MINIMUM COURSE CURRICULUM FOR UNDERGRADUATE COURSES UNDER CHOICE BASED CREDIT SYSTEM

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Background/Preamble:

Ministry of Human Resource Development (HRD), Govt. of India, has already initiated the process for developing New Education Policy (NEP) in our country to bring out reforms in Indian education system. University Grants Commission (UGC) participates more actively in developing National Education Policy, its execution and promotion of higher education in our country. The UGC has already initiated several steps to bring equity, efficiency and academic excellence in National Higher Education System. The important ones include innovation and improvement in course- curricula, introduction of paradigm shift in learning and teaching pedagogy, examination and education system.

The education plays enormously significant role in building of a nation. There are quite a large number of educational institutions, engaged in imparting education in our country. Majority of them have entered recently into semester system to match with international educational pattern. However, our present education system produces young minds lacking knowledge, confidence, values and skills. It could be because of complete lack of relationship between education, employment and skill development in conventional education system. The present alarming situation necessitates transformation and/or redesigning of education system, not only by introducing innovations but developing "learner-centric approach in the entire education delivery mechanism and globally followed evaluation system as well.

Majority of Indian higher education institutions have been following marks or percentage based evaluation system, which obstructs the flexibility for the students to study the subjects/courses of their choice and their mobility to different institutions. There is need to allow the flexibility in education system, so that students depending upon their interests and aims can choose inter-disciplinary, intra-disciplinary and skill-based courses. This can only be possible when choice based credit system (CBCS), an internationally acknowledged system, is adopted. The choice based credit system not only offers opportunities and avenues to learn core subjects but also exploring additional avenues of learning beyond the core subjects for holistic development of an individual. The CBCS will undoubtedly facilitate us bench mark our courses with best international academic practices. The CBCS has more advantages than disadvantages.

Advantages of the choice based credit system:

- Shift in focus from the teacher-centric to student-centric education.
- Student may undertake as many credits as they can cope with (without repeating all courses in a given semester if they fail in one/more courses).
- CBCS allows students to choose inter-disciplinary, intra-disciplinary courses, skill oriented papers (even from other disciplines according to their learning needs, interests and aptitude) and more flexibility for students).

- CBCS makes education broad-based and at par with global standards. One can take credits by combining unique combinations. For example, Physics with Economics, Microbiology with Chemistry or Environment Science etc.
- CBCS offers flexibility for students to study at different times and at different institutions to complete one course (ease mobility of students). Credits earned at one institution can be transferred.

Disadvantages:

- Difficult to estimate the exact marks
- Workload of teachers may fluctuate
- Demand good infrastructure for dissemination of education

CHOICE BASED CREDIT SYSTEM (CBCS):

The CBCS provides an opportunity for the students to choose courses from the prescribed courses comprising core, elective/minor or skill based courses. The courses can be evaluated following the grading system, which is considered to be better than the conventional marks system. Therefore, it is necessary to introduce uniform grading system in the entire higher education in India. This will benefit the students to move across institutions within India to begin with and across countries. The uniform grading system will also enable potential employers in assessing the performance of the candidates. In order to bring uniformity in evaluation system and computation of the Cumulative Grade Point Average (CGPA) based on student's performance in examinations, the UGC has formulated the guidelines to be followed.

Tentative list of Undergraduate Disciplines/Courses to be covered under CBCS developing common minimum structure and syllabi:

BACHELOR COURSES UNDER CBCS IN INDIA

S.NO.	UNDERGRADUATE COURSES	
1	**Arts and Humanities**	1. Hindi 2. Sanskrit 3. Modern Indian Language-Punjabi 4. English 5. Sociology 6. Public Administration 7. Defense and Strategic studies 8. History 9. Geography 10. Economics 11. History and Tourism 12. Philosophy 13. Political Science 14. Music 15. Journalism 16. Psychology 17. Mathematics 18. Home Science 19. Education
2	**Commerce and Management**	20. Business Economics 21. Commerce 22. Banking and Insurance 23. Accounting and Finance 24. Financial Markets 25. Company and Compensation law 26. Business Administration 27. Labor Management 28. Tourism and Travel management
3	**Science**	29. B.Sc. Medical/Life Sciences 30. Chemistry 31. Physics 32. Botany 33. Zoology 34. Biotechnology

		35. Microbiology 36. Biochemistry 37. Computer Science 38. Environmental Science 39. Food Technology 40. Electronic Science 41. Information Technology 42. Forensic Science 43. Biomedical Science 44. Physical Science 45. Operational Research 46. Statistics 47. Anthropology
5	**Others**	48. LLB 49. BCA 50. B. Lib 51. B.Ed 52. B.El.Ed 53. Multimedia and Communication 54. Fine Arts 55. Performing Arts 56. Physical Education and Health 57. Foreign Languages

Outline of Choice Based Credit System:

1. **Core Course:** A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.
2. **Elective Course:** Generally a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/ subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate's proficiency/skill is called an Elective Course.
   2.1 **Discipline Specific Elective (DSE) Course**: Elective courses may be offered by the main discipline/subject of study is referred to as Discipline Specific Elective. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).
   2.2 **Dissertation/Project**: An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher/faculty member is called dissertation/project.
   2.3 **Generic Elective (GE) Course**: An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective.

   P.S.: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and vice versa and such electives may also be referred to as Generic Elective.
3. **Ability Enhancement Courses (AEC):** The Ability Enhancement (AE) Courses may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). "AECC" courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.
   3.1 Ability Enhancement Compulsory Courses (AECC): Environmental Science, English Communication/MIL Communication.
   3.2 Skill Enhancement Courses (SEC): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

* **Introducing Research Component in Under-Graduate Courses**

Project work/Dissertation is considered as a special course involving application of knowledge in solving / analyzing /exploring a real life situation / difficult problem. A Project/Dissertation work would be of 6 credits. A Project/Dissertation work may be given in lieu of a discipline specific elective paper.

Implementation:

1. The CBCS may be implemented in Central/State Universities subject to the condition that all the stakeholders agree to common minimum syllabi of the core papers and at least follow common minimum curriculum as fixed by the UGC. The allowed deviation from the syllabi being 20 % at the maximum.
2. The universities may be allowed to finally design their own syllabi for the core and elective papers subject to point no. 1. UGC may prepare a list of elective papers but the universities may further add to the list of elective papers they want to offer as per the facilities available.
3. Number of Core papers for all Universities has to be same for both UG Honors as well as UG Program.
4. Credit score earned by a student for any elective paper has to be included in the student's overall score tally irrespective of whether the paper is offered by the parent university (degree awarding university/institute) or not.
5. For the introduction of AE Courses, they may be divided into two categories:
    a) AE Compulsory Courses: The universities participating in CBCS system may have common curriculum for these papers. There may be one paper each in the 1st two semesters viz. (i) English/MIL Communication, (ii) Environmental Science.
    b) Skill Enhancement Courses: The universities may decide the papers they may want to offer from a common pool of papers decided by UGC or the universities may choose such papers themselves in addition to the list suggested by UGC. The universities may offer one paper per semester for these courses.
6. The university/Institute may plan the number of seats per elective paper as per the facility and infrastructure available.
7. An undergraduate degree with Honours in a discipline may be awarded if a student completes 14 core papers in that discipline, 2 Ability Enhancement Compulsory Courses (AECC), minimum 2 Skill Enhancement Courses (SEC) and 4 papers each from a list of Discipline Specific Elective and Generic Elective papers respectively.
8. An undergraduate Program degree in Science disciplines may be awarded if a student completes 4 core papers each in three disciplines of choice, 2 Ability Enhancement Compulsory Courses (AECC), minimum 4 Skill Enhancement Courses (SEC) and 2 papers each from a list of Discipline Specific Elective papers based on three disciplines of choice selected above, respectively.
9. An Undergraduate program degree in Humanities/ Social Sciences/ Commerce may be awarded if a student completes 4 core papers each in two disciplines of choice, 2 core papers each in English and MIL respectively, 2 Ability Enhancement Compulsory Courses (AECC), minimum 4 Skill Enhancement Courses (SEC), 2 papers each from a list of Discipline Specific Elective papers based on the two disciplines of choice selected above, respectively, and two papers from the list of Generic Electives papers.
10. The credit(s) for each theory paper/practical/tutorial/project/dissertation will be as per the details given in A, B, C, D for B.Sc. Honours, B.A./B.Com. Honours, B.Sc. Program and B.A./B.Com. Program, respectively.
11. Wherever a University requires that an applicant for a particular M.A./M.Sc. /Technical/Professional course should have studied a specific discipline at the undergraduate level, it is suggested that obtaining 24 credits in the concerned discipline at the undergraduate level may be deemed sufficient to satisfy such a requirement for admission to the M.A./M.Sc./Technical/Professional course.

A

Details of courses under B.Sc. (Honors)

Course	*Credits	
	Theory+ Practical	Theory + Tutorial
I. Core Course		
(14 Papers)	14X4= 56	14X5=70
Core Course Practical / Tutorial*		
(14 Papers)	14X2=28	14X1=14
II. Elective Course		
(8 Papers)		
A.1. Discipline Specific Elective	4X4=16	4X5=20
(4 Papers)		
A.2. Discipline Specific Elective Practical/ Tutorial*	4 X 2=8	4X1=4
(4 Papers)		
B.1. Generic Elective/ Interdisciplinary	4X4=16	4X5=20
(4 Papers)		
B.2. Generic Elective Practical/ Tutorial*	4 X 2=8	4X1=4
(4 Papers)		

- **Optional Dissertation or project work in place of one Discipline Specific** E**lective paper (6 credits) in 6th Semester**

III. Ability Enhancement Courses		
1. **Ability Enhancement Compulsory Courses (AECC)**		
(2 Papers of 2 credit each)	2 X 2=4	2 X 2=4
Environmental Science		
English/MIL Communication		
2. **Skill Enhancement Courses (SEC)**		
(Minimum 2)	2 X 2=4	2 X 2=4
(2 Papers of 2 credit each)		

Total credit **140** **140**

Institute should evolve a system/policy about ECA/ General Interest/Hobby/Sports/NCC/NSS/related courses on its own.

*** wherever there is a practical there will be no tutorial and vice-versa**

PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN B. Sc. Honours

	CORE COURSE (14)	**Ability Enhancement Compulsory Course (AECC) (2)**	**Skill Enhancement Course (SEC) (2)**	**Elective: Discipline Specific DSE (4)**	**Elective: Generic (GE) (4)**
I	C 1	(English Communication/MIL)/ Environmental Science			GE-1
	C 2				
II	C 3	Environmental Science/(English/MIL Communication)			GE-2
	C 4				
III	C 5		SEC -1		GE-3
	C 6				
	C 7				
IV	C 8		SEC -2		GE-4
	C 9				
	C 10				
V	C 11			DSE-1	
	C 12			DSE -2	
VI	C 13			DSE -3	
	C 14			DSE -4	

B

Details of courses under B.A./ B.Com. (Honors)

Course	*Credits	
	Theory+ Practical	Theory + Tutorial
I. Core Course **(14 Papers)**	14X4= 56	14X5=70
Core Course Practical / Tutorial* **(14 Papers)**	14X2=28	14X1=14
II. Elective Course **(8 Papers)**		
A.1. Discipline Specific Elective **(4 Papers)**	4X4=16	4X5=20
A.2. Discipline Specific Elective Practical / Tutorials* **(4 Papers)**	4 X 2=8	4X1=4
B.1. Generic Elective/Interdisciplinary **(4 Papers)**	4X4=16	4X5=20
B.2. Generic Elective Practical / Tutorials* **(4 Papers)**	4 X 2=8	4X1=4
III. Ability Enhancement Courses		
1. **Ability Enhancement Compulsory Courses (AECC)** **(2 Papers of 2 credits each)** Environmental Science English Communication/MIL	2 X 2=4	2 X 2=4
2. **Skill Enhancement Courses (SEC)** (Minimum 2, Max. 4) **(2 Papers of 2 credits each)**	2 X 2=4	2 X 2=4

- **Optional Dissertation or project work in place of one Discipline Specific elective paper (6 credits) in 6th Semester**

Total credit= 140 **Total credit= 140**

Institute should evolve a system/policy about ECA/ General Interest/Hobby/Sports/NCC/NSS/related courses on its own.

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PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN B.A./B.Com. Honours

	CORE COURSE (14)	**Ability Enhancement Compulsory Course (AECC) (2)**	**Skill Enhancement Course (SEC) (2)**	**Elective: Discipline Specific DSE (4)**	**Elective: Generic (GE) (4)**
I	C 1 C 2	(English/ MIL Communication)/ Environmental Science			GE-1
II	C 3 C 4	Environmental Science/(English/ MIL Communication)			GE-2
III	C 5 C 6 C 7		SEC -1		GE-3
IV	C 8 C 9 C 10		SEC -2		GE-4
V	C 11 C 12			DSE-1 DSE -2	
VI	C 13 C 14			DSE -3 DSE -4	

C

Details of Courses Under Undergraduate Programme (B.Sc.)

Course	***Credits**	
	Theory+ Practical	Theory+Tutorials
I. Core Course **(12 Papers)** 04 Courses from each of the 03 disciplines of choice	12X4= 48	12X5=60
Core Course Practical / Tutorial* **(12 Practical/ Tutorials*)** 04 Courses from each of the 03 Disciplines of choice	12X2=24	12X1=12
II. Elective Course **(6 Papers)** Two papers from each discipline of choice including paper of interdisciplinary nature.	6x4=24	6X5=30
Elective Course Practical / Tutorials* **(6 Practical / Tutorials*)** Two Papers from each discipline of choice including paper of interdisciplinary nature	6 X 2=12	6X1=6

- **Optional Dissertation or project work in place of one Discipline elective paper (6 credits) in 6th Semester**

III. Ability Enhancement Courses

1**. Ability Enhancement Compulsory Courses (AECC)** **(2 Papers of 2 credits each)** **Environmental Science** **English/MIL Communication**	2 X 2=4	2X2=4
2**. Skill Enhancement Courses (SEC)**	4 X 2=8	4 X 2=8

(4 Papers of 2 credits each)

Total credit= 120 **Total credit= 120**

Institute should evolve a system/policy about ECA/ General Interest/Hobby/Sports/NCC/NSS/related courses on its own.

***wherever there is practical there will be no tutorials and vice -versa**

PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN B.Sc. Program

	CORE COURSE (12)	**Ability Enhancement Compulsory Course (AECC) (2)**	**Skill Enhancement Course (SEC)** (2)	**Discipline Specific Elective DSE (6)**
I	DSC- 1 A	(English/MIL Communication)/ Environmental Science		
	DSC- 2 A			
	DSC- 3 A			
II	DSC- 1 B	Environmental Science / (English/MIL Communication)		
	DSC- 2 B			
	DSC- 3 B			
III	DSC- 1 C		SEC-1	
	DSC- 2 C			
	DSC- 3 C			
IV	DSC- 1 D		SEC -2	
	DSC- 2 D			
	DSC- 3 D			
V			SEC -3	DSE-1 A
				DSE-2 A
				DSE-3 A

I			SEC - 4	DSE-1 B
				DSE-2 B
				DSE-3 B

D

Details of Courses Under Undergraduate Programme (B.A./ B.Com.)

Course	***Credits**	
	Paper+ Practical	Paper + Tutorial
I. Core Course	12X4= 48	12X5=60
(12 Papers)		
Two papers – English		
Two papers – MIL		
Four papers – Discipline 1.		
Four papers – Discipline 2.		
Core Course Practical / Tutorial*	12X2=24	12X1=12
(12 Practicals)		
II. Elective Course	6x4=24	6X5=30
(6 Papers)		
Two papers- Discipline 1 specific		
Two papers- Discipline 2 specific		
Two papers- Inter disciplinary		
Two papers from each discipline of choice and two papers of interdisciplinary nature.		
Elective Course Practical / Tutorials*	6 X 2=12	6X1=6
(6 Practical/ Tutorials*)		
Two papers- Discipline 1 specific		
Two papers- Discipline 2 specific		
Two papers- Generic (Inter disciplinary)		
Two papers from each discipline of choice including papers of interdisciplinary nature.		

- **Optional Dissertation or project work in place of one elective paper (6 credits) in 6th Semester**

III. Ability Enhancement Courses		
1**. Ability Enhancement Compulsory Courses (AECC)**	2 X 2=4	2 X 2=4
(2 Papers of 2 credits each)		
Environmental Science		
English Communication/MIL		
2**. Skill Enhancement Courses (SEC)**	4 X 2=8	4 X 2=8

(4 Papers of 2 credits each)

Total credit= 120 **Total = 120**

Institute should evolve a system/policy about ECA/ General Interest/Hobby/Sports/NCC/NSS/related courses on its own.

***wherever there is a practical there will be no tutorial and vice-versa.**

PROPOSED SCHEME FOR CHOICE BASED CREDIT SYSTEM IN B.A./B.Com Program

	CORE COURSE (12)	**Ability Enhancement Compulsory Course (AECC) (2)**	**Skill Enhancement Course (SEC)** (2)	**Discipline Specific Elective DSE (4)**	**Generic Elective GE (2)**
I	English/MIL-1 DSC- 1 A DSC- 2 A	(English/MIL Communication) / Environmental Science			
II	MIL/English-1 DSC- 1 B DSC- 2 B	Environmental Science/ (English/MIL Communication)			
III	English/MIL-2 DSC- 1 C DSC- 2 C		SEC -1		
IV	MIL/English-2 DSC- 1 D DSC- 2 D		SEC -2		
V			SEC -3	DSE-1 A DSE-2 A	GE-1

VI			SEC -4	DSE-1 B	GE-2
				DSE-2 B	

12. The Universities/Institutes may offer any number of choices of papers from different disciplines under Generic Elective and Discipline Specific Elective as per the availability of the courses/faculty.
13. Universities/Institutes may evolve a system/policy about Extra Curricular Activities/ General Interest and Hobby Courses/Sports/NCC/NSS/Vocational courses/related courses on their own.
14. A student can opt for more number of Elective and AE Elective papers than proposed under the model curriculum of UGC. However the total credit score earned will not exceed 160 credits for UG Honours and 140 credits for UG Program degree.
15. The new scheme of UG courses should be given due consideration while framing the admission eligibility requirement for PG/ Technical courses in Indian Universities/Institutions to ensure that students following inter and multi-disciplinary format under CBCS are not at a disadvantage. It is suggested that wherever required, obtaining 24 credits in particular discipline may be considered as the minimum eligibility, for admission in the concerned discipline, for entry to PG/Technical courses in Indian Universities/Institutions.

Conversion of credit(s) into grade(s): The following illustrations could be taken as an example for computing SGPA and CGPA from credits for Honours courses in all disciplines, degree Program courses in Science subjects and degree Program courses in Humanities, Social Sciences and Commerce subjects:

1. Grades and Grade Points

Letter Grade	**Grade Point**
O (Outstanding)	10
A+(Excellent)	9
A (Very Good)	8
B+(Good)	7
B (Above Average)	6

C (Average)	5
P (Pass)	4
F (Fail)	0
Ab (Absent)	0

1 A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.
2 For non credit courses 'Satisfactory' or "Unsatisfactory' shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.
3 The Universities can decide on the grade or percentage of marks required to pass in a course and also the CGPA required to qualify for a degree taking into consideration the recommendations of the statutory professional councils such as AICTE, MCI, BCI, NCTE etc.,
4 The statutory requirement for eligibility to enter as assistant professor in colleges and universities in the disciplines of arts, science, commerce etc., is a minimum average mark of 50% and 55% in relevant postgraduate degree respectively for reserved and general category. Hence, it is recommended that the cut-off marks for grade B shall not be less than 50% and for grade B+, it should not be less than 55% under the absolute grading system. Similarly cut-off marks shall be fixed for grade B and B+ based on the recommendation of the statutory bodies (AICTE, NCTE etc.,) of the relevant disciplines.

Illustration of Computation of SGPA and CGPA and Format for Transcripts

2. B. Sc. / B. Com. / B.A. Honors Course

Course	**Credit**	**Grade Letter**	**Grade Point**	**Credit Point (Credit X Grade)**	**SGPA (Credit Point/Credit)**
Semester I					
C-1	06	A	8	48	
C-2	06	B+	7	42	
AECC-1	02	B	6	12	
GE-1	06	B	6	36	
Total	**20**			**138**	**6.9 (138/20)**
Semester II					

C-3	06	B	6	36	
C-4	06	C	5	30	
AECC -2	02	B+	7	14	
GE-2	06	A+	9	54	
Total	**20**			**134**	**6.7 (134/20)**
Semester III					
C-5	06	A+	9	54	
C-6	06	0	10	60	
C-7	06	A	8	48	
SEC -1	02	A	8	16	
GE-3	06	0	10	60	
Total	**26**			**238**	**9.15 (238/26)**
Semester IV					
C-8	06	B	6	36	
C-9	06	A+	9	54	
C-10	06	B	6	36	
SEC -2	02	A+	9	18	
GE-4	06	A	8	48	
Total	**26**			**192**	**7.38 (192/26)**
Semester V					
C-11	06	B	6	36	
C-12	06	B+	7	42	
DSE-1	06	0	10	60	
DSE-2	06	A	8	48	
Total	**24**			**186**	**7.75 (186/24)**

Semester VI					
C-13	06	A+	9	54	
C-14	06	A	8	48	
DSE-3	06	B+	7	42	
DSE-4	06	A	8	48	
Total	**24**			**192**	**8.0 (192/24)**
CGPA					
Grand Total	**140**			**1080**	**7.71 (1080/144)**

Semester 1	**Semester 2**	**Semester 3**	**Semester 4**
Credit: 20; SGPA: 6.9	Credit: 20; SGPA: 6.7	Credit: 26; SGPA: 9.15	Credit: 26; SGPA: 7.38

Semester 5	**Semester 6**
Credit: 24; SGPA: 7.75	Credit: 24; SGPA: 8.0

Thus, **CGPA = (**20 x 6.9 + 20 x 6.7 + 26 x 9.15 + 26 x 7.38 + 24 x 7.75 + 24 x 8.0)/ 140 = **7.71**

2. B.Sc Program Course

Course	**Credit**	**Grade Letter**	**Grade Point**	**Credit Point (Credit X Grade)**	**SGPA (Credit Point/Credit)**
Semester I					
DSC-1A	06	B	6	36	

DSC-2A	06	B+	7	42	
DSC-3A	06	C	5	30	
AECC -1	02	B	6	12	
Total	**20**			**120**	**6.0**
Semester II					
DSC-1B	06	B	6	36	
DSC-2B	06	B	6	36	
DSC-3B	06	C	5	30	
AECC-2	02	A+	9	18	
Total	**20**			**120**	**6.0**
Semester III					
DSC-1C	06	A	8	48	
DSC-2C	06	A+	9	54	
DSC-3C	06	A	8	48	
SEC -1	02	A	8	16	
Total	**20**			**166**	**8.3**
Semester IV					
DSC-1D	06	C	5	30	
DSC-2D	06	B	6	36	
DSC-3D	06	B+	7	42	
SEC -2	02	A+	9	18	
Total	**20**			**126**	**6.3**
Semester V					
DSE-1A	06	B	6	36	
DSE-2A	06	A+	9	54	

DSE-3A	06	A	8	48	
SEC -3	02	B	6	12	
Total	**20**			**150**	**7.5**
Semester VI					
DSE-1B	06	B+	7	42	
DSE-2B	06	B	6	36	
DSE-3B	06	C	5	30	
SEC -4	02	C	5	10	
Total	**20**			**118**	**5.9**
CGPA					
Grand Total	**120**			**800**	**6.67 (800/120)**

Semester 1	**Semester 2**	**Semester 3**	**Semester 4**
Credit: 20; SGPA: 6.0	Credit: 20; SGPA: 6.0	Credit: 20; SGPA: 8.3	Credit: 20; SGPA: 6.3

Semester 5	**Semester 6**
Credit: 20; SGPA: 7.5	Credit: 20; SGPA: 5.9

Thus, **CGPA = (**20 x 6.0 + 20 x 6.0 + 20 x 8.3 + 20 x 6.3 + 20 x 7.5 + 20 x 5.9)/ 120 = **6.67**

3. B.A. / B.Com. Program Course

Course	**Credit**	**Grade Letter**	**Grade Point**	**Credit Point (Credit X Grade)**	**SGPA (Credit Point/Credit)**
Semester I					

English-1	06	A	8	48	
DSC-1A	06	B	6	36	
DSC-2A	06	A	8	48	
AECC-1	02	B+	7	14	
Total	**20**			**146**	**7.3**
Semester II					
MIL-1	06	A+	9	54	
DSC-1B	06	B+	7	42	
DSC-2B	06	B+	7	42	
AECC-2	02	B	6	12	
Total	**20**			**150**	**7.5**
Semester III					
English -2	06	B	6	36	
DSC-1C	06	A	8	48	
DSC-2C	06	B	6	36	
SEC -1	02	A	8	16	
Total	**20**			**136**	**6.8**
Semester IV					
MIL - 2	06	B+	7	42	
DSC-1D	06	A+	9	54	
DSC-2D	06	A	8	48	
SEC -2	02	B	6	12	
Total	**20**			**156**	**7.8**
Semester V					
SEC -3	02	A+	9	18	

DSE-1A	06	A	8	48	
DSE-2A	06	A+	9	54	
GE-1	06	A+	9	54	
Total	**20**			**174**	**8.7**
Semester VI					
SEC -4	02	A+	9	18	
DSE-2A	06	B	6	36	
DSE-2B	06	A	8	48	
GE-2	06	A	8	48	
Total	**20**			**150**	**7.5**
CGPA					
Grand Total	**120**			**912**	**7.6 (912/120)**

Semester 1	**Semester 2**	**Semester 3**	**Semester 4**
Credit: 20; SGPA: 7.3	Credit: 20; SGPA: 7.5	Credit: 20; SGPA: 6.8	Credit: 20; SGPA: 7.8

Semester 5	**Semester 6**
Credit: 20; SGPA: 8.7	Credit: 20; SGPA: 7.5

Thus, **CGPA = (**20 x 7.3 + 20 x 7.5 + 20 x 6.8 + 20 x 7.8 + 20 x 8.7 + 20 x 7.5)/ 120 = **7.6**

*Transcript (Format): Based on the above recommendations on Letter grades, grade points and SGPA and CCPA, the HEIs may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

Structure of B.Sc. Honours Botany under CBCS

Core Course

1. Algae and Microbiology
2. Cell Biology
3. Mycology and Phytopathology
4. Archegoniate
5. Morphology and Anatomy
6. Economic Botany
7. Basics of Genetics
8. Molecular Biology
9. Ecology
10. Plant Systematics
11. Reproductive Biology of Angiosperms
12. Plant Physiology
13. Plant Metabolism
14. Plant Biotechnology

Discipline Centric Elective (Any four)

1. Bio-molecules
2. Analytical Techniques in Plant Sciences
3. Bioinformatics
4. Stress Biology
5. Plant Breeding
6. Natural Resource Management
7. Horticultural Practices and Post-Harvest Technology
8. Research Methodology
9. Industrial and Environmental Microbiology
10. Biostatistics

Generic Elective(Any four)

1. Biodiversity (Microbes, Algae, Fungi and Archegoniate)
2. Plant Ecology and Taxonomy
3. Plant Anatomy and Embryology
4. Economic Botany and Biotechnology
5. Plant Diversity and Human Welfare
6. Environmental Biotechnology

Ability Enhancement Course

Compulsory

1. Environmental Science
2. English/MIL Communication

Elective (Any two)

1. Mushroom Culture Technology
2. Bio-fertilizers
3. Herbal Technology
4. Nursery and Gardening
5. Floriculture
6. Ethno botany

Structure of B.Sc. Programme (Life Sciences)/ B.Sc. Medical under CBCS

Core Courses (12)

Botany

1. Biodiversity (Microbes, Algae, Fungi and Archegoniate)
2. Cell and Molecular Biology
3. Plant Anatomy and Embryology
4. Plant Physiology and Metabolism

Zoology

1. Animal Diversity-I
2. Animal Diversity -II
3. Genetics and Evolution
4. Physiology and Biochemistry

Chemistry

1. Bonding
2. Conceptual Organic Chemistry
3. Thermodynamics, chemical equilibrium and electrochemistry
4. Spectroscopy

Discipline Centric Electives

Botany (Any two)

1. Economic Botany and Biotechnology
2. Plant Ecology and Taxonomy
3. Analytical Techniques in Plant Sciences
4. Bioinformatics
5. Research Methodology

Zoology (Any two)

1. Animal Behaviour
2. Reproductive Biology
3. Developmental Biology
4. Biotechnology
5. Immunology
6. Applied Zoology

Chemistry (Any two)

1. Molecules of Life
2. Bioinorganic, environmental & green chemistry
3. Bioinorganic, environmental & green chemistry
4. Analytical methods in chemistry

Ability Enhancement Course

Compulsory

1. Environmental Science
2. English/MIL Communication

Elective (Any four)

1. Mushroom Culture Technology
2. Bio-fertilizers
3. Herbal Technology
4. Nursery and Gardening
5. Floriculture
6. Ethno botany

The subject experts have to prepare and submit the syllabi of all the papers pertaining to honors and programme courses latest by 30th March, 2015. The next meeting for finalization of syllabi for the courses meeting held on 20th March, 2015, has been fixed on 31st March, 2015.

The experts for subjects like Botany, Life Sciences, Zoology, Physics, Chemistry, Commerce, Economics, and Hindi.