CURRICULUM AND CREDIT FRAMEWORK FOR FIVE YEAR INTEGRATED PROGRAMMES (CCFYIP)

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1.0. Introduction

Education plays a significant role in the holistic development of the student. A robust, flexible, multidisciplinary education framework with "Learner Centric Pedagogy" could effectively transform a student into a global citizen of tomorrow to catalyze nation's growth and development. The National Education Policy 2020 (NEP 2020) outlines the goals, objectives, and policies for the development and improvement of education across all levels. The NEP 2020 is a comprehensive and ambitious policy that aims to transform the Indian education system and makes it more student-centric, holistic and to align with the needs of the 21st Century. Some of the key features of the NEP 2020 include:

- Multidisciplinary, flexible and equitable education framework for the holistic development of learners
- Emphasis on skill-based education, vocational education and apprenticeship/internship
- Encourage critical thinking, creativity and problem-solving skills
- Increase the Gross Enrollment Ratio (GER) in higher education to 50% by 2035
- Promotion of Indian languages, art, culture and heritage
- Emphasis on Multidisciplinary, Interdisciplinary, and Transdisciplinary research to develop innovative solutions to overcome societal issues

NEP 2020 advocates that a holistic and multidisciplinary education would aim to develop all capacities of human beings -intellectual, aesthetic, social, physical, emotional, and moral in an integrated manner. Five Year Integrated programmes are specialized and focused programmes which enable students to complete their Bachelor's and Master's degrees in one go. Students enrolled in Five Year Integrated Programmes right after school (class 12), and thus help them to choose a stream of their interest and graduate with a Master's Degree making them ready to start their career from the get-go.

2.0. Objectives

The following objectives of NEP2020 are kept in perspectives while designing the Framework for Integrated Programmes:

- ➢ To provide multidisciplinary and holistic education to learners to ensure the unity and integrity of all knowledge;

➢ To provide flexibility so that learners have the ability to choose programmes, according to their talents and interests;

➢ To eliminate harmful hierarchies among disciplines/fields of study and silos between different areas of learning;

➢ To promote creativity and critical thinking and to encourage logical decision-making and innovation;

➢ To promote ethics and human &constitutional values among the learners;

➢ To promote multilingualism and the power of language in learning and teaching;

➢ To impart life skills such as communication, cooperation, teamwork, and resilience;

➢ To promote outstanding research as a co-requisite for outstanding education and development; and

➢ To incorporate Indian Knowledge System relevant for a particular discipline or field of studies.

3.0 Scope of the Framework

The Curriculum and Credit Framework for Five Year Integrated Programmes is applicable to all the five year programmes offered by the University.

4.0. Main features of Framework

The Curriculum and Credit Framework for Five Year Integrated Programmes includes the following features:

i. Opportunity for learners to choose the courses of their interest in all disciplines

ii. Provision of multiple entry and exit options with a UG Certificate or UG Diploma or UG Degree depending on the number of credits earned

iii. Flexibility for students to move among the institutions through the implementation of Academic Bank of Credits(ABC)

iv. Flexibility to switch to alternative modes of learning (Offline, ODL, Online, and Hybrid modes)

v. Versatile curricular framework for holistic development of graduate

Definition of Keywords

Course:

Course refers to a paper having specified credits which is a component of a programme in a discipline/subject. The course defines the learning objectives and learning outcomes. A

course may be designed comprising credits for lectures/tutorials/laboratory work/field work/outreach activities/project work/internship/vocational training etc. or combination thereof.

Credit:

Credit is the weightage given to each course of study. It is the numerical value assigned to a course according to the relative importance of the contents and the contact hours required to teach the prescribed syllabi of the programme.

Discipline Specific Course (DSC)/Major Course:

Discipline specific/Major course is the discipline or subject of main focus in which the degree will be awarded. Students should secure the prescribed number of credits (atleast 50% of total credits) through Discipline Specific Course/Major Course in the major discipline.

Minor Course (MIC):

Minor discipline is the discipline that helps a student to gain a broader understanding beyond the major discipline. For example, if a student pursuing Economics as major course may choose Statistics as minor course.

Vocational Course (VOC):

Vocational Course assists student in developing workforce-relevant skills and enhance the employability of student.

Multidisciplinary Course (MDC):

A Multidisciplinary Course is an option to explore disciplines of interest beyond the choices of learners made in their major and minor disciplines.

Ability Enhancement Course (AEC):

Ability Enhancement Course aims to achieve competency in language and communication skills.

Skill Enhancement Course (SEC):

Skill Enhancement Course aims to promote skills pertaining to a particular field of study, impart practical skills, hands-on training, soft skills, etc., in order to enhance the student's employability.

Internship:

Internship is a course to develop a professional ability through an appropriate learning. The duration of Internship is of 120 hours during summer vacation.

Research Thesis:

Research thesis involves applications of knowledge in exploring, analyzing and solving real-life situations/problems.

Value Added Course (VAC):

Value Added Course aims to add the knowledge of learner beyond academic disciplines.

Semester/Academic Year

A semester comprises 90 working days and an academic year is divided into two semesters.

Academic Bank of Credit (ABC)

Academic Bank of credit is an academic service mechanism to facilitate students to become its academic account holders, thereby paving the way for seamless student mobility between or within degree-granting Higher Educational Institutions through a formal system of credit recognition, credit accumulation, credit transfers and credit redemption to promote distributed and flexible teaching-learning. ABC will digitally store the academic credits earned by students from HEIs registered with ABC for awarding degrees/diplomas/certificates taking into account credits earned by students.

Academic Bank Account

Academic Bank Account is an individual account with the Academic Bank of Credits opened and operated by a student, to which all academic credits earned by the Student from course(s) of study are deposited, recognized, maintained, accumulated, transferred, validated or redeemed for the purposes of the award of degree/diploma/certificates etc. by an awarding institution.

Multiple Entry and Exit Points

These are stages where the students may have options for entry and exit as per UGC Guidelines for Multiple Entry and Exit in Academic Programmes.

Credit Point

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

Grade Point

It is a numerical weight allotted to each letter grade on a 10-point scale.

Letter Grade

It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.

Semester Grade Point Average (SGPA)

The SGPA is the ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.

Cumulative Grade Point Average (CGPA)

The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

5.0. Eligibility

A person who has passed 10+2 examination from Haryana Board of School Education or any other examination recognized by the M.D. University, Rohtak as equivalent thereto shall be eligible for admission. The detailed eligibility conditions e.g. percentage of marks in the qualifying examinations, subject(s) combination etc. shall be notified in the Admission Brochure/Prospectus as approved by the Academic Council from time to time.

6.0. Programme Structure

The five year integrated degree programme is designed for ten semesters, or five years with multiple entry and exit options.

6.1 Major and Minor disciplines

Major discipline is the discipline or subject of main focus and the degree will be awarded in that discipline. Students should secure the prescribed number of credits (about 50% of total credits) through core courses in the major discipline.

Minor discipline helps a student to gain a broader understanding beyond the major discipline. For example, if a student pursuing an Economics major obtains a minimum of 12 credits from a bunch of courses in Statistics, then the student will be awarded B.A. degree in Economics with a Minor in Statistics.

6.2 Awarding UG Certificate, UG Diploma, and Degrees

UG Certificate: Students exiting the programme after second semester and securing 48 credits including 4 credits of summer internship will be awarded UG Certificate in the

relevant Discipline/Subject. These students are allowed to re-enter the degree programme within three years and – complete the degree programme within the stipulated maximum period of eight years.

UG Diploma: Students exiting the programme after fourth semester and securing 96 credits including 4 credits of summer internship will be awarded UG Diploma in the relevant Discipline/Subject. These students are allowed to re-enter within a period of three years and complete the degree programme within the maximum period of eight years.

3-year UG Degree: Students who wish to undergo a 3-year UG programme will be awarded UG Degree in the Major discipline after successful completion of three years, securing 136 credits and satisfying the minimum credit requirement as given in Table 1.

4-year UG Degree (Honours): A four-year UG Honours degree in the major discipline will be awarded to those who complete a 4-year degree programme with 184 credits and have satisfied the credit requirements as given in Table 1.

4-year UG Degree (Honours with Research): A four-year UG Honours degree with Research in the major discipline will be awarded to those who complete a 4-year Honours degree with Research with 184 credits including 12 credits from a research project/dissertation and satisfied the credit requirements as given in Table 1. The students who secure 75% marks in first six semesters will be eligible to pursue UG Degree (Hons. with Research)

5- Year PG Degree: A five year PG Degree will be awarded to the students, who secure 224 credits including 12 credits from a dissertation and satisfied the credit requirements as given in Table 1.

The statutory bodies of the Universities such as the Board of Studies and Academic Council shall finalize the course list for various programmes.

The Curriculum and Credit Framework for Five Year Integrated Programmes is detailed in the Table 1 & 2.

Table1: Minimum Credit Requirements to Award Degree under Each Category

S. No.	Broad Category of Course	Minimum Credit Requirement as per UGC Guidelines		Five Year Integrated Programmes				
		3-year UG	4-Year UG	3-year UG	4-Year UG (Hons.)	4-Year UG (Hons. With Research)	5- Year PG with 4-Year UG (Hons.)	5- Year PG with 4-Year UG (Hons. With Research)
1	Major/Discipline Specific Courses (DSC)	60	80	76	116	104	140	128
2	Minor Course (MIC including Vocational Courses [VOC])	24	32	24	32	32	32	32
3	Multidisciplinary Courses (MDC)	09	09	09	09	09	09	09
4	Ability Enhancement Courses (AEC)	08	08	08	08	08	08	08
5	Skill Enhancement Courses (SEC)	09	09	09	09	09	09	09
6	Value Added Courses (VAC)	06 – 08	06 – 08	06	06	06	06	06
7	Internship	02 – 04	02 – 04	04	04	04	08	08
8	Research Project / Dissertation	-	12	-	-	12	12	24
	Total	**120**	**160**	**136**	**184**	**184**	**224**	**224**

Table 2: Structure of Five Year Integrated Programme   (UG + PG)

A. Structure of UG Program (First three years of Five year Integrated Program)

Semester	Discipline-Specific Courses (DSC) / Major Course	Minor(MIC)/ Vocational (VOC)	Multidisciplinary courses (MDC)	Ability Enhancement courses (AEC)	Skill Enhancement Courses (SEC)/ Internship /Dissertation/Research Project	Value-Added Courses (VAC)	Total Credits
I	DSC - A1 @ 4 credits	MIC1 @ 4 credits	MDC1 @ 3 credits	AEC1 @ 2 credits	SEC1 @ 3 credits	VAC1 @ 2 credits	22
	DSC – A2 @ 4 credits						
II	DSC – A3 @ 4 credits	MIC2 @ 4 credits	MDC2 @ 3 credits	AEC2 @ 2 credits	SEC2 @ 3 credits	VAC2 @ 2 credits	22
	DSC – A4 @ 4 credits						
Students exiting the programme after second semester and securing 48 credits including 4 credits of summer internship will be awarded UG Certificate in the relevant Discipline/Subject (44)						
III	DSC – A5 @ 4 credits	MIC3 @ 4 credits	MDC3 @ 3 credits	AEC3 @ 2 credits	SEC3 @ 3 credits		24
	DSC – A6 @ 4 credits						
	DSC – A7 @ 4 credits						
IV	DSC – A8 @ 4 credits	MIC4(VOC) @ 4 credits	--------------------	AEC4 @ 2 credits	--------------------	VAC3 @ 2 credits	24
	DSC – A9 @ 4 credits						
	DSC – A10 @ 4 credits						
	DSC – A11 @ 4 credits						
Students exiting the programme after fourth semester and securing 96 credits including 4 credits of summer internship will be awarded UG Diploma in the relevant Discipline/Subject (92)						
V	DSC – A12 @ 4 credits	MIC5(VOC) @ 4 credits	--------------------	--------------------	Internship @ 4 credits#	--------------------	24
	DSC – A13 @ 4 credits						
	DSC – A14 @ 4 credits						
	DSC – A15 @ 4 credits						
VI	DSC – A16 @ 4 credits	MIC6(VOC) @ 4 credits	--------------------	--------------------	--------------------	--------------------	20
	DSC – A17 @ 4 credits						
	DSC – A18 @ 4 credits						
	DSC – A19 @ 4 credits						
Students exiting the programme will be awarded 3-year UG Degree in relevant Discipline/Subject upon securing 136 credits. (136)						

#Four credits of internship earned by a student during summer internship after 2nd semester or 4th semester will be counted in 5th semester of a student who pursue 3 year UG Programmes without taking exit option

B. Structure of PG Program (Last two years of Five year Integrated Program)

	Semester	Discipline-Specific Courses (DSC)	Skill Enhancement Courses (SEC) / Vocational Courses (VOC)/ Internship	Research thesis/project	Total Credits
First year of 2 Year PG program (NHEQF Level 6)					
	VII	DSC 1 @ 4 credits	SEC1/VOC 1/Internship 1 @ 4 credits	---	24
		DSC 2 @ 4 credits			
		DSC 3 @ 4 credits			
		DSC 4 @ 4 credits			
		DSC 5 @ 4 credits			
	VIII	DSC 6 @ 4 credits	SEC2/VOC2/Internship 2 @ 4 credits	---	24
		DSC 7 @ 4 credits			
		DSC 8 @ 4 credits			
		DSC 9 @ 4 credits			
		DSC 10 @ 4 credits			
Students who exit after first year on completion of 48 credits will be awarded PG Diploma in concerned discipline					
Second year of two year PG program (NHEQF Level 6.5) (STUDENT SHOULD SELECT ANY ONE OPTION FOR THE SECOND YEAR OF 2 YEAR PG PROGRAM)					
Only Course Work					
Option 1	IX	DSC 11 @ 4 credits	SEC 3/Internship 3/ Project Work 1 @ 4 credits	---	24
		DSC 12 @ 4 credits			
		DSC 13 @ 4 credits			
		DSC 14 @ 4 credits			
		DSC 15 @ 4 credits			
	X	DSC 16 @ 4 credits	SEC4/Internship 4/ Project Work 2 @ 4 credits	---	24
		DSC 17 @ 4 credits			
		DSC18 @ 4 credits			
		DSC19 @ 4 credits			
		DSC20 @ 4 credits			
Course work and Research					
Option 2	IX	DSC 11 @ 4 credits	SEC 3/Internship 3 @ 4 credits	---	24
		DSC 12 @ 4 credits			
		DSC 13 @ 4 credits			
		DSC 14 @ 4 credits			
		DSC 15 @ 4 credits			
	X	--	SEC4/Internship 4 @ 4 credits	Research thesis/project @20 credits	24
Only Research (only for the students who have completed 3 Years Bachelor's Program)					
	Semester	Discipline-Specific Courses (DSC)	Skill Enhancement Courses (SEC) / Vocational Courses (VOC)/ Internship	Research thesis/project	Total Credits
Option 3	IX	--	SEC3/Internship 3 @ 4 credits	20 credits*	24
	X	--	SEC4/Internship 4 @ 4 credits	20 redits**	24

Note:

* The students who opted Option 3 should submit a project report/synopsis of at least 50 pages

comprising of Literature survey, identification of Research Problem, Plan of work, methodology

as well as practical work (if any) at the end of 3rd semester and the same will be evaluated by internal and external examiners.

**The students should continue the research work in 4th semester based on the project work/synopsis submitted at the end of 3rd semester. The final thesis/project report will be evaluated by the internal and external examiners.

NOTE:

DSC / MC	**Discipline Specific Course / Major Course:** Credit of a DSC /major course could be the combination of lecture credits, tutorial credits, and practical credits.
MIC including VOC	Minor Course (MIC) with minimum 24 Credits including Vocational Course (VOC)
MDC	**Multidisciplinary Course:** All students must undergo introductory level multidisciplinary courses relating to **Natural Sciences, Physical Sciences, Humanities, Arts & Social Sciences, Commerce & Management, Interdisciplinary Studies** during first three semesters. Students are not allowed to choose or repeat courses already studied at the higher secondary level (12th class) or opted as major and minor stream under this category.
AEC	**Ability Enhancement Course:** Ability Enhancement (Language) courses may be designed to achieve competency in the Modern Indian Language and English, with a special emphasis on language and communication skills.
SEC	**Skill Enhancement Course:** Skill Enhancement Courses may be primed to impart practical skills, hands-on training, soft skills, etc., to enhance the student's employability.
Summer Internship	Internships will require 120 hours (1 credit: 30 hrs of engagement) of involvement working with local industry, government or private organizations, business organizations, artists, crafts persons, and similar entities during summer vacation.
Research Project/ Dissertation	Research Project/ Dissertation for UG degree (Honors with Research)/ PG Degree will be completed in the eighth/tenth semester under the guidance of a faculty member.
VAC	All UG students must undergo at least three Value Added Courses (VAC)

DSC Major and Minor in I& II Semesters will have Foundation or Introductory level courses. DSC Major and Minor in III & IV semesters will be Intermediate Level Courses. Whereas DSC Major and minor in V & VI shall be of higher level courses and in VII, VIII, IX & X semesters, advanced level courses will be offered.

6.3. Credit hours for different types of courses

A credit is a unit by which the workload relating to a course is measured. It determines the number of hours of instruction required per week over the duration of a semester (minimum 15 weeks).

Required contact hours to earn credits will be as follows:

Nature of Work	Course Credits	Contact hours per week	Contact hours per semester (15 weeks)
Lecture	01	01	15
Tutorial per paper	01	01	15
Practical, Seminar, Internship, field practice/project, or community engagement, etc.	01	02	30

A course can have a combination of lecture credits, tutorial credits, and practicum credits. For example, a 4–credit course with three credits assigned for lectures and one credit for practicum shall have three 1-hour lectures per week and one 2-hour duration field-based learning/project or lab work, or workshop activities per week. In a semester of 15 weeks duration, a 4-credit course is equivalent to 45 hours of lectures and 30 hours of practicum. Similarly, a 4 –credit course with 3- credits assigned for lectures and one credit for tutorial shall have three 1-hour lectures per week and one 1-hour tutorial per week. In a semester of 15 weeks duration, a four-credit course is equivalent to 45 hours of lectures and 15 hours of tutorials.

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

• **Lecture courses:**

Courses involving lectures relating to a field or discipline by an expert or qualified personnel in a field of learning, work/vocation, or professional practice.

• Tutorial courses:

Courses involving problem-solving and discussions relating to a field or discipline under the guidance of qualified personnel in a field of learning, work/vocation, or professional practice.

• Practicum or Laboratory work:

A course requiring students to participate in a project or practical or lab activity that applies previously learned/studied principles/theory related to the chosen field of learning, work/vocation, or professional practice under the supervision of an expert or qualified individual in the field of learning, work/vocation or professional practice.

• Seminar:

A course requiring students to participate in structured discussion/conversation or debate focused on assigned tasks/readings, current or historical events, or shared experiences guided or led by an expert or qualified personnel in a field of learning, work/vocation, or professional practice.

• Internship:

A course requiring students to participate in a professional activity or work experience, or cooperative education activity with an entity external to the education institution, normally under the supervision of an expert of the given external entity. A key aspect of the internship is induction into actual work situations. Internships involve working with local industry, government or private organizations, business organizations, artists, crafts persons, and similar entities to provide opportunities for students to actively engage in on-site experiential learning.

• Studio activities:

Studio activities involve the engagement of students in creative or artistic activities. Every student is engaged in performing a creative activity to obtain a specific outcome. Studio-based activities involve visual- or aesthetic-focused experiential work.

• Field practice/projects:

Courses requiring students to participate in field-based learning/projects generally under the supervision of an expert of the given external entity.

• Community engagement and service:

Courses requiring students to participate in field-based learning/projects generally under the supervision of an expert of the given external entity. The curricular component of 'community engagement and service' will involve activities that would expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems.

7.0 Curricular components of the Five Year Integrated Programmes

The curriculum includes courses in language, skill, environmental education, India comprehension, digital and technological solutions, health and wellness, yoga education, sports and fitness, and more. It also includes courses from major streams, minor streams, and other disciplines.

7.1 Disciplinary/ Interdisciplinary Major: A student's major would give them the opportunity to study a specific subject or field in depth. The major would provide the opportunity for a student to pursue in-depth study of a particular subject or discipline. Students may be allowed to change major within the broad discipline at the end of the second semester by giving her/him sufficient time to explore interdisciplinary courses during the first year. Advanced-level disciplinary/interdisciplinary courses, a course in research methodology, and a project/dissertation will be conducted in the seventh semester. The final semester may comprise seminar presentation, preparation, and submission of project report/dissertation. The project work/dissertation will be on a topic in the disciplinary programme of study or an interdisciplinary topic.

7.2 Disciplinary/ Interdisciplinary Minor: Courses from disciplinary or interdisciplinary minors, as well as skill-based courses related to a chosen vocational education programme, will be available to students. Students who complete a sufficient number of courses outside of their intended major can pursue a minor in that field or in the selected interdisciplinary field. After completing a variety of courses in the second semester, students can declare their preferred minor and vocational stream.

7.3 Vocational Education and Training: In addition to imparting theoretical and practical knowledge, the undergraduate programme will incorporate vocational education and training to impart skills. A minimum of 12 credits will be awarded to students in the "Minor" stream of vocational education and training. These credits may be related to the student's preferred major or minor or choice of the student. These classes will be helpful in locating employment for students who drop out before finishing the programme.

7.4   Multidisciplinary courses: All UG students are required to undergo 3 introductory-level courses relating to any of the broad disciplines given below. These courses are intended to broaden the intellectual experience and form part of liberal arts and science education. Students are not allowed to choose or repeat courses already undergone at the higher secondary level (12th class) or opted as major and minor stream under this category.

I.   *Life Sciences***:** Biochemistry, Biotechnology, Botany, Bioinformatics, Medical Biotechnology, Environmental Sciences, Food Technology, Forensic Sciences, Genetics, Microbiology, Zoology, Chemistry and other Life & Natural Sciences and other Natural Science disciplines are among the foundational courses that students can choose from.

II.   *Physical Sciences*: Chemistry, Physics, Mathematics, Computer Sciences, Statistics, Energy and Environmental Sciences and other Physical Science disciplines are among the foundational courses that students can choose from. The courses in this category will assist students in utilizing and putting techniques and tools into use in both their major and minor fields. Training in applications languages like STATA, SPSS, Tally, and other programming languages like Python could be a part of the class. When it comes to data analysis and the use of quantitative tools, the fundamental courses in this category will be beneficial to science and social science.

III.   *Commerce and Management***:** The courses cover topics like Accounting, Commerce, Business Studies, Human Resource Management, Finance, Production & operations International Business, Business Economics, E – Business, Travel & Tourism Management Financial institutions, Financial Technology, Data Science, English, Sociology, Psychology and other areas.

IV. ***Arts, Humanities and Social Sciences***: Through courses in the social sciences like Economics, History, Geography, Sanskrit, Music, Visual Arts, Political science, Psychology, Sociology, Defence Studies, English, Hindi, Public Administration, Library Sciences, Journalism, Mass Media and Communication among others, students will be able to comprehend people and their social behavior, society, and country. Survey methods and India-specific large-scale databases will be taught to students. History, archaeology, comparative literature, the arts and creative expressions, creative writing and literature, language(s), philosophy, and other related fields are just a few examples of courses that fall under the heading "humanities," as well as courses that are related to the humanities that are taught across disciplines.

V. **Interdisciplinary Studies**: Taking courses in interdisciplinary fields like Environmental Sciences, Yoga Sciences, Gender Studies, Political Economy and Development, Global Environment & Health, Cognitive Science, International Relations, Political Economy and Development, Sustainable Development, and so on will help the learners to understand society.

7.5 Language Enhancement Courses: Students must demonstrate proficiency in English and a Modern Indian Language (MIL), with an emphasis on their language and communication skills, in order to graduate. The primary objective of the classes is to assist students in developing and demonstrating fundamental linguistic skills like critical reading, expository writing, and academic writing. These skills help students understand the significance of language as a medium for knowledge and identity, as well as how to express their ideas in a clear and coherent manner. They would enable students to become familiar with the cultural and intellectual heritage of the chosen MIL and English languages, in addition to providing students with a reflective understanding of the complexity and structure of the language and literature related to both languages. The courses will also place an emphasis on the development and enhancement of skills like communication and the capacity for discussion and debate.

7.6 Skills Enhancement Courses (SEC): By giving students practical knowledge, hands-on experience, soft skills, etc., these courses aim to improve students' employability. The

universities may design courses based on the needs of the students and the resources at its disposal.

7.7 Value-Added Courses (VAC) Common to All UG Students

Understanding India: The course aims at enabling the students to acquire and demonstrate the knowledge and understanding of contemporary India with its historical perspective, the basic framework of the goals and policies of national development, and the constitutional obligations with special emphasis on constitutional values and fundamental rights and duties. The course would also focus on developing an understanding among student-teachers of the Indian knowledge systems, the Indian education system, and the roles and obligations of teachers to the nation in general and to the school/community/society. The course will attempt to deepen knowledge about and understanding of India's freedom struggle and of the values and ideals that it represented to develop an appreciation of the contributions made by people of all sections and regions of the country, and help learners understand and cherish the values enshrined in the Indian Constitution and to prepare them for their roles and responsibilities as effective citizens of a democratic society.

Environmental science/education: The course seeks to equip students with the ability to apply the acquired knowledge, skills, attitudes, and values required to take appropriate actions for mitigating the effects of environmental degradation, climate change, and pollution, effective waste management, conservation of biological diversity, management of biological resources, forest and wildlife conservation, and sustainable development and living. The course will also deepen the knowledge and understanding of India's environment in its totality, its interactive processes, and its effects on the future quality of people's lives.

Digital and technological solutions: Courses in cutting-edge areas that are fast gaining prominences, such as Artificial Intelligence (AI), 3-D machining, big data analysis, machine learning, drone technologies, and Deep learning with important applications to health, environment, and sustainable living that will be woven into undergraduate education for enhancing the employability of the youth.

Health & Wellness, Yoga education, sports, and fitness: Course components relating to health and wellness seek to promote an optimal state of physical, emotional, intellectual, social,

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

The Universities may introduce other innovative value-added courses relevant to the discipline or common to all UG programmes.

7.8 Summer Internship/Apprenticeship: key aspect of the new UG programme is induction into actual work situations. All students will also undergo internships / Apprenticeships in a firm, industry, or organization or Training in labs with faculty and researchers in their own or other HEIs/research institutions during the summer term. Students will be provided with opportunities for internships with local industry, business organizations, health and allied areas, local governments (such as panchayats, municipalities), Parliament or elected representatives, media organizations, artists, crafts persons, and a wide variety of organizations so that students may actively engage with the practical side of their learning and, as a by-product, further improve their employability. Students who wish to exit after the first two semesters will undergo a 4-credit work-based learning/internship during the summer term in order to get a UG Certificate.

Community engagement and service: The curricular component of 'community engagement and service' seeks to expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. This can be part of summer term activity or part of a major or minor course depending upon the major discipline.

Field-based learning/minor project: The field-based learning/minor project will attempt to provide opportunities for students to understand the different socio-economic contexts. It will

aim at giving students exposure to development-related issues in rural and urban settings. It will provide opportunities for students to observe situations in rural and urban contexts, and to observe and study actual field situations regarding issues related to socioeconomic development. Students will be given opportunities to gain a first-hand understanding of the policies, regulations, organizational structures, processes, and programmes that guide the development process. They would have the opportunity to gain an understanding of the complex socio-economic problems in the community, and innovative practices required to generate solutions to the identified problems. This may be a summer term project or part of a major or minor course depending on the subject of study.

7.9 Research Project/Dissertation: Students choosing a 4-Year Bachelor's degree (Honours with Research) are required to take up research projects under the guidance of a faculty member. The students are expected to complete the Research Project in the eighth semester. The research outcomes of their project work may be published in peer-reviewed journals or may be presented in conferences /seminars or may be patented.

Other Activities: This component will include participation in activities related to National Service Scheme (NCC), National Cadet Corps (NCC), adult education/literacy initiatives, mentoring school students, and other similar activities.

Additional Seats: The HEIs may create 10% additional seats over and above the sanctioned strength to accommodate the request for a change of major. Any unfilled or vacant seats may be filled with those seeking a change of Major. Preference will be given to those who have got highest CGPA with no arrears in the first year.

7.10 Levels of Courses

I. ***Foundation or introductory courses (First Year):*** These courses will focus on foundational theories, concepts, perspectives, principles, methods, and procedures for deciding the subject or discipline of interest. These courses will impart general education required for the advanced studies. These courses will expose students to the different fields of study will lay the foundation for higher-level course work.

II. ***Intermediate-level courses (Second Year):*** These courses will include subject-specific courses to fulfill the credit requirements for minor or major areas of learning.

III. ***Higher-level courses (Third Year):*** These courses will be of disciplinary/interdisciplinary area of study are required for majoring for the award of a degree.

IV. ***Advanced courses (Fourth and Fifth Year):*** These courses will include lecture courses with practicum, research methodology, advanced laboratory experiments/software training, research projects, hands-on-training, internship/apprenticeship projects.

8.0. Pedagogical approaches

The Learning Outcomes-Based Approach to curriculum planning and transaction requires that the pedagogical approaches are oriented towards enabling students to attain the defined learning outcomes relating to the courses within a programme. The outcome-based approach, particularly in the context of Integrated Programmes, requires a significant shift from teacher-centric to learner-centric pedagogies, and from passive to active/participatory pedagogies. Every programme of study lends itself to the well-structured and sequenced acquisition of knowledge and skills. Practical skills, including an appreciation of the link between theory and practice, will constitute an important aspect of the teaching-learning process. Teaching methods, guided by such a framework, may include lectures supported by tutorial work; practicum and field-based learning; the use of prescribed textbooks and e-learning resources and other self-study materials; field-based learning/project, open-ended project work, some of which may be team-based; activities designed to promote the development of generic/transferable and subject-specific skills; and internship and visits to field sites, and industrial or other research facilities etc.

9.0. Outcomes based approach to Higher Education

The basic assumption of the learning outcomes-based approach to curriculum development for awarding higher education degree should be based on the demonstrable attainment of objectives (academic excellence, knowledge, creativity, abilities, attitudes, and values) in a student after the completion of a programme. The National Higher Education Qualifications Framework (NHEQF) specified learning outcomes related to the disciplinary area(s) in the selected field(s) of learning and generic learning outcomes that are anticipated to be attained by a graduate upon completion of the programme(s). Students must possess the qualities and characteristics of a graduate of a programme of study. The key outcomes that underpin

curriculum planning and development include Graduate Attributes, Qualification Descriptors, Programme Learning Outcomes, and Course Learning Outcomes:

9.1 Graduate Attributes:

The graduate attributes reflect the particular quality and feature or characteristics of an individual, including the knowledge, skills, attitudes and values that are expected to be acquired by a graduate through studies at the higher education institution (HEI) such as a college or university. The graduate attributes include capabilities that help strengthen one's abilities for widening current knowledge base and skills, gaining new knowledge and skills, undertaking future studies, performing well in a chosen career and playing a constructive role as a responsible citizen in the society. The graduate attributes define the characteristics of a student's university degree programme(s), and describe a set of characteristics/competencies that are transferable beyond study of a particular subject area and programme contexts in which they have been developed. Graduate attributes are fostered through meaningful learning experiences made available through the curriculum, the total college/university experiences and a process of critical and reflective thinking.

The graduate attributes include capabilities that help:

- Broaden the current knowledge base and skills,
- Gain and apply new knowledge and skills,
- Undertake future studies independently,
- Perform well in a chosen career,
- Play a constructive role as a responsible citizen in society.

Graduate attributes include learning outcomes that are specific to disciplinary areas relating to the chosen field(s) of learning and generic learning outcomes that graduates of all programmes of study should acquire and demonstrate.

9.2 Program Learning Outcomes

The programme learning outcomes are aligned with the relevant qualification descriptors. Programme learning outcomes will include subject-specific skills and generic skills, including transferable global skills and competencies, the achievement of which the students of a specific programme of study should be able to demonstrate for the award of the certificate/

Diploma/Degree qualification. The programme learning outcomes would also focus on knowledge and skills that prepare students for further study, employment, and citizenship. They help ensure comparability of learning levels and academic standards across colleges/ universities and provide a broad picture of the level of competence of graduates of a given programme of study. A programme of study may be mono disciplinary, multi-disciplinary or inter-disciplinary.

Common components of PLO are:

Program specific learning outcomes	Generic learning outcomes
- A comprehensive knowledge and coherent understanding of the chosen disciplinary/ interdisciplinary areas of study - Practical, professional, and procedural knowledge required for carrying out various work/tasks related to the chosen field(s) of learning - Application of knowledge and skills - Capacity to extrapolate the acquired knowledge and skills to real-life situations and apply acquired competencies in new/unfamiliar contexts	- Problem-solving - Critical thinking - Creativity - Communication Skills - Research-related skills - Collaboration - Learning how to learn - Constitutional, humanistic, ethical, and moral values

The template for Programme Learning Outcomes (PLO) and course mapping with PLOs is enclosed as **Annexure A.** The Learning Outcomes Descriptors for integrated Programmes i.e. levels 4.5 to 6.5 is given as **Annexure B**.

10. Learning assessment

A variety of assessment methods that are appropriate to a given disciplinary/subject area and a programme of study will be used to assess progress toward the course/programme learning outcomes. Priority will be accorded to formative assessment. Evaluation will be based on continuous assessment, in which sessional work and the terminal examination will contribute to

the final grade. Sessional work will consist of class tests, mid-semester examination(s), homework assignments, etc., as determined by the concerned BOS.

The proportion of external and internal assessment in any course shall be preferably 70%:30%. However, this proportion may vary depending upon the nature of course.

10.1. Letter Grades and Grade Points: The Semester Grade Point Average (SGPA) is computed from the grades as a measure of the student's performance in a given semester. The SGPA is based on the grades of the current term, while the Cumulative GPA (CGPA) is based on the grades in all courses taken after joining the programme of study. The HEIs may also mention marks obtained in each course and a weighted average of marks based on marks obtained in all the semesters taken together for the benefit of students.

Marks (%)	Letter Grade	Grade Point
> 90	O(outstanding)	10
> 75 to 90	A+(Excellent)	9
> 65 to 75	A(Very good)	8
> 55 to 65	B+(Good)	7
> 50 to 55	B(Above average)	6
> 40 to 50	C(Average)	5
40	P (Pass)	4
Less than 40	F(Fail)	0
	Ab(Absent)	0

a. **Computation of SGPA and CGPA**

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

$$\text{SGPA } (S_i) = \Sigma(C_i \times G_i) / \Sigma C_i$$

Where C_i is the number of credits of the ith course and G_i is the grade point scored by the student in the ith course.

Example for Computation of SGPA

Semester	Course	Credit	Letter Grade	Grade point	Credit Point (CreditxGrade)
I	Course 1	3	A	8	3X8= 24
I	Course 2	4	B+	7	4X7= 28
I	Course 3	3	B	6	3X6= 18
I	Course 4	3	O	10	3X 10 =30
I	Course 5	3	C	5	3X5= 15
I	Course 6	4	B	6	4X6= 24
		20			139
	SGPA				139/20=**6.95**

The Cumulative Grade Point Average (CGPA) is also calculated in the same manner taking into account all the courses undergone by a student in all the semesters of a programme, i.e.

$$CGPA = \Sigma(C_i \times S_i) / \Sigma C_i$$

where S_i is the SGPA of the ith semester and C_i is the total number of credits in that semester.

Example for Computation of CGPA

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Credit:21 SGPA:6.9	Credit:22 SGPA:7.8	Credit:25 SGPA:5.6	Credit:26 SGPA:6.0	Credit:26 SGPA:6.3	Credit25 SGPA8.0
CGPA**=6.73**(21 x6.9+22x7.8+25x5.6+26 x6.0+26x6.3+25 x8.0)/145					

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

14. Power to remove Difficulties:

If any difficulty arises in giving effect to the provisions of this Ordinance, the Vice Chancellor may, by order, make such provisions not inconsistent with the Act, Statutes, Ordinances or other Regulations, as appears to be necessary or expedient to remove the difficulty, however subject to ratification of such order by the Statutory bodies of the University.

PROGRAM LEARNING OUTCOMES OF UG PROGRAMMES

The graduate on completion of Bachelors programme will be able to:-

PLO 1	Demonstrate in-depth knowledge and coherent understanding of -------------------- academic program and its linkages with related disciplinary/interdisciplinary areas.
PLO 2	Demonstrate practical, professional and procedural knowledge required for performing various tasks associated with the chosen field of learning.
PLO 3	Demonstrate the capacity to apply knowledge and skills related to one's specialisation in the chosen field of learning
PLO 4	Demonstrate the capacity to extrapolate the acquired knowledge and skills to real-life situations and apply acquired competencies in new/unfamiliar contexts
PLO 5	Demonstrate relevant generic competencies such as (i) problem-solving skills that are required to solve different types of problems with well defined solutions, , relating to concerned academic field (ii) communication skills involving the ability to listen carefully, to read texts and research papers analytically and to present complex information in a concise manner to different groups/audiences; (iii) analytical skills involving paying attention to detail and ability to construct logical arguments; (iv) ICT skills; (v) personal skills such as the ability to work both independently and in a group.
PLO 6	Demonstrate professional behaviour such as (i) being objective, unbiased and truthful in all aspects of work and avoiding unethical behavior; (ii) the ability to identify the potential ethical issues in work-related situations;

PROGRAM LEARNING OUTCOMES OF PG PROGRAMMES

The graduate on completion of Masters programme will be able to:-

PLO 1	Demonstrate advanced knowledge about _____ with a critical understanding of the emerging developments and issues relating to the learners domain area.
PLO 2	Demonstrate advanced knowledge and understanding of principles, methods, and techniques applicable to the chosen field of study.
PLO 3	Demonstrate the capacity to extrapolate the acquired knowledge and skills to real-life situations and apply acquired competencies in new/unfamiliar contexts
PLO 4	Demonstrate the ability to apply the acquired conceptual, operational or technical knowledge and a range of cognitive and practical skills to identify and address problems related to the chosen field of learning.
PLO 5	Demonstrate the apply advanced knowledge relating to research methods to carryout research and investigations to formulate evidence-based solutions to complex and unpredictable problems in the field of _____.
PLO 6	Demonstrate the ability to communicate, in a well-structured manner the findings/ results of the research studies undertaken in the field of _____.
PLO 7	pursue self-paced and self- directed learning to upgrade knowledge and skills, including research-related skills avoiding unethical practices.

Course Learning Outcomes

The programme learning outcomes are attained by learners through the essential learnings acquired on completion of selected courses of study within a programme. The term 'course' is used to mean the individual courses of study that makes up the scheme of study for a programme. Course learning outcomes are specific to the learning for a given course of study related to a disciplinary or interdisciplinary/multi-disciplinary area. Some programmes of study are highly structured, with a closely laid down progression of compulsory/core courses to be taken at particular phases/stages of learning. Some programmes allow learners much more freedom to take a combination of courses of study according to the preferences of individual student that may be very different from the courses of study pursued by another student of the same programme. Course-level learning outcomes will be aligned to programme learning outcomes.

Course Mapping with PLOs

Course level learning outcomes are specific to a course of study within a given programme of study. The achievement by students of course-level learning outcomes leads to the attainment of the programme learning outcomes. At the course level, each course may well have links to some but not all graduate attributes as these are developed through the totality of student learning experiences across the years of their study. A course map would indicate the linkage between course learning outcomes and each programme learning outcome. A course map would indicate the linkage between course learning outcomes and each programme learning outcome (**Table 1**).

Table 1: Course mapping with PLO for Undergraduate Programmes (Multidisciplinary)

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
Course 1							
Course 2							
Course 3							
Course 4							
Course 5							
Course 6							
Course 7							
Course 8							
Course 9							
Course 10							
Course 11							
Course 12							
Course 13							
Course 14							
Course 15							
Course N							

Learning Outcomes Descriptors for Higher Education qualification at levels 4.5 to 6.5

Elements of the Descriptors	Level 4.5 Undergraduate Certificate
Knowledge and understanding	The graduates should be able to demonstrate the acquisition of: • knowledge of facts, concepts, principles, theories, and processes in broad multidisciplinary learning contexts within the chosen fields of learning, • understanding of the linkages between the learning areas within and across the chosen fields of study, • procedural knowledge required for performing skilled or paraprofessional tasks associated with the chosen fields of learning.
Skills required to perform and accomplish tasks	The graduates should be able to demonstrate the acquisition of: • a range of cognitive and technical skills required for accomplishing assigned tasks relating to the chosen fields of learning in the context of broad multidisciplinary contexts, • cognitive skills required to identify, analyze and synthesize information from a range of sources, • cognitive and technical skills required for selecting and using relevant methods, tools,and materials to assess the appropriateness of approaches to solving problems associated with the chosen fields of learning.
Application of knowledge and skills	The graduates should be able to demonstrate the ability to: • apply the acquired operational or technical and theoretical knowledge, and a range of cognitive and practical skills to select and use basic methods, tools, materials, and information to generate solutions to specific problems relating to the chosen fields of learning.
Generic learning outcomes	The graduates should be able to demonstrate the ability to: • listen carefully, read texts related to the chosen fields of study analytically and present information in a clear and concise manner to different groups/audiences, • express thoughts and ideas effectively in writing and orally and present the results/findings of the experiments carried out in a clear and concise manner to different groups, • meet own learning needs relating to the chosen fields of learning, • pursue self-directed and self-managed learning to upgrade knowledge and skills required to pursue higher level of education and training, • gather and interpret relevant quantitative and qualitative data to identify problems, • critically evaluate principles and theories associated with the chosen fields of learning, • make judgement and take decision, based on analysis of data and evidence, for formulating responses to issues/problems associated with the chosen fields of learning, requiring the exercise of some personal responsibility for action and outputs/outcomes.
Constitutional, humanistic, ethical and moral values	The graduates should be able to demonstrate the ability to: • embrace constitutional, humanistic, ethical, and moral values in one's life, and practice these values in real life situations, • put forward convincing arguments to respond to the ethical and moral issues associated with the chosen fields of learning.
Employment ready skills, and entrepreneurship skills and mindset	The graduates should be able to demonstrate the acquisition of knowledge and a basket of essential skills, required to: • perform effectively in a defined job relating to the chosen fields of study, • ability to exercise responsibility for the completion of assigned tasks and for the outputs of own work, and to take some responsibility for group work and output as a member of the group.

Elements of the Descriptors	Level 5 Undergraduate Diploma
Knowledge and understanding	The graduates should be able to demonstrate the acquisition of: • theoretical and technical knowledge in broad multidisciplinary contexts within the chosen fields of learning, • deeper knowledge and understanding of one of the learning areas and its underlying principles and theories, • procedural knowledge required for performing skilled or paraprofessional tasks associated with the chosen fields of learning.
Skills required to perform and accomplish tasks	The graduates should be able to demonstrate the acquisition of: • cognitive and technical skills required for performing and accomplishing complex tasks relating to the chosen fields of learning, • cognitive and technical skills required to analyze and synthesize ideas and information from a range of sources, • act on information to generate solutions to specific problems associated with the chosen fields of learning.
Application of knowledge and skills	The graduates should be able to demonstrate the ability to: • apply the acquired specialized or theoretical knowledge, and a range of cognitive and practical skills to gather quantitative and qualitative data, • select and apply basic methods, tools, materials, and information to formulate solutions to problems related to the chosen field(s) of learning.
Generic learning outcomes	The graduates should be able to demonstrate the ability to: • listen carefully, read texts related to the chosen fields of learning analytically and present complex information in a clear and concise manner to different groups/audiences, • communicate in writing and orally the information, arguments, and results of the experiments and studies conducted accurately and effectively to specialist and non-specialist audience, • meet own learning needs relating to the chosen field(s) of learning, work/ vocation, and an area of professional practice, • pursue self-paced and self directed learning to upgrade knowledge and skills required for pursuing higher level of education and training, • critically evaluate the essential theories, policies, and practices by following scientific approach to knowledge development, • make judgement and take decision, based on the analysis and evaluation of information, for determining solutions to a variety of unpredictable problems associated with the chosen fields of learning, taking responsibility for the nature and quality of outputs.
Constitutional, humanistic, ethical and moral values	The graduates should be able to demonstrate the ability to: • embrace constitutional, humanistic, ethical, and moral values, and practice these values in life, • take a position regarding these values, • formulate arguments in support of actions to address issues relating the ethical and moral issues relating to the chosen fields of learning, including environmental and sustainable development issues, from multiple perspectives.
Employment ready skills, and entrepreneurship skills and mindset	The graduates should be able to demonstrate the acquisition of knowledge and essential skills set that are necessary to: • take up job/employment relating to the chosen fields of study or professional practice requiring the exercise of full personal responsibility for the completion of tasks and for the outputs of own work, and full responsibility for the group task/work as a member of the group/ team, • exercise self- management within the guidelines of study and work contexts, • supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities.

Elements of the Descriptors	Level 5.5 Bachelor's Degree
Knowledge and understanding	The graduates should be able to demonstrate the acquisition of: • comprehensive, factual, theoretical, and specialized knowledge in broad multidisciplinary contexts with depth in the underlying principles and theories relating to one or more fields of learning, • knowledge of the current and emerging issues and developments within the chosen fields of learning, • procedural knowledge required for performing and accomplishing professional tasks associated with the chosen fields of learning.
Skills required to perform and accomplish tasks	The graduates should be able to demonstrate the acquisition of: • cognitive and technical skills required for performing and accomplishing complex tasks relating to the chosen fields of learning, • cognitive and technical skills required to evaluate and analyze complex ideas, • cognitive and technical skills required to generate solutions to specific problems associated with the chosen fields of learning.
Application of knowledge and skills	The graduates should be able to demonstrate the ability to: • apply the acquired specialized technical or theoretical knowledge, and cognitive and practical skills to gather and analyze quantitative/ qualitative data to assess the appropriateness of different approaches to solving problems, • employ the right approach to generate solutions to problems related to the chosen fields of learning.
Generic learning outcomes	The graduates should be able to demonstrate the ability to: • listen carefully, to read text related to the chosen fields of learning analytically and present complex information in a clear and concise manner to different groups/audiences., • communicate in writing and orally the constructs and methodologies adopted for the studies undertaken relating to the chosen fields of learning, • make coherent arguments to support the findings/ results of the study undertaken to specialist and non-specialist audience, • meet own learning needs relating to the chosen field(s) of learning, • pursue self-paced and self directed learning to upgrade knowledge and skills that will help adapt to changing demands of workplace and pursue higher level of education and training, • critically evaluate evidence for taking actions to generate solutions to specific problems associated with the chosen fields of learning based on empirical evidence, • exercise judgement across a broad range of functions based on empirical evidence, for determining personal and/or group actions to generate solutions to specific problems associated with the chosen fields of learning.
Constitutional, humanistic, ethical and moral values	The graduates should be able to demonstrate the ability to: • embrace the constitutional, humanistic, ethical, and moral values, and practice these values in life, • identify ethical issues related to the chosen fields of study, • formulate coherent arguments about ethical and moral issues, including environmental and sustainable development issues, from multiple perspectives, • follow ethical practices in all aspects of research and development, including avoiding unethical practices such as fabrication, falsification or misrepresentation of data or committing plagiarism.

Elements of the Descriptors	Level 5.5 Bachelor's Degree
Employment ready skills, and entrepreneurship skills and mindset	The graduates should be able to demonstrate the acquisition of knowledge and essential skills set and competence that are necessary to: • take up a professional job relating to the chosen field of learning and professional practice, • entrepreneurship skills and mindset required for setting up and running an economic enterprise or pursuing self-employment requiring the exercise of full personal responsibility for the outputs of own work, and full responsibility for output of group, • exercise management and supervision in the contexts of work or study activities involving unpredictable work processes and working environment.

Elements of the Descriptors	Level 6 Bachelor's Degree (Honors / Honors with Research)
Knowledge and understanding	The graduates should be able to demonstrate the acquisition of: • advanced knowledge about a specialized field of enquiry, with depth in one or more fields of learning within a broad multidisciplinary/ interdisciplinary context, • a coherent understanding of the established methods and techniques of research and enquiry applicable to the chosen fields of learning. • an awareness and knowledge of the emerging developments and issues in the chosen fields of learning, • procedural knowledge required for performing and accomplishing professional tasks associated with the chosen fields of learning.
Skills required to perform and accomplish tasks	The graduates should be able to demonstrate the acquisition of: • a range of cognitive and technical skills required for performing and accomplishing complex tasks relating to the chosen fields of learning, • cognitive and technical skills relating to the established research methods and techniques, • cognitive and technical skills required to evaluate complex ideas and undertake research and investigations to generate solutions to real-life problems, • generate solutions to complex problems independently, requiring the exercise of full personal judgement, responsibility, and accountability for the output of the initiatives taken as a practitioner.
Application of knowledge and skills	Graduates should demonstrate the ability to: • apply the acquired advanced technical and/or theoretical knowledge and a range of cognitive and practical skills to analyze the quantitative and qualitative data gathered drawing on a wide range of sources for identifying problems and issues relating to the chosen fields of learning, • apply advanced knowledge relating to research methods to carryout research and investigations to formulate evidence-based solutions to complex and unpredictable problems.
Generic learning outcomes	The graduates should be able to demonstrate the ability to: • listen carefully, read texts and research papers analytically and present complex information in a clear and concise manner to different groups/ audiences, • communicate technical information and explanations, and the findings/results of the research studies relating to specialized fields of learning, • present in a concise manner one's views on the relevance and applications of the findings of research and evaluation studies in the context of emerging developments and issues, • meet one's own learning needs relating to the chosen fields of learning, • pursue self-paced and self directed learning to upgrade knowledge and skills that will help accomplish complex tasks and pursue higher level of education and research, • Demonstrate a keen sense of observation, inquiry, and capability for asking relevant and appropriate questions, • problematize, synthesize and articulate issues and design research proposals, • define problems, formulate appropriate and relevant research questions, • formulate hypotheses, test hypotheses using quantitative and qualitative data, and establish hypotheses, make inference based on

	the analysis and interpretation of data, and predict causeand-effect relationships, • develop appropriate tools for data collection, • examine and assess the implications and consequences of emerging developments and issues relating to the chosen fields of study based on empirical evidence, • make judgement in a range of situations by critically reviewing and consolidating evidences, • exercise judgement based on evaluation of evidence from a range of sources to generate solutions to complex problems, including real-life problems, associated with the chosen fields of learning requiring the exercise of full personal responsibility and accountability for the initiatives undertaken and the outputs/ outcomes of own work as well as of the group as a team member.
Constitutional, humanistic, ethical and moral values	The graduates should be able to demonstrate the acquisition of: • embrace and practice constitutional, humanistic, ethical, and moral values in one's life, • adopt objective, unbiased, and truthful actions in all aspects of work related to the chosen field(s) of learning and professional practice, • present coherent arguments in support of relevant ethical and moral issues, • participate in actions to address environmental and sustainable development issues, • follow ethical practices in all aspects of research and development, including avoiding unethical practices such as fabrication, falsification or misrepresentation of data or committing plagiarism.
Employment ready skills, and entrepreneurship skills and mindset	The graduates should be able to demonstrate the acquisition of knowledge and skills set and competencies required for: • adapting to the future of work and to the demands of the fast pace of technological developments and innovations that drive shift in employers' demands for skills, particularly with respect to transition towards more technology assisted work involving the creation of new forms of work and rapidly changing work and production processes, • managing complex technical or professional activities or projects, requiring the exercise of full personal responsibility for output of own work as well as for the outputs of the group as a member of the group/team, • exercising supervision in the context of work having unpredictable changes.

Elements of the Descriptors	Level 6.5 Master's Degree
Knowledge and understanding	The graduates should be able to demonstrate the acquisition of: • advanced knowledge about a specialized field of enquiry with a critical understanding of the emerging developments and issues relating to one or more fields of learning, • advanced knowledge and understanding of the research principles, methods, and techniques applicable to the chosen fields of learning or professional practice, • procedural knowledge required for performing and accomplishing complex and specialized professional tasks relating to teaching, and research and development.
Skills required to perform and accomplish tasks	The graduates should be able to demonstrate the acquisition of: • advanced cognitive and technical skills required for performing and accomplishing complex tasks related to the chosen fields of learning, • advanced cognitive and technical skills required for evaluating research findings and designing and conducting relevant research that contributes to the generation of new knowledge, • specialized cognitive and technical skills relating to a body of knowledge and practice to analyze and synthesize complex information and problems.
Application of knowledge and skills	Graduates should demonstrate the ability to: • apply the acquired advanced theoretical and/or technical knowledge about a specialized field of enquiry or professional practice and a range of cognitive and practical skills to identify and analyze problems and issues, including reallife problems, associated with the chosen fields of learning, • apply advanced knowledge relating to research methods to carryout research and investigations to formulate evidence based solutions to complex and unpredictable problems.
Generic learning outcomes	The graduates should be able to demonstrate the ability to: • listen carefully, read texts and research papers analytically and present complex information in a clear and concise manner to different groups/audiences, • communicate, in a well structured manner, technical information and explanations, and the findings/ results of the research studies undertaken in the chosen field of study, • present in a concise manner one's views on the relevance and applications of the findings of recent research and evaluation studies in the context of emerging developments and issues, • meet one's own learning needs relating to the chosen fields of learning, work/vocation, and an area of professional practice, • pursue self-paced and self- directed learning to upgrade knowledge and skills, including research-related skills, required to pursue higher level of education and research, • problematize, synthesize and articulate issues and design research proposals, • define problems, formulate appropriate and relevant research questions, formulate hypotheses, test hypotheses using quantitative and qualitative data, establish hypotheses, make inference based on the analysis and interpretation of data, and predict cause-and-effect relationships, • develop appropriate tools for data collection for research,

	• use appropriate statistical and other analytical tools and techniques for analysis of data collected for research and evaluation studies, • plan, execute and report the results of an investigation, • follow basic research ethics and skills and practice ethics in the field/ in one's own research work, • make judgements and take decisions regarding the adoption of approaches to solving problems, including real-life problems, based on the analysis and evaluation of information and empirical evidence collected, • make judgement across a range of functions requiring the exercise of full responsibility and accountability for personal and/ or group actions to generate solutions to specific problems associated with the chosen fields/subfields of study, work, or professional practice.
Constitutional, humanistic, ethical and moral values	The graduates should be able to demonstrate the ability to: • embrace and practice constitutional, humanistic, ethical and moral values in one's life, • adopt objective and unbiased actions in all aspects of work related to the chosen fields/subfields of study and professional practice, • participate in actions to address environmental protection and sustainable development issues, • support relevant ethical and moral issues by formulating and presenting coherent arguments, • follow ethical principles and practices in all aspects of research and development, including inducements for enrolling participants, avoiding unethical practices such as fabrication, falsification or misrepresentation of data or committing plagiarism.
Employment ready skills, and entrepreneurship skills and mindset	The graduates should be able to demonstrate the acquisition of knowledge and essential skills set required for: • adapting to the future of work and responding to the demands of the fast pace of technological developments and innovations that drive shift in employers' demands for skills, particularly with respect to transition towards more technology-assisted work involving the creation of new forms of work and rapidly changing work and production processes, • exercising full personal responsibility for output of own work as well as for group/ team outputs and for managing work that are complex and unpredictable requiring new strategic approaches.