



THE NATIONAL COLLEGE

AUTONOMOUS

NAAC ACCREDITED – 'A' GRADE

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CHOICE BASED CREDIT SYSTEM: An Introduction

Recommendation of National Knowledge Commission

To ensure quality, NKC has called for reform of existing universities and Colleges to ensure frequent curricula revisions, introduction of course credit system, enhancing reliance on internal assessment, encouraging research, and reforming governance of institutions.

What is lacking in the Present System?

- Lacks context based approach
- There are no opportunities for
 - Group work
 - Individual work
 - Data collection
 - Field work
 - Quizzes
 - Class tests
 - Community involvement

No inter-disciplinary mobility possible

- Lack of multi-disciplinarity, closed isolated environment
- Lack of choices for the student
- No opportunity to the learner to walk out and walk in to earn a certification
- No scope to introduce latest knowledge in the curriculum
- Learning goals of the course and learning objectives of the units/submits never enunciated

Why Choice Based Credit Based System?

- Making the curriculum interdisciplinary.
- All cutting edge development in technologies occur at the interface of two or more disciplines.
- Interdisciplinary approach enables integration of concepts, theories, techniques, and perspectives from two or more disciplines to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline.

- Undergo additional courses and acquire more than required number of credits
- Adopt an interdisciplinary approach in learning
- Inter college/University transfer of Credits
- Complete a part of programme in the parent institute and get enrolled in another Institution for specialized courses
- Enhance skill/employability by taking up project work, entrepreneurship and vocational training.
- Carry on and transfer their credit
- Make best use of the expertise of available faculty.
- Bridges the gap between professional and liberal education.
- Greatly improves the employability of students.
- Promotes students' mobility – horizontal as well as vertical.
- Collaboration with industry and foreign partners to foster innovations possible. This can go a long way in capacity building of students.

Choice Based Credit Based System: Basic Elements

- Semesterisation
- Credit system
- Comprehensive continuous assessment
- Grading

It involves clear cut identification of duration of teacher learner engagement, duration for conduct of assessment and term end examination for evaluation and certification by declaration of grades.

As per UGC regulations in a semester there has to be a minimum of 90 Teaching days for learner – teacher engagement.

What is a credit?

- Term Credit has a connotation of achievement or earning.
- It in the present context also implies successful completion of a course of study measured in terms of class room instruction hours/week in the courses being studied in that semester
- It is also an identification of credits for a learning effort
- It also measures the volume of the content to be delivered in the course being studied
- Credits of a course also indicates the weightage of a course for calculating Grade Point Average

How is a Credit Measured?

- Every one hour of lecture session/week amounts to 1 credit per semester
- A minimum of two hour session of Tutorial or Practical/Practice session/week amounts to 1 credit per semester
- A course of study may have only lecture component or only

Practical/practice component or combination of any two or all the three components

- The total credits earned by a student at the end of semester upon successfully completing the course is L+T+P

Credit Patterns

- The credit pattern of the course is indicated as L:T:P format. For a 4 credit course format could be:

4:0:0 1:2:1 1:1:2 1:0:3 1:3:0

2:1:1 2:2:0 2:0:2 3:1:0 3:0:1

0:2:2 0:4:0 0:0:4 0:1:3 0:3:1

- The Concerned BOS will choose the convenient credit pattern for every course based on the requirement. However, generally a course shall be 3 or 4 credits

Relationship between number of credits and marks per paper:

- Though credits are not directly related to marks, as thumb rule we may consider 1credit=25 marks
- A theory paper with 4 credits shall be assigned 100 marks
- A theory paper with 3 credits shall be assigned 75 marks.
- The concerned BOS will choose the convenient credit pattern and marks for every course based on the requirement.

However, generally a course shall be 3 or 4 credits or 75 or 100 marks

- Theory paper or practical paper with 2 credits shall be assigned 50 marks • There could be some non-credit NC courses also, for which no credits are assigned (seminars, training and group discussions, independent study, projects, thesis, presentations). However, these activities are compulsory to be completed satisfactorily (s Grade), Unsatisfactory performance shall be assigned X grade.

Conventional Number of Credits for Different Levels of Courses:

Short term courses: (Certificate Courses): Less than 6 weeks 4 credits

UG Degree courses: (General Education and Professional Courses): Level 4 (e.g. B.A., B.Sc., B.Com., B..C.A., etc.)

Six semesters: 20-25 credits

Labelling of Courses, Distribution of Courses and Management of Courses:

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 candidates proficiency/skill is called an elective course.

Elective courses may be offered by the main discipline/subject of study or by:

- **Open Elective:** An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called an open elective
- **Self-Study Elective:** An elective course designed to acquire a Special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his /her own with an advisory support by a teacher is called a self-study

elective

- **Project Work:** Project work/ Dissertation work is a special course involving application of knowledge in solving/analysing/ exploring a real-life situation/difficult problem.
- Minor Project work (6-8 credits)
- Major Project work (10-12 credits)

Note: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject/vice versa

Course-wise Distribution of Credits:

- This requires determining the amount of work to be completed (or credit points to be earned) by students
- Decision on the number of student-faculty contact hours during a semester in different programmes and levels
- Decision on the time distribution on the Class Room work, Tutorials, Field-work, Laboratory work, and /or other curricular work distribution will vary from subject to subject.

Giving Courses of Study Codes

Each course is given a unique name reflecting its content and an alpha numeric code for easy identification:

Three letter alphanumeric Prefix for level	Three letter Alphanumeric code for Subject/Department	Numeric code for Semester (Double digit)	Numeric code for Course no. (Double digit)
CER	GER	01	07

Evaluation (Calculation of Raw Score):

- **Marks Distribution for evaluation with following credits & Marks**

- Course credits 4
- Total Marks 100
- Distribution (Theory)
 - Test Minor-1: 15 marks or 15 %
 - Test Minor-2: 15 marks or 15 %
 - End Semester Exam: 50 marks or 50%
 - Assignments/ quiz/ class test/discussion: 15 marks or 15 %
 - Attendance: 5 marks or 5%

Evaluation (Calculation of Raw Score)

- **Marks Distribution for evaluation with following credits & Marks**

- Course credits 2
- Total Marks 50
- Distribution (Practicals/Practice)
 - Record Mark (based on continuous assessment of lab /practical works considering regularity and timely submission of lab/practice records) 10 marks or 20 %

- Viva Voce 15 marks or 30%

- Attendance: 5 marks or 5%

- End Semester Exam

(Lab Experiment/Procedure writing/Tabulation of readings etc.,/

Innovation etc., as applicable: 10 marks or 20%

Viva Voce: 10 marks or 20%

Maintenance of Record of Attendance and

Comprehensive Continuous Assessment

- **Following format for course-wise maintenance of Assessment cum Attendance Register is proposed:**

S.No.	Reg. No.	Name	Days
1	15 NCB BA1 001	xxx	Attendance

		CCA1 (during first 8 weeks)					
		CCA1 (during first 8 weeks)					

Converting Raw Score into Absolute Grades:

- Grade is a number or a letter indicating quality on a band of raw score. It can be 10 point or 10 letter scheme.
- At the end of every course, for which a student has registered, if the candidate obtains a pass grade, the student accumulates the course credit as earned credits.
- Student has the option of auditing some courses. Grades obtained in these audit courses are not counted towards calculation of grade point average. However, a pass grade is essential for earning credits from an audit course.

Converting Raw Score into Grades

% Absolute Marks intervals (Raw Score)	Grade Point	Letter Grade
96 and above	96	S+
91-95	9.5	S
86-90	9.0	D++
81-85	8.5	D+
76-80	8.0	D
71-75	7.5	A++
66-70	7.0	A+
61-65	6.5	A
56-60	6.0	B+
51-55	5.5	B
46-50	5.0	C+
40-45	4.5	C
Below 40	0	F

Credit Weighed Marking System: *Performance Evaluation:*

- Performance of a student is evaluated in terms of earned credit weighed marking system
- Earned credits are defined as the sum of course credits in which grade points above a certain cut off have been obtained for declaring learner pass in that course

- Points earned in a semester: $\Sigma(\text{course credits earned} \times \text{Grade points})$ summed over all courses in which grade points above a certain cut off have been obtained
- In this way two performance indices emerge
 - Semester Grade Point Average for the current semester
 - Cumulative Grade Point Average is for all the completed semesters at any point in time

Performance Evaluation (SGPA)

- **Semester Grade Point Average (SGPA)** for the current semester which is calculated on the basis grade points obtained in all courses, except audit courses and courses in which satisfactory or course continuation has been awarded.

$SGPA = \frac{\Sigma(\text{course credits earned} \times \text{Grade points})}{\Sigma(\text{Total course credits in the semester except satisfactory, audit credits or course continuation credits})}$

Or $SGPA = \frac{\text{Points secured in the semester}}{(\text{credits registered in the semester excluding audit, satisfactory courses and course continuation courses})}$

- **Cumulative Grade Point Average (CGPA)** for the is calculated on the basis of all pass grades obtained in all courses, except audit courses and courses in which satisfactory or course continuation has been awarded, obtained in all completed semesters

$CGPA = \frac{\Sigma(\text{course credits earned} \times \text{Grade points}) \text{ over all semesters}}{\Sigma(\text{Total course credits in all the semesters except satisfactory, audit credits or course continuation credits})}$

Or $CGPA = \frac{\text{cumulative Points secured in all passed courses}}{(\text{Cumulative earned credits excluding audit, satisfactory courses and course continuation courses})}$

(Cumulative earned credits excluding audit, satisfactory courses and course continuation courses)

How to go about the task of introducing CBCS?

- Preparation of guidelines
- Preparations of Regulations and Course Structure for different levels by respective Heads of Departments / Deans
- Formulation of subject wise working groups (to be constituted by the Chairperson Board of studies of different subjects)
- Sensitization of working group members and BOS members about the Guide lines
- Drafting of list of courses and their classification by subject wise working groups as per respective regulation.
- Drafting of list of courses and their classification across faculties to be coordinated by the deans of faculties with Chairperson BOS of the Subject working groups to avoid any confusion
- Working groups prepare draft syllabus with volume of the content as per the credits requirement along with notes for paper setter etc.
- The drafting of the syllabus/ curricula is to be carried out in terms of
 - Current knowledge
 - National and international developments
 - Relevance of new ideas, concepts and knowledge to the concerned discipline

- Internet search engines, latest books, journals and open course wares available across the net.
- Development of topical courses as per the requirements of employability of the learners, academic interests of the faculty and thrust of the Programme.
- Volume of the content as per credits.
- Subject wise workshops to discuss draft syllabi for different levels and make changes as per recommendations emerging from the discussion in workshops
- BOS meets to discuss draft syllabus along with regulations, make changes if required. finalize and approve these.

• **Role of Working Groups/ Board of Studies of a subject (UG)**

- Focus on the structure of the programme as per the requirement of the award of degree with in a minimum period of three years & regulations – Identify courses as per the table on course wise distribution of credits and classification (Hard core, soft core, electives, open electives etc.) visà-vis total credit requirement.
- Design each course content to provide for stipulated instruction hours as is envisaged by the credits assigned to the course
- Design each course content to be spread evenly over the semester making necessary allowance for minor tests, assignments, seminars etc. – Design course content so that it gets divided into four units with two to three sub units mentioning credits for each sub unit.
- In the syllabus list recommended text books, list of supplementary reading and list of internet resources should be clearly mentioned.

Template for Design of Syllabus of a Theory Course:

- Header as given below with note about minor tests, major tests, continuous comprehensive assessment End Semester Examination (with a note to the paper setter of term end examination) and distribution of marks for each component, credits assigned to the course (L:T:P)

• **Body of the syllabus:**

- Module / Unit-I /
 - Subunit 1
 -
- Module / Unit-II
 - Subunit 1
 -
- Module / Unit-III
 - Subunit 1
 -

- Module / Unit-IV
- Subunit 1
-
- Books Recommended (in bibliographic format for books)
- Text Books
- Books for supplementary reading
- Internet Resources
- Journal resources

Template for Design of Syllabus of a Laboratory Course

- Header as given below with note about minor tests, major tests, continuous comprehensive assessment, End Semester Examination (with a note to the paper setter of end sem examination) and distribution of marks for each component, credits assigned to the course (L:T:P)
- Body of the syllabus – Unit-I
- Subunit 1 etc.,
Lab Manual, Lab Record, etc.,

Other Issues:

The BOS shall make changes, if any, in the syllabus at least a year before the commencement of the academic year/semester to which syllabus concerned pertains

- After the design of the syllabus, drafting of model question papers by BOS
- Writing of learning goals of the course and learning or instructional objectives of each topic.
- Maintenance of complete course file by teacher to be handed over to the designated head of Department having following documents:
 - Time table for the course
 - Learning goals of the course
 - Lecture wise course plan with learning/instructional objectives
 - Attendance record
 - Tutorial sheets/Assignment sheets
 - Quizzes
 - Question papers of minor tests
 - Question paper of end semester examination
 - Complete details of Comprehensive Continuous Assessment
 - Filled Teacher Evaluation Sheets by students
 - Course Content Evaluation Sheets by students
 - Raw scores of CCA of students with authenticated copy submitted to head of the department

Final Remarks

- CBCS is the mother of student centric educational reforms. A student is provided with an academically rich, highly flexible learning system blended with abundant provision for skill practice and activity orientation that he/she could learn in depth without sacrificing his/her creativity.
- A student can exercise the option to decide his/her own pace of learning- slow, normal or accelerated plan and sequence his/her choice of paper, learn to face challenges through term work/ project work/ and may venture out to acquire extra knowledge/ proficiency through add- on facilities.
- A student enjoys an extra ordinary benefit that his/her evaluation would be in terms of grades, computed through a more scientific and a logical process of normalization which imbibes the advantages of relative weighing of the performances against evaluating in an absolute way.
- The great advantage is that the learning process is made continuous and the evaluation process is not only made continuous but also made learner-centric and is designed to recognize the capability and talent of a student.
- CBCS is a process of evolution of educational reforms that would yield the result in subsequent years and after a few cycles of its implementation.
