



HARYANA STATE HIGHER EDUCATION COUNCIL

No.:- 12/26-2025 Proj.M./HSHEC

Dated:- 10.01.2025

Notification

Sub.: Constitution of Committee for providing comments/ suggestions/ feedback on Draft UGC "Guidelines for introduction of skill based courses, micro credentials in HEIs and SOP for implementation."

UGC has invited comments/ suggestions/ feedback on Draft UGC "Guidelines for introduction of skill based courses, micro credentials in HEIs and SOP for implementation." vide UGC public notice no. 30-11/2022(NSQF) dated 31.12.2024 (copy enclosed). The comments/ suggestions/ feedback is to be submitted through google form drafted by UGC within 30 days from the date of publication of the public notice i.e. 30.01.2025.

A committee to be chaired by the Chairperson, HSHEC comprising of the following members on the subject cited above is hereby constituted:

- 1 Dr. Ramanand Pandey, Director, Centre of Policy Research & Governance, New Delhi
- 2 Dr. Kishanvir Singh Shakya, Ex-Member, Uttar Pradesh Public Service Commission
- 3 Dr. Manjula Chaudhary, Director, Centre for Distance & Online Education, Kurukshetra University, Kurukshetra
- 4 Dr. R.S. Rathore, Dean Academic, Shri Vishwakarma Skill University, Palwal
- 5 Representative of Higher Education Department dealing with Skill Development Program
- 6 Representative of School Education Department dealing with Skill Development Program
- 7 Representative of Elementary Education Department dealing with Skill Development Program
- 8 Representative of Skill Development & Industrial Training Department dealing with Skill Development Program
- 9 Officers dealing with NEP-2020 in HSHEC

The meeting of the committee has been scheduled at 11:30 AM on 05.02.2025 in Council's office. All are therefore requested to make it convenient to join the meeting for providing their valuable inputs.

Prof. K.C. Sharma
Chairperson, HSHEC

Endst. No.:- Even

Dated. 10.01.2025

A copy for information and necessary action is forwarded to the following:-

1. DGEE for kind information of Director General, Elementary Education Haryana with a request to depute a representative of Elementary Education Department. dealing with Skill Development Program



HARYANA STATE HIGHER EDUCATION COUNCIL

2. DSE for kind information of Director, Secondary Education Haryana with a request to depute a representative of Secondary Education Department dealing with Skill Development Program
3. DHE for kind information of Director, Higher Education Haryana with a request to depute a representative of Higher Education Department dealing with Skill Development Program
4. Director General & Secretary SDIT for kind information of Director General & Secretary, SDIT Haryana with a request to depute a representative of Skill Development & Industrial Training Department dealing with Skill Development Program
5. Hon'ble Members of the Committee
6. Budget Officer, HSHEC

K.K. Agnihotri

K.K. Agnihotri
Advisor, HSHEC

CC:

1. PS/ ACSHE&TE for kind information of ACSHE&TE Haryana, Chandigarh
2. PS/ CP, HSHEC for kind information of the Chairperson, HSHEC, Panchkula
3. PS/ PSSE for kind information of PSSE Haryana, Chandigarh
4. Expert NEP-III for uploading on the Council's website.



ज्ञान-विज्ञान विमुक्तये

आचार्य मनिष र. जोशी
सचिव

Prof. Manish R. Joshi
Secretary



सत्यमेव जयते



विश्वविद्यालय अनुदान आयोग
University Grants Commission
(शिक्षा मंत्रालय, भारत सरकार)
(Ministry of Education, Govt. of India)

F.No.30-11/2022(NSQF)

31st December, 2024/10 पौष 1946

सार्वजनिक सूचना

Subject: Comments/Suggestions/Feedback on the Draft University Grants Commission "Guidelines for the Introduction of Skill-based Courses/ Micro-credentials in Higher Education Institutions and SOP for implementation".

UGC invites comments/suggestions/feedback on the Draft University Grants Commission "**Guidelines for the Introduction of Skill-based Courses/ Micro-credentials in Higher Education Institutions and SOP for implementation**" for offering of skill based courses/ micro-credentials by the Higher Educational Institutions (HEIs).

The skill-based courses/micro-credentials would provide an avenue for continuous professional development and personal growth, thereby fostering a mindset of adaptability and curiosity.

Undertaking skill-based courses/micro-credentials has the potential to increase productivity at work, thereby supporting economic growth through a qualified workforce.

These guidelines are coherent with the objective of the National Education Policy 2020 that encourages switching from the traditional, content-heavy learning method to holistic learning, thereby enhancing the learners skills/knowledge and employability.

The draft University Grants Commission guidelines are enclosed for perusal and invites suggestions/comments/feedback from all the stakeholders. The suggestions/comments/feedback may be submitted through the Google form available at <https://forms.gle/5FM8rzGwMMFy8njRA> within thirty (30) days from the date of publication of this Public Notice.

(मनिष जोशी)

संलग्न: उपरोक्तानुसार



Guidelines for the Introduction of Skill-based Courses and Micro-credentials in Higher Educational Institutions (HEIs) and SOP for Implementation



University Grants Commission

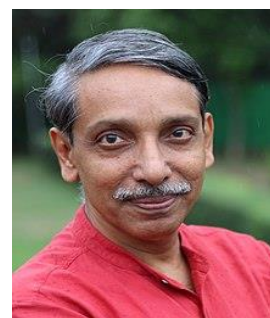
Bahadur Shah Zafar Marg

New Delhi- 110002

(05 November 2024)

Foreword

The **University Grants Commission (UGC)** is pleased to present the **Guidelines for the Introduction of Skill-Based Courses and Micro-Credentials in Higher Education Institutions (HEIs)**, a pivotal step in realizing the vision of the **National Education Policy (NEP) 2020**. These guidelines address a fundamental shift in our educational framework to equip our students with practical, industry-relevant skills alongside academic knowledge to succeed in the rapidly evolving job market.



India's youth represent a tremendous asset in our journey toward becoming a globally competitive knowledge economy. However, to harness this potential, our higher education institutions must adapt to provide the flexible, multidisciplinary, and skill-oriented education that the NEP envisions. Introducing skill-based courses and micro-credentials enables our students to acquire competencies in emerging fields, from artificial intelligence and data analytics to sustainable practices and digital marketing. By integrating these courses into the academic framework, we bridge the gap between traditional education and the dynamic demands of industry.

By embedding these courses within academic programs, we equip students with in-demand skills and practical expertise in areas like data science, AI, and sustainable practices, directly aligning education with industry needs. This approach, endorsed by the **National Education Policy (NEP) 2020**, enables students to build flexible, multidisciplinary competencies, enhancing employability and fostering lifelong learning. Students can earn stackable credits through frameworks like the **National Credit Framework (NCrF)**, creating a transformative, career-focused education pathway that bridges the gap between academia and industry.

The **National Credit Framework (NCrF)** embedded within these guidelines further ensures that students can gain credits across academic, skill, and experiential domains, creating pathways for seamless learning and career progression. This credit flexibility empowers students to customize their educational journeys, exploring diverse fields that enhance their employability and personal growth.

An essential component of these guidelines is the **collaborative model** between academia and industry, which allows HEIs to work closely with industry experts, awarding bodies and sector skill councils to deliver skill-based training of the highest standard. These partnerships will enable students to gain real-world experience and hands-on knowledge, making them job-ready and competitive in national and global job markets.

I commend the members of the **two Expert Committees constituted by UGC**, first to develop "Guidelines for the Introduction of Skill Courses/Micro-credentials in Higher Education Institutions, and the second to create SOP in respect of short-term skill courses/ micro-credentials, developed by the Skill course/micro-credential provider, to be offered by the HEIs, and all contributors who have worked diligently to develop these guidelines. The **Standard Operating Procedures (SOPs)** provided

here offer a clear roadmap for HEIs to implement skill-based courses effectively, ensuring alignment with UGC's commitment to excellence, transparency, and quality.

These guidelines will serve as a foundational tool for HEIs across India, transforming the landscape of higher education to be more inclusive, skill-focused, and adaptable. Through these efforts, we empower students to be graduates, skilled professionals, innovators, and leaders of tomorrow.

Prof. M. Jagadesh Kumar

Chairman, University Grants Commission (UGC)

Preface

The **Guidelines for the Introduction of Skill-Based Courses and Micro-Credentials in Higher Education Institutions (HEIs)**, along with the **Standard Operating Procedures (SOPs) for Implementation**, represent a significant advancement in India's educational landscape. As envisioned by the **National Education Policy (NEP) 2020**, these guidelines aim to transform higher education by aligning it with the needs of the modern workforce, empowering students with industry-relevant skills, and fostering an ecosystem of lifelong learning.



India stands at the **cusp of a demographic opportunity**, with a youthful population that can **drive economic growth** for decades to come. However, realizing this potential requires an education system that equips students with not only academic knowledge but also **the practical skills needed to thrive in a dynamic, technology-driven job market**. Traditional degree programs alone cannot fulfill this demand, underscoring the importance of **skill-based learning and micro-credentialing** to bridge the gap between education and employability. This idea of the University Grants Commission (UGC), therefore, is both timely and transformative, providing HEIs with a clear framework to embed skill development within their curricula.

I am thankful to Prof Jagdish Kumar, Chairman UGC, for emphasizing the importance of Integrating skill-based courses and micro-credentials into higher education as essential for preparing students to meet the demands of a rapidly evolving job market. In this regard UGC constituted two Expert Committees, first to develop "**Guidelines for the Introduction of Skill Courses/Micro-credentials in Higher Education Institutions** and **the second to develop SOP in respect of short-term skill courses/ micro-credentials**, developed by the Skill course/micro-credential provider, which would be offered by the Higher Education Institutions (HEIs). **This report presents a combined integrated view of both these committees dealing with totally interlinked subjects.**

In developing these guidelines, the **University Grants Commission (UGC)** and the Empowered Committee of experts constituted by UGC have drawn on best practices from around the world. The framework emphasizes flexibility, allowing students to earn credits through diverse learning pathways such as online courses, hands-on training internships and, industry projects. Furthermore, the guidelines promote collaboration between HEIs, industry leaders, and recognized awarding bodies, ensuring that students gain competencies that are directly aligned with industry standards. The incorporation of **skill-based courses and Micro-Credentials into mainstream higher education** marks a pivotal shift, acknowledging that learning must adapt to meet the demands of an evolving economy.

This document also highlights the **National Credit Framework (NCrF)**, an integrated credit system that **enables students to accumulate credits across academic, skill, and experiential learning domains**. The NCrF not only supports the seamless transition between different levels of education but also facilitates **credit recognition**

and mobility. This flexibility empowers students to **curate their learning experiences based on individual career aspirations**, allowing them to choose from a wide array of courses, including those in emerging fields such as artificial intelligence, data science, cybersecurity, and sustainable development. By embedding the NCrf, these guidelines ensure that skill acquisition and academic progression are harmonized within the broader structure of higher education in India.

The **Standard Operating Procedures (SOPs)** included in this document serve as a practical roadmap for HEIs, outlining **step-by-step processes for implementing skill-based courses and micro-credentials**. These SOPs cover critical aspects such as **curriculum design, assessment methods, certification, and suggested placement support processes**, providing institutions with the tools to establish a sustainable skill-based education ecosystem. Through well-defined processes for accreditation and collaboration, the guidelines emphasize quality assurance, accountability, and consistency, ensuring that students receive training that meets the highest standards of excellence.

This initiative also opens new avenues for **student engagement with industry, facilitating work-integrated learning opportunities** that go beyond traditional internships. The guidelines encourage HEIs to **partner with industries, multinational corporations**, and skilled professionals, **creating a pipeline of job-ready graduates** who can meet the needs of local, national, and global markets. The ultimate objective is to create a **symbiotic relationship between academia and industry**, where each can benefit from the expertise, insights, and innovations of the other.

I extend my gratitude to all members of both the Expert Committees constituted by UGC namely Prof. Badri Narayan Tiwari Commission Member, UGC, Dr. Debabrata Das Director IIIT Bangalore, Dr. Bhimaraya Metri Director IIM Nagpur, Prof. S.G. Deshmukh, IIT Delhi, Shri. Manish Sabharwal Vice-Chairman, Teamlease, Mr. Santosh Ananthapura Head, Corporate Affairs INFOSYS, Dr. Neena Pahuja Executive Member NCVET, Dr. Vinita Aggarwal Executive Member NCVET, Prof. Rajive Kumar Member-Secretary AICTE and Shri. Rahul Kulkarni Chief Technologist, Samagra Transforming Governance for finding time and contributing immensely to this report. As the **Former Chairperson of the National Council for Vocational Education and Training (NCVET)**, I am honored to have been able to contribute to this effort of UGC, which I believe will reshape the future of higher education in India.

I am grateful to Dr. Avichal Raj Kapur Joint Secretary, UGC and his team for their hard work and dedicated efforts in coordinating and contributing to the development of these Guidelines and the SOP. I would also like to thank all other stakeholders who have contributed to the development of these guidelines, including members of the academic leaders, industry experts, and policymakers.

By embracing skill-based education and micro-credentialing, India can unlock the full potential of its young population, transforming them into skilled professionals who can drive the nation's growth and innovation. These guidelines provide HEIs with a robust framework to lead this transformation, ensuring that the education system is responsive, inclusive, and attuned to the aspirations of every learner.

I am confident that these efforts will lay the foundation for a new era of education in India, where every student is empowered with the skills and knowledge necessary to succeed in an increasingly complex world.

Prof. (Dr.) Nirmaljeet Singh Kalsi, IAS (Retd.)
Former Chairperson, NCVET

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The Expert Committee constituted vide UGC's Letter No. 30-11/2022 (NSQF) Dated 09.08.2024 to formulate "**Guidelines for the Introduction of Skill Courses/Micro-credentials in Higher Education Institutions**":

S.No.	Name and Designation	Signature
1.	Dr. Nirmaljeet Singh Kalsi, IAS Retd. (Former Chairman, National Council for Vocational Education and Training, New Delhi) Adjunct Professor Public Policy and Governance Management Development Institute Mehrauli Road, Gurugram - 122007	Chairman 
2.	Prof. Badri Narayan Tiwari Commission Member, UGC Director and Professor, G.B. Pant Social Science Institute, University of Allahabad, Prayagraj Uttar Pradesh	Member 
3.	Shri. Manish Sabharwal Vice-Chairman, Teamlease Services Limited, Bangalore, Karnataka	Member 
4.	Dr. Debabrata Das Director, International Institute of Information and Technology Bangalore, Bengaluru - 560100	Member 
5.	Shri. Rahul Kulkarni Chief Technologist Samagra Transforming Governance, 9 / 5 Sarvapriya Vihar, New Delhi-110016	Member 
6.	Prof. S.G. Deshmukh Indian Institute of Technology Delhi (IITD), Hauz Khas, New Delhi-110016	Member 
7.	Prof. Rajive Kumar Member-Secretary All India Council for Technical Education, Nelson Mandela Marg, Vasant Kunj, New Delhi-110070	Member (AICTE Representative) 
8.	Dr. Neena Pahuja Executive Member National Council for Vocational Education and Training 4th Floor Kaushal Bhawan, Africa Avenue, Diplomatic Enclave Chanakyapuri, New Delhi-110023	Member (NCVET Representative) 
9.	Dr. Avichal Raj Kapur Joint Secretary, UGC	Coordinating Officer 

The Expert Committee constituted vide UGC's letter No 5-40/2023(NSQF) pt. file dated 23.08.2024 **to develop SOP in respect of short-term skill courses/ micro-credentials, developed by the Skill course/micro-credential provider, which would be offered by the Higher Education Institutions (HEIs):**

S.No.	Name and Designation		Signature
1.	Dr. Nirmaljeet Singh Kalsi IAS Retd, Former Chairperson, National Council for Vocational Education and Training (NCVET) Adjunct Professor Public Policy and Governance Management Development Institute Mehrauli Road, Gurugram - 122007	Chairperson	
2.	Dr. Bhimaraya Metri Director Indian Institute of Management Nagpur Nagpur, Maharashtra - 441108	Member	
3.	Mr. Santosh Ananthapura, Head, Corporate Affairs INFOSYS, Bengaluru	Member	
4.	Dr. Vinita Aggarwal Executive Member National Council for Vocational Education and Training 4th Floor Kaushal Bhawan New Moti Bagh, New Delhi- 110023	Member	
5.	Prof. S. G. Deshmukh Department of Mechanical Engineering Indian Institute of Technology Delhi, New Delhi-110016	Member	
6.	Dr. Avichal Raj Kapur Joint Secretary, UGC	Coordinating Officer	

Introduction

Educational opportunities and effective skilling are the driving forces 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 needs of the industry and enhances employment, therefore, is a pressing need.

The National Education Policy 2020, lays emphasis on making 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.

Acquiring skills in emerging areas facilitates increasing the learner's perspective, improving their career prospects and advancing their potential to a higher level. The skill-based courses/micro-credentials promote a culture of lifelong learning, encouraging individuals to continue acquiring knowledge and skills throughout their lives.

The skill-based courses/micro-credentials provide an avenue for continuous professional development and personal growth, thereby fostering a mindset of adaptability and curiosity. They enable individuals to gain exposure to different subjects, helping them identify their areas of interest or passion before pursuing further education or career transitions. They also provide individuals with an added advantage, resulting in better opportunities for future endeavours and thereby meeting current and future skill demands.

Undertaking skill-based courses/micro-credentials has the potential to increase productivity at work, thereby supporting economic growth through a qualified workforce. There is growing importance for Skill-based courses/Micro-credentials in a country like India.

These guidelines are coherent with the objective of the National Education Policy, 2020 that encourages switching from the traditional, content-heavy learning method to holistic learning, thereby enhancing the learners' competence and employability.

1. Relevant UGC, National Credit Framework (NCrF) and other notifications

1.1. National Credit Framework

- i. The **National Credit Framework (NCrF)**, notified by the **UGC** on 10th April 2023, serves as a broad, enabling framework for integrating academic and skill-based education in line with the **National Education Policy (NEP) 2020**. These guidelines and **Standard Operating Procedures (SOPs)** supplement the NCrF, guiding institutions and organizations in implementing skill-based learning effectively.
- ii. The NCrF is a comprehensive framework designed to transform the Indian education system by integrating high-quality academic

instruction with practical skills. This approach aims to make education and skill development aspirational, especially for the youth, ensuring they are well-prepared to contribute to India's demographic dividend.

- iii. The framework seamlessly integrates **academic components, skill components** and **experiential training**.
- iv. For skill-based courses under the **National Higher Education Qualification Framework (NHEQF)**, credit allocation follows a distinct structure:
 - o **Theory:** 1 credit = 15 hours
 - o **Practical:** 1 credit = 30 hours
 - o **Experiential learning:** 1 credit = 40-45 hours
- v. For courses aligned with the **National Skills Qualification Framework (NSQF)**, 1 credit equals **30 hours of learning**, with no distinction between theoretical, practical or experiential learning.
- vi. Additionally, the NCrF allows students to earn **up to 50% of their total credits** from diverse domains, including skill-based courses or micro-credentials.
- vii. For **Skill Universities** offering specialized skill-based programmes, the skill component can be up to **60%** of the total credits and in exceptional cases, it may be raised to **70%** with prior approval from the UGC or the relevant regulatory body. This flexibility ensures that students receive a well-rounded education, with a significant focus on practical and job-ready skills.
- viii. Refer to **Annexure 2** of the SOP for the **Operationalization of the National Credit Framework** for detailed guidelines on implementing the NCrF in higher education, as notified by the UGC at <https://www.ugc.gov.in/pdfnews/SOPs%20for%20implementation%20of%20NCrF%20Final.pdf>

- 1.2. **The following references in the NCrF may be referred to and read with this document for a detailed understanding of these SOPs/Guidelines. The Notified NCrF framework is available at**

https://www.ugc.gov.in/pdfnews/9028476_Report-of-National-Credit-Framework.pdf

- 1.2.1. Section 3.2.5- learning hours- components of learning- detailing components that need to be considered as part of the notional learning hours for counting credits.

- 1.2.2. Section 3.2.5, Table 2- elaborates on the learning hours per year across the various academic grades in Higher Education, School and Vocational Education, Training and Skilling.
- 1.2.3. Section 3.2.9, Table 3-details the NCrF levels for different academic Grade/Vocational Education, Training and Skilling and the Assessment Bands and equivalence.
- 1.2.4. Section 3.2.10, Figure I- the NCrF caters to the creditization of three dimensions of learning i.e, Academic Education (School and Higher), Vocational education, Training and Skilling and relevant experiential learning & proficiency/professional levels achieved.
- 1.2.5. Section 3.3.2, para I-Table 4; Para – II, Table 5; Section 3.3.3 - Table 6: Detail the NCrF levels and credit assignment in School education, Higher education and Vocational Education, Training and Skilling, respectively.
- 1.2.6. Section 3.3.4, Table 7- Credit Assignment for Relevant Experience and Professional/ Proficiency Level Acquired including the calculation of overall credit earned.
- 1.2.7. Section 3.4.1, Table 8- refers to National Credit Framework Levels (NCrF) and corresponding Academic Levels (National School Education, National Higher Education Qualifications Framework), and Vocational Education and Skills Levels (National Skill Qualifications Framework) and conditions for academic equivalence.

1.3. Major Relevant Guidelines notified by UGC

- 1.3.1. **National Higher Education Qualifications Framework (NHEQF):** The National Higher Education Qualification Framework (NHEQF) is a comprehensive framework that classifies qualifications based on a set of performance criteria, approved nationally and comparable with international quality standards. It describes the higher education qualifications leading to a Certificate/Diploma/Degree in terms of Learning Outcomes/Graduate Attributes from Level 4.5 (Undergraduate Certificate) to Level 8 (Doctoral degree).

https://www.ugc.gov.in/pdfnews/2990035_Final-NHEQF.pdf

- 1.3.2. **Curriculum & Credit Framework for Undergraduate Programmes:**

The framework lays minimum credit requirements for the award of the three or four-year degree programme (FYUGP). It also mentions that the student should attain a prescribed number of credits (50% of total credits) through core courses in the major disciplines in which the degree is going to be awarded.

The framework defines credit requirements for the award of the three or four-year degree programme under the components; Major, Minor, Multi-disciplinary, Ability Enhancement Courses, Skill Enhancement Courses, Value Addition Courses, Internship and Research Project.

The framework is available at

https://www.ugc.gov.in/pdfnews/7193743_FYUGP.pdf

- 1.3.3. Table 2 (Minimum credit requirement to award degree under each category) of document Curriculum and Credit Framework for Undergraduate Programmes:

https://www.ugc.gov.in/pdfnews/7193743_FYUGP.pdf to understand the structure of the Undergraduate Program.

- 1.3.4. **Curriculum and Credit Framework for Postgraduate Programmes:** The framework is a testament to student empowerment, giving them freedom, flexibility and choices. The framework has no discipline-specific entry requirements and shows the credit structure and curriculum contents for both one- and two-year PG programmes, also offers an exit option at the end of the first year in two-year PG programmes as per the following pathways:

a) a student is eligible for admission in a PG programme either in the major or minor discipline taken by the student in his/her UG programme;

b) Irrespective of the major or minor disciplines taken by a student in a UG programme, a student is eligible for admission in any discipline of PG programmes if the student qualifies for the National level or University level entrance examination in the discipline of PG programme.

The credit assignment for relevant experience/proficiency is also defined in the framework.

The framework is available at:

https://www.ugc.gov.in/pdfnews/4682468_Curriculum-and-Credit-Framework-for-Postgraduate-Programmes.pdf

- 1.3.5. **UGC (Establishment and Operationalization of Academic Bank of Credits (ABC) Scheme in Higher Education) Regulations, 2021:**

https://www.ugc.gov.in/academic_bank_of_credits.aspx

- 1.3.6. **Guidelines for Multiple Entry and Exit** in Academic Programmes offered in Higher Education Institutions:

https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/abc_doc.pdf

- 1.3.7. **UGC Guidelines for Higher Education institutions to offer Apprenticeship/ internship embedded Degree programmes:**
https://www.ugc.gov.in/pdfnews/9105852_ugc-guidelines_ApprenticeshipInternship.pdf
- 1.3.8. **Guidelines for providing Skill-Based Education under National Skills Qualifications Framework:**
https://www.ugc.gov.in/pdfnews/6556003_Guidelines-for-providing-Skill- Based-Education-under-NSQF.pdf
- 1.4. **Relevant Guidelines notified by NCVET:**
 - 1.4.1. **National Skill Qualification Framework (NSQF) Notification**
<https://ncvet.gov.in/wp-content/uploads/2023/07/National-Skills-Qualification-Framework-notification-June-2023.pdf>
 - i. Section 5.1 and Annexure-I: to understand Level Descriptors to determine the Learning Outcomes at the NSQF level.
 - ii. Section 5.2 and 5.3: refer to defining National Occupation Standards (NOS) and Micro-credentials (MC).
 - iii. Section 5.4 and Annexure-II: explain the minimum entry criteria and minimum range of notional hours for both short-term and Long-term training required to achieve the learning outcomes prescribed for a particular NSQF level.
 - 1.4.2. **Guidelines for Recognition and Regulation of Awarding Bodies (AB):**
<https://ncvet.gov.in/wp-content/uploads/2023/01/Guidelines-for-Awarding-Bodies.pdf>
 - 1.4.3. **Guidelines for Recognition and Regulation of Assessment Agencies:**
<https://ncvet.gov.in/wp-content/uploads/2023/01/Guidelines-for-Assessment-agencies.pdf>
 - 1.4.4. **Guidelines for Blended Learning for Vocational Education, Training & Skilling by NCVET:**
<https://ncvet.gov.in/wp-content/uploads/2023/01/Guidelines-for-Blended-Learning-for-Vocational-Education-Training-Skilling.pdf>
 - 1.4.5. **Guidelines for Development, Approval & Usage of National Occupational Standards (NOS) & Micro-Credentials (MC) by NCVET :**
<https://ncvet.gov.in/wp-content/uploads/2023/07/Guidelines-for-Development-Approval-Usage-of-National-Occupational-Standards-NOS-Micro-Credentials-MC.pdf>

- 1.4.6. **Guidelines for Creditization of Skilling & Training Courses & Qualifications of Multinational Companies (MNCs) and Leading Indian Enterprises by NCVET** (these guidelines also define MNC & Indian Enterprises of Repute)
- 1.4.7. **Guidelines for Recognition of Prior Learning (RPL) by NCVET:**
<https://ncvet.gov.in/wp-content/uploads/2023/08/Final-RPL-guidelines.pdf>
- 1.4.8. **Guidelines on Multiskilling and Cross-Sectoral Skilling by NCVET:**
<https://ncvet.gov.in/wp-content/uploads/2023/01/Multiskilling-and-Cross-Sectoral-Skilling.pdf>
- 1.4.9. **Guidelines for Diploma Qualifications in Vocational Education, Training & Skilling:**
https://ncvet.gov.in/wp-content/uploads/2023/05/DiplomaGuidelines_20230515.pdf

2. Objectives

- 2.1. To establish the foundation for integrating skill development into higher education at all levels through the **introduction of short-term, credit-linked skill-based courses and micro-credentials**. These courses aim to enhance students' **employment opportunities, including self-employment**, by addressing industry-relevant skill gaps.
- 2.2. To enable **Higher Educational Institutions (HEIs) to adopt the National Credit Framework (NCrF) and integrate skilling seamlessly** into the academic curriculum. This allows for the recognition and accumulation of credits from both formal education and skill-based learning, ensuring flexibility in education pathways and facilitating the smooth transition between academic learning and skills.
- 2.3. To cultivate a **comprehensive understanding of best practices and industry standards** that align with the needs of the modern job market, ensuring **enhanced employability of learners through relevant skill development initiatives**.
- 2.4. To ensure learners **acquire practical skills and competencies** that make them **job-ready** for the rapidly evolving demands of the current labour market.
- 2.5. To boost workplace productivity by **promoting upskilling and reskilling courses/** programmes that enable workers to adapt to technological advancements and emerging industry requirements.

- 2.6. To promote the introduction of **demand-driven, industry-focused skill-based courses** that cater to both regional and local employment needs, thereby aligning higher education with regional economic development.
- 2.7. To **leverage the expertise of industry professionals, skilled practitioners and experts for training students**, ensuring that learners receive up-to-date, practical knowledge that aligns with current industry standards.
- 2.8. To **strengthen partnerships between Higher Educational Institutions and industries**, fostering collaboration that supports **curriculum development, internships and job placements**, ultimately enhancing the employability of graduates.

3. Scope and Applicability:

- 3.1. **Every HEI may offer, as part of their UG and PG curricular structure, skill-based courses or micro-credentials** of the appropriate NCeF levels, which are either designed/ developed by the HEI as per the National Higher Education Qualification Framework (NHEQF) and approved by the highest academic body of HEI concerned or adopt the NSQF aligned and approved courses as per the requirement.
- 3.2. Such **skill-based courses or micro-credentials** may be implemented in many different ways by the HEIs as part of the UG/ PG curriculum for their students, as given below:
 - 3.2.1. The **skill-based courses or micro-credentials**, may be NHEQF aligned and are integrated as part of the curricular structure of the UG/PG programme or
 - 3.2.2. The **skill-based courses or micro-credentials** may be NSQF aligned and are integrated as part of the curricular structure of the UG/PG programme or
 - 3.2.3. The **skill-based courses or micro-credentials**, can also be implemented/ offered as **standalone additional courses with credits, not integrated within the curriculum of a UG/ PG programme** over and above their approved curricular structures. The standalone **skill-based courses/micro-credentials** may be from any stream, irrespective of the curricular stream of the UG/PG Programme. Such standalone additional courses may be either NHEQF or NSQF aligned.
- 3.3. The following types/ categories of **skill-based courses/micro-credentials in the HEIs as a credit course shall require the** approval of UGC:
 - 3.3.1. All skill-based courses/micro-credentials credit courses **offered/ run by Leading Indian Enterprises/ Indian Enterprise of Repute, Multinational Companies (MNCs), including Original Equipment Manufacturers (OEM), Original Design**

Manufacturers (ODM) and Value-Added Resellers (VAR) (as defined in **Annexure A**).

- 3.3.2. All NHEQF aligned skill-based courses/micro-credentials credit courses where the **skill component is 50% or more**.
- 3.3.3. Any skill-based courses/micro-credentials **to be published and uploaded with credits on the Swayam Plus Portal**.
- 3.3.4. All NHEQF-aligned skill-based credit courses/micro-credentials credit courses the HEIs are desirous of offering on **their campus** to the students/learners who are **not on their rolls, certifying them and issuing and transferring their credits in ABC account** of such students/learners. This would be only an enabling provision for HEIs to be implemented in the next phase.
- 3.4. These guidelines are applicable to **all Universities** established or incorporated under the **Central, or State Acts** as well as to every institution or affiliated college also, with the permission of the affiliating university or an autonomous college recognized by the University Grants Commission (UGC) under Clause (f) of Section 2 of the UGC Act, 1956. This also includes institutions deemed to be universities under Section 3 of the Act.
- 3.5. These guidelines are also extended to **Indian Enterprises of repute and Multinational Corporations (MNCs)** desirous of offering **skill-based courses/micro-credentials in the HEIs as a credit course**. Such entities must seek UGC's approval for the **skill-based courses/micro-credentials** they wish to offer in the HEIs. The definition and eligibility of Indian Enterprises of repute or MNCs shall be as given in the **MNC Guidelines of NCVET**, as modified by UGC from time to time.
- 3.6. For programmes that fall under the purview of **other regulatory councils/ authorities** (besides UGC), the introduction of skill-based courses and micro-credentials must have **prior approval** from such respective statutory or regulatory bodies.
- 3.7. All students enrolled in a programme at any **Higher Educational Institution (HEI)** are eligible to undertake skill-based courses/micro-credentials. These courses may be pursued either as **domain-specific credits** or **cross-domain or other disciplines or employability enhancement** courses from a wide range of disciplines offered by the HEI.
- 3.8. The maximum permissible credit accumulation through skill-based courses or micro-credentials shall not exceed **50%** of the total credits required for the award of a degree in general universities. In **Skill Universities**, this limit is **60%**, and in exceptional cases, this limit may be extended up to **70%**, to accommodate specialized skill programmes, as per the clause 1.1(vii).
- 3.9. The skill-based courses/micro-credentials can take various forms, provided they meet and conform to the **National Credit Framework**

(NCrF) level 4.5 or higher, with well-defined learning outcomes and assessment methods. The courses may include:

- 3.9.1. **Short-term skilling, upskilling or reskilling** courses at NCrF levels 4.5 and above.
- 3.9.2. **National Occupational Standards (NOSs)** focusing on specific subjects or skill areas, including foundational skills and upskilling.
- 3.9.3. **Micro-Credentials (MCs)** aimed at upskilling or reskilling in specialized areas through short-term, targeted learning modules.
- 3.9.4. **Nano-Credentials (NCs)** for **highly focused orientation or awareness programmes** or skill updates, such as a brief module on a specific topic.
- 3.9.5. **Apprenticeship courses/ qualifications**, at NCrF level 4.5 or above offered as part of Apprenticeship Embedded Degree Programmes or courses or qualifications offered under the Apprentices Act.
- 3.9.6. **Internship**, undertaken during the tenure of UG/PG programmes, which contribute to skill development and are credited as part of the degree subject to achieving defined learning outcomes and proper assessment process jointly with the industry/ organisation.
- 3.9.7. **Skill-based project work** involving defined learning outcomes and assessments conducted in collaboration with industry or institutions with proper assessment process jointly with the industry/ organization.
- 3.9.8. **The skill-based courses/micro-credentials offered by Indian Enterprises of repute and Multinational Corporations (MNCs) and**, where external expertise is leveraged for skill-based training.
- 3.9.9. **A comparative table on Micro-Credentials vs NOSs vs Qualification have been placed in the Annexure B.**
- 3.10. For the purposes of these guidelines, **short-term courses** refer to any skill-based courses/ qualifications, micro-credentials or nano-credentials as described in the Section above, in alignment with the broader objectives of integrating practical skills into higher education.
- 3.11. Components of **skill-based /micro-credentials credit course**: A skill-based course/ qualification may have the following components of learning:
 - 3.11.1. Lectures/ Theory/ Assignments and/or
 - 3.11.2. Practical/ Hands-on Skill Training/ Skilling and/or
 - 3.11.3. Internship/ Project work and/or
 - 3.11.4. Apprenticeship/ Shop-floor training and/or

- 3.11.5. On the Job Training (OJT).
- 3.11.6. Mandatory Assessments and
- 3.11.7. Credit assignment and transfer to ABC
- 3.12. These guidelines are **extension/continuation to the SOPs for Operationalization of National Credit Framework (NCrF)** in Higher Education, Vocational Education, Training and Skilling (VETS) and School Education as notified by UGC in August 2024.

4. Process for the approval of Skill-based Courses/Micro-credentials proposed by HEIs/ Indian Enterprises of repute / MNCs for inclusion into HEI curriculum:

- 4.1. All eligible entities as per clause 3.4 and clause 3.5, desirous of offering **skill-based courses/micro-credentials in the HEIs as a credit course** shall apply to UGC or to the SWAYAM Plus, as may be decided by UGC time to time, for the approval of such skill-based courses/micro-credential courses in the prescribed template and as per the defined process, as amended by UGC from time to time.
- 4.2. Eligible **Indian Enterprises of repute and MNCs** interested in offering skill-based courses or micro-credentials may, similarly, apply to UGC for approval of their **skill-based courses/micro-credentials** after securing their internal approvals according to their establishment protocols. The eligibility of MNCs or Indian Enterprises will be as given in the **MNC Guidelines of NCVET**, as modified by UGC over time.
- 4.3. Every proposal submitted by the **HEI** for the consideration of UGC shall be designed/ developed as per the National Higher Education Qualification Framework (NHEQF) and **approved by the highest academic body of HEI and/or approved by the other regulators/ Professional Council concerned**. Similarly, every proposal submitted by the **MNCs, or reputed Indian Enterprises** shall have their **internal approvals according to their establishment protocols**.
- 4.4. The proposals shall be submitted online on the dedicated **UGC Portal, "Uchattar Kaushal" Portal** or **"उच्चतर कौशल" Portal**. This portal will enable seamless processing of such proposals submitted for the approval of UGC.
- 4.5. The **UGC's prescribed template (Annexure C)** (which may be updated periodically by UGC) shall broadly detail the following key aspects of the **skill-based courses/micro-credentials**:
 - 4.5.1. Compliance with HEI eligibility criteria as mentioned in these guidelines.
 - 4.5.2. Comprehensive details of the proposed **skill-based course or micro-credential**, including the following points:

- i. Course name together with unique identification no. (from NHEQF or NSQF)
- ii. Conformance to NCrF in terms of
 1. Duration in hours
 2. Entry level Criteria
 3. NCrF / NHEQF level /NSQF level
 4. Credits assigned
- iii. Curriculum structure of UG/PG programme, where it is proposed to be integrated/ offered
- iv. Detailed curriculum and content readiness including digital content
- v. Delivery mechanism
- vi. Assessment Methodology/ Assessment Agency
- vii. Major learning outcomes from the course
- viii. Occupational mapping/Structure threads /Taxonomy
- ix. Relevance to discipline/programme or major/ minor degree, if any
- x. The minimum required infrastructure (hard and software), Software etc. and resource availability status
- xi. The availability of trained teachers, academic or industry experts, instructors, lab technicians etc. to deliver the course
- xii. Self-sustenance/ Fees/ financial provisions to support the course
- xiii. An undertaking in the format prescribed by UGC

4.5.3. A copy of the prescribed templates is at **Annexure C**. The UGC may add/modify/edit these templates from time to time depending upon the requirement of the HEIs and the industry.

4.5.4. Evidence of the approval of **skill-based courses/micro-credentials** from relevant statutory bodies or regulators, other than the UGC, as applicable.

4.5.5. An undertaking in the prescribed format (as notified by the UGC and as modified from time to time) certifying that the skill-based course or micro-credential submitted by the higher educational institution /Indian enterprise of repute/MNC is in conformance with the UGC guidelines and aligns to the National Credit Framework.

4.6. **Standing Skill Course Approval Committee (SSC-AC)**

- 4.6.1. A **Standing Skill Course Approval Committee (SSC-AC)** shall be constituted by UGC to examine/ review /evaluate the proposals of skill-based courses or micro-credentials received from HEIs/Indian Enterprises of repute / MNCs in the prescribed template with the prescribed documentary evidence.
- 4.6.2. The **SSC-AC** will include subject matter and industry experts, as needed, to ensure comprehensive review and alignment with guidelines. **The indicative composition of the SSC-AC** is provided in **Annexure D** of the guidelines.
- 4.6.3. The Proposals will be examined /reviewed and evaluated with respect to the conformance to the information required in the template and alignment to the NCrF, NHEQF, other relevant guidelines and provisions of these guidelines. The proposals must ensure alignment with the provisions of NCrF and UGC's guidelines and focus on the integration of **higher-order skills/ hands-on skills** into the higher education ecosystem.
- 4.6.4. The **SSC-AC** shall hold periodic meetings to consider and examine/ review /evaluate the received proposals and make recommendations for approval or otherwise as per these guidelines for consideration and approval of the Commission.
- 4.6.5. The **SSC-AC** will make recommendations on the proposals normally within a period of 2 months from date of online submission on the UGC portal subject to their meeting the conditions for such approval.
- 4.6.6. The Commission may consider to put in place mechanism for expeditious approval of skill-based courses or micro-credentials for special category of Institutions (e.g. top 100 NIRF ranking accredited universities) making the process easier but more accountable.
- 4.7. **Once approved by the Commission, the skill-based course or micro-credential will be notified and listed** on both the **UGC website, Uchhtar Kaushal Portal** and **SWAYAM Plus** portal along with relevant details. This is to ensure **structured accessibility by HEIs, public accessibility by the learners and to enhance transparency cum credibility.**
- 4.8. If the proposal for skill-based course or micro-credential **does not conform to the norms, requirements and compliances prescribed above or is not found suitable for any other reasons**, the HEI or Indian enterprise of repute or MNC **will be notified of the same along with the reasons** and given **six months'** time to address the deficiencies.
- 4.9. If the required changes are not submitted to the conformity of these guidelines within this period, the proposal **may be considered closed.**
- 4.10. Any skill-based course or micro-credential that does not receive approval from the Commission **cannot count towards** the **minimum credit**

requirement for a degree programme. However, it may be offered as an **audit course** without credits with the approval of the statutory bodies of the HEI.

- 4.11. The Courses available on SWAYAM Plus may be validated/ adopted by the UGC through a process for compliance confirmation/ validation of these courses with NCrF, NHEQF/NSQF.
- 4.12. In case of the **proposed skill-based courses/ micro-credentials relating to the Professional Councils**, such courses **shall be approved** by their concerned **regulatory councils**, as applicable.
- 4.13. HEIs may also include the validated skill-based courses/micro-credentials **on-boarded and uploaded on the SWAYAM Plus platform into the curriculum of a UG/PG Programme**.
- 4.14. HEIs may implement the skill-based courses or micro-credentials **duly approved by the respective regulator from other learning platforms only if such courses are recognized by UGC**, as updated from time to time.
- 4.15. If the **skill-based courses/micro-credentials are NSQF aligned and approved qualifications/ courses** have been embedded in the curricular structures and are being offered as part of the UG/PG programme, which is duly approved by the highest academic body concerned of the HEI, **no approval of NCVET would be necessary to embed such courses as integral part of the UG/PG curriculum**. The HEIs may implement and carry out the assessments in respect of such embedded courses, assign credits and award their own NHEQF certificates. The credits earned from such vocational/ skill-based courses from an HEI would not require further validation or approval from NCVET.
- 4.16. In case the skill-based courses/micro-credentials are NSQF aligned and approved by NCVET and are being offered as such without any change by the HEI, no separate approval for offering such courses would be required provided the HEI offering such courses is a dual recognized body of NCVET subject to the provisions of NCrF.
- 4.17. If the HEI itself is an Awarding body (AB) or Deemed AB of NCVET, HEI may also develop an NSQF course/ qualification and get the approval of the National Skills Qualification Committee (NSQC). In all such cases, the credits assigned to the NSQF aligned course/ qualification offered as additional/ standalone course/ qualification would be the same as the credits specified in the NCVET qualification.

5. Delivery and Implementation of Skill-Based Courses/Micro-Credentials

- 5.1. The Skill-based courses or micro-credentials may be offered by the **Higher Educational Institution (HEI)** through the following methods or a

combination thereof, as applicable and appropriate, subject to compliance to these guidelines:

- 5.1.1. The Skill-based courses or micro-credentials may be offered completely by the **HEI concerned in-house, delivered within its statutory jurisdiction or approved campus.**
- 5.1.2. The HEI may implement the **skill-based courses/micro-credentials** through a **collaborative arrangement** between the HEI and the following entities:
 - Government Centre of Excellence/ Training Centers of repute established by Government of India/ State Governments/ PSUs/Autonomous bodies of Ministries
 - Indian Enterprises of repute or MNCs
 - An Industry partner or business establishment (e.g. Skill-based internship, OJT or apprenticeship)
 - A Recognized awarding body of NCVET including **Sector Skill Councils (SSCs)** through their affiliated training centres subject to meeting the standards set in these guidelines.
 - If specialized infrastructure is required, the HEI may collaborate with external skilling facilities such as **Industry Associations, Industry Centers of Excellence, Technology Parks, Global Capability Centres (GCCs) and Research Institutions etc.**
- 5.1.3. An indicative list of such institutions is provided in **Annexure E.**
- 5.1.4. **HEIs shall sign a formal agreement/ MOU with such entities.**
- 5.1.5. HEIs may deliver skill-based courses/micro-credentials in **blended or multimodal pedagogy**, including **online, off-line, onsite and on-the-job training**, in collaboration with the entities mentioned above subject to ensuring compliance with UGC and NCVET guidelines, as applicable in this regard.
- 5.1.6. Courses can be delivered and assessed in **physical, online, hybrid or blended modes**, based on approval from statutory bodies and the provisions contained in these guidelines.
- 5.1.7. For courses requiring hands-on training/practice, at least **50% of the course** must be delivered and assessed in **physical mode, subject to the approval by the regulators concerned.**
- 5.2. **Requirements for implementation of the Skill-Based Courses or Micro-Credentials to be Delivered by HEIs:** For courses delivered entirely by the HEI as per section 5.1.1, the HEI must ensure:
 - 5.2.1. Approval of the course, its curriculum, and the assessment methodology by **HEI's statutory bodies** (e.g., Board of Studies, Academic Council, Board of Management) **and approval of UGC.**

- 5.2.2. Adequate physical and digital **infrastructure, skilling labs, workshops and facilities**, including soft infrastructure, as may be required for implementation of the course.
- 5.2.3. The Infrastructure, faculty, trainers, facilities and any other resources required for effectively delivering the course must have the **approval of the HEI's highest academic bodies so as to ensure its continued availability**.
- 5.2.4. Availability of **qualified faculty, trainers, instructors and experts/ industry experts** to deliver the course. The Courses may be delivered by a range of professionals, including **HEI faculty, Skill Instructors, Industry Experts, Professors of Practice** and experts from recognized institutions.
- 5.2.5. Access to course content and/or **digital content** that adheres to Content Creation and Quality Frameworks, such as those from **Karmayogi Bharat** or **NCVET** or as **adopted and amended by UGC**.
- 5.2.6. Public availability of complete course information on the HEI's website, with provisions to retrieve such data via **API/technology-driven processes**.
- 5.3. **Additional Requirements and Provisions Applicable for implementation:** While delivery of the course through HEIs or in collaboration with other entities, HEIs must also ensure:
 - 5.3.1. Proper notification of the **skill-based course/micro-credential**, including its **entry requirements (Qualifications, Experience etc), NCrF level, assigned credits** on the HEI's website.
 - 5.3.2. HEI must ensure that the course has proper approval by the academic bodies and/ or the regulators concerned.
 - 5.3.3. Assignment of credits based on the applicable framework shall be as follows:
 - For **NHEQF-aligned courses**: 1 credit = 15 hours of theory, 30 hours of practical or 45 hours of experiential learning.
 - For **NSQF-aligned qualifications**: 1 credit = 30 hours of learning, covering theory, practical, and on-the-job training (OJT).
 - 5.3.4. If the course is an NSQF-aligned qualification to be offered by the HEIs to students outside their regular students within the jurisdiction of the HEI, HEIs must seek the recognition of NCVET as an **Awarding Body** or collaborate with an existing Awarding Body.
- 5.4. The HEI shall offer credit-based skill-based courses/micro-credentials as per the **overall credit structure defined in the National Credit Framework**. It is clarified that under the National Higher Education Qualification Framework (**NHEQF**), **Curriculum & Credit Framework for**

Undergraduate Programmes, Curriculum and Credit Framework for Postgraduate Programmes or any other Guidelines the Skill-Based Courses and Micro-Credential may also include the courses offered under the following categories, subject to the condition that the overall credits earned from skill based courses / micro-credentials do not exceed 50% of the total credit requirements for that programme:

- 5.4.1. **Minor (non-core subject)** skill-based courses and micro-credentials.
- 5.4.2. **Multi-disciplinary subject-aligned** skill-based courses and micro-credentials.
- 5.4.3. **Ability Enhancement Courses (AEC).**
- 5.4.4. **Skill Enhancement Courses (SEC).**
- 5.4.5. Courses focused on **employability skills, soft skills, and life skills.**
- 5.4.6. **Value-added courses** common to all undergraduate programs.
- 5.4.7. **Future skill courses/courses in emerging technology areas.**
- 5.5. The indicative list of Skill-Based Courses and Micro-Credentials which can be taken under the Minor (Non-Subjects) or Multidisciplinary Subjects, the indicative broad areas and sub-areas of skill-based courses/micro-credentials that higher educational institutions in India could offer to enhance employability and the category-wise examples of the Skill-Based courses within the relevant categories some of which may be the essential part of the subjects, and some may even be totally aligned with the Major (Core Subjects) and can be taken as such is at **Annexure F, Annexure G and Annexure H.**
- 5.6. The credits earned from skill-based courses may also be counted as part of **minor and major components** of the student's academic programme.

6. Comprehensive Assessment Framework for Skill-Based Courses and Micro-Credentials

The **Higher Educational Institution (HEI), Leading Indian Enterprise/Indian Enterprise of Repute, or MNC** offering skill-based courses or micro-credentials must follow a structured, multi-tiered approach to pre-determined assessment methodology. This ensures consistency, rigor and industry alignment across all courses while considering global standards.

6.1. Adherence to UGC's & NCVET's Established Assessment Methodology

The **University Grants Commission (UGC)** and **National Council for Vocational Education and Training (NCVET)** have defined a robust framework for assessing skill-based courses or micro-credentials, which the HEI, Indian Enterprise of Repute or MNC may follow. This includes:

- **Learning outcomes and Competency-based assessments**, focusing on the application of skills in real-world scenarios.
- Continuous updates and alignment with **UGC guidelines** to ensure assessments are relevant to current industry practices.

6.2. **Internal Assessments by Institutions**

6.2.1. Institutions may choose to conduct assessments internally, provided they:

- All faculty members of the HEI teaching/imparting training in the specific skill-based subjects are competent to carry out the assessment without the need for a separate certification as an assessor.
- Have a cadre of **certified and qualified assessors**.
- Established systems, preferably technology-supported systems, to ensure fair, transparent and consistent evaluations.
- Use recognized tools and methodologies, such as **portfolios, practical tests, simulations, and projects**, to evaluate student competencies comprehensively.

6.2.2. For institutions that are recognized as dual **Awarding Bodies (AB) or deemed Awarding Bodies** by NCVET, they may conduct their own assessments.

6.3. **External Assessments through NCVET recognized Assessment Agencies**

6.3.1. Where institutions lack internal capacity, assessments should be conducted through **NCVET approved assessment agencies**. These agencies ensure impartiality and standardization across assessments, using the following mechanisms:

- **Third-party evaluation**, coordinated by recognized Awarding Bodies, including Sector Skill Councils (SSCs).
- Adoption of **sector-specific tools and standards**, ensuring that assessments reflect current industry requirements.
- **Holistic evaluation techniques** such as practical demonstrations, in addition to written assessments.

6.3.2. NCVET approved Assessment Agencies can either work directly with the HEI or through recognized awarding bodies, ensuring that assessments align with national occupational standards (NOS).

6.4. **Flexibility in Delivery and Assessment Modes**

Skill-based courses can be delivered in **physical, online, hybrid or blended modes**, following UGC's **ODL and Online Regulations** and NCVET's **Blended Learning Guidelines**:

- **Online assessments** must adhere to guidelines ensuring **proctored exams, anti-cheating technologies**, and secure platforms to maintain integrity.
- For hands-on skills training, **50% of the courses** must be conducted and assessed in **physical mode**, ensuring students receive adequate practical exposure.
- **Global best practices** support the use of **virtual labs, simulations** and **interactive modules** for online practical assessments, as seen in global frameworks like the **European Credit Transfer and Accumulation System (ECTS)**.

6.5. Industry Collaboration for Joint Assessments

6.5.1. For industry-based courses, assessments should be **jointly conducted by both the HEI and the industry partner**:

- This ensures that both academic rigor and industry standards are maintained.
- **Practical evaluations**, such as **internships, capstone projects, or on-the-job training**, should be co-assessed by **industry experts** and faculty, with feedback loops ensuring continuous improvement of student competencies.

6.5.2. In line with **UGC's and NCVET's guidelines**, industry partnerships should lead to assessments that are **job-role specific**, ensuring students are ready for employment post-completion of the UG/PG programme.

6.6. Compliance with SWAYAM PLUS Guidelines

For courses offered via **SWAYAM PLUS**, assessments must align with its guidelines, ensuring:

- **Online and blended delivery** modes are fully compliant with **UGC regulations and SWAYAM's assessment policies**.
- Continuous monitoring by **statutory bodies, including regulators**, to ensure compliance with quality standards and to integrate SWAYAM PLUS's digital capabilities for assessments.

6.7. Alignment with International Best Practices

Drawing from international best practices like the **European Qualifications Framework (EQF)** and **UK's Regulated Qualifications Framework (RQF)**, UGC's guidelines and NCVET, HEIs may incorporate the following:

- **Competency-based evaluation models**, as employed by the **Australian Qualifications Framework (AQF)**, where assessments focus heavily on demonstrable skills rather than traditional exams.

6.8. Evaluation Outcome and Reporting

- 6.8.1. After assessments, institutions are responsible for issuing detailed **evaluation reports**, highlighting:
 - **Skills acquired** and competency levels.
 - Areas for **improvement, if any**, and **recommended pathways and occupational maps** for further skill development.
 - Compliance with **NCrF**, ensuring the appropriate credit assignment for skill, theory, and experiential components.
- 6.8.2. Institutions and employers should jointly certify students, reflecting both academic and industry validation of skills. This ensures **enhanced employability** for graduates in the job market

7. Placement Assistance

To ensure that students completing skill-based courses and micro-credentials are well-positioned in the job market, HEIs should develop a structured plan to facilitate employment opportunities. This plan may include the following strategies:

7.1. Career Counseling and Guidance

- Establish **Career Counseling Cells** to assist students in understanding career pathways associated with their acquired skills.
- Provide **guidance on industry expectations**, resume-building, interview preparation, and professional etiquette.
- Conduct **one-on-one career coaching sessions** to help students identify suitable roles based on their skill profile.

7.2. Industry Partnerships and Collaborations

- Forge partnerships with **industry leaders, MNCs, and sector-specific organizations** to create pipelines for job placements and internships.
- Develop **Memorandums of Understanding (MoUs)** with industry partners, outlining roles for industry-based internships, live projects, and recruitment drives.
- Engage **Sector Skill Councils (SSCs)** to align skills with market demands, enhancing job readiness and employability.

7.3. Dedicated Placement Support for Skill-Based Graduates

- Create a dedicated **Placement Support Team** specializing in skill-based course graduates to identify job roles, companies, and industries relevant to the specific skill sets.
- **Job portals** or platforms within the HEI's career services should specifically list opportunities for skill-based course graduates.

- Regularly invite **recruiters and companies** to campus or virtual placement drives focused on students with skill-based certifications and micro-credentials.

7.4. Skill Showcasing Events and Job Fairs

- Host **Industry-Specific Job Fairs** and **Skill Showcasing Events** where students can demonstrate their competencies to potential employers.
- Organize **annual skill exhibitions** where students present projects, products, or innovations developed through their coursework, attracting industry stakeholders and recruiters.

7.5. Internships and Apprenticeships

- Partner with companies to provide **internships or apprenticeships** that lead to potential job placements upon completion.
- Use UGC's **Apprenticeship Embedded Degree Programs** as a model to create employment pathways.
- Offer credit-bearing internships, allowing students to integrate practical experience into their learning, making them more market-ready.

7.6. Alumni Network and Mentorship Programs

- Leverage the **alumni network** to create mentorship programs where former students who are industry professionals provide career advice and placement support.
- Facilitate **networking opportunities** between students and alumni, enhancing connections in relevant sectors.

7.7. Digital Placement and Job Portal Integration

- Establish a **digital placement portal** within the HEI where students can showcase their digital portfolios, certifications, and completed projects.
- Integrate this portal with recognized job platforms, including **SWAYAM Plus**, to ensure that students' achievements are visible to a wider array of recruiters.

7.8. Recognition of Prior Learning (RPL) and Credit Transfer

- Implement Guidelines for **Recognition of Prior Learning (RPL)**, enabling students to showcase their prior experience and skills, improving their employability.
- Facilitate **credit transfer through the Academic Bank of Credits (ABC)**, allowing students to leverage additional qualifications in related skill areas that support career advancement.

7.9. Continuous Feedback from Employers

- Implement a **feedback system** where employers provide insights on students' performance and skill gaps, allowing the HEI to fine-tune its courses and make students more industry-ready.
- Engage with industry experts to validate curriculum relevance and adjust courses based on **market trends and feedback**.

7.10. Tracking and Reporting Outcomes

- Set up a system for tracking **employment outcomes**, including placement rates, job roles, and salary bands, providing valuable data to continuously improve the placement assistance plan.
- Publish annual **placement reports** highlighting success stories and placement statistics, boosting the HEI's reputation and attracting more industry partners.

This Placement Assistance Plan will help HEIs maximize employment opportunities for students completing skill-based courses, fostering relationships with industry and supporting the development of a job-ready workforce.

8. Suggested Areas for skill-based courses/micro-credentials:

The HEIs may offer skill-based courses/micro-credentials from diversified areas. A suggestive list, not limited to the following, is given in **Annexures 'F' and 'G'**.

- 8.1. These areas reflect the growing importance of cross-sectoral & **interdisciplinary knowledge and emerging technologies** in shaping the future workforce. By offering courses in these fields, higher educational institutions in India can better align with market demands, fostering a skilled workforce that is equipped for future challenges and opportunities in a globally competitive environment
- 8.2. The additions of **humanities and social sciences skills** would ensure that the curriculum in higher educational institutions also reflects the critical, analytical and contextual knowledge required in humanities and social sciences. Integrating these areas with sustainability & emerging technologies and market demands enhances the overall employability and adaptability of students, making them better prepared for the challenges of the future.
- 8.3. The areas of **employability skills, soft skills and life skills** including Indian Knowledge System and ethos emphasize a holistic approach to education, ensuring that students are not only technically proficient but also equipped with the soft skills, life skills, and ethical grounding necessary for success in today's dynamic and complex world. By integrating these skills into their curriculum, higher education institutions can significantly enhance their graduates' employability and overall life preparedness. There is also a need for skilling in area of Indian Knowledge systems, which again may be embedded in various programs.

- 8.4. Further, the HEI may offer skill-based courses/micro-credentials in areas identified based on the skill gap studies of the Union Government or State Government or based on reports of local bodies, corporate, advisory, and industry bodies such as CII, FII, NASSCOM, Ministries, State Governments Public Sector Units, etc. among others.

9. Removal of difficulties, minor modifications and interpretations of Guidelines

- 9.1. Removal of Difficulties in implementation: Any difficulty faced during the implementation of these guidelines, within the National Credit Framework (NCrF) and SOPs for implementation of NCrF, may be removed with the approval of the Chairman UGC.
- 9.2. Any minor modification of modification required to be carried out on urgent basis will be issued with the approval of the Chairman UGC and shall be placed before the Commission for post facto approval.
- 9.3. If any issue arises regarding the interpretation of any of the provisions of these Guidelines, the interpretation of the Commission shall be final.
- 9.4. All notifications / orders required to be issued for effective implementation of these Guidelines the Guidelines will be issued with the approval of the Chairman UGC.
- 9.5. These Guidelines have been issued with the approval of the Commission after following the due process of public consultations, so any major modifications shall also be made by following the same due process.



Annexure A

Definitions of the Leading Indian Enterprises, MNCs, OEM, ODM and VAR

S.N.	Entities	Definition	Criteria for getting their Skilling and Training Courses/ Qualifications Recognised
1	Leading Indian Enterprises/ Indian Enterprise of Repute	The leading Indian Enterprises of national importance based on some parameters. These are the enterprises that are leading in India. Many of these leading Indian Enterprises are reputed MNCs as well.	<p>i) Financial Criteria: registered under the Companies Act with Registrar of Companies in India, the annual turnover - at least Rs. 8,000 crore in each of the last three years.</p> <p>ii) Prior Experience: must have conducted skill training or training and assessments for at least 10,000 students/ learners/ employees including their own employees in last three (3) years.</p>
2	Multinational Companies (MNCs)	Multinational Corporations or Multinational Companies are enterprises that operate in one or more countries other than their native country. MNCs are globally reputed successful firms that usually follow the global standards.	<p>i) Financial Criteria: The MNCs with headquarter outside India must have operations in at least five (5) countries including India with a minimum annual turnover of US\$ 2 Billion (two billion dollar) in each of the last three years.</p>
3	Original Equipment Manufacturer (OEM)	An Original Equipment Manufacturer (OEM) makes systems or components that are used in another company's end product.	<p>ii) Prior Experience: must have conducted skill training and assessments for at least 2,50,000 students/ learners/ employees globally including their own employees in the last three (3) years, out of which at least 10,000 should be in India.</p>
4	Original Design Manufacturer (ODM)	The Original Design Manufacturers (ODMs) operate differently from OEMs. They ideate, design and manufacture, including development of products in-house which are subsequently purchased by diverse clientele.	
5	Value Added Reseller	A Value-Added Reseller (VAR) is a company that works with an Original Equipment Manufacturer (OEM) to sell the OEM's products. The VAR buys the products at a discounted price and then adds extra services, like support, demonstrations, or customization, before selling them to customers. In return for these added services, the VAR charges a higher price to the customer.	

Annexure B
Micro-Credentials vs NOSs vs Qualification

Headers\Type	Micro-Credentials	NOSs	Qualifications
Utilization	Upskilling	Upskilling, Bridge courses, Skilling	Upskilling, Reskilling, Skilling
No of Hours	Ideally in Multiple of 7.5 Can be of 15, 22.5 or up to 30 hours	<ul style="list-style-type: none"> • Standard – In multiple of 30 hours • Special Requirement – In multiple of 15 hours 	Multiple of 30 From 150 to 1200 hours
Types (Adoption guidelines may be used to minimise duplication)	<ul style="list-style-type: none"> • Public: Available for adoption by anyone including content • Private: Open Curriculum/Content IPR with Awarding Body(AB)/Industry Body 	<ol style="list-style-type: none"> 1. Applicability wise: Generic/ Domain 2. Structure wise: Mandatory/ Optional 3. Approval wise: Standalone /As Part of qualification 	<ol style="list-style-type: none"> 1. Short Term Training 2. Long Term Training (Qualification can be cross sectoral/multi sectoral/ Apprenticeship)
Industry Validations	5 for Public Micro-Credentials 1 for Private 2 for Future Skills qualifications	As required for standard qualification approval	30 for New Qualification 21 for Revised with Changes. 5 for Revised without Changes 5 for future Skills Qualifications
Levels	Can come at all levels Will be same as the entry level. However, it is suggested to create less than 15 hours courses only for level 6 and above	Possible at all levels	Possible at all levels (1-8)
Suggested Delivery Mechanism	Preferably on-line	As per Blended guidelines	As per Blended guidelines
Credit Range	0.25-1 (For example 7.5 Hrs/30 Hrs= 0.25 credits and 15 Hrs shall be 0.5 and so on)	1-8 (For example 60 Hrs/30 Hrs=2 credits and so on)	5-40(per year) (540 Hrs/30 Hrs = 18 credits and so on)
Suggested Assessment Methodology	Preferably on-line	As per Blended guidelines	As per Blended guidelines

Annexure C

Standard Template For Skill-Based Courses And Micro-Credentials

Template for introducing Short Term Courses in HEIs

<Qualification/Course Name>

< Major Program name>

< Minor Program name>

Short Term Training (STT) **Upskilling**

General **Multi-skill (MS)** **Cross Sectoral (CS)** **Future Skills**

Heritage-Traditional **Entrepreneurship**

NCrF/NHEQF Level:

Submitted By:

< Submitting Body Name>

<Submitting Body Contact Details>

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Section 1: Basic Details

1.	Qualification/Course Name												
2.	Sector(s)												
3.	Sub-sector(s)												
4.	Occupation(s) Name <i>(As per Occupational Map or NCO if available.)</i>												
5.	Type of Qualification/Course: <input type="radio"/> <input type="radio"/> Qualification has: <input type="checkbox"/> Electives <input type="checkbox"/> Options <i>(Select none, both or either or None, as applicable)</i>												
6.	Code & Version <i>(Issued after NSQC approval.)</i>	a. Code: b. Version:	7. NCrF/NHEQF Level										
8.	Award (Certificate/Diploma/Advance Diploma/ Degree, Any Other), if applicable												
9.	Brief Description of the Qualification/course												
10.	Eligibility Criteria for Entry	a. Entry Qualification & Relevant Experience: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">S. No.</th> <th style="width: 55%;">Academic/Skill Qualification (with Specialization - if applicable)</th> <th style="width: 35%;">Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)						
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)											
		b. Age: <Please specify age only in case of any legal restrictions>											

<p>11.</p>	<p>Training Duration by Modes of Training Delivery (Specify training <i>Duration</i> as per selected training delivery modes and as per requirement of the qualification. Refer Blended Learning guidelines and provide details in the Annexure.)</p>	<p><input type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended</p> <table border="1" data-bbox="678 240 2011 616"> <thead> <tr> <th rowspan="2">Qualification Components (Compulsory/Electives/Options)</th> <th colspan="2">Classroom (offline)</th> <th colspan="2">Online</th> <th rowspan="2">OJT- Mandatory (Hours)</th> <th rowspan="2">Total (Hours)</th> <th rowspan="2">Credits</th> </tr> <tr> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> </tr> </thead> <tbody> <tr> <td>Compulsory Components</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="8">Total Number of Electives in this qualification (If applicable):</td> </tr> <tr> <td colspan="8">Minimum Number of Electives necessary for an award (If applicable):</td> </tr> <tr> <td>Elective 1: <Specify name></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Elective 2: <Specify name></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="8">Total Number of Options (If applicable):</td> </tr> <tr> <td>Option 1: <Specify name></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>a. Minimum Notional Hours (Including Elective/s of Minimum duration, wherever applicable):</p> <p>b. Maximum Notional Hours (Including all Electives and Options, wherever applicable):</p> <p>Note: 1. Insert/delete Elective/Option rows in the above table as per the requirement of the qualification. 2. Actual Training duration for the qualification will depend as per selected Electives and Options.</p>	Qualification Components (Compulsory/Electives/Options)	Classroom (offline)		Online		OJT- Mandatory (Hours)	Total (Hours)	Credits	Theory (Hours)	Practical (Hours)	Theory (Hours)	Practical (Hours)	Compulsory Components								Total Number of Electives in this qualification (If applicable):								Minimum Number of Electives necessary for an award (If applicable):								Elective 1: <Specify name>								Elective 2: <Specify name>								Total Number of Options (If applicable):								Option 1: <Specify name>								Total							
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Option 1: <Specify name>																																																																														
Total																																																																														
<p>12.</p>	<p>Credits Assigned to this Qualification, Subject to Assessment (As per National Credit Framework (NCrF). If qualification has Electives or Options, specify both Minimum and Maximum Credits.)</p>	<p>a. Minimum Credits (Including Elective/s of Minimum duration, wherever applicable):</p> <p>b. Maximum Credits (Including all Electives and Options, wherever applicable):</p>																																																																												
<p>13.</p>	<p>Credits Validity Period (As per NCrF SOP)</p>	<p><input type="radio"/> <input type="radio"/> <input type="radio"/></p>																																																																												
<p>14.</p>	<p>Any Licensing requirements for Undertaking Training on This Qualification (Wherever applicable.)</p>	<p>a. Name of the License:</p> <p>b. Issuing Authority:</p>																																																																												

15.	Infrastructure requirement	c.	
16.	Progression Path after Attaining the Qualification <i>(Please show Professional and Academic progression, as applicable. In case of multiple progression options, mention them separately, including cross sectoral progression.)</i>		
17.	Content Availability Timeline for this qualification	a. Current qualification: b. Content available for previous version of qualification <i>(if applicable):</i> <input type="checkbox"/> Student's/Learner's Handbook <input type="checkbox"/> Teacher's/Trainer's Guide <input type="checkbox"/> Digital Content <input type="checkbox"/> Any Other:	
18.	Is similar Qualification(s) available on any other platform? if yes, provide details of similar qualifications with justification for this qualification	<input type="checkbox"/> No <input type="checkbox"/> Yes If yes, Justification: ,	
19.	Name and Contact Details of Submitting Body SPOC <i>(In case of Cross-Sectoral or Multi-Skill qualification provide details of both Lead AB & Supporting ABs.)</i>	Name: Email: Website:	Contact No.:
20.	Date of Approval by UGC/SCC:	21. Validity Duration:	22. Next Review Date

Section 2: Module Summary

NOS(s)/MC(s)/NC(s)/Module of Qualifications

NOS.- National Occupational Standards MC - Micro-Credential NC -Nano-Credential

Specify the training duration and assessment criteria at NOS/MC/NC/Module level. For further details refer to the curriculum document.

Formative assessment marks of the qualification to be included in result calculations.

(Formative assessment for a qualification is optional. If the check box is checked, then the specified Formative assessment marks are to be included in the Total.)

Note: For all hands-on, practical, and viva assessments, video evidence needs to be captured and maintained through the assessment platform.

Compulsory Components:

(Mandatory for the qualification and award. Insert/delete rows in the tables as per requirement.)

Th. - Theory Pr. - Practical OJT Man. - On the Job Mandatory Training Proj. - Project

S. No	Component Details				Core / Non-Core	NCrF/NHEQ F Level	Training Duration (Hours)				Assessment Marks*** (As applicable)						
	Type (NOS/MC/NC/ Module)	Name	Code *	Version *			Th.	Pr.	Total (Excluding OJT)	OJT*	Formative Assessment	Summative Assessment				Total	*Weightage (%)
												Th.	Pr.	Proj.	Viva		
1.																	
2.																	
3.																	
4.																	
5.																	
6.																	
Duration (in Hours) / Total Marks																	
Grand Total Including OJT Duration (in Hours) **																	

* If applicable. ** Provide cumulative OJT duration for the qualification. The Grand Total should include Theory, Practical and OJT duration.

*** Refer NCVET guidelines for assessments. Formative assessment for a qualification is optional. If the Check box — “Formative assessment marks of the qualification to be included in result calculations.”, is checked, then include the Formative assessment marks in the Total, which will be counted in result calculations.)

For summative assessment, specify marks for the given assessments type Th./Pr./Proj. /Viva as per requirement, ensuring each component of the qualification is evaluated.

(Insert/delete Elective/Option table and rows as per requirement of the qualification. Specify the Elective Number and name, as per requirement.)

Elective 1: <Specify Elective name>

S. No	Component Details				Core/Non-Core	NCrF/NHEQF Level	Training Duration (Hours)				Assessment Marks*** (As applicable)						
	Type (NOS/MC/NC/Module)	Name	Code*	Version*			Th.	Pr.	Total (Excluding OJT)	OJT*	Formative Assessment	Summative Assessment				Total	*Weightage (%)
												Th.	Pr.	Proj.	Viva		
1.																	
2.																	
3.																	
Duration (in Hours) / Total Marks																	
Grand Total Including OJT Duration (in Hours)																	

* If applicable. ** Provide cumulative OJT duration for the qualification. The Grand Total should include Theory, Practical and OJT duration.

*** Refer NCVET guidelines for assessments. Formative assessment for a qualification is optional. If the Check box — “Formative assessment marks of the qualification to be included in result calculations.”, is checked, then include the Formative assessment marks in the Total, which will be counted in result calculations.)

For summative assessment, specify marks for the given assessments type Th./Pr./Proj. /Viva as per requirement, ensuring each component of the qualification is evaluated.

Option 1: <Specify Option Name>

* If applicable. ** Provide cumulative OJT duration for the qualification. The Grand Total should include Theory, Practical and OJT duration.

*** Refer NCVET guidelines for assessments. Formative assessment for a qualification is optional. If the Check box — “Formative assessment marks of the qualification to be included in result calculations.”, is checked, then include the Formative assessment marks in the Total, which will be counted in result calculations.)

For summative assessment, specify marks for the given assessments type Th./Pr./Proj. /Viva as per requirement, ensuring each component of the qualification is evaluated.

S. No	Component Details				Core / Non-Core	NCrF/NSQ F Level	Training Duration (Hours)				Assessment Marks*** (As applicable)						
	Type (NOS/MC/NC/Module)	Name	Code *	Version *			Th .	Pr .	Total (Excluding OJT)	OJT*	Formative Assessment	Summative Assessment				Total	*Weightage (%)
												Th .	Pr .	Proj .	Viva		
4.																	
5.																	
6.																	
Duration (in Hours) / Total Marks																	
Grand Total Including OJT Duration (in Hours) **																	

Assessment - Minimum Qualifying Percentage (OPTIONAL)

Please select any one of the following:

<input checked="" type="radio"/>	Minimum Pass Percentage - Aggregate at Qualification Level:	___% (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)
<input type="radio"/>	Minimum Pass Percentage – NOS/MC/NC/Module-wise:	___% (Every Trainee should score specified minimum passing percentage in each mandatory and selected Elective and Option component to successfully clear the assessment.)
<input type="radio"/>	Minimum Pass Percentage – Theory and Practical Aggregate at Qualification Level:	Theory: ___% and Practical: ___% (Every Trainee should score specified minimum aggregate passing percentages in both theory and practical at qualification level to successfully clear the assessment.)

Section 4: Training Related

1.	Trainer’s Eligibility and experience in the relevant sector (in years)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 15%;">Minimum Educational Qualification</th> <th rowspan="2" style="width: 15%;">Specialization</th> <th colspan="2" style="width: 20%;">Relevant Experience</th> <th colspan="2" style="width: 20%;">Training Experience</th> <th rowspan="2" style="width: 15%;">Remarks</th> </tr> <tr> <th style="width: 5%;">Years</th> <th style="width: 15%;">Specialization</th> <th style="width: 5%;">Years</th> <th style="width: 15%;">Specialization</th> </tr> </thead> <tbody> <tr> <td><i>Diploma</i> SAMPLE</td> <td><i>Agriculture/ Horticulture</i></td> <td style="text-align: center;">2</td> <td><i>Experience required in Horticulture and related field</i></td> <td style="text-align: center;">1</td> <td><i>Teaching Horticulture and related subject</i></td> <td rowspan="2"><i>Ex-Serviceman including Ex Paramilitary personnel: Minimum Qualification is 10+2</i></td> </tr> <tr> <td><i>Graduate</i> SAMPLE</td> <td><i>Agriculture / Horticulture /Botany/ Forestry</i></td> <td style="text-align: center;">1</td> <td><i>Experience required in Horticulture and related field</i></td> <td style="text-align: center;">1</td> <td><i>Teaching Horticulture and related subject</i></td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>Trainer’s Certification (Wherever applicable)</p> <p style="margin-left: 20px;">a. Domain Certification: b. Platform Certification: c. Any other specialized certification:</p>	Minimum Educational Qualification	Specialization	Relevant Experience		Training Experience		Remarks	Years	Specialization	Years	Specialization	<i>Diploma</i> SAMPLE	<i>Agriculture/ Horticulture</i>	2	<i>Experience required in Horticulture and related field</i>	1	<i>Teaching Horticulture and related subject</i>	<i>Ex-Serviceman including Ex Paramilitary personnel: Minimum Qualification is 10+2</i>	<i>Graduate</i> SAMPLE	<i>Agriculture / Horticulture /Botany/ Forestry</i>	1	<i>Experience required in Horticulture and related field</i>	1	<i>Teaching Horticulture and related subject</i>							
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		Years	Specialization	Years	Specialization																												
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2.	Master Trainer’s Qualification and experience in the relevant sector (in years)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 15%;">Minimum Educational Qualification</th> <th rowspan="2" style="width: 15%;">Specialization</th> <th colspan="2" style="width: 20%;">Relevant Experience</th> <th colspan="2" style="width: 20%;">Training Experience</th> <th rowspan="2" style="width: 15%;">Remarks</th> </tr> <tr> <th style="width: 5%;">Years</th> <th style="width: 15%;">Specialization</th> <th style="width: 5%;">Years</th> <th style="width: 15%;">Specialization</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p>Master Trainer’s Certification: (Wherever applicable)</p>	Minimum Educational Qualification	Specialization	Relevant Experience		Training Experience		Remarks	Years	Specialization	Years	Specialization																				
Minimum Educational Qualification	Specialization	Relevant Experience			Training Experience		Remarks																										
		Years	Specialization	Years	Specialization																												
3.	Tools and Equipment Required for Training	<input type="checkbox"/> Yes <input type="checkbox"/> No (If “Yes”, details to be provided in Annexure)																															

NCVET ToT guidelines may be referred to if needed

Section 5: Assessment Related

1 Assessor’s Eligibility and experience in relevant sector (in years) <i>(As per NCVET guidelines. If multiple combinations of qualification and experience are envisaged, mention each combination)</i>	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th rowspan="2" style="width: 25%;">Minimum Educational Qualification</th> <th rowspan="2" style="width: 15%;">Specialization</th> <th colspan="2" style="width: 20%;">Relevant Experience</th> <th colspan="2" style="width: 20%;">Training/Assessment Experience</th> <th rowspan="2" style="width: 18%;">Remarks</th> </tr> <tr> <th style="width: 10%;">Years</th> <th style="width: 10%;">Specialization</th> <th style="width: 10%;">Years</th> <th style="width: 10%;">Specialization</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Assessor’s Certification <i>(Wherever applicable, as per NCVET Guidelines.)</i></p> <ul style="list-style-type: none"> a. Domain Certification: b. Platform Certification: c. Any other specialized certification: 	Minimum Educational Qualification	Specialization	Relevant Experience		Training/Assessment Experience		Remarks	Years	Specialization	Years	Specialization																					
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		Years	Specialization																														
3 Master Assessor’s/Proctor’s Eligibility and experience in relevant sector (in years)	<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th rowspan="2" style="width: 25%;">Minimum Educational Qualification</th> <th rowspan="2" style="width: 15%;">Specialization</th> <th colspan="2" style="width: 20%;">Relevant Experience</th> <th colspan="2" style="width: 20%;">Training/Assessment Experience</th> <th rowspan="2" style="width: 18%;">Remarks</th> </tr> <tr> <th style="width: 10%;">Years</th> <th style="width: 10%;">Specialization</th> <th style="width: 10%;">Years</th> <th style="width: 10%;">Specialization</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <p>Master Assessor’s Certification: <i>(Wherever applicable)</i></p>	Minimum Educational Qualification	Specialization	Relevant Experience		Training/Assessment Experience		Remarks	Years	Specialization	Years	Specialization																					
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NCVET ToA guidelines may be referred to if needed

Section 6: Evidence of the Need

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study by AB/Indian/Global Organisations (Study not older than 3 years) (Yes/No):
2.	Latest Indian/Global Market, Research Reports, or any other source (Not older than 2 years) (Yes/No):
3.	Government /Industry initiatives/ requirement (Yes/No):
4.	Number of Industry validation provided:
5.	Estimated number of persons to be trained and employed:

Section 7: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name.

1.	Annexure: NCrF/NHEQF level justification based on NCrF level/NHEQF descriptors <i>(Mandatory)</i>	
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	
6.	Annexure: Acronym and Glossary <i>(Optional)</i>	
7.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	
8.	Supporting Document: Career Progression <i>(Mandatory – Public view)</i>	
9.	Supporting Document: Occupational Map <i>(Mandatory)</i>	
10.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	
11.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrF/NHEQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NHEQF level descriptor	NCrF/NSQF Level
Knowledge and understanding			
General, technical and professional skills required to perform and accomplish tasks			
Application of knowledge and skills			
Generic learning outcomes			
Constitutional, humanistic, ethical, and moral values			
Employability and job ready skills, and entrepreneurship skills and capabilities/qualities and mindset			

Refer NHEQF Guidelines of UGC (https://www.ugc.gov.in/pdfnews/2990035_Final-NHEQF.pdf)

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size

Classroom Aids

The aids required to conduct sessions in the classroom are:

- 1.
- 2.

Annexure: Industry Validations Summary

Provide summary information of all the industry validations in table. This is optional for MNC qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)

The industry validation is as per requirement,

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities

Data to be provided year-wise for the next 3 years.

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET "Guidelines for Blended Learning for Vocational Education, Training & Skilling" available on:

<https://ncvet.gov.in/wp-content/uploads/2023/01/Guidelines-for-Blended-Learning-for-Vocational-Education-Training-Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline: Online Ratio
1	Theory/ Lectures - Imparting theoretical and conceptual knowledge (Yes/No)		
2	Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners (Yes/No)		
3	Showing Practical Demonstrations to the learners (Yes/No)		
4	Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training (Yes/No)		
5	Tutorials/ Assignments/ Drill/ Practice (Yes/No)		
6	Proctored Monitoring/ Assessment/ Evaluation/ Examinations (Yes/No)		
7	On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training (Yes/No)		

Annexure: Detailed Assessment Criteria

Ensure the Module Summary Assessment Marks are mapped to the Detailed Assessment Criteria.

Detailed assessment criteria for each NOS/MC/NC/Module are as follows (Refer NCVET Guidelines):

Component Type (NOS/MC/NC/Module)	NOS/MC/NC/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
		Total Marks				
		Total Marks				
		Grand Total				

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program. Mention the detailed assessment strategy in the provided template in accordance with the concerned UGC/NCVET guidelines, as applicable ([sample](#)).

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

(Add/delete as per requirement.)

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf

(Add/delete as per requirement.)

Annexure D

The indicative composition of the Standing Skill Course Approval Committee (SSC-AC) to be constituted by UGC to examine/ review and evaluate the proposals of skill-based courses or micro-credentials

1. Person of Eminence as the Chairman of the Committee
2. Representative of UGC
3. Representative of AICTE
4. Representative of NCVET
5. Representative of NCTE
6. Representatives of IIT, NIT, IIIT and IISER
7. Two representatives of a top-ranked universities at national level
8. Two representatives of the top-ranked state universities
9. Two representatives of industry bodies (CII, NASSCOM, PHDCCI, FICCI, ASSOCHAM, etc.) by rotation
10. Joint Secretary of UGC - Member Secretary

Committee Composition of 15 members may be reviewed from implementation perspective as the Committee may have to meet frequently in initial period.

Annexure E

The indicative list of institutions and organizations that specialize in providing infrastructure for high-end skill-based training:

1. Industry Associations and Chambers of Commerce

- **Example:** The **Confederation of Indian Industry (CII)** is one of the leading trade associations, fostering collaboration between the private sector and the government to boost industrial growth. Another prominent body is the **Federation of Indian Chambers of Commerce and Industry (FICCI)**, which advocates for policy changes across various sectors and engages in international trade promotion. The **Associated Chambers of Commerce and Industry of India (ASSOCHAM)** is also a key player, representing the interests of businesses in manufacturing, technology, and services. The **PHD Chamber of Commerce and Industry (PHDCCI)** is focusing on industrial and socio-economic development.
- **Role:** These organizations collaborate with businesses to offer specialized infrastructure for skill development programs, providing access to industry-standard equipment and technology.

2. Sector Skill Councils (SSCs)

- **Example:** Automotive Skill Development Council (ASDC), IT-ITeS Sector Skill Council
- **Role:** SSCs provide industry-specific infrastructure and training resources, focusing on equipping learners with the necessary tools and facilities for hands-on experience in vocational skills.

3. Corporate Training Centers

- **Role:** Corporations create in-house training centers with cutting-edge infrastructure to train employees, using advanced technology, simulators, and equipment related to their industries.

4. Technology Parks and Incubation Centers

- **Example:** International Tech Park Bangalore (ITPB), STPI (Software Technology Parks of India)
- **Role:** These parks provide access to state-of-the-art infrastructure for skill development, especially in tech-related fields like software development, IoT, AI, and robotics.

5. Government-Owned Training Facilities

- **Example:** National Skill Development Corporation (NSDC) Centers of Excellence, Pradhan Mantri Kaushal Kendras (PMKKs)
- **Role:** Government centers offer specialized infrastructure for large-scale vocational training, equipped with modern labs and tools for industry-aligned skill development.

6. Research and Development Institutions

- **Example:** Indian Space Research Organisation (ISRO) training centers, Fraunhofer Institutes (Germany)

- **Role:** These institutions have world-class R&D infrastructure that also provides hands-on skill-based training in applied sciences, space technology, advanced manufacturing, and engineering.

7. Industrial Clusters and Special Economic Zones (SEZs)

- **Example:** Noida SEZ, Automotive Industrial Clusters in Chennai
- **Role:** These clusters offer shared infrastructure for industries, including high-tech manufacturing equipment, which is used for specialized skill training in collaboration with industries.

8. International Organizations and Development Agencies

- **Example:** United Nations Industrial Development Organization (UNIDO), World Bank skill development projects
- **Role:** These organizations fund and establish specialized training infrastructure in developing countries, providing access to advanced labs and industry-specific training equipment.

9. Equipment Manufacturers and Tech Companies

- **Role:** Manufacturers of industrial equipment and technology firms offer dedicated training centers with state-of-the-art machinery, software, and simulators to upskill individuals in cutting-edge technologies.

10. Universities with Industry Collaboration

- **Example:** Technical University of Munich (TUM) with its industry labs, MIT Fab Labs
- **Role:** Universities with strong ties to industry establish advanced research and training centers, providing learners with access to modern labs and hands-on experience in fields like AI, robotics, and biotechnology.

11. **Vocational Training Providers recognised by Regulators or affiliated to an Awarding body (AB) Role:** Specialized vocational training providers offer high-end infrastructure, including technical labs and workshops that are industry-specific for IT, manufacturing, and automotive skills.

12. Defense and Military Training Institutes

- **Example:** Indian Army Training Command, National Defense Academy (USA)
- **Role:** Military institutes possess state-of-the-art simulators, advanced technical equipment, and labs used for high-end skill development in areas like aviation, cybersecurity, and defense technology.

13. Public-Private Partnerships (PPP)

- **Example:** Tata STRIVE, Maruti Suzuki Training Academy
- **Role:** Public-private initiatives collaborate to set up infrastructure for skill training, combining government resources with industry expertise to deliver industry-aligned vocational education.

14. Innovation and Skill Hubs

- **Example:** Skill Hubs under the WorldSkills program, UK's Catapult Centers
- **Role:** These hubs provide specialized training infrastructure in areas such as advanced manufacturing, digital skills, and engineering, offering access to modern equipment and hands-on learning.

15. Non-Governmental Organizations (NGOs) and Social Enterprises Role: NGOs involved in skill development often partner with industries to establish infrastructure that offers access to high-end technology and training facilities for underserved communities.

16. Govt. Science and Technology Labs

- **Example:** Council of Scientific and Industrial Research (CSIR) labs, DRDO (Defense Research and Development Organisation) labs, National Institutes of Health (NIH) in the US
- **Role:** Government science and technology labs offer cutting-edge infrastructure for training in advanced scientific research, engineering, biotechnology, materials science, and defense technologies, supporting specialized skill development for high-tech sectors.

17. Community Colleges and Polytechnics

- **Example:** Centennial College (Canada), Swiss Polytechnics
- **Role:** These institutions provide high-quality vocational training with access to specialized labs and technical infrastructure, preparing students for immediate entry into the workforce with industry-ready skills.

18. Trade Associations

- India has a diverse range of major trade associations that represent different sectors of the economy, playing a crucial role in promoting industry interests, driving policy reforms, and facilitating skill development.
- **Example:** In the small and medium enterprise (SME) sector, the **Federation of Indian Micro and Small & Medium Enterprises (FISME)** and **National Small Industries Corporation (NSIC)** support MSME growth through policy advocacy and access to resources. For specific industries, associations like the **Automotive Component Manufacturers Association of India (ACMA)**, **Retailers Association of India (RAI)**, and **Indian Electrical & Electronics Manufacturers' Association (IEEMA)** promote standards and address sectoral challenges. The **National Association of Software and Service Companies (NASSCOM)** drives growth in India's IT and tech industries. These associations play a vital role in shaping India's economic landscape through advocacy, training, and fostering international partnerships.
- **Role:** Trade associations often set up industry-specific training centers with modern equipment, offering workshops and hands-on training for skill development across various industries.

19. Centers of Excellence (CoEs)

- **Example:** Center of Excellence in Cyber Security (India), Welding CoEs

- **Role:** CoEs focus on developing advanced skills in niche areas by providing high-end infrastructure and facilities to train professionals on industry-specific technologies and methodologies.

20. Technical Training Institutes for Emerging Technologies

- **Example:** AICTE's emerging technologies labs (India),
- **Role:** These institutes provide infrastructure for advanced skill development in cutting-edge technologies such as AI, machine learning, networking, and cloud computing, helping bridge the skills gap in the tech industry.

This updated list includes **government science and technology labs** as key institutions that offer high-end infrastructure for specialized, skill-based training, particularly in areas like scientific research, defence, and advanced engineering.

Annexure F

The indicative list of Skill-Based Courses and Micro-Credentials which can be taken under the Minor (Non-Subjects) or Multidisciplinary Subjects,

Some of these may be the essential part of these subjects and some may even be totally aligned with the Major (Core Subjects) and can be taken as such.

1. B.A. History

- 1.1. Digital History and Archives Management
- 1.2. Public History and Heritage Tourism
- 1.3. Digital Storytelling in History
- 1.4. Global Perspectives in History
- 1.5. Cultural Resource Management
- 1.6. Heritage Conservation and Restoration
- 1.7. Public Policy and History
- 1.8. Applied Linguistics in Historical Research
- 1.9. AI in Historical Research
- 1.10. Digital Mapping for Historians
- 1.11. Entrepreneurship in Heritage
- 1.12. Data Analysis for Historians

2. B.A. Political Science

- 2.1. Political Psychology and Behavior Analysis
- 2.2. Data Analysis for Political Science
- 2.3. Digital Advocacy and Campaigning
- 2.4. AI Applications in Political Analysis
- 2.5. Negotiation and Diplomacy Skills
- 2.6. Leadership and Management in Politics
- 2.7. Media and Political Communication
- 2.8. Political Risk Analysis and Forecasting
- 2.9. Policy Advocacy and Lobbying
- 2.10. International Development and Aid Management
- 2.11. Crisis Management and Emergency Response
- 2.12. Ethics and Governance in Politics

3. B.A. Sociology

- 3.1. Social Entrepreneurship
- 3.2. Data Visualization for Social Sciences
- 3.3. Environmental Sociology
- 3.4. Digital Sociology
- 3.5. Cultural Anthropology
- 3.6. Social Media Management
- 3.7. Community Development
- 3.8. Conflict Resolution and Mediation
- 3.9. AI and Social Research

4. B.A. Economics

- 4.1. Applied Econometrics
- 4.2. Behavioral Economics
- 4.3. Financial modelling and valuation
- 4.4. Econometric Forecasting
- 4.5. Development Economics
- 4.6. Applied Macroeconomics
- 4.7. Financial Markets and Institutions
- 4.8. Game Theory and Strategic Decision Making
- 4.9. AI and Financial Markets
- 4.10. International Finance
- 4.11. Urban and Regional Economics
- 4.12. Health Economics

5. B.A. Philosophy

- 5.1. Research Methodology and Philosophical Inquiry
- 5.2. Philosophy and Technology: Ethics in the Digital Age
- 5.3. Intercultural Philosophy and Global Perspectives
- 5.4. Ethical Leadership and Decision Making
- 5.5. Project Management for Philosophical Initiatives
- 5.6. Public Speaking and Communication Skills
- 5.7. Creative Writing and Philosophical Expression

6. B.A. English

- 6.1. Literary Editing and Publishing
- 6.2. Digital Storytelling and narrative Design
- 6.3. Screenwriting and Film Adaptation
- 6.4. Literary Journalism and Feature Writing
- 6.5. Book Marketing and Promotion
- 6.6. AI and Literary Analysis
- 6.7. Applied Linguistics and Language Teaching
- 6.8. Creative Writing

7. B.A. Commerce

- 7.1. Data Analytics and Business Intelligence
- 7.2. Digital Marketing
- 7.3. e-commerce and e-Business
- 7.4. Sustainability and Corporate Social Responsibility (CSR)
- 7.5. Personal Finance and Investment Planning
- 7.6. Business Negotiation and Conflict Resolution
- 7.7. Introduction to AI in Business
- 7.8. Global Trade and Logistics
- 7.9. Innovation and Technology Management
- 7.10. Cybersecurity for Business

8. B.A. Psychology

- 8.1. Psychological Assessment and Testing Techniques
- 8.2. Psychotherapy Techniques and Practices

- 8.3. Behavioral Economics
- 8.4. Neuropsychology
- 8.5. Sports Psychology
- 8.6. Forensic Psychology
- 8.7. Digital Mental Health Interventions
- 8.8. Psychometrics Cyberpsychology
- 8.9. AI and Machine Learning in Psychological Research

9. B.Sc. Physics

- 9.1. Advanced Instrumentation and Measurement Techniques
- 9.2. Computational Fluid Dynamics
- 9.3. Artificial Intelligence in Physics
- 9.4. Data Science for Physicists
- 9.5. Space Science and Technology
- 9.6. Renewable Energy Systems
- 9.7. Robotics and Automation
- 9.8. Photonics and Optoelectronics
- 9.9. Quantum Computing Fundamentals

10. B.Sc. Chemistry

- 10.1. Bioinformatics in Chemistry
- 10.2. Chemical Safety and Hazard Management
- 10.3. Environmental Monitoring and Analysis
- 10.4. Nanotechnology in Chemistry
- 10.5. Introduction to AI in Chemistry
- 10.6. Quality Control and Assurance in Chemistry
- 10.7. Chemical Process Optimization
- 10.8. Advanced Organic Synthesis
- 10.9. Computational Chemistry
- 10.10. Sustainable Chemistry Practices
- 10.11. Biomedical Applications of Chemistry
- 10.12. Advanced Instrumentation Techniques

11. B.Sc. Biology

- 11.1. Pharmacology and Drug Development
- 11.2. Biomedical Research Methods
- 11.3. Clinical Trials Management
- 11.4. Biostatistics and Epidemiology
- 11.5. Bioinformatics and Computational Biology
- 11.6. Foundations of AI Technologies for Biology
- 11.7. Stem Cell Biology and Regenerative Medicine
- 11.8. Biopharmaceutical Manufacturing
- 11.9. Genetics and Genomics Analysis
- 11.10. Immunology and Vaccine Development

12. B.Sc Geography

- 12.1. Geospatial Intelligence and Analysis

- 12.2. Natural Resource Management and Conservation Planning
- 12.3. Geodemographics and Market Analysis
- 12.4. Geospatial Modeling and Simulation
- 12.5. Community Development and Social Justice
- 12.6. Remote Sensing Applications in Agriculture
- 12.7. GIS for Public Health Analysis
- 12.8. Climate Change Adaptation Strategies
- 12.9. Geographic Information System (GIS) Applications in Business
- 12.10. Environmental Impact Assessment
- 12.11. Urban Planning and Design

Annexure G

The indicative broad areas and sub-areas of skill-based courses/micro-credentials that higher educational institutions in India could offer to enhance employability

1. Information Technology and Computer Science

- **Artificial Intelligence (AI) and Machine Learning (ML)**
 - Deep Learning
 - Natural Language Processing (NLP)
 - AI Ethics and Governance
 - Responsible AI
- **Data Science and Analytics**
 - Big Data Analytics
 - Business Intelligence
 - Predictive Analytics
- **Usage of AI across various business verticals**
 - Healthcare
 - Agriculture
 - Logistics & Supply chain
- **Cybersecurity**
 - Ethical Hacking
 - Cyber Threat Intelligence
 - Digital Forensics
- **Blockchain Technology**
 - Blockchain Development
 - Cryptocurrencies and Smart Contracts
 - Decentralized Applications (DApps)
- **Cloud Computing**
 - Cloud Infrastructure and Services
 - DevOps and Cloud Automation
 - Multi-Cloud Strategy
- **Internet of Things (IoT)**
 - IoT Architecture and Protocols
 - IoT Security
 - Smart Cities and Industrial IoT
- **Automated testing**
 - Automation testing lifecycle
 - Testing automation and DevOps
 - Types of testing automation
- **DevOps**
 - DevOps as an accelerator to Agile software development
 - Continuous integration
 - Continuous delivery
- **Full stack development**
 - Need for Full stack development and the components

- User interface, middle tier and backend
- Developing enterprise apps using full stack development

2. Engineering and Advanced Manufacturing

- **Robotics and Automation**
 - Industrial Robotics
 - Human-Robot Interaction
 - Autonomous Systems
- **3D Printing and Additive Manufacturing**
 - Materials for 3D Printing
 - Design for Additive Manufacturing
 - Rapid Prototyping
- **Renewable Energy Technologies**
 - Solar and Wind Energy Systems
 - Energy Storage Solutions
 - Smart Grids and Microgrids
- **Smart Manufacturing (Industry 4.0)**
 - Digital Twins
 - Industrial IoT and Automation
 - Advanced Production Planning

3. Life Sciences and Biotechnology

- **Genomics and Personalized Medicine**
 - Gene Editing (CRISPR)
 - Bioinformatics
 - Pharmacogenomics
- **Biomedical Engineering**
 - Medical Imaging and Diagnostics
 - Biomedical Devices and Wearables
 - Tissue Engineering
- **Agricultural Biotechnology**
 - Precision Agriculture
 - GMO Technology and Regulation
 - Biofuels and Bioenergy
- **Environmental Biotechnology**
 - Waste Management and Recycling
 - Bioremediation
 - Sustainable Agriculture

4. Business and Management

- **Digital Marketing and E-commerce**
 - Social Media Marketing
 - SEO and SEM Strategies
 - Online Consumer Behavior
- **Entrepreneurship and Innovation**
 - Startup Incubation and Scaling
 - Venture Capital and Funding

- Innovation Management
- **Financial Technologies (FinTech)**
 - Digital Payments and Banking
 - Cryptocurrencies and Blockchain in Finance
 - RegTech and InsurTech
- **Supply Chain Management and Logistics**
 - Supply Chain Analytics
 - Global Trade and E-commerce Logistics
 - Sustainable Supply Chain Management
 - Supply Chain Optimisation

5. Creative Arts and Design

- **Digital Media and Animation**
 - 3D Animation and Visual Effects (VFX)
 - Game Design and Development
 - Virtual and Augmented Reality (VR/AR)
- **Graphic and User Experience (UX) Design**
 - User-Centered Design
 - Interaction Design
 - Prototyping and Usability Testing
- **Fashion Technology**
 - Sustainable Fashion Design
 - Textile Innovation
 - Fashion Marketing and E-commerce

6. Health Sciences

- **Public Health and Epidemiology**
 - Global Health Challenges
 - Health Data Analytics
 - Pandemic Preparedness and Response
- **Telemedicine and Digital Health**
 - Health Informatics
 - Remote Patient Monitoring
 - AI in Healthcare
- **Mental Health and Wellness**
 - Clinical Psychology
 - Behavioral Health Technologies
 - Workplace Wellness Programs

7. Social Sciences and Humanities

- **Digital Humanities**
 - Data Visualization in Humanities Research
 - Digital Archiving and Preservation
 - Computational Social Science
- **Environmental Studies and Sustainability**
 - Climate Change Policy and Action
 - Sustainable Development Goals (SDGs)

- Environmental Law and Governance
- **Psychology and Behavioral Sciences**
 - Cognitive Neuroscience
 - Human-Computer Interaction (HCI)
 - Social Media and Behavior

8. Interdisciplinary and Emerging Areas

- **Quantum Computing**
 - Quantum Algorithms and Programming
 - Quantum Cryptography
 - Quantum Machine Learning
- **Space Technology**
 - Satellite Communication
 - Spacecraft Design and Engineering
 - Astrobiology and Planetary Sciences
- **Nanotechnology**
 - Nanomaterials and Nanostructures
 - Nanoelectronics
 - Nanomedicine

9. Humanities and Social Sciences

- **Cultural Studies and Media**
 - Digital Media Literacy
 - Globalization and Cultural Identity
 - Media Ethics and Law
- **International Relations and Global Studies**
 - Geopolitics and Global Governance
 - International Security Studies
 - Human Rights and Global Justice
- **Sociology and Anthropology**
 - Urban Sociology and Smart Cities
 - Social Inequality and Justice
 - Cultural Heritage and Preservation
- **Political Science and Public Policy**
 - Public Administration and Governance
 - Policy Analysis and Evaluation
 - Comparative Politics and International Organizations
- **Economics**
 - Behavioral Economics
 - Development Economics
 - Environmental Economics and Sustainability
- **Philosophy and Ethics**
 - Ethics of Technology and AI
 - Environmental Ethics
 - Philosophy of Science and Technology
- **Psychology**

- Organizational Psychology and HRM
- Positive Psychology and Well-being
- Social Psychology and Group Dynamics
- **Gender and Women's Studies**
 - Gender and Development
 - Feminist Theory and Practice
 - Gender in Media and Culture
- **Education and Pedagogy**
 - Educational Technology and e-Learning
 - Curriculum Development and Instructional Design
 - Inclusive Education and Special Needs
- **Law and Legal Studies**
 - Cyber Law and Data Protection
 - Environmental Law and Policy
 - Human Rights Law and International Law

10. Employability Skills

- **Career Development**
 - Resume Writing and Job Search Strategies
 - Interview Preparation and Techniques
 - Networking and Professional Relationships
- **Entrepreneurial Skills**
 - Business Planning and Strategy
 - Financial Literacy for Entrepreneurs
 - Startup Ecosystem and Innovation
- **Project Management**
 - Agile Methodologies and Scrum
 - Time Management and Productivity
 - Risk Management and Mitigation Strategies
- **Digital Literacy**
 - Basic and Advanced Computing Skills
 - Social Media for Professional Networking
 - Cybersecurity Awareness

11. Soft Skills

- **Communication Skills**
 - Verbal and Non-Verbal Communication
 - Public Speaking and Presentation Skills
 - Writing Skills for the Workplace
- **Leadership and Teamwork**
 - Leadership Styles and Practices
 - Team Dynamics and Collaboration
 - Conflict Resolution and Negotiation
- **Emotional Intelligence**
 - Self-Awareness and Self-Regulation
 - Empathy and Relationship Management

- Stress Management and Resilience
- **Critical Thinking and Problem Solving**
 - Analytical Thinking
 - Decision-Making Processes
 - Creative Problem Solving Techniques

12. Life Skills

- **Personal Financial Management**
 - Budgeting and Saving
 - Investment Planning and Retirement Savings
 - Understanding Taxes and Financial Products
- **Health and Wellness**
 - Physical Fitness and Nutrition
 - Mental Health Awareness
 - Work-Life Balance and Stress Reduction
- **Social Responsibility and Ethics**
 - Civic Engagement and Volunteerism
 - Environmental Stewardship
 - Ethical Decision-Making in Daily Life
- **Adaptability and Lifelong Learning**
 - Coping with Change and Uncertainty
 - Continuous Learning and Personal Development
 - Technology Adaptation in Daily Life

13. Digital Literacy and Media Studies

- **Information Literacy**
 - Evaluating Online Information Sources
 - Research Skills and Data Analysis
 - Understanding Misinformation and Fake News
- **Media Production Skills**
 - Graphic Design
 - Video and Audio Editing
 - Subtitle & content creation
 - Content Creation for Digital Platforms
 - Storytelling and Scriptwriting for Media
 - Games & Simulation model creation
- **Social Media Management**
 - Building and Managing Online Presence
 - Social Media Analytics
 - Crisis Management on Social Media
- Digital Communication and Media Production
- Media Ethics and Online Behavior
- Data Privacy and Cybersecurity Awareness

14. Sociology and Technology

- Social Impact of Emerging Technologies

- Technology and Social Equity
- Technology Adoption and Change Management

15. Workplace Skills and Professional Development

- Remote Work Technologies and Management
- Leadership and Change Management in Tech-Enriched Environments
- Digital Collaboration Tools and Techniques

16. Ethics, Integrity and Professionalism

- **Workplace Ethics**

- Understanding Professional Codes of Conduct
- Maintaining Integrity in Professional Settings
- Ethical Decision-Making in Business

- **Corporate Governance**

- Transparency and Accountability
- Corporate Social Responsibility (CSR)
- Ethical Leadership in Organizations

Annexure H

The category-wise examples of the Skill-Based courses within the relevant categories

1. Employability Skills

- Entrepreneurship
- Basics of start-ups and Entrepreneurship – leadership, project planning, management, financing, and entrepreneurship
- Critical thinking, problem-solving, and design thinking

2. Soft Skills

- Content Writing
- Health and Wellness - courses focusing on mental health counseling, nutrition and dietetics, and fitness training

3. Life Skills

- Yogic Sciences
- Health and Wellness - courses focusing on mental health counseling, nutrition and dietetics, and fitness training

4. Information Technology and Computer Science

- Digital Commerce
- Digital awareness and emerging technologies
- Basic Coding in Computing Languages
- Mobile Communication
- Digital Marketing: Search Engine Optimization (SEO), social media marketing, and e-commerce management
- Financial Technology (FinTech) - courses in digital payments, blockchain technology, digital currencies, and financial regulations
- Artificial Intelligence and Machine Learning
- AI for work productivity
- Cloud Computing
- Cyber Security and Digital Forensics
- Data Analytics and Data Management
- Exploratory Data Analysis
- Data Science for Beginners, Introduction to Cybersecurity
- Digital Forensics
- Security Infrastructure Specialist
- Prevention of Cyber Crime and Fraud Management
- Information System Security Audit
- Data Analytics for Finance Professionals

- Data Engineering and Visualization
- Data Center Management
- System Administration
- Embedded IoT Development
- C/C++
- Basics of Digital Commerce for Open Networks

5. Business and Management

- Basic Cost Accounting
- Goods and Service Tax (GST)
- GST Audit and Assessment Procedure (ACGAA)
- Risk Management
- Audit
- Resource Optimization Techniques
- Supply chain and logistics
- Advertising
- Event Management
- Hospitality Management/Tourism
- Basics of start-ups and Entrepreneurship – leadership, project planning, management, financing, and entrepreneurship
- Digital Banking (Remote Proctored)
- Banking & Finance
- Investment Management
- Concurrent Audit of Banks
- Credit Management of Banks
- Treasury and International Banking
- Wealth Management Professional
- Financial Modeling and Valuation
- Internal Audit
- Filing of Returns
- Income Tax Assessment and Appeals
- International Trade

6. Creative Arts and Design

- Graphic Design
- Fashion Technology, Fashion design, stitching, etc.
- Film & TV Production
- Game Design

- Animation
- Media Communication

7. Life Sciences and Biotechnology

- Life Sciences
- Basics of Clinical Data Management
- Advanced Data Capture Techniques in Clinical Data Management
- Clinical Data Validation and Quality Control
- Clinical Data Reporting and Analysis
- Foundation for Pharma Sales & Marketing
- Product promotion with Registered Medical Practitioner
- Retail Chemist Prescription Audit
- Retail Pharmacy Management & Sales
- Pharmacovigilance – Case Processing (Incidents/Adverse Event using Software)
- Aggregate Report Writing for Regulatory Compliance

8. Engineering and Advanced Manufacturing

- Cost & Management Accounting for Engineers

9. Ethics, Integrity, and Professionalism

- Anti-Money Laundering and Know Your Customer
- Forensic Audit
- Information System Security Audit
- Security Infrastructure Specialist
- Climate Risk and Sustainable Finance

This categorization aligns each course with its relevant educational focus, ensuring that students can select courses that best fit their career goals and the skills they wish to develop.