degree under Twinning arrangement shall be given solely by the host HEI (e.g., State Public Universities in Maharashtra). The partnering HEIs shall ensure that the credits earned by the students shall not be from the overlapping course contents/curriculum.

5.3 Honors and Minor Degree Programs in Engineering and Technology

Honors and Minor Degree Programs in Engineering and Technology are already ongoing at IITs. Besides regular B.Tech. wherein students specialize in single stream, B.Tech. with Honors, which enables students to take up five-six extra courses in the same specialization and B.Tech with Minors, where students would take up five-six additional courses in another specialization offered. On similar lines and with a view to enhance the employability skills and impart in depth knowledge in emerging areas which are usually not being covered in UG Engineering and Technology Degree credit framework, AICTE has come up with the concept of 'Minor Degree' in emerging areas and 'Honors Degree' as presented in their Approval Process Handbook (APH) for the academic session 2020-21. Minor Degree will carry 18 to 20 credits in addition to the credits essential for obtaining the UG Engineering Degree in Major Discipline (i.e., 160 credits usually). Keeping in mind the need for manpower in emerging areas, AICTE with the help of industry-academia experts, has framed the curriculum for seven Minor Degrees:

- Artificial Intelligence and Machine Learning
- Block Chain
- Cyber Security
- Data Science
- Internet of Things (IoT)
- Robotics
- Virtual and Augmented Reality

a) UG Engineering Honors Degree in Emerging Areas (Artificial Intelligence (AI), Internet of Things (IoT), Blockchain, Robotics, Quantum Computing, Data Sciences, Cyber Security, 3D Printing and Design, Augmented Reality/ Virtual Reality) shall be allowed as specialization from the same Department. The

minimum additional Credits for such Courses shall be in the range of 18-20 and the same shall be mentioned in the degree, as specialization in that particular area. For example, doing extra credits for Robotics in Mechanical Engineering shall earn B.E./ B.Tech. (Hons.) Mechanical Engineering with specialization in Robotics.

b) Minor specialization in Emerging Areas in UG Engineering Degree Courses may be allowed where a student of another Department shall take the minimum additional Credits in the range of 18-20 and get a degree with Minor from another Department. It is also made very clear by AICTE that areas in which Minor Degree/Honors may be offered are numerous. It is up to the Universities with the help of their BoS, BoD and Academic Council to decide whether Minor Degree/Hons. is to be offered or not in any particular area, which is not covered under AICTE Approval Handbook. AICTE approval is not required for offering Minor Degree/Honors in any such area, however the criteria 'Minor Degree or Hons. will cumulatively require additional 18 to 20 credits in the specified area. In addition to the credits essential for obtaining the UG Degree in Major Discipline (i.e. 160 credits)' needs to be precisely followed.

5.4 Internationalization of Higher Education

Internationalization of higher education promotes sharing of best academic and research practices through interactions between diverse education systems, and helps in developing global citizens through mobility of students and scholars. Internationalization of Higher Education should be seen as the catalyst to spur Maharashtra State Universities to position themselves strategically to cater to the needs of the global knowledge society. As per section 12.8 of NEP 2020, India should be promoted as a global study destination providing premium education at affordable costs thereby helping to restore its role as a Vishwa Guru. The Internationalization of higher education requires collaboration/ linkages between foreign universities and Indian universities /institutions for promoting exchange of faculties for teaching and student exchanges between Indian institutions and global institutions as well as establishing international partnerships for research and the feasibility of carrying credits across institutions in multiple countries. Credits acquired in foreign universities will be permitted, where appropriate, as per the requirements of each HEI, will be counted for

the award of a degree. The dual/ joint/ twinning degree system can be adopted for stronger academic linkages and facilitation of student and faculty mobility. The advantage of this way of entry to foreign universities is that it will encourage capacity enhancement of collaborating Indian Universities/Institutions. Research/teaching collaborations and faculty/student exchanges with high-quality foreign institutions will have to be facilitated, and relevant mutually beneficial and functional MoUs with foreign Universities will have to be signed and executed.

In order to improve the access of meritorious students of Maharashtra from economically and socially weaker sections to global education, Government of Maharashtra/ GoI will have to develop additional schemes of financial assistance to these students through institutionalization of scholarships, fellowships and other funding support mechanism. The state Universities in Maharashtra, in turn, must make concerted efforts towards the Internationalization of higher education and increasing the intake of foreign students. The Universities, with due support from Government of Maharashtra and GoI, can devise ways to attract foreign students from developing countries by offering them the scholarships and fellowships to make it possible for them to afford the education at our universities and providing quality residential facilities to ensure effective living conditions and learning environment for them. An International Students Office at each HEI hosting foreign students is required to be set up to coordinate all matters relating to welcoming and supporting students arriving from abroad. This office shall function as single point of contact and will undertake liaising with regulatory/statutory bodies and shall be responsible for carrying out all collaborative activities. In addition, the state universities, with due permissions from Government of Maharashtra, UGC and GoI, may explore the option of setting up campuses overseas. International dimension to curriculum, international offering in educational activities, international competencies in our faculty and students etc. will propel our institutions towards internationalization of higher education. The areas of strength in India such as science, technology, engineering and mathematics (STEM), computer science, gaming should be tied up with internship and apprenticeship to make them attractive for foreign students. Short-term non-degree niche courses to create global perception about our core competencies in Yoga/Philosophy / Ayurveda/Health/Sanskrit can be designed to attract foreign students. These would widen the outreach of state universities among international students and improve the global ranking in internationalization indicators.

With the vision of increased internationalization of higher education in India, University Grants Commission has formulated and released Guidelines in July 2021 for the Internationalization of Higher Education within the framework of NEP 2020. These Guidelines will provide a broader roadmap and enable the HEIs in transforming the higher education system in critical areas of internationalizations. Besides this, the UGC regulations (2022) on Academic Collaboration between Indian and Foreign Higher Educational Institutions lay down the minimum standards for offering Twinning, Joint Degree and Dual Degree Programmes. Any Indian HEI which is accredited by NAAC with a minimum score of 3.01 on a 4-point scale, or which figures in the top 1000 of Times Higher Education or QS World University ranking, or which figures in the top 100 in university category of NIRF at the time of application and any Foreign HEI figuring in top 1000 of Times Higher Education or QS World University ranking at the time of application shall be eligible to offer Twinning, Joint Degree and Dual Degree programmes.

a. Dual / Joint Degree Programme with Foreign HEIs

The dual degree programme shall be jointly designed by both the Indian HEI and foreign HEI in the same disciplines or subject areas and at the same level. The degrees for such programmes shall be conferred by the Indian and Foreign HEIs, separately and simultaneously, upon completion of degree requirements of both the institutions. As per UGC regulations, this shall not in any way be construed as two degree programmes in separate disciplines or subject areas and/or levels being pursued simultaneously. The students must earn at least 30 percent of total credits from the Indian institution. Credits to be earned by the Indian students from the foreign institution and credits earned by the foreign students from Indian institutions shall be obtained through conventional mode.

As per UGC regulations, Joint Degree Programme curriculum shall be designed jointly by the collaborating Indian and Foreign HEIs. The students must earn at least 30 per cent of the total credits from each of the Indian and Foreign HEIs. Credits to be earned by the Indian students from the foreign institution and credits earned by the foreign students from Indian institutions shall be obtained through conventional mode. Upon completion of the joint degree programme, the Degree is awarded by the Indian HEI and the collaborating Foreign HEI with a single

Certificate. Each HEI shall issue a transcript for their respective courses, with a remark indicating that the student has taken certain modules at the partner institution. The collaborating Indian HEIs, including state Universities in Maharashtra, shall make provisions for exit pathways for students who are unable to complete the Joint Degree programme with clear specification with respect to future acceptance of credits earned by the students.

All other provisions related to offering of Dual and Joint Degree Programme shall be decided mutually by the participating institutions conforming to the respective rules, regulations and laws of their respective institution and country.

b. The Twinning Degree Programme and Credit Recognition under Twinning Arrangement

The Twinning Programme shall be a collaborative arrangement whereby students enrolled with an Indian HEI may undertake their programme of study partly in India, complying with relevant UGC Regulations, and partly in the Foreign HEI. The Twinning Programme thus shall be collaboratively designed by Indian and foreign universities. However, the degree under Twinning arrangement shall be given solely by the Indian HEI including State Public Universities in Maharashtra. Each institution shall issue a transcript for their respective courses, with a remark indicating that the student has taken certain modules at the partner institution, wherever applicable. The idea behind Twinning programme is holistic development of the learners with the help of cultural exchanges and social cohesion. Mobility under Twinning programme will equip the learners with best practices, approaches and methods of teaching and learning in foreign institutions/ Universities. This will aid in capacity building of our institutions and help our students in career choices. In this, the existing curricula may be supplemented by the additional curricula of the collaborating universities. The joint course structure can be worked out on the basis of need assessment and to complement the course structure of the corresponding semester.

Implementation of NCrF will promote Internationalization of Education by enabling equivalence of courses and qualifications, provisions of credit transfer, and encourage international exchange of students and faculty with foreign

universities. Credit Recognition and Transfer arrangement will have to be worked out in conformity with the provisions of section 22 (3) of the UGC Act, 1956. Credit Recognition and Transfer means 'Credit' conferred by a Foreign Higher Education Institution to be recognized, quantified and included towards the credit requirements for a programme delivered by an Indian HEI under a mutual twinning arrangement. The collaborating State Public Universities in Maharashtra will enter into Agreement/MoUs with foreign HEI for recognition of credits under twinning arrangement. However, credits earned by the student from the Foreign HEI shall not exceed 30 per cent of the total credits for the programme. The collaborating HEIs shall make provisions for exit pathways for students who are unable to complete the Twinning programme with clear specification with respect to future acceptance of credits earned by the students.

Chapter VI

Ph.D. Programme and Promotion of Research and Innovation Culture

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Ph.D. Programme and Promotion of Research and Innovation Culture

Level 8, in NHEQF, defines Doctoral Degree with minimum prescribed credits for course work and a thesis with published work. Codes 700-799 and above will include courses for doctoral students. Admission to a Ph.D. programme in particular subject (Level 8.0) shall require either a Master's degree with compulsory Project Work in the same subject or a four year multidisciplinary Bachelor's degree with Research in same subject. Students, who wish to pursue a Doctorate in a subject other than the major/core subject studied by him/her in four year multidisciplinary UG programme, must take additional course/s of equivalent credits of that subject, which are not pursued in the previously completed UG programme for the purpose of admission eligibility. In addition, student desirous for Ph D admission in Indian universities, has to qualify National Eligibility Test (NET)/JRF (Junior Research Fellowship), conducted by the National Testing Agency (NTA)or an Entrance test conducted at the level of individual universities. The University must adhere to the National/State-level reservation policy, as applicable. The UGC, through the recently circulated 'Draft UGC (Minimum Standards and Procedure for Award of Ph.D. Degree) Regulations, 2022' has revised the rules for admission to PhD programmes by including an entrance test for admission, apart from qualification through the NET. The draft covers the Eligibility criteria and Procedure for admission to the Ph.D. programme, guidelines for the Allocation of Research Supervisor and the Supervisor's obligations, Credit and other requirements for the Course Work, Evaluation and Assessment Methods, minimum standards/credits for award of the degree, and other related procedural aspects.

As per section 15.9. of NEP 2020, all fresh Ph.D. entrants, irrespective of discipline, will be required to take credit-based courses in teaching/education/pedagogy/writing related to their chosen Ph.D. subject during their doctoral training period. Exposure to pedagogical practices, designing curriculum, credible evaluation systems, communication, and so on will be ensured since many research scholars will go on to become faculty or public representatives/communicators of their chosen disciplines. As suggested by Maharashtra State Task Force, all Ph.D. entrants may also be oriented for teaching profession through the credit courses leading to Theory Credits (TCs) and Role-Based Credits (RBCs). This will enable Teaching Methodology to be added into the course of study for all Ph.D. students making

them teaching-ready, should they choose to align their careers to HEIs. Ph.D. students will also have a minimum number of hours of actual teaching experience gathered through teaching assistantships and other means. Ph.D. programmes at universities around the country will be re-oriented for this purpose. Thus, the Doctoral students should engage in teaching as a substantial part of their learning experiences. They should at least engage teaching of one-semester theory /Laboratory course.

As per UGC (Academic Collaboration between Indian and Foreign Higher Educational Institutions to offer Twinning, Joint Degree and Dual Degree Programmes) Regulations, 2022, the collaborating Indian and Foreign HEIs can design joint Ph D degree programme and, upon satisfactory completion of the programme, the Degree is awarded by the Indian HEI and the collaborating Foreign HEI with a single Certificate. For execution of joint doctoral degree programme, the students must have a supervisor at each HEI. The student shall spend a minimum of one semester in each of the collaborating institutions during the study programme. However, the student shall submit a single thesis adhering to a framework jointly devised by the participating institutions.

National Education Policy (NEP) 2020 envisages the promotion of quality research within the Higher Education System. The Doctoral degree qualifies students who can ask relevant and new questions and develop appropriate methodologies and tools for collecting information in pursuit of generating new knowledge and new data sets and apply a substantial body of knowledge to undertake research and investigations to generate new knowledge, in one or more fields of inquiry and scholarship or professional practice. Graduates at this level are expected to have systematic and critical understanding of a complex field of learning and specialized research skills for the advancement of knowledge and/or professional practice and to make a significant and original contribution to the creation of new knowledge related to a field of learning or in the context of an area of professional practice.

In addition to Ph D Programme, all the state universities in Maharashtra must encourage researchers to undertake research in post-doctoral programmes. The government and the universities should roll out scholarships and fellowships for promoting such post-doctoral research.

To make India a global knowledge superpower, India has to be at the forefront of knowledge creation, research, innovation, and entrepreneurship. Promotion of research and creation of knowledge emerge from conducive and all-level academic development. To further promote research in all the fields of education, the NEP-2020 has proposed the National Research

Foundation (NRF) that will nurture the culture of research among learners as well as HEIs. The Foundation will create a global quality research ecosystem by providing merit-based competitive funding with sustainable incentives and recognition of outstanding research.

NEP-2020 aims at creating a conducive ecosystem to catalyze and energize research and innovation in HEIs. The UGC has launched an initiative to establish a Research & Development Cell (RDC) in HEIs with a mandate for promoting quality research that contributes meaningfully towards the goal of a self-reliant India ("Atma-Nirbhar Bharat"), aligned with the provisions of NEP-2020. The RDC will help in creating a research ecosystem for reliable, impactful, and sustained research output. The essential elements of such an ecosystem, viz., generation of knowledge and facilitation of research, innovation and technology development for industrial & societal benefits, are defined by human resources (researcher & faculty), intellectual capital (knowledge & skills), governance (regulation & policies) and financial resources (funding & grants). Regular initiatives by RDC will ensure that researchers understand the importance of integrity and ethics and comply with ethical codes of research and publishing practices at institutional, national, and global levels. A standard plagiarism check should be mandatorily implemented and the requisite software in this regard should be made accessible to all researchers. In addition, the RDC will sensitize the research community about dubious research and publishing practices and predatory journals. The HEIs should put in place a Research Information Management System (RIMS) to collect and manage research-oriented information, databases, publications, research projects, fellowships, collaborations, patents, thrust areas, innovations etc. aligned with the institution's research policies.

RDC at University will identify potential collaborators from industry, research organizations, academic institutions and other stakeholders for cooperation and synergistic partnerships and liaison between researchers and relevant research funding agencies, extend guidance in preparation and submission of project proposals and post-sanctioning of the grants to oversee adherence to timelines. The Start-Up ecosystem with the promise to open new career and entrepreneurship opportunities for students and youth in India should be well promoted through the Incubation Centers established in State Universities of Maharashtra. Thrust areas for Research in an HEI should be identified, underpinning the societal needs and the availability of key resources, including in-house human resources, faculty research competencies, and support systems. This would enable HEIs to consider establishing a Center of Excellence (CoE) in these identified contemporary areas of research. CoEs' can serve as

Incubation Centers to transform innovative ideas into processes and products administered and monitored by the University RDC.

In order to support and monitor the activities of University level RDC, Government of Maharashtra should constitute Maharashtra State Research and Innovation Council (MSRIC) as recommended by Task Force headed by Dr. R. A. Mashelkar. It will work together with societal actors (researchers, citizens, policy makers, business, third sector organizations, etc.) during the whole research and innovation process to align both the process and its outcomes with the values, needs and expectations of society.

Chapter VII

Overall Roadmap for Implementation of NEP-2020 in Reference to Level 4.5-8 Multidisciplinary Programmes at Different Universities in Maharashtra State

Chapter VII

Overall Roadmap for Implementation of NEP-2020 in Reference to Level 4.5-8 Multidisciplinary Programmes at Different Universities in Maharashtra State

All HEIs providing UG, PG, and doctoral programmes ranging from traditional disciplines of the humanities, social sciences, and pure sciences to various professional, technical, and vocational disciplines, have to impart holistic and multidisciplinary education to the students across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge. NEP-2020 envisions that holistic and multidisciplinary education is the need of the hour, to produce well-rounded individuals, rooted in Indian culture, with capabilities to keep pace in an integrated manner, with the demands of the 21st century. All the major higher education providers across the globe are operating a system of credits in multidisciplinary environment. The European Credit Transfer System (ECTS), the 'National Qualifications Framework' in Australia, the Pan-Canadian Protocol on the Transferability of University Credits, the Credit Accumulation and Transfer System (CATS) in the UK as well as the systems operating in the US, Japan, etc are examples of these.

In India, Karnataka is the first state to execute the recommendations of NEP 2020 followed by states such as UP and MP. These states have approved state level Regulations Governing the Scheme with Multiple Entry and Exit Options in the Undergraduate and Post-graduate Degree Programmes. Central Universities such as Hyderabad University has prepared NEP-2020 Implementation Plan for Phase-I. The Jawaharlal Nehru University (JNU) has approved the exit option for engineering students of Dual Degree programme. Students admitted to Delhi University in the 2022-23 academic year will be the first batch to study the four-year undergraduate curriculum.

7.1 Transformation of HEIs into Multidisciplinary Institutions

A substantial number of HEIs in India, in general, and Maharashtra state, in particular, are either single stream institutions or multidisciplinary institutions with rigid disciplinary boundaries. Large multidisciplinary HEIs to be established in or near every district by 2030 is one of the most significant recommendations in the NEP 2020. A multidisciplinary institution should not only have different departments covering

multiple disciplines, but also should have innovative programmes of a multi- and inter-disciplinary nature to help widen learners' thinking and learning capability and enable students to become well-rounded individuals. The UGC Report on 'Transforming Higher Education Institutions into Multidisciplinary Institutions' (Sept. 2022) has suggested multiple ways such as Academic collaboration between institutions, through HEI clusters, leading to multidisciplinary education and research in different modes; and Merger of single-stream institutions with other multidisciplinary institutions under the same management or different managements to achieve the characteristics of a multidisciplinary institution. The multidisciplinary Teaching-intensive Universities (TUs) and Research-intensive Universities (RUs) will be universities with 3,000 or more students. Given that by 2035 all affiliated colleges should become degree-awarding multidisciplinary autonomous institutions, it is necessary to develop a road map to transform all affiliated colleges to attain the status, either alone or through collaboration with nearby institutions in the form of clusters or by becoming a constituent part of a university as envisioned in NEP 2020. The affiliated colleges need to achieve the degree-awarding status by becoming large multidisciplinary autonomous colleges or by becoming part of the cluster to become a large multi-disciplinary HEI. The overall higher education sector will be an integrated higher education system, including professional and vocational education. The policy also suggests strengthening of institutions by opening departments needed for multidisciplinary subjects, including: Languages, Literature, Music, Philosophy, Indology, Art, Dance, Theatre, Education, Mathematics, Statistics, Pure and Applied Sciences, Sociology, Economics, Sports, Translation and Interpretation. The teaching-learning has to be linked to life, community and the world of work, including the environment across all disciplines/ fields of study, including STEM education. The NEP 2020 visualizes establishment of one Education Department in colleges/ universities/ HEIs to contribute to multidisciplinary and holistic education and to contribute to research and development in these areas.

Under the collaborative arrangement, the single-stream institutions can integrate their programmes with those of nearby multidisciplinary institutions to enhance what they can offer with their programmes. B.Ed. course, integrated with a B.A./ B.Sc./ B.Com. programme gives the Integrated Teacher Education Programme (ITEP), and combination of B.A.-B.Ed., B.Com.- B.Ed. and B.Sc.-B.Ed. with multiple entry and exit options. Similarly, the Management Institutions can collaborate with Science, Arts and

Commerce Colleges to offer integrated programme such as B.Sc. MBA., B.A. MBA and B.Com. MBA. Thus, collaboration between two HEIs for the award of dual degree facilitates students enrolled in an HEI to take up the first degree at the host institution and the second degree at the partnering institution.

Single-stream institutions and multidisciplinary institutions with poor enrollment, due to lack of employment-oriented, innovative multidisciplinary courses and lack of financial resources to maintain and manage the institutions can improve enrolment by becoming members of cluster and by offering multidisciplinary programmes. The clustering of colleges may help in securing good grades in NAAC accreditation.

Government of Maharashtra has already constituted the Committee to frame appropriate rules/policies to transform HEIs into multidisciplinary institutions.

Of the existing State Universities and Deemed to be Universities in Maharashtra, the Government of Maharashtra should immediately begin the process of identifying the Universities which can be categorized as Type 1: Research-intensive Universities (RUs) and Type 2: Teaching-intensive Universities (TUs). NEP 2020 suggests that the HE GER should reach 50% by 2035 for which a large University is required in every district of the Maharashtra state; the State would achieve the target if it can immediately identify one HEI in every district that can be turned into a large multidisciplinary University.

7.2 Key Result Areas (KRA) and Key Performance Indicator (KPI) for Transformation of HEI into NEP Compliant HEI

Besides transformation as Multidisciplinary HEI, the State Universities should undertake the execution of following Key Result Areas (KRA) as a part of successful implementation of NEP 2020. They must define Targets/ Key Performance Indicator (KPI) for each KRA and undertake periodic review of these KPI so as to achieve due compliance/ readiness for implementation of NEP in its true spirit.

a) Institutional Development Plan

As per section 12.3 of NEP 2020, each HEIs will integrate its academic plans ranging from curricular improvement to quality of classroom transaction - into its larger Institutional Development Plan (IDP). The HEIs must undertake the framing of IDP for phase wise implementation of NEP and adoption of different Guidelines

of UGC. All HEIs will develop IDPs to assess human resources requirements, in terms of faculty and administrative staff shortages, the physical infrastructural facilities, ICT related technology requirements, Learning infrastructure such as labs, libraries, CPD requirements, Student Support related areas and Teaching infrastructure. The IDP could be long-term (10-15 year), medium-term (5 years), short-term (1-3 years) and could have details such as educational and research outcomes, quality and capacity parameters including those related to equity and inclusion, human resource and organizational development plans, along with financial support and mentoring required for the foregoing. All HEIs will develop a CPD plan for the faculty and determine the process for its implementation. The plan should include capacity development in the field/discipline, pedagogical capacities, research, and contribution to practice. The IDP should be used as basis for measure of HEI's progress against the IDP and funding support by RUSA. The IDPs will form the basis of the graded accreditation (GA) of HEIs with concomitant graded autonomy. This phase wise empowerment of HEIs is the path towards complete autonomy as suggested by the policy.

b) NAAC Accreditation, Academic Audit and IQAC

University must motivate the non-accredited affiliated colleges to be accredited and Colleges with NAAC A grade to become autonomous. As a quality assurance mechanism, every accredited HEI should establish an Internal Quality Assurance Cell (IQAC) as a post-accreditation quality sustenance measure. Since quality enhancement is a continuous process, the IQAC functions as a part of the institution's system and work towards realization of the goals of quality enhancement and sustenance. The prime task of the IQAC is to develop a system for conscious, consistent, and catalytic improvement in the overall performance of HEI. The HEIs must undertake Administrative and Academic Audit on regular basis as per UGC Norms.

c) **Registration of HEI at ABC, and Design of NHEQF Aligned Multidisciplinary Programme with Multiple Entry and Exit Options**

NHEQF outlining the learning outcomes associated with certification /diploma/ degree shall be the guiding document for curricula across all disciplines and fields, which do not have their individual PSSBs. HEIs offering programmes with the multiple entry and exit system need to register in the ABC to enable acceptance of multidisciplinary courses, credit transfer, and credit acceptance.

d) **Internationalization of Education and Establishment of Office of International Affairs**

Refer section 5.4 of Chapter V for additional details.

e) **Offering of ODL and Online Programmes**

NEP 2020 has set the ambitious target of achieving 50 per cent GER by 2035. To achieve this target, Online learning is one of the ways. Hundreds of online courses recognized by UGC including those available in the SWAYAM portal can provide an ideal platform to enable multidisciplinary education by HEI. Number of students completing the MOOCS and SWAYAM courses as a part of credit requirement of the Degree could be the KPI for HEI. For proper and smooth conduct of the online learning of credit course offered on SWAYAM platform, the HEI shall ensure that the physical infrastructures viz, computer facilities, library, etc. essential for pursuing such courses are made available for free and in adequate measure.

f) **Offering of Professional Courses in Indian Languages**

No. of Courses (particularly Technical and Professional Courses) offered in Local Language will be the KPI.

The Maharashtra State Universities and Colleges offering courses and programme in all classical languages, dialects and literature, should undertake strong research efforts to collect, preserve, translate, and study the manuscripts that have not yet received their due attention. Marathi, Hindi, Sanskrit, English and all other Indian language institutes and departments across the state should provide adequate training to large new batches of students to study, in particular, the large numbers of manuscripts and their interrelations with other subjects.

g) **Embedding IKS in Curriculum-**

No of Courses or modules on Indian Knowledge System (IKS) will be the KPI. Refer section 2.7 of Chapter II for additional details on IKS

h) **Establishment of Research and Development Cell (RDC)**

The KPIs could be the Cumulative Research Grant from Government and Private Agencies sanctioned to HEI as well as number of active start-ups promoted by HEI Incubation Center. Refer Chapter VI for additional details on RDC and initiatives for promotion of Research and Innovation Culture.

i) **Offering of Apprenticeship/ Internship Embedded Degree Programme, Employability/ Skilling Centric Initiatives, Alumni Connect, Central Training and Placement Cell (CTPC) and Industry-Institute Linkage**

HEIs are required to develop KPI in terms of no. of Academic Programmes having internship/apprenticeship, On-job Training, and Field Projects as a part of curriculum, Percentage of program curriculum with skill/vocational courses, Percentage of graduating students placed through Placement Cell, and No of MoUs with Industries for Industry-Institute linkage for apprenticeship/ internship/ research/ entrepreneurship/ employment. HEIs can register on portal-https://internship.aicte-india.org created by AICTE to support students to find internships. Initiatives for Alumni connect to connect with alumni (of Indian origin living abroad and foreign alumni) will play an important role for the overall growth of their alma mater.

The National Policy on Skill Development and Entrepreneurship, 2015 laid out Skill India Mission, and envisaged the creation of Sector Skill Councils (SSCs) by National Skill Development Corporation (NSDC). Priority sectors have been identified based on the skill gap analysis. The SSCs can support HEIs in identification of skill development needs of students including the types, range and depth of skills for specific domain and conduct of assessment and certification of vocational and skill-based courses. Due stress is required to be given for the skilling needs of ST/SC, differently-abled and minority groups.

Center of Excellences established under TEQIP project at various Engineering Institutes in Maharashtra, Skill Development Institutes in various Universities

(e.g., Garware Institute of Career Education and Development (GICED) at University of Mumbai) and recently established Skill University in Maharashtra can play a major role in promoting Skill Centric Initiatives.

Global Capability Centers (GCCs), which have a rich developmental history built across the past two and a half decades of their existence in our country, presents a very good employability opportunities for students equipped with necessary skillsets. India is home to 1300+ GCC organizations, employing more than 1.3 million in workforce and contributing US$33.8 billion in gross revenue, as of financial year 2020 (https://nasscom.in/knowledge-center/publications/gcc-value-proposition-india) through the value addition generated by this sector across six core dimensions- economic, human capital development, innovation and ecosystem nurturing, social progress, environmental sustainability, and reputational positioning. NASSCOM has partnered with ANSR to conduct a study on the "Evolution of Retail/CPG Global Capability Center (GCCs) in India". This report (https://nasscom.in/knowledge-center/publications/evolution-retail-cpg-gccs-india) shares insights on various aspects of the Retail/CPG GCC's evolution in India, and a promising outlook in the future. The findings present the current status of Retail/CPG GCCs and their growth, their core value proposition, operating models, sustained expansion and transformation beyond delivering cost efficiencies, and strategic plans to emerge as the digital transformation and talent hub for the global enterprise in the future.

Appointment of Professor of Practice and Associate Professor of Practice at different HEI, as per UGC Norms, could be one of the important steps in promoting Industry-Institute interactions.

Refer section 2.20 and 2.11 of Chapter II and section 3.2 of Chapter III for additional details on Vocational Education and Internship.

7.3 HEI Governance and Infrastructure Upgradation

Internal governance of HEIs needs to be more autonomous, accountable, decentralized, and transparent. A flexible pattern of governance, which is responsive to the changing needs of society, global trends, and knowledge, can be a powerful factor in accelerating progress. In the wake of the internationalization of education, coupled with globalization and competition, the HEIs need to be managed more professionally. To deal effectively

and efficiently with the new, more complex academic environment to be ushered in by the implementation of NEP-2020 provisions, every University/College must develop proper governance mechanism.

For effective implementation of NEP, every state university/ college must undertake expansion and reinforcement of existing laboratory spaces, upgrade instrumentation and equipment infrastructure, and equip classrooms for blended/hybrid mode of instruction. The faculty strength be increased to maintain the Teacher-student ratio (TSR) in tune with the number of teaching programmes offered and the intake capacity of the programme.

It is essential to strengthen the e-governance system to effectively manage the new, complex academic environment and develop IT based tracking system for following the progress of learners at various levels. HEIs should undertake augmentation of IT infrastructure and facilitate use of Technology in Educational Planning, Teaching, Learning and Assessment, Administration and Management, Increasing Access for Disadvantaged Groups, developing Divyang Friendly Education Software, developing e-Content in Regional Language and removing language barriers, setting up of Virtual Labs, and digitally Equipping Teachers and Students. End to end Digitization and its augmentation is very much essential with respect to execution of various administrative processes connected to smooth running of four year Multidisciplinary Degree Programme.

One of the many disruptions aggravated by the Covid-19 pandemic is the rapid and massive digitization of education. Under COVID pandemic, India's educational system started equipping itself with an increasingly digitalized environment. It accelerated the demand for applying technology in a wide range of areas requiring data, most importantly computers, laptops, SMART classrooms and smartphones. India's smartphone penetration is growing at an especially rapid pace, with an estimated 750 million users in 2022, out of which 80% with units possessing 5G capabilities, and also we have witnessed the fastest growth in rural India. Digital revolution and Information and Communication Technology (ICT) has ushered in new possibilities in process and delivery of higher education. ICT can lead the way in providing career opportunities for socially and economically disadvantaged groups by providing opportunities to students to learn what they want to learn at different levels, places and times. Artificial Intelligence (AI) can be a key engine of innovation in supporting education sector. The

global AI in the education market is projected to reach $ 3.68 billion by 2023. Leveraging AI can enhance the personalized learning experience of students through adjusting to each student's learning needs, pace and styles. By utilizing rich content, adaptive quizzes, live courses and interactive gamified simulation training (GST), AI based learning platforms can provide tailored training for both teachers and students and furnish detailed analysis of the students' performances. The e-learning tools and applications will thus provide opportunities for remote, self-paced learning anytime and anywhere. This implies that there will be individual learning processes for each student which will result in a better understanding of the concepts and an overall better result. It will also help teachers to identify the strengths and weaknesses of each student individually and guide them accordingly.

7.4 Student Centric Initiatives and Learner Support System

Multiple student centric initiatives are essential to promote inclusive education policies. The Task Force for Implementation of NEP 2020 in Maharashtra has proposed the initiative of accelerating the Movement towards Ensuring that 'No One is Left Behind'. The report has recommended to set up a special cell for continuous monitoring and evaluating the performance and attainment of outcomes; a committee which will use empirically evidenced methodology, going into the data-based evaluation of what has and hasn't worked for whom and where; suggest new missions/ schemes to take the agenda of inclusion forward and an Equal Opportunity Office (EOO) at the Apex as well as at HEI level. HEIs should implement these recommendations.

The HEI must undertake frequently the updating of website with respect to all statutory details (Programme details and Course fees Structure, examination and assessment pattern, teaching staff with qualification, SSR, AQAR etc). There has to be Budgetary support for providing scholarship and various support schemes for socially and economically weaker students. Thus Scholarships for meritorious and socially weaker students will have to be offered for the purpose of attracting outstanding candidates to the 4-year UG and 2-year/1-year PG programmes. The infrastructural facilities must be upgraded for better access to physically challenged students.

Each institution will be committed to the holistic development of students and create strong internal systems for supporting diverse student cohorts in academic and social domains both inside and outside formal academic interactions in the classroom. The HEI

must support for promotion/ enhancement of Sports, Cultural, Extracurricular Activities and Curriculum as envisaged by NEP 2020. For example, all HEIs will have mechanisms and opportunities for funding of topic-centred clubs and activities organized by students with the help of faculty and other experts as needed, such as clubs and events dedicated to science, mathematics, poetry, language, literature, debate, music, sports, etc. Such activities could be incorporated into the curriculum as a part of cocurricular courses. Faculty will have the capacity and training to be able to approach the students not just as teachers, but also as mentors and guides. As per section 12.4 of the NEP-2020 policy document, students from socio-economically disadvantaged backgrounds require encouragement and support to make a successful transition to higher education. Universities and colleges will thus be required to set up high-quality Learner Support Centres and professional academic and career counselling system to ensure physical, psychological and emotional well-being of students.

7.5 Faculty Support and Training

Multidisciplinary degree programmes punctuated with internship, community service and engagement and skill courses need substantial orientation for teachers. Capacity-building for faculty to teach, train and to do research in multidisciplinary academic programmes need adequate focus. Initiatives like Annual Refresher Programme in Teaching (ARPIT) need to be utilized for additional capacity-building. Institutional structures have to be expanded to strengthen capacity of faculty to use effective pedagogical approaches and design learning assessment methods and tools.

The section 13.1 of National Education Policy (NEP) 2020 specifies that the most important factor in the success of higher education institutions is the quality and engagement of its faculty, while section 15.1.1 of presents that Teacher education is vital in creating a pool of teachers that will shape the next generation. The 4 year degree graduate is expected to be part of a learning system that is multidisciplinary as well as research intensive. The graduates will often have individualized learning plans rather than standard curriculum teaching plans. Assessing such graduates means that even the Teaching talent will have to be enabled to be open and equally prepared to assess with new approaches that will be more continuous rather than end term basis through exams alone. Thus, the teacher preparation is an activity that requires multidisciplinary perspectives and knowledge, formation of dispositions and values, and development of

practice under the best mentors. Teachers must be grounded in Indian values, languages, knowledge, ethos, and traditions including tribal traditions, while also being well-versed in the latest advances in education and pedagogy. In order to fulfill these objectives, Government of Maharashtra has established Maharashtra State Faculty Development Academy (MSFDA) under Section 8 of Companies Act, 2013 to impart training to the faculty of Higher and Technical Education Institutions of Maharashtra. MSFDA has entered into MoU with various Universities and Institutes in Maharashtra State for promoting training on Teaching Pedagogies.

As suggested by Maharashtra State Task Force, Maharashtra State Faculty Development Academy (MSFDA) may be entrusted with the role of nodal agency with adequate financial support to design, develop and launch the online or blended credit courses in teacher education for in-service teachers of HEIs. This may be done in close collaboration with HRDCs in the universities. UGC-HRDC in various state Universities should promote continuous capacity-building of faculty members, especially those in the early part of their careers. A novel academic and business model to revitalize HRDCs as Centers of Excellence for Teacher Education in emerging knowledge society may be conceived and implemented.

7.6 Common Academic Calendar for Universities across Maharashtra State, Faculty-Student ratio (FSR), Credit-hours for different types of courses, and Teaching Workload calculations

a. Common Academic Calendar for Universities across Maharashtra State

In order to facilitate the flexibility of pursuing different courses from different Institutes for students as well as lateral entry at different levels in reference to multiple entry and exit options, it is essential to have **Common Academic Calendar for Universities across Maharashtra State** in terms of the more or less uniform schedule for Admission and Enrolment, Teaching and Learning sessions, Examination Time Table, Evaluation Period and Result Declaration. JBVC can be the right forum for deciding the Common Academic Calendar for every academic year. The Registrar and DBOEE across State Universities should ensure strict implementation of common academic calendar.

b. Faculty- Student Ratio (FSR)

The Task Force for Implementation of NEP 2020 in Maharashtra has identified the shortages of teachers in colleges and universities as critical problem affecting the quality of education. State Governments should therefore take initiatives to appoint and increase the faculties in colleges and universities as per the student: teacher ratio proposed by UGC and in tune with the teaching-learning-evaluation requirements of Multidisciplinary Degree Programme. Thus Government of Maharashtra should support the HEIs to achieve the Faculty/ Teacher - Student Ratio (FSR or TSR) as recommended by IDP document of UGC:

For Under Graduate Courses (FSR):

- Social Sciences (1:30); Sciences (1:25); Mass Media (1:15); Commerce/Management (1:30); Professional Courses (1:25); Vocational Course (1:30), Engineering & Pharmacy-1:15, Architecture and Design Streams-1:10
- Autonomous degree-granting College can be given the flexibility of not more than 10-15% in STR
- The Elective courses, SEC, and AEC courses are undertaken as per the preference of the student. Hence, they can have variable STR. The minimum number of students in a Class shall be 20.
- For Practical/Experiment classes, the proposed STR is 1:15

For Post Graduate Courses (FSR):

- Science 1:10
- Humanities 1:15
- Commerce/Management 1:15
- Mass Media 1:10
- Professional Courses 1:10
- Engineering & Management- 1:10
- Architecture & Design: 1:5
- Pharmacy 1:5

c) **Credit-hours for Different Types of Courses and Teaching Workload Calculations**

A semester consists of 90 working days and an academic year is divided into two semesters. Each working week will have 40 hours of instructional time. **The old method of calculating teaching workload must be replaced by the Credit based calculations of teaching Workload and essential requirement of TSR/ FSR.**

General Education credit refers to a unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour (60 Min) of teaching [theory lecture or tutorial] or two hours of laboratory practical work/field work per week for a duration of a semester (13-15 weeks). Accordingly, one Credit would mean equivalent of 14-15 hrs of theory or 28 - 30 hrs of workshop/ lab work per Semester. For field work, the credit weightage for equivalent hours is 50% of that for lectures/tutorials. For self-learning, based on e-content or otherwise, the credit weightage for equivalent hours of study is 50% or less of that for lectures/tutorials. Credits for internship shall be one credit per one week of internship, subject to a maximum of six credits in a Semester.

Each of the core/interdisciplinary courses will require specific number of hours of teaching/guidance, in any of the modes of learning, and laboratory/studio/workshop activities, field-based learning/projects, and internships/ community engagement and service. The Teaching Workload determination will thus include calculations based on TSR and Credit.

The following types of courses/activities constitute the programmes of study. Each of them will require specific number of hours of teaching/guidance and laboratory/studio/workshop activities, field-based learning/projects, and internships, and community engagement and service in reference to credit requirement.

i. **Taught Courses:** A minimum of 15 hours of teaching per credit is required in a semester along with 30 hours of out-of-class activities such as preparation for class /lessons, completing assignments which form a part of the course work, and independent reading and study. The total learner engaged time for a one credit taught course would be 45 hours. The out-of-

class activities may not be measured and quantified for purposes of grading of the credit but shall be reasonably included in the calculation of teaching workload.

ii. **Laboratory Work/Activities:** A course requiring students to discover/practice application of a scientific or technical principles/theories. The course may require scientific, or research focused experiential work where students observe, test, conduct experiment(s) or practice application of principles/theories relating to field of learning, work/vocation or professional practice. A minimum of 30 hours in the laboratory activities per credit in a semester along with 15 hours of out-of-class activities such as preparation for the practicum, completing assignments which form a part of the course work, and independent reading and study. The total learner engaged time for a one credit laboratory work/activity would be 45 hours.

iii. **Studio Activities:** Studio activities involve engagement of students in creative or artistic activities. Every student is engaged in performing a creative activity to obtain a specific outcome. Studio-based activities involve visual- or aesthetic-focused experiential work. A minimum of 30 hours in the studio activities per credit in a semester along with 15 hours of out-of-class activities such as preparation for the studio activity, completing assignments, and independent reading and study. The total learner engaged time for a one credit-hour studio activity would be 45 hours.

iv. **Workshop-based Activities:** Courses involving workshop-based activities require engagement of students in hands-on activities related to work/vocation or professional practice. Every student is engaged in performing a skill-based activity related to specific learning outcome(s). A minimum of 30 hours of workshop-based activities per credit in a semester along with 15 hours of out-of-class activities such as preparation for the workshop activity, completing assignments, and independent reading and study. The total learner engaged time for a one credit-hour workshop activity would be 45 hours.

v. **Seminar:** A course requiring students to participate in structured discussion/conversation or debate focused on assigned tasks/readings, current or historical events, or shared experiences guided or led by an expert

or qualified personnel in a field of learning, work/vocation or professional practice. A minimum of 15 hours of participation in seminar activity per credit in a semester along with 30 hours of out-of-class activities such as preparation for the seminar, completing assignments, and independent reading and study.

vi. **Practicum:** A course requiring students to participate in an approved project or practical activity that applies previously learned/studied principles/theory related to the chosen field of learning, work/vocation or professional practice under the supervision of an expert or faculty in the field of learning, work/vocation or professional practice.

vi. **Internship:** A course requiring students to participate in professional employment- related activity or work experience, or cooperative education activity with an entity external to the education institution, normally under the supervision of an employee of the given external entity. A key aspect of the internship is induction into actual work situations. Internships involves working with local industry, businesses, artists, crafts persons, etc. and opportunities for students to actively engage with the practical side of their learning. Credits for internship shall be one credit per one week of internship, subject to a maximum of six credits.

vii. **Field-based Learning/ Practices:** A minimum of 30 hours of learning activities in a semester along with 30 hours of out-of-class activities such as preparation for the field projects, completing assignments which form a part of the course work, and independent reading and study.

Courses requiring students to participate in field-based learning/project generally under the supervision of an employee of the given external entity. 30 hours per credit in a semester along with 15 hours of activities such as preparation for the field projects, data analysis, preparation of reports etc., and independent reading and study

viii. **Community Engagement and Service:** Courses requiring students to participate in field-based learning/project generally under the supervision of an employee of the given external entity. The curricular component of 'community engagement and service' will involve activities that would expose students to the socio-economic issues in society so that the theoretical

learnings can be supplemented by actual life experiences to generate solutions to real-life problems. 30 hours of contact time per credit in a semester along with 15 hours of activities such as preparation for the community engagement and service, preparation of reports etc., and independent reading and study.

ix. **Hybrid Courses Involving a Mix of Taught Courses and Practicum:** A 4-credit course involving 75% of face–to– face teaching and 25% field-based learning/project or lab work, or workshop activities will have a total of 75 hours of instructional time during a semester, and 105 hours of out-of-class activities such as preparation for the courses of study, completing assignments and independent reading and study. Thus, the total learner engaged time would be 180 hours for a 4-credit course.

x. **Learner Engaged Time for a 4-Credit Course involving 50% Practicum:** A 4-credit course involving 50% face–to– face teaching and 50% field-based learning/project or lab work, or workshop activities will have a total of 90 hours of instructional time during a semester, and 90 hours of out-of-class activities such as preparation for the courses of study and practicum, completing assignments and independent reading and study. Thus, the total learner engaged time would be 180 hours for a 4-credit course.

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राष्ट्रीय शैक्षणिक धोरण, २०२० अंतर्गत (१) सध्या सुरु असलेल्या ३ वर्षाच्या अभ्यासक्रमावरुन ४ वर्षाच्या अभ्यासक्रमाकडे स्थलांतर (२) एकसमान शैक्षणिक अभ्यासक्रम आराखडा (३) सामान्य अध्यापनशास्त्राऐवजी विधायक अध्यापनशास्त्राचा वापर (४)विद्यार्थ्यांच्या सर्वांगीण विकासासाठी वैयक्तिकृत शिक्षणाचा आराखडा यासंदर्भात करावयाची अंमलबजावणी.

महाराष्ट्र शासन
उच्च व तंत्र शिक्षण विभाग
शासन निर्णय क्रमांक: एनईपी-२०२२/प्र.क्र.१०५/विशि-३,
मंत्रालय, मुंबई ४०० ०३२,
दिनांक: ०६ डिसेंबर, २०२२

संदर्भः- १. शासन निर्णय, उच्च व तंत्र शिक्षण विभाग, क्र. एनईपी-२०२२/प्र.क्र.१०५/विशि-३, दि. २६ एप्रिल, २०२२.

प्रस्तावना-

भारताला ज्ञान महासत्ता बनविण्यासाठी, विद्यार्थ्यांमध्ये आवश्यक कौशल्य व ज्ञानप्राप्ती आणि विज्ञान, तंत्रज्ञान, शिक्षण आणि औद्योगिक क्षेत्रामधील मनुष्यबळाची कमतरता दूर करण्यासाठी, भारतातील लोकसंख्येला गुणवत्तापूर्ण शिक्षण, नाविन्यपूर्ण शिक्षण व संशोधनाच्या सुविधा उपलब्ध करुन देण्यासाठी, भारत सरकारने नवीन राष्ट्रीय शैक्षणिक धोरण- २०२० लागू केलेले आहे. राष्ट्रीय शैक्षणिक धोरण-२०२० ची राज्यात अंमलबजावणी करण्याच्या दृष्टीने या धोरणाचा अभ्यास करुन राज्य शासनास अहवाल सादर करण्यासाठी दिनांक १६ ऑक्टोबर, २०२० च्या शासन निर्णयानुसार डॉ.रघुनाथ माशेलकर, माजी महासंचालक, वैज्ञानिक आणि औद्योगिक संशोधन परिषद, नवी दिल्ली यांच्या अध्यक्षतेखाली कार्यबल गट स्थापन करण्यात आला होता. सदर कार्यबल गटाने दि.३० जून, २०२१ रोजी शासनास सादर केलेल्या अहवालातील शिफारशींचे त्यांची निकड, प्रभाव, अंमलबजावणीची सुलभता, गुंतवणूक आणि निधीची गरज, कार्यवाहीमधील प्राधान्य या घटकांचा विचार करुन तीन टप्प्यात खालीलप्रमाणे वर्गीकरण करण्यात आले आहेः

(१) तातडीने हाती घ्यावयाचा/किमान संसाधनांची आवश्यकता असलेला कार्यक्रम;
(२) मध्यम मुदतीचा/मध्यम संसाधनांची आवश्यकता असलेला कार्यक्रम;
(३) दीर्घकालीन/ज्यासाठी मोठ्या प्रमाणावर निधीची आवश्यकता असलेले कार्यक्रम.

दि.२७ जानेवारी, २०२२ रोजी झालेल्या मंत्रिमंडळ बैठकीतील मान्यतेनुसार डॉ.माशेलकर समितीने शिफारस केल्याप्रमाणे (१) सध्या सुरु असलेल्या ३ वर्षाच्या अभ्यासक्रमावरुन ४ वर्षाच्या अभ्यासक्रमाकडे स्थलांतर करण्याची योजना व त्याबाबतचा आराखडा तयार करणे, (२) एकसमान शैक्षणिक अभ्यासक्रम आराखडा तयार करणे, (३) सामान्य अध्यापनशास्त्राऐवजी विधायक अध्यापनशास्त्राचा वापर करणे, (४) विद्यार्थ्यांच्या सर्वांगीण विकासासाठी वैयक्तिकृत शिक्षणाचा आराखडा तयार करण्यासंदर्भात संदर्भाधीन दि.२६.०४.२०२२ च्या शासन निर्णयान्वये

डॉ. रविंद्र कुलकर्णी,माजी प्र-कुलगुरु, मुंबई विद्यापीठ, मुंबई यांच्या अध्यक्षतेखाली समिती स्थापन करण्यात आली होती. सदर समितीने आपला अहवाल शासनास सादर केला असून त्यातील शिफारशी शासनाने स्विकारल्या आहेत. तसेच, या शिफारशीची विद्यापीठाच्या विहित प्राधिकरणांची मान्यता घेऊन तातडीने अंमलबजावणी करण्याबाबत विद्यापीठांनी निर्णय घ्यावा असे सर्व संबंधित विद्यापीठांना दिनांक २० ऑक्टोबर, २०२२ आणि दिनांक ४ नोव्हेंबर २०२२ च्या पत्रान्वये कळविण्यात आले आहे. त्यादृष्टीने राष्ट्रीय शैक्षणिक धोरण-२०२० ची सन २०२३-२४ पासून प्रभावी व एकसमान अंमलबजावणी करण्याच्या दृष्टीने सर्व अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे व समूह विद्यापीठे आणि सर्व शैक्षणिक संस्थांसाठी निर्देश जारी करण्याची बाब शासनाच्या विचाराधीन होती.

<u>शासन निर्णय:-</u>

राष्ट्रीय शैक्षणिक धोरण, २०२० अंतर्गत उपरोक्त नमूद बाबींसाठी स्थापन केलेल्या डॉ.रविंद्र कुलकर्णी,माजी प्र-कुलगुरु, मुंबई विद्यापीठ, मुंबई यांच्या अध्यक्षतेखालील समितीने सादर केलेल्या अहवालातील शिफारशींच्या अंमलबजावणीच्या अनुषंगाने सोबत जोडलेल्या परिशिष्टामध्ये निर्देश जारी करण्यात येत असून सदर निर्देशांची वर्ष २०२३-२४ पासून सर्व अभ्यासक्रमांसाठी अंमलबजावणी करण्यात यावी.

सदर निर्देश महाराष्ट्र सार्वजनिक विद्यापीठ अधिनियम, २०१६ मधील कलम ५ (८१) मधील तरतूदीनुसार निर्गमित करण्यात येत आहेत.

सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा सांकेतांक २०२२१२०६१८४३११४००८ असा आहे. हा शासन निर्णय डिजीटल स्वाक्षरीने साक्षांकित करून काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नांवाने,

AJIT MADHUKARRAO BAWISKAR

Digitally signed by AJIT MADHUKARRAO BAWISKAR
DN: c=IN, o=GOVERNMENT OF MAHARASHTRA, ou=HIGHER AND TECHNICAL EDUCATION DEPARTMENT, 2.5.4.20=deb455609479b6c7f30e7f1f9a8360c0f8600a542859e8fe229d6ea333415e8d, postalCode=400032, st=Maharashtra, serialNumber=99EB928028DF71EBDFCD2898E209D499192AD3899261FEAD42F7D38A3141AB69, cn=AJIT MADHUKARRAO BAWISKAR
Date: 2022.12.06 18:47:04 +05'30'

(अजित बाविस्कर)

उप सचिव, महाराष्ट्र शासन

प्रत,

१. मा. राज्यपाल यांचे प्रधान सचिव, राजभवन, मुंबई,
२. मा. मुख्यमंत्री यांचे प्रधान सचिव, मंत्रालय, मुंबई,
३. मा. उपमुख्यमंत्री यांचे उप सचिव, मंत्रालय, मुंबई,
४. मा. मंत्री, उच्च व तंत्र शिक्षण विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई,
५. मा. कुलगुरु, सर्व अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे व समूह विद्यापीठे.
६. कुलसचिव, सर्व अकृषि विद्यापीठे, अभिमत विद्यापीठे, स्वयं अर्थसहाय्यित विद्यापीठे व समूह विद्यापीठे

७. संचालक, उच्च शिक्षण/ तंत्रशिक्षण/ कला/ ग्रंथालय
८. प्रधान सचिव, उच्च व तंत्र शिक्षण विभाग, यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई,
९. उप सचिव (विशि), उच्च व तंत्र शिक्षण विभाग, यांचे स्वीय सहाय्यक, मंत्रालय, मुंबई,
१०.निवडनस्ती (विशि-३).

शासन निर्णय क्रमांक: एनईपी-२०२२/प्र.क्र.१०५/विशि-३,दि. ०६ डिसेंबर, २०२२ सोबतचे परिशिष्ट

DIRECTIVES (निर्देश)

1. **National Credit Framework (NCrF):**
   For creditisation and integration of all higher education qualifications leading to a certificate/ diploma/ degree with multiple entry and exit options, the State Universities shall refer to National Credit Framework (NCrF) which encompasses the qualification frameworks for higher education, vocational & skill education and school education, namely National Higher Education Qualification Framework (NHEQF), National Skills Qualification Framework (NSQF) and National School Education Qualification Framework (NSEQF) respectively.

2. **Structure of Four years multidisciplinary UG Programme and Five Years Integrated Multidisciplinary Master's Degree Programmes with Multiple Entry and Exit Options at Different Levels:**

   (1) Students will have the flexibility to enter a Four years multidisciplinary Under-Graduate Programme in odd semesters and exit a programme after the successful completion of even semesters as per their future career needs.

   (2) Students will get a Certificate after a One year programme (minimum 40 Credits), a Diploma after Two years (minimum 80 Credits), a Bachelor's degree after Three years (minimum 120 Credits), and a Bachelor's degree with Research or Honours after Four years (minimum 160 Credits).

3. **Qualification Type and Credit Requirements of Four Years Multidisciplinary Degree Programme with Multiple Entry and Exit Options**

   (1) Details of qualifications, minimum credit requirements, exit credit courses, year and semester are as under:

Levels	Qualification title	Min. Credit requirements	Exit Credit Courses	Year and Semester
4.5	UG Certificate	40	10- credit bridge course(s) lasting two months	1 year, 2 Semesters
5.0	UG Diploma	80	10- credit bridge course(s) lasting two months	2 years, 4 Semesters
5.5	Bachelor's Degree	120	10- credit bridge course(s) lasting two months	3 years, 6 Semesters
6.0	Bachelor's Degree-Honors	160	-	4 years, 8 Semesters
6.0	Bachelor's Degree-Research	160	-	4 years, 8 Semesters
6.0	Bachelor's Degree-Engineering	160	-	4 years, 8 Semesters

(2) An exit 10-credit bridge course(s) lasting two months, including at least 6-credit job-specific internship/apprenticeship that will help the graduates acquire job-ready competencies required to enter the workforce will be an additional requirement for the award of the undergraduate Certificate/ Diploma/ three year Bachelor's Degree.

(3) Besides defining titles for common fees for the programme, the fee structure needs to be defined for individual courses which will enable the mechanism for working out the overall fee structure based on the combinations of courses selected by the students for the particular programme.

(4) On exit, the students will have the option to re-enter the programme from where they had left off, at the same or in a different higher education institution. Re-entry at various levels for lateral entrants in academic programmes should be based on the earned and valid credits as deposited and accumulated in the Academic Bank of Credits (ABC) through Registered Higher Education Institutions (RHEI) and proficiency test records.

(5) PG curriculum, as illustrated below, also offers flexibility in the design and duration of One-year Post-Graduate Diploma (PGD), One/ Two year Post-graduate Programme and 5 Years Integrated Multidisciplinary Master's degree programmes with multiple Entry and Exit options at different levels.

(a) Post-Graduate Diploma (PGD): Programme duration- One year (2 semesters) after any bachelor's degree, min. 40 credits
   (i) UGC: 1-Year (2 semesters) Post-Graduate Diploma (PGD) after 3-years Bachelor's degree: Level 6.0
   (ii) UGC: 1-Year (2 semesters) PGD after 4 years Bachelor's degree (Honors/ Research): Level 6.5
   (iii) AICTE: 1-Year (2 semesters) PGD after 4 years Bachelor's degree (Engg.): Level 6.5

(b) Master's Degree:
   (i) UGC: 2-Years (four semesters) Master's Degree after obtaining a 3-years Bachelor's degree, Minimum 40 credits/year, second year devoted entirely to research, PG – 2nd year: Level 6.5

   OR

   1-Year (two semesters) Master's Degree after obtaining a 4-year Bachelor's degree (Honours/Research): Minimum 40 credits: Level 6.5

   (ii) AICTE: 2-Years (four semesters) Master's Degree ME/ M. Tech. after obtaining a 4 years Bachelor's degree in Engg. and Tech.), Minimum 40 credits/ year

   PG 1st year (Engineering.): Level 6.5; PG- 2nd (Engineering.): Level 7.0

(c) Learner after completing the first year of M. Tech. program, shall be eligible for an M. Voc. degree, upon exit. Having M. Voc. degree, however, is not mandatory for entry into an M. Tech. program.

(d) Level 8 represents Ph. D. Research Degree.

(e) A 5-year Integrated Bachelor's and Master's programme shall have a minimum of 200 credits. The exact number of credits for different UG and PG programs will be determined by the individual Universities but shall lie within the stated limits.

(f) Master's and doctoral programmes, while providing rigorous research-based specialization, should also provide opportunities for multidisciplinary work, in academia, government, research institutions, and industry.

4. Lateral Entry/ Re-entry at higher Levels after exit from lower levels of four years multidisciplinary UG degree programme:

(1) The credit points earned and accumulated shall be used to determine the eligibility for taking admission to various programs at multiple levels, subject to fulfilment of the broad principles laid down under NCrF. Students who leave with a Certification, Diploma, or a Basic Bachelor's Degree will be eligible to re-enter the programme at the exit level to complete or progress to the next level through lateral entry mode. Depending upon the academic and physical facilities available, the State Universities/ Autonomous Colleges (Higher Education Institutions or HEI) may earmark specific seats/ intake for lateral entry into the second year/ third year/ fourth year of a four years multidisciplinary UG degree programme as approved by Professional Standard Setting Bodies (PSSB/Govt. of Maharashtra/ statutory council of affiliating University plus any consequential vacancies caused by exits to an ongoing programme (four-year Degree Programme and Integrated Master's or second year Master's). Lateral entry or Re-entry is open to those students if he/she has either -

(a) successfully completed the first year/second year/third year of the particular four years multidisciplinary degree programme in any ABC registered HEI with valid credits in ABC and re-entering into the second year/third year/fourth year, respectively of the same four years degree programme of any ABC registered HEI, within stipulated/ permissible period of years as decided by Statutory Councils of that HEI

OR

(b) already successfully completed a multidisciplinary four-year first-degree programme and is desirous of and academically capable of pursuing another multidisciplinary four years first-degree programme in an allied subject.

(2) A student will be allowed to enter/re-enter only at the odd semester. Re-entry at various levels for lateral entrants in academic programmes should be based on the earned and valid credits as deposited and accumulated in Academic Bank of Credits (ABC) through Registered Higher Education Institutions (RHEI) and proficiency test records. Hence, the University/ College will have to work out prerequisites and entry norms for lateral admissions such as the previous year Cumulative Grade Point Average (CGPA), a written test and/or interview, the requirement of bridge courses etc. In case the lateral entrant is desirous of joining four years degree programme different from his/her earlier Programme (i.e. with different combinations of Major and Minor), then the Board of Studies of that Higher Educational Institution shall decide the requirements of bridge courses, prerequisite courses and additional credit

requirements for new combinations of Major and Minor which the lateral entrant must fulfil for the purpose of joining new Programme. However, in terms of the admission eligibility requirements, the student shall belong to the same faculty/ discipline in terms of Major Subject i.e., the Major subject of his earlier Programme and the Major subject of the new Programme for which he is seeking admission must be from the same faculty/discipline. Reservation for lateral entry will have to be executed as per the Government of Maharashtra norms.

5. Distribution of Credits across Multidisciplinary Four Years Degree Programme:

(1) Four-year multidisciplinary degree programme with Honors/ Specialization Degree will have Internship and Core /Major Courses with a minimum of 20 credits per Sem. in the Fourth Year.

(2) Four-year multidisciplinary degree programme with Research will have Research Projects, Seminars, Dissertations and Internships with a minimum of 20 credits per Sem. in the Fourth Year.

(3) Students shall select a 'Major or Core Subject/ Discipline' and a 'Minor Subject/Discipline' from the lists of various Subject Combinations and Options provided by the State Universities/ Autonomous Colleges (higher Education Institutions or HEI). In general, for the four years multidisciplinary bachelor's degree programme, the distribution of credits will be as follows:

(a) Disciplinary/interdisciplinary Major/ Core Subject (minimum of 40-56 credits)- Mandatory and Elective Courses
(b) Disciplinary/interdisciplinary Minor Subject (maximum of 20-28 credits)
(c) Skill based/Vocational studies corresponding to the Major/ Core Subject (12-18 credits)
(d) Field projects/internship/apprenticeship/community engagement and service corresponding to the Major/ Core Subject (24- 32 credits) with a maximum of six credits per Semester
(e) Generic/ Open Electives through Baskets of Elective Courses (8-12 credits),
(f) Ability Enhancement Courses including Languages, Literature and Environmental Studies (12-14 credits),
(g) In-built modules on the Indian Knowledge System (IKS) in Major/ Core Subject at Level 4.5,
(h) Value-based Education, Life Skills and Professional Ethics (4-6 credits)
(i) Co-curricular Courses such as Sports and Culture, NSS/NCC and Fine/ Applied/ Visual Arts(2-6 credits).

(4) The National Skills Qualifications Framework (NSQF) organizes qualifications for Vocational and Skill Courses in a series of 8 levels based on professional knowledge, professional skills, core skills and responsibilities, in the increasing order of complexity and competency.

(5) University Grants Commission (Credit Framework For Online Learning Courses through Study Webs of Active-Learning for Young Aspiring Minds) Regulations, 2021, permits up to 40 per cent of the total courses being offered in a particular

programme in a semester through the Online Learning Courses offered through the Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) platform.

(6) NCrF proposes that the number of credits per year for 1200 learning hours will be 40. Wherever necessary, if the curriculum so demands, the concerned State University may consider having more than 40 credits for a particular program. However, the minimum credits for any program against 1200 hours of learning in a year will be 40. The Board of Studies (BoS) and Academic Council (AC) of Universities and Autonomous Colleges shall adopt Learning Outcomes-based Approach to Curriculum Planning and Development based on Key Qualification Descriptors and Graduate attributes.

6. Examination and Assessment Process:

(1) The basic principle of the credit framework is that credits are a function of the successful completion of a program of study/ vocational education/ training and assessment. No credit can be earned by the student unless the student is assessed for the achievement of the desired competencies and outcome of a program.

(2) Exit options are provided with certification, diploma and basic Bachelor's degrees to the students at the end of the second, fourth and sixth semesters of a four years multidisciplinary degree programme. Students will receive a Bachelor's degree with Honours/ Research on successfully completing of all eight semesters of the UG Program either at a stretch or with opted exits and re-entries.

(3) For the smooth success of four-year multidisciplinary degree programme with multiple entry and exit systems, the examination mode should be based on the combination of innovative trends in formative (informal and formal tests administered during the learning process) and summative (evaluation of students learning at the end of an instructional unit) examination modes in line with the UGC Report on 'Evaluation Reforms in Higher Educational Institutions (2019)'.

7. Declaration of Results:

(1) Declaration of result is based on the Semester Grade Point Average (SGPA) earned towards the end of each semester or the Cumulative Grade Point Average (CGPA) earned at the completion of all eight semesters of the programme and the corresponding overall alpha-sign or letter grades as given in Table 2. If some candidates exit at the completion of the first, second or third year of the four years Undergraduate Programmes, with Certificate, Diploma or Basic Degree, respectively, then the results of successful candidates at the end of the second, fourth or sixth semesters shall also be classified on the basis of the CGPA obtained in the two, four, six or eight semesters, respectively. Successful candidates at the end of the tenth semester of the integrated Master's Degree Programmes shall also be classified on the basis of CGPA obtained in the ten semesters of the Programmes. Likewise, the successful candidates of one year or two semesters Master's Degree Programme are also classified on the basis of the CGPA of two semesters of the Master's Degree Programme.

Table 2: Letter Grades and Grade Points

Semester GPA/ Program CGPA Semester/Program	% of Marks	Alpha-Sign / Letter Grade Result
9.00-10.00	90.0-100	O (Outstanding)
8.00-<9.00	80.0-<90.0	A+ (Excellent)
7.00-<8.00	70.0-<80.0	A (Very Good)
6.00-<7.00	60.0-<70	B+ (Good)
5.50-<6.00	55.0-<60.0	B (Above Average)
5.00-<5.50	50.0-<55.0	C (Average)
4.00-<5.00	40.0-<50.0	P (Pass)
Below 4.00	Below 40	F (Fail)
Ab (Absent)	-	Absent

(2) A student obtaining Grade F shall be considered failed and will be required to reappear in the examination. For non credit courses 'Satisfactory' or "Unsatisfactory' shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA. Based on the above recommendations on Letter grades, grade points and SGPA and CGPA, the State Universities may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

8. Award of Major and Minor Degree:

(1) A student pursuing four-year multidisciplinary UG programme shall be awarded an appropriate Honours/ Research degree in Major/ Core Subject on completion of VIII Semester with the minimum of 160 credits if he secures in that Subject at least 50% of the total credits for that programme. He shall thus study the specific number of Mandatory Core Courses, Core Electives, Vocational and Skill Courses and Field projects/ Internships connected to Core Subjects in eight semesters so as to cover at least 50% of the total credits.

(2) In case of Research Degree, a student shall pursue research project and write dissertation in that Major in the VII and VIII semesters.

(3) A student is eligible for the award of Minor Degree on successful completion of four years Multidisciplinary Degree Programme with the minimum of 160 credits if he earns 20-28 credits in that Minor Subject. The award of Minor Degree is independent of the award of the Major Degree.

9. Universities to frame Statutes/Ordinances/Regulations:

All Universities in the State of Maharashtra including Self-Financed Universities and Open University shall frame Statutes/Ordinances/Regulations in this regard in accordance with the provisions of the respective University Acts and implement the same from the academic year 2023-24 for all programs

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ज्ञान-विज्ञान विमुक्तये
प्रो. रजनीश जैन
सचिव
Prof. Rajnish Jain
Secretary

सत्यमेव जयते

विश्वविद्यालय अनुदान आयोग
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D.O.68-1/2021(IC) **29th July, 2021**

Sub: Guidelines for Internationalisation of Higher Education in India

Respected Madam/Sir,

As you are aware, Government of India is taking a number of initiatives for internationalisation of higher education under National Education Policy, 2020. On the completion of one year of transformative reforms under National Education Policy, 2020 Hon'ble Prime Minister of India, Shri Narendra Modi released the Guidelines for Internationalisation of Higher Education.

The Guidelines enumerates various strategies and initiatives and provide an excellent opportunity through a wide array of activities such as internationally relevant curricula, brand building of Indian Higher Education Institutions abroad, academic and research collaboration with foreign universities, credit recognition under twinning arrangements, global citizenship approach and engaging with foreign alumni. The Guidelines provide an excellent opportunity for global outreach of Indian Higher Education Institutions.

I take this opportunity to request you to come forward and take up various measures directed towards internationalisation of higher education in the larger interest of our students.

With kind regards,

Yours sincerely,

(Rajnish Jain)

To

The Vice Chancellors of all the Universities
The Principals of all the Colleges

ज्ञान-विज्ञान विमुक्तये

सत्यमेव जयते

विश्वविद्यालय अनुदान आयोग
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प्रो. रजनीश जैन
सचिव
Prof. Rajnish Jain
Secretary

D.O. No.1-6/2007(CPP-II) **30 September, 2022**

Respected Madam/Sir,

As you are aware, UGC on 13th April, 2022 has issued Guidelines for pursuing two academic programmes simultaneously. These guidelines have been framed keeping in view the NEP-2020, to facilitate multiple pathways to learning involving both formal and non-formal education modes. The guidelines are available on the UGC website www.ugc.ac.in.

All the Higher Educational Institutions (HEIs) were requested to devise mechanisms through its statutory bodies for allowing students to pursue two academic programmes simultaneously. It is once again requested that in the larger interest of the students, implementation of the said scheme may kindly be ensured and expedited, if not done so far.

With kind regards,

Yours sincerely,

(Rajnish Jain)

The Vice-Chancellors of all Universities
The Principals/Directors of all Colleges / Institutes

Guidelines for Pursuing Two Academic Programmes Simultaneously



University Grants Commission
Bahadur Shah Zafar Marg
New Delhi

April, 2022

Guidelines for Pursuing Two Academic Programmes Simultaneously

Background

The National Education Policy - NEP 2020 states that pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible, and, of course, enjoyable. The policy envisions imaginative and flexible curricular structures to enable creative combinations of disciplines for study, that would offer multiple entry and exit points, thus, removing currently prevalent rigid boundaries and creating new possibilities for life-long learning and centrally involve critical and interdisciplinary thinking.

With the rapid increase in demand for higher education and limited availability of seats in regular stream, several Higher Education Institutions (HEIs) have started a number of programmes in Open and Distance Learning (ODL) mode to meet the aspirations of students. It has also led to the emergence of online education programmes which a student can pursue within the comforts of her / his home. The issue of allowing the students to pursue two academic programmes simultaneously has been examined by the Commission keeping in view the proposals envisaged in the National Education Policy - NEP 2020 which emphasizes the need to facilitate multiple pathways to learning involving both formal and non-formal education modes.

In view of above, UGC has framed the following Guidelines.

Objectives

To allow the students to pursue two academic programmes simultaneously keeping in view the following objectives envisaged in NEP 2020:

- recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing teachers as well as parents to promote each student's holistic development in both academic and non-academic spheres;
- no hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams, etc. in order to eliminate harmful hierarchies among, and silos between different areas of learning;

- multidisciplinarity and a holistic education across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge;
- enabling an individual to study one or more specialized areas of interest at a deep level, and also develop character, ethical and constitutional values, intellectual curiosity, scientific temper, creativity, spirit of service.
- offering the students, a range of disciplines including sciences, social sciences, arts, humanities, languages, as well as professional, technical, and vocational subjects to make them thoughtful, well-rounded, and creative individuals.
- preparing students for more meaningful and satisfying lives and work roles and enable economic independence.

Guidelines

1. A student can pursue two full time academic programmes in physical mode provided that in such cases, class timings for one programme do not overlap with the class timings of the other programme.
2. A student can pursue two academic programmes, one in full time physical mode and another in Open and Distance Learning (ODL)/Online mode; or up to two ODL/Online programmes simultaneously.
3. Degree or diploma programmes under ODL/Online mode shall be pursued with only such HEIs which are recognized by UGC/Statutory Council/Govt. of India for running such programmes.
4. Degree or diploma programmes under these guidelines shall be governed by the Regulations notified by the UGC and also the respective statutory/professional councils, wherever applicable.
5. These guidelines shall come into effect from the date of their notification by the UGC. No retrospective benefit can be claimed by the students who have already done two academic programmes simultaneously prior to the notification of these guidelines.

The above guidelines shall be applicable only to the students pursuing academic programmes other than Ph.D. programme.

Based on the above guidelines, the universities can devise mechanisms, through their statutory bodies, for allowing their students to pursue two academic programmes simultaneously as mentioned above.

सत्यमेव जयते

ज्ञान-विज्ञान विमुक्तये

University Grants Commission

Guidelines for Transforming Higher Education Institutions into Multidisciplinary Institutions



Guidelines for Transforming Higher Education Institutions into Multidisciplinary Institutions

ज्ञान-विज्ञान विमुक्तये

The University Grants Commission
Bahadur Shah Zafar Marg
New Delhi – 110002

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Foreword

The quintessence of Higher Education Institution (HEI), as envisioned in the National Education Policy 2020, is one which builds vibrant communities of scholars and peers, break down harmful silos between disciplines and enable students to become well-rounded individuals. However, a substantial number of HEIs in the country are either single stream institutions or multidisciplinary institutions with rigid disciplinary boundaries. To transform the HEIs into multidisciplinary institutions within the timelines suggested by the NEP 2020, therefore, is a challenge.

In order to enable the transformation of HEIs into multidisciplinary institutions, the UGC constituted a committee under the chairmanship of Prof. R. P. Tiwari. The Committee has suggested multiple ways such as collaboration, merging and clustering between institutions to achieve the characteristics of a multidisciplinary institution. I am happy to present the "Guidelines for Transforming Higher Educational Institutions in to Multidisciplinary Institutions" to the HEIs for consideration. Hope these guidelines help State Governments and Universities to frame appropriate rules/policies to transform HEIs into multidisciplinary institutions.

I take this opportunity to thank the Chairman of the Expert Committee Prof. R. P. Tiwari and members for drafting the guidelines. Thanks are also due to Prof. Nageshwar Rao and members for drafting guidelines for establishment of department of education in multidisciplinary institutions. I also thank Prof. Rajnish Jain, Secretary, UGC and all others for providing all possible support in bringing out these guidelines.

Prof. M. Jagadesh Kumar
Chairman
University Grants Commission

New Delhi,
September, 2022

Guidelines for Transforming Higher Education Institutions (HEIs) into multidisciplinary institutions

1. Preamble

Aano bhadra krtavo yantu vishwatah
Let noble thoughts come from all directions

This profound concept from the Rigveda illustrates the recognition of limitless learning in the Vedic Period. India has a rich tradition of the multidisciplinary approach since ages, as exemplified by the ancient institutions such as Nalanda and Takshashila. These higher learning centres of ancient India were known for teaching every branch of knowledge, such as singing, painting, chemistry, mathematics; vocational fields such as carpentry, clothes-making; professional fields such as medicine and engineering; and soft skills such as communication, discussion and debate. Over the centuries the broader learning opportunities got narrowed and gradually in recent years the focus moved to specialization in particular subjects resulting in the growth of single-stream institutions. The National Education Policy 2020 (NEP 2020), suggests several policy directions for offering multidisciplinary education.

The NEP 2020 aims to develop intellectual, aesthetic, social, physical, emotional, ethical and moral facets of an individual in an integrated manner, thereby contributing directly to transformation of the country and making India a global knowledge superpower. What constitutes an HEI, that is, a university or a college, is also defined in the NEP 2020. Large multidisciplinary HEIs to be established in or near every district by 2030 is one of the most significant recommendations in the NEP 2020. A multidisciplinary institution should not only have different departments, but also should have innovative programmes of a multi- and interdisciplinary nature to help widen learners' thinking and learning capability and train them to address emerging challenges.

India has domain specific stand-alone colleges and universities. Even in multidisciplinary HEIs the disciplinary boundaries are so rigid that the opportunities to learn and explore different disciplines are less explored. Internationally, the culture of establishing and sustaining a multidisciplinary university is increasing fast, thereby maximizing productivity with enhanced focus towards research and development, innovation and incubation. It is therefore, pertinent for higher educational system (HES) to phase out stand-alone, fragmented and domain-specific HEIs to create HEI clusters and multidisciplinary HEIs instead. Such institutions will impart education, with strong values and skill sets. The Higher Education System will further enhance the performance of Indian institutions in terms of teaching, learning and research to newer and greater heights.

The way proposed in the NEP 2020 to end fragmentation of higher education is by transforming HEIs into multidisciplinary universities, colleges and clusters and knowledge hubs. The types of HEIs envisaged are:

a. Multidisciplinary research-intensive universities (RUs)
b. Multidisciplinary teaching-intensive universities (TUs)
c. Degree-awarding multi-disciplinary autonomous colleges (smaller than a university)

The multidisciplinary TUs and RUs will be universities with 3,000 or more students. Given that by 2035 all affiliated colleges should become degree-awarding multidisciplinary autonomous institutions, it is necessary to develop a road map to transform all affiliated colleges to attain the status, either alone or through collaboration with nearby institutions in the form of clusters or by becoming a constituent part of a university as envisioned in NEP 2020. The affiliated colleges need to achieve the degree-awarding status by becoming large multidisciplinary autonomous colleges or by becoming part of the cluster to become a large multi-disciplinary HEI.

The overall higher education sector will be an integrated higher education system, including professional and vocational education. The policy also suggests opening departments needed for multidisciplinary subjects, including: Languages, Literature, Music, Philosophy, Indology, Art, Dance, Theatre, Education, Mathematics, Statistics, Pure and Applied Sciences, Sociology, Economics, Sports, Translation and Interpretation.

2. Objectives

- Transform single-stream institutions into large multidisciplinary universities and autonomous degree-awarding HEIs.
- Strengthen institutional infrastructure necessary for multidisciplinary education and research.

3. Approaches Towards the Setting Up of Multidisciplinary HEIs

- Academic collaboration between institutions, through HEI clusters, leading to multidisciplinary education and research in different modes.
- Merger of single-stream institutions with other multidisciplinary institutions under the same management or different managements.
- Strengthening of institutions by adding departments in subjects such as: Languages, Literature, Music, Philosophy, Indology, Art, Dance, Theatre, Education, Mathematics, Statistics, Pure and Applied Sciences, Sociology, Economics, Sports, Translation and Interpretation and other subjects as needed for a multidisciplinary institution.

4. Requirements for a Multidisciplinary HEI

Multidisciplinary education will help students to shape their career options. To offer multidisciplinary programmes successfully, HEIs are expected to conduct student-induction programmes to create awareness among students about various learning pathways and career opportunities; to register in the Academic Bank of Credit (ABC); and adopt online courses, in addition to other collaboration with other HEIs, to offer the programmes with a strong interdisciplinary flavor.

a) **Orientation about new opportunities:** The University Grants Commission (UGC) has initiated Student Induction Programme (SIP) with the purpose to help students acclimatize with the new surroundings, develop bonds with fellow students and teachers, sensitivity towards various issues of social relevance and imbibe values so as to become responsible citizens. With the NEP 2020 bringing in a series of reforms such as multidisciplinary education, multiple entry and exit, Academic Bank of Credits (ABC)

etc., students entering the portals of higher education need to be oriented about the available opportunities. Ensuring a well- designed induction programme with adequate exposure to all these reforms will help students to set the pace of their academic journey.

b) **Credit mobility between institutions:** For credit mobility between partnering institutions, the National e-Governance Division (NeGD) of the Ministry of Electronics and Information Technology (MeitY) has developed the ABC platform under a Digilocker Framework. The ABC provides the facility and functionality for a student to open an academic account and to get eligible HEIs on board. The ABC digitally store the academic credits of the students earned from HEIs registered with the Bank and supply appropriate data for the HEIs to award degrees, diplomas/PG diplomas and certificates as merited by the students, over a period of time. The ABC also ensures opening, closing and validation of Academic Bank Accounts and Credit verification, credit accumulation and credit transfer or redemption for students. HEIs need to register in the ABC to enable credit mobility.

c) **Online and ODL mode of education:** NEP 2020 has set the ambitious target of achieving 50 per cent GER by 2035. To achieve this target, higher education needs to be imparted in multiple ways. Online learning is one of the ways. Online education is gaining acceptance and popularity. Hundreds of online courses recognized by UGC including those available in the SWAYAM portal can provide an ideal platform to enable multidisciplinary education.

5. General Conditions

- The standards prescribed by the UGC or by the concerned Statutory or Regulatory bodies, such as: All India Council for Technical Education (AICTE), National Medical Commission (NMC), Dental Council of India (DCI), National Council for Teachers Education (NCTE), Bar Council of India (BCI) and Indian Nursing Council (INC), etc. in terms of academic and physical infrastructure, qualification of teachers, duration of a programme, intake, eligibility, admission procedures, fees, curriculum and programme implementation, assessment and evaluation, among other conditions are applicable.
- The degrees to be offered as a result of collaboration between institutions must conform to the nomenclature and duration of the degrees as specified in section 22 (3) of the UGC Act, 1956 and shall also conform to the minimum eligibility and other norms and standards to offer such degree programmes. Multidisciplinary degree programmes punctuated with internship, community service and engagement and skill courses need substantial orientation for teachers. Capacity-building for faculty to teach, train and to do research in multidisciplinary academic programmes need adequate focus. Initiatives like Annual Refresher Programme in Teaching (ARPIT) need to be utilized for additional capacity-building.
- Institutional structures have to be expanded to strengthen capacity of faculty to use effective pedagogical approaches and design learning assessment methods and tools.

- The academic requirements and other details of the programme(s) of study to be offered under collaborative arrangements shall be displayed prominently on the collaborating institutions' website before the commencement of programmes.
- An appropriate mechanism has to be put in place to make available counselling services in all HEIs. Each HEI will encourage students through placement assistance and career guidance to help them decide their occupational choices, facilitate processes to identify employment opportunities and set up interactions with potential employers. An efficient mechanism for grievance-handling and or redressal will have to be created or upgraded.
- HEIs shall need appropriate educational infrastructure in terms of books, journals, study materials, audio-visual facilities, e-resources, virtual classrooms and studios and specifically, high bandwidth internet connectivity to deliver courses through various modes such as Open & Distance Learning (ODL), Online education and face to face.

6. Academic Collaboration between Institutions Leading to Multidisciplinary Education and Research.

Colleges which are the bedrock of the Indian Higher Education System are connected with universities through an "Affiliating System", where universities design the syllabi, conduct examination and award degrees, while teaching is done in colleges. The structure of this affiliating system has changed very little over the years thereby having a limiting effect on the evolution of research and innovation at both the university and college levels. UGC's attempt to blur the traditional divide between universities and colleges was the scheme of "Autonomous Colleges". However, the effort to bring more colleges into the fold of academic autonomy was only partly successful. With NEP 2020 recommending transformation of all HEIs into large multidisciplinary degree-awarding autonomous institutions, the challenge lies in bringing the affiliated colleges on to the track of progressive autonomy leading to a degree-awarding institution and finally into an university as envisioned in the NEP 2020. Consolidation of existing HEIs into multidisciplinary degree-granting autonomous colleges through cooperation and collaboration among institutions is outlined in these guidelines.

Many industries now look for graduates with sound knowledge of different disciplines. In sync with the market demand, majority of students aspire to acquire multiple skills. Although there are many single-stream institutions in subjects such as Education, Engineering, Management and Law exist in close proximity, rigid disciplinary boundaries and lack of collaboration between institutions deprive students the opportunities of multidisciplinary learning. It is, therefore, essential to capitalize on the proximity of HEIs in offering multidisciplinary programmes. Collaboration and cooperation in offering degree programmes in innovative ways is in the larger interests of aspiring students, parents, industry, government and the nation.

1. Institutional collaboration leading to the award of dual-major degrees

a) Eligibility criteria

Under the collaborative arrangement, single-stream institutions can integrate their programmes with those of nearby multidisciplinary institutions to enhance

their programmes. The multidisciplinary HEIs may also seek collaboration in case they are willing to expand further by adding more programmes. Such a new and novel educational architecture will help and strengthen the structure of multidisciplinary education and achieve what has been envisioned in the NEP 2020. As an example, a B.Ed. programme with a B.A leads to the award of dual major degree B.A. B.Ed. (Integrated Teacher Education Programme, ITEP)

b) Approval process

The approval process and degree-awarding will be under the purview of the affiliating universities. The colleges and universities must get the concerned Professional Council(s) to start the degree programmes, either in discipline-specific degree or dual major degree programmes.

HEIs should submit proposals to offer a four-year dual-major bachelor's programme to the regulatory body concerned for recognition. Following the selection procedure, the concerned regulatory bodies will recognize institutions to offer the integrated dual major programmes.

c) Operational requirements

The physical proximity of the institutions should be such that they can share physical and human resources and ensure easier student and faculty mobility. Collaborative dual-major degree programmes, wherever possible and required, should be offered with the idea of bringing flexibility and interdisciplinarity for the students. The collaborative dual-major degree programme should be naturally feasible and should open new career and employment opportunities for the students. The institution will have to enter into a written Memorandum of Understanding (MoU) with its partner institution(s) for collaboration. The MoU must include the purposes and related provisions of collaboration, nature and extent of partnership among partnering institutions and the modalities for the functioning of the institutions in offering dual major programmes. The partnership plan for awarding dual major degree and/or collaborative programmes must include planning the expansion in the infrastructure, number of students, departments involved, administration, academic functions and research activities. The student's tuition fee may be charged only for the residential period in the concerned HEIs. The universities will issue the degrees with the transcript or degree indicating the courses the student has taken at the partner institution.

2. Collaboration between two institutions for the award of dual degree

Collaboration between two institutions for the award of dual degree facilitates students enrolled in an HEI to take up the first degree at the host institution and the second degree at the partnering institution.

An MoU may be signed between the partnering institutions to offer the dual degree with the approval of the university, the State government and/ or the regulatory bodies, covering all aspects such as the number of seats, modalities of transition from one institution to

another and awarding the degree. In accordance to the norms of regulatory bodies, the Central and/ or State governments, should manage and regulate the joint seat allocation for dual degree programmes. Eligibility to the dual degree programme will be as per the eligibility criteria in terms of qualifying examinations, minimum marks and any other factors as set for the programme by the partnering institutions. Once admitted, the students will be able to complete the first degree at the host institution and the second degree at the partnering institution, without going through the admission process again. Fees will be applicable as per the host institute for the first degree; and for the second degree the fee structure of the partnering institution will be applicable. Partnering institutions will provide hostel facilities, wherever possible, for students while they are pursuing degrees in the particular institution. Students who complete the programme successfully will be awarded the dual degree jointly by the partnering HEIs in the case of universities. In case of collaboration between two colleges of the same university, the affiliating university will award the degree. The students of the dual degree programmes will take up courses as approved by the Academic Council of the HEIs. A certain percentage of seats may be earmarked by the partnering institutions for the dual degree programme. Admission over and above the sanctioned intake is feasible only with the prior approval of the university, the State government and/or the regulatory bodies concerned.

3. Cluster of colleges

Single-stream institutions and multidisciplinary institutions with poor enrollment, due to lack of employment-oriented, innovative multidisciplinary courses and lack of financial resources to maintain and manage the institutions can improve enrolment by becoming members of cluster and by offering multidisciplinary programmes. The clustering of colleges may help in securing good grades in NAAC accreditation.

Transforming all HEIs into large multidisciplinary institutions, the existing colleges operating in the same campus or in close proximity can form a cluster. This will ensure that colleges with poor enrolment and fewer resources can offer multidisciplinary programmes and can have access to better facilities for the benefit of all. The cluster colleges shall aim at making the courses more dynamic through collaboration with other universities, prestigious government institutions and reputed industrial houses and also avail of the courses offered in the online and ODL mode. In the case of private colleges forming a cluster, the trust, or society, or company which runs the college must be charitable and not-for-profit bodies.

The cluster colleges will have the following characteristics:

- Students can take up the study programme partly in the parent institution and partly in the partnering institution(s) in the cluster.
- There shall be an Academic Council and Finance Committee for the academic and finance related matters of the cluster colleges.
- The cluster colleges will continue to be affiliated to the university concerned. Admission, examination, result and degree will be awarded as per the rules and regulations of the affiliating university.

- Financial resources will be pooled to ensure that money is utilized for the holistic growth of students.
- All facilities under the colleges, such as housekeeping, security services, library, sports, laboratories, parking, ground and classes will come under the umbrella of a common pool, which will again benefit all students on the campus.
- Facilities in individual colleges can be put to optimum utilization for the overall benefit of students in the cluster. This will also ensure that the expenditure on separate resources is curtailed and a common pool can benefit all the students.
- Through the clusters, restructured degree programmes with skill courses, internships and community service, among others, will become easier and will increase the students' job-oriented skills.
- The existing colleges will continue to function as per prevailing norms.
- There will be no change in the recruitment, appointment, allowances, service rules and pension schemes of the teaching and non-teaching staff of the colleges.
- The State governments will continue to provide the same funds to government- aided colleges as they had been doing before the cluster formation.

For the smooth functioning of cluster colleges there shall be a Board of Directors as per the following composition:

i) For cluster of government colleges:

1	Highly reputed persons from government, academic, industry or public administration. (nominated by the State government)	Chairperson
2	Commissioner or director of HE or his or her nominee	Director
3	Vice-Chancellor of the affiliating university or nominee	Director
4	Principals from the cluster of colleges (Two)	Directors
5	Academicians as external experts, as nominated by the Board (Two)	Directors
6	One expert from the Industry, as nominated by the Board	Director
7	One principal from the cluster of colleges, as nominated by the government	Director and Head of Cluster college

Term: The Board of Directors shall be reconstituted every three years.

i. For cluster of private colleges:

1	One representative from the management	Chairperson

2	Highly reputed person from government, academic, industry or public administration (nominated by the management)	Director
3	Three representatives from the management	Director
4	Nominee of the State government	Director
5	Vice-Chancellor of the affiliating university or nominee	Director
6	Principals from the cluster of colleges (Two)	Director
7	Academicians as external experts, as nominated by the Board (Two)	Director
8	One expert from the industry, as nominated by the Board	Director
9	One principal from the cluster of colleges, as nominated by the government	Director and Head of Cluster college

Term: The Board of Directors shall be reconstituted every three years.

Composition of the Academic Council:

1. The Director nominated at no. 7 (Govt. Colleges) and 9 (Pvt. Colleges) above will be the Chairperson
2. Principals of all the colleges in the cluster
3. Heads of departments - 5
4. Senior faculty members – 3 (one to be nominated as Member Secretary by the Director and Head of Cluster College)
5. Not less than four experts and/or academicians from outside the cluster of colleges representing such areas as Industry, Commerce, Law, Education, Medicine, Engineering, Sciences as nominated by the Board of Directors.

Composition of the Finance Committee:

1. The Director nominated at no. 7(Govt. Colleges) and 9 (Pvt. Colleges) above will be the Chairperson
2. Nominee of the Board of Directors
3. Finance officer of the affiliating university
4. The senior-most teacher of the college (nominated by the Director).

The Board of Directors provides overall direction and coordination of the cluster of colleges. The Academic Council works closely with the departments to develop new programmes and a research agenda and review the progress of research.

a) Approval process

The norms and standards set by the concerned regulatory bodies as applicable are: the duration of the programme, intake, eligibility, admission procedure, fees, curricula and programme implementation; assessment and evaluation; staff and faculty, qualification, infrastructural facilities and instructional facilities.

Proposals by institutions to offer the multidisciplinary programme in a cluster mode are to be approved by the statutory bodies of a university in accordance with the regulations and/or guidelines set by the regulatory bodies concerned.

Consolidation of cluster of colleges

The member colleges in a cluster will continue to function as affiliated colleges under the university in the initial phase with the Board of Directors, Academic Council, Finance Committee and Curriculum Development Committee governing the academic, financial and administrative matters. During this phase, the member colleges may share their resources to offer multidisciplinary programmes and guide student research projects. After the initial years, the affiliating university may affiliate the cluster of colleges as a single unit. During this transformation phase, the cluster may pass through graded autonomy before developing into an autonomous degree-granting cluster of college. With appropriate accreditations, autonomous degree-granting colleges can further evolve into RUs or TUs university, if they so aspire.

b) Operational requirements

- The institution shall have to enter into a written MoU with its partner institution(s) for collaboration. The MoU must categorically include the purposes and related provisions of collaboration, nature and extent of relationship among partnering institutions and the modalities for the functioning of the cluster.
- To avoid scheduling clashes, the timetable must be set in consultation with partner institutions in a manner that students associated with different programmes can easily register for courses without having to deal with any timetable clashes for the semesters they are attending.
- An action plan is needed to upgrade academic facilities and infrastructures, including technology-enabled and assisted learning ecosystem, in each identified HEI, which will include: video-based classes, infrastructure for blended and online learning modes; other academic infrastructure such as library and laboratories; infrastructure for the differently-abled students; facilities and infrastructure for faculty; facilities and infrastructure for promoting sports and wellness and the arts.
- The information related to collaborative programmes to be disclosed in the mandatory public disclosure and it has to be part of the Institutional Development Plan (IDP) of the collaborating institutions.

- The academic requirements and other details of the programme(s) of study offered under the collaborative arrangements shall be made public by displaying prominently on the collaborating institutions' websites before such programmes are scheduled to commence.
- Curriculum Development Committee needs to be constituted with its members having a blend of experience in industry, academia and professional associations, to revise and review curricula within the broad framework for course components as suggested by the UGC and the concerned Statutory Councils.
- The course tuition fee charged to the students should only pertain to the courses taught by the HEI.

7. Merger of HEIs

a) Merger of institutions under the same management

Institutions functioning under same managements may merge to put the academic and physical resources to optimal use and to offer multidisciplinary education.

The managing trust or society of the institutions should submit an undertaking to the effect that the institutions under its management will merge in accordance to the rules of the State government, affiliating university and/or the regulatory body.

b) Merger of institutions run by different managements

A private institution desirous of merging with a single stream institution / multidisciplinary institution of another registered society or trust, may apply, with the approval of the affiliating university, to the society or trust of the institution to be merged with and become a part of it as per the procedure of the Societies Registration Act or Trust Act, as the case may be.

8. Adding New Departments

The Policy on 'Holistic and Multidisciplinary Education' underlines pulling of courses and resources from a variety of disciplines and providing flexibility to students to choose courses and pathways such that holistic individual development takes place in intellectual, aesthetic, social, physical, emotional and moral dimensions and that 21st century skills/ competencies (including social and life skills) of critical thinking, problem solving, communication, leadership, team work, mastery of curricula across fields, increase in social and moral awareness and creativity and innovation are fully developed and put to practice. The teaching-learning has to be linked to life, community and the world of work, including the environment across all disciplines/ fields of study, including STEM education.

9. Establishment of Department of Education in Multidisciplinary Institutions

The NEP 2020 visualizes establishment of one Education Department in colleges/ universities/ HEIs to contribute to multidisciplinary and holistic education and to contribute to research and development in these areas.

Section 15 of NEP 2020 underlines three purposes:

i. to conduct cutting-edge research in various aspects of education,

ii. to support the actualization of all teacher education in multidisciplinary institutions and

iii. to contribute to multidisciplinary and holistic higher education across disciplines.

Section 15.6 of NEP 2020 talks of Education Departments developing a range of experts in education (including subject areas); and Section 15.9 stipulates that all PhD scholars across disciplines shall have to take up courses from Education Departments relating to curriculum design, pedagogy, education areas, communication and writing so that they develop competencies relating to these areas too, as also that they may take up teaching as a career in the future.

The 'Education Departments' (or Departments of Education/ Schools of Education) are visualized as instruments toward:

i. contributing to multidisciplinarity across disciplines of study in a HEI;

ii. benefitting from the multidiscipline environment of the HEI for its own programmes; and

iii. contributing to multidisciplinary teaching-learning (curriculum, pedagogy, technology-enabled blended learning, assessment and evaluation etc.) as visualized in the NEP 2020 and develop specialized experts in these areas.

At present, there are three structural arrangements and areas of work that Education Departments in universities and/ or colleges serve:

i. One, offer of 'Education' programmes (MA Education and PhD) as broad discipline and research-oriented programme, with wide coverage of educational planning and organisation in the country and to address education as a distinct (but multidisciplinary) area of study.

ii. Two, offer of teacher education programmes (M.Ed., B.Ed., Diploma in Elementary Education, Art Education, Physical Education, Pre-School Education, Integrated Teacher Education and Ph.D.) for pre-service and in-service 'training/ professional development' of teachers and teacher educators.

iii. Three, besides the above, there are Education Departments in various undergraduate colleges (eg in states of Odisha, Jammu, Kashmir, north-east states, West Bengal, some colleges in the University of Delhi, etc) which offer general and honours programmes in the discipline of 'Education', combining largely various interdisciplinary areas relating to education, education as a distinct field of study and in some cases some school practice teaching .The visualization of 'Multidisciplinarity' in higher education under NEP 2020 is concerned with improving the 'pedagogy' of teaching-learning, 'research' in the pedagogy of teaching-learning and development of multidisciplinary and interdisciplinary understanding of students and graduates (by pulling courses from other disciplines). The same objective is also largely addressed by the Teaching-Learning Centres (TLCs) and Centres for Excellence in Curriculum and Pedagogy under the same PMMMNMTT scheme. The Inter-University Centres for Teacher Education (IUCTE) under PMMMNMTT caters to research and development (R&D) needs of teacher education in the country.

a) In stand-alone Teacher Education Institutes (TEIs):

All existing stand-alone TEIs must aim to become multidisciplinary HEIs. This will bring about a major transformation in the preparation of appropriately qualified teachers by ensuring high-quality training and exposure to teacher trainees for multidisciplinary education. Because teacher education requires multidisciplinary inputs, all programmes for the initial preparation of professionally trained teachers will be moved into multi-disciplinary HEIs in a phased manner. Currently, most TEIs are stand-alone institutions. This has led to the intellectual and professional isolation of teacher education and their faculty from the rest of the disciplines.

b) Education Departments in Multidisciplinary HEIs

Multidisciplinary universities and multidisciplinary colleges must also aim to establish departments in education, which aside from carrying out teaching and research, can also offer four-year integrated programmes, in collaboration with other departments such as Psychology, Philosophy, Sociology, Neuroscience, Indian languages, Arts, History, Literature, Science and Mathematics.

Accordingly, the following are to be considered further:

i. What will be the structural arrangement for such multidisciplinary departments?

ii. What programmes and functions will such departments undertake?

iii. What linkages will they have within the HEI, across HEIs and across all 'Education/ Teacher Education' institutions/ departments/ schools in the country?

iv. In what way will these Education Departments contribute to the implementation of NEP- 2020, especially in respect of: curriculum and pedagogy (including multidisciplinary and holistic education), technology-enabled blended learning, skilling and employability, social and life and happiness skills, cutting-edge research in all areas of education, teacher and teacher educator professional development and strategic policy-organisation-management of the education system in the country

I. Structural Arrangement

Considering the large number of universities and colleges, it may not be feasible to open education departments in all institutions in one go. Therefore, an attempt should be made to open Education Departments in select multidisciplinary universities and colleges. Subsequently, other universities and colleges may be taken up in a phased manner for the purpose. Further, these, along with the existing Education Departments in universities and colleges, should be involved in the implementation of NEP 2020 — the already existing Education Departments may be upgraded to play a strategic role in the implementation of NEP 2020 and the planned Departments need to take initiative to supplement the national and institutional initiatives toward its implementation. The existing Education Departments may do hand-holding to guide the new Departments of Education. The norms and standards followed by UGC should be applicable to these selected institutions. The existing as well as planned Education Departments may preferably be named as 'School of Education' in universities and as

'Department of Education' in colleges. More stress should be given to linkage of their courses and programmes to the job market, national and regional development needs and needs of life and the community.

II. Functions and Programmes

The Education Departments need to go beyond contributing to the value of design and delivery of 'education/teacher education' to include the strategic planning and organization and management of education. While the Education Department itself will be multidisciplinary, it will function in tandem with other disciplines contributing further toward multidisciplinarity and interdisciplinarity. There should be multi-units or centres or special groups in each Education Department, especially in areas of policy studies in education, educational studies (i.e. foundations of education), equity and inclusion, educational leadership and governance, special needs education, comparative and international education, interdisciplinary research, besides the areas which directly contribute to enriching the other disciplines, like curriculum and pedagogy (especially interdisciplinary pedagogy), teaching-learning including technology-enabled learning and blended learning, assessment and evaluation, language and education, etc. The existing Education Departments need to be relooked at/ re-examined so as to revamp their functions and programmes — they are supposed to take a lead role in the implementation of NEP 2020 (resource development, training and research). The Education Departments are to primarily offer the following programmes and undertake the following functions:

- Design, development and offer of certificates, diplomas, degrees and add-on/ skill-based courses relating to the area of study of 'Education' and in specialized areas of Curriculum and Pedagogy, Educational Technology/ Technology-Enabled Learning (TEL), Assessment and Evaluation, Special Needs Education, Educational Planning and Management and Leadership, Educational and Vocational Guidance and Counselling, Yog Skiksha, among others so as to develop specialized experts in these areas for operation of education structure and function in the country, as also developing experts in specialized areas for other departments/ disciplines. There could be 'general' areas as well as 'specific' areas of intervention. These could address a range of levels starting from pre-school education up to higher education. These areas of study should be linked to skilling and employability in respective sectors. While courses from these programmes (including online courses) can be taken up by other departments/ disciplines (under 'holistic and multidisciplinary education'), the programmes of Education Department can also take up courses from a variety of disciplines, including online courses. In addition, all departments, irrespective of disciplines, should ensure that the Ph.D. scholars take training in teaching/education/ pedagogy/writing related to their chosen Ph.D. subject during their doctoral period. Ph.D. scholars may also be assigned 4-6 hours per week of teaching/research assistantship for conducting tutorial or lab work and evaluations in order to gain additional experience along with their research work.
- Conduct cutting-edge research, develop digital and other professional development resources, collate best practices and undertake continuing professional development and scholarship of teaching and learning in above noted and emerging areas of higher

education, including MOOCs, OERs, micro-credentials, machine learning, blended learning, social technologies and teaching-learning-assessment, etc. They will promote team/ network of teaching and research, by borrowing expertise from other departments in the institution; and adopt a clearing house approach for implementing collaborative/ multidisciplinary research programmes. They will generate good practices in various areas of educational application and contribute to facilitate educational policy formulation and implementation. The activities and outputs of TLCs and CECPs under PMMMNMTT should be taken into consideration so that linkage between Education Departments and these centres can be maintained.

- It will be left to the Education Departments to take a considered view and keeping in view the infrastructural and human resource positions, to offer both in-service programmes and pre-service ITE programmes as per laid down procedures and norms. There are two models which could be considered for this — one is the existing NCERT/ RIE model of integration and the other could be a collaborative (across disciplines with education as nodal) model of integration. The offer of teacher education programmes should be guided by the demand and supply studies conducted by any designated agency and/ or the regulator NCTE. For offer of integrated teacher education programmes (which need to be distinct for pre-school, elementary, secondary and senior secondary), structural and functional changes in the school sector as stipulated in NEP 2020 should be taken into account

III. Linkage to HEIs

The Education Departments, while themselves function as 'multidisciplinary' by having multi-programmes within 'education' (and also be inter-disciplinary), shall relate to and contribute to other departments/ disciplines/ faculties in their university and college in respect of the following:

- Establish linkage in the study of 'education' as a multidisciplinary area, contributing to the discipline itself, as also to the broader education policy and organization in the country.
- Work in tandem with other cognate disciplines/ departments, especially in social sciences, sciences, humanities including art and culture, sports/ physical education, among others for cross-disciplinary and interdisciplinary discourse, dialogue and research to enrich the knowledge base and operationalisation of both the disciplines.
- Work, in collaboration with other disciplines, to enrich curriculum design and development, pedagogy and teaching-learning, assessment and evaluation, use of technology for teaching-learning/ assessment/ organization and management of various disciplines and programmes of study.
- Undertake collaborative research in multi- and inter-disciplinary areas relating specifically to the fore-noted areas to strengthen the quality, employability and innovativeness of various programmes and courses. This relates more to the `pedagogy and employability of the discipline' and 'researching the pedagogy and employability of the discipline'.
- Undertake continuing professional development (relating to scholarship of teaching

and learning and continuing professional learning) on the above areas and especially in the areas of NEP 2020 for the faculty and staff of the entire university, college and constituent/ affiliated colleges.

IV. Implementation of NEP 2020

The National Education Policy-2020 (NEP 2020) has impressed upon a paradigm change in the visualization, operationalisation and quality of the entire education system in the country. All the levels of education in the country need to implement the new policy and in doing so will need facilitation mechanisms for its operationalisation. The Education Departments of universities and colleges (led by the existing Education Departments) need to comprehensively focus on the following areas, though there are many more micro-details/ functions that may be worked out subsequently by them.

- Role of Policy in Higher Education - contours and foundational principles of NEP 2020.
- Structural Changes from School to University and linkages in associated values and competencies across levels.
- GER, Access, Equity, Inclusion — increase in access to education through alternative pathways including distance and online learning and by extending classroom education through flexible and blended learning.
- Indian Knowledge System, Tradition, Culture and Values — combining indigenous knowledge and contemporary global developments, including research in science and technology.
- Curriculum and Pedagogy, especially the constructivist and connectivist pedagogies, critical pedagogies, contextual pedagogies and development of curriculum and learning resources which are culturally-wrought, grounded, practice- and employability-oriented and globally competitive; and which focus on discipline competencies, inter-disciplinary competencies, social and life skills/ happiness skills/ 21st century skills and vocational/ job/ professional skills.
- Holistic and Multidisciplinary Education and Multiple Entry-Exit -conceptualization, design, development and operationalisation and its effectiveness/ impact of students, graduates and employers (and also based on recent UGC regulations/ guidelines).
- Enabling Learning Environment (and Learner Support) for Optimal Learning, including mother tongue as medium of instruction, development of meta-cognitive and self-regulated learning skills and focusing on the uniqueness of each child/ individual.
- Vocational Education and Skilling and Employability - building employability into the curricular contents and transactional strategies (and with special focus on pedagogy of VET) and establishment of linkage with industry and employers and in equivalence with NHEQF and NSQF.
- Innovative Formative and Summative Assessment (and online assessment) -including cases, portfolios, internships, technology-enabled assessment and e-portfolios (and with specific reference to the UGC report on assessment and evaluation).
- Digital Education/ Technology-Enabled Learning - using technology and especially

social technologies and social networks and open source technologies for flipped classroom, use of MOOCs/ SWAYAM/online courses, conferencing and web technologies.

- Cross-border Education/ Internationalisation of Education, including cross-border credit transfer.
- Quality Academic Research - both disciplinary, pedagogy of disciplines and multi-and inter-disciplinary.
- Regulation and Quality Assurance including quality indicators, ranking indicators, evidence-based teaching-learning, among others.
- Role of Faculty - in all aspects of education, including curriculum design and development, pedagogy of discipline and interdisciplinary pedagogy, TEL, assessment and evaluation, leadership and professional development, among others.
- Governance and Leadership - revamping the educational leadership programmes and provisions, as also the administration and management of higher education institutions. The education Departments are visualized to take lead roles specifically in the following for the implementation of the NEP 2020:
- Collaborate/ join hands/ act as regional/ institutional nodal agency in NEP 2020 implementation, in collaboration with national and regional agencies/ organisations. This may also include development of specialized digital and otherwise modules/ resources, courses for PhD students of all disciplines and case studies of good practices. They should join hands and share the professional development modules of other designated institutions/ agencies on awareness development and capacity building on NEP 2020.
- Develop and show case innovations and best practices in indigenous knowledge system, curriculum design, pedagogy/ teaching-learning, graduate employability, RPL and credit transfer, TEL, assessment and evaluation, organization and management of higher education curriculum, resources, strategies and impacts.
- Train teachers and staff within the institution, across the constituent and affiliated colleges and even schools in their jurisdiction on various aspects and detailed nuances of NEP 2020 at institutional and contextual level.
- Develop 'training of trainers' groups in specific/ specialized areas of NEP 2020 who would continuously engage with faculty and staff and students (of Education Department as also all other departments/ disciplines) and continually update themselves on these areas; and also develop or join networks relating to areas of NEP 2020.
- Conduct collaborative research on the process and effectiveness/ impact of various areas in NEP 2020 and strategies of implementation and showcase/ publish/ disseminate to wider national and international communities.

If the Act, Regulations, MoA (in the case of deemed-to-be universities) do not permit adding departments in Education, the same needs to be amended. With the approval of the concerned regulatory body and Academic Council HEIs can establish departments in Education.

10. Constituent Colleges in Universities

NEP 2020 suggests a stage-wise mechanism for granting graded autonomy to colleges, through a transparent system of graded accreditation. Colleges will be encouraged, mentored, supported and incentivized to gradually attain the minimum benchmarks required for each level of accreditation. Over a period of time, it is envisaged that every college will either develop into an autonomous degree-granting college or become a constituent college of a university. In the latter case, it would be a part of the university in its entirety.

Colleges willing to become part of a university as a constituent college should submit a proposal to the concerned university giving reasons for joining. The necessary terms and conditions shall be decided mutually by both institutions in accordance with the provisions of the Act and or regulations governing the State university or Central University, or deemed-to-be university, or private university.

11. Multidisciplinary Research in HEI Clusters

Over the past decades there has been increased growth in Multidisciplinary Research in Higher Education. The high level of diversity, such as different disciplinary experts and the rapid sharing of information and resources involved in Multidisciplinary Research enables the synthesis of new knowledge, increased production of original, creative work, innovations and patents. Multidisciplinary Research, therefore, plays a crucial role in finding solutions to the challenges currently facing society. As the trend towards multidisciplinary-based research collaboration grows, it is imperative to train a new generation of teacher-researchers in the Multidisciplinary Research areas. Multidisciplinary Research also wrestles with several challenges due to the organizational, logistical and location diversity involved. For Multidisciplinary Research to thrive in HEI clusters, a Multidisciplinary Research Committee comprising members from collaborating institutions may be formed to: (a) share the scarce resource in an optimum way among collaborating institutions and (b) identify core learning and research activities in the collaborating HEIs and the development of multidisciplinary thinking approach

1. Capacity building in Multidisciplinary Research

The four-year undergraduate programme with the research component and different designs of the Master's programme, are likely to increase research activities, which calls for enhancing the research capacity in HEIs. Students and faculty should be encouraged to do research in areas that are locally, regionally and nationally relevant. To encourage high quality research in multidisciplinary areas in HEIs a research ecosystem is needed where ample opportunity on how to design research proposals, write research articles, publish and patent findings, are available for young scholars and faculty. These opportunities are likely to be high in HEI clusters with the availability of faculty with different disciplinary backgrounds, collective resources and a greater number of students engaging in research.

2. Collaboration between HEIs in student projects

NEP 2020 aims for holistic education to develop well-rounded individuals. The four-year undergraduate programme has been proposed for students to experience a holistic education, with the fourth year of the programme focusing on the research component.

Faculty with backgrounds of different disciplines will provide the perfect opportunity in guiding students pursuing UG (hons. with research) and Master's programmes. Multidisciplinary projects can provide students with the valuable training required to assume multidisciplinary roles.

Faculty from different institutions of a cluster can be encouraged to design multidisciplinary projects in areas of National priority and supervise students interested in multidisciplinary research. The institutions should work out the modalities of collaboration between them in enabling faculty members to supervise UG and PG students in research.

3. Collaboration of HEI clusters with industries and/or government and non-government organizations

Most industries in the manufacturing sector in India are in the micro, small and medium category and they largely lack the capacity, in terms of R&D strengths, to face global challenges. It is important that graduates assume multidisciplinary roles. With their contribution in providing employment and to the Gross Domestic Product (GDP) they form an important part of the National economy. However, the Micro Small and Medium Enterprise (MSME) sector, in general, is characterized by very low investment in R&D and as a consequence, the research activities in the sector are always low key. The huge pool of universities and colleges employing a large number of faculty members and enrolling the huge population of students in the country if collaborate with MSME, the huge potential therein can be productively used for running an effective education system and R&D for the industry. If industry can be made to see value in investing efforts in the university eco-system, the R&D potential therein can be used to serve the needs of the country and, a lot of gains can be achieved in bringing prosperity to the nation.

Similarly, students and faculty may be encouraged to undertake projects on issues that local communities face or for the welfare of local artisans and crafts persons.

12. Role of University and Government

1. Role of the parent university

To identify potentials of colleges and to encourage them by providing timely approval to their proposals and help to nominate representatives in various committees for the proper functioning of cluster colleges and enable collaboration between institutions.

2. Role of the State government

Given the size of our Higher Education System and the variety of HEIs with many single-stream institutions, it may not be viable to introduce multidisciplinary education in all HEIs simultaneously. Therefore, for all HEIs to plan to become multidisciplinary institutions, a hub and spoke model where a certain number of HEIs will be identified as the hub institutions and transform them into multidisciplinary institutions. These 'hub' HEIs can, in turn, develop a specified number of 'spoke' institutions. Over some time, they will have a rapid multiplier effect so that by 2030 there will be at least one large multidisciplinary HEI in or near every district.

13. Grievance Redressal Mechanism Required for Collaborating HEIs

- Institutions entering into academic collaboration shall address matters relating to the grievances of students and legal matters relating to the collaboration.
- The Commission could, either suo moto or based on any complaint from any quarter may initiate an inquiry, including physical inspection, of the collaborative arrangements. After giving the opportunity of representation and hearing to the collaborating institutions and after being convinced that the collaborating institution(s) is/are not functioning according to the guidelines, the Commission may rescind the approval for collaboration. However, the students who have already enrolled for such courses or programmes will be permitted to continue till they acquire the requisite qualification.

References:

1. National Education Policy 2020
2. Note on Shri K.K. Shastri Government Colleges Confederation, Education Department, Govt. of Gujarat
3. Dual Degree Program in Bachelor of Technology (B.Tech) and Master of Business Administration (MBA) – IIT Jammu & IIM Jammu

Acknowledgements

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UGC acknowledges and appreciates the efforts made by the Expert Committees in preparing this document.

Prof Rajnish Jain
Secretary
University Grants Commission

New Delhi
September, 2022



ज्ञान-विज्ञान विमुक्तये

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ज्ञान-विज्ञान विमुक्तये

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प्रो. रजनीश जैन
सचिव
Prof. Rajnish Jain
Secretary

No. F.1-8/2022(PA&EA/NEP Guidelines) **21st October, 2022**

Public Notice

Subject: Guidelines for Pedagogical Approaches and Evaluation/ Assessment.

The National Education Policy 2020 focuses on making education more accessible, inclusive, and equitable. The various sections of NEP focuses on revamping curriculum and providing innovative pedagogical approaches and revised assessment/evaluation for quality learning. To take the objective further, UGC has prepared the "Guidelines for Pedagogical Approach and Evaluation/Assessment."

The draft "Guidelines for Pedagogical Approach and Evaluation/Assessment" are attached herewith for comments/suggestions from all stakeholders. The comments/suggestions may be sent by **14th November, 2022** on ssiwach.ugc@nic.in.

(Rajnish Jain)

294995/2022/01122020

ज्ञान-विज्ञान विमुक्तये

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विश्वविद्यालय अनुदान आयोग
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प्रो. रजनीश जैन
सचिव
Prof. Rajnish Jain
Secretary

No.F.14-1/2022(JCRC) **September, 2022**

Sub: IKS Division Initiatives reg. 19 SEP 2022

Respected Madam/Sir,

India is the home of oldest living civilization of the world. It is imperative that we understand our heritage and teach the world the Indian way of doing things. With a vision to promote interdisciplinary and trans-disciplinary research on all aspects of India Knowledge System (IKS), preserve and disseminate IKS knowledge of further research, and societal application, IKS Division of Ministry of Education was established which has announced the four initiatives *viz.* भारतीयज्ञानसंवर्धनयोजना–1 Outcome Based Research Proposal Program 2022-2023; भारतीयज्ञानसंपोषणकेन्द्रम्–1 IKS Center Proposal Program 2022-2023; भारतीयज्ञानसंपोषणकेन्द्रम्–2 IKS Center Proposal Program 2022-2023; भारतीयज्ञानसंवाहनकार्यक्रमः–2 IKS Internship Program2022-2023.

HEI's across the country can play a huge role in spreading the IKS Division internship program 2022-23. All the Vice Chancellors of the Universities and Principals of the colleges are requested to initiate and encourage the youth to avail the benefits of the above said initiatives of IKS division of the Ministry of Education.

The details are available at https://iksindia.org.

With kind regards.

Yours faithfully,

(Rajnish Jain)

Encl: As above

To

- **The Vice-Chancellors of all the Universities**
- **The Principals of all Colleges**

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
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अधिसूचना

नई दिल्ली, 28 जुलाई, 2021

मि. सं. 14-31/ 2018 (सी॰पी॰पी॰--II).—विश्वविद्यालय अनुदान आयोग, विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 की धारा 26 की उप-धारा (1) के खंड (च) और (छ) के अन्तर्गत प्रदत्त शक्तियों का प्रयोग करते हुए केंद्र सरकार के अनुमोदन से एतद् द्वारा निम्नलिखित विनियम बनाता है, नामतः

1. **लघु शीर्षक, अनुप्रयोग एवं प्रवर्तन :** (1) इन विनियमों को **विश्वविद्यालय अनुदान आयोग का (उच्चतर शिक्षा में एकेडमिक क्रेडिट्स बैंक की स्थापना और संचालन) विनियम, 2021** कहा जाएगा।

(2) ये विनियम एक केंद्रीय अधिनियम, एक प्रांतीय अधिनियम या एक राज्य अधिनियम द्वारा या उसके तहत स्थापित या निगमित भारत में सभी विश्वविद्यालयों; विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 (1956 का 3) की धारा 3 के तहत मानित विश्वविद्यालय के रूप में घोषित संस्थान; और इन विनियमों में परिभाषित स्वायत्त महाविद्यालयों पर लागू होंगे।

(3) वे भारत के राजपत्र में उनकी अधिसूचना की तारीख से प्रभावी होंगे।

2. **परिभाषाएं:-** इन विनियमों में, जब तक संदर्भ से अन्यथा वांछित न हो

(क) "अधिनियम" का अर्थ विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 (1956 का 3) है;

(ख) "एकेडमिक बैंक खाता" का अर्थ एक विद्यार्थी द्वारा एकेडमिक क्रेडिट्स बैंक के साथ खोला गया और संचालित एक व्यक्तिगत खाता है, जिसमें विद्यार्थी द्वारा अध्ययन किए गए पाठ्यक्रमों से अर्जित सभी शैक्षणिक क्रेडिट निक्षेपित, मान्य, संचित, पोषित, अंतरित, पुष्टिक्रत अथवा किसी उपाधि प्रदान वाली संस्था द्वारा डिग्री या डिप्लोमा या प्रमाणपत्र आदि प्रदान करने के प्रयोजन से विमोचित किए जाते हैं;

(ग) "एकेडमिक क्रेडिट्स बैंक" का अभिप्राय एक अकादमिक व्यवस्था से है, जो एक डिजिटल या वर्चुअल या ऑनलाइन इकाई के रूप में है, जिसे आयोग द्वारा केंद्र सरकार के अनुमोदन से स्थापित किया गया है, ताकि विद्यार्थियों का शैक्षणिक खाताधारक बनना सुगम हो सके, जिसके फलस्वरूप क्रेडिट स्वीकृति, क्रेडिट संचयन, क्रेडिट अंतरण और क्रेडिट मोचन की औपचारिक प्रणाली के माध्यम से उपाधि प्रदान करने वाले वाले उच्चतर शिक्षा संस्थानों में या ऐसे संस्थानों के मध्य विद्यार्थियों की निर्बाध अंतरणीयता का मार्ग प्रशस्त हो;

(घ) "शैक्षणिक लचीलापन" का अर्थ है, दृढ़ पाठ्यचर्या को हटाते हुए अध्ययन विषयों में पाठ्यक्रमों के रचनात्मक संयोग से अन्तर्निमेय व अभिनव पाठ्यविषयी संरचना के प्रावधान से अध्ययन हेतु बहुप्रवेश एवं बहुनिर्गम की सुविधा के साथ डिग्री या डिप्लोमा या स्नातकोत्तर डिप्लोमा या प्रमाण पत्र की पेशकश को सक्षम कर जीवन पर्यंत अधिगम की नवीन संभावनाओं का निर्माण करना;

(ङ) "स्वायत्त महाविद्यालय" का अर्थ ऐसे किसी भी संस्थान से है, चाहे वह इस नाम से जाना जाता है या किसी अन्य नाम से, जिसे आयोग द्वारा संबद्ध विश्वविद्यालय और संबंधित राज्य सरकार की सिफारिशों पर स्वायत्तता का दर्जा दिया गया है, जिसके आधार पर यह अकादमिक और रचनात्मक लचीलेपन के साथ एक पाठ्यक्रम या शैक्षणिक कार्यक्रम संचालित करता है; एवं एक विश्वविद्यालय से कोई योग्यता प्राप्त करने के लिए विश्वविद्यालय के विधान एवं अध्यादेशों के अनुरूप ऐसे पाठ्यक्रम या शैक्षणिक कार्यक्रम संचालित किए जाने तथा ऐसे पाठ्यक्रमों या शैक्षणिक कार्यक्रमों में अध्यायनरत विद्यार्थियों को संगत योग्यता प्रदान किए जाने बाबत परीक्षा कराये जाने हेतु वर्तमान में मान्यता प्राप्त है;

(च) "आयोग" का वही अर्थ होगा जो अधिनियम की धारा 2 के खंड (क) में दिया गया है;

(छ) "पाठ्यक्रम" का अर्थ उन विहित इकाइयों में एक से है जो एक निर्दिष्ट अध्ययन कार्यक्रम में समावेशित होती हैं;

(ज) "क्रेडिट" का अभिप्राय एक सेमेस्टर (13-15 सप्ताह) की अवधि के लिए प्रति सप्ताह सिद्धांत-कक्षा के एक घंटे या एक घंटे के ट्यूटोरियल या दो घंटे के प्रयोगशाला कार्य के परिणामस्वरूप एक क्रेडिट प्रदान किए जाने की मानक गणना पद्धति से है; जो एक उच्चतर शिक्षण संस्थान, जिस पर ये विनियम लागू होंगे, प्रदान करता है; और इंटर्नशिप के लिए इंटर्नशिप के प्रति एक सप्ताह में एक क्रेडिट होगी, अधिकतम छह क्रेडिट की सीमा तक;

(झ) "क्रेडिट-संचय" का अभिप्राय एकेडमिक क्रेडिट्स बैंक द्वारा 'एकेडमिक बैंक खाते' में विद्यार्थियों द्वारा निक्षेपित किए गए 'क्रेडिट' को स्थानांतरित करने और समेकित करने से है जो उनके द्वारा किसी पाठ्यक्रम में अध्ययन से अर्जित किए गए हों;

(ञ) "क्रेडिट-मान्यता" का अभिप्राय एक पंजीकृत उच्च शिक्षण संस्थान के माध्यम से अर्जित क्रेडिट्स और ऐसे उच्चत्तर शिक्षा संस्थान द्वारा सीधे एकेडमिक क्रेडिट्स बैंक को हस्तांतरित क्रेडिट्स से है;

(ट) "क्रेडिट-रिडेम्पशन" का अभिप्राय पंजीकृत डिग्री प्रदान करने वाले उच्चत्तर शिक्षा संस्थान द्वारा डिग्री या डिप्लोमा या प्रमाणपत्र या पीएचडी कोर्स वर्क आदि के लिए 'क्रेडिट आवश्यकताओं' को पूरा करने के उद्देश्य से एकेडमिक क्रेडिट्स बैंक में बनाए गए विद्यार्थियों के ' एकेडमिक बैंक खाते' में अर्जित 'क्रेडिट' को विनिमय करने की प्रक्रिया से है;

(ठ) "क्रेडिट-अंतरण" का अभिप्राय उस प्रक्रिया से है जिसके द्वारा पंजीकृत उच्चत्तर शिक्षा संस्थान भारत में किसी भी पंजीकृत उच्चत्तर शिक्षा संस्थान में नामांकित विद्यार्थियों द्वारा अध्ययन किए गए 'पाठ्यक्रमों' के सापेक्ष विश्वविद्यालय अनुदान आयोग क्रेडिट मानदंडों का अनुपालन करते हुये उसके व्यक्तिगत एकेडमिक बैंक खातों में निर्धारित 'क्रेडिट' प्राप्त करने या प्रदान करने में सक्षम हैं;

(ङ) "उच्चत्तर शिक्षा संस्थान" का अर्थ उन संस्थानों से है जिन्हें स्वयं या विश्वविद्यालय अनुदान आयोग अधिनियम, 1956 की धारा 22 के अनुसार डिग्री प्रदान करने का अधिकार है;

(ढ) "व्यावसायिक मानक निर्धारण निकाय" का अर्थ उच्चतर शिक्षा के प्रासंगिक क्षेत्रों में मानकों को निर्धारित करने और बनाए रखने के लिए संसद के एक अधिनियम के तहत निर्मित, स्थापित या गठित एक नियामक या प्रमुख निकाय है;

(ण) "कार्यक्रम" या "अध्ययन-कार्यक्रम" का अर्थ अधिनियम की धारा 22 की उपधारा (3) के तहत आयोग द्वारा विनिर्दिष्ट उपाधियों के संगत लक्षित उच्च शिक्षा कार्यक्रम है;

(त) "पंजीकृत उच्चत्तर शिक्षा संस्थान" का अर्थ एक योग्य उच्चत्तर शिक्षा संस्थान है जो इन विनियमों के तहत एकेडमिक बैंक ऑफ क्रेडिट द्वारा पंजीकृत है;

(थ) "सांविधिक प्राधिकरण" का अभिप्राय उच्चत्तर शिक्षण संस्थानों के सांविधिक निकाय, जैसे कि शासी परिषद या कार्यकारी परिषद या सिंडिकेट या प्रबंधन बोर्ड या शैक्षणिक परिषद, से है जो संस्था की ओर से निर्णय लेने के लिए सक्षम हों;

(द) "विद्यार्थी" का अर्थ है एक उच्चत्तर शिक्षा संस्थान में एक निर्दिष्ट क्रेडिट-आधारित पाठ्यक्रम या अध्ययन-कार्यक्रम में प्रवेशित और अध्ययनरत व्यक्ति।

3. एकेडमिक क्रेडिट्स बैंक. – (1) एकेडमिक क्रेडिट बैंक, इन विनियमों के माध्यम से बनाए गए उपयुक्त क्रेडिट ट्रांसफर तंत्र के साथ देश में उच्चत्तर शिक्षा संस्थानों में विद्यार्थियों के पाठ्यक्रम ढांचे और अंतःविषय या बहु-विषयक शैक्षणिक गतिशीलता के लचीलेपन को बढ़ावा देने के लिए एक राष्ट्रीय स्तर की सुविधा होगी; और जो मल्टीपल एंट्री-मल्टीपल एग्जिट के साथ-साथ कहीं, भी कभी भी और किसी भी स्तर की शिक्षा के सिद्धांत पर कार्य करते हुये विद्यार्थियों को डिग्री या डिप्लोमा या स्नातकोत्तर-डिप्लोमा या शैक्षणिक योग्यता प्राप्त करने के लिए अपना स्वयं का सीखने का रास्ता चुनने की सुविधा प्रदान करेगा।

(2) एकेडमिक क्रेडिट्स बैंक उच्चत्तर शिक्षा के कई विषयों के एकीकरण को सक्षम करेगा, जिससे उन्नत रचनात्मकता, नवाचार, उच्चकोटि की सोच और विवेचनात्मक विश्लेषण सहित वांछित सीखने के परिणाम प्राप्त होंगे।

(3) एकेडमिक क्रेडिट्स बैंक कई उच्चत्तर शिक्षा विषयों या संस्थानों में अध्ययन-कार्यक्रम में व्यापक विकल्पों के साथ पाठ्यचर्या में लचीलापन, तथा अनूठे और रुचिकर पाठ्यक्रमों के विकल्प प्रदान करके विद्यार्थियों को सार्थक स्वायत्तता प्रदान करेगा।

4. एकेडमिक क्रेडिट्स बैंक के उद्देश्य.- (1) देश भर में उच्चत्तर शिक्षा में शिक्षार्थी के अनुकूल दृष्टिकोण के साथ विद्यार्थी केंद्रितता को बढ़ावा देना और उच्चत्तर शिक्षा में अधिक अंतःविषय दृष्टिकोण को बढ़ावा देना।

(2) विद्यार्थियों को उनकी अभिवृत्ति और ज्ञानेच्छा के अनुरूप सर्वोत्तम पाठ्यक्रमों या पाठ्यक्रमों के संयोजन का चयन करने में सक्षम बनाना।

(3) विद्यार्थियों को संगत व्यवस्था और लागत के साथ अपनी पढ़ाई के गतिक्रम को चुनने की अनुमति देना।

(4) विद्यार्थियों को एक विश्वविद्यालय या स्वायत्त महाविद्यालय के दृढ़, नियमित रूप से नियत डिग्री या पाठ्यक्रमों के बजाय अपनी डिग्री को तैयार करने या विशिष्ट आशोधन या विशेषज्ञताएं करने की अनुमति देना।

(5) विद्यार्थियों को उनकी समय की प्राथमिकताओं के अनुसार अपनी डिग्री पूरी करने के लिए मल्टीपल एंट्री-मल्टीपल एग्जिट को सक्षम बनाते हुये, डिग्री या डिप्लोमा या स्नातकोत्तर डिप्लोमा या सर्टिफिकेट प्रोग्राम या पीएचडी हेतु कोर्स वर्क के लिए विभिन्न विषयों और उच्चत्तर शिक्षा संस्थान के मध्य विद्यार्थियों को अंतरणीयता प्रदान करना।

(6) उन्नत अंतरणीयता के साथ परिसरों या विश्वविद्यालयों या स्वायत्त महाविद्यालयो में एकीकरण के माध्यम से वितरित और मिश्रित तरीके से होने वाली शिक्षण-अधिगम गतिविधियों को प्रक्रियात्मक रूप से प्रोत्साहन देना।

(7) सभी के लिए, अर्थात, पूर्णकालिक और अंशकालिक दोनों माध्यमों के औपचारिक और अनौपचारिक विद्यार्थियों के बीच आजीवन अधिगम को सुलभ करना,

(8) ज्ञानेच्छा को परिपूरित करने के लिए, अपनी शैक्षणिक दिशाओं को चुनने और बदलने की स्वतंत्रता, ज्ञान के विभिन्न क्षेत्रों को जोड़ने और विद्यार्थियों को अपने जीवन के लक्ष्यों को आगे बढ़ाने के लिए सही नींव और बिल्डिंग ब्लॉक हासिल करने में मदद करने के लिए।

5. क्रेडिट के एकेडमिक बैंक की संगठनात्मक संरचना.- (1) एकेडमिक क्रेडिट्स बैंक अपने हितग्राहियों के रूप में विद्यार्थियों के साथ उच्च शिक्षण संस्थानों के एकेडमिक क्रेडिट डेटाबेस की एक डिजिटल या आभासी या ऑनलाइन संग्रहागार इकाई होगी।

(2) एकेडमिक क्रेडिट्स बैंक को "राष्ट्रीय अकादमिक निक्षेपागार" की तर्ज पर स्थापित किया जाएगा; और उच्चत्तर स्तर की शिक्षा के सभी हितधारकों के उपयोग के लिए एकेडमिक क्रेडिट्स बैंक और इसके परिचालन तंत्र के सभी विवरण प्रदान करने वाली एक सक्रिय वेबसाइट होगी।

(3) एकेडमिक क्रेडिट्स बैंक, वित्तीय उद्देश्यों के लिए वाणिज्यिक बैंकों की तरह शैक्षणिक उद्देश्यों के लिए एक बैंक होगा, एकेडमिक खाताधारकों के रूप में विद्यार्थियों के साथ, एकेडमिक क्रेडिट्स बैंक क्रेडिट सत्यापन, क्रेडिट संचय, क्रेडिट हस्तांतरण या मोचन और अकादमिक उपाधियों के प्रमाणीकरण सहित विभिन्न प्रकार की सेवाएं प्रदान करेगा।

(4) एकेडमिक क्रेडिट्स बैंक द्वारा क्रेडिट या शैक्षणिक उपाधियों का प्रमाणीकरण, किसी भी तरह से, डिग्री और अन्य शैक्षणिक योग्यता प्रदान करने के लिए एकेडमिक क्रेडिट्स बैंक के साथ पंजीकृत उच्चत्तर शिक्षा संस्थानों की वैधानिक शक्तियों पर अतिक्रमण के रूप में नहीं माना जाएगा।

(5) एकेडमिक क्रेडिट्स बैंक केंद्र सरकार या आयोग, जैसा सुसंगत हो, द्वारा अधिकृत निकाय के रूप में पंजीकृत उच्चत्तर शिक्षा संस्थान से विद्यार्थियों द्वारा अर्जित क्रेडिट के प्रमाणीकरण रिकॉर्ड प्रदान करने के लिए कार्य करेगा ।

(6) किसी भी स्नातक या स्नातकोत्तर डिग्री या डिप्लोमा या प्रमाण पत्र अथवा पीएचडी कार्यक्रमों हेतु विहित पाठ्यक्रम के लिए वांछित क्रेडिट तथा अध्ययन के आवश्यक घटक पंजीकृत उच्चत्तर शिक्षा संस्थान द्वारा निर्धारित किए जाएंगे।

(7) एकेडमिक क्रेडिट्स बैंक प्रत्येक विद्यार्थी को डिजिटल रूप में अद्वितीय या व्यक्तिगत एकेडमिक बैंक खाता खोलने की सुविधा प्रदान करेगा; और खाताधारक को एक विशिष्ट आईडी और मानक संचालन प्रक्रिया (एसओपी) उपलब्ध कराई जाएगी।

6. क्रेडिट के एकेडमिक बैंक के कार्य.- (1) एकेडमिक क्रेडिट्स बैंक विद्यार्थी के एकेडमिक बैंक खाते में पंजीकृत उच्चत्तर शिक्षा संस्थान द्वारा संचालित पाठ्यक्रमों के लिए क्रेडिट जमा करेगा; और ऐसे क्रेडिट की वैधता आयोग द्वारा समय-समय पर जारी किए गए मानदंडों और दिशानिर्देशों के अनुसार होगी।

बशर्ते कि, एकेडमिक क्रेडिट्स बैंक सीधे विद्यार्थियों से पाठ्यक्रम क्रेडिट से संबंधित किसी भी दस्तावेज को स्वीकार नहीं करेगा और ऐसे दस्तावेजों को तभी मान्य मानेगा जब उन्हें क्रेडिट प्रदान करने वाले संबंधित पंजीकृत उच्चत्तर शिक्षा संस्थान द्वारा प्रेषित किया जाय।

(2) एकेडमिक क्रेडिट्स बैंक इन विनियमों के तहत, हितग्राहियों के बीच अपनी भूमिका को बढ़ावा देने के अलावा, उच्चत्तर शिक्षा संस्थान को पंजीकृत करेगा, शैक्षणिक बैंक खातों के खोलने, समापन और सत्यापन को सुनिश्चित करेगा; और विद्यार्थियों के लिए क्रेडिट सत्यापन, क्रेडिट संचय, और क्रेडिट हस्तांतरण या मोचन भी सुनिश्चित करेगा।

(3) राष्ट्रीय योजनाओं जैसे 'स्वयं', एनपीटीईएल, वी-लैब आदि या किसी निर्दिष्ट विश्वविद्यालय के माध्यम से ऑनलाइन मोड के माध्यम से विद्यार्थियों द्वारा किए गए पाठ्यक्रमों को भी क्रेडिट हस्तांतरण और क्रेडिट संचय के लिए मान्य किया जाएगा।

(4) एकेडमिक क्रेडिट्स बैंक के कार्य दूरस्थ या गैर-संपर्क माध्यम तक सीमित नहीं हैं; बल्कि यह विभिन्न मौजूदा और भविष्य-संगत शिक्षण अधिगम मॉडलों के समामेलन तक विस्तारित होगा; तथा यह 'सिद्धांत' या 'प्रयोगिक' मूल्यांकन द्वारा विद्यार्थियों द्वारा प्राप्त क्रेडिट्स को भी मान्य कर सकता है, यदि उन्हें प्रथक क्रेडिट पाठ्यक्रम के रूप संचालित किया गया है।

(5) पाठ्यक्रम सामग्री, पाठ्यक्रम लेनदेन, प्रस्तावित पाठ्यक्रमों के लिए शैक्षिक प्रौद्योगिकियों, उनके समय, निरंतर मूल्यांकन विधियों, उपस्थिति और मूल्यांकन के नए तरीकों के संबंध में मानदंड पंजीकृत उच्चत्तर शिक्षा संस्थान द्वारा

तय किए जाएंगे, और व्यापक नीति और राष्ट्रीय शिक्षा नीति -2020 के तहत समग्र, बहु-विषयक शिक्षा का दर्शन के अनुरूप होंगे।

(6) विद्यार्थियों के हित में, एकेडमिक क्रेडिट्स बैंक के पास अर्जित और जमा किए गए क्रेडिट, डिग्री या डिप्लोमा या स्नातकोत्तर डिप्लोमा या प्रमाण पत्र के लिए मोचन हेतु क्रेडिट प्रदान करने वाले और क्रेडिट स्वीकृत करने वाले उच्चत्तर शिक्षा संस्थान द्वारा निर्दिष्ट अलग-अलग समयावधि के लिए अधिकतम सात साल की समय सीमा तक वैध होंगे।

(7) एकेडमिक क्रेडिट्स बैंक आयोग, अखिल भारतीय तकनीकी शिक्षा परिषद और राष्ट्रीय शिक्षक शिक्षा परिषद के दायरे में आने वाले सभी उच्चत्तर शिक्षा कार्यक्रमों को शामिल करेगा; यद्यपि अन्य विधाओं के व्यावसायिक कार्यक्रमों के अध्ययन के संबंध में में क्रेडिट्स को उपयुक्त व्यावसायिक मानक निर्धारण निकाय और केंद्र सरकार के अनुमोदन से शामिल किया जा सकता है।

(8) एकेडमिक क्रेडिट्स बैंक उन विद्यार्थियों के लिए क्रेडिट मान्यता और क्रेडिट रिडेम्पशन प्रक्रिया की सुविधा भी प्रदान करेगा, जो अपनी व्यक्तिगत पसंद के अनुसार सभी ऐसे पाठ्यक्रमों को चुन सकते हैं जो किसी विशेष विषय क्षेत्र में न आते हों किन्तु एक पंजीकृत उच्चत्तर शिक्षा संस्थान द्वारा प्रदान किए जाने वाली स्नातक डिग्री के लिए कुल क्रेडिट आवश्यकता को पूरा करते हैं; और उच्चत्तर शिक्षा संस्थान द्वारा प्रदान की जाने वाली ऐसी स्नातक डिग्री आयोग द्वारा विनिर्दिष्ट की जा सकती है।

(9) पंजीकृत उच्चत्तर शिक्षा संस्थान में विशिष्ट उच्चत्तर शिक्षा कार्यक्रम के हिस्से के रूप में विद्यार्थी द्वारा अपनी रुचि आधारित पाठ्यक्रमों के अतिरिक्त, विद्यार्थियों को निर्धारित पाठ्यक्रम से परे अपनी पसंद के इस तरह के डिग्री कार्यक्रम के लिए भी स्वतंत्रता होगी, और उनके क्रेडिट्स संबंधित शैक्षणिक बैंक खाते में अर्जित होंगे।

पंजीकृत उच्चत्तर शिक्षा संस्थान निर्धारित शैक्षणिक कार्यक्रम से परे विद्यार्थियों द्वारा किए गए पाठ्यक्रमों के संबंध में अर्जित क्रेडिट के सापेक्ष डिप्लोमा या प्रमाण पत्र प्रदान कर सकते हैं।

(10) व्यावसायिक डिग्री या डिप्लोमा या स्नातकोत्तर डिप्लोमा या प्रमाणपत्र कार्यक्रम संचालित कर रहे पंजीकृत उच्चत्तर शिक्षा संस्थान से 'कौशल-पाठ्यक्रम' के माध्यम से विद्यार्थियों द्वारा प्राप्त किए गए क्रेडिट्स भी एकेडमिक क्रेडिट्स बैंक के माध्यम से क्रेडिट के संग्रहण और मोचन के लिए पात्र हैं।

(11) शैक्षणिक वर्ष 2021-2022 के दौरान या उसके उपरांत पंजीकृत उच्चत्तर शिक्षा संस्थान में 'पाठ्यक्रम' से प्राप्त क्रेडिट ही एकेडमिक क्रेडिट्स बैंक के माध्यम से क्रेडिट ट्रांसफर, क्रेडिट संग्रहण और क्रेडिट रिडेम्पशन के लिए पात्र हैं।

(12) एकेडमिक क्रेडिट्स बैंक के उद्देश्यों को पूरा करने के लिए, आयोग एकेडमिक क्रेडिट्स बैंक को ऐसी वित्तीय और प्रशासनिक सहायता प्रदान कर सकता है, जैसा वह उचित समझे।

7. एकेडमिक क्रेडिट्स बैंक के साथ पंजीकरण करने के लिए उच्चत्तर शिक्षा संस्थान के अनुमोदन के लिए पात्रता मानदंड.- (1) विनियम 1 के उप-विनियम (2) को संतुष्ट करने वाले विश्वविद्यालय और स्वायत्त महाविद्यालय जो राष्ट्रीय मूल्यांकन और प्रत्यायन परिषद द्वारा 'ए' ग्रेड स्तर से अथवा राष्ट्रीय प्रत्यायन बोर्ड द्वारा न्यूनतम 675 अंकों के साथ कम से कम तीन कार्यक्रमों के लिए प्रत्यायित हो अथवा जिन्हें विश्वविद्यालय अनुदान आयोग द्वारा सूचीबद्ध प्रत्यायन एजेंसी से समरूप प्रत्यायन या ग्रेड या प्राप्तांक प्राप्त हो। तथापि यदि संस्थान द्वारा संचालित कार्यक्रमों की संख्या तीन से कम हो तो प्रत्येक कार्यक्रम में 675 अथवा इससे अधिक अंक प्राप्त हों या राष्ट्रीय संस्थागत रैंकिंग फ्रेमवर्क (एनआईआरएफ) या भारत सरकार द्वारा समय-समय पर स्थापित किए जाने वाले समतुल्य मूल्यांकन और प्रत्यायन निकाय द्वारा शीर्ष 100 रैंक किए गए संस्थान, या वह उच्च शिक्षण संस्थान जो क्वाक्वेरेली साइमंड्स (क्यूएस) या टाइम्स हायर एजुकेशन (टीएचई) द्वारा विश्व रैंकिंग के शीर्ष 1000 में शुमार हों; श्रेष्ठ संस्थान; भारत सरकार द्वारा घोषित राष्ट्रीय महत्व के संस्थान एकेडमिक क्रेडिट्स बैंक के साथ पंजीकरण के लिए पात्र हैं।

(2) एकेडमिक क्रेडिट्स बैंक के साथ पंजीकरण के समय प्रत्यायन या रैंकिंग की स्थिति मान्य होनी चाहिए।

(3) उच्चतर शिक्षा संस्थान को एकेडमिक क्रेडिट्स बैंक के साथ पंजीकरण के लिए आवेदन करने के लिए अपने संबंधित सांविधिक प्राधिकरणों जैसे शासी या कार्यकारी परिषद या सिंडिकेट या प्रबंधन बोर्ड या अकादमिक परिषद आदि से अनुमोदन प्राप्त करना होगा।

(4) पूर्ण डिग्री कार्यक्रमों में प्रवेश के अलावा पंजीकृत उच्चतर शिक्षा संस्थानों को विद्यार्थियों को एकल पाठ्यक्रमों में प्रवेश देना होगा:

बशर्ते, किसी भी उच्चतर शिक्षा संस्थान के पाठ्यक्रम (पाठ्यक्रमों) में अतिसंकुलता से बचने के लिए, ऐसे उच्चतर शिक्षा संस्थान को ऐसे पाठ्यक्रम (पाठ्यक्रमों) में अतिरिक्त सीटें रखने की अनुमति होगी, जो उपयुक्त व्यावसायिक मानक निर्धारण निकाय द्वारा पूर्वानुमोदन के अधीन होगी।

बशर्ते कि, ऐसे पाठ्यक्रमों के संबंध में, जो किसी व्यावसायिक मानक निर्धारण निकाय के दायरे में नहीं आते हैं, पंजीकृत उच्चतर शिक्षा संस्थान, आवश्यक बुनियादी ढांचे की उपलब्धता के अधीन, अपने सांविधिक अथॉरिटी के अनुमोदन से अतिरिक्त सीटों का सृजन कर सकता है।

बशर्ते यह भी कि, पंजीकृत उच्चतर शिक्षा संस्थान विशेष रूप से एकेडमिक क्रेडिट्स बैंक योजना के उद्देश्य के लिए 'पाठ्यक्रम' का एक सेट भी संचालित कर सकते हैं।

(5) पंजीकृत उच्चतर शिक्षा संस्थान के पास ऑडियो-विजुअल सुविधाओं, ई-संसाधनों, वर्चुअल कक्षाओं और स्टूडियो आदि के संदर्भ में उपयुक्त शैक्षिक बुनियादी ढांचा होगा, और विशेष रूप से ओडीएल या ऑन-लाइन पाठ्यक्रमों या कार्यक्रमों के सुचारु संचालन के लिए उच्च बैंडविड्थ इंटरनेट कनेक्टिविटी एवं रूबरू सिद्धांत या व्यावहारिक या प्रशिक्षण पाठ्यक्रमों हेतु प्रासंगिक विश्वविद्यालय अनुदान आयोग विनियमों औरया या विधियों या उच्चतर शिक्षा संस्थान के अध्यादेशों के तहत समय-समय पर निर्दिष्ट अन्य बुनियादी सुविधाएं होंगी ।

(6) एक पंजीकृत उच्चतर शिक्षा संस्थान के पास अपनी वेबसाइट पर एक वेबपेज होगा जिसमें एकेडमिक क्रेडिट्स बैंक की सुविधा का विवरण, सभी पंजीकृत उच्चतर शिक्षा संस्थान की सूची, विद्यार्थियों को सुविधा का प्रभावी ढंग से उपयोग करने के लिए दिशा-निर्देश या मानक प्रचालन प्रक्रिया (एसओपी), एकेडमिक क्रेडिट्स बैंक की वेबसाइट के लिंक के साथ उपलब्ध होगा।

8. एकेडमिक क्रेडिट्स बैंक कार्यान्वयन पद्धति.- (1) एकेडमिक क्रेडिट्स बैंक अनिवार्य रूप से एक क्रेडिट-आधारित, और अत्यधिक लचीली, विद्यार्थी-केंद्रित सुविधा है।

(2) पंजीकृत उच्चतर शिक्षा संस्थान, अपने सांविधिक अथॉरिटी के अनुमोदन से, अन्य बातों के साथ-साथ, पाठ्यक्रम पंजीकरण, पाठ्यक्रम अर्हताओं, अंतर-विषयक एवं बहु-विषयक पाठ्यक्रमों के लिए स्वीकृति, ऐसे पाठ्यक्रमों के लिए दिए जाने वाले क्रेडिट, क्रेडिट अंतरण और अन्य अनुमोदित उच्चतर शिक्षा संस्थानों से क्रेडिट स्वीकृति और दिए जाने वाले ग्रेड की प्रकृति आदि से संबंधित मौजूदा अध्यादेशों में संशोधन करेंगे।

(3) पंजीकृत उच्चतर शिक्षा संस्थान विद्यार्थियों को एक या अधिक पंजीकृत उच्चतर शिक्षा संस्थानो द्वारा संचालित पाठ्यक्रमों में से विद्यार्थी द्वारा चुने गए पाठ्यक्रमों का उपयोग करके अपनी खुद की डिग्री को अनुकूलित या डिजाइन करने के लिए प्रोत्साहित और सक्षम करेंगे।

बशर्ते, विद्यार्थी को डिग्री या डिप्लोमा या प्रमाणपत्र प्रदान करने वाले उच्चतर शिक्षा संस्थान से क्रेडिट का कम से कम पचास प्रतिशत अर्जित करना आवश्यक होगा।

बशर्ते कि, विद्यार्थी को डिग्री या डिप्लोमा या प्रमाण पत्र प्रदान करने के लिए आवश्यक कोर विषय क्षेत्र में आवश्यक संख्या में क्रेडिट अर्जित करने की आवश्यकता होगी, जैसा कि डिग्री प्रदान करने वाली उच्चतर शिक्षा संस्थान द्वारा निर्दिष्ट किया गया है, जिसमें विद्यार्थी नामांकित है।

(4) उपविनियम (3) में प्रदान की गई एकेडमिक क्रेडिट्स बैंक की सुविधा के तहत लचीलेपन का लाभ उठाने वाले विद्यार्थी न कि पूरे 'अध्ययन-कार्यक्रम' के लिए, जिसके कारण पंजीकृत उच्चतर शिक्षा संस्थान द्वारा डिग्री प्रदान की जाती है, वरन अपनी पसंद और अभिवृत्ति के अनुसार केवल एकल पाठ्यक्रमों में प्रवेश लेने के भी हकदार हैं ताकि उन्हें क्रेडिट संग्रहण सुलभ हो सके।

(5) एकेडमिक क्रेडिट्स बैंक विनियम 7 के तहत निर्धारित पात्रता मानदंडों को पूरा करने वाले उच्चत्तर शिक्षा संस्थानों की एक परिवर्तनशील ऑनलाइन निर्देशिका बनाए रखेगा।

(6) क्रेडिट परिभाषा, क्रेडिट संचय, क्रेडिट ट्रांसफर, क्रेडिट रिडेम्पशन के संदर्भ में एकेडमिक क्रेडिट्स बैंक की सेवाओं के उपयोग के विवरण के संबंध में प्रत्येक पंजीकृत उच्चत्तर शिक्षा संस्थान एकेडमिक क्रेडिट्स बैंक के साथ एकेडमिक बैंक खाता खोलने के इच्छुक सभी विद्यार्थियों को विद्यार्थी परामर्श और मार्गदर्शन प्रदान करेगा; साथ ही विद्यार्थियों के एकेडमिक बैंक खाते खोलने, बंद करने और वैधीकरण के संबंध में सहयोग और मार्गदर्शन प्रदान करेगा जहां ऐसे अनुरोधों की सिफारिश एकेडमिक क्रेडिट्स बैंक के साथ पहले से ही पंजीकृत मूल विश्वविद्यालय या स्वायत्त महाविद्यालयो के माध्यम से की जाती हैं।

(7) विद्यार्थियों द्वारा अर्जित क्रेडिट्स को एकेडमिक क्रेडिट्स बैंक के साथ संबंधित एकेडमिक बैंक खाते में जमा किया जाएगा और किसी भी डिग्री या डिप्लोमा या प्रमाण पत्र प्रदान करने के लिए क्रेडिट्स के कम्यूटेशन के उद्देश्य से क्रेडिट प्रदान करने वाले संस्थानों द्वारा निर्दिष्ट और शैक्षणिक योग्यता प्रदान करने वाले पंजीकृत उच्चत्तर शिक्षण संस्थानों द्वारा इसकी स्वीकृति के अनुरूप अधिकतम सात वर्षों के लिए मान्य होंगे।

उपरोक्त शैक्षणिक योग्यता को प्रदान करने के लिए किसी भी क्रेडिट को भुनाए जाने के बाद, ऐसे क्रेडिट को संबंधित विद्यार्थी के एकेडमिक बैंक खाते से अपरिवर्तनीय रूप से डेबिट कर दिया जाएगा।

(8) जहां कोई विद्यार्थी निर्दिष्ट डिग्रीया डिप्लोमा या परास्नातक डिप्लोमा या प्रमाण पत्र प्रदान किए जाने हेतु पंजीकृत उच्चत्तर शिक्षा संस्थान द्वारा अनुमोदित क्रेडिट की कुल संख्या और क्रेडिट की प्रकृति की पर्याप्तता के मानदंडों को पूरा करता है, तो विद्यार्थी उच्चत्तर शिक्षा संस्थान द्वारा इस तरह की उपाधि के लिए पात्र होगा।

(9) एक बार उपयोग या भुनाने के बाद, किसी विद्यार्थी द्वारा अर्जित क्रेडिट को किसी अन्य औपचारिक शैक्षणिक योग्यता को प्राप्त करने के लिए पुन: उपयोग नहीं किया जा सकता है।

(10) सांविधिक प्राधिकरणों के अनुमोदन से, एकेडमिक क्रेडिट्स बैंक द्वारा एक पंजीकृत उच्चत्तर शिक्षा संस्थान को उसके द्वारा प्रस्तावित पाठ्यक्रमों की संरचना बहु-विषयक या अंतर-विषयक उच्चत्तर शिक्षा को बढ़ावा देने के उद्देश्य से मूल पाठ्यक्रम या मूल ऐच्छिक या मुक्त ऐच्छिक या कौशल वृद्धि ऐच्छिक या क्षमता वृद्धि ऐच्छिक आदि के रूप में उचित क्रेडिट आवश्यकताओं के साथ विभाजित करने के लिए प्रोत्साहित किया जाएगा।

(11) शैक्षणिक योग्यता आदि प्रदान करने में, पंजीकृत उच्चत्तर शिक्षा संस्थान आयोग या व्यावसायिक मानक निर्धारण निकाय द्वारा समय-समय पर निर्धारित क्रेडिट्स की संख्या और समयावधि के संबंध में सुसंगत मानदंडों और दिशानिर्देशों का पालन करेंगे।

बशर्ते कि, समय अवधि के संबंध में, एकेडमिक क्रेडिट्स बैंक सुविधा के तहत शैक्षणिक योग्यता पाने वाले विद्यार्थी, निर्धारित क्रेडिट अर्जित करने के बाद, अधिकतम एक सेमेस्टर की छूट का लाभ उठा सकते है, जबकि पाठ्यक्रम या कार्यक्रम की अवधि दो साल या अधिक (चार सेमेस्टर या अधिक) की हो।

(12) एक पंजीकृत उच्चत्तर शिक्षा संस्थान अपने पाठ्यक्रम शुल्क को उस पाठ्यक्रम के क्रेडिट की संख्या के आधार पर निर्धारित कर सकता है जिसके लिए विद्यार्थी नामांकित है।

(13) उच्चतर शिक्षण संस्थानों द्वारा इन विनियमों के अधीन पात्र संस्थानों के रूप में एक पंजीकरण शुल्क देय होगा, जो केंद्र सरकार या आयोग, जैसा भी मामला हो, की पूर्व-स्वीकृति से निर्धारित किया जाएगा।

9. विश्वविद्यालयों और एकेडमिक क्रेडिट्स बैंक द्वारा निगरानी, सहयोग और गुणवत्ता आश्वासन.- (1) यह पंजीकृत उच्चत्तर शिक्षा संस्थान की जिम्मेदारी होगी कि वे विश्वविद्यालय स्तर पर और उनके संबद्ध स्वायत्त महाविद्यालयों के स्तर पर एकेडमिक क्रेडिट्स बैंक कार्यक्रम के परिवर्धन व परिचालन की निगरानी करें।

(2) पंजीकृत उच्चत्तर शिक्षा संस्थान एकेडमिक क्रेडिट्स बैंक सुविधा के कामकाज की गुणवत्ता में सुधार के लिए और एकेडमिक क्रेडिट्स बैंक के सहयोग से समग्र या बहु-विषयक शिक्षा को बढ़ावा हेतु शिक्षक या कर्मचारी प्रशिक्षण, परामर्श, शैक्षणिक और प्रशासनिक लेखा परीक्षा और अन्य साधन प्रस्तुत करेंगे और जो कि संकाय विकास कार्यक्रम

या गुणवत्ता सुधार कार्यक्रम या व्यावसायिक विकास कार्यक्रम या प्रौद्योगिकी विकास कार्यक्रम के रूप में हो सकता है।

(3) पंजीकृत विश्वविद्यालययया स्वायत्त महाविद्यालय के स्तर पर एकेडमिक क्रेडिट्स बैंक के कार्यान्वयन का गुणवत्ता आश्वासन संबंधित विश्वविद्यालय या स्वायत्त महाविद्यालय द्वारा या तो आंतरिक गुणवत्ता आश्वासन प्रकोष्ठ (आईक्यूएसी) या पंजीकृत उच्चत्तर शिक्षा संस्थान द्वारा विनिश्चित किसी अन्य उपयुक्त संरचित तंत्र के माध्यम से विकसित किया जा सकता है।

(4) प्रत्येक पंजीकृत उच्चत्तर शिक्षा संस्थान अपनी वेबसाइट पर एकेडमिक क्रेडिट्स बैंक के संगत में अपनी गतिविधियों के वार्षिक प्रतिवेदन के साथ ही गुणवत्ता आश्वासन, गुणवत्ता संपोषण और गुणवत्ता उननयन के लिए किए गए उपायों का विवरण अपलोड करेगा।

(5) विद्यार्थियों की शिकायतोंया अपीलों को दूर करने के लिए केंद्र सरकार या विश्वविद्यालय अनुदान आयोग या एकेडमिक क्रेडिट्स बैंक के स्तर पर और एकेडमिक क्रेडिट्स बैंक के साथ पंजीकृत प्रत्येक एचईआई के स्तर पर एक 'एकेडमिक क्रेडिट्स बैंक-परिवेदना निवारण तंत्र' होगा।.

10. **उल्लंघन के परिणाम.-** यदि कोई पंजीकृत उच्चत्तर शिक्षा संस्थान इन विनियमों के तहत निर्धारित शर्तों या आवश्यकताओं को पूरा करने में विफल रहता है, तो आयोग, सुनवाई का एक उचित अवसर प्रदान करने के बाद, आयोग द्वारा निर्धारित समय के भीतर कमी को ठीक करने के लिए संस्थान को निर्देश दे सकता है; और ऐसा करने में उच्चत्तर शिक्षा संस्थान की ओर से विफल रहने पर, एकेडमिक क्रेडिट्स बैंक से ऐसे संस्थान का पंजीकरण समाप्त कर दिया जाएगा; और, इसके अतिरिक्त, अधिनियम के तहत अनुदान प्रदान करना बंद कर दिया जाएगा, जहां ऐसे अनुदान संस्था के लिए अनुदेय हैं।

11. **व्याख्या.-** इन विनियमों की व्याख्या के संबंध में किसी भी प्रश्न पर निर्णय विश्वविद्यालय अनुदान आयोग द्वारा लिया जाएगा, और उसका निर्णय इस मामले में अंतिम और बाध्यकारी होगा।

प्रो. रजनीश जैन, सचिव, विश्वविद्यालय अनुदान आयोग

[विज्ञापन-III/4/असा./167/2021-22]

UNIVERSITY GRANTS COMMISSION

NOTIFICATION

New Delhi, the 28th July, 2021

F. No. 14-31/2018 (CPP-II).—In exercise of the powers conferred by clauses (f) and (g) of sub-Section (1) of Section 26 of the University Grants Commission Act, 1956, the University Grants Commission with the approval of the Central Government hereby makes the following regulations, namely:-

1. **Short title, Application and Commencement.-** (1) These Regulations may be called the University Grants Commission (Establishment and Operation of Academic Bank Of Credits in Higher Education) Regulations, 2021.

(2) These Regulations shall apply to all Universities in India established or incorporated by or under a Central Act, a Provincial Act or a State Act; the institutions Deemed-to be Universities declared as such under Section 3 of the University Grants Commission Act, 1956 (3 of 1956); and the Autonomous Colleges as defined in these regulations.

(3)They shall come into force from the date of their notification in the Gazette of India.

2. **Definitions.-** In these Regulations, unless the context otherwise requires,-

(a) "Act" means the University Grants Commission Act, 1956 (3 of 1956);

(b) "Academic Bank Account" means an individual account with the Academic Bank of Credits opened and operated by a student, to which all academic credits earned by the Student from course(s) of study are deposited, recognised, maintained, accumulated, transferred, validated or redeemed for the purposes of the award of degree/diploma/certificates etc. by an awarding institution;

(c) "Academic Bank of Credits" means an academic service mechanism as a digital or virtual or online entity established by the Commission with the approval of the Central Government, to facilitate students to become its academic account holders, thereby paving the way for seamless student mobility between or within degree-granting Higher Educational Institutions through a formal system of credit recognition, credit accumulation, credit transfers and credit redemption to promote distributed and flexible teaching-learning;

(d) "Academic Flexibility" means the provision for innovative and interchangeable curricular structures to enable creative combinations of Courses or Programmes in Disciplines of study leading to Degree or Diploma or Post Graduate Diploma or Certificate of Study offering multiple entry and multiple exit facilities, while removing rigid curricular boundaries and creating new possibilities of life-long learning;

(d) "Autonomous college" means any institution, whether known as such or by any other name, accorded with autonomous status by the Commission upon the recommendations of the affiliating university and the State Government concerned, by virtue of which it provides for a course or programme of study with academic and innovative flexibility for obtaining any qualification from a university; and which, in accordance with the Statutes and Ordinances of such university, is recognised as competent to provide for such course or programme of study and present students undergoing such course or programme of study for the examination leading to the award of such qualification;

(f) "Commission" shall have the same meaning as assigned to it in clause (a) of section 2 of the Act;

(g) "Course" means one of the specified units which go to comprise a specified programme of study;

(h) "Credit" means the standard methodology of calculating one hour of theory or one hour of tutorial or two hours of laboratory work, per week for a duration of a semester (13-15 weeks) resulting in the award of one credit; which is awarded by a higher educational institution on which these regulations apply; and, Credits' for internship shall be one credit per one week of internship, subject to a maximum of six credits;

(i) "Credit-accumulation" means the facility created by Academic Bank of Credits in the Academic Bank Account opened by students in order to transfer and consolidate the credits earned by them by undergoing Courses;

(j) "Credits-recognition" means the credits earned through a registered Higher Educational Institution and transferred directly to the Academic Bank of Credits by such Higher Educational Institution;

(k) "Credit-redemption" means the process of commuting the accrued credits in the Academic Bank Account of the students maintained in ABC for the purpose of fulfilling the credits requirements for the award of Degrees or Diplomas or Certificates or Course work for Ph.D. programme etc., by the registered degree-awarding Higher Educational Institutions;

(l) "Credit-transfer" means the mechanism by which the Registered Higher Educational Institutions are able to receive or provide prescribed credits to individual Academic Bank Accounts in

adherence to the University Grants Commission credit norms for the 'course/s' undertaken by students enrolled in any Registered Higher Education Institution within India;

(m) "Higher Education Institutions" means the institutions which are empowered to award degrees by themselves or in accordance with section 22 of the Act;

(n) "Professional Standards Setting Body" means a regulatory or principal body created, established or constituted under an Act of Parliament for determining and maintaining standards in the relevant areas of higher education;

(o) "Programme" or "Programme of study" means a higher education programme pursued for a degree specified by the Commission under sub -section (3) of section 22 of the Act;

(p) "Registered Higher Education Institution" means an eligible Higher Educational Institution which is registered by the Academic Bank of Credits, under these regulations;

(q) "Statutory authority" means statutory bodies of higher educational institutions, such as the Governing Council or Executive Council or Syndicate or Board of Management or Academic Council, competent to take decisions on behalf of the institution.

(r) "Student" means a person admitted to, and pursuing, a specified credit-based course/programme of study in a higher education institution.

3. Academic Bank of Credits.- (1) Academic Bank of Credits, shall be a national-level facility to promote flexibility of curriculum framework and interdisciplinary or multidisciplinary academic mobility of students across Higher Education Institutions in the country with appropriate credit transfer mechanism created through these regulations and shall facilitate students to choose their own learning path to attain a Degree or Diploma or Post Graduate diploma or academic qualification, working on the principle of multiple entry-multiple exit as well as any-time, any-where, and any-level learning.

(2) Academic Bank of Credits shall enable the integration of multiple disciplines of higher learning, leading to the desired learning outcomes including enhanced creativity, innovation, higher order thinking and critical analysis.

(3) Academic Bank of Credits shall provide significant autonomy to students by providing extensive choice of courses for a programme of study, flexibility in curriculum, novel and engaging course options across a number of higher education disciplines or institutions.

4. Objectives of Academic Bank of Credits.-(1)To promote student centricity with learner-friendly approaches in higher education across the country and promote a more inter-disciplinary approach in higher education.

(2) To enable students to select the best courses or combination of courses to suit their aptitude and quest for knowledge.

(3) To permit students to choose a pace for their studies along with the associated logistics and costs.

(4) To allow students to tailor their degrees or make specific modifications or specialisations rather than undergoing the rigid, regularly prescribed degree or courses of a single university or autonomous college.

(5) To enable multiple entry-multiple exit for students to complete their degrees as per their time preferences, providing mobility across various disciplines and HEIs for Degree or Diploma or Post Graduate Diploma or Certificate programme or Course work for the Ph.D. programme.

(6) To support, procedurally, the teaching-learning activities to happen in a distributed and blended manner through integration across campuses or universities or autonomous colleges with increased mobility.

(7) To facilitate lifelong learning amongst all, i.e., formal and informal students from both full-time and part-time modes.

(8) To satisfy the students' quest for knowledge, freedom to choose and change their academic directions, connect different domains of knowledge and help them acquire the right foundations and building blocks to pursue their life goals.

5. Organisational Structure of Academic Bank of Credits.- (1)Academic Bank of Credits shall be a digital or virtual or online store-house entity of academic credit data base of Higher Education Institution with students as its stakeholder.

(2) Academic Bank of Credits shall be established, on the lines of the National Academic Depository shall have a dynamic website providing all details of Academic Bank of Credits and its operational mechanism for the use of all stakeholder of higher education.

(3) Academic Bank of Credits shall be a bank for academic purposes, on the pattern of commercial banks for financial purposes, with students as academic account holders to whom, the Academic Bank of Credits shall provide a variety of services including credit verification, credit accumulation, credit transfer or redemption and authentication of academic awards.

(4) Authentication of credits or academic awards by Academic Bank of Credits shall not, in any way, be construed as encroachment on the statutory powers of Higher Education Institutions registered with Academic Bank of Credits to award degrees and other academic qualifications.

(5) ABC shall act as the body empowered by the Central Government or the Commission, as the case may be, to provide authenticated records of credits earned by students from Registered Higher Education Institutions.

(6) The requirement of credits as well as essential components of study for award of any Under Graduate or Post Graduate or diploma or certificate, or the Course work requirements for the Ph.D. programmes shall be as prescribed by Registered HEIs.

(7) Academic Bank of Credits shall provide to every student the facility to open unique or individual Academic Bank Account in digital form; and the account holder shall be provided with a unique ID and access to the Standard Operating Procedure (SOP).

6. Functions of Academic Bank of Credits. -(1) Academic Bank of Credits shall deposit Credits awarded by Registered Higher Education Institutions, for Courses pursued therein, in the Academic Bank Account of the student and the validity of such credits shall be as per norms and guidelines issued by the Commission from time to time:

Provided that ABC shall not accept any document pertaining to course credits directly from students and shall entertain such documents as valid only when the same are transmitted by the respective, Registered Higher Education Institution awarding the credits.

(2) ABC shall register Higher Education Institutions under these regulations, ensure the opening, closure and validation of Academic Bank Accounts and shall also ensure credit verification, credit accumulation, and credit transfer or redemption for students; apart from promoting its role among stakeholder.

(3) Courses undergone by the students through the online modes through National Schemes like SWAYAM, NPTEL, V-Lab etc. or of any specified university, shall also be considered for credit transfer and credit accumulation.

(4) The functions of ABC are not limited to distance or a non-contact mode; and shall extend to amalgamation of various existing and futuristic teaching-learning models and it may also consider

credits obtained by students in assessments for theory or practicals, if the same are offered as separate credit courses.

(5) The norms in respect to the curriculum content, curriculum transaction, educational technologies for the courses offered, their timing, continuous evaluation methods, attendance and novel methods of assessment shall be as decided by the Registered Higher Education Institution, and shall be consistent with the overarching policy and philosophy of holistic, multidisciplinary education under National Education Policy-2020.

(6) In the interests of students, credits earned and deposited with ABC shall be valid for the purpose of redemption to a degree or diploma or Post Graduate diploma or certificate, for varying duration as specified by the credit awarding and credit accepting Higher Education Institution subject to a maximum duration of seven years.

(7) Academic Bank of Credits shall encompass all higher education programmes coming under the purview of the Commission, the All India Council of Technical Education, and the National Council of Teacher Education; credits in professional programmes of study in respect of other disciplines may be included with the approval of the appropriate professional standards setting body and the Central Government.

(8) Academic Bank of Credits shall also facilitate the credit recognition and credit redemption process for students who may opt, according to their individual choice, for all courses, not falling in any particular subject domain, but fulfilling the total credits requirement for the Under Graduate degree to be awarded by a Registered Higher Education Institution and such Under Graduate degree to be awarded by the Higher Education Institution may be specified by the Commission.

(9) In addition to the choice based courses to be undertaken by the student as a part of the specific higher education programme in Registered Higher Education Institutions, students shall also have freedom to take additional courses of their aptitude, beyond the curriculum prescribed for such degree programme, and accrue credits in their respective Academic Bank Account:

Provided that Registered Higher Education Institutions may award diploma or certificate against credits accrued in respect of courses undertaken by students beyond the prescribed curriculum.

(10) Credits obtained by students by undergoing Skill-courses from Registered Higher Education Institutions offering vocational Degree or Diploma or Post Graduate Diploma or Certificate programmes are also eligible for accrual and redemption of credits through the Academic Bank of Credits.

(11) Credits obtained by undertaking Courses in Registered HEIs during or after the academic year 2021-2022 alone are eligible for Credit transfer, Credit accrual and Credit redemption through Academic Bank of Credits.

(12) For carrying out the purposes of the Academic Bank of Credits, the Commission may provide such financial and administrative assistance to the Academic Bank of Credits, as it may deem fit.

7. Eligibility Criteria for approval of HEIs to register with Academic Bank of Credits.-(1) Universities and Autonomous Colleges satisfying sub-regulation (2) of regulation 1, which are accredited by either National Assessment and Accreditation Council with minimum 'A' Grade or by National Board of Accreditation for at least three programme(s) with a minimum score of 675 individually (however, if the number of programme(s) being run by the Institution is less than three, then each of the programmes should secure 675 or more marks); or top 100 National Institutional Ranking Framework (NIRF) or similar Assessment and Accreditation body(ies) to be established by Government of India from time to time or those Indian Higher Education Institutions appearing in top 1000 world ranking of Quacquarelli Symonds (QS)/ Times Higher

Education (THE); Institutions of Eminence or Institutions of National Importance as declared by Government of India are eligible to register with Academic Bank of Credits.

(2) Accreditation or ranking status must be valid at the time of registration with Academic Bank of Credits.

(3) HEIs shall obtain approval from their respective statutory authorities such as the Governing or Executive Council or Syndicate or Board of Management or Academic Council etc., to apply for registration with Academic Bank of Credits.

(4) Registered Higher Education Institutions shall be required to admit students to individual courses, in addition to their admissions to full degree programmes:

Provided that in order to avoid overcrowding in a course(s) of any Higher Education Institution, such Higher Education Institution shall be permitted to have additional (supernumerary) seats in such course(s), subject to prior approval by the appropriate professional standards setting body:

Provided further that in respect of courses, not coming under the purview of any professional standards setting body the Registered Higher Education Institution may, subject to availability of required infrastructure, create supernumerary seats with the approval of its statutory authorities:

Provided also that, Registered Higher Education Institution may also offer a set of Courses, exclusively for the purpose of the Academic Bank of Credits Scheme.

(5) Registered Higher Education Institution shall have the appropriate educational infrastructure in terms of audio-visual facilities, e-resources, Virtual classrooms and studios etc., and specifically high bandwidth internet connectivity to support ODL or On-line courses or programmes and other infrastructural facilities for face to face theory or practical/ or training courses as specified, from time to time, under the relevant University Grants Commission Regulations and/or Statutes or Ordinances of the Higher Education Institution.

(6) A Registered Higher Education Institution shall have a webpage on its website containing details of the facility of Academic Bank of Credits, list of all Registered Higher Education Institutions, guidelines or Standard Operating Procedures for the students to utilise the facility effectively, along with a link to the website of Academic Bank of Credits.

8. Academic Bank of Credits Implementation methodology. - (1)Academic Bank of Credits is essentially a credit-based, and highly flexible, student-centric facility.

(2) Registered Higher Education Institutions shall, with the approval of their statutory authorities, amend the extant Ordinances relating to, inter alia, Course registration, Course requirements, acceptance for inter-disciplinary and multi-disciplinary courses, Credits to be offered to such courses, Credit transfers and Credits acceptance from other approved Higher Education Institutions, nature of grades to be awarded etc.

(3) Registered Higher Education Institutions shall encourage and enable students to customise or design their own degrees utilising Courses selected by the student from among courses offered by one or more of the Registered Higher Education Institutions:

Provided that, the student shall be required to earn at least fifty per cent of the credits from the Higher Education Institution awarding the degree or diploma or certificate:

Provided further that, the student shall be required to earn the required number of credits in the core subject area necessary for the award of the degree or Diploma or Certificate, as specified by the degree awarding Higher Education Institution, in which the student is enrolled.

(4) Students availing flexibility under the facility of ABC provided in sub-regulation (3) are entitled to subscribe only to Courses of their choice and aptitude, so as to enable them to accumulate credits and not to the entire Programme of study leading to the award of a degree by the Registered Higher Education Institution.

(5) The ABC shall maintain a dynamic online directory of Higher Education Institutions which satisfy the eligibility criteria stipulated under regulation 7.

(6) Every Registered Higher Education Institution shall provide student counselling and guidance to all students desirous of opening an Academic Bank Account with Academic Bank of Credits, in regard to the details of utilisation of the services of Academic Bank of Credits in terms of Credit definition, Credit accumulation, Credit transfer, Credit redemption as well as in respect of the opening, closure and validation of Academic Bank Accounts of students where such requests are recommended through the parent University or Autonomous colleges which are already registered with Academic Bank of Credits.

(7) Credits earned by students shall be deposited in the respective Academic Bank Account with ABC and shall be valid for not exceeding seven years as specified by the credit awarding institutions and subject to its acceptance by the Registered Higher Education Institution awarding academic qualifications, for the purpose of commutation of credits for the award of any Degree or Diploma or Certificate:

Provided that once any credit is redeemed for the award of the aforementioned academic qualification, such credit shall be irrevocably debited from the respective student's Academic Bank Account.

(8) Where a student fulfils the norms of sufficiency of total number of credits and of the nature of credits, approved by a Registered Higher Education Institution for the award of the specified Degree or Diploma or Post Graduate Diploma or Certificate, the student shall be eligible for such award by that Higher Education Institution.

(9) Once used, or redeemed, Credits earned by a student cannot be re-used for the award of any other formal academic qualifications.

(10) With the approval of its statutory authorities, a Registered Higher Education Institution shall be encouraged by Academic Bank of Credits to apportion the structure of courses offered by it as core courses or core electives or open electives or skill enhancement electives or ability enhancement electives etc. with appropriate credit requirements, in order to promote multi-disciplinary or inter-disciplinary higher education.

(11) In awarding academic qualifications etc., Registered Higher Education Institutions shall follow the norms and guidelines, in regard to the number of credits and duration of time, stipulated from time to time by the Commission or the professional standards setting body, as the case may be:

Provided that in respect of time duration, a student pursuing academic qualifications under the Academic Bank of Credits facility may, after earning the stipulated credits, avail a relaxation of a maximum of one semester, provided the duration of the course or programme is of two-years or more (Four semesters or more).

(12) A Registered Higher Education Institution may fix its Course fee based on the number of credits of a course for which the student is enrolled.

(13) The Higher Education Institution shall pay a fee for registration as an eligible institution under these regulations, which shall be determined with the prior approval of the Central Government or the Commission, as the case may be.

9. Monitoring, support and Quality assurance by Universities and ABC.- (1) It shall be the responsibility of Registered Higher Education Institutions, to monitor the development and operationalisation of the Academic Bank of Credits programme at the university level and at the level of their affiliated autonomous colleges.

(2) Registered Higher Education Institutions shall offer teacher or staff training, mentoring, academic and administrative audit and other measures for improving the quality of performance of the Academic Bank of Credits facility and promotion of holistic/multidisciplinary education with the support of Academic Bank of Credits, which may be in the form of Faculty Development Programmes or Quality Improvement Programmes or Professional Development Programmes or Technology Inculcation Programmes.

(3) The Quality assurance of the implementation of Academic Bank of Credits at the level of the registered university or autonomous college shall be developed by the University or autonomous college concerned either through the Internal Quality Assurance Cell (IQAC) or any other appropriate structured mechanism as may be decided by the Registered Higher Education Institution.

(4) Every Registered Higher Education shall upload, annually, on its website, a report of its activities *vis a vis* the Academic Bank of Credits, as well as of measures taken by it for Quality assurance, Quality sustenance and Quality enhancement.

(5) There shall be an Academic Bank of Credits-Grievance Redressal Mechanism at the level of Central Government/University Grants Commission/Academic Bank of Credits, and at the level of every Higher Education Institution registered with Academic Bank of Credits to address the grievance/appeals of students.

10. Consequences of violation.- Where a Registered Higher Education Institution fails to fulfil the conditions or requirements prescribed under these regulations, the Commission may, after providing a reasonable opportunity of being heard, direct the institution to rectify the deficiency within such period of time as may be stipulated by the Commission and on failure on the part of the Higher Education Institution to do so, terminate the registration of such institution from Academic Bank of Credits and, in addition, cease to provide grants under the Act, where such grants are admissible to the institution.

11. Interpretation.- Any question as to the interpretation of these Regulations shall be decided by the Commission, and its decision shall be final and binding in the matter.

Prof. RAJNISH JAIN, Secy., UGC

[ADVT.-III/4/Exty./167/2021-22]

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ज्ञान-विज्ञान विमुक्तये

सत्यमेव जयते

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University Grants Commission
(शिक्षा मंत्रालय, भारत सरकार)
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सचिव
Prof. Rajnish Jain
Secretary

F.15-2/2021(QIP)

October, 2022

Public Notice

21 OCT 2022

National Education Policy (NEP) 2020 emphasizes making education more holistic and effective by integrating higher education and vocational education. To realize the intent and objective of NEP 2020, the National Credit Framework (NCrF) has been jointly developed by a high-level committee constituted by the Government of India.

NCrF is a comprehensive framework that enables seamless integration of learning from academic, vocational, and experiential learning. The NCrF provides for creditisation of all learning and assignment, accumulation, storage, transfer and redemption of credits, subject to assessment; removes distinction and establishes academic equivalence between vocational and general education; enables mobility within and between them and its operationalization through the Academic Bank of Credits (ABC).

The draft National Credit Framework is attached herewith for comments/ suggestions from all stakeholders. The comments/suggestions may be sent at comments.ncrf@gmail.com up to 30th November, 2022.

(Rajnish Jain)

प्रो. धीरेन्द्र पाल सिंह
अध्यक्ष
Prof. D. P. Singh
Chairman

सत्यमेव जयते

ज्ञान-विज्ञान विमुक्तये

विश्वविद्यालय अनुदान आयोग
शिक्षा मंत्रालय, भारत सरकार
University Grants Commission
Ministry of Education, Govt. of India

D.O.F. No. 1-4/2021(QIP) 18th November, 2021

Subject: Initiatives undertaken by UGC for implementation of NEP, 2020-reg.

Dear Vice Chancellor,

As you are aware, National Education Policy (NEP), 2020 was launched on 29th July, 2020. On completion of one year of launch of NEP 2020, Hon'ble Prime Minister announced a number of historic initiatives including the major reforms such as Academic Bank of Credits, Guidelines for Multiple Entry and Exit in Academic Programmes, Internationalisation of higher education etc. in the august presence of our esteemed Education Minister. Some of the initiatives undertaken by the UGC for implementation of NEP, 2020 are as follows:-

- Regulations on Academic Bank of Credits to promote flexibility and facilitate student mobility
- Guidelines on Multiple Entry and Exit in the Academic Programmes of Higher Education Institutions
- Guidelines for Apprenticeship/Internship embedded degree programme as part of the curriculum of general degree programme
- Amendment of Institutions Deemed to be University Regulations to facilitate Vocational Education to enhance Employability
- Regulations on ODL and Online Education to expand access and increase GER
- Regulations on Credit Framework for online courses through SWAYAM, 2021 for recognition and integration of credits – Increasing the credit limit from 20% to 40%
- Guidelines for Internationalization of Higher Education
- Establishment of Office for International Affairs - one stop contact for foreign students
- Alumni Connect at University Level to engage with Alumni (of foreign origins and Indians living abroad)

The above-mentioned initiatives are aimed to improve accessibility, equity, quality, affordability & accountability and thereby bringing about transformative reforms in the higher education sector. The concerned/eligible institutions may implement above initiatives at their level so that the benefits can reach to the stakeholders in a time-bound manner.

Further, the University Grants Commission in its endeavour to address the major challenges faced by the higher education system in India adopted "UGC Quality Mandate" for improving the quality in higher education institutions.

The activities envisaged under Quality Mandate and aligned to NEP, 2020 can also be undertaken by HEIs at their own level such as offering multidisciplinary programmes, orientation to newly recruited faculty through Faculty Induction Programme (Guru Dakshta), Inculcation of human values and professional ethics (Mulya Pravah), framework for eco-friendly and sustainable campus in higher educational institutions (SATAT), empowering graduates with the vital skills requisite for global employment and successful life (Life Skills), orientation to new students through Student Induction Programme (Deeksharambh), social responsibility and community engagement, industry-academic linkage, development cell and start up incubation centre, divyangjan friendly physical infrastructure, translation of books/course materials for degree programmes in Indian languages.

The vision of NEP-2020, to provide quality education to all and thereby making India a global knowledge superpower can only be achieved with the active participation of the HEIs. Many HEIs are proactively involved in implementing NEP, 2020 and have initiated several measures for the same. In order to ensure that vision of NEP, 2020 gets translated into reality, I would request you to establish **"NEP Cell"** in your institution and make the above-mentioned initiatives operational as well as monitor their progress on timely basis.

Best wishes,

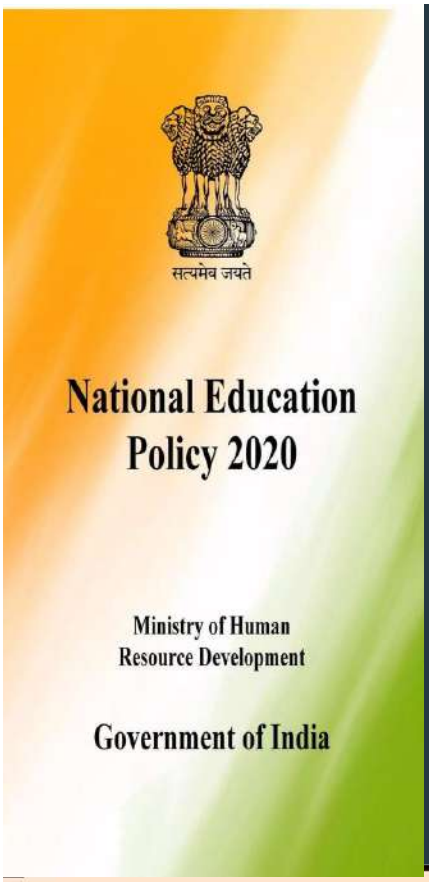
Yours sincerely,

D P Singh

(D.P. Singh)

To

The Vice-Chancellors of all Universities



Guidelines for Innovative Pedagogical Approaches & Evaluation Reforms



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1. Preamble:

The traditional Indian teaching-learning system has been driven by *Guru-Shishya parampara.* It is a holistic system which provided comprehensive knowledge, value-based learning as well as requisite life skills suited to the learners. Diverse pedagogies have been used for achieving core objectives of the entire learning processes, which included exposure to real life experiences and hands on learning, value-based learning through stories/narrations, problem-solving through explorations, role plays, memorization and dissemination through debates and discussions.

In the past few decades, various policy frameworks have been developed to address the evolving needs of different pedagogical approaches in higher education. The recent National Education Policy 2020 (NEP) is the outcome of mammoth exercise to integrate Indian traditional value-based education with the present technology dominated teaching and learning process. It aims to overhaul the existing education system through a multipronged approach, one of which is developing a pedagogy that makes education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible and enjoyable. As the NEP 2020 strives to develop well-rounded, competent individuals with 21st-century skills, the curricula and pedagogies have to be reoriented and revamped for the same, which includes raising the standard of curricula and using appropriate pedagogies to deliver effectively to the learners.

The NEP 2020, in its Para's, namely, Para 4.4, Para 9.3 (d), Para 11.6, Para 12.1, Para 12.2 and Para 12.6, envisions innovative pedagogical approaches and their role in higher education. The policy emphasises the holistic development of the learners, which requires using innovative pedagogical approaches such as experiential learning, cutting edge pedagogy, art integrated learning, flipped classroom etc.

The NEP 2020 is learner centric in its approach, and teachers play a pivotal role in its implementation. The policy gives teachers more autonomy in choosing aspects of pedagogy so that they may plan teaching-learning in the manner they find most effective for the students in their classrooms. However, the meaningful exercise of this autonomy and flexibility depends on the teacher's understanding of the different pedagogical approaches.

Pedagogical practices determine the learning experiences arranged for the learners, thus directly influencing their learning outcomes. Therefore, the use of relevant pedagogy is necessary to achieve the objectives of the curricula successfully. Such pedagogy has to have an increased emphasis on an inclusive approach to communication, discussion, debate, research, and cross-disciplinary and interdisciplinary thinking opportunities. Teachers should be provided with requisite training on pedagogical approaches for capacity building to achieve the desired learning outcomes for students. Such aspects of training on pedagogy must focus on the following:

- Addressing the different learning needs of students within a classroom and institutions-needs of differently-abled students.
- The difference in the learning styles (visual, auditory and kinaesthetic learning styles) of students.
- Diversity of the background of students in terms of the discipline of study, the social, economic, cultural and educational background.
- The difference in the pace of learning.

Adopting an inclusive approach: The NEP 2020 focuses on providing accessible, inclusive and equitable education. The pedagogy used in a classroom must reflect the inclusive approach so that learners can relate what is taught in the class with the multiple perceptions and realities they experience.

Embracing Multi-disciplinarity: Singularity in terms of acquiring knowledge in a particular discipline lacks the understanding of the complexity and interplay of various factors in the causation as well as finding a durable solution to a problem. Therefore, NEP 2020 promotes multi-disciplinarity. Accordingly, there is a need to change the pedagogical approach to instil in the students the multidisciplinary approach for understanding the core concepts, identifying and formulating problems, and exploring possible solutions.

Learning mode centric pedagogy: The key modes of learning, viz. physical or offline, online, hybrid or blended modes, and flipped classroom necessitate varying pedagogies suited to the channel/s of communication characteristic to each mode of learning. Therefore, appropriate pedagogy needs to be devised and adopted accordingly to avoid gaps in the teaching and learning process through these modes.

Learning method based pedagogy: There are multiple methods of learning which can be used based on the desired learning outcomes or degrees of active participation of learners in the teaching-learning process both within and outside the classroom. For instance, if the learning outcome is sensitization about a real-time problem, then it is essential to incorporate fieldwork with an observational study or survey in addition to the theoretical grounding required. If the aim is to provide hands-on or experiential learning, it is important to incorporate field-based, example-based, or project-based learning as pedagogy. Further, when the active engagement of learners in the learning process is desired, the use of collaborative and cooperative learning strategies, such as group discussion, brainstorming, role plays, case-studies, and self-learning methods supporting flipped classroom pedagogy are the important teaching-learning methods to encourage articulation, demonstrate new understandings of the content and apply it in solving problems. Flipped classroom pedagogy involves self or peer study by students before class to develop an understanding of the learning material provided by the teacher and thereafter engage in debate, discussion, analysis among students guided by the teacher during the class time. It is one of the important pedagogies to encourage articulation, demonstrate new understandings of the content and apply it in solving problems.

Each learning method may have an appropriate pedagogy for delivering to the learners what is to be learnt. Thus, determining the appropriate pedagogy for a chosen learning method is an essential step toward effective teaching-learning.

Given the significance of pedagogy and the different aspects of it which are to be taken into consideration, there is a need to formulate guidelines for innovative pedagogical approaches taking care of the following objectives:

- Pedagogical approaches for different learning needs of students
- Pedagogical approaches for different modes of teaching-learning such as physical, blended and online
- Pedagogical approaches for different disciplines, multi and inter-disciplinary approaches
- Evaluation & Assessment corresponding to defined Learning Outcomes requiring specific pedagogical strategies

- Pedagogical approaches enabling collaboration, cooperation, creation and co-creation among learners
- Capacity building of teachers with respect to pedagogical approaches
- Any other measures to achieve recommendations of NEP 2020 with respect to pedagogical approaches

These guidelines aim to suggest innovative pedagogies and develop the linkage of Graduate Attributes, as listed in National Higher Education Qualifications Framework (NHEQF), with learning needs and pedagogical approaches to better serve towards achieving the NEP 2020 vision.

2. Pedagogy and Its importance:

Pedagogy is an art of sharing knowledge which is dynamic in nature and may vary from teacher to teacher, classroom to classroom, institution to institution and platform to platform. The most critical factor in pedagogy is the constructivism.

An effective pedagogical approach may touch upon the following:

- Pedagogies are constantly evolving processes; every pedagogy is different and may be modified as per 21st Century learning.
- Pedagogy must fit the targeted audience and focus on helping students to develop an understanding of the knowledge delivered and relate with real life scenarios.
- To provide rich classroom experiences, various tools or methods may be integrated to enhance level of interaction and discussion within the class.
- Different assessment tools need to be explored for higher and inclusive productivity of the learners. Integrating ICT into assessment and evaluation processes may provide self-assessment opportunity to learners.

3. Innovative Pedagogical Approaches:

The adjectival word ‘innovative’ connotes featuring new methods that are advanced and original; and in the context of ‘innovative pedagogical approaches’, it may be understood to be those pedagogical approaches which involve usage of appropriate means (tools) and methods (ways) in a new and creative ways and in varied combinations in order to make the teaching-learning process more effective by enabling the learners to attain the

expected/defined learning outcomes, develop students' capabilities in problem-solving, teamwork, learning to learn, reflective thinking etc. to be creative, adapt to changes, manage and analyze information, and work with knowledge.

Innovative pedagogical approaches positively impact student learning, behaviour and attitudes and are capable of ensuring that all students achieve the defined course/programme learning outcomes and demonstrate the expected graduate attributes. Para 13.4 of NEP 2020 recognises flexibility for teachers to adopt innovative pedagogies to ensure a motivated and creative teacher.

There are four broad categories of pedagogical approaches, namely - Behaviourism, Constructivism, Social Constructivism, and Liberationist.

(i) Behaviourism:

The theory of behaviourism informs its approach toward teacher-centred learning. It advocates the use of direct instruction and lecture-based lessons wherein the teacher is the sole authority to lead the lesson and the knowledge being delivered in a curriculum where each subject is taught discretely (topic-based learning). A behaviourist pedagogical approach is expected to use a lesson mixture of lecturing, modelling and demonstration, rote learning, and choral repetition. All these activities are 'visible' and structured and are led by the teacher. However, during the lesson, the shift may come where the student is the centre of the activity and demonstrates one's learning. Behaviourism is also sometimes referred to as a traditional teaching style.

(ii) Constructivism:

Learning through experiences and reflections is a part of constructivism theory. Constructivist pedagogy is 'invisible pedagogy' as it puts the child at the centre of learning. A constructivist approach would incorporate project work and inquiry-based learning and might adopt a Montessori or Steiner method. A lesson having constructivism theory includes individualisation and leads to slower-paced learning having hidden outcomes with the support of the expert and less teacher talk. This pedagogy also has scope for emphasis on being outdoors and engaging with nature. Constructivism is also sometimes referred to as a progressive teaching style.

(iii) Social Constructivism:

Social constructivism pedagogy could blend two priorities: teacher-guided and student-centred. The teacher uses group work elements, having smaller group sizes and limited topics for choices. The teacher may also use teacher modelling, questioning, and a mixture of individual, pair, and whole-class instruction.

(iv) Liberationism:

A liberationist approach involves democracy in the classroom as the student's voice is placed at the centre. The class discovers the subjects together, and the teacher plays the role of a learner. A teacher may use examples like literature containing non-standard constructions, such as graffiti or hip-hop. Students playing the role of the teacher decide about the topic of the lesson and showcase their learning through performance, speech, or dance. The teacher thus provides space and opportunity for the students to learn independently.

In addition to the points above, the following innovative pedagogies may be considered:

- Blended learning – Rethinking the purpose of the classroom and classroom time
- Gamification – Engagement through play and the pedagogies of games
- Computational thinking – Problem-solving approach through logic
- Experiential learning – Investigating in a complex world
- Multi-literacies and discussion-based teaching – Fostering critical thinking and questioning

Three structural changes within the educational systems that have an excellent potential for emboldening the successful development of innovative pedagogies mentioned above are:

1. Professional development to ensure the foundations of quality teaching;
2. Widening the profile of educators;
3. Supporting new models that are hybrids between formal and non-formal learning;

Recently, a new form of teaching, learning, and assessment have been explored, in order to guide teachers and policymakers in productive innovation, and proposed, under the title "Innovating Pedagogy"[1].

- Artificial intelligence in education
- human-centred System
- Learning through open data
- Engaging with data ethics
- Social justice pedagogy
- Learning from animations
- Multisensory learning
- Online laboratories – Laboratory access for all

Another pedagogy which is much needed to be cultivated is 'Gratitude' as pedagogy. "Gratitude involves the acknowledgement of what people have or receive and the conscious action of wanting to give back in some ways. When applied in an academic context, gratitude can help students to improve student-teacher and student-student relationships; it can help them to be more aware of their learning environment and increase understanding and focus on their studies. One practical approach to implementing gratitude as a pedagogy involves asking teachers and students to examine their attitude before starting their teaching or learning and during learning activities. A more detailed reflection can bring awareness of any negative attitudes towards certain topics or learning activities. These are then analysed and replaced by elements of gratitude."[2] It is also suggested to develop gratitude journal to enhance teaching-learning. Both teachers and students can maintain personal journals and write down three good things related to their teaching and learning respectively on a daily or weekly basis. Through this way, students and teachers would value the time and the opportunity to appreciate what was learned and taught and the people involved in the process.[3]

It is believed these pedagogies will play a part in shaping the future of teaching and learning and in opening possibilities for learners and teachers.

[1] Lucian Ciolan, et al (ed.) (2021), "*Innovative Pedagogies: Ways into the Process of Learning Transformation*"
[2] Kukulska-Hulme, A., et al (2021), *Innovative Pedagogy 2021: Open University Innovation Report 9.* Milton Keynes: The Open University. p.2.
[3] See, *Id* at p. 20.

4. Pedagogical Approaches Addressing Learning Needs:

Pedagogy, as a focus for teaching and learning, involves reflecting on different pedagogical approaches and helping teachers to improve and innovate the art of teaching. The changing environmental paradigms require new types of graduates and bring renewed pressure for higher education to respond by developing and cultivating the students capable of meeting those challenges at their workplaces. Therefore, a teacher must assess students' learning needs to adopt the matching pedagogical approach. Further, different students have their optimum learning methods. Some are fast in learning while reading texts and others ensure first listening to the teacher. Another group of students may learn once they have a practical demonstration. A teacher could find it challenging to maintain the balance that will be favourable to every student.

The learner's learning needs represent the gap between the learning experience one wants to have and their current state of knowledge, skill, and enthusiasm. There are four different domains of potential learning needs, viz., Cognitive, Social, Affective and Psychomotor, and these are detailed below in Table 1.

Table 1: Domains of Learning Needs[4]

Cognitive	Social	Affective	Psychomotor
Recognize good questions	Communicate with peers	Attain goals	Be in a comfortable setting
Ask good questions	Give and receive support	Nurture positive attitudes	Have transportation
Get help from experts	Experience external motivation	Be open to feedback from others	Have childcare
Practice problem-solving	Make a difference	Have time for reflection and Self-assessment	Get enough sleep
Think independently	Interact while problem-solving	Possess well-founded Self-Confidence	Have a good diet/ adequate energy level
Create work products	Explore and challenge conventions	Define and respond to the locus of control	Exercise
Process new information	Grow with friends	Have a sense of belonging	Have access to equipment and tools

[4] Source: Cambridge Academies - Kingman Unified School District #20. https://www.kusd.org/education/academic-programs/cambridge-academies

Use learning resources	Manage time and tasks	Understand the motivations of others	Engage in appropriate and timely demonstrations

The *diversity of learning needs* of the learners occurs due to the nature of the discipline, course, level of study, necessary level of competency, and applicability of knowledge. Therefore, identification of specific learning needs is required to reflect in the learning outcomes of a course, which in turn are expected to reflect in graduate attributes (GA).

Linking learning needs with graduate attributes (GAs) would ensure the holistic development of a student, as envisioned in NEP 2020. Development of graduate attributes, as specified in NHEQF, would require specific pedagogical approaches to serve the learning needs of a student. Thus, a teaching-learning process that ensures establishing linkages between graduate attributes, learning needs and pedagogical approaches would serve the purpose of outcome-based teaching-learning process. Table 3 lists the suggestive pedagogical approaches that help develop specific graduate attributes by specifying learning needs.

Table 3: Suggestive Pedagogical Approaches

Graduate Attributes	Learning Needs	Suggestive Pedagogical Approach
Comprehensive knowledge	To know the discipline in its current form, its emergence and future developmental aspects, Interdisciplinary and multi-disciplinary context for discipline knowledge	Classroom Lecture using chalk and talk technique, case study examples, Discussion method, Thematic Teaching and Learning by design
Procedural knowledge	To know how to use the knowledge professionally for highly skilled work/tasks related to the chosen field(s) of learning, including knowledge required for undertaking self-employment initiatives, and knowledge and mindset necessary for entrepreneurship involving enterprise creation, improved product	Activity-based learning,

	development, or a new model of organization	
Skill	To have the skills in areas related to specialization in the chosen disciplinary/interdisciplinary area(s) of learning in a broad multidisciplinary context, including wide-ranging practical skills, involving a variable in routine and non-routine contexts relating to the chosen field(s) of learning	Training, Workshops, Vocational Internship,
Complex problem-solving	To have the competence to solve problems in familiar and non-familiar and non-familiar contexts	Analysis of critical incidents originating in familiar and non-familiar situations
Critical thinking	Having an analytical mind and the ability to synthesize information from varied sources	Group discussion, Brainstorming, Real-life problems allowing reflection time, Integration among students
Creativity	To be able to think differently and have out-of-box solutions	Stimulus activity, Reframing problems, Brainstorming, Free writing, Mind mapping
Communication Skills	To have - good listening capability, expression of thoughts in a clear and precise manner, sensitivity in communication, confidence and technical correctness	Content-based instruction, Jigsaws, cognitive learning, think-aloud pair problem-solving
Research-related skills	To have research capabilities in terms of problem formulation, the proposition of hypotheses, use of appropriate research tools for data collection and analysis, report writing and research ethics	Guided questioning, Experiment, Discussion, Self-reflection, Collaboration, Project work
Coordinating/collaborating with others	To have the capacity to coordinate and collaborate with others toward the achievement of group goals	Peer teaching, Group project, Group grid, think-aloud pair problem-solving
Leadership	To have the capacity to organize and direct the	Teamwork, Decision

readiness/qualities	teamwork	making
Learning how to learn skills	To have the ability to pursue self-directed learning activities throughout the life to be a lifelong learner	Exploration, Self-learning, Real-life problems, Allow reflection time, Integration among students
Digital literacy skills	To have the capacity to use various ICT tools and software and integrate them to analyse the data	Use of practical exercises using ICT tools and software
Multicultural competence	To know the values and beliefs of multiple cultures and be able to engage in a multi-cultural environment	Interact with a diverse group, Cultural meet, Diversity focused conference
Value inculcation	To imbibe constitutional, humanistic, ethical, and moral values in life, including universal human values of truth, righteous conduct, peace, love, nonviolence, scientific temper, and citizenship values	Storytelling, Debate, Discussion, Cultural meet, Celebration of days of national importance
Autonomy, responsibility and accountability	To be able to work independently, identify appropriate resources required for a project, and manage a project through to completion, thus showcasing the responsibility and accountability in action	Use of project work and fieldwork
Environmental awareness and action	To know the actions needed to mitigate the effects of environmental degradation, climate change and pollution	Fieldwork, Project, Scenario planning, Dramatization, Discussion method, Observation method
Community engagement and service	To know and participate in the practices for community development	Fieldwork involves community services, Outdoor learning, Project management.
Empathy	To learn the ways to identify with the needs of other individuals and groups	Storytelling, Debate, Critical incident,

5. Pedagogical Approaches Enabling Learning of Multi-disciplinary and Inter-disciplinary Courses:

The NEP 2020 Para's, viz., Para 11.3, Para 11.6 and Para 11.7, provide specific details about the scope of multi-disciplinary and inter-disciplinary education to have holistic development of a learner.

Multi-disciplinary Education is a unique educational approach that allows students to learn and explore distinct subjects or curricula from various disciplines. There is no *rigid separation* in disciplines. The curriculum would enable students to develop a holistic understanding of the subject approaches in terms of similarities and differences between them. Varied academic disciplines in the curriculum are included to help in nurturing the ability to critically think and have solutions to problems that are not easily acquired from everyday experience. When taught and appropriately assessed, the varied disciplines, including humanities, social sciences, science, mathematics, languages, and the arts, help develop the ability to think critically and creatively. The student needs to be able to reflect on and apply approaches they learn in academic disciplines and become effective, critical and creative thinkers in everyday life in an interdisciplinary way.

Interdisciplinary Education refers to the combination of two or more academic disciplines into one. Interdisciplinary understanding brings the ability and confidence to navigate between disciplines to make inter linkages for developing new perspectives having a holistic appreciation of knowledge. Disciplinary understanding provides the base to create a rigorous interdisciplinary approach. In the absence of disciplinary understanding, learning can lead to superficial coverage and confusion. Teachers enable students to make connections in their minds between what they learn in one context and another with the help of a supportive curriculum. Excellent institutions support teachers in planning collaboratively for the development of interdisciplinary understanding. Teachers also need to understand what their colleagues are teaching to a particular year group to connect with their own classes.

Trans-disciplinary Education, thus, is an arrangement of the knowledge and skills within one subject area. It aims at integrating the subject's knowledge and skills into a coherent whole.

6. Information & Communications Technology (ICT) in the Classroom:

ICT for enabling learner-centred interactions, collaborative tools, ICT tools for fostering cognitive skills such as summarising, visual presentation; concept mapping, etc. are significant in development of 21st century skills.

Teachers can provide knowledge in different digital formats such as short-span videos, info graphics, audio podcast, concept-maps, whereas discussion forums, quizzes, sharable docs, blogs, clickers, etc., can also be used for learner-engagement and collaboration.

Using digital technologies in classrooms has continued to expand over the past decade. Educators find ways to commonly employ today's technologies like desktops, laptops, tablets and smart phones, ensuring learning across various subjects. Though it is challenging to include ICT-based resources and activities in teaching programmes, using ICT resources is considered an essential skill all learners need to develop. It is critical for today's generation of learners to use ICT resources to access, process, evaluate and communicate information and data. The use of ICT contributes equally to the learners and teachers for being confident, responsible, reflective, and innovative and engaged (Table 4).

Table 4: ICT Contributions to Teachers and Learners[5]

ICT Contributions	Learners	Teachers
Confident	Confident in working with information and ideas of their own and others.	Confident to teach their subject and engage with each student in the learning process.
Responsible	Responsible for themselves, responsive to and respectful of others.	Responsible for themselves, responsive to and respectful of others.
Reflective	Reflective as learners, developing their ability to learn.	Reflective as learners themselves, developing their practice.
Innovative	Innovative and equipped for new and future challenges.	Innovative and equipped for new and future challenges.
Engaged	Innovative and equipped for	Intellectually, socially and

[5] Source: https://www.doralinternational.org/cambridge, https://www.browardschools.com/Page/32816 Learner & Teacher Attributes

	new and future challenges.	professionally engaged, and ready

7. Innovative Pedagogies:

Multiple approaches to teaching-learning allow the teaching-learning process to keep pace with current and future developments. Use of experiential learning, inquiry-based learning, case-based instruction, problem-based learning, individual/group project-based learning, discovery learning, practical work, enhanced technology use and integration- including the use of digital and e-learning technologies and resources, online platforms and methods improve teaching-learning-assessment processes. Field-based learning and visits to industrial or other research facilities etc., help in deduction based learning. The following pedagogies emphasize constructive learning and active involvement of the learners in their learning journey, fulfilling the need of 21st Century learning environment.

(i) **Flipped classroom pedagogy:** It is an innovative pedagogical approach based on the constructivist school of thought. It is based on the blended form of learning with an emphasis on the 21st Century skills such as Creating, Evaluating and Analysing in the form of activity-based learning in the classroom wherein the interaction between student and teacher takes place in a flexible learning environment and culture.

(ii) **Art Integrated Learning Pedagogy:** It is a joyful and experiential learning pedagogy. It is about identifying the needs and potential of the learners and nourishing them to provide holistic growth. The students actively participate in the process of learning wherein they explore, develop and express their understanding and creative output using various arts forms and makes connections across curricula.

(iii) **Project-based Learning Pedagogy:** It is pedagogy of reflective practice and collaboration wherein students connect the concepts with real-life situations so that it could promote lifelong learning and 21st-Century skills using an online platform for engagement of learners.

(iv) **Cutting Edge Pedagogy:** It is pedagogy of learning with innovation and problem-solving skills, wherein students are engaged using Technology. The diverse needs of the learners are catered to using digital and technological platforms such as pear deck for interactive online/digital learning.

(v) **Critical Pedagogical Approach:** This approach emphasizes enhancing the learners' critical thinking skills by raising questions such as what they are learning and why they are learning, problem posing, and letting the students discover the answers. Learners acquire knowledge by investigation.

8. Modes of Teaching Learning and Pedagogical Approaches:

NEP 2020 envisions holistic education for learners. The underlying need for holistic education is to have the combined use of different pedagogical modes to ensure:

(i) Transmission of pre-existing knowledge.

(ii) Development of independent and self-directed problem solving.

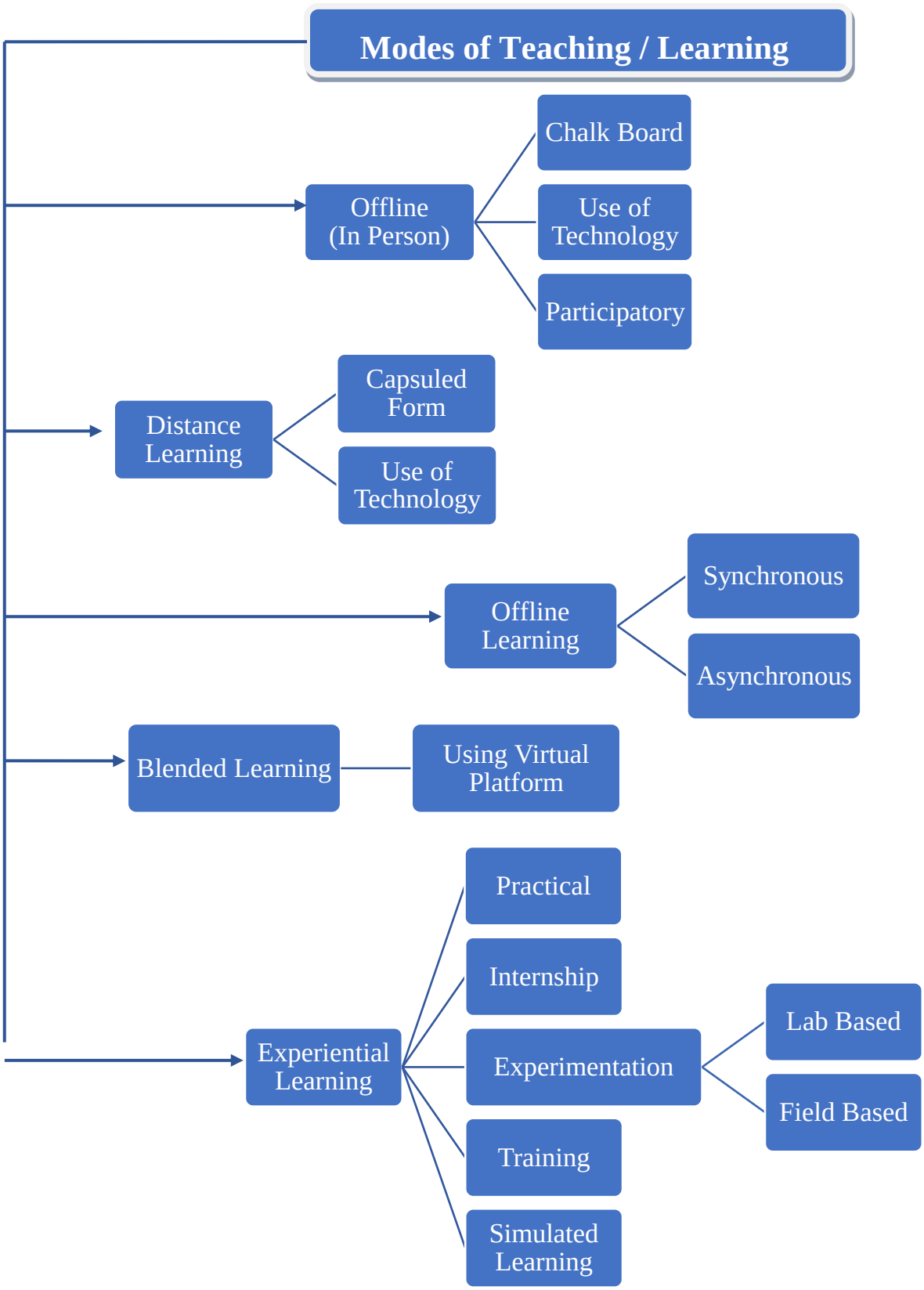
(iii) Use of dialogue and collaboration to develop inquiry and critical thinking skills through interaction.

(iv) Transformation of learners having idea about their purpose and identity while striving for wisdom and compassion to have holistic orientation about self and external environment.

Thus learning experiences need to allow for analysis, synthesis, and experimentation in disciplinary and interdisciplinary domains. Figure 2 shows various modes of teaching & learning which-

- Have different levels of student-teacher interaction;
- Have different levels of student participation and engagement in-class discussion;
- Have different levels of visualization and verbalization effects;
- Have different levels of required skill orientation;
- Have different levels of experimentation opportunities;
- Require different competency level for teacher;
- Require different methodology for evaluation, assessment and feedback;
- Differently require availability, knowledge and expertise for the use of technology;

Figure 2: Modes of Teaching-Learning



(A) Offline Modes of Teaching:

Models of Teaching: Models such as Concept-Attainment Model, Role-Play, Assertive Training Mode, Inquiry-Training Model, Jurisprudential Inquiry Model, synectics are a few powerful models for classroom environments, even in Higher Education. Each model has direct instructional as well as nurturing effects such as development of concept-formation, logical reasoning, creativity, assertiveness, etc.

Various modes of pedagogy[6] that a teacher at HEI may use for offline (in-person classroom) teaching are:

(i) **Cooperative Learning Strategies (CLS):** These strategies include methods such as Jigsaw, Think-Pair-Share, Team-Pair-Solo, Inside-Outside Circle, Fishbowl, Project Quality Plan (P-Q-P), etc.

(ii) **Brainstorming:** Using chalkboard or a presentation device to invite ideas of learners on a problem/issue without allowing them to criticise, but encouraging wild ideas which should follow short-listing and critically analysing ideas generated. Sometimes, these ideas may be categorised by learners and the teacher together or learners alone to learn 'types' or 'categories' of new concepts.

(iii) **Group discussions:** The use of discussions is an attempt to counteract the risk of the teacher/educator taking a transmissive or authoritarian approach, enabling the learner group to explore their own and others' views. Group discussions encourage active listening, self-reflection, and the exchange of different cultural narratives, worldviews and attitudes.

(iv) **Role-plays:** This technique provides an opportunity for participants to take on different identities (roles) and act these out with or for others in a scenario depicting some sustainability issues or event so that both participants and spectators can empathize with (put themselves in the shoes of) others, and understand their perspective, experiences and contexts, or issue, better.

[6] Source: Education for Sustainable Development (ESD). https://1library.net/article/education-for-sustainable-development-esd.q595w1rz

(v) **Guided Questioning:** Using probing and structured questions, for example, during fieldwork or on an interpretive walk, to direct learners' thinking about particular aspects of their experience.

(vi) **Interpretive Trails:** It is a guided walk or a trail with interpretive signage through an area where one can learn about the natural or built environment. There are different ways in which the interpretation can occur: through signs, poster boards or plaques along the way, a booklet with a map and additional information, a knowledgeable guide, and digital technologies. Many nature reserves and botanical gardens, for example, layout walks through exciting sections of the area, illustrate different ecosystems, archaeological sites, places of cultural interest etc.

(vii) **Music, Poetry and Visual Art:** People learn differently. There are different ways of accessing and expressing knowledge. Art can provide a better outlet for some people's ideas and experiences than more formal types of expression. There are opportunities for people (children and adults) to give creative expression to their ideas and to reflect on their experiences and feelings about matters, such as sustainability, in open-ended and creative ways. Many art forms are not language-based, so they have much potential in contexts where language might be a barrier to learning. Music can help bridge barriers between very different people and hence facilitate social learning deliberations.

(viii) **Stimulus activities:** A stimulus activity involves watching a video or looking at photos, poems or newspaper extracts to initiate reflection or discussion. Learners may even be interested in producing their own work, such as photos taken to stimulate a debate. Using videos or an externally produced document enables the multipliers to bring in a wide range of viewpoints for critical analysis.

(ix) **Critical incidents:** Learners are given an example and asked what they would do, what they could do and what they should. Critical incidents allow them to consider their perspectives and actions in the light of an ethical stance. A teacher can use this approach with groups to promote awareness and deep reflection about multiple perspectives on sustainable development paths.

(x) **Case studies:** These provide learners with in-depth information about a particular issue in one specific context (with varying amounts of detail and formality). Case

studies can bring diverse learning domains into curriculum areas and promote the learners' group with a holistic view of an issue. Case studies enable students to investigate what affects their local area, work with community groups, NGOs or private enterprises, and work together to find solutions for local issues.

(xi) **Reflexive accounts:** Individuals consider their position concerning new knowledge about an issue. It may help them understand their actions contributing to the issue of concern, e.g., sustainability issues. This pedagogical approach makes learners reflect on personal roles, attitudes and responsibilities concerning sustainability issues.

(xii) **Critical reading and writing:** These are important social practices which are the keys for promoting learning. To assess the author's possible motivation in the text, learners de-construct the discourses and try to visualize alternative futures.

(xiii) **Problem-based learning:** Problem-based learning is an iterative learning process. A teacher uses this approach to teach a whole range of subject matter. Education for sustainable development, for example, requires the identification of sustainability-related issues for students to investigate and generate a body of knowledge. Students can develop a vision of alternative actions and potential solutions to the problem, which helps devise a plan of action, followed by a period of reflection and evaluation. This process thus promotes both the conceptual and practical aspects of sustainability literacy.

(xiv) **Solution-based learning:** This approach involves an idea that one wants to bring to life and action. Therefore, it is important to work with and get inspired by positive examples to promote positive emotions and motivation for active participation in the communities and institutions.

(xv) **Fieldwork and outdoor learning:** Fieldwork is an example of experiential pedagogy that can influence students' emotions and help develop the essential critical thinking skills to understand the complexity of an issue. Fieldwork and outdoor learning are often based on issues in the local community and environments, linking theory to real-world examples.

(xvi) **Storytelling:** Telling stories is an engaging and effective form of teaching and learning. Storytelling is currently experiencing a considerable revival of interest since folktales about the relationship between the Earth and its human inhabitants have been at the heart of storytelling since the earliest times. Storytelling draws on indigenous societies and folk art as the oral traditions practised for generations as a means of entertainment, education or cultural preservation. Storytelling makes ideas, theories, and concepts come alive, offer a source of inspiration, provides us with practical insight into approaches to our most persistent environmental, social and economic difficulties, and helps to impart respect for cultural heritage and the environment. This enables teachers to reflect better sustainable development information, principles and values with the group of learners.

(xvii) **Talks and presentations:** In this activity, a body of knowledge or selection of information through a structured verbal and visual presentation is presented. Talks and presentations can be helpful at the start or within a learning process when it may be necessary to provide background information, clarify concepts or introduce a specific focus. Lecturettes of 10-15 minutes at a time to be encouraged followed by participatory, learner-centred methods.

It is used for both types of education - offline and online. A good presentation requires teachers to incorporate visuals such as images, GIFs, videos, etc. as it will lead to use of both auditory and visual senses for better learning.

(B) Online Modes of Teaching:

(i) **Live Online Classes:** With Online classes, teachers deliver online lectures in real-time and need not have students in the physical classroom. Live online classes allow teachers and students to interact face-to-face and have the same classroom-like environment for learning. There are various video conferencing apps which a teacher can use. Teachers need to create and share a link with students for running regular classes. Live online classes break the barriers of reach, and teachers can connect to students from anywhere. Online courses become more engaging with the live use of the online whiteboard.

(ii) **Online Whiteboard:** Teachers can use online whiteboards for best practices in teaching online. In a virtual classroom setup, an online whiteboard helps them

convey information and better connect teachers and students. Online whiteboard is a canvas on which teachers can create diagrams, share pre-made templates and charts, make sketches, write up etc.

It works just like the classroom blackboard and digitizes the content provided by the teacher which can be reused. Teachers and students can connect in real-time for assignments, mind mapping, review homework, interactive exercises, brainstorming around lessons, and give feedback.

(iii) **Online Quizzes:** Online quizzes are the effective mechanism to incentivize student completion of preparatory work, enhance active learning, and from the educator's perspective these are relatively time efficient. The online quizzes are used to improve instructional design and support formative assessment.

(iv) **Pre-Recorded Video Lectures:** Pre-Recorded Video Lectures are one of the suitable online teaching methods and pedagogy, where the lectures are recorded and shared with the students instead of taking live lectures. It gives them the flexibility to attend the lecture at their own convenient time. Unlike live online courses, students can also use the pre-recorded videos for revision purposes and to clear their doubts.

(v) **Game-Based Teaching:** Game-based teaching methods help students enjoy and not feel bored during teaching lessons. It allows students to be better engaged and not feel stressed students. Students who are not quite good at studying can find this way of teaching helpful in learning and memorizing. Teachers need to ensure that students access the same type of data for game-based teaching. Teachers start teaching using video conferencing tools, including gaming sessions and may chat through the chat option with students asking questions.

(vi) **Collaborative ICT tools:** The use collaborative ICT tools such as Digital Walls, collaborative concept-mapping tools, sticky-notes, project management tools such as Open Project allows for better problem solving skill, increased knowledge, satisfaction and motivation for learning. The teachers need to ensure that students would find the collaborative ICT tools easy to use.

(vii) **Flipped Classroom:** During the past few years, the flipped classroom has gained popularity and has emerged as one of the best teaching practices. Opposite to the traditional classroom concept, in flipped classrooms, students need to read and

review the study material before their teacher teaches them. It is a reserving concept of actual in-class where teachers teach, and students study later.

The flipped classroom concept includes effective techniques, like Online quizzes, Polls, Info graphics, Mind maps or word clouds.

(viii) **Class Blog:** Students create a class blog individually or in a group about what they have learnt. An innovative concept class, a blog allows students to explore self-learning and share knowledge with other students by sharing the blog. Teachers can also share their learning material on class blogs.

(ix) **Virtual environments:** Virtual Labs, Museums, Augmented reality (AR) - Virtual reality (VR) Technologies / AR-VR contents are specifically useful in teaching scenarios requiring field work.

(C) Blended Mode of Teaching:

Teachers may combine physical classroom learning activities with online learning components. Using a blended approach as a course design enhances students' teaching and learning experiences. In many cases, the act of "blending" may bring better experiences and outcomes for a student and more efficient teaching and course management practices for a teacher. It can involve a mix of delivery modes, teaching approaches and learning styles. Advances in technology provide new opportunities for blended learning forms for students in diverse environments. Also, blended teaching allows the designing and delivery of courses to enhance the teachers' role.

The blended learning approaches a teacher may use include:

- Sharing the Video Lectures with the students for the entire course.
- Use Internet-Based Learning (IBL) to promote self-learning as students must undertake some internet-based projects, i.e., the search & learn approach.
- Project-Based Learning has integrated multiple peer groups for the projects, and students collaboratively generate ideas.
- Use of Tablet (TAB) based remote learning / remote examination and evaluation. Touch screens and digital pens appeal to tactile learners requiring mobile learning.
- Satellite-based TV channels provide an opportunity for mass learning, adult education, and farmer education, taking care of different timings.

- Online Assessments – Quiz, Assignments, Tests, Examinations – at regular intervals to measure learning outcomes.

9. Research as Pedagogy:

Merging education and research by integrating research as a part of teaching pedagogy is an emerged need in our education sector. Research as a pedagogical tool is the evolved form of "experiential learning". It involves reflection, critical analysis and synthesis, initiative, decision-making, and accountability. Students get engaged intellectually, creatively, emotionally, socially, or physically. The actual learning takes place when students reflect & assess their decisions in the light of natural consequences, mistakes, and successes.

The experiential learning theory[7] is based on the idea that learning is a process whereby knowledge is created through experience transformation. It is based on four main elements which operate in a continuous cycle during the learning experience:

- **Concrete experience (Do):** At this stage, the learner actively experiences an activity either in a lab or field.
- **Reflective observation (Observe):** The learner consciously reflects on the experience at this stage.
- **Abstract conceptualization (Think):** At this stage, the learner attempts to conceptualize a theory or model based on his observation
- **Active experimentation (Plan):** This being the last stage, the learner tries to plan how to test the model or theory for further experience.

The introduction of research as a pedagogical tool in higher education gives an opportunity and provides an optimum learning environment as a child would explore on his own, and the learning would be more joyful and long-lasting. It aims at developing knowledge on a topic, helps establish facts, obtain a clearer idea of how reality works, motivation, self-development and helps create new theories. By engaging in research, students can better understand the rationale behind others' research.

[7] Kolb, D. A. (2014). Experiential learning: Experience as the source of learning and development. FT press.

Research can be introduced at a very early stage in higher education to create awareness about the process. Research through systematic study makes various available methods that help find solutions.

Research as a learning tool helps:

- Translate classroom knowledge to real-world situations.
- Develop a deeper understanding of course materials.
- Gain real-world skills that potential employers and professional programs value.
- Explore career pathways

Research as a pedagogical tool would help students question their perceptions and motivate them to learn by putting them in a situation where they come to see themselves as the authors of answers, as the agents of responsibility for change. Research as a pedagogical tool encourages students to develop a balanced, diverse approach to solving real-world problems independently and in a team.

10. Capacity Building on Various Pedagogical Approaches:

Para 13.1 of NEP 2020 also emphasises the capacity building of teachers as the most important factor ensuring the quality and engagement of faculty at HEI. This brings attention to the role the teachers' pedagogical knowledge, beliefs, experiences, and professional identity have in shaping the learning outcomes of their students.

It is necessary for the teachers to shape their attitudes towards teaching, improve their pedagogies to make them more interactive and student-centric and make classrooms inclusive spaces for not just reading but learning. Proper training, continuous professional development, and effort from the teachers themselves are required to bring about successful change in pedagogy at a substantial level.

In view of the above, it involves the identification of the capacity needs of teachers in terms of:

- Communication skills
- Presentation skills

- Knowledge enrichment
- Library resources
- Class management
- Evaluation and assessment
- Empathy
- Motivation
- Use of digital technologies

11. Improving Teaching Effectiveness: Faculty Development

Use of appropriate pedagogies is essential to ensure teaching effectiveness. However, there are other aspects of the teaching-learning process, like developing competence to assess learner needs, broadening the role of the teacher as a mentor and facilitator, use of library sources, which expands the role of pedagogy in ensuring teaching effectiveness.

All faculty members in higher educational institutions (HEI's) acquire and demonstrate specific competencies such as:

- Improving their work performance, particularly in the areas of teaching, and become more effective at facilitating student learning.
- Learning about new fields/frontiers of knowledge and apply new instructional delivery models, technologies, and pedagogies to promote improved student learning outcomes.
- Enhancing teaching effectiveness and excellence in research and engaged scholarship.
- Responding to changing learner characteristics.
- Responding to the emerging curricular thrusts and diversified knowledge requirements in local and global contexts.
- Effectively performing the expanded roles of teachers demanded by the education sector.

Preparing faculty for their expanded role is no longer mere transmitters of knowledge or instructor but also a:

- Facilitator, navigator and pathfinder;
- Counsellor, mentor;

- Content creator, course designer and evaluator;
- Programme/course content designer, creator of learning resources, evaluator, ICT expert etc.
- Reflective practitioners and lifelong learners, etc.

In addition to imparting knowledge in their subject areas, a teacher is required to-deal with students from diverse cultural, social and economic backgrounds, be sensitive to gender issues, promote tolerance and social cohesion, provide special attention to students with learning disabilities, learn and apply new pedagogies and technologies, keep pace with current educational developments and initiatives.

- Reflective practitioners and lifelong learners, etc.
- Performing specific administrative duties and parents and community engagements.

Methods to bring teaching effectiveness through broadening the role of teaching pedagogy are:

- Teachers' orientations in a structured manner – Gurudakshta programme
- Regular FDPS/workshops –specific to capacity requirements to be mandated in terms of a specific number
- Access to general reading material
- Participation in seminars/conferences

12. Faculty Feedback:

NEP 2020 advocates taking feedback from students at regular intervals for providing useful input to the teachers.

21st Century pedagogy involves a shift toward using active teaching strategies to ensure relevance and interest in the course. New teaching strategies are necessary to increase students' motivation and desire to learn. Immediate and constructive feedback for faculty provides students' involvement in the class for effective teaching-learning and relationship-building mechanisms. Different teaching pedagogies allow for varying levels of students' interactions with the teacher; an HEI needs to evolve a feedback mechanism that serves the quality teaching-learning process accordingly. Also, an HEI would develop a scheduled feedback mechanism to better serve the teaching-learning process. Using state of the art

technology for feedback collection, compilation, analysis, and recording would help in effective feedback management.

13. Evaluation and Assessment:

An effective education system relies on the integrity and efficacy of the existing evaluation system. Unless evaluations are designed to be the best identifiers of the performance of students; students won't put in their best efforts in learning and understanding concepts.

It is imperative that an Educational Institute has a robust, yet flexible, evaluation system which is also in consonance with NEP2020 objectives. These objectives, in the context of evaluation, can be summarized as:

1. Continuous and Comprehensive Evaluation
2. Criterion-based grading system
3. Learning Outcome-Based Education and Evaluation

NEP 2020 proposes that HEIs should adopt continuous and comprehensive evaluation rather than high stake examinations. Continuous and comprehensive evaluation embraces horizontal assessment modes instead of one single vertical mode. It can be used to assess the overall development of students, for example, critical thinking, problem-solving ability, right application of knowledge, and adherence to ethics.

NEP 2020 recommends a criterion-based grading system that emphasises assessment of student achievement based on the learning goals for each programme. A criterion defines the characteristics or traits to be judged. These are derived from the learning outcomes. Grading can be designed to measure the degree of achievement on each criterion thus making assessments more meaningful.

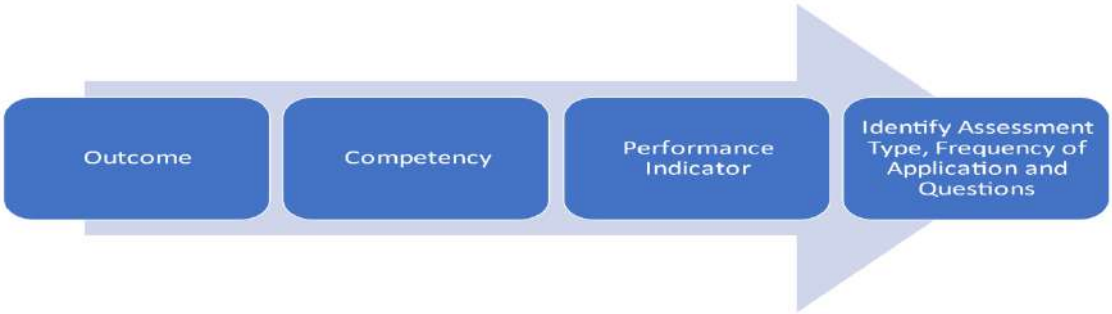
HEIs should focus on Outcome Based education and evaluation. Outcome-Based Education (OBE) advocates the importance of establishing a "clear picture of what is important for students to be able to do, and then organizing the curriculum, instruction, and assessment to make sure that this learning ultimately happens. [10]" Learning outcome-based performance evaluation is necessary to assess modern skills and domain-specific competencies (British Psychological Society, 2019). It ensures that evaluation is more students centric.

13.1 A Prescription for an Evaluation System

Learning outcomes drive curriculum, instruction and evaluation. Accordingly, the questions that need to be addressed, in sequence, are show in Figure.



This leads to the identification of outcomes, competencies, performance indicators and finally assessment as show in Figure, and as also described in detail.



Any evaluation and assessment system must test different levels of cognitive attainment as illustrated in Figure.

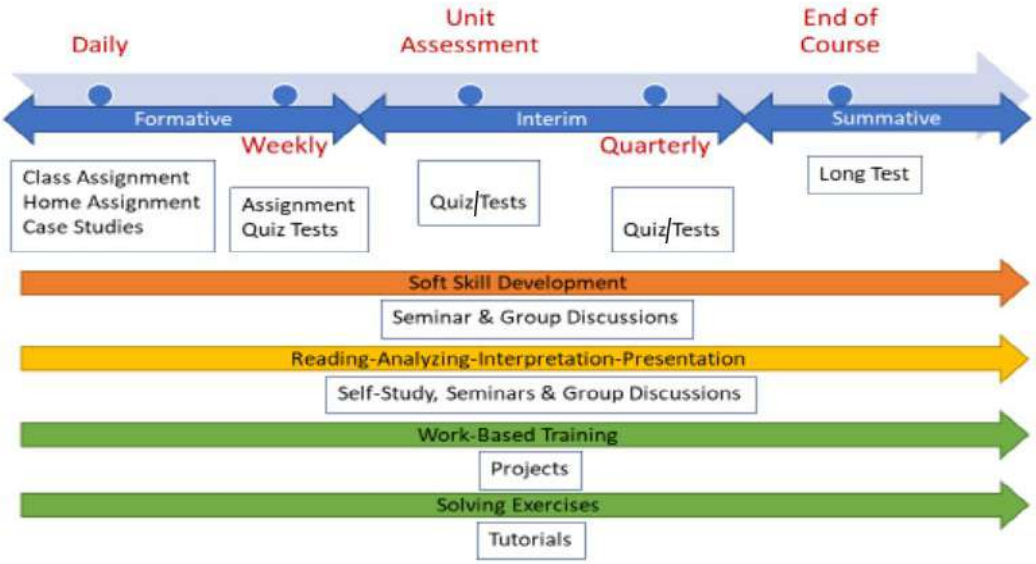


Across these levels, mental skills (knowledge) are tested which deal with how a student acquires, processes, and utilizes knowledge. The levels represent a continuum of increasing cognitive complexity—from remembering to creating to developing sustainable solutions.[11]

(11). A Taxonomy of Learning, Teaching and Assessment , Anderson and Krathwohl's (2001) revision of the original Bloom's taxonomy.

13.2 The Assessment Continuum

Best practice in educational research dictates triangulating assessment data. If several different sources of data, i.e., assessments are used, it increases the probability that an accurate assessment of student learning will emerge. Furthermore, assessments must be continuous, as also suggested in NEP2020, and include a variety of assessments for continuous and complete feedback. The continuum in Figure below positions a sample of types of assessment on a time axis.



14. Evaluation and Assessment Tools:

The National Education Policy 2020 emphasizes formative and competency-based assessment for developing higher-order thinking skills such as creativity, critical thinking and analysis. The assessments help the learner to track and improve the learning outcomes/ approaches and promote holistic development of the learner.

Pedagogical approaches used by a teacher determine the use of one or more types of evaluation tools, which are formative or summative or both. Evaluation and assessment tools supporting the teacher's pedagogy for a course need to help determine the achievement of graduate attributes. In other words, the achievement of different graduate attributes has linkage with specific pedagogical approach(s) and evaluation and assessment tools used as a part of formative and summative assessment.

The Evaluation and Assessment Tools and strategies corresponding to different pedagogical approaches are as follows:

- **Criterion-referenced assessment:** It is the process of evaluating students based on the pre-specified criteria for competency-based outcomes.
- **Rubrics:** It is a method of grading assignments based on certain criteria and helps the learners to understand the performance criteria and performance expectations.
- **Portfolios:** It is based on collecting the students' work for assessment. It can be developed using technology such as a web-based e-portfolio for authentic assessment.
- **Peer Assessment:** It helps the learners to get feedback from their peers and improve their performance.
- **Self-assessment:** It is the process of knowing what the learners already know, what they want to know, and what they have learned.

The use of assessment methods that would assess all aspects of learning, including disciplinary knowledge and skills as well as generic 21st century appropriate skills within a given programme of study, is:

- Time-constrained examinations
- Closed/open book examination
- Problem-based assignments
- Practical assignment reports
- Observation of practical skills
- Individual project reports (case-study reports)
- Team project reports
- Oral presentations, including seminar presentations
- Viva voce interviews
- Computerized adaptive testing
- Peer and self-assessment
- Examination on demand
- Modular certification to facilitate exit and re-entry of learners into the education system

14.1 Semester and Cumulative Grading System

Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are the measures of performance of students for the work done in a semester and across all semesters, respectively. **Numerically, it should be expressed up to three decimal places.**

The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses completed by a student, i.e

SGPA (Si) = ∑(Ci x Gi) / ∑Ci

(Where Ci is the number of credits of the ith course and Gi is the grade point scored by the student in the i^{th} course)

On the other hand, CGPA is also calculated in the same manner considering the overall performance of students in terms of all the courses undergone by a student across all the semesters of an academic programme, i.e.

CGPA = ∑(Ci x Si) / ∑ Ci

(where Si is the SGPA of the i^{th} semester and Ci is the total number of credits in that semester)

Numerically, all GPA computations should be expressed up to 3 decimal places. This will ensure

- Greater precision in assigning credit to student's academic achievements
- Greater precision in discerning differences in achievement
- More precision in conversions from one format to another

14.2 Online Education and Evaluation

The Online Education Program as envisaged in the NEP-2020 also, has twin noble objectives. First, it is meant to provide the 'last, the lost, the least and the lowest' an effectively affordable option for education right from an early stage to beyond University education. Second, it is aimed towards working professionals and students who find it a very convenient option to balance their academic advancement along with their professional careers. However, the challenge in meeting the above goals lies with Institutions in terms of designing, developing and delivering high quality digital content and in implementing a

mechanism to evaluate and objectively measure the performance of each student enrolled in this mode of education.

While the components of evaluation may be the same as that in the offline mode, the ‘Online Supervised Monitoring and Evaluation’ may be necessary to implement such programs. A test that is administered online is monitored/ mentored in supervised mode. The use of State-of-the-art ICT technologies such as Audio and Videoconferencing, Digital surveillance, Plagiarism detecting software and Online Course Monitoring System will prove to be instrumental in meeting this scenario. Alternately, all tests may be conducted in offline mode at designated canters.

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ज्ञान-विज्ञान विमुक्तये

प्रो. रजनीश जैन
सचिव
Prof. Rajnish Jain
Secretary

सत्यमेव जयते

विश्वविद्यालय अनुदान आयोग
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PUBLIC NOTICE

D.O.No.F.1-1/2021(Multidisciplinary/QIP)

September,2022

02 SEP 2022

Subject:- **Transforming Higher Education Institutions (HEIs) into Multidisciplinary Institutions**.

Respected Madam/Sir,

Multidisciplinary education is known to build vibrant communities of scholars, peers and enable students to become well-rounded individuals. It is in this backdrop, the National Education Policy 2020 lays strong emphasis on transformation of Higher Education Institutions into large multidisciplinary universities, colleges and HEI clusters.

Considering the rigidity of disciplinary boundaries in Higher Education Institutions, the UGC has developed "Guidelines for Transforming Higher Education Institutions into Multidisciplinary Institutions". A copy of the guidelines is attached herewith.

All universities and colleges are advised to take necessary initiatives as per the guidelines to evolve into multidisciplinary institutions.

With kind regards,

Yours sincerely,

(Rajnish Jain)

To,

The Vice Chancellors of all Universities
The Principals of all Colleges

ज्ञान-विज्ञान विमुक्तये

प्रो. रजनीश जैन
सचिव
Prof. Rajnish Jain
Secretary

सत्यमेव जयते

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D.O.No.F.1-3/2021(QIP) **29th July, 2021**

Subject: One year of Transformative Reforms under National Education Policy, 2020

Respected Madam/Sir,

In continuation to UGC's previous letter regarding one year of Transformative Reforms under National Education Policy (NEP), 2020 on 29th July, 2021, I would like to inform you that eight webinars on various themes on NEP, 2020 are being organized by different Ministries and departments as under:

Date	Theme	Nodal Ministry/ Department Organisations
30.07.2021	Equity and Inclusion	D/o-School Education & Literacy: NCERT
02.08.2021	Multidisciplinary and Holistic Education	University Grants Commission (UGC)
03.08.2021	Skill, Entrepreneurship Development and Employability: Challenges and Opportunities	M/o Skill Development and Entrepreneurship
04.08.2021	Effect of NEP on Youth Empowerment and Sports Development	D/o Sports
05.08.2021	Indian Knowledge System, Languages, Arts and Culture	AICTE
06.08.2021	Quality Education, Accreditation and Teacher Development	D/o School Education & Literacy: NCTE
09.08.2021	Research, Innovation and Ranking	D/o Higher Education
10.08.2021	Use of Technology in Education	D/o Higher Education

These webinars would be webcast live on Ministry of Education Youtube link: https://www.youtube.com/user/HRDMinistry/

I take this opportunity to invite you to participate in the above virtual events and request you to kindly encourage your faculty, students and other stakeholders of your esteemed institution to view the aforesaid programmes.

I would also like to request you to kindly organize the webinars/ programmes on the above themes, preferably on the same day from 3:00 pm onwards in your Institution for wider awareness about the 'Transformative Reforms under National Education Policy (NEP), 2020 amongst all the stakeholders.

The hashtag for the event is #TransformingEducation.

Looking forward to your active cooperation, in this regard.

With kind regards,

Yours sincerely,

(Rajnish Jain)

To
The Vice-Chancellors of all Universities
The Principals of all Colleges

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D.O.No.14-31/2018 (CPP-II) **29th July, 2021**

Subject: The University Grants Commission (Establishment and Operation of Academic Bank of Credits in Higher Education) Regulations, 2021.

Respected Madam/Sir,

As you are aware that the National Education Policy (NEP)-2020 is based on principles of flexibility; no hard separations between disciplines, multi-disciplinarity and holistic education, conceptual understanding on creativity and critical thinking, ethics and human & constitutional values, life skills, respect for diversity and the local context, with focus on equity and inclusion.

Accordingly, as per recommendations of NEP-2020, the Commission with the concurrence of Ministry of Education has notified *'The University Grants Commission (Establishment and Operation of Academic Bank of Credits in Higher Education) Regulations, 2021"* in the Gazette of India on 28th July, 2021 a copy of which is attached herewith.

ABC is based on principle of Distributed & Flexible Teaching-Learning that allows a student to learn as per her or his convenience, drop education mid-way and pick it up again as per their choice and convenience. This will also address curtailing the dropout ratio while also improving GER.

Academic Bank of Credits (ABC) platform has been developed by National e-Governance Division (NeGD) of Ministry of Electronics and Information Technology (MeitY) under Digilocker Framework, with the facility/functionality of opening of Academic Account by the student and on-boarding of eligible HEIs. ABC will digitally store the academic credits earned by students from HEIs registered with ABC, for awarding degrees/diploma/PG diploma/certificates taking into account credits earned by students. ABC will ensure the opening, closure and validation of Academic Bank Accounts, credit verification, credit accumulation, and credit transfer or redemption for students.

Higher Education Institutions (HEIs) that meet the eligibility requirements can register with Academic Bank of Credits on ABC website (www.abc.gov.in). Furthermore, students can also register by visiting the ABC website. A comprehensive User Manual for both, HEIs and Students with step-by-step instructions and screenshots, are available on the ABC portal's Resources section under the General Resources category. All eligible HEIs are requested to kindly take appropriate steps for joining ABC Platform at the earliest. Further, you are requested to kindly make the students of your University/Institution aware about ABC facility and encourage them for opening Academic Bank Account.

With kind regards,

Yours sincerely,

(Rajnish Jain)

To

- **The Vice Chancellors of Universities**
- **The Principals of Autonomous Colleges**

ज्ञान-विज्ञान विमुक्तये

सत्यमेव जयते

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Prof. Rajnish Jain
Secretary

D.O.No.2-58/2022 (CPP-II) **30 September, 2022**

Subject: Engagement with IT Industry and Provision of credits for Industry Led Modules

Respected Madam/Sir,

As you are aware that UGC has notified guidelines for providing Skill Based Education under National Skills Qualifications Framework which are available on UGC website. The guidelines provide that when industry developed courses are offered in higher educational institutions with credits, then these courses must be aligned with National Skill Qualifications Framework, which is a competency – based framework that organizes qualifications according to a series of knowledge, skills and aptitude.

All Higher Educational Institutions (HEIs) and their affiliated colleges/institutions are requested to interact with the leading IT – industries for the development and promotion of industry-oriented course modules.Credits may be awarded to students for completing such course modules. This will help in increasing the employability of passing out graduates significantly.

With kind regards,

Yours sincerely,

(Rajnish Jain)

To

The Vice-Chancellors of all Universities
The Principals of all Colleges/Institutes



NATIONAL CREDIT FRAMEWORK

The Report of the High-Level Inter-Ministerial Committee on National Credit Accumulation & Transfer Framework

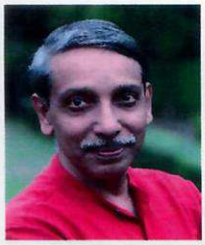
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Foreword



Educational opportunities and effective skilling are the driving force of economic growth and social development for any country. India is the world's youngest nation in terms of youth population with a burgeoning economy. The benefits of these strengths can be evenly spread across the country only when the youth is well educated and appropriately skilled. Quality education that meets the need of the industry and enhances employment, therefore, is a pressing need. Emphasizing that there should be no hard separation among curricular and extracurricular or co-curricular or between vocational or academic streams, the National Education Policy (NEP) 2020 stressed upon the need for vocational education through integration and mainstreaming of vocational education with general education. This calls for re-engineering of education system.

The High-Level Committee constituted by the Government to formulate a unified credit accumulation & transfer framework for both vocational and general education, from school education to higher education, has developed "National Credit Framework" encompassing three main components such as credits earned from academic grade, skill programme and relevant experience. This framework will enable establishing equivalence and mobility between general education and vocational education so that lifelong learning, recognition of prior learning, multiple entry and exit, and continuous professional development are encouraged in the system.

I congratulate the High-Level Committee under the chairmanship of Dr N. S. Kalsi, Chairman, NCVET for taking on this challenging task of drafting the "National Credit Framework". I am sure this framework will make studies and courses more transparent, flexible and provide skilled manpower for India's economy to achieve inclusive and equitable growth.

Prof. M. Jagadesh Kumar
Chairman
University Grants Commission

PREFACE



National Education Policy (NEP), 2020, envisioned under the dynamic leadership of **our Hon'ble Prime Minister, Shri Narendra Modi,** is a **reflection of the aspiration** of the **students, teachers and citizens** of the country. The NEP is rooted in ***bhartiyata*** and is in sync with the culture and heritage of our nation while assimilating global knowledge and perspective.

The National Education Policy 2020, **lays emphasis on of making the education more holistic and effective by integration of general (academic) and vocational education** while ensuring the **vertical and horizontal mobility of students and learners** between academic and vocational streams. Built on the **foundational pillars of access, equity, quality, affordability and accountability**, NEP strives to **transform India into a vibrant knowledge society** to become a global knowledge superpower ***(vishwa guru)***.

To realise the intent and objectives of National Education Policy 2020, the **National Credit Framework (NCrF),** has been jointly developed by a **High Level Committee** constituted by the Government with members from UGC, AICTE, NCVET, NIOS, CBSE, NCERT, Department of School Education and Learning & Department of Higher Education, Ministry of Education, DGT, and Ministry of Skill Development **under the guidance of Shri Dharmendra Pradhan, Hon'ble Minister of Education and Minister of Skill Development & Entrepreneurship**. NCrF is a **comprehensive credit framework** encompassing elementary, school, higher, and vocational education & training, **integrating creditisation of learning** on the -axis i.e. **academics, vocational skills and Experiential learning including relevant experience and professional levels acquired**.

The NCrF provides for **creditisation of all learning and assignment, accumulation, storage, transfer & redemption of credits, subject to assessment;** removes distinction and establishes academic **equivalence** between vocational & general education; enables **mobility** within & between them, and its operationalising through the Academic Bank of Credits (ABC).

The **NCrF relies on a unified approach** across the **education and skilling frameworks enabling** the education and skilling ecosystem **in implementing** a comprehensive credit-based framework**.** While catering to **multi-disciplinarity and holistic education** across sciences, social sciences, arts, humanities and sports, NCrF **enables multiple entry - multiple exit** (ME-ME) **pathways** in general & vocational education; **ensures flexibility for students** to choose their **learning trajectories and career choices,** including option for **mid-way course correction or modification**, as per their talents and interests;

NCrF also **recognizes blended and online learning, thus promotes extensive use of technology** in teaching and learning, especially in vocational education, training and skilling for **removing barriers while** also improving **access and opportunities for Divyangs**.

Implementation of NCrF will promote **Internationalization of education by enabling equivalence of courses and qualifications,** provisions of credit transfer**,** and encourage international exchange of students and faculty with foreign universities.

NCrF has provisions for **educational acceleration for gifted students with special learning abilities** as also for **Recognition of Prior Learning** for workforce those have acquired the knowledge and skills informally, through family inheritance, work experience, traditional or other methods, thereby allowing them **progression and mobility into the formal education and learning ecosystem.**

NCrF will enable transformation of India by **providing high quality education opportunities integrated with effective skills** to reap the demographic dividend making education and skilling truly **aspirational**.

The **National Credit Framework (NCrF) is an enabling framework and may not be construed as a regulation.** It empowers, facilitates and allows the stakeholders with the required flexibility for creating to their specific academic and skill needs. It shall act as a **broad enabling framework** for all regulatory organizations, and autonomous institutions who may, wherever required, **notifying their detailed implementation guidelines** within this Framework. I am confident that NCrF will become a game changer by mainstreaming the skill education and Experiential learning including relevant experience and professional levels acquired, making these an integral part of the education system thereby ensuring that the youth is provided with educational opportunities with quality skills.

As a part of the framework formulation and finalisation process extensive consultations, besides MoE and MSDE, have been made with multiple stakeholders of the education and skill ecosystems, including the presentations and discussions on the contours of National Credit Framework with IITs, IIMS, IIITs, NITs, IISERs, INIs, Universities, HEIs/ Engineering Colleges, School Boards, Technical Education Boards, among many others.

I am thankful to all the esteemed members of the High-Level Committee Shri Atul Kumar Tiwari, now Secretary, Ministry of Skill Development and Entrepreneurship, Shri Manoj Ahuja, the then Chairman CBSE, Shri Vineet Joshi, Additional Secretary, DoHE & Director General NTA, Chairman CBSE, Shri. Maneesh Garg, Joint Secretary, DoSEL, MoE, Ms. Nidhi Chhibber, Chairperson CBSE, Prof. M.P Poonia, Vice- Chairman, AICTE, Prof. Rajnish Jain, Secretary, UGC, Prof. (Dr.) Saroj Sharma, Chairperson, NIOS, Dr. Dinesh Prasad Saklani, Director, NCERT and Dr Sridhar Srivastava, officiating Director, NCERT and Dr. Biswajit Saha, Director (Training & Skill Education), CBSE, Member-Secretary of the committee for working relentlessly on this framework, providing their valuable inputs, insights and support and bringing out this report. I acknowledge their invaluable contribution in formulation of this framework in such a short timeframe.

This framework would have not been possible without the valuable guidance and unstinted support of Prof Jagadesh Kumar, Chairman UGC and Prof. Anil Sahastrabudhe, the then Chairman AICTE. I whole heartedly thank them. I am also thankful for the valuable support of Sh Rajesh Aggarwal, the then Secretary Ministry of Skill Development and Entrepreneurship, Sh. Sanjay Murthy, Secretary Department of Higher Education, Smt Anita Karwal, Secretary Department of School Education and Learning, Ministry of Education and Ministry of Education in bringing out this policy. I would also like to thank Dr. Vinita Aggarwal, Dr. Neena Pahuja the Executive Members, Lt Col Gunjan Chowdhary Director, Ms. Sarika Dixit & Mr. Shourya Sangam, consultants at NCVET for their persistent help and assistance in preparing this document.

My best wishes to all the stakeholders for effective and efficient implementation of this much awaited framework which will help change the education and skilling landscape of the country for not only country's growth but also making education and skilling aspirational and making India the **skill capital of the world** by our global recognition in the education and skilling domain.

Nirmaljeet Singh Kalsi,
Chairperson, NCVET

GLOSSARY

AICTE - All India Institute of Technical Education

CBCS – Choice Based Credit System

CBSE- Central Board of Secondary Education

CITS: Craftsman Instructor Training Scheme

CTS - Craftsman Training Scheme

DGT - Directorate General of Training

HEIs: Higher Education Institutes

MSDE - Ministry of Skill Development and Entrepreneurship

NAC- National Apprenticeship Certificate

NCERT - National Council for Educational Research and Training

NCrF – National Credit Framework

NCVET - National Council for Vocational Education and Training

NEP - National Education Policy

NSEQF- National School Education Qualification Framework

NHEQF - National Higher Education Qualification Framework

NIOS - National Institute of Open Schooling

NSQF - National Skill Qualifications Framework

NTA - National Testing Agency

NTC - National Trade Certificate

SAMVAY - Skill Assessment Matrix for Vocational Advancement of Youth

SDG - Sustainable Development Goals

UGC - University Grants Commission

VET – Vocational Education and Training

CONSTITUTION OF COMMITTEE ON CREDIT FRAMEWORK

The Government of India has approved the constitution of a High-Level Committee, vide order dated 18th November 2021, to develop a National Credit Accumulation & Transfer Framework for both Vocational and General Education. The Credit Framework would enable the integration of academic and vocational domains/components of learning and ensure flexibility and mobility between the two. The composition of the Committee is as follows:

1.	Dr. Nirmaljeet Singh Kalsi, Chairperson, NCVET	Chairman
2.	Shri Atul Kumar Tiwari, Addl Secretary, MSDE	Member
3.	Shri Vineet Joshi Addl Secretary DoHE & Director General NTA, Chairman, CBSE	Member
4.	Shri. Maneesh Garg, Joint Secretary, DoSEL, MoE	Member
5.	Smt. Neelam Shammi Rao, Addl Secretary & DG, DGT, MSDE	Member
6.	Prof. Rajnish Jain, Secretary, UGC	Member
7.	Shri Manoj Ahuja, Chairman, CBSE	Member
8.	Prof. (Dr.) Saroj Sharma, Chairperson, NIOS	Member
9.	Prof. M.P Poonia, Vice- Chairman, AICTE	Member
10.	Dr Sridhar Srivastava, Director, NCERT	Member
11.	Dr. Biswajit Saha, Director (Training & Skill Education), CBSE	Member-Secretary

TERMS OF REFERENCE

i. Assign credit value to academic and skill courses taught at various levels
   a. School education,
   b. Higher Education,
   c. Skilling Ecosystem, Vocational Training and Education
   d. Distance/ Blended Learning, etc.

ii. Identify ways of Credit Accumulation for:
   a. School Education
   b. Higher Education.
   c. Vocational education and Training

iii. Propose Credit Transfer Model for:
   a. Vocational and School Education and vice-versa
   b. Vocational and Higher Education and vice-versa

iv. Establish academic equivalence between Vocational and General Education at all

levels.

v. Develop the unified credit framework for integration of vocational education and training/ skilling into school and higher education in line with the National Education Policy 2020 to enable vertical and horizontal mobility between education and skilling

vi. Identify the mechanism for accumulation and storage of credits through a Credit Bank

vii. Any other matter relating to the development and functioning of the unified credit framework

The Final Report has agreement and signature of all the esteemed members of the High level Committee.

NATIONAL CREDIT FRAMEWORK

We the undersigned members of the High Level Committee on the **National Credit Accumulation and Transfer Framework** for both Vocational and General Education constituted by Ministry of Skill Development and Entrepreneurship, Government of India vide order No Coord-11/01/2021-P&C dated 18th November 2021, hereby submit our report:-

Ser No	Name and Designation		Signature with Date
1.	Dr. Nirmaljeet Singh Kalsi, Chairperson, NCVET	Chairman	
2.	Shri Atul Kumar Tiwari, Special Secretary, MSDE	Member	
3.	Chairperson, CBSE	Member	
	(a) Shri Manoj Ahuja- upto 14.2.2022		
	(b) Shri Vineet Joshi- upto 30.6.2022		
	(c) Ms. Nidhi Chibber		
4.	Shri Vineet Joshi, AS, DoHE, MoE & DG NTA	Member	
5.	Shri. Maneesh Garg, Joint Secretary, DoSEL, MoE (upto 18.5.22)	Member	
6.	DG, DGT, MSDE	Member	
	(a) Ms. Neelam Shammi Rao - upto 6.12.2021		
	(b) Shri. Atul Tiwari		
7.	Prof. Rajnish Jain, Secretary, UGC	Member	
8.	Prof. (Dr.) Saroj Sharma, Chairperson, NIOS	Member	
9.	Prof. M.P Poonia, Vice- Chairman, AICTE	Member	
10.	Director, NCERT	Member	
	(a) Dr. Sridhar Srivastava- Upto 14.2.22		
	(b) Dr. Dinesh Prasad Saklani		
11.	Dr. Biswajit Saha, Director (Training & Skill Education), CBSE	Member-Secretary	

THE NATIONAL CREDIT FRAMEWORK 2022:
EXECUTIVE SUMMARY

Manifesting the National Education Policy 2020

To fulfil the vision of National Education Policy 2020, making education more holistic and effective and lay emphasis on the integration of general (academic) education, vocational education and Experiential learning including relevant experience and professional levels acquired, it becomes imperative to establish and formalize a national credit accumulation and transfer system which will **integrate both general & vocational education** while ensuring mobility of candidates between the two systems.

The **National Credit Framework (NCrF)** has been jointly developed by UGC, AICTE, NCVET, NIOS, CBSE, NCERT, Ministry of Education, DGT, and Ministry of Skill Development to achieve this vision and intent of NEP. NCrF is a comprehensive framework encompassing elementary, school, higher, and vocational education & training, integrating **learning on all dimensions i.e. academics, vocational skills and experiential learning including relevant experience and professional levels acquired**.

The **National Credit Framework (NCrF) shall be an inclusive umbrella Framework** to seamlessly integrate the credits earned through school education, higher education and vocational & skill education. For creditisation and integration of all learning, the National Credit Framework (NCrF) shall encompass the qualification frameworks for higher education, vocational & skill education and school education, namely National Higher Education Qualification Framework (NHEQF), National Skills Qualification Framework (NSQF) and National School Education Qualification Framework (NSEQF) also **popularly known as National Curricular Framework (NCF)** respectively.

The implementation of **NCrF would be a game changer** in realising the vision and intent of NEP by **removing distinction**, ensuring **flexibility & mobility** and **establishing academic equivalence** between general and vocational education. Such integration shall open numerous options for further progression of students and inter-mingling of school & higher education with vocational education & Experiential learning including relevant experience and professional levels acquired, to further enable entry and re-entry from vocational stream to general education and vice-versa, thus mainstreaming the vocational education and skilling.

The National Credit Framework (NCrF) provides for broad based, **multi-disciplinary, holistic education**, allowing **imaginative and need based curricular structures** and enabling **creative combinations of subjects and disciplines.** The Framework has been built on the strength of existing regulations, guidelines and qualification frameworks of UGC, AICTE, NCVET, NCERT, CBSE & NIOS so that the options for Multiple Entry-Multiple Exit (ME-ME) are accessible and applicable across the higher education, school education and vocational education.

The National Credit Framework (NCrF) provides **for Assignment, Accumulation, Storage, Transfer & Redemption of Credits**. The NCrF paves way for **multidisciplinary education** and **empowers students** through **flexibility in choice of cou**rses for choosing their **own learning trajectories and programmes**, and thereby choose their paths in life with **appropriate career choice**, including **option for mid-way course correction**s, according to their talents and interests. NCrF fully enables the students with opportunities to catch up and re-enter education ecosystem in case they have fallen behind or dropped out at any stage. NCrF also fully supports **educational acceleration for students with gifted learning abilities and Recognition of Prior Learning** for workforce that has acquired knowledge and skills informally through the traditional family inheritance, work experience or other methods, thereby allowing them **progression and mobility into formal education ecosystem.**

The total **Notional Learning Hours** for assignment of credits across school education, higher education and vocational education /skilling have been agreed to be **1200 Hrs per year** for which the students/ learners shall be **awarded 40 Credits.** For the purpose of credit calculations under National Credit Framework (NCrF), 30 notional learning hours will be counted as one Credit. However, the assignment of credits is independent of the education streams, subjects or type of learning, subject to assessment. The students/ learners may take additional courses/ programs/subjects/projects beyond 40 credits to get additional credits for the same.

NCrF recognises **no hard separation between different areas of learning**, i.e. arts and sciences, vocational and academic streams, curricular and extra-curricular for the purpose of assignment of credits and credit levels. In the true spirit of National Education Policy 2020, **the total learning hours can be creditised,** subject to assessment, and **may include** class room teaching/ learning, laboratory work/ innovation labs/ class projects/ assignments/ tutorials; sports and games, yoga, physical activities, performing arts, music, handicraft work, social work, NCC, bag less days; examinations/ class tests/ quizzes/ assessments; vocational education, training and skilling, minor/ major project work/ field visits in skill education as well as on the job training (OJT)/ internship/ apprenticeship/ Experiential learning including relevant experience and professional levels acquired etc. Such an approach would also close the gap in achievement of learning outcomes by shifting the classroom education to competency and learning outcome-based education and learning.

Under the National Credit Framework (NCrF) **every learning can be creditised subject to its assessment.** Under NCrF, the **Credit levels** to be assigned across school/ higher/ vocational education/ skilling**,** (independent of the streams, subjects etc) will be based on the **cumulative numbers of years of learning with assessment.** For earning credits, the course/ qualification should be qualification framework aligned and approved with a defined NCrF level and clearly describing the desired competency and learning outcome expected. Also the learning outcome shall be assessed after completing the course/ qualification for assignment of credits.

The **assessment is thus mandatory for earning credits** for all types of learning and progression to the next assessment band. **The Assessment Bands** are the stages at which the student/ learner needs to be formally assessed for progression in academic/ vocational/ skilling streams. (e.g. 10th/ 12th board exams, DGT's assessment and exams for CTS, UG/ PG semester exams). The NCrF Credits for the two courses/ qualifications/ programs may be added to each other and accumulated in ABC if these are earned in the same assessment band, subject to the guidelines of the respective regulators.

The NCrF credit levels for school education are upto level 4, while for higher education from Level 4.5. to level 8 [Under Graduate Levels 4.5, 5.0, 5.5 & 6.0, Post Graduate Levels 6.0, 6.5 & 7.0, and PhD Level 8] and for vocational education & training level 1 to level 8.

The total Credit Points earned by the student could be obtained by multiplying the credits earned with the NCrF Level at which the credits have been earned. The credit points may be redeemed as per the guidelines of Academic Bank of Credit (ABC) for entry or admission in school, higher, technical or vocational education programs/ courses at multiple levels enabling horizontal and vertical mobility with various lateral entry options.

In addition to the credits for higher education, the **Academic Bank of Credit (ABC)** shall also be expanded for **credits earned through school education, vocational education and skilling, apprenticeships, internships, project work etc.** ABC could digitally store the academic and other credits earned from recognized institutions so that credits could be redeemed and the relevant award granted taking into account the credits earned at various NCrF levels. The credits may also be linked to Digi locker for easy verification and portability.

The National Credit Framework (NCrF) also **enables creditisation of Experiential learning including relevant experience and professional levels acquired**, based on the weightage for relevant experience and proficiency levels achieved, subject to assessment.

Assignment of Credits has been enabled for online, digital and blended learning in vocational education and skilling to expand the open /distance learning options and to promote extensive use of technology in learning & skilling. This would help in overcoming the constraints of physical infrastructure & scalability while enhancing access, equity, and affordability and ensuring quality and accountability. The blended learning option shall also **enhance accessibility of learning in Indian language for 90% non-English medium students as well as for Divyangs.**

National Credit Framework (NCrF) will encourage **Internationalization of education through credit transfer provisions** thus enabling **wider international equivalence, recognition and acceptance of Indian education and skilling** by other countries, promoting exchange with foreign universities and institutions.

Thus, there would be only one credit Framework for higher education, school education and skill education, namely the **National Credit Framework (NCrF)** which would be the **mother framework document notified for integrating the creditisation of learning in**

various dimensions of academics, skilling and experiential learning including relevant experience and professional levels acquired and only single credit system would be operationalised through Academic Bank of Credits (ABC). The **qualification frameworks for school, higher education and skills would be addendum to NCrF and aligned with it.** The **basic principles and provisions of National Credit Framework (NCrF)** would be **applicable to all the qualification frameworks**.

National Credit Framework (NCrF) shall act as a **broad enabling framework** for all regulatory organizations (UGC, AICTE, NCVET, NCERT etc.), and autonomous institutions, including Universities, INIs, CBSE, NIOS, State School Boards, State Technical Education Boards, etc. who may, wherever required, **notifying their detailed implementation guidelines** within this Framework. The **NCrF** empowers institutions and enables them with the required flexibility for catering to their specific academic requirements for creating imaginative and **flexible curricular structures, creative combinations of disciplines** and other special needs**.**

Thus, there would be only one credit framework for higher education, school education and skill education, namely the National Credit Framework (NCrF) which would be the mother framework document notified for integrating the creditisation of learning in various dimensions of academics, skilling and Experiential learning including relevant experience and professional levels acquired and only single credit system would be operationalised through Academic Bank of Credits (ABC). The qualification frameworks for school, higher education and skills would be part of and addendum to NCrF. The basic principles and provisions of National Credit Framework (NCrF) would be applicable to all the qualification frameworks (NHEQF and NSQF are already aligned with NCrF).

Thus the NCrF shall not only enable effective implementation of National Education Policy 2020 through integration of various policy endeavours under general education and vocational education, but will also be a game changer to establish a benchmark for holistic education and learning integrated with skills, by removal of barriers, infusion of flexibility and creating lifelong learning opportunities. NCrF will enable transformation of India by providing high quality education opportunities integrated with effective skills to reap the demographic dividend making education and skilling truly aspirational.

National Credit Framework

1. Section 1: OVERVIEW

1.1. INTRODUCTION

Education is fundamental for achieving full human potential, developing an equitable society and promoting national development. Providing universal access to quality education is the key to India's continued ascent and leadership on the global stage in terms of economic growth, social justice & equality, scientific advancement, national integration, and cultural preservation. Universal high-quality education opportunities integrated with effective skills is the best way forward for developing and maximizing our country's rich talents and resources for the good of the individual, the society, the country, and the world.

Today, India is one of the youngest nations in the world with more than 62% of its population in the working-age group (15-59 years), and over 54% of its total population below 25 years of age. Its population pyramid is expected to bulge across the 15–59 age groups over the next decade. This is a huge opportunity and at the same time poses a formidable challenge. To reap this demographic dividend India needs to equip its workforce with knowledge and employable skills so that they can contribute substantively to the economic growth and development of the country. Our ability to provide high-quality educational opportunities to the youth will determine the future of our country.

Not only the educational opportunities but effective skilling is also the driving force of economic growth and social development for any country. Countries with higher levels and standards of skills adjust more effectively to the challenges and opportunities in domestic and international job markets. The United Nations in the epic summit of 2015 on 'Transforming our World: the 2030 Agenda for Sustainable Development' defined 17 Sustainable Development Goals (SDGs) which places emphasis on 'skill' apart from the 'basic necessities' for people across the world. The SDGs have defined skill development requirement as – 'to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all'. The SDGs report 2018 by the United Nations shows that 42% of the world population is young with a global youth unemployment rate of 13%, which can be brought down drastically by skilling the youth. The global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015 seeks to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' by 2030. Such a lofty goal will require the entire education system to be reconfigured to support and foster learning, so that all of the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development can be achieved. Efforts made in this direction should meet the needs of the all sectors of economy including primary, industry and the service sectors. Such efforts should also be learner centric to make the entire skilling movement aspirational. Skill training needs to be considered as a complementary and essential part of mainstream education, rather than being regarded as a secondary alternative, as also envisaged under the National Education Policy (NEP), 2020.

This National Education Policy, 2020 envisions an education system rooted in Indian ethos that contributes directly to transforming India, into an equitable and vibrant knowledge society, by providing high-quality education to all and thereby making India a global knowledge superpower. The Policy envisages that the curriculum and pedagogy of our institutions must develop among the students a deep sense of respect towards the Fundamental Duties and Constitutional values, bonding with one's country and a conscious awareness of one's roles and responsibilities in a changing world.

The vision of this policy is to instil among the learners a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable development & living, and global well-being, thereby reflecting a truly global citizen. Education with effective skilling is a great leveller and is the best tool for achieving economic and social mobility, inclusion, and equality. These elements must be incorporated taking into account the local and global needs of the country, and with a respect for and deference to its rich diversity and culture.

The National Education Policy seeks to provide to all students, irrespective of their place of residence, a quality education system, with particular focus on historically marginalized, disadvantaged, and under-represented groups. Instilling knowledge of India and its varied social, cultural, and technological needs, its inimitable artistic, language, and knowledge traditions, and its strong ethics in India's young people is considered critical for purposes of national pride, self-confidence, self-knowledge, cooperation, and integration. This may be achieved by a number of factors and an important one amongst these being establishing equivalence and mobility between general education and vocational education and training/ skilling so that lifelong learning, recognition of prior learning, multiple entry and exit, and continuous professional development is encouraged in the system.

1.2. CREDITS IN INDIAN CONTEXT

1.2.1. School Education

At present, there is no established credit mechanism for regular school education. However, under the open schooling system, the National Institute of Open Schooling (NIOS) follows the following credit system:

i. Each subject is assigned 240 hours for self-study. Total 5 subjects are required at the Secondary and Senior Secondary level which makes it of 1200 hours and 40 credits in one year
ii. 1 credit is equivalent to 30 hours of total study i.e. each subject is of 8 credits.

1.2.2. Higher Education

I. CHOICE BASED CREDIT SYSTEM (CBCS) BY UGC

Under the CBCS system, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be earned by the students. This framework is being implemented in several universities across States in India. The main highlights of CBCS are as below:

- The CBCS provides flexibility in designing curriculum and assigning credits based on the course content and learning hours.
- The CBCS provides for a system wherein students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning.
- CBCS also provides opportunity for vertical mobility to students from a bachelor's degree programme to masters and research degree programmes.

The detailed Guidelines for Choice Based Credit System is available at https://ugc.ac.in/pdfnews/8023719_Guidelines-for-CBCS.pdf

II. SKILL ASSESSMENT MATRIX FOR VOCATIONAL ADVANCEMENT OF YOUTH (SAMVAY) BY AICTE

The scheme on Skill Assessment Matrix for Vocational Advancement of Youth (SAMVAY) is a credit framework for skill based vocational courses which was launched by MHRD on 11th November, 2014. The SAMVAY defines the rules for credit allotment and follows the NSQF regulatory framework while stating the credit assessment requirements for skills. The skill based courses, under SAMVAY, generally, have both the skills and general education components.

The following formula may be used for the credit calculation in general education component of the courses:

i. General Education credit refers to a unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching [lecture or tutorial] or two hours of practical work/field work per week. Accordingly, one Credit would mean equivalent of 14-15 hrs of theory or 28 - 30 hrs of workshop/ lab work.

ii. One Credit is equivalent to 14-15 periods of 60 minutes each, for theory, or 28-30 periods of 60 minutes for workshop/labs and tutorials;

iii. For internship/field work, the credit weightage for equivalent hours is 50% of that for lectures/tutorials;

iv. For self-learning, based on e-content or otherwise, the credit weightage for equivalent hours of study is 50% or less of that for lectures/tutorials.

For the ease of calculation, the break -up of credit wrt general education component is as in the table below:

Table1: Break-Up of Credits

Theory **1 Credit = 15 hours**	**Practical** **1 Credit = 30 hours**	**Experiential learning including relevant experience and professional levels acquired** **1 Credit = 40-45 hours**
• In each theory class, a new concept is taught and the student is learning something new throughout the class. • It also involves self-learning.	• The practical is dependent on theory and experiments performed are based on concepts learned in theory class. • Repetition of an already learned concept. Observations are taken again and again	Experiential learning including relevant experience and professional levels acquired activities like field visits, industrial visits, etc carry lesser weightage because it is just an observation and/or application of concepts learned in theory.

As per SAMVAY, the credits regarding skill component may be awarded in terms of NSQF level certification which will have more than 50% weightage of total credits of the course based on the assessment in a manner prescribed by the concerned regulatory body.

The latest SAMVAY guidelines are available at : SAMVAY 1 .pdf (aicte-india.org)

III. UGC GUIDELINES FOR PROVIDING SKILL-BASED EDUCATION UNDER NATIONAL SKILL QUALIFICATION FRAMEWORK

Under these guidelines, the skill-based programmes shall have a mix of general and skill components in which 30-40% of the total content shall be of general nature including language courses while the remaining 60% (extendable up to 70%) of the content shall be on skill development. In such programs the following formula is used for conversion of time into credit hours.:

a. **Skill Component:** The skill component should have a minimum of 60% (extendable up to a maximum of 70%) of the total credits. The skill component will include practical classes in laboratories / workshops, internships, apprenticeships and any other forms of hands on training.

b. **General Education Component:** The balance credits of the program i.e. 30-40% are of general component. This will include curricula which are supportive to the core trade in addition to communication skills, soft skills, digital skills, critical thinking, problem solving skills, environmental studies and value education.

The detailed guidelines can be accessed at 6556003_Guidelines-for-providing-Skill-Based-Education-under-NSQF.pdf (ugc.ac.in) and summary document at NSQF New Guidelines.pdf (ugc.ac.in)

IV. CREDITS STRUCTURE FOR AUTONOMOUS INSTITUTIONS LIKE IIT/IIMS

The autonomous institutions like IIT/IIMs in India are independent and each institute implements its unique credit system. Education at such institute/s is generally organized around the semester-based credit system of study. There is a process of continuous evaluation of a student's performance/progress and flexibility is allowed to students to progress at an optimum pace suited to their ability or convenience, subject to fulfilling minimum requirements for continuation and within the maximum allowable period for completion of a degree.

1.2.3. Vocational education and Training/ Skilling

I. NATIONAL SKILLS QUALIFICATION FRAMEWORK (NSQF)

The National Skills Qualification Framework (NSQF) was notified on 27th December 2013, by the Ministry of Finance, pursuant to the decision of the Cabinet Committee on Skill Development held on 19th December 2013.
NSQF is a national competency-based skill framework that provides for multiple pathways, horizontal as well as vertical to facilitate mobility both within vocational education and training/ skilling and between vocational education and training/ skilling and general education thus linking one level of learning to another higher level. The NSQF is also a quality assurance framework as it organizes qualifications in a series of 8 levels based on professional knowledge, professional skills, core skills and responsibilities, in the increasing order of complexity and competency. These levels are defined in terms of learning outcomes which are an explicit description of what a learner should know, understand and be able to do as a result of learning, regardless of whether these competencies were acquired through formal, non-formal or informal learning. This enables learners to acquire desired competency levels, transit to the job market, and at an opportune time, return for acquiring skills as required to further upgrade their competencies.

The NSQF is based on an outcome based approach wherein each level is defined and described in terms of competency levels that are to be achieved, thereby enabling clear provisions for mobility (both vertical & horizontal) and making progression pathways transparent for students, institutions and employers. The NSQF has resulted in development of quality qualifications applicable both in school education and higher education and has

also helped in alignment of Indian qualifications to international qualifications through existing qualification frameworks of other countries. The NSQF facilitates the awarding of credit and supports credit transfer and progression routes within the Indian Education and Training system.

NSQF is anchored in National Council for Vocational Education and Training and is implemented through national Skills Qualification Committee (NSQC) which is set up as a permanent secretariat in NCVET and has from Central Ministries, NITI Aayog, regulators like AICTE, UGC and CBSE, State Skill Development Missions, Awarding bodies like the Directorate General of Training (DGT), Sector Skill Councils (SSCs) and select industry representatives.

The detailed NSQF notification can be accessed at https://www.ncvet.gov.in/nsqf-notification

2. SECTION 2: GENESIS OF A NATIONAL CREDIT FRAMEWORK

2.1. NEED FOR A NATIONAL CREDIT FRAMEWORK

The National Education Policy 2020, lays emphasis on the integration of the general (academic) education and vocational education & training/skilling with provision for seamless horizontal and vertical mobility between the two for lifelong learning. Such integration shall enable desired reforms in the education and skilling systems. In addition, this integration of vocational education and training/ skilling programmes into mainstream education at all levels, as is highlighted in NEP 2020, will lead to removal of distinction between general and vocational education and training/ skilling while at the same time enable establishing academic equivalence between the two which is the most important way of making the vocational education and training/ skilling aspirational' for the youth. The integration would also lead to emphasizing the dignity of labour and importance of various vocations.

To fulfil the vision of National Education Policy 2020, making education more holistic and effective and to lay the emphasis on the integration of general (academic) education and vocational education including Experiential learning including relevant experience and professional levels acquired it becomes imperative to establish and formalize a national credit accumulation and transfer system which will **integrate both general & vocational education** while ensuring mobility of candidates between the two systems.

The detailed National Education Policy is available at
https://ncert.nic.in/pdf/nep//NEP_2020.pdf

2.2. NATIONAL CREDIT FRAMEWORK- ENABLING EFFECTIVE IMPLEMENTATION OF NEP 2020 AND EDUCATIONAL REFORMS

The National Education Policy (NEP) 2020, is the first education policy of the 21st century and aims to address the many growing developmental imperatives of our country. The NEP proposes the revision and revamping of all aspects of the education structure, including its regulation and governance, to create a new system that is aligned with the aspirational goals of 21st century education, including Sustainable Development Goal (SDG), while building upon India's heritage, traditions and value systems. The National Education Policy lays particular emphasis on the development of the creative potential of each individual. It is based on the principle that education must develop not only cognitive capacities - the 'foundational capacities' of literacy & numeracy and 'higher-order' cognitive capacities, such as critical thinking and problem solving but also social, ethical, and emotional capacities and dispositions. Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, the policy aims to transform India into a vibrant knowledge society and global knowledge superpower by making both school and college education more holistic, flexible and multidisciplinary.

NEP 2020 proposes that curriculum content will be reduced in all subject to its core essentials, to make space for critical thinking and more holistic, inquiry-based, discovery-based, discussion-based, and analysis based learning. The mandated content will focus on key concepts, ideas, applications, and problem solving. Teaching and learning will be conducted in a more interactive manner; questions will be encouraged, and classroom sessions will regularly contain more fun, creative, collaborative, and exploratory activities for students for deeper and more Experiential learning including relevant experience and professional levels acquired. In all stages of education, Experiential learning including relevant experience and professional levels acquired will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy, among others, as standard pedagogy within each subject, and with explorations of relations among different subjects. To close the gap in achievement of learning outcomes, classroom transactions will shift, towards competency-based learning and education.

The NEP 2020 while highlighting the importance of flexible learning states that 'imaginative and flexible curricular structures will enable creative combinations of disciplines for study and would offer multiple entry and exit points and thus, removes the currently prevalent rigid boundaries. These would create new possibilities for students to choose and learn the subject(s) of their choice, while changing the educational institute as per their preference, convenience, or necessity'. NEP shall also help to achieve universal participation in educational institutes by carefully tracking students, as well as their learning levels, in order to ensure that they (a) are enrolled in and attending educational institutes, and (b) have suitable opportunities to catch up and re-enter educational institutes in case they have fallen behind or dropped out.

NEP 2020, highlights the need for multidisciplinary study from the secondary education stage. It lays particular emphasis on empowering students through flexibility in course choices so that the learners could choose their learning trajectories and programmes, and thereby choose their paths in life according to their talents and interests. The NEP 2020 also proposes to establish an 'Academic Bank of Credit' (ABC) which could digitally store the academic credits earned from recognized institutions so that the degrees can be awarded taking into account credits earned.

Given the premise, a well-defined and robust credit framework will be instrumental in enabling seamless integration and coordination across institutions and all stages of education and skilling as envisioned in NEP. The credit framework will enable broad based, multi-disciplinary, holistic education with flexible curricula, creative combinations of subjects, integration of vocational education and training/ skilling and multiple entry and exit points with appropriate certification.

2.3. BENEFITS AND ADVANTAGES of NATIONAL CREDIT FRAMEWORK

2.3.1. Removal of Hard Separation Between General and Vocational education

NEP 2020 highlights that, holistic development and a wide choice of subjects and courses should be the new distinguishing feature of secondary school education and there should be no hard separation among 'curricular', 'extracurricular', or 'co-curricular', among 'arts', 'humanities', and 'sciences', or between 'vocational' or 'academic' streams.

Learning is a process that takes into account multi-dimensions of cognitive, emotional, social and physical learning as well. To ensure holistic learning of students, it is desirable that they are allowed to choose subjects according to their interests irrespective of the nature of course (academic or vocational). The educational institutes are meant to prepare students for handling life challenges and upheavals and it is only through this flexibility of choice with a range of elective subjects available that will help learner/students make more informed career choices.

The proposed credit system will take into account the learning hours put in by a learner irrespective of the stream of education (general and vocational).

2.3.2. Establishing Equivalence Between General and Vocational education and training/ skilling

Equivalency, in general, determines the level of education and number of years of study completed along with the upward progression in accordance with candidate's field of study. By equivalence, it is understood that the evaluation of a curriculum followed by the holder of the educational award (certificate/ diploma etc.) and its compatibility with the national education system in terms of the learning outcomes and the gained competencies are aligned to other curriculums and therefore considered at parity.

In order to establish such equivalence, it is important that each program within general education and vocational education and training/ skilling has a measurable criteria including the outcomes and competencies backed by proper assessment which is possible only through a robust credit framework. Such framework should enable assignment of a measurable criteria for both general education and vocational education and training/ skilling with due emphasis on the content of the study, duration and achievement of requisite competencies.

The credit framework shall also allow for identifying measurable outcomes through a well-defined assessment process in order to bring equivalence of a vocational education and skilling program with general education programs with or without any additional academic learning. It will remove the need for equivalence certification for academic programs that meet the NCrF requirements and facilitate interoperability, mobility and transfer of students between schools, boards, colleges and universities, empowering greater choice and means for students to pursue knowledge and skills of their interests, aptitude and circumstances.

2.3.3. Mobility Between and Within General and Vocational education and training/ skilling

One of the major advantages of the national credit framework will be to enable establishment of eligibility criteria for various qualifications being implemented both in general education and vocational education and training/ skilling in terms of accumulated credit points at certain credit levels. These credit points can be used to determine the eligibility for taking admission in various programs at multiple levels, subject to fulfilment of the broad principles laid down under National Credit Framework (NCrF) and the acceptance of the credit points by the concerned agencies. This mobility, will be an outcome of the equivalence that is established between general and vocational education and training/ skilling based on the criterion laid by NCrF without the need for further certification of equivalence of academic qualifications of students.

2.3.4. Enabling Provisions for Lifelong Learning Through Multiple Entry and Exit Options

Flexible learning is important to choose one's learning pathway leading to the award of certificate, diploma, and degree. There are occasions when learners pursue alternative schooling, home-schooling, online schooling or have to give up their education mid-way for various reasons. The national credit framework will act as an enabler in this regard and regulators shall be required to define the entry and exit criteria of the programs being offered by them. This would also help in fragmenting an entire program into smaller units with due acknowledgement being given to each unit of learning.

The credit transfer mechanism will also enable a student to enter, exit and re-enter the educational ecosystem both general and vocational at any point of time. In such cases due weightage is proposed to be given to work experience gained or any other training

undertaken by the learner, in offline or online mode, subject to assessment. The proposed equivalence by virtue of this national credit framework enables a learner (whether from a general education background or from a vocational education and training/ skilling background) to accumulate necessary credits that will allow him/her to re-enter the mainstream education. The ME-ME is possible when the entire education ecosystem especially in case of higher education is divided into yearly independent modules.

The multiple entry and exit option or the lifelong learning will serve the following objectives:

- Remove rigid boundaries and facilitate new possibilities for learners.
- Recognises no hard separation between different areas of learning, i.e. arts and sciences, vocational and academic streams, curricular and extra-curricular for the purpose of assignment of credits and credit levels.
- Offer creative combinations of disciplines of study that would enable multiple entry and exit points.
- Offer flexibility in curriculum and novel course options to students in addition to discipline specific specializations.
- Offers flexibility in choice of courses to the students for choosing their own learning trajectories and programmes, and thereby choose their paths in life with appropriate career choice, including option for mid-way course corrections, according to their talents and interests
- every type of learning can be creditised subject to its assessment. Also enables creditisation of Experiential learning including relevant experience and professional levels acquired, based on the weightage for relevant experience and proficiency levels achieved, subject to assessment.
- Enable credit accumulation and transfer along with provision of evaluation.
- Validation of non-formal and informal learning (like alternative/ home/open/ online/distance learning from primary education to PhD) for the award of a certificates, diploma, degree and encourage lifelong learning; and
- Facilitate encashing credits earned against a qualification/ degree when the learner resumes his/her programmes of study.

2.3.5. Integration and Mixing of Education, Skilling and Work Experience

The proposed credit framework provides for a comprehensive and practical approach to include all dimensions learning i.e. academic education, skilling and experiential learning including relevant experience and professional levels acquired. Such seamless mixing of Education, Skilling and Work Experience would enable a student/learner take full benefit of the option of Multiple Entry-Multiple Exit wherein, the student exits an academic program, undertakes a skill based training followed by a relevant work experience, acquires corresponding credits and then returns back for further education/ higher education.

This also enables a student/learner to get benefit of all kinds of learning whether acquired from academic education, vocational education & training/skilling or through Experiential

learning including relevant experience and professional levels acquired by engaging in a work place.

2.3.6. Enabling Educational Acceleration

This framework will also aim to address the educational acceleration of gifted students which is when students move through traditional curriculum at rates faster than normal pace and includes grade/class skipping, early entrance to school or college and/ or subject based acceleration.

Within the broad principles of NCrF, the regulator may define the specific modalities for catering to such gifted students, subject to defining special assessment criteria. Such an approach may also be extended and special provisions must be enabled for Hackathons, Olympiads and students showing exemplary performance in Sports, Fine Arts and other activities. The NCrF also envisions to be a competency framework which shall, in addition to the established processes of formal education and certification, shall also enable the gifted learners with exceptional learning abilities/ capabilities/ competencies to move up the education and skilling ladder without going through the prescribed established formal education / learning hours by assessing the **learning outcomes for assignment of credits and the credit levels**. However, the **such specialised assessment methods have to be very strict, objective, above board and adhere to high-standard** so as to keep the credibility of the NCrF intact.

3. SECTION 3: DEVELOPING THE NATIONAL CREDIT FRAMEWORK

3.1. FORMULATION OF HIGH LEVEL COMMITTEE AND PREVIOUS WORK DONE

In order to fulfil the vision of NEP, 2020 and to facilitate its effective implementation, it was felt that it is important to formulate a comprehensive framework which caters to both General Education and Vocational Education and Training/ Skilling and also seamlessly aligns and integrates them. This was further emphasized upon by the Hon'ble Minister MSDE and MoE who suggested that the credit frameworks made in silos will not be conducive to address the challenges existing in the entire educational and skilling ecosystem and hence it is imperative that a national credit framework be developed across academics (school education, higher education) and vocational education & skilling.

Accordingly, a High-Level Committee, with well-defined ToRs was constituted by MSDE vide Order dated 18th November 2021, to develop a National Credit Accumulation and Transfer Framework for both General and Vocational Education and Training/ skilling. This framework should enable integration of academic and vocational domains of learning and ensure flexibility and mobility between the two. The Committee had representation from heads/ senior officials of Ministry of Education (including school and higher education), UGC, AICTE, NCERT, NIOS, CBSE, Ministry of Skill Development and Entrepreneurship (MSDE), NCVET and DGT. The committee was to be Chaired by Dr. Nirmaljeet Singh Kalsi, IAS Retd., Chairperson, National Council of Vocational Education and Training (NCVET).

The ToR of the Committee and scope is also detailed below:

To formulate a framework for allocation of credits to every component of learning i.e. theory, practical, extracurricular, and experiential for general as well as vocational education and training/ skilling, to facilitate mobility within VET and from VET to general education. This framework is envisaged to cater to the following specific objectives:

- **i.** To define credit, components of credit and corresponding credit value
- **ii.** To devise a formula for calculating the credit/s for School Education, Higher Education, and VET.
- **iii.** To formulate a framework for credit accumulation for School Education, Higher Education, and VET.
- **iv.** To formulate a framework for credit transfer for VET & School Education, and vice-versa; and VET & Higher Education, and vice-versa.
- **v.** Establish Academic Equivalence:
  - Between General Education and Vocational (both for School and Higher Education)
  - Within Vocational education and training/ skilling
- **vi.** Identify the mechanism for accumulation, storage, and redemption of credit through Credit Bank

3.2. THE NATIONAL CREDIT FRAMEWORK: THE MOTHER FRAMEWORK AND BASIC PRINCIPLES

The National Credit Framework (NCrF) is a comprehensive framework encompassing elementary, school, higher, and vocational education & training, integrating the learning on three-axis i.e. academics, vocational skills and Experiential learning including relevant experience and professional levels acquired which has been jointly developed by UGC, AICTE, NCVET, NIOS, CBSE, NCERT, Ministry of Education, DGT, and Ministry of Skill Development.

The NCrF has been build and developed on the existing regulations guidelines and qualification frameworks of UGC, AICTE, NCVET, NCERT & NIOS so that the options for Multiple Entry-Multiple Exit (ME-ME) are accessible and applicable across the higher education, school education and vocational education.

The National Higher Education Qualifications Framework (NHEQF) has been formulated by UGC to achieve the objectives of NEP with detailed level descriptors and learning outcomes. The NHEQF and National Skills Qualifications Framework (NSQF) are in sync with each other to ease the integration of vocational education into higher education. The National Credit Framework (NCrF) seamlessly integrates higher education and vocational education and is totally aligned with the NHEQF and NSQF while also integrating school education [National School Education Qualifications Framework (NSEQF)] in continuum. Till now there was no credit framework in place for school education.

The National Credit Framework (NCrF) is the mother framework which enables seamless integration and coordination across regulators and institutions to enable broad based, multi-disciplinary, holistic education across sciences, social sciences, arts, humanities and sports, allows imaginative and flexible curricular structures, enables creative combinations of disciplines and integration of vocational education & skilling into academics with multiple entry and exit options.

3.2.1. National Credit Framework (NCrF) to be an Umbrella Framework

The National Credit Framework (NCrF) shall be an inclusive umbrella framework to integrate the credits earned through school education, higher education and vocational & skill education. It shall also act as umbrella framework to cater to the needs of all HEIs/ institutions including the autonomous institutions and institutes of National Importance including IITs, IIMs, IIITs, IISERs, and NITs as these institutions may also take the advantage of NCrF. Moreover, for creditisation and integration of all learning, the National Credit Framework (NCrF) shall encompass the qualification frameworks for higher education, vocational & skill education and school education, namely National Higher Education Qualification Framework (NHEQF), National Skills Qualification Framework (NSQF) and National School Education Qualification Framework (NSEQF) respectively.

Accordingly, the integration of all qualification frameworks into NCrF document has been discussed and deliberated at various levels. After detailed deliberations, it has been decided

that the National Credit Framework (NCrF) will be the mother document integrating the credits in the dimensions of academics, skilling and also the experiential learning including relevant experience and professional levels acquired.

Thus, there would be only one credit framework for higher education, school education and skill education, namely the National Credit Framework (NCrF) which would be the mother framework document for integrating the creditisation of learning in dimensions of academics, skilling and Experiential learning including relevant experience and professional levels acquired and only single credit system would be operationalised through Academic Bank of Credits (ABC). The qualification frameworks for school, higher education and skills would be addendum to NCrF and aligned with it. The basic principles and provisions of National Credit Framework (NCrF) would apply to all the qualification frameworks (NHEQF and NSQF are already aligned with NCrF), particularly to the following aspects:

a. Provision for **creditisation of all types of learnings**; Assignments of Credit levels for all learnings for seamless integration,

b. Provision for **integration of learning in all dimensions of academics and skilling along with experiential learning including relevant experience and professional levels acquired**;

c. **Assignment of one single Credit levels** i.e. NCrF Credits Levels applicable **across** all qualification frameworks; no other separate Credit levels to be assigned by any stakeholders;

d. **Assignment, Accumulation, Storage, Transfer & Redemption of Credit**s. Assignment of credits to be independent of the streams, subjects or any learning, of course subject to assessment;

e. **Assignment of Credits also for online, digital and blended learning;**

f. Credit system to be operationalised through Academic Bank of Credits (ABC);

g. The total **Notional Learning Hours** for assignment of credits to be uniform across school education, higher education and vocational education & training/skilling;

h. The **assessment is mandatory for earning credits.**

i. **Academic equivalence of vocational education and skilling programmes;**

j. Multiple entry and exit options; ensuring **horizontal and vertical mobility;**

k. Provision of **multi-disciplinary and holistic education** across sciences, social sciences, arts, humanities and sports;

l. **No hard separation between different areas of learning**, i.e. arts and sciences, vocational and academic streams, curricular and extra-curricular for the purpose of assignment of credits and credit levels;

m. Allow **imaginative and flexible curricular structures**, enables **creative combinations of disciplines;** redesigning the curriculum and pedagogy to not only capture the emerging technology but also include heritage & traditional knowledge to ensure education is relatable, relevant, interesting, and effective for students.

n. Provision for **integration of vocational education & skilling into academic education** at all levels;

o. **Empowerment of students** for **flexibility** in choice of courses/choosing their **own learning trajectories** and programme. Option for **mid-way course correction**s;

p. **Provision for Recognition of Prior Learning, and NCrF credit levels and credit assignment for the same** for main-streaming the learners who are out of formal education and skilling ecosystem.

q. Supports **educational acceleration for students with gifted learning abilities;**

r. Provision for **RPL** with or without upskilling

However, the credits are to be integrated from the different qualification frameworks i.e. school education (NSEQF), higher education including technical education (NHEQF) as well as vocational education, training & skilling (NSQF). A qualifications framework is a formalized structure in which learning level descriptors and qualifications are used in order to define and understand learning outcomes. Therefore, these Qualification Frameworks would be necessary to be maintained, inter-alia, for the **following purposes** for implementation of the intent of National Education Policy (NEP) 2020 as also for the operationalisation of the National Credit Framework (NCrF) by the school education, higher education and vocational education & skilling:

a. The curricular structure for accreditation/ approval of qualifications;

b. Planning and delivery of education/ skilling programmes;

c. Developing, designing of curriculum, courses, qualifications;

d. Developing syllabus, content, pedagogy, teaching and learning resources;

e. Information about the broad equivalence of qualifications;

f. Defining Learning outcomes, which the learner must possess, (regardless of whether they were acquired through formal, non-formal or informal learning);

g. The level descriptors for school education, higher education and vocational education & skilling. These levels are defined in terms of learning outcomes;

h. Defining entry criteria and academic equivalence;

i. Nomenclature and award of certificates, diplomas and degrees.

The National Credit Framework (NCrF) shall act as a **broad enabling framework** for all regulatory organizations (UGC, AICTE, NCVET, NCERT etc.), and autonomous institutions, including Universities, INIs, CBSE, NIOS, State School Boards, State Technical Education Boards, etc. who may, wherever required, **notifying their detailed implementation guidelines** within this Framework. Thus, the National Credit Framework (NCrF) **is an enabling framework** which empowers institutions and enables them with the required flexibility for catering to their specific academic requirements for creating imaginative and **flexible curricular structures, creative combinations of disciplines** and other special needs**.**

While the **NCrF lays down broad framework and enabling provisions and basic guidelines for achieving the intent of NEP has been included in this document,** the responsibility of implementing the provisions defined in the NCrF through detailed operational guidelines viz. Multiple Entry, Multiple Exit, entry and exit modules for implementing ME-ME, SOPs for credit assignment, transfer and redemption, credit validation and expiry, creditisation of digital/ online learning, flexible curricular structures, ratios of skill/ multi-disciplinary credits vs. academic/ other credits to be earned under a program, assessment methods for educational acceleration, Recognition of Prior Learning, establishing entry criteria for various programs etc, shall lie with the concerned regulator and/or autonomous organizations, as applicable.

3.2.2. Defining Credit and Calculating Credit Points

'Credit' is recognition that a learner has completed a prior course of learning, corresponding to a qualification at a given level. For each such prior qualification, the student would have put in a certain volume of institutional or workplace learning, and the more complex a qualification, the greater the volume of learning that would have gone into it. Credits quantify learning outcomes that are subject to valid, reliable methods of assessment.

The credit points give learners, employers, and institutions a means of describing and comparing the learning outcomes achieved. The credit points can be calculated as credits attained multiplied with the credit level.

3.2.3. Total Learning Hours in a Year for Calculation of Credit

In line with the philosophy of NEP 2020, which emphasizes on considering any kind of learning as part of the overall learning and doing away with the distinction between curricular, co-curricular, and extra-curricular, it was felt that the overall notional learning hours across the academic classes including pre-school, school and higher education should be aligned. This would lead to consistency and standardisation in the entire education and vocational ecosystem, mainstreaming both formal and informal education system and also smoothen the implementation of the proposed credit framework.

Accordingly, it has been agreed by all stakeholders that under the National Credit Framework (NCrF) the total Notional Learning Hours for assignment of credits across school education, higher education and vocational education & training/skilling have been agreed to be 1200 Hrs per year (except for pre-school up to grade 5th wherein the learning hours range from 800 to 1000 hours) for which the students shall be awarded 40 Credits. Thus 20 Credits shall be awarded for a six-months semester with 600 Notional Learning Hours. For the purpose of calculations under the National Credit Framework (NCrF) 30 notional learning hours will be counted as one Credit. However, the assignment of credits is independent of the streams, subjects or any learning subject to assessment. The students

also have a choice to take additional courses/ programs/subjects/projects beyond 40 credits to get additional credits.

NCrF recognises no hard separation between different areas of learning, i.e. arts and sciences, vocational and academic streams, curricular and extra-curricular for the purpose of assignment of credits and credit levels. Accordingly, the learning shall not be limited to only instructional hours but also encompass all other activities in the educational institutions, earlier categorised as curricular, co-curricular, and extra-curricular. In the true spirit of National Education Policy 2020, the total outcome based learning hours for credits shall, subject to assessment, include:

i. Classroom teaching/ learning hours
ii. Lab work/ innovation labs/ projects
iii. Yearly and half-yearly examinations/ class tests/ quiz/ assessments including formative assessments
iv. Experiential learning including relevant experience and professional levels acquired activity hours
    a. Performing arts, music, handicraft work,
    b. Debate and Discussion/ Essay Writing / Recitation Competition
    c. Story Writing competition
    d. Celebration of festivals in institutes, music performance, Drama.
    e. Other Contests
v. Sports/ games / physical activity / yoga
vi. Life skills including employment skills
vii. Social/ community work/ NCC/ shramdan: School cleaning, building, decoration
viii. Bag less days, field visits organised by the institution
ix. vocational education/ training, skilling, minor/ major project work, assignments
x. Field visits/ Industry attachment by institutions
xi. Internship and apprenticeship hours, on the job training (OJT), and Experiential learning including relevant experience and professional levels acquired
xii. Blended/ online/ digital learning
xiii. Self-study/ Home assignments (for NIOS)
xiv. Any other type of learning as may be notified by the regulators concerned

Such an approach would also close the gap in achievement of learning outcomes, shifting the classroom education towards competency and learning outcome-based learning and education.

Thus under the National Credit Framework (NCrF) every learning can be creditised subject to its assessment. For earning credits, the course/ qualification should be NSQF/ NHEQF aligned and approved with a defined NCrF level, clearly indicating the desired outcomes expected. Also the learning outcome shall be assessed after completing the course/

qualification for assignment of credits. It will be under the purview of respective regulator/ institution to determine the content/ curriculum of a program. The basis of assessing credits related to sports, fine arts etc shall be defined and determined by the concerned regulator/ school board. The curriculum must align with principles as defined in NEP including life skills such as communication, cooperation, teamwork, and resilience; which are included as part of NSQF and NHEQF in form of employability skills (ES).

A snapshot of learning hours across grades (from pre-school to Ph.D) is given in table below.

Table 2: Learning hours across academic classes

S. No.	Stakeholders of Education, Higher Education, Technical Education, and Vocational education and training/ skilling System		Total Notional Learning Hours in/ by the Institution per year*	Remarks
1.	School Education: Foundational stage (5 Years) (3 years of Anganwadi/ pre-school/ Balvatika) (Ages 3-6) + 2 Years (Class 1 & 2) (Ages 6-8)		800	
2.	School Education: Preparatory Stage: 3 Years, (Class 3 to 5) (Age 8-11)		1000	
3.	School Education: Middle Stage: 3 Years, (Class 6 to 8)(Age 11-14)		1200	1000 Hours of Educational Learning + 200 Hours of learning through other activities
4.	School Education: Secondary Stage: 4 Years, (Class 9 to 12), (Age 14-18)		1200	1080 Hours of Educational Learning + 120 Hours of learning through other activities
5.	NIOS: 8th Grade/ 10th Grade/ 12th Grade (with a gap of 2 years between each)		1200	8th/ 10th or 12th certificate from NIOS/ School Board
6.	DGT: 1-Year ITI after 8th Plus NIOS		1200+ 240 hrs (NIOS**/ STT***) +150 hr of project	NTC + 9th Class certificate from NIOS/ School Board
7.	DGT: 2-Years ITI After 8th grade plus NIOS or 1-Year ITI plus 1-Year NAC after 8th plus NIOS		1200+ 240 hrs (NIOS/ STT) +150 hr of project	NTC + 10th Class certificate from NIOS/ School Board
8.	DGT: 1-Year ITI after 10th Plus NIOS		1200+ 240 hrs (NIOS/ STT) +150 hr of project	NTC + 11th Class certificate from NIOS/ School Board
9.	DGT: 2-Years ITI After 10th plus NIOS or 1-Year ITI plus 1-Year NAC After 10th plus NIOS		1200+ 240 hrs (NIOS/ STT) +150 hr of project	NTC + 12th Class certificate from NIOS/ School Board
10.	AICTE: 3 Years Diploma after 10th		1200	This does not include self-study hours but includes industry

				attachments/ internships
11.	DGT: 1-Year to 2-Year ITI after 12th		1200	This does not include self-study hours but includes industry attachments/ internships
12.	AICTE: 2-Years Diploma after 12th		1200	This does not include self-study hours but includes industry attachments/ internships
13.	AICTE: 3-Years Bachelor's degree in Vocation (B.Voc) after 12th		1200	This does not include self-study hours but includes industry attachments/ internships
14.	AICTE: 4-Years Bachelor's degree in Engineering/ Technology after 12th		1200	This does not include self-study hours but includes industry attachments/ internships
15.	AICTE: - Year Post Graduation Diploma after Bachelor's degree		1200	This does not include self-study hours but includes industry attachments/ internships
16.	AICTE: 2-Years Master's Degree after Bachelor's degree		1200	This does not include self-study hours but includes industry attachments/ internships
17.	UGC: 1-Year Undergraduate Certificate after 12th		1200	This does not include self-study hours but includes industry attachments/ internships
18.	UGC: 2-Years Undergraduate Diploma after 12th		1200	This does not include self-study hours but includes industry attachments/ internships
19.	UGC: 3-Yyears Bachelor's degree after 12th		1200	This does not include self-study hours but includes industry attachments/ internships

20.	UGC: 4-year UG with Honours / Honours with Research, after 12th		1200	This does not include self-study hours but includes industry attachments/ internships
21.	UGC: 1-Year Post-Graduate Diploma after 3-years Bachelor's degree		1200	This does not include self-study hours but includes industry attachments/ internships
22.	UGC: 2-Years Master's Degree after 3-years Bachelor's degree OR 1-Years Master's Degree 4-year UG with Honours / Honours with Research		1200	This does not include self-study hours but includes industry attachments/ internships
23.	UGC: Doctoral program - Ph.D. (3 to 5 Years) after Master's degree		1200	-

** These hours will not include the self-study hours except in case of except in the case of distance education, home-schooling, alternative schooling, online education and open education (NIOS) where it is part of the overall learning hour*

*** NIOS is National Institute of Open Schooling. In NIOS, self-study forms a major component for a learner as the study material in ODL system specifically of NIOS is called Self Learning Material (SLM) which are quite exhaustive in content and not Text Book. The face to face classroom teaching is limited to Personal Contact Programme (PCPs) which are conducted during weekends or on holidays in order to facilitate learners from various heterogeneous group having understanding issues/doubts during their self-learning/study. In case of NIOS, the 1200 hours per year is assigned for self-study +PCP +Assignments +Internal +Theory +Practical +Portfolio +projects +Internship.*

**** STT is Short Term Vocational education and training/ skilling*

3.2.4. Credit Levels in the National Credit Framework and Level Descriptors

In order to align with the international best practices being followed wrt assigning credit levels, the NCrF has proposed that the maximum levels within this framework shall uniformly be upto level 8.

- The credit level that can be attained after completion of school education i.e. grade 12th will be level 4.
- The higher education shall be from credit levels of 4.5 and to level 8.
- For the Vocational Education and Training/ skilling the NCrF credit levels are from level 1 to 8 wherein the level 1 is of lowest level of competence and complexity while level 8 indicates highest level of competence and complexity.

The Credit levels to be assigned across school/ higher/ vocational education/ skilling, (independent of the streams, subjects etc) will be based on the cumulative numbers of years of learning with assessment.

The level descriptors for deciding the NCrF credit levels have been defined for every qualification framework. These descriptors describe the knowledge, skills and outcome based learning expected to be attained by a student/learner at various levels in the qualification framework. The learning outcomes could also be specific to disciplinary areas of learning Generic learning outcomes.

E.g. In case of National Skills Qualification Framework (NSQF), there are 5 level descriptors namely Professional Theoretical Knowledge, Professional and Technical Skills/ Expertise, Employment Readiness & Entrepreneurship Skills & Mind-set, Broad Learning Outcomes, and Responsibility for deciding the NCrF level to be assigned. NSQF also has entry requirements, notional hours, NCrF credit levels earned (which is in line with NCrF)

Similarly, for National Higher Education Qualification Framework (NHEQF), the element of the Descriptor includes knowledge and understanding, skills required to perform and accomplish tasks; application of knowledge and skills; generic learning outcomes; Constitutional, humanistic, ethical, and moral values; employment- ready skills and entrepreneurship skills and mindset; Credit requirements, Entry requirements for deciding the NCrF level to be assigned.

3.2.5. Credits Against Total Notional Hours

In accordance with the international best practice and the current recommendations of NHEQF, the framework proposes that the number of credits per year for 1200 learning hours will be 40. Accordingly, every semester will comprise of 20 credits. Any additional program/ course undertaken by the student/ learner beyond the 1200 learning hours or beyond the purview of the course syllabus, shall be considered for additional credits that can be earned by the student/ learner. Therefore, the minimum credits that a student/learner can earn in a year shall be 40.

The NCrF provides basic guidelines on total learning hours in a year or part thereof and credits to be allocated based on those learning hours. The assignment credits for learning hours may be further defined for theory, practical and Experiential learning including relevant experience and professional levels acquired for calculation of one credit, which shall be under the purview of the regulator concerned. However, these differential ways of credit assignment will conform to the basic principles of total notional hours in a year and total credits to be allocated within a year of study.

Wherever necessary, if the curriculum so demands, the concerned regulator/ autonomous institution may consider having more than 40 credits for a particular program. However, the minimum credits for any program against 1200 hours of learning in a year will be 40.

3.2.6. Credits for Additional Learning

Any additional program/ course undertaken by the student/ learner beyond the prescribed 1200 learning hours or beyond the purview of the course syllabus, shall be considered for assignment of additional credits that can be earned by the student/ learner. Such programs could be custom programs to cater to the industry requirements run either directly by the institutions of through the industry/ organization. Hence depending on his or her interest, talent and capability, a student may earn credits beyond the ceiling of 40 credits. This provision will enable the student to undertake the dual degree/ dual Qualification programs as notified by UGC/ permitted by NCVET. This shall also encourage and provide for other School Boards / Regulatory Bodies to offer students further flexibility, mobility and opportunities including ME-ME.

3.2.7. Assessment Band

The basic principle of the credit framework is that credits are a function of successful completion of a program of study/ vocational education/ training and assessment. No credit can be earned by the student unless the student is assessed for the achievement of the desired competencies and outcome of a program.

It is also clear that in case of academic education (both school and higher education) progression to the next grade is dependent on the assessment. For eg. unless a student clears 8th grade, the student cannot appear for 10th grade and unless the student clears 10th, the student cannot appear for 12th exam. Similarly, in case of higher education, for enrolling in a Higher Education Institute (HEI) "Certificate obtained after successful completion of Grade 12 or equivalent state of education" is a must. Hence, this becomes a mandatory assessment stage to clear for entry into higher education. Therefore, in general education there are major assessment stages which are mandatory before the student goes to the next step.

In addition, to enable implementation of multiple entry- multiple exit options, assessment is a compulsory element after each year of school, graduation and post-graduation and also after a skilling course. This means that the student will be earning credit/s after every year/ semester/ Qualification of education/ vocational education/ skilling which they go through and hence the framework needs to cater to this requirement.

The assessment is thus mandatory for earning credits for all types of learning and progression to the next assessment band. The Credits for the two courses/ qualifications/ programs may be accumulated and added to each other if these are earned in the same assessment band, subject to the guidelines of respective regulators. The regulator may also consider setting up of broad learning outcomes for each level and bands so defined.

The total Credit Points earned by the student could be obtained by multiplying the credits earned with the NCrF Level at which the credits have been earned. The credit points may be redeemed as per Academic Bank of Credit (ABC) guidelines for entry or admission in school,

higher, technical or Vocational Education programs/ courses at multiple levels enabling horizontal and vertical mobility with various lateral entry options.

The National Credit Framework (NCrF) also enables creditisation of Experiential learning including relevant experience and professional levels acquired, based on the weightage for relevant experience and proficiency levels achieved, subject to assessment.

Accordingly, the assessment bands so formulated are as indicated in the Table 3.

Table 3: NCrF levels for different academic grades/ Vocational Education & Training/ Skilling and Assessment Bands*

Academic Band/ Hours of Learning per year	Academic Grade/ Levels- School Education & Higher Education	Vocational Education Long Term Trg/ Short Term Trg (LTT/STT)	National Credit Framework (NCrF) Credit levels	Credits Earned/ year	Credit Points Earned	Assessment Stage and equivalence
Doctoral Degree	PhD	NSQF Level 8 STT	8.0	40	320	
PG degree (1/2 yrs)/ ME/ M Tech (1200 Hrs/yr)	PG- 2nd (Eng)	NSQF Level 7 STT	7.0	40	280	M.Tech. 2nd Yr,/ Engg PG Degree
	PG – 2nd yr/ PG 1st yr (Eng)	NSQF Level 6.5 STT	6.5	40	260	PG Degree/ M.Voc / M.Sc (eng)
4-year UG with honours/ Honours with Research / B.E./ B.Tech. OR 3 year UG (1200 Hrs/yr)	**4-year UG with honours/ Honours with Research /** PG – 1st yr	NSQF Level 6 STT	6.0	40	240	UG- Degree (Hons)/ PG – Diploma/B.Tech/B.E
	UG- 3rd Year	10th+5-Yr NTC/NAC/CITS, 12th+3-Yr NTC/NAC/CITS, NSQF Level 5.5 STT	5.5	40	220	UG- Degree/ B.Voc/ B.Sc Eng
	UG- 2nd Year	10th+4-Yr NTC/NAC/CITS, 12th+2-Yr NTC/NAC/CITS, NSQF Level 5 STT	5.0	40	200	UG- Diploma/ Diploma-Eng
	UG- 1st Year/equivalent	10th+3-Yr NTC/NAC/CITS, 12th+1-Yr NTC/NAC/CITS, NSQF Level 4.5 STT	4.5	40	180	UG- Certificate
2 year- Senior Secondary (1200 Hrs/yr)	Class XII	10th+2-Yr NTC/NAC/CITS, NSQF Level 4 STT	4.0	40	160	Class XII (thru CBSE/ School Boards/ NIOS)
	Class XI	10th+1-Yr NTC/NAC/CITS, NSQF Level 3.5 STT	3.5	40	140	Class XI (thru CBSE/ School Boards/ NIOS)
2 Year- Secondary (1200 Hrs/yr)	Class X	8th+2-Yr NTC/NAC, NSQF Level 3 STT	3.0	40	120	Class X (thru CBSE/School Boards/ NIOS)
	Class IX	8th+1-Yr NTC/NAC, NSQF Level 2.5 STT	2.5	40	100	Class IX (thru CBSE/ School Boards/ NIOS)
3 year- Middle (1200 Hrs/yr)	Class VIII	NSQF Level 2 STT	2.0	40	80	Class VIII (thru School Boards/ NIOS)
	Class VII		1.67	40	67	
	Class VI		1.33	40	53	
3 year- Preparatory (1000 Hrs/yr)	Class V	NSQF Level 1 STT	1.0	33	33	Class V (thru School Boards/ NIOS)
	Class IV		0.8	33	26.4	
	Class III		0.6	33	19.8	
5 year Foundational (800 Hrs / yr)	Class II		0.4	27	10.8	
	Class I		0.2	27	5.4	
	Pre-School (3 years)		0.1x3	27x3=81	8.1	

* *would include other entry criteria as well like min education and experience at that level. The equivalent criteria for NTC/NAC are detailed in table 9 below*

3.2.8. Major Dimensions of National Credit Framework

The National Credit Framework encompasses the following main components/ dimensions of learning:

- Credits earned by virtue of completed academic education
- Credits earned by virtue of undergoing vocational education, training/ skill program
- Credit points earned by virtue of relevant Experiential learning including relevant experience and professional levels acquired

a. Academic Education – School Education, Higher Education, Professional Education

At present, the school education system follows a system of progression of academic classes that is dependent on a student successfully clearing the requirements of a particular class/ grade to proceed to next. To formulate a comprehensive and holistic credit framework, that also takes into account the learning acquired during schooling and through informal modes either by homeschooling, open schooling or online schooling, it is necessary that a credit system at the school level is also developed.

For higher and professional education, frameworks namely CBCS and SAMVAY (for skill based programs) exist and largely the education ecosystem has been aligned with these frameworks. These frameworks however, were not able to fully address the requirements of assigning credits to vocational education and training/ skilling or school education and other forms of learning. The National Credit Framework therefore seeks to cater to all kinds/ types/ forms/ levels of academic education, be it school, higher/ professional or/ and vocational.

b. Vocational Education and Training/ Skilling

With the emphasis on mainstreaming vocational education and training/ skilling under the National Education Policy 2020, it is important that the skill/vocational programs undertaken by students/learners are also assigned credits. One of the aims of the national credit framework is to creditise vocational education and training/ skilling, thereby, enabling seamless integration of vocational education and training/ skilling with the general education through credit accumulation & transfer mechanism. This will specifically enable students who have to discontinue general education and undertake short-term skilling program(s) for early employment and to enable them to gain credits for vertical and horizontal mobility and further progression.

c. Relevant Experience/ Proficiency

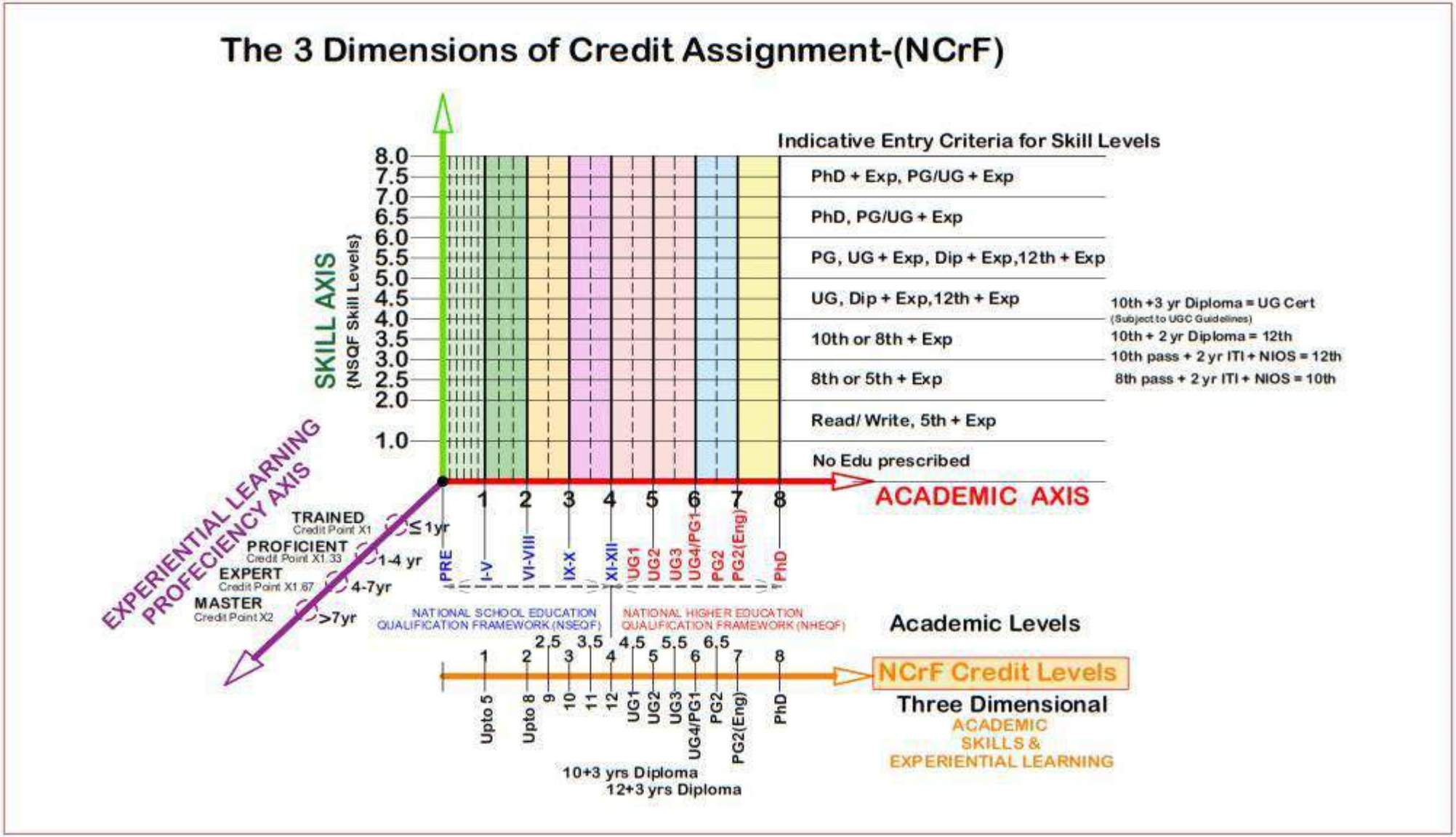
One of the most unique, practical & beneficial features of the National Credit Framework is assignment of credit points/ weightage to the Relevant experiential learning including relevant experience and professional levels acquired/ proficiency levels of a learner/

student. This means that the experience attained by a person after undergoing a particular education (including vocational) shall be considered for assignment of credits.

The credit assigned by virtue of relevant experience would enable learners to progress in their career through the work hours put in during a job/employment. This experience/proficiency could be either an extension of the academic learning or Skill based learning and should be earned within the 'same domain at the same level(s)'. Detailed modalities of the same have been explained in the later sections.

Thus the National Credit Framework (NCrF) provides for Assignment, Accumulation, Storage, Transfer & Redemption of Credits in alignment with the National Higher Education Qualification Framework (NHEQF), National School Education Qualifications Framework (NSEQF), which is a new concept, and National Skill Qualification Framework (NSQF) which are the comprehensive credit-based Academic & Skill Qualification frameworks.

A diagrammatic view of the dimensions of the credit assignment is in figure I below:


The 3 Dimensions of Credit Assignment-(NCrF)
Indicative Entry Criteria for Skill Levels
PhD + Exp, PG/UG + Exp
PhD, PG/UG + Exp
PG, UG + Exp, Dip + Exp,12th + Exp
UG, Dip + Exp,12th + Exp
10th or 8th + Exp
8th or 5th + Exp
Read/ Write, 5th + Exp
No Edu prescribed
10th +3 yr Diploma = UG Cert
(Subject to UGC Guidelines)
10th + 2 yr Diploma = 12th
10th pass + 2 yr ITI + NIOS = 12th
8th pass + 2 yr ITI + NIOS = 10th
SKILL AXIS
(NSQF Skill Levels)
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.0
ACADEMIC AXIS
1 2 3 4 5 6 7 8
PRE I-V VI-VIII IX-X XI-XII UG1 UG2 UG3 UG4/PG1 PG2 PG2(Eng) PhD
EXPERIENTIAL LEARNING
PROFECIENCY AXIS
TRAINED
Credit Point X1
≤ 1yr
PROFICIENT
Credit Point X1.33
1-4 yr
EXPERT
Credit Point X1.67
4-7yr
MASTER
Credit Point X2
>7yr
NATIONAL SCHOOL EDUCATION QUALIFICATION FRAMEWORK (NSEQF)
NATIONAL HIGHER EDUCATION QUALIFICATION FRAMEWORK (NHEQF)
Academic Levels
1 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 8
NCrF Credit Levels
Upto 5 Upto 8 9 10 11 12 UG1 UG2 UG3 UG4/PG1 PG2 PG2(Eng) PhD
10+3 yrs Diploma
12+3 yrs Diploma
Three Dimensional
ACADEMIC
SKILLS &
EXPERIENTIAL LEARNING

3.3. ASSIGNMENT OF CREDITS IN NATIONAL CREDIT FRAMEWORK

3.3.1. Credits Assigned by Virtue of Academic Education

I. School Education

Based on the principles defined in the sections above, the total credits attained by a student who has completed one year of education are 40. These 40 credits are earned on a yearly basis subject to successful completion of the assessment at that level/ class/ grade. Currently, National Skills Qualification Framework is totally in sync with the qualification framework being followed at school level and the same may be implemented till such time the National School Education Qualification Framework (proposed for School education) is formulated and notified. The assignment of credits at school level is given in the Table below:

Table 4: NCrF levels and credit assignment for school education

S. No	Academic Education Band	School Edu Grade/ Level	Number of Hours of study	Credits for hours / year	Credit Levels as per NCrF	Credit Points Earned *
C-1	C-2	C-3	C-4	C-5	C-7	C-8 (C6 X C7)
	Pre-Primary School		800X3	27x3	**0.1**	8
1	**Primary School(I-V)**	**Class I**	800	27	**0.2**	5
2	Primary School(I-V)	**Class II**	800	27	**0.4**	11
3	Primary School(I-V)	**Class III**	1000	33	**0.6**	20
4	Primary School(I-V)	**Class IV**	1000	33	**0.8**	26
5	Primary School(I-V)	**Class V**	1000	33	**1.0**	33
6	**Middle School(VI-VII)**	**Class VI**	1200	40	**1.33**	53
7	Middle School(VI-VII)	**Class VII**	1200	40	**1.67**	67
8	Middle School(VI-VII)	**Class VIII**	1200	40	**2.0**	80
9	**High School (IX-X)**	**class IX**	1200	40	**2.5**	100
10	High School (IX-X)	**Class X**	1200	40	**3.0**	120
11	**Sr. Sec. School (XI-XII)**	**Class XI**	1200	40	**3.5**	140
12	Sr. Sec. School (XI-XII)	**Class XII**	1200	40	**4.0**	160

*rounded off to the nearest decimal

II. Higher Education

In case of higher education, all one year programs offered will have notional learning hours of 1200 hours with 40 credits. The concerned regulator (UGC and AICTE) may add more programs in the one-year program thereby leading to increased learning hours beyond 1200 notional hours of learning and higher overall credits while ensuring that

the broad contours of the National Credit Framework are adhered to. The regulators/ autonomous institution may consider having baskets of courses in addition to the flagship programs keeping in view the industry and user organizations.

Accordingly, the assignment of credits wrt Higher education as prescribed under NHEQF, for all streams including science/ commerce/ arts and Engineering (technical) is as given below:

Table 5: NCrF levels and Credit Assignment in Higher Education

Sr. No	EXAMPLES OF HIGHER EDUCATION QUALIFICATIONS LOCATED WITHIN EACH LEVEL (Including Science/ Arts. Commerce and Vocational)	TOTAL LEANING HOURS PER YEAR	TOTAL CREDITS PER YEAR	NATIONAL CREDIT FRAMEWORK (NCRF) CREDIT LEVELS	CREDITS POINTS
C-1	C-2	C-3	C-4	C-5	C-6 (C-4 X C-5)
1	**Undergraduate Certificate** Programme duration: first year (first two semesters) of any undergraduate programme	1200	40	4.5	180
2	**Undergraduate Diploma** Programme duration: first two years (first four semesters) of any undergraduate programme.	1200	40	5	200
3	**Bachelor's Degree** Programme duration: three years (Six semesters) of any undergraduate programme.	1200	40	5.5	220
4	**Bachelor's Degree (Honours/ research/ Engineering).** Programme duration: four years (eight semesters) of any undergraduate programme.	1200	40	6	240
5	**Post-Graduate Diploma.** Programme duration: One year (2 semesters) after any bachelor's degree i. PGD after 3-year bachelor degree/ 2 semesters of the 2-year master's degree programme. ii. PGD after 4 year bachelor degree	1200	40	i. 6 ii. 6.5	i. 240 ii. 260
6	**Master's Degree.** Programme duration: One year (two semesters) after obtaining a Bachelor's degree (Honours/Research).	1200	40	6.5	260
7	**Master's Degree.** Programme duration: two years (four semesters) after obtaining a 3 yr Bachelor's degree.	1200	40	6.5	260

8	**Master's degree.** Programme duration: two years (four semesters) after obtaining a Bachelor's Engineering degree.	1200	40	7.0	280
9	Doctoral degree	1200	40	8.0	320

III. OTHERS LIKE ONLINE/ BLENDED/ OPEN & DISTANCE LEARNING

The Credit assignment is a function of total hours of learning put in by a student in a year versus total credits available in a year. The learning hours irrespective of the mode of learning (offline, online or blended) shall continue to follow the broad principles specified in previous sections which also form the core of the NCrF. The only exception being the hours may include the self-study hours, as applicable in the case of distance education, home-schooling, alternative schooling, and open education.

Assignment of Credits has also been enabled for online and blended learning in vocational education and skilling to expand the open /distance learning options and to promote extensive use of technology in learning & skilling. This would help in overcoming the constraints of physical infrastructure & scalability while enhancing access, equity, and affordability and ensuring quality and accountability. The blended learning option shall also enhance accessibility of learning in Indian language for 90% non-English medium students as well as for Divyangs.

3.3.2. Credits Assigned by Virtue of undergoing Vocational Education and Training/ Skilling

For the vocational education and training/ skilling ecosystem, wrt credit assignment, the following shall be applicable:

- Total notional learning hours in a year (for purpose of calculating credits): 1200
- Credits to be allocated in a year with 1200 notional learning hours: 40
- Therefore, number of notional hours leading to one credit unit= 1200/ 40 = 30

The credit assignment for vocational/ skill education as per NSQF levels & credit assignment at different levels is reflected in the Table No. 6.

Table 6: NCrF Levels and Credit Assignment in Vocational Education and Training/ Skilling

NSQF/ NCrF level at Entry/ Equivalent Grade/ years of Academic education	NSQF/ National Credit Framework (NCrF) level attained after VET/ Skill Trg (STT/ LTT)	Minimum entry criteria for undergoing Short Term Training (STT) at the given level		Minimum Range of Notional hours of Short Term Training/ STT (Theory + Practical + OJT) (Notional Hours for each - In Multiple of 30) subject to assessment	Long Term Training LTT Course viz. Craftsmen Training Scheme (CTS) in Industrial Training Institutes (ITIs), Crafts Instructor Training Scheme (CITS) & National Apprenticeship Certificate (NAC)	Credit Points earned (NCrF/ NSQF Level X 40)
		Min Education/ Skilling required	**Minimum Req Relevant Experience***			
Fresher	**Level 1**	• No formal education prescribed	No Experience required	**150-210 Hours** OR 600 hours of Apprenticeship	No LTT course	40
Fresher or Level 1	**Level 2**	• No formal education prescribed • May require ability to read and write for some qualifications	No Experience required. However, 1 year relevant experience may be desirable for some qualifications	**210-270 Hours** OR 750 hours of apprenticeship	No LTT courses	80
		• Previous relevant Qualification of NSQF Level 1	No Experience required			
Level 2	**Level 2.5**	• 8th Grade pass • 8th Grade pass and pursuing continuous schooling	No Experience required	**240-300 Hours**	**1-year** Vocational education & Training/ Skilling (NTC/ NAC) after Grade 8 **AND** (for NTC only) 150 hours of project work **AND** (For NTC/NAC only) 240 hours of Language course	**100**
		• Grade 5	3 year relevant experience			
		• Ability to read and write	3 year relevant experience			
		• Previous relevant Qualification of NSQF Level 2	6 months relevant experience			
		• Previous relevant Qualification of NSQF Level 1	1 year relevant experience			

Level 2.5	**Level 3**	• Grade 9	No Experience required	**270-390 Hours**	**2 years** of Vocational education & Training/ Skilling (NTC/ NAC) after Grade 8 AND (for NTC only) 150 hours of project work AND (For NTC/NAC only) 240 hours of Language course	**120**
		• Grade 8 with one year of (NTC/ NAC) after 8th • Grade 8 pass and pursuing continuous schooling in regular school with vocational subject	No Experience required			
		• 8th grade pass	1 year relevant experience			
		• 5th grade pass	4 year relevant experience			
		• Ability to read and write	5 year relevant experience			
		• Previous relevant Qualification of NSQF Level 2	1 year relevant experience			
		• Previous relevant Qualification of NSQF Level 2.5	6 months relevant experience			
Level 3	**Level 3.5**	• 10th Grade pass • 10th grade pass and pursuing continuous schooling	No Experience required	**360-420 Hours**	**1 year** of Vocational education & Training/ Skilling (NTC/ NAC) After Grade 10 AND (for NTC only) 150 hours of project work AND (For NTC/NAC only) 240 hours of Language course	**140**
		• 8th grade pass with two years of NTC • 8th Grade pass with 1 year NTC plus 1 year NAC • 8th Grade pass with 1 year NTC plus 1 year CITS	No Experience required			
		• 8th Grade pass	2 year relevant experience			
		• 5th Grade pass	5 year relevant experience			
		• Previous relevant Qualification of NSQF Level 2.5	2 year relevant experience			
		• Previous relevant Qualification of NSQF Level 3	1 year relevant experience			
Level 3.5	**Level 4**	• 11th grade pass	No Experience required	**390-480 Notional Hours of Training**	**1 to 2 years** of Vocational education & Training/ Skilling (NTC/ NAC) (After 10th) AND (for NTC only)	**160**
		• Completed 1st year of 3-year diploma (after 10th) and pursuing regular diploma	No Experience required			
		• 10th grade pass plus 1-year NTC/ NAC	No Experience required			
		• 8th grade pass plus 2-year NTC plus 1 Year NAC • 8th pass plus 1-year NTC plus 1-Year NAC plus CITS	No Experience required			

		• 10th grade pass and pursuing continuous schooling	No Experience required		150 hours of project work AND (For NTC/NAC only) 240 hours of Language course	
		• 10th Grade Pass	2 year relevant experience			
		• Previous relevant Qualification of NSQF Level 3.0 with minimum education as 5th Grade pass	2 year relevant experience			
		• Previous relevant Qualification of NSQF Level 3.5	1 year relevant experience			
Level 4	**Level 4.5**	• 12th Grade Pass • Pursuing 1st year of UG	No Experience required	**450-510 Notional Hours of Training** OR For UG Students - 450 Hours of Internship + project work with Assessment	**1 year** of Vocational education & Training/ Skilling after 12th (NTC/ NAC/ CITS) OR **2 to 3** years of Vocational education after 10th (NTC/ NAC/ CITS) AND (for NTC only) 150 hours of project work AND (For NTC/NAC only) 240 hours of Language course	**180**
		• Completed 2nd year of the 3-year diploma after 10 • Pursuing 3rd year of 3-year diploma after 10th • Pursuing 1st year of 2- year diploma after 12th	No Experience required			
		10th Grade pass plus 3 years of vocational education & Training eg. • 10th grade pass with 2 year NTC plus 1 year NAC • 10th Grade pass with 1 year NTC plus NAC • 10th grade pass with 1 year NTC plus CITS	No Experience required			
		• 8th Grade pass with 2 year NTC plus 1 year NAC plus 1 year CITS	No Experience required			
		• Previous relevant Qualification of NSQF Level 3.5 and with minimum education as 8th Grade pass	2 year relevant experience			
		• Previous relevant Qualification of NSQF Level 4 and with minimum education as 8th Grade pass	1 year relevant experience			
Level 4.5	**Level 5**	• Completed 1st year of UG (UG Certificate) • Pursuing 2nd year of UG • Completed 1st year of diploma (after 12th)	No Experience required	**480 to 570 Notional Hours of Training** OR	**1 to 2 years** of Vocational education & Training/ Skilling after 12th (NTC +NAC/ CITS)	**200**

		• Pursuing 2nd year of 2-year diploma after 12th		For UG Students - 510 Hours of Internship + project work with Assessment	OR **3 to 4 years** of Vocational education & Training/ Skilling after 10th (NTC/ NAC / CITS)	
		• 12th pass with 1 year Vocational Education & training (NTC or NAC or CITS)	No Experience required			
		• Completed 3 year diploma after 10th	1 year relevant experience			
		• 12th Grade pass	2 year relevant experience			
		• 10th Grade pass	4 year relevant experience			
		• Previous relevant Qualification of NSQF Level 4 and with minimum education as 8th Grade pass	3 year relevant experience			
		• Previous relevant Qualification of NSQF Level 4.5	1.5 year relevant experience			
Level 5	**Level 5.5**	• Completed 2nd year of UG (UG Diploma) • Pursuing 3rd year of UG • Completed 2nd year diploma after 12th	No Experience required	**540 to 600 Notional Hours of Training** OR For UG Students - 550 Hours of Internship + project work with Assessment	**2 to 3 years** of Vocational education & Training/ Skilling/ Experiential learning including relevant experience and professional levels acquired after 12th (NTC/ NAC/ CITS) OR **4 to 5 years** of Vocational education & Training/ Skilling/ Experiential learning including relevant experience and professional levels acquired after10th (NTC/ NAC/ CITS)	**220**
		12th Grade Pass plus 2 years of vocational Education and Training. EG. • 12th grade pass with 2 year NTC/ CITS/NAC • 12th grade pass with 1 year NTC plus 1year NAC/CITS	1 year relevant experience			
		• 12th Grade pass with 1 year NTC/ NAC • Completed 3-year diploma (after 10th)	2 year relevant experience			
		• 12th Grade pass	3 year relevant experience			
		• Previous relevant Qualification of NSQF Level 5	1.5 year relevant experience			
		• Previous relevant Qualification of NSQF Level 4.5	3 years relevant experience			

Level 5.5	**Level 6**	• Pursuing first year of 2-year PG program after completing 3 year UG degree • Pursuing PG diploma after 3 year UG degree • Completed 3 year UG degree program after 12th • Pursuing 4th year UG (in case of 4-year UG with honours/ honours with research)	No Experience Required	**570 to 660 Notional Hours of Training** OR For UG/ PG Diploma Students - 600 Hours of Internship + project work with Assessment		240
		12th Grade Pass with 2 years of Vocational Education & Training. Eg. • 12th Grade with 1 year NTC plus 1 year NAC/CITS • 12th grade with 1 year NAC plus CITS	2 year relevant experience			
		• 12th grade pass	4 years relevant experience			
		• Previous relevant Qualification of NSQF Level 5.5	1.5 years relevant experience			
		• Previous relevant Qualification of NSQF Level 5	3 years relevant experience			
Level 6	**Level 6.5**	• Completed 4 year UG program (UG honours/ research/ Eng) • Pursuing PhD (after 4 year UG honours with research) • Pursuing 2nd year of PG (after 3 year UG Dregree) • Pursuing 1st year of PG (after 4 year UG Degree with Honours/ honors with Research) • Pursuing 1st year of PG- Eng	No Experience Required	**630 to 690 Notional Hours of Training** OR For PG Students - 660 Hours of Internship + project work with Assessment		260
		• 2-year Diploma after 12th Grade (in any field)	3 years of relevant experience			

		12 Grade Pass with 2 years of Vocational education and Training thereafter. Eg. • 12th Grade with 1 year NTC plus 1 year NAC/ CITS • 12th grade with 1 year NAC plus 1 year CITS	3 years relevant experience			
		• Previous relevant Qualification of NSQF Level 6	1.5 years relevant experience			
		• Previous relevant Qualification of NSQF Level 5.5	3 years relevant experience			
Level 6.5	**Level 7**	• Pursuing PhD	No Experience Required	**660 to 750 Notional Hours of Training** OR For PG Students - 720 Hours of Internship + project work with Assessment		280
		• Pursuing 2nd year of 2 year PG- Eng	No Experience Required			
		• Completed 3 year UG degree	3 year of relevant experience			
		• Completed 4 year UG degree with Honours/ Honours with research	2 year of relevant experience			
		• Previous relevant Qualification of NSQF Level 6.5	1.5 years of relevant experience			
		• Previous relevant Qualification of NSQF Level 6	3 years of relevant experience			
Level 7	**Level 8**	• PhD in the relevant field	No Experience Required	**750 onwards Notional Hours of Training** OR 810 Hours of Internship & project		320
		• PhD in any field	1 year of relevant experience			
		• PG in any field	4 year of relevant experience			
		• UG in relevant field	5 year of relevant experience			
		• UG in any field	6 year of relevant experience			
		• Previous relevant Qualification of NSQF Level 6.5	4 years of relevant experience			
		• Previous relevant Qualification of NSQF Level 7	2 years of relevant experience			

NOTES:

*	• Relevant Experience may include On the Job training (OJT), Internship and Apprenticeship training. • OJT undertaken as part of qualification and redeemed into credits shall not be considered again as part of relevant work experience. • For establishment of Relevant Experience & OJT till NCrF/ NSQF level 2.5 the concerned AB/ Regulatory Body may, in the absence of a formal experience certificate, prescribe process (like pre admission test etc.) to assess the relevant experience based on the learning outcomes. In such cases, formal experience & OJT certificate may not be insisted upon. • However, for all NCrF/NSQF levels beyond 2.5 proper certificates establishing relevant experience & OJT shall be required. • The additional hours of learning through project work and NIOS lead to additional credit. • Credits in case of STT programs shall be dependent on number of hours calculated on the principal of 40 credits against 1200 learning hours. • Provision of Recognition of Prior learning with or without up-skilling and subject to outcome based assessment and certification shall also be used for assignment of credit levels to the trained workforce with Experiential learning including relevant experience and professional levels acquired
**	• Competent Authority shall be the body as approved & notified by the Department of School Education and Learning, Ministry of Education (MoE) for assessment & issuance of certificates of academic/ levels equivalence as mentioned
***	• Credits required for academic equivalence may be accumulated through skill training or relevant work experience or language courses subject to successful completion of the same.
	• It may be ensured that one should not use Monkey stairs using entry Qs + Exp to gets higher and higher levels of certificates without commensurate outcome based skills, which are properly assessed. ABs concerned should clearly put some practical checks and balances/ riders /Limits.
	• For RPL no formal entry qualifications would be insisted upon subject to the condition that the RPL assessment shall be conducted as per the detailed guidelines of NCVET

3.3.3. Credits Assigned by the Virtue of Relevant Experience/ Proficiency Acquired

One of the dimensions of assigning credit within the NCrF is through relevant experience/ proficiency. This relevant experience can be attained either through OJT/Apprenticeship or work experience post academic learning of vocational learning. Accordingly, the student/learner who has just finished a vocational course/ skill program or an academic grade and has less than one year of professional experience effectively gets a weightage of 1, which implies that no additional credit points wrt work experience have been earned by the student. Only the candidate/ trained person who takes up active employment for a defined number of years can earn additional credits as per the weightage assigned. The maximum weightage provided for under this dimension is two (2) i.e. a candidate/ trained person can at best earn credits equal to the credits acquired for the base qualification/ skill, provided he has more than certain number of years of work experience. This also means that a candidate/ trained person at the max can double his or her credits/ credits points earned by way of relevant Experiential learning including relevant experience and professional levels acquired and attaining proficiency levels. The redemption of credits so earned however, shall be based on the principle of assessment bands, which implies that the overall credit earned will be accumulated within the existing assessment band and will allow a learner to establish eligibility for the next assessment band or earn a certificate, diploma or degree at the same NCrF level.

The total Credit Points earned by the student could be obtained by multiplying the credits earned with the NCrF Level at which the credits have been earned. a candidate with work experience for a defined period, employed after completing certain education/ skilling shall have its overall credit points calculated as credit points earned multiplied with the weightage of relevant experience. The credit points may be redeemed as per Academic Bank of Credit (ABC) guidelines for entry or admission in school, higher, technical or Vocational Education programs/ courses at multiple levels enabling horizontal and vertical mobility with various lateral entry options

Example- a learner who has undertaken training of 1200 hours (40 credits) of level 3 program attains 120 credit points (40*3). Presuming that this candidate works in a related field for 3 years, then the overall credit points earned shall be- 120 X 1.33=159.6 or rounded of to 160 credit points. Similarly, in case of student/ learner with more than 7 years' experience, the maximum credit points earned will be 120 X 2= 240.

The principle of calculating credits acquired by a candidate by virtue of relevant Experiential learning including relevant experience and professional levels acquired and attaining proficiency levels (post completion of an academic grade/ skill based program) gained by the learner/student in the industry is given in the Table 7 below

Table 7: Credit acquired by virtue of relevant experience / proficiency

Experience cum Proficiency Levels	Description of the relevant Experiential learning including relevant experience and professional levels acquired and attaining proficiency levels	Weightage/ multiplication Factor	No. of years of experience (Only indicative)
Trained/ Qualification attained	Someone who has completed the coursework/ education/ training and has been taught the skills and knowledge needed for a particular job or activity	1	Less than or equal to 1
Proficient	Proficient would mean having the level of advancement in a particular profession, skillset, or knowledge	1.33	More than 1 less than or equal to 4
Expert	Expert means having high level of knowledge and experience in a trade or profession	1.67	More than 4 less than or equal to 7
Master	Master is someone having exceptional skill or knowledge of a subject/domain	2	More than 7

3.4. CREDIT ACCUMULATION AND TRANSFER (OPERATIONALIZATION OF CREDIT FRAMEWORK)

a. Credit Accumulation

The total credit points earned by a student/learner is a multiplication of total credits earned at a level of study/ skilling and NCrF level assigned to that level of skilling/ academic class. The Framework also envisions to take into account the cases wherein the student opts out of the education ecosystem and gains employment.

Such a student, if desirous of returning to mainstream education shall benefit as the experience gained by the student during his active employment shall also be assigned credits which can be redeemed to establish eligibility for further mobility in accordance with the assessment band. The weightage assigned to relevant experience shall be multiplied with the credit points to calculate the final credits available to a student.

Accordingly, at any point of time, the overall credit points accumulated by a student shall be calculated as 'total credit points earned' multiplied by the 'weightage assigned to the relevant experience acquired by the student'.

b. Credit Transfer

The transfer of Credits may be defined as the process of mutual acceptance of credits between two entities. This would mean that the competencies acquired by a learner/ student after completion of qualification/s are acknowledged in numerical values. The transfer of credits is possible only when credits are recognized by concerned awarding bodies and there is a mutual agreement on credits between the body allocating credits and the body accepting those credits.

While having the requisite number of credits shall make a learner fulfill the eligibility criteria for entry to a program, it would be the decision of the accepting institution to prescribe the modalities and process for admission which may include merit based listing, an entrance test/ examination or simply first come-first serve basis.

In addition, it would be the responsibility of the regulator/ Autonomous institutions to define the need of an exit or entry module while defining the admission criterion.

The transfer of credits shall fulfil the following objectives:

i. Establishing equivalence between General education and Vocational Education and Training/ Skilling, without further certification of equivalence
ii. Defining Entry criteria for various qualifications
iii. Defining and establishing Multiple entry and exit possibilities
iv. Other benefits like establishing minimum requirements for a job/ employment or projects, if applicable

3.4.1. Establishing Equivalence Between General Education and Vocational Education and Training/ Skilling

One of the objectives of the National Credit Framework is to establish equivalence between various streams of education by ensuring equivalence between different types of existing programs/ qualifications and this equivalence sets the base for establishing eligibility of students and/ or establishing multiple entry and exit pathways. The following are the basic principles to be followed while establishing equivalence:

i. The learner must have accumulated credit required for a particular level either through regular informal and formal education, vocational education and training/ skilling or through relevant work experience or a combination of all.

ii. Equivalence is possible only within the same assessment band.

iii. The learner would need to clear/pass the previous assessment band in order to move to the next assessment band

iv. The accumulated credits are wrt to each assessment band.

v. For establishing equivalence (including academic) for a level, the requirement of any additional learning will be defined by the concerned regulator.

Such an equivalence shall be applicable to all kinds of program including those being implemented within school education, Higher education (both general and technical) and vocational education (ITI-DGT based programs). This would mean that even a ITI pass out will be able to get academic equivalence to 9th, 10th, 11th and 12th grades, subject to additionally fulfilling the requirements for such equivalence/ equivalence criteria. The equivalence table (below) in addition to the existing equivalence post completion of 2 year ITI after 8th and 2 year ITI after 10th with 10th and 12th grade respectively also establishes requirements/ process for academic equivalence for ITI pass student for grade 9 and grade 11.

The matrix of equivalence between school education & vocational education and training/ skilling and higher education and vocational education and training/ skilling is detailed in the Table No. 8

Table 8: The National Credit Framework Levels (NCrF), Academic Levels (National School Education, Higher Education Qualifications Framework), and Vocational Education and Skills Levels (National Skill Qualifications Framework) and conditions for academic equivalence

No of Years of Edu	Stages/ Band/ Education Program	School Education grade Passed / Credits Earned per year/ NCrF Credits Levels	Higher Education Programs (General Edu) / Credits Earned	Higher Education Programs (Tech Edu/ AICTE) / Credits Earned	Vocational education and training/ skilling Programs (Long Term) with Entry criteria	Vocational education and training/ skilling Programs (Short Term) with Entry criteria / Credits Earned	Additional requirement for Academic Equivalence of VET & Skilling	Common National Credit Framework Levels	Credit Points earned
Col-1	Col-2	Col-3	Col-4	Col-5	Col-6	Col-7	Col-8	Col-9	Col-10
	School Education								
	3 years of **Pre-Primary 800 Hrs/Year**	Balvatika/ **81/ 0.1 x 3**	NA	NA	NA	NA		0.1	8
1	**Primary School** Grade I & II **800 Hrs/ Year** and Grade III, IV & V **1000 Hrs/ Year**	Grade I/ **27/ 0.2**	NA	NA	NA	• No formal education and • 150-210 hrs of Vocational education and Training/ Skilling **OR** • 600 hours of apprenticeship	**In addition to (Col-7)** Foundational literacy and numeracy at NSQF level 1/ 2 for grade 3 or Grade 5 certificate by competent authority	0.2	5
2		Grade II/ **27/ 0.4**	NA	NA	NA			0.4	11
3		Grade III/ **33/ 0.6**	NA	NA	NA			0.6	20
4		Grade IV/ **33/ 0.8**	NA	NA	NA			0.8	26
5		Grade V/ **33/ 1.0**	NA	NA	NA			1.0	33
6	**Middle School** **1200 Hrs/ Year**	Grade VI/ **40/ 1.33**	NA	NA	NA	• No formal education **OR** • Ability to read and write with one-year experience wherever job requires **AND**	**In addition to (Col-7)** Advance Literacy & Numeracy Skills at NSQF level 2 or 3 through competent	1.33	53
7		Grade VII/ **40/ 1.67**	NA	NA	NA			1.67	67

8		Grade VIII/ **40/ 2.0**	NA	NA	NA	• 210-270 hrs of Vocational education & Training/ Skilling **OR** • **NSQF Level 1** and 210-270 hrs of Vocational education and Training/ Skilling **OR** • 750 hours of apprenticeship	authority for grade 5th or grade 8th certificate	2.0	80
9	High School 1200 Hrs/Yr	Grade IX	NA	Completed **1 year of ITI after 8th class**	8th Grade pass + 1 year of Vocational education & Training/ Skilling (NTC/ NAC) **AND (for NTC only)** 150 hours of project work	• Total 8-9 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment • OR • 1 year relevant experience at NSQF Level 2 or 6 months' relevant experience at Level 1 **AND** • 240-300 hrs of Vocational education & Training/ Skilling	**In addition to (Col-6)** Language skill at level 3 through competent authority for 9th Certificate **In addition to (Col-7)** Grade 8th certificate + Accumulated 40 credits at level 2/3 **plus** Language Skills at level 3 by competent authority for Grade 9th Certificate	2.5	100
10	High School 1200 Hrs/Yr	Grade X	NA	Completed **2 Years of ITI after 8th Class**	8th Grade pass + 2 years of Vocational education & Training/ Skilling (NTC/ NAC) **AND (for NTC only)** + 150 hours of project work	• Total 9-10 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 1 year relevant experience at NSQF Level 2 or 6 months' relevant experience at Level 2.5 **AND** • 270-390 hrs of Vocational education & Training/ Skilling •	**In addition to (Col-6)** Language skill of level 3 through competent authority for 10th Certificate **In addition to (Col-7)** Grade 8th and/or Grade 9th certificate + Accumulated 40 credits at level 3 plus	3.0	120

							Language Skill at level 3 through competent authority for Grade 10th Certificate		
11	Sr. Sec. School 1200 Hrs/Yr	Grade XI	NA	Completed 1st Yr of Diploma after 10th (Certificate of Voc. (Eng))	10th Grade pass + 1 year of Vocational education & Training/ Skilling (NTC/ NAC) (After 10th) **AND (for NTC only)** + 150 hours of project work	• Total 10-11 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 1 year relevant experience at NSQF Level 3 or 2 year relevant experience at level 2.5 **AND** • 360 to 420 hrs of Vocational education & Training/ Skilling **OR** • 10th Grade pass and pursuing continuous schooling in regular school with one vocational subject	**In addition to (Col 6)** Language skill of level 3.5/4 through competent authority for grade 11th Certificate **In addition to (Col 7)** Grade 10th certificate + Accumulated 40 credits at level 3.5 plus Language Skill of level 3.0/3.5 through competent authority for Grade 11th Certificate	3.5	140
12	Sr. Sec. School 1200 Hrs/Yr	Grade XII	NA	Completed 2nd Yr of Diploma after 10th (Industrial Training Certificate (Eng.))	10th Grade pass + 1 to 2 years of Vocational education & Training/ Skilling (NTC/ NAC) (After 10th) **AND (for NTC only)** + 150 hours of project work	• Total 11-12 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 2-year relevant experience at NSQF Level 3 or 1 Year experience at NSQF level 3.5 **AND** • 390 to 480 hrs of Vocational education & Training/ Skilling	**In addition to (Col 6)** Language skill at level 3.5/4 competent authority for 12th Certificate **In addition to (Col 7)** Grade 11th certificate + Accumulated 40 credits at level 4 plus Language Skill at level 3.5/4 through competent authority	4.0	160

							for Grade 12th Certificate		
	Higher Education								
13	3-Year Under Graduate Program 1200 Hrs/Yr	NA	Completed 1st Year of 3-year UG / **(UG Certificate**) 40 credits **OR** UG 1st Year for Armed Forces Prog by IGNOU/ 20 Credits (+20 credits from skilling)	Completed 1 Year of technical education after 12th plus internship as per AICTE Policy 40 credits **OR** Completed 3 year diploma after 10th 40 credits **(Eng-Certificate)**	Total 1 year of Vocational education & Training/ Skilling after 12th (NTC/ NAC/ CITS) **OR** Total 2 to 3 years of Vocational education after 10th (NTC/ NAC/ CITS) **AND (for NTC only)** **+**150 hours of project work	• Total 12 to 13 years of learning including academic education, Vocational education, Training and Skilling and/ or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 2 year relevant experience at NSQF Level 3.5 or 1year relevant experience at NSQF Level 4 **AND** • 450-510 hrs of Vocational education & Training/ Skilling	**For Armed Forces** 20 Credits from NHEQF courses at level 4.5 and Above **&** 20 credits from NSQF aligned & approved skill courses at level 4.5 or above **For LTT & STT with UG certificate** 20 credit from NCrF level 4.5 or above STT/LTT courses **&** 20 credits from UGC/ AICTE approved NHEQF courses at level 4.5 and above	4.5	180
14	3-Year Under Graduate Program 1200 Hrs/Yr	NA	Completed 2 years of UG education **(UG Diploma)** 40 credits **OR** **UG 2nd Year for Armed**	Completed 2 Year of technical education after 12th plus internship as per AICTE Policy 40 credits **(Eng-Diploma)**	Total 1 to 2 years of Vocational education & Training/ Skilling after 12th (NTC +NAC/ CITS) **OR** Total 3 to 4 years of Vocational education & Training/ Skilling	• Total 13 to 14 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 3-year experience at NSQF Level 4 (min 8th class pass) or 1.5 year experience at NSQF level 4.5 **AND**	**For Armed Forces** 16 Credits from NHEQF courses at level 5.0 and Above and 24 credits from NSQF aligned & approved skill courses at level 5.0 or above **For LTT/ STT Courses with UG Diploma**	5.0	200

			Forces Prog by IGNOU/ 16 Credits (+24 credits of skill)		after 10th (NTC/ NAC / CITS)	• 480-570 hrs of Vocational education & Training/ Skilling	In addition to 20 credit from NCrF level 4.5 or above STT/LTT courses **and** 20 credits from UGC/ AICTE approved NHEQF courses at level 5.0 and above		
15	3-Year Under Graduate Program 1200 Hrs/Yr	NA	Completed UG 3rd Year **(UG Degree)** 40 credits **OR** **UG 3rd Year for Armed Forces** Prog by IGNOU/ 24 credits (+16 Credits of skilling)	Completed 3 Years of technical education after 12th plus internship as per AICTE Policy 40 credits **(B.Voc/ B.Sc Eng-)**	Total 2 to 3 years of Vocational education & Training/ Skilling/ Experiential learning including relevant experience and professional levels acquired after 12th (NTC/ NAC/ CITS) **OR** Total 4 to 5 years of Vocational education & Training/ Skilling/ Experiential learning including relevant experience and professional levels acquired after10th (NTC/ NAC/ CITS)	• UG Diploma **OR** • Total 15-16 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 3 years of experience at NSQF Level 4.5 or 1.5 years of experience at level 5 **AND** • 540-600 hrs of Vocational education & Training/ Skilling	**For Armed Forces** 24 Credits from NHEQF courses at level 4.5 and Above **&** 16 credits from NSQF aligned & approved skill courses at level 5.5 or above **For LTT/ STT Courses with UG Degree** In addition to 20 credit from NCrF level 5.5 or above STT/LTT courses **&** 20 credits from UGC/ AICTE approved NHEQF courses at level 5.5 and above	5.5	220
16	4-Year Under Graduate Program (With Honours)	NA	Completed 4-year UG with Honours / Honours with Research	Completed 4 Year of technical education after 12th plus internship as per AICTE Policy	NA	• Total 16-17 years of learning including academic education, vocational education, training and skilling and/ or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR**	**For STT Courses with UG Degree- Honours/ research or PG Diploma** In addition to 20 credit from NCrF level 6 or above STT/LTT courses	6.0	240

	1200 Hrs/ Yr		40 credits **OR** Completed 1st year of 2-year PG after 3-year UG 40 credits **OR** Completed 1-year PG **(PG-Diploma)** after 3-year UG/ 40 credits	40 credits **(Eng- Degree)**		• 3 years relevant experience at NSQF Level 5 or 1.5 years relevant experience at level 5.5 **AND** • 570-660 hrs of Vocational education & Training/ Skilling	& 20 credits from UGC/ AICTE approved NHEQF courses at level 6 and above		
17	Masters/ Post Graduate 1200 Hrs/Yr	NA	Completed 2nd year of 2-year PG after 3-year UG/ 40 credits **OR** Completed 1-year PG after 4-year UG with Honours / Honours with Research 40 credits	Completed 1st year of 2-years ME/ M. Tech Prog plus internship as per AICTE Policy 40 Credits **OR** Completed 2nd year of M. Voc after 3 year B.Voc plus internship as per AICTE Policy 40 credits	NA	• Total 17-18 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 3 years relevant experience at NSQF Level 5.5 or 1.5 year of relevant experience at level 6 **AND** • 630- 690 hrs of Vocational education and training/ skilling & Training/ Skilling **OR** • Pursuing 2nd year PG (after 3 year of UG Degree) **OR** • Ph.D after Degree (honors) **AND**	**For STT Courses with PG Degree** In addition to 20 credit from NCrF level 6.5 or above **&** 20 credits from UGC/ AICTE approved NHEQF courses at level 6.5 and above	6.5	260

						• 570-660 hrs of Vocational education & Training/ Skilling			
18	Masters/ Post Graduate 1200 hours/ Year	NA	NA	Completed 2nd year of 2-years M.E/ M.Tech Prog plus internship as per AICTE Policy 40 Credits **(Masters- Eng)**	NA	• Total 18-19 years of learning including academic education, vocational education, training and skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 3 years of relevant experience at NSQF Level 6 or 1.5 years of relevant experience at level 6.5 **AND** • 660-750 hrs of Vocational education & Training/Skilling	**For STT Courses with PG engineering** In addition to 20 credit from NCrF level 7 or above **&** 20 credits from UGC/ AICTE approved NHEQF courses at level 7 and above	7.0	280
19 years +	PhD after PG, 2 to 4 yrs	NA	NA	1st Yr of Ph.D and onwards	NA	• More than 19 years of learning including academic education, vocational education, training and Skilling and/or Experiential learning including relevant experience and professional levels acquired, subject to assessment **OR** • 4 years of relevant experience at level 6.5 or 2 years of relevant experience at NSQF Level 7 **AND** • 750 (or more) hrs of Vocational education & Training/ Skilling		8.0	320

Notes:

1. *The National Credit Framework (NCrF) shall act as a broad enabling framework for all regulatory organizations, and autonomous institutions who may, wherever required, notifying their detailed implementation guidelines within this Framework*
2. *The NCrF is only an enabling framework which empowers institutions and enables them with the required flexibility for catering to their specific academic requirements for creating imaginative and flexible curricular structures, creative combinations of disciplines and other special needs.*
3. *STT is Short Term Training, LTT is Long Term Training.*
4. *In case of Long Term Training (LTT) i.e. column 6:*
    a. *The NTC stands for National Trade Certificate and is a one or two- year duration certificate program. This certificate program is offered by Directorate General of Training (DGT) and is offered after Grade 8th /Grade 10th and after Grade 12th. NTC is offered to students who pass the All India Trade Test (AITT) for Craftsman Training Scheme (CTS)*
    b. *The NAC is National Apprenticeship Certificate and the period of training varies from one year & two months to 2 years. The minimum age for undertaking NAC program is 14 years and the qualifications vary from Grade VIII pass to XII Grade pass (10+2) system. NAC is offered to students who pass the All India Trade Test (AITT).*
    c. *The craftsman Instructor Training Scheme (CITS) is a program offered by DGT for the instructor trainees. The DGT mandates that all trainers in the it is must be CITS certified. The duration of CITS program is 1 year and the eligibility for CITS is having NTC/ NAC/Diploma/Degree qualifications.*
5. *Open schooling and NIOS:*
    a. *Open schooling is an alternative and complementary to formal education offering an opportunity for complete range of schooling. The term open schooling describes that the learning is open in terms of timing, location, teaching roles, instructional methods and modes of access. Open schooling aims at removing obstacles exist in formal learning viz., age, geographic, financial, infrastructure or time related and so on. In this process, the student takes the responsibility for what they study, how they learn, the pace at which they learn, using the learning support they have and when the examinations they take etc. Thus, the learner has flexibility to learn and progress.*
    b. *In India, the National Institute of Open Schooling (NIOS) is the largest Open Schooling system in the world providing alternative schooling. It offers open basic education courses, vocational, life enrichment courses etc. It offers a range of courses equivalent to Gradees III to the pre-degree level. The target group includes neo-literates, dropouts and general public. The NIOS curriculum*

is largely placed in the categories of equivalency or alternative schooling, life skills education & training, as well as training in income generation courses.

c. *NIOS is also offering various courses in collaboration with various institutions like ITDC, IMA, NHM, MoT, MoHFW, Sector Skill Council (SSCs). NIOS is also implementing various Govt projects for literacy (NLMA), digital literacy (PMGDISHA), ASHA assessment and Certification, Training Assessment & Certification in Community Health for untrained Health workers in collaboration with State Govt.*

d. *NIOS offers elementary level courses under its Open Basic Education (OBE) programme for Level-A, Level-B and Level-C equivalent to Grade 3, 5 and 8 of the formal system, Secondary (Grade10) and Senior Secondary (Grade12).*

e. *So far, NIOS does not conduct 9th Grade examination. For admission to Grade Xth in NIOS, the entry requirement is Certificate of Grade VIIIth pass or self-certificate. The Self Certificate states that the learner has studied at home and find herself/himself eligible for study in Secondary (Grade 10th).*

f. *Similarly, there is no Grade XIth examination in NIOS. For entry to Grade XIIth, the eligibility criteria is certificate of the Secondary examination from a recognized board. However, a gap of two years for certification at Senior Secondary level is required after passing of the secondary level.*

g. *However, the National Credit Framework (NCrF) enables NIOS to conduct special assessments for Grade IX and XI or conduct an on demand examination as and when demanded by the students/ learners.*

3.4.2. Establishing Entry Eligibility Through Credit Framework

I. The credit points earned and accumulated can be used to determine the eligibility for taking admission in various programs at multiple levels, subject to fulfilment of the following broad principles laid down under NCrF and the acceptance of these credit points by the concerned agencies. While the detailed transfer mechanism indicating entry eligibility at various levels for various streams shall be defined by individual regulators, following conditions are required to be fulfilled:

a. It must be ensured that the student has acquired and accumulated the credit points needed for moving to a particular level after undergoing either skill based training or academic classes or through relevant experience. These credit points must have been accumulated from the adjacent (lower) assessment band. For eg. A 10th pass student (who had cleared assessment band B') is eligible for appearing for 12th class examination (assessment band 'C') provided the student has accumulated requisite credit points, either through an additional academic program or through vocational education & training/ skilling or through relevant experience as defined in the equivalence table or specified by the regulator/ autonomous institutions.
b. The student has undertaken and cleared the examination resulting in passing of the adjacent lower assessment band. Eg. For taking admission in a UG equivalent program (assessment band 'D'), the students must have accumulated enough credits in the previous assessment band 'C' (11th and 12th) and cleared the requisite exam leading to 12th class certification.
c. The educational institute providing the credits and the institute accepting the credits are in mutual agreement while transferring the credits, without the need for further equivalence certificate for each student. Since a similar program being offered by two different institutions may have variation, it is expected that the institutions permitting transfer of credits will have mutual understanding. The accepting institutes, if they so desire, may also supplement their program with a bridge course.
d. Once the eligibility criteria for various programs is established, the accepting institution may devise appropriate policy changes.
e. The NCrF enables and empowers establishing academic equivalence and defining the entry criteria for various academic and vocational programs. However, the process of admission into the admitting institution including conducting a merit based selections through entrance test/ examination or screening etc for an institute is subject to the guidelines specified by regulator or if the institution is autonomous, the internal mechanisms established by the institution, subject also to availability of seats etc
f. As regards the assessment of the students with exceptional achievements/ performance in games and sports, performing/ fine arts, Social Work, NCC, or other similar subjects/ category is concerned, the same can be defined/ prescribed based on their level of competition (State level/ National level,

International level/ Commonwealth/ Olympics/ World Championships etc), the level of representation (District/ State/ National/ International), medal/ distinction achieved in team/ individual events, and such exceptional performance can be treated equivalent to an assessment. The modalities however, may be defined/ prescribed by the concerned regulator.

3.4.3. Establishing Multiple Entry and Multiple Exit (ME-ME) Pathways

The credit transfer mechanism will also enable a student/ learner to enter and exit the educational ecosystem, both general and vocational, at any point of time. In such cases due weightage is given to work experience gained or any other training undertaken by the learner. The proposed equivalence by virtue of this National Credit Framework highlights how a student can accumulate necessary credits that will allow a student to re-enter the mainstream education.

While NCrF is an enabling framework, the detailed guidelines of ME-ME shall be as defined/ prescribed by the concerned regulator. The standardization of content/ curriculum although seems to be an ideal approach, however, given the diversity of the country, the same may not be feasible. The regulators or the autonomous body concerned may however prescribe the criteria for ME-ME which may include an entry or exit module as per the NCrF level of the program.

Some examples of ME-ME are:

i. A 5th grade student with total accumulated credit points of 200 over the years and undertaking certain bridge course is eligible to appear for 8th class examination. Once the student clears it, he will be grade 8th pass and can continue with 9th grade onwards through mainstream education.

ii. In case of the undergraduate degree of either three- or four-year duration, the multiple entry and exit options, shall be as mentioned below:
   - Certificate after completing one year in a discipline or field including vocational and professional areas;
   - A diploma after two years of study; or
   - A bachelor's degree after a three-year programme
   - A bachelor's degree with research/ honours/ Engineering in case of a 4-year bachelor program

iii. For the Master's programmes:
   - A two-year programme with the second year devoted entirely to research for those who have completed the three-year Bachelor's programme;
   - A one-year Master's programme for students who are completing a four-year Bachelor's programme with honours or Honours with Research; and

- An integrated five-year Bachelor's/Master's programme with an option to exit at the end of the third year with a Bachelor's degree, with entry to a 2-year Master's programme in another HEI.

iv. Other Examples of ME-ME

- Learner after completing first year of M.Tech program, shall be eligible for an M.Voc degree, upon exit. Having M.Voc degree, however, is not mandatory for entry into an M.Tech program.

The responsibility of detailing out the multiple entry- multiple exit options for the general education and the vocational education and training/ skilling shall be the responsibility of concerned regulators. The regulator/ autonomous institutions like IITs and IIMs may also take a view on the level of standardization of subjects and content being implemented in various institutions (both school and higher) for the enablement of seamless student mobility, however, the NCrF does not prescribe any such condition for mobility of students.

The ME-ME options separately for higher education (both by UGC and AICTE) is at Annexure I.

3.5. CREDIT STORAGE AND REDEMPTION THROUGH ACADEMIC BANK OF CREDIT

3.5.1. Mechanism for Credit Storage

The framework envisages a well-developed Academic Bank of Credits (ABC), encompassing the requirements of academic, vocational and Experiential learning including relevant experience and professional levels acquired. As per NEP 2020, Academic Bank of Credits (ABC), which shall be a national-level facility, will promote the flexibility of the curriculum framework and interdisciplinary/ multidisciplinary academic mobility of students across the HEIs in the country with appropriate 'credit transfer' mechanism.

ABC shall enable the integration of multiple disciplines of higher learning leading to the desired learning outcomes including increased creativity, innovation, higher order thinking skills and critical analysis. ABC shall provide significant autonomy to the students by providing an extensive choice of courses for a programme of study, flexibility in curriculum, novel and engaging course options across a number of higher education disciplines/ institutions.

'Academic Bank of Credits' (ABC) system intends to enable students across the nation in "fulfilling their thirst for knowledge by providing academic flexibility to pick and modify their educational paths, link diverse disciplines; and assist them in acquiring the proper foundations and building blocks for their ambitions". The 'Academic Bank of Credits' (ABC) shall be an educational digital platform created to facilitate student's seamless mobility between or within degree-granting Higher Education Institutions (HEIs) and

vocational education and training/ skilling through a formal system of credit recognition, credit accumulation, credit transfer, and credit redemption in order to promote distributed and flexible teaching and learning.

3.5.2. Accumulation and Storage

The Academic Bank of Credit shall be a repository of all credits earned by a student. These credits shall be accumulated and redeemable provided the credits accumulated are within the same assessment band. The credits accumulated shall have a validity/ expiry which will be defined wrt each program.

This will be the responsibility of independent regulators based on the type, relevance and future utility of a program amongst others. The validity of the credits should be in-sync with all the other regulatory policy and initiatives of the Government. Once redeemed the student shall not be able to use the same credits again for similar purpose.

3.5.3. Verification

The verification of credits accumulated and stored in ABC will be done by respective regulators.

3.5.4. Redemption of Accumulated Credits

The ABC will promote equity, quality, flexibility, mobility, collaboration, transparency, and integration to improve the competitiveness and efficiency of India's education system. ABC shall provide services, including credit accumulation, credit transfer, credit redemption through the opening, closure and validation of accounts and shall enable multiple entry-multiple exit (ME-ME) options in a programme.

Students who pursue education as freelancers or through open / home / online schooling can also accumulate credits. These credits can be deposited to student's ABC account. After the accumulation of credits, a student can redeem these in order to get any academic degree based on the norms set by the regulatory body/ institution. It works on the principle of ME-ME as well as "anytime learning, anywhere learning, and any level learning' as is emphasized in NEP 2020. It can facilitate the integration of campuses by creating student mobility within the university system. ABC can also help integrate skills into a credit-based system by providing a credit recognition mechanism. However, the Certificates/ Diploma/ degrees will have to be given by university, regulator or respective Awarding Body (AB) and not by the credit bank.

For credit redemption, the process to be followed will be as per the Academic Bank Guidelines notified by UGC. However, the Committee agreed that in line with the recommendations of this Committee, necessary changes, if so needed, shall be carried out in the Academic Bank notification by UGC to ensure that process followed remains uniform across.

3.5.5. Credit Expiry and Renewal

'Credits earned by students shall be deposited in the respective Bank Account with ABC and shall be valid for a period as defined by the respective regulator or till it is redeemed. Also, once any credit is redeemed for the award of the aforementioned academic qualification, such credit shall be irrevocably debited from the respective student's Academic Bank Account'.

4. Section 4: SPECIAL PROVISIONS IN NATIONAL CREDIT FRAMEWORK

4.1. Provisions for Creditisation of Special Cases of learning: Educational Accelerations

The framework would be considered as successful only if it is responsive to the special needs of various groups off students and learners. The respective regulators would make provision for such exceptional cases. Some of the use cases to be covered are given below:

I. Provision for educational acceleration

a. Education acceleration is one of the established mechanism for gifted children. The practice of educational acceleration has been used to match high level student's general abilities and specific talents with optimal learning opportunities

b. Acceleration occurs when students move through traditional curriculum that rates faster than the normal pace. Among the many forms of acceleration are grade skipping or class skipping, early entrance to school or college and subject based acceleration, for example when a 5th standard student takes an 8th standard mathematics or social science or a language course

c. For educational acceleration the following activities have been undertaken/ planned under the national education policy:

i. NCERT & SCERTs when framing the national or state curricular and pedagogical framework for early childhood care and education will factor the aspects of educational acceleration.

ii. PARAKH as well as CBSE, NIOS and other School Boards of assessment in the country **will device special assessment methods to facilitate such fast track learning trajectories** for gifted children.

iii. UGC, AICTE and NCVET may also develop their own mechanisms, including special assessment methods, for enabling assessments of such fast track learning trajectories for such gifted students, independent of the learning hours spent by them.

iv. In such cases **instead of the learning hours** it is the **learning outcome subject to very strict assessment objective above board and adhere to high-standard to clearly establish that the intended learning outcomes have been fully achieved which would decide the assignment of credits and the credit levels.**

4.2. Provision for Recognition for Prior Learning

There exists a large section of student/ learners/ persons/ workers who have acquired knowledge, skills and work competencies through either informal or mix of formal and informal experiential learning including relevant experience and professional levels acquired or other learning through family/ traditional inheritance etc. However, they have no formal certifications for the same. As a result, they are unable to be integrated with the formal education and skill ecosystem for further progression through up-skilling or re-skilling. Moreover, they do not get appropriately paid and have limited opportunities for revenue generation for their knowledge and skills in the absence of any formal recognition of their skills and certification.

To enable such student/ learners/ persons/ workers, NCrF provides for 'Recognition of Prior Learning' (RPL) which refers to the process for recognising learning that has been developed from experiential learning including relevant experience and professional levels acquired and/or previous formal non-formal and informal learning contexts subject to assessment of their existing knowledge, skills, competencies. Learning outcomes are appropriately assessed and leading to certification of the same through a well-defined, credible, objective and established process/ mechanism. RPL, therefore will enable such students/learners/persons/workers to formalise their learning and provide opportunities for personal and career development through career progression and skill upgradation by his integration into formal education and skilling ecosystem.

As envisaged under NEP, NCrF provides for earning and accumulation of credits through education, skill development and experiential learning including relevant experience and professional levels acquired on outcome-based assessment approach (rather than learning hours alone). However, for earning and accumulation of credits, assessment of student/ learners/ persons/ workers, corresponding to a particular NCrF level is a mandatory requirement. The level descriptors define the level of knowledge, skills, competencies and learning outcomes for each Credit level under NCrF. Moreover, the National Higher Education Qualification Framework (NHEQF) and National Skill Qualification Framework (NSQF) level descriptors are already in place.

Therefore, NCrF shall provide a gateway to the student/ learners/ persons/ workers to creditise their informal or mix of formal and informal experiential learning including relevant experience and professional levels acquired, or learning through other methods into credits at designated NCrF levels through a well-established outcome-based assessment process called Recognition of Prior Learning (RPL). This shall also ensure the goal of lifelong learning, open further progression pathways to higher education for such persons and enhance the employability and/or entrepreneurial opportunities as envisaged under NEP. This shall also ensure the goal of lifelong learning, open further

progression pathways to higher education for such persons and enhance the employability and/or entrepreneurial opportunities as envisaged under NEP

Under the framework of NCrF, the school education, higher education and vocational education would have their own through a well-defined, credible, objective and established process/ mechanism for RPL evolving out of NEP principles of outcome-based assessment.

The similar concept of RPL may also be extended to the general education domain to create options for student/ learners/ persons/ workers to get assessed for a subject/ qualification at same or at a higher level, subject to meeting the competency levels as per level descriptors and concerned regulatory compliances. This shall effectively provide him/ her with options of Exam/ Assessment-On-Demand. NIOS is an example which offers option of Exam-On-Demand to learners who have completed certain no of years of self-study/ learning for assessment for a particular educational grade. Similar models can be developed and adopted by other state school boards and CBSE etc. to provide RPL option in school education as well.

The students should also have option to get themselves assessed for learning /subject/ skills acquired outside the formal education system. This shall, in the true sense, promote multidisciplinary learning and innovation and open pathways from vocational education training & skills to general education, and vice versa to achieve the objective of holistic approach in education. The concept of On-Demand-Assessment (RPL on-demand) along with the general RPL would form the basic pillars of creditisation of learning through informal methods.

The NEP discusses the rich heritage of ancient and Indian eternal knowledge and promotes the nurturing of heritage skills and furthermore emphasizes on researching, enhancing and putting new uses through our education system. Recognition of Prior Learning (RPL) for various traditional (indigenous) skills/occupation is an integral approach to acknowledge and recognise the potential of artisans and craft persons paving the way for upskilling and mainstreaming them in formal sectors. NCrF shall empower them to improve and upgrade their competencies.

However, the Recognition of Prior Learning (RPL) would require trained master assessors and assessors along with a well-defined, credible, objective, reliable, rational and established assessment processes. Such assessment shall also have to be carried out through credible assessment agencies and must be evidence based. In a few traditional and heritage skill areas, it may be carried out using very unconventional methods like relying on the Guru Shishya Parampara. Globally recognised OEMs and reputed industry bodies, who are the big consumer of the output of the skilling ecosystem, can also play a vital role as designated assessment agencies/ centers for such RPL.
The detailed guidelines for implementation of RPL will be developed by the respective regulators. The main features of RPL under NCrF can be summed up as follows:

i. Learning Outcome based assessment approach recognizing learning through informal methods;
ii. Providing access and opportunity for further education
iii. It allows demonstration of skills and knowledge therefore eliminating duplication of learning
iv. It also allows transition from training centres to higher education institutions in both directions and increase educational choices and career opportunities
v. High quality assessment consisting of a well-defined, credible, objective, reliable and rational and established assessment processes;
vi. Assessment against pre-defined learning outcomes at pre-defined NCrF levels, as per Level Descriptors of respective regulator
vii. Assessment of Cross sectoral, inter-stream & multidisciplinary learning;
viii. Provisions for 'On-Demand-Assessment' & 'On-Demand-Examination';
ix. Special and innovative methods of assessment through OEMs, reputed industries, Guru Shishya Parampara;
x. Dedicated Assessment centers of with state of art infrastructure & robust assessment mechanism.
xi. Will include detailed Assessment Guidelines by the concerned regulators/ autonomous bodies for further enablement of abovementioned provisions as per requirements.

4.3. Provision for special events like Hackathon, Olympiads

Provision and detailed guidelines would also be developed for handling hackathons, and subject Olympiads etc. for exceptional children/ students/ learners.

a. **Hackathons, and subject Olympiads**, both would need special assessment methods and credit assignments on the basis of achievement of outcome based learning outcomes subject to such special assessment.

b. In such cases, **instead of the learning hours,** it is the **learning outcome which would decide the assignment of credits and the credit levels**. However, the **assessment has to be very strict, objective, above board and adhere to high-standard** so as to keep the credibility of the NCrF intact.

5. BENEFITS OF THE PROPOSED NATIONAL CREDIT FRAMEWORK: REALISING THE VISION OF NATIONAL EDUCATION POLICY 2020

The National Credit Framework (NCrF) will have the following benefits:

i. NCrF will enables fulfilling the objective of NEP of no rigid separation between academic streams, extracurricular, and vocational streams in schools. NCrF will also give due weightage to Experiential learning including relevant experience and professional levels acquired which is now included as a part of the overall learning hours.

ii. NCrF enables vocational and skilling exposure at early stages in middle and secondary school, and integration of quality vocational education and training/ skilling smoothly into higher education. It will ensure that every student learns at least one vocation, earns credits for it and is exposed to several more. This would lead to emphasizing the dignity of labour and importance of various vocations including /Indian arts and artisanship.

iii. NCrF will enable the required flexibility, so that learners have the ability to choose their learning trajectories and programmes, thereby defining their own career path according to their talents and interests;

iv. NCrF will enable multidisciplinary and a holistic education across the sciences, social sciences, arts, humanities, and sports for a multidisciplinary world in order to ensure the unity and integrity of all knowledge. NCrF will encourage entire education system to be creative, critical and multi-disciplinary. The framework provides a possibility of having a which is a mix or arts, science, humanities, life skills including employability skills etc.

v. NCrF will also enable inter-transfer of students between different curriculums/boards/institutions/universities and education systems within India and also with overseas educational institutions.

vi. NCrF will bring synergy in curriculum across all levels of education from school education to higher education including redesigning the curriculum and pedagogy to not only capture the emerging technology but also include heritage & traditional knowledge to ensure education is relatable, relevant, interesting, and effective for students

vii. NCrF would enable availability of higher level vocational courses to students enrolled in all programmes, including the 3/4-year multidisciplinary Bachelor's programmes, NIOS and State Open Schools and adult literacy and life-enrichment programmes including availability of life skills such as communication, cooperation, teamwork, and resilience;

viii. NCrF would enable different models of vocational education and training/ skilling, and apprenticeships, by school education and higher education institutions.

ix. This Framework will provide the basis for Recognition of Prior Learning. Through this, dropouts from the formal system will be reintegrated by aligning their practical experience with the relevant level of the Framework, by means of an assessment as per the assessment band criteria applicable, and will also facilitate mobility across 'general' and 'vocational' education.

x. NCrF takes into account the multiple reasons leading to School/ Higher Education drop-outs and enables suitable entry paths for them both in general education and vocational education and training/ skilling. NCrF, therefore, promotes universalization of education from pre-school to secondary level and higher education by ensuring more students join/ return to mainstream.

xi. NCrF will encompass all existing framework of various regulators namely proposed NHEQF (by UGC/AICTE) and existing NSQF.

xii. NCrF will help in filling the gaps between current state of learning outcomes and what is desirable to enhance the employability of a student, while also ensuring that the time invested by a student in learning either via education or through work does not go unaccounted.

xiii. NCrF further strengthens the principle laid out in NEP that education must develop not only cognitive skills including both 'foundational skills' of literacy & numeracy and 'higher-order' cognitive skills such as critical thinking & problem solving – but also social and emotional skills – which will be recognized as part of core learning of a student under this framework.

xiv. NCrF will enable students to store and redeem the accumulated credits in a 'Academic Bank of Credit'.

xv. The NCrF will promote the concept of life-long learning as it is providing multiple entry-multiple exit options across the education ecosystem.

xvi. NCrF will also help in addressing the long standing issues associated with vocational education and training/ skilling of not being aspirational. The NCrF permits mainstreaming of vocational programs with equal weightage and credits being given to vocational subject as to any other academic subject across school and higher education.

xvii. NCrF also focuses on establishing equivalence between general education courses and vocational education programs thereby leading to seamless integration between general and vocational education and training/ skilling.

xviii. NCrF will enable an increase in the GER as has been envisaged by the Government.

xix. NCrF is adaptable by different streams like law, medical etc as required.

xx. NCrF addresses the difficulties students are facing in respect of equivalence of certificates issues by various School Education Boards in India for the purpose of admissions in higher education institutions and employment in Central/State Government.

Table 10: Benefits of the National Credit Framework

S No	NCrF BENEFICIARIES			
	STUDENTS	**INSTITUTIONS**	**GOVERNMENT**	**INDUSTRY**
1.	Creditisation of all learning hours, including academic, vocational and Experiential learning including relevant experience and professional levels acquired,	Promotes unification of HEIs to promote multidisciplinary education	Increased enrolment of students (GER)	Short term future skills can be obtained as up-skilling
2.	Multidisciplinary and holistic education with flexible curricula	More diversified and rich student's knowledge base	Helps in fulfilling the national vision of complementing the demographic dividend	Re-Skilling and up-skilling of existing employees/ engineers
3.	Flexibility in duration of study/ courses through provisions of Multiple entry and exit / work option	Promotes stronger collaboration between institutions	To achieve Hon PM's Vision of making India the Skill capital of the World.	Allows students to attain NSQF approved foundational skills developed by industry & be more employable
4.	Provision for lifelong learning – any time any where learning	Simpler and uniform credit mechanism	Making vocational education and training/ skilling aspirational	Provision of Micro-credentials allows integration of quick educational upgradation/ up-skilling
5.	Removal of hard distinction between education stream thereby making study choices respectful and allowing for more than one award in same period.	Increased focus on research and innovation	Highly educated and trained workforce for Aatmnirbhar Bharat.	Helps cater to the future demand of skills and bridging skill gap
6.	Removes distinction between arts, science, social sciences, and commerce etc Student get credits for every academic/ skill/ experience	Promotes digital learning, blended learning and open distance learning	Could be extended to all kind of streams including agriculture, medical and law	Makes students more employable by more holistic design of study by including vocational education and training/ skilling
7.	Enhances the scope of core learning to include foundational and cognitive both.	Leveraging of institutional infrastructure		Have skill enhanced, multi/ cross-sectoral skilled pool of employable youth
8.				

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Annexure I: MULTIPLE ENTRY MULTIPLE EXIT options by UGC & AICTE

i. MULTIPLE ENTRY MULTIPLE EXIT – UGC

ACADEMIC LEVEL	ENTRY QUALIFICATION*	EXIT QUALIFICATION AND CREDITS required for the level	NATIONAL CREDIT LEVEL (NCrF)
	Higher Education		
UNDER-GRADUATE 1st year (B. General/ B. Voc)	12th pass certificate or equivalent state of education	Under-Graduate Certificate will be awarded and Minimum 40 credit-hours followed by an exit 4-credit skills-enhancement course	4.5
UNDER-GRADUATE 2nd year (B. General/ B. Voc)	Under-Graduate Certificate	Under-Graduate Diploma will be awarded and Minimum of 80 credit-hours followed by an exit 4-credit skills-enhancement course	5
UNDER-GRADUATE 3rd year (B. general/ B.Voc)	Under-Graduate Diploma	Bachelor Degree will be awarded and Minimum of 120 credit-hours	5.5
UNDER-GRADUATE 4th year (B. general/ B.Voc)	Bachelor's Degree (3 year)	Bachelor's degree (Honours/ Honours with Research) and Minimum of 160 credits, with minimum of 40 credits each at level 4.5, 5, 5.5 and 6 of the NHEQF	6
POST GRADUATE DIPLOMA Or 1st year of 2- year PG program	Bachelor's degree (3 years)	Post Graduate Diploma after completion of 1st year of 2-year PG program and minimum of 40 credits for individuals who have completed a Bachelor's programme	6.0
MASTERS (M. General / M.Voc) 2 year of master program	Bachelor degree (after 3 years of UG)	Master's degree and Minimum of 80 credits from the first and second years of the programme, with minimum of 40 credits in the first year and minimum of 40 credits in the second year of the programme at level 6.5 on the NHEQF	6.5
MASTER'S (M.General/ M.Voc) One year program after 4 year UG	Bachelor degree (honors/ honours with research) or Post Graduate Diploma	Master's degree and Minimum of 40 credits for individuals who have completed a Bachelor's degree (Honours/ Honours with Research)	6.5

Master's programme (Eng M.E., M. Tech	Bachelor degree (honors/ honours with research)	Master's degree and minimum of 80 credits from the first and second years of the programme, with minimum of 40 credits in the first year and minimum of 40 credits in the second year of the programme at level 6 on the NHEQF	7
P.hD	PG Diploma OR Master's Degree OR a Bachelor degree (honours with research)	Doctorate degree will include course work and a thesis with published work and/or creative work	8

* Admission will be open to those who have met the entrance requirements, including specified levels of attainment, in the programme admission regulations along with evaluation of documentary evidence (including the academic record and/or evidence relating to the assessment and validation of prior learning outcomes) of the applicant's ability to pursue an undergraduate programme of study.

ii. MULTIPLE ENTRY- MULTIPLE EXIT IN HIGHER EDUCATION- AICTE

Academic Level	Entry Qualifications at different levels.	Exiting Qualifications at different levels	National Credit Level (NCrF)	Learning Outcomes
9th Grade	8th Class	• 9th Class/ • 1 year of ITI after 8th class	2.5	• Limited service skill used in limited context, select and apply tools assisting professional works with no variables, differentiates good and bad quality • Transmit written and oral messages, basic arithmetic, personal financing, understanding of social, political and environmental applications.
10th Grade	• 9th Class/ • 1 year of ITI after 8th class	• 10th Class • 2 Year of ITI after 8th Class	3.0	
11th Grade. /1st yr. Diploma	10th Class/ 2 Year of ITI after 8th Class+ NIOS	• Class 11 • Certificate of VoC. (Eng) • Class 11+ + QPs/ NOCs enabling lateral entry in 2nd Year of Certificate of Voc.	3.5	• Recall and demonstrate Practical skill, routine And repetitive in narrow Range of application • Communication written and oral, with minimum required clarity, skill of basic arithmetic and algebraic principles, personal banking, basic understanding of social, political and environmental applications
12th Grade. /2nd yr. Diploma	• 10+ Certificate of Voc • Class 11 • Class 11+ QPs &NOCs	• Class 12 • Industrial Training Certificate (Eng) • Class 12+ QPs and NOCs enabling entry in UG Certificate	4.0	• Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts • Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment
Final yr. Diploma/ 1styr UG Degree	• Class 12 • 12+ Industrial Training Certificate (Eng) • Class 12+ QPs & NOCs	UG Certificate (Eng.)	4.5	
2ndyr UG Degree	UG Certificate(Eng.)	UG Diploma(Eng.)	5.0	• A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools materials and information • Desired mathematical skill, understanding of social, political and some skill of collecting and

				organizing information, communication.
3rdyr UG Degree	UG Diploma(Eng.)	B.VoC (Eng.)	5.5	• wide ranging, factual and theoretical knowledge in broad contexts within a field of work or study • Wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study • Good logical and mathematical skill understanding of social political and natural environment good in collecting and organising information, communication and presentation skill
Final yr UG Degree	B.Voc (Eng.)	B.E./B. Tech.	6.0	• wide ranging, factual and theoretical knowledge in broad contexts within a field of work or study • Wide range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study • Good logical and mathematical skill understanding of social political and natural environment good in collecting and organising information, communication and presentation skill
1st Year PG (Eng)	B.E./B. Tech.	M.Voc (Eng.)	6.5	• Advanced Knowledge and skill Critical understanding of the subject, demonstrating mastery and innovation, completion of substantial research and dissertation. • Responsible for decision making in complex technical activities, involving unpredictable study/work situations.
2nd year PG (Eng)	M.Voc. (Eng.)	M. Tech	7	• At the end of this course, students will be able to • Understand research problem formulation. • Analyze research related information • Follow research ethics • Understand that today's world is controlled by Computer, Information Technology, but

				tomorrow world will be ruled by ideas, concept, and creativity. • Understanding that when IPR would take such important place in growth of individuals & nation, it is needless to emphasis the need of information about Intellectual Property Right to be promoted among students in general & engineering in particular. • Understand that IPR protection provides an incentive to inventors for further research work and investment in R & D, which leads to creation of new and better products, and in turn brings about, economic growth and social benefits.
Ph.D	M. Tech	Ph.D		

Note:

At each entry, Institution/ University has to identify the educational gaps/ skill gaps and suitable bridge courses may be offered.

- To make the students employable after every exit, the skill component with progressive enhancement in skills in respective disciplines may be introduced in the curriculum right from the 1st year of the program by the concerned regulatory body/ University/ Technical Board, as the case may be.
- The levels of exit, assessed through and learning outcomes are the basis of equivalency, not the duration of the courses. For example: Dual Degree etc.

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PUBLIC NOTICE

Inviting Suggestions
on
Draft UGC (Academic collaboration between Indian and foreign Higher Education Institutions to offer Joint Degree, Dual Degree and Twinning Programme) Regulations, 2021

The Government of India is taking a number of initiatives for the implementation of the National Education Policy-2020. The NEP-2020 calls for permitting credits acquired in foreign countries to be counted for the award of a degree. Furthermore, the budget announcement of 2021 proposed regulatory mechanism to permit dual degrees, joint degrees and twinning arrangements.

Accordingly, UGC constituted a Committee to frame enabling Regulations in these regards. The draft UGC (Academic collaboration between Indian and foreign Higher Education Institutions to offer Joint Degree, Dual Degree and Twinning Programme) Regulations, 2021 are hereby placed in public domain.

UGC invites **comments/suggestions/feedbacks** from all the stakeholders on the draft Regulations and the same may be sent to **ugcforeigncollaboration@gmail.com** by **5th March, 2021**.

(Rajnish Jain)