Sher-e-Kashmir
University of Agricultural Sciences and Technology of Jammu

No: AUJ/DE/24-25/F- 231/2848-293
Dated: 10-10-2024

Memorandum

The University adopts the Indian Council of Agricultural Research (ICAR) Sixth Deans' Committee Report for restructuring of all the Undergraduate programmes, except B.V.Sc.&A.H., from the 1st Semester of Academic year 2024-25. The memorandum to this effect is issued pursuant to the approval of the Competent Authority.

1. The recommendations of 6th Deans' Committee Report for restructuring of UG Programs have been delineated under the following heads (Annexure-1):

    4.1 Restructuring of UG programs
    4.2 Credit hours allocation
    4.3 Deeksharambh (Introduction-cum-foundation course)
    4.4 Common courses
    4.5 New age courses
    4.6 Deficiency courses
    4.7 Entrepreneurship development
    4.8 Study tour
    4.9 Online courses
    4.10 Elective courses
    4.11 Imparting traditional knowledge, values and ethics
    4.12 Introduction of new degree programs
    4.13 Light but tight educational program
    4.14 Moderation of courses at institution level
    4.15 Central assistance for strengthening higher agricultural education
    4.16 Admission criteria
    4.17 Provision of lateral entry for diploma holders from recognised institutions
    4.18 Migration from one university to other
    4.19 Exit option
    4.20 Maximum residential period
    4.21 Examination and evaluation system
    4.22 Award of divisions
    4.23 Uniformity in nomenclature of degrees
    4.24 Increasing Gross Enrolment Ratio (GER)
    4.25 Academic Bank of Credits (ABC)
    4.26 Blended learning
    4.27 Minimum requirement for establishing colleges for agriculture and allied disciplines
    4.28 Making implementation of the recommendations of the Deans' Committee mandatory

2. Accordingly, the Regulations on Resident Instructions are modified, as per the requirement. Chapter 4 of RRI 2020 *"B.Sc. (Hons.) Agriculture, B.Sc. (Hons.) Horticulture, B.Tech. (Agricultural Engineering), B.Tech. (Dairy Technology) and B.Tech. Biotechnology programmes shall be governed as per the regulations of ICAR 5th Deans Committee recommendations and any such recommendations in future"* shall be replaced with the following

   "Undergraduate Programs in Agriculture, Agricultural Engineering, Biotechnology, Horticulture, and Dairy Technology shall be governed as per the regulations of ICAR 6th Deans' Committee Report for restructuring undergraduate programs and any such recommendations in the future."

3. The restructuring of all undergraduate programs, except BVSc & AH, 1st Year 1st Semester as per the 6th Deans' Committee Report is given hereunder:

3.1. Common Courses:

   i. *Deeksharambh (Foundation course)* is a common non-gradial (0+2) course across all the UG programs with similar course contents. This course will be offered across all UG programs, except B.V.Sc.&A.H.; and Deans of the Faculties/Director Institute of Biotechnology shall nominate teacher(s) for this course. Since the course is related to personality development and exposure of the students, I/C Counselling & Placement Cell shall be the overall Course Coordinator for this. Deans of the Faculties/Director Institute of Biotechnology shall ensure a common slot in the timetable for this course for initial 2 weeks duration. There will be a common course code DRM-111 for this course.

   ii. NCC-1/NSS-1: It is a gradial course in 1st year (Semester-1) in 6th Deans' Committee Report with 0+1 credit. As such, this course is recommended for adoption. The Dean Student Welfare will offer this course to all the faculties.

   iii. Farming-Based Livelihood Systems: This is a multidisciplinary course common to all faculties (except B.V.Sc.&A.H.), and it is given the course code MDC-111. The Division of Agricultural Economics and ABM shall offer it in coordination with other related Faculties/Divisions.

   iv. Communication Skills: This is an ability-enhancing course common to all faculties (except B.V.Sc.&A.H.), and it is given course code AEC-111. The Divisions of Agriculture Extension Education and Veterinary and Animal Husbandry Extension shall offer this course for the faculties at Chatha and R.S.Pura, respectively. The English language component shall be taught by English teacher engaged for the purpose.

3.2 UG Program in Agriculture
1st Year (Semester-I)

S. No.	Course Title	Course code	Credit Hours	Total credit hours
1.	Deeksharambh (Foundation Course)	DRM-111 (2 weeks) Non-gradial	2(0+2)	23(11+12) +1 Introductory Mathematics (Need based)
2.	Farming-Based Livelihood Systems	MDC-111	3(2+1)	
3.	Communication Skills	AEC-111	2(1+1)	
4.	Rural Sociology and Educational Psychology	EXTN-111	2(2+0)	
5.	Fundamentals of Agronomy	AGRO-111	3(2+1)	
6.	Fundamentals of Soil Science	SSAC-111	3(2+1)	
7.	Fundamentals of Horticulture	FRTS-111	3(2+1)	
8.	National Service Scheme-1 / National Cadet Corps-1	NSS-I/ NCC-I	1(0+1)	
9.	Introductory Mathematics* (need-based)	MATH-111	1(1+0) Non-gradial	
*for the students who have not studied mathematics at 10+2 or equivalent level				
Skill Enhancement Courses (SEC): Choose any two courses out of the following				
1.	Mushroom Cultivation	SECA-1	2 (0+2)	
2.	Apiculture	SECA-2	2(0+2)	
3.	Nursery Production in Horticultural Crops	SECH-3	2(0+2)	
4.	Natural Farming	SECA-4	2(0+2)	
5.	Beneficial Insect Farming	SECA-5	2(0+2)	

3.3 UG Program in Biotechnology
1st Year (Semester-I)

S.No.	Course Title	Course code	Credit Hours	Total credit hours
1.	Deeksharambh (Foundation Course)	DRM-111 (2 weeks) Non-gradial	2(0+2)	23(14+9)
2.	Farming-Based Livelihood Systems	MDC-111	3(2+1)	
3.	Communication Skills	AEC-111	2(1+1)	
4.	Basic Mathematics/Basic Botany/Basic Zoology	MATH-111/ BOT-111/ ZOO-11	2(2+0)	

5.	Molecular Biology	BIOT-111	3(3+0)
6.	Introductory Cell Biology	BIOT-112	3(3+0)
7.	Fundamentals of Genetics	BIOT-113	3(3+0)
8.	National Cadet Corps 1/ National Service Scheme 1	NCC-1/NSS-1	1(0+1)
Skill Enhancement Courses (SEC): Choose any two courses out of the following			
1.	Practices in Plant Tissue Culture	SECB-1	2(0+2)
2.	Practices in Animal Cell Culture	SECB-2	2(0+2)
2.	Laboratory Management and Instrumentation	SECB-3	2(0+2)

3.4 UG Program in Horticulture
1st Year (Semester-1)

S.No.	Course Title	Course Code	Credit Hours	Total credit hours
1.	Deeksharambh (Foundation Course)	DRM 111 (2 weeks) Non-gradial	2(0+2)	23(8+15)
2.	Fundamentals of Horticulture	FRTS 111	3(2+1)	
3.	Plant Propagation and Nursery Management of Fruit and Plantation Crops	FRTS 112	3(1+2)	
4.	Commercial Production of Flower Crops	FLOR 111	3(1+2)	
5.	Farming Based Livelihood Systems	MDC 111	3(2+1)	
6.	Sprinkler and Micro irrigation system	SWE 111	2(1+1)	
7.	Communication Skills	AEC 111	2(1+1)	
8.	National Service Scheme-1 / National Cadet Corps-1	NSS-I/ NCC-I	1(0+1)	
Skill Enhancement Courses (SEC): Choose any two courses out of the following				
1.	Mushroom Cultivation	SECA-1	2 (0+2)	
2.	Apiculture	SECA-2	2(0+2)	
3.	Nursery Production in horticultural crops	SECH-3	2(0+2)	

3.5 UG Program in Agricultural Engineering

1st Year (Semester-I)

S.No.	Course Title	Course code	Credit Hours	Total credit hours
1.	Deeksharambh (Foundation Course)	DRM-111 (2 weeks) Non-gradial	2(0+2)	21(10+11)
2.	Basic Electrical Gadgets and Instruments	BEEE-111	3(2+1)	
3.	Farming based livelihood systems	MDC-111	3(2+1)	
4.	Workshop Technology and Practice	BEME-111	2(0+2)	
5.	Introduction to Agricultural Engineering	FMPE-111	4(3+1)	
6.	Surveying and Leveling	BECE-111	3(1+2)	
7.	Agricultural Informatics and Artificial Intelligence	VAC-111	3(2+1)	
8.	National Cadet Corps I/ National Service Scheme I	NCC-1/NSS-1	1(0+1)	

3.6 UG Program in Dairy Technology

1st Year (Semester-I)

S.No.	Course Title	Course code	Credit Hours	Total credit hours
1.	Deeksharambh (Foundation Course)	DRM-111 (2 weeks) Non-gradial	2(0+2)	24(9+15)
2.	Farming-Based Livelihood Systems	MDC-111	3(2+1)	
3.	Communication Skills	AEC-111	2(1+1)	
4.	Agricultural Informatics and Artificial Intelligence	VAC-111	3(2+1)	
5.	Workshop Practice	DENG-111	2(1+1)	
6.	Fluid Mechanics	DENG-112	2(1+1)	
7.	Engineering Drawing	DENG-113	1(0+1)	
8.	Fundamentals of Microbiology	DMIC-111	2(1+1)	
9.	Physical Chemistry of Milk	DCHE-111	2(1+1)	
10.	National Cadet Corps I/ National Service Scheme I	NCC-1/NSS-1	1(0+1)	
Skill Enhancement Courses (SEC): Choose any two courses out of the following				
1.	Basic Aspects of Milk and Milk Products	SECD-111	2(0+2)	

	Testing*			
2.	Basic Microbiological Tests for Quality of Milk and Milk Products*	SECD-112	2(0+2)	
3.	Brand Awareness: Major Diary Companies and their Brands	SECD-113	2(0+2)	

*Syllabus to be provided by Dean Faculty of Dairy Technology

4. The restructuring of the syllabus of 1st year semester-I fulfills the requirements of NEP and is adopted w.e.f. Semester-I, Academic year 2024-25.

5. Adoption of the restructuring of the undergraduate programmes (except B.V.Sc.&A.H) across the disciplines with multiple entry and exit options of Deans' Committee Report from the 1st Semester, Academic year 2024-25.

6. The restructuring of course structure, syllabi and credit allocation for II, III, IV, V, VI and VIII semesters across disciplines will be finalized and notified later.

7. Swapping of courses between semesters in an academic year is permitted but not permitted between the two academic years.

8. The adoption of the Sixth Deans' Committee Report for restructuring will come into force with immediate effect i.e. Semester-I, Academic year 2024-25, and may be placed before the next Academic Council for ratification.

The Indian Council of Agricultural Research (ICAR) Sixth Deans' Committee Report (soft copy) for the restructuring of undergraduate programmes is enclosed.

10.10.2024

(Prof. Rajinder Peshin)
Director Education

Copy to:
- All Officers of the University for information and necessary action.
- Registrar, SKUAST-Jammu for information and necessary action with a request to place it before Academic Council for ratification.
- Director, Institute of Biotechnology.
- Controller of Examination for information and necessary action.
- Heads of the Divisions _____.
- Nodal Officer, Data Centre for uploading the Memorandum on University website.
- SVC for kind information of the Hon'ble Vice-Chancellor.

4. Restructuring of Undergraduate Programmes

4.1 Restructuring of UG Programs

The restructuring has been done based on the following NHEQF levels:

- Year 1, Certificate Course, NEP-NHEQF Level 4.5
- Year-2, Diploma Course, NEP-NHEQF Level 5.0
- Year 4, B.Sc. (Hons.)/ B. F. Sc. (Hons.)/ B. Tech. NEP-NHEQF Level 6.0

The restructured program for the undergraduate agriculture education with multiple entry and exit options is illustrated in Figure 4.1.
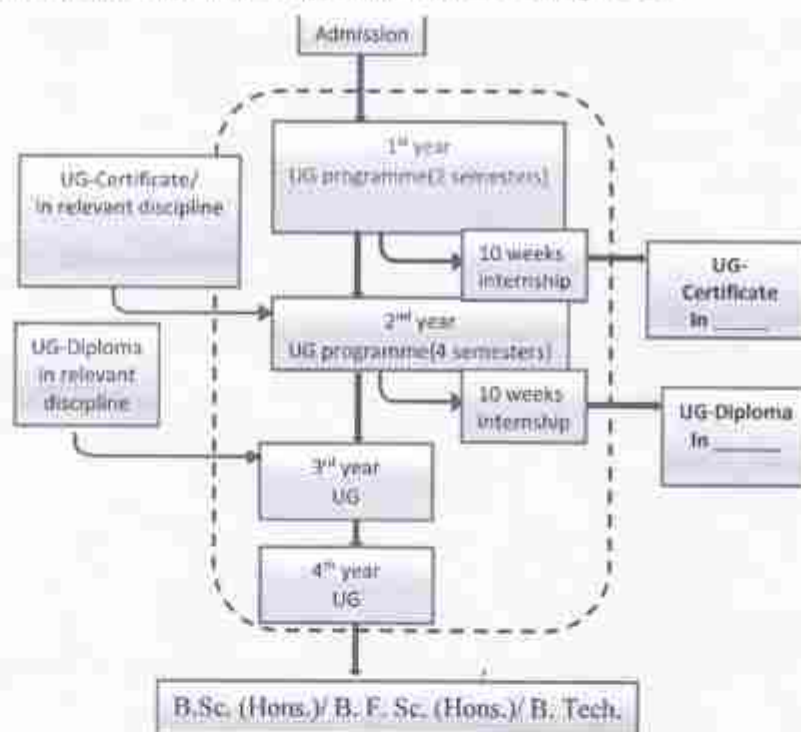

Fig. 4.1 Framework of Undergraduate Programmes

The eligibility for entry into the UG programs will be + 2 Science; the students will be admitted as per norms of ICAR/ SAUs/CAUs. The 1st year of the programme will be having the foundation, introductory and skill enhancement courses. The 2nd year will be having basic core courses with

some more options for skill enhancement. The 3rd year of the programme will have advanced core courses. The 4th year programme will emphasize more on the specialisation and elective courses as well as advanced skill enhancement through internship.

There will be exit options after 1st year and 2nd year for UG-Certificate and UG-Diploma. However, the students opting to exit with UG-Certificate or UG-Diploma will have to take up 10 weeks internship after the 1st year (2 semester) and 2nd year (4 semesters), respectively.

Table 4.1 shows the restructured undergraduate programs for the higher agricultural educational institutions (HAEIs).

Table 4.1 Types of courses and learning outcomes for the restructured undergraduate programs for the HAEIs

Year	Types of courses	Learning outcome	Exit option
YEAR 1 NHEQF Level 4.5	Foundation courses, introductory courses and skills enhancement training/ training in the chosen area, ability enhancement courses	Students will acquire the basic knowledge in respective disciplines and adequate skill in some selected areas, to enable them for employment/ entrepreneurship	A student must complete 10 weeks of internship (10 credits) after 1st year if exit with UG-Certificate is opted
YEAR-2 NHEQF Level 5	Basic core courses and additional skill enhancement in chosen areas/ courses	Students will acquire the higher level knowledge in respective disciplines and adequate skill in some selected areas, to enable them for employment at middle level/ supervisory level or for entrepreneurship	A student must complete 10 weeks of internship (10 credits) after 2nd year if exit with UG-Diploma is opted
YEAR-3	Advanced core subjects and their practical applications	Students will have deeper understanding of the subjects and their major application areas	No exit after 3rd year
YEAR-4 NHEQF Level 6	Specialization/ Elective courses and advanced skill enhancement through project and internship	Students will acquire advanced knowledge and skill in different areas so as to meet the higher order requirements of the society and industry as well as other prospective employers. It will also enable the graduates to become a job provider rather than being a job seeker through establishment of enterprises in concerned fields.	UG degree in concerned discipline

4.2 Credit Hours Allocation

A total of 166-174 credit hours is recommended for the four years of UG programs. The credit distributions for the different courses have been specified for individual disciplines. The general structure is given in Table 4.2.

Table 4.2 General Credits Allocation Scheme of UG Programs (Credit hours)

Semester	Core Courses (Major+ Minor)	Multi-Disciplinary Course (MDC)	Value Added Course (VAC)	Ability Enhancement Course (AEC)	Skill Enhancement Course (SEC)	Internship/ Project/ Student READY	Total Credits	Non-Gradial	Online Courses/ MOOC
I	12	3(2)		1(3) + 2(4)	4	-	22	2(1)	
II	10	3(5)	3(6)	1(3) + 2(7)	4	-	23	-	
Post-II semester						10(12)			
III	16	-----		2(8)	2	-	20		
IV	12	3(9)	3(10)	----	2	-	20	-	10
Post-IV semester						10(13)			
V	21	-	-	-	-	-	21	2(11)	
VI	21	-	-	-	-	-	21	-	
VII	20	-	-	-	-	-	20	-	
VIII	-	-	-	-	-	20	20	-	
Total	112	9	6	8	12	20	167	4	10

(1) Deeksharambh (Induction-cum-Foundation Course) of 2 credits (2 weeks duration).

(2) Farming based Livelihood systems

(3) NCC/NSS; (4) Communication Skills; (5) Entrepreneurship Development and Business Management

(6) Environmental Studies and Disaster Management;

(7) Personality Development; (8) Physical Education, First Aid, Yoga Practices and Meditation.

(9) Agriculture Marketing and Trade; (10) Agriculture Informatics and Artificial Intelligence

(11) Study tour (10-14 days).

(12) Only for those opting for an exit with UG-Certificate. (13) Only for those opting for an exit with UG-Diploma.

One multidisciplinary course in Agricultural Engineering discipline is different from the above common courses keeping in view the discipline specific requirement.

Note:

- The credit hours mentioned in the Table 4.2 include both theory and practical.
- The total credit allocation and the allocation for different types of courses including online courses for some disciplines such as Agricultural Engineering, Dairy Technology and Food Technology are slightly different than those mentioned in the Table 4.2, so as to accommodate the specific need of these disciplines.
- Also, some minor deviations in the courses and credits allocations are allowed across disciplines considering the specific nature of the courses.
- The three-year course curricula of all disciplines of agricultural and allied sciences do not cover the teaching of elective/ specialized courses, that in fact qualify the students in specializing in

a particular subject in which the student intends to do further studies. These courses have been presently listed under the 7th and 8th semesters (in IV year). Therefore, the Sixth Deans' Committee is of the view that the option of B. Sc. (Hons.) with research may lead to deficiency of the knowledge and learning of the elective / specialized subjects needed for PG studies. For B. Tech. programs, the framework prescribed by AICTE/ UGC may be applicable. Under such circumstances, the Committee recommends that the launching of UG degree with research should be deferred for the time being. ICAR may consider about this aspect along with considering restructuring PG/ Ph.D. programs. Also considering the professional nature of the courses, the exit after at the end of 3rd year (at the end of 6th semester) is not recommended.

- Each class (contact hour) will be of 50 min duration and one practical will be of two contact hours.
- If the student has to take up any deficiency course(s), that has to be satisfactorily completed within the first year.

4.3 Deeksharambh (Introduction- cum-foundation course)

The goal of higher education is to nurture students by blossoming their hidden potentials to pursue the academic and professional studies in a diligent, honest and responsible manner. It is possible by facilitating them to develop a sense of integrity with diverse faculties and build linkages with peers, society and community as a whole and lastly be proficient in earning livelihood independently along with sustaining society and nature.

A course entitled Deeksharambh (0+2) (Non-gradial) will be offered at the start of first semester for a duration of two weeks. This will be a part of first semester for all purposes including the calculation of Net Instruction Days (NIDs).

The goal of Deeksharambh is to inculcate life skills, develop bonding with mentors, peers and seniors, familiarize with institutional academic framework and functioning. It must educate students to explore their potentials and understand the purpose of their life with reference to serving the community, nation and global society.

Often the incoming undergraduate students are influenced by their parents and relatives to join higher studies, without understanding their own interests and talents. Therefore, the very purpose of initiating Deeksharambh: the induction cum foundation course is to acclimatize the student with the new surroundings, develop bond with fellow students and teachers. It is the time when a student should become clear as to what he/she/ze is going to study in a particular discipline, or even it is time to quit and join another discipline of his/ her choice. They must develop sensitivity towards various issues of social relevance and imbibe human values to become responsible citizens.

Thus, ensuring a well-designed Induction-cum-foundation program by the institutions shall be designed to become helpful to both teachers and students for setting the pace of productive teaching and learning experiences.

Four Pillars of Deeksharambh

Socializing: Meeting new students, senior students, attend lectures by Eminent People.

Associating: Visits to university / college, visits to Dept./Branch/ Program of study and important places on campus, local area, city and so on.

Acclimatizing with rules and regulations, student support system, etc.

Experiencing: Subject lectures, study skills, small-group activities, physical activity, creative and performing arts, literary activities, universal human values, etc.

Deeksharambh will create a platform for students to:

- learn from each other's life experiences,
- help for cultural integration of students from different backgrounds,
- know about the operational framework of academic process in university,
- instilling life and social skills,
- social awareness, ethics and values, team work, leadership, creativity, etc., and
- identify the traditional values and indigenous cultures along with diverse potentialities both in indigenous and developed scenario.

There will be sessions by alumni, business leaders, outstanding achievers in related fields, people with inspiring life experiences as well as the University academic and research managers.

Steps will be taken by the institutions to identify the strength and weakness of students (with remedial measures) and diverse potentialities and to enhance cultural Integration of students from different backgrounds.

4.4 Common courses

The following common courses have been proposed to be offered across the disciplines, which in addition to giving the students a broader view of agriculture and allied sectors, will enable them for better communication skills and personality development. Besides, this will also help them to — look beyond the boundaries of their own subject/ discipline, and collaborate in future with other sectors to face the next generation challenges from a holistic point of view.

- Farming based livelihood systems
- Entrepreneurship Development and Business Management
- Agriculture Marketing and Trade
- Communication Skills
- Personality Development
- Environmental Studies and Disaster Management
- Agricultural Informatics and artificial Intelligence

In addition to these common courses and Deeksharambh, the courses as Physical Education, First Aid, Yoga Practices and Meditation, NCC and NSS have also been made compulsory for students for improving social awareness, ethics, moral values and health of the future generation.

4.5 New age courses

Courses like artificial intelligence, robotics, machine learning, etc. have been incorporated into the course curricula. Besides an array of elective courses have been included so that the student can get deeper knowledge and understanding in the subject of his interest. Emphasis has also been given to include the latest topics and subjects in both core and elective courses. Practical exercises

and pedagogy are proposed to make the next generation more imaginative, innovative, ingenious, creative and competent.

4.6 Deficiency courses

If the student has to take up any deficiency course(s), it has to be completed within the first year.

4.7 Entrepreneurship development

Entrepreneurship is a key driver of the economy of a nation, which has been encouraged through NEP-2020. Expectation is that an early orientation of the young minds towards skill enhancement and entrepreneurship will inculcate entrepreneurial mind set, allowing them to have first-hand experience of working with institutions, organizations, companies, industrial setup and investors so as to understand their dynamics in the real-world setting.

The restructured undergraduate curricula are designed to enable the students to take up entrepreneurship as a career path. As per NEP-2020, the curricula in all the disciplines of Agricultural education have been refined and fine-tuned with intensive focus on choice-based skill enhancement programs.

- Skill enhancement courses are included in following different modes:
- skill enhancement courses in the 1st year and 2nd year as part of the course programs;
- internship for exit programs after 1st year/ 2nd year; and
- advanced skill enhancement through Student READY; Experiential Learning/Hands on Training/Skill development/ RAWE/ Industrial attachment/IPT/ student project and Internship etc. in 4th year.

Internship can be seen as a mini capsule of intense learning for a student, a way to apply the theory into practice, expand their knowledge base and a platform to integrate all learnings of formal classroom setup.

Addition of new age courses related to Agriculture, Forestry, Fisheries, Agricultural Engineering, Community Science, Food Nutrition and Dietetics, etc., and incorporation of choice based online courses, which can be taken up from NPTEL, moo KIT, edX, Coursera, SWAYAM or any other portal in open digital learning environment. Practical exercises and teaching methodology are so designed to make the young generation more imaginative, innovative, ingenious, creative and competent.

The skill set acquired must make them proactive, pioneering, prospect oriented during their internship or industrial attachment to serve as apprentices in the relevant field. This will empower them to grasp viable avenues of self-employment and entrepreneurship along with diversified career options in different facets of related domains.

4.7.1 Skill Enhancement Courses

The skill enhancement programs will be choice based; student can choose the areas of skill enhancement from a bouquet of skill enhancement modules offered by the parent institution. The institutions will develop capabilities for offering such courses.

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An institution is at liberty to (and in fact, it should) work in partnership with capable organizations/ companies/ NGOs/ progressive entrepreneurs/ farmers for running various skill enhancement programs.

In the report, for each discipline the list of Skill Enhancement Courses (SEC) has been suggested. The University/ HAEIs may also formulate and offer courses in any other areas as identified by it, based on institutional expertise/ capabilities/ resources. In addition, the skill enhancement courses suggested by the UGC, as listed, may also be offered.

The evaluation of the skill enhancement programs will be as per the evaluation criteria of courses with only practical. However, for the internship programs, the evaluation will be done jointly by the host and parent organisations/ institutions.

4.7.2 Internship

The internship proposed under NEP-2020 have been an integral part of agricultural education (as proposed by Fifth Deans' Committee) under the broad category of Student READY programs. It includes various activities such as Experiential Learning/ Hands-on Training, Skill Development Training, Rural Agriculture Work Experience (RAWE), In-Plant Training/ Industrial Attachment and Students' Projects. Therefore, in the recommended structure, the student READY is further strengthened as per NEP-2020 guidelines.

Those students who wish to exit with UG-certificate after one year, has to undergo 10 weeks of internship programme (10 credits) after 1st Year. Similarly, the students who wish to exit with UG-Diploma after second year, has to undergo 10 weeks of internship programme (10 credits) after 2nd Year. The goal of Internship at exit for UG-Certificate and UG-Diploma is to further strengthen skills in the chosen area/ subject.

Internship should be preferably arranged outside of the parent institution at any assigned organization/ industry/ research institution/ project or with a progressive farmer/ agri enterprise, etc.

HAEIs will ensure that the Internship program is aligned with the course that the student has chosen. It is recommended that each HAEI appoints one or more Coordinators for the internship programs. The coordinator must plan/execute/ monitor internship programme implementation at the institution level.

4.7.3 Projects

For some disciplines, projects have been kept as an integral part of the course programme. This will enable the students to develop required competencies and skill in either research or entrepreneurship or potential employment avenues rather than having only mere qualifications, choose appropriate career in research or employment/ entrepreneurship, discover their interests, aptitudes and potentialities and maximise his/ her/ze potentialities and self-confidence. It will also add to creativity and critical thinking of the students. This will also help the students gain research skills and be more innovative in planning, executing, reporting and presenting the things.

4.8 Study tour

There will be a study tour of 10-14 days' duration during the 5th semester of the UG programme. The students will preferably visit the leading industries/ enterprises/ institutions/ organisations and

other places of academic interest outside the state (of location of the institution). This, in addition to exposing the students to the indigenous as well as the latest technologies in their related fields, will also help the students to know about the socio-economic-cultural variations within the country. The course will be of 0+2 credits, non-gradial.

4.9 Online courses

The students will have to take a minimum of 10 credits of online courses, which will comprise of one or more courses, as a partial requirement for the UG programme.

(As per UGC guideline, a 1- to 3- credit SWAYAM course is expected to be covered in 4-12 weeks' duration including the assessment component, in which it should be 40 hours for 3- credit courses to 80 hours for a 6-credit course for the learning from e-content, reading references material, discussion forum posting and assignment.)

The online courses can be from any field such as Basic Sciences, Humanities, Psychology, Anthropology, Economics, Engineering, Business Management, Languages including foreign language, Communication skills Music, etc., and can be taken from NPTEL, mooKIT, edX, Coursera, SWAYAM or any other portal.

The objective is to allow the students to groom their passion or strengthen their knowledge and competency in any field beyond prescribed courses.

The courses will be non-gradial as separate certificates would be issued by institutes offering the courses. These can be taken any time during the duration of UG program, but preferably during the 3rd and 4th years.

The University/ institute will keep a record of such courses registered and completed by each student and will indicate the title of the (successfully completed) courses in final transcript issued to the student.

The requirement of credits for online courses for B. Tech. programs is different due to the specific need of the disciplines.

4.10 Elective courses

The institutions will offer a bouquet of Elective courses to be offered to the students. The students will have the freedom to choose a subject among these courses. The institutions should develop capabilities to offer maximum of the Elective courses proposed in this report. The institutions will also have the liberty to develop and offer more Elective courses relevant to the subject as per local/ regional needs and available expertise. The elective courses can be offered from other disciplines in a Universality/HAEI.

4.11 Imparting Traditional Knowledge, Values and Ethics

Due emphasis has been given for imbibing the traditional knowledge, values and ethics among the students through different courses like the Deeksharambh, NCC and NSS. It is proposed the Study tour shall be conducted across the country to be aware about the socio-cultural-economic status of the people of the country and develop respect for their values and ethics.

X 4.12 Introduction of new degree programs *deleted*

Two new degree programs have been proposed in this report in two important areas.

Considering the natural strength of the country and future opportunities, a new UG course on Natural farming has been included. The syllabus is based on Bhartiya Prakartik Krishi Paddhati (BPKP) in India to enhance production, sustainability, saving of water, improvement in soil health and farmland ecosystem and reducing the market inputs. These important aspects of natural farming are considered as cost-effective and suitable for livelihood of large number of farmers and sustainable rural development.

A new degree programme on Agribusiness Management has been included. These students are expected to acquire competency and confidence to start their own enterprise, as well as will have adequate competency for getting jobs.

4.13 Light but tight educational programme

As per the norms of the NEP-2020, the programme has been made light but tight for the students. The total credit hours vary from 166-174 considering the specific need of the professional courses. At the same time, the students have been given the option of the skill development courses, internship, online courses, etc., which will make their learning experience pleasurable and learning more efficient.

4.14 Moderation of courses at institution level

The following flexibility is allowed to the institutions for offering the courses:

A. Maximum 30% modification in the syllabus for any individual subject. It is recommended the HAEI should consider updating the course curricula around 5% every year. That would enable addition of new contents replacing obsolete/ old contents in the courses.

B. Formulation /addition/ change of Skill Enhancement modules as per needs/ facilities available.

C. Interchange of courses in between semesters within a year (but no change of course shall be normally allowed in between years).

D. Change of maximum two core courses (If any course is removed from the list of core course, it should be kept as elective). However, the total credit hours should not be lower than the prescribed.

E. Inclusion of any number of courses as Electives and freedom to offer the Elective courses.

F. Modification/ change of credit hours for any four courses (however, total credit hours should not differ by more than four).

G. In case the skill enhancement/ internship programs are conducted in collaboration with industry/ other organizations/ agencies, students may be expected to remain out of the campus for a certain period within the semester. In that situation, the timetable should be so adjusted for the remaining part of the net instruction days (NIDs) of the corresponding semester, that each credit has at least 15 contact hours.

4.15 Central Assistance for strengthening higher agricultural education

The central Assistance for strengthening higher agricultural education, as proposed by the Fifth Deans' Committee, may be continued.

4.16 Admission Criteria

The eligibility and mode of admission for entry into the UG programs will be as per the prevailing ICAR/ SAU norms.

Agricultural universities/ colleges and other general universities offering agricultural disciplines, will fall under the umbrella of ICAR, as PSSB for agricultural education, as mandated by NEP-2020.

Institutions are at liberty to assess their student intake capacity, and announce the number of seats available in the first semester, and for lateral entries at 3rd semester and 5th semester.

The lateral entry at 3rd semester will be for the candidates having UG-certificate or those who have completed Diploma (3 years course after 10th) in recognised institutions. The lateral entry in 5th semester will be for candidates who have completed UG-Diploma.

There cannot be guarantee for migration to another HAEI. Institutions are at liberty to make their own decisions/ norms/guidelines on the matter of seats and admissions in 3rd and 5th semesters.

4.17 Provision of lateral entry for Diploma holders from recognised institutions

Candidates having a Diploma from polytechnics (after completion of 3 years course after 10th in related disciplines) will be entitled to take admission in the 2nd year (3rd semester) program. The HAEI may admit students either by holding its own admission test or use merit as criteria for by following any of the existing norms of the University/HAEI.

4.18 Migration from one University to other

The UG-Certificate/ UG-Diploma passed candidate from a HAEI will be eligible for admission into any agricultural university/institution in the country at appropriate level, provided the admitting university has provision of seats to admit them.

It is recommended to make institutional migration after 4th semester more convenient. HAEIs are at liberty to put in place rules/ regulations relaxing/ modifying existing provisions of migration, providing more freedom and ease to students. The migration shall be subject to availability of seats at the accepting HAEI.

Provided further, any such rule/ regulation that is notified by UGC regarding changes in admission criteria, migration, etc., these notifications will be considered/ examined by ICAR and re-notified to make them applicable to agricultural education falling under its domain.

4.19 Exit Option

There will be three exits during the restructured UG programme.

Exit after 1st year: A student may opt to exit after the 1st year of UG programme. However, he/ she/ze has to complete 10 weeks of internship (10 credits) to be eligible for being awarded UG-Certificate degree. (The students going to the higher level need not take 10 weeks internship at this stage.)

Exit after 2nd year: A student may opt to exit after the 2nd year of UG programme. However, he/ she/ze has to complete 10 weeks of internship (10 credits) to be eligible for being awarded UG-

Certificate degree. (The students going to the higher level need not take 10 weeks internship at this stage.)

Exit after 4-years programme leading to B.Sc. (Hons.)/ B.F.Sc. (Hons.)/ B.Tech. degree.

4.20 Maximum residential period

Students who exit with a UG- Certificate or UG- Diploma are permitted to re-enter within three academic years and complete the degree programme.

Students may be permitted to take a break from the study during the period of study but the total duration for completing the programme shall not exceed 7 years.

4.21 Examination and Evaluation system

There will be a uniform system of the evaluation and grading to be followed with Grade point average (GPA) system. The following pattern of examination is recommended.

Table 4.3 Evaluation system

	External theory	Internal theory (Mid-term)	Quiz/ progressive assessment	Final Practical
For courses having both theory and practical components	40%	20%	20%	20%
For courses with theory only	50%	30%	20%	–
Courses with practical only	–	30%	20%	50% (Internal)

For the external theory examinations, the question paper will be obtained from external experts. The HoDs of the respective departments will ensure due coverage of the syllabus with the provision of moderation, if necessary. Paper evaluation to be done by a faculty other than the course instructor(s).

The external theory examinations should be of 2 to 2.5 hours' duration and the mid-term examinations should be normally of 1-hour duration. The format of assessment and duration of quizzes/ progressive assessment duration will depend upon the course teacher.

Internal practical examination to be conducted by the course instructor and one faculty nominated by the HoD of the concerned department.

The evaluation of the skill enhancement courses will be done as courses with practical only.

Usually for any subject, there will be two quizzes within the semester, one before the mind-term and one after. There will be provision of corrections in between, i.e. the students scoring lower than 50% marks in any one quiz can opt for appearing for a third quiz to improve their grades. The assessment of the students through quizzes should focus on their critical thinking and creativity rather than rote reading.

The quiz and progressive assessment can also be considered in form of group assignments (which should encourage creativity, critical thinking and problem-solving attitude).

The evaluation of internship will be done both by the parent institute and the host industry/ organisation. It should be 50% weightage for each. The student shall submit a report to the parent

institute and present the learnings before the other students and faculty after the internship programme. The format of evaluation may be developed by the parent institute.

The online/MOOC courses, successfully completed by the student, will be indicated in the transcript with 'Satisfactory' remark.

When students take deficiency course(s), they will be assessed as 'Satisfactory' or 'Unsatisfactory' without any grade points.

The evaluation will be done on a 10-point scale.

10 point = 100 marks

The per cent of marks in a subject will be divided by 10 to obtain the grade point.

The grade point average for a semester will be calculated as follows:

$$GPA = \frac{\sum (Grade\ point \times credit\ hours)_{in\ one\ semester}}{Total\ credit\ hours\ in\ the\ semester}$$

The Cumulative grade point earned at any stage of the course will be calculated as cumulative grade point average (CGPA) as follows.

$$CGPA = \frac{\sum (Grade\ point \times credit\ hours)_{until\ last\ semester}}{Total\ credit\ hours\ until\ last\ semester}$$

If a student passes in a subject in a second attempt, for calculation of CGPA, the grade point for the subject in the second attempt will only be considered. The final CGPA will be named as overall grade point average (OGPA), which will be mentioned in the final transcript of the students.

4.22 Award of Divisions

The award of the divisions will be as follows

Table 4.4 Award of the divisions

OGPA	Division
5 to <6	Pass
6 to <7	II division
7 to <8	I Division
>=8	1st division and distinction

4.23 Uniformity in Nomenclature of Degrees

To ensure hassle free movement of students throughout the country, it is important that nomenclature of degrees awarded is same, across all HAEIs. The nomenclature will be as follows.

a. UG-Certificate with mention of discipline

e.g. UG-Certificate in Agriculture, UG-Certificate in Horticulture, UG-Certificate in Agricultural Engineering

Note: If any institution is at present offering any certificate course of the duration of one year lower, it may continue to do so, but this certificate course will not be considered at par with

the UG-Certificate, if the student has not taken admission through the appropriate entrance examination for entry into the 4-year UG program.

b. UG-Diploma with mention of discipline

e.g. UG-Diploma in Agriculture, UG-Diploma in Horticulture, UG-Diploma in Agricultural Engineering

Note: If any institution is at present offering any Diploma course of two years or less than two years' duration after +2 Science, it may continue to do so, but this diploma course will not be considered at par with the UG-Diploma, if the student has not taken admission through the appropriate entrance examination for entry into the 4-year UG program.

The nomenclature of undergraduate degrees will be as per the recommendations of the 5thDeans' Committee as follows:

B. Sc. (Hons.)/ B. F. Sc. (Hons.)/ B. Tech. followed by discipline

e.g. B. Sc. (Hons.) Agriculture/ B. F. Sc (Hons.)/ B. Tech. (Agricultural Engineering)

The nomenclature of degrees may change in case any such revision is suggested by the UGC.

4.24 Increasing Gross Enrolment Ratio (GER)

Keeping in view the NEP-2020 call for increasing GER, it is recommended that provision is made by institutions to launch stand-alone UG-Certificate and/ or UG-Diploma courses in specific subjects/ disciplines. The entrance examinations for such programs will be separate. The students completing the UG-Certificate will have to appear separate entrance test for continuing to higher level as per University/HAEI norms. Similarly, the students completing the UG-Diploma will have to appear separate entrance test for continuing to higher level as per University/HAEI norms.

4.25 Academic Bank of Credits (ABC)

As per NEP-2020 guidelines, the HAEI will create an Academic Bank of Credits (ABC) of each student and recognise the ABC of a student as per the norms of the HAEI/ NEP-2020 recommendations.

4.26 Blended learning

Blended learning has gained tremendous popularity as it combines the benefits of traditional classroom teaching with emerging technology and online educational resources to make learning more real-time, contextual, and engaging. This provision will enable blended learning to expand the open /distance learning options and to promote extensive use of technology in learning and skilling. This would help in overcoming the constraints of physical infrastructure and scalability while enhancing access, equity, and affordability and ensuring quality and accountability. The blended learning option shall also enhance accessibility of learning for Divyangs.

4.27 Minimum requirement for establishing colleges for agriculture and allied disciplines

The minimum requirements for establishing colleges for 13 agricultures and allied disciplines shall be as per the ICAR Model Act-2023 and various guidelines and orders being issued by ICAR from time to time.

The new NEP-2020 has been introduced in the country to formalize changes in the system, from school to college/ university level. Keeping in mind the concurrent developing scenario and stakeholders' demands, especially in agriculture education, research and extension systems across the regions, delivery of education content henceforth, will focus on key-concepts, ideas, applications and problem-solving angles so as to empower students to become employment ready.

The Indian Council of Agricultural Research has been declared Professional Standards Setting Body (PSSB) for agriculture and allied subjects under NEP-2020. The Council has been coordinating with all agricultural universities since 1960s or so for addressing the issues of quality agricultural education. Primary focus of national coordination in agricultural education was given to update course curricula periodically and concerned universities to adopt them. As a result of long term persuasions by ICAR and realization of stakeholders' demand, agricultural universities have been implementing ICAR recommended Course Curricula for 13 undergraduate programs, 80 Post Graduate programs and 79 Ph. D. programs.

Later on, it was perceived that merely changing the course curricula would not be sufficient to address the quality education, but a sound framework suggesting minimum requirements for degree programs especially requirements of teaching and non-teaching staff, instructional laboratory and instructional farms and supporting units of the following disciplines are also equally essential:

1. Agriculture
2. Agricultural Engineering
3. Biotechnology
4. Dairy Technology
5. Fisheries Science
6. Food Technology
7. Forestry
8. Community Science
9. Horticulture
10. Food Nutrition and Dietetics
11. Sericulture
12. Agribusiness Management
13. Natural Farming

4.28 Making implementation of the recommendations of the Deans' Committee mandatory

Efforts have been made to improve the quality of agricultural education to make it internationally competitive. Implementation of the recommendations of the Sixth Deans' Committee to be made mandatory for accreditation of academic programs and academic institutions by the National Agricultural Education Accreditation Board (NAEAB).