KTU
ACADEMIC CREDIT SYSTEM

PRESENTATION

ON

28TH FEB.2015

Scheme of Presentation

- B. Tech Program – Salient Features
- Credits and their allotment
- Course evaluation and earning of Credits
- Grading
- Flexibility & options available for earning Credits
- Eligibility to move to Higher Semesters
- Accountability and Academic system monitoring
- Some contemporary changes

B. Tech Program-
Salient Features

- Full Semester system
- Credit based system
- Balanced Curriculum
- Focus on learning
- Continuous Evaluation
- Introduction of new courses
- System transparency and Academic auditing
- Flexibility to adjust the pace of progress.
- Student activities points

B. Tech Program-
Salient Features

- B. Tech Program is for 8 Semesters
- Maximum duration is limited to 12 Semesters.
- 1st and 2nd Semesters are independent.
- Academic Year and Semesters

  (an academic year has two semesters-odd and even semesters)
- All courses are given a unique number
- Course Numbers reflect the offering Department, Academic year and the Semester in which it is offered.
- Example: CE 201 and EE 302
- [first number refers to the academic year in which the course is normally offered and the last digit indicates whether it is offered in the odd (odd number) or even semester (even number]. If the last digit is 0 it indicates that the course is offered in both semesters. CE 201 is a course offered by the Civil Eng.Dept in the 2nd year odd semester.
- Courses are organized in a hierarchical fashion
- They cover Core Theory courses, Electives and Practical and Laboratory courses.

B. Tech Program-
Salient Features

- Students have to register for the courses they want to credit.
- Later they enroll for the registered courses.

  (Except for the first semester, registration for the courses in the up coming semester is done at the end of the current semester and enrolment is done at the beginning of the new semester. In the first semester ,all students shall register for all courses at the beginning of the semester and there is no enrolment. Registration and enrolment will be online.
- Duration of a Semester - 72 instruction days.
- All courses offered carry certain number of Credits.
- Total credits to be earned for a B.Tech degree is 180 (182*).
- * Includes 2 credits for student activities that are Pass / Fail credits {not graded and not included in the CGPA}

Credit System

- Credits are assigned to all courses listed in the curriculum based on one week of instruction.
- Course Structure:-
- Lecture - Tutorial - Lab/Practical session [L-T-P]
- Lecture: 1 Credit for every hour in a week
- Tutorial: 1 Credit for every hour in a week
- Lab/Practical: 1 Credit for every session (2 or 3 hrs)
- Example: 3-1-0 [4Cr] or 3-0-0 [3 Cr] or 2-0-2[3Cr]. or 0-0-2 [1Cr.]
- An examination slot is given for each course in each semester for convenience in Sem.Exam scheduling.

Knowledge Segments and Credits

Knowledge Segments	Code	Credits	
Basic Sciences	[BS]	10	[8 Theory+ 2 Labs]
Mathematics	[MA]	16	
Humanities	[HU]	9	
Basic Engineering	[BE]	29	[25 Theory +4 Labs]
Professional Engineering	[PE]	89	[80 Theory +9 Labs]
Electives	[EL]	15	
Seminar	[SM]	2	
Comprehensive Viva	[CV]	2	
Design Project	[DP]	2	
Project	[PR]	6	
Total Academic Credits:		**180**	
Student's Activities	[SA]	2	No Grading [Pass / Fail]
Total credits for B.Tech Degree		**182**	

Credit Distribution over Knowledge Segments and Semesters

Semester	Basic Science	Maths	Humanities	Basic Engineering	Core Engineering	Electives	Lab/ Practical	Seminar	Design Project	Compri. Viva	Project	Credits
First	**4**	**4**		**13**			**3 [Includes 1 Science Lab]**					**24**
Second	**4**	**4**		**12**			**3 [Includes 1 Science Lab]**					**23**
Third		**4**			**18 3x4 Cr + 2x3 Cr=18**		**2**					**24**
Fourth		**4**	**1**		**16 1x4 + 4x3=16**		**2**					**23**
Fifth			**3**		**13 1x4 + 3x3=13**	**3**	**2**		**2**			**23**
Sixth			**1**		**15 5x3=15**	**3**	**2**			**2**		**23**
Seventh			**4**		**12 4x3=12**	**3**	**1**	**2**				**22**
Eighth					**6 2x3=6**	**6**					**6**	**18**
Total Credits	8 **[8+2=10]**	16	9	25	80 **[5x4Cr+20x3Cr =80 Cr]**	15	15 **[15-2=14]**	2	2	2	6	180

Typical Listing of Courses in a Semester

[Civil Engineering 2nd year odd Semester]

Exam. SLOT	Code	Course No:	Subject	L-T-P	Hours	Credits
A	MA	MA 201	Mathematics III	3-1-0	4	4
B	PE	CE 201	Mechnicis of Structures	3-1-0	4	4
C	PE	CE 203	Fluid Mechanics	3-1-0	4	4
D	PE	CE 205	Surveying	3-0-2	4	4
E	PE	CE 207	Concrete Technology	3-0-0	3	3
F	HU	HU 201	Economics	3-0-0	3	3
	PE	CE 211	Lab/Practical	0-0-2	2	1
	PE	CE 213	Lab/Practical	0-0-2	2	1
	SA		Entrepreneurship/TBI /NCC/NSS/Physical Edn/Design Project/Student activities,. etc		4	

Course Evaluation

Course Evaluation: Theory Courses

Continuous evaluation – Internal assessment &
Semester Examination

Weights for Semester and Internal evaluations:-

1/3 Weight for Internal continuous assessment

2/3 Weight for Semester Examination by the University

Credits are earned only on getting a Pass grade or higher in the course.

[for convenience Marks are assigned as 50 and 100 for internal and Semester evaluations for theory courses]

Course Evaluation

Internal assessment of Theory Courses: 50 marks

Two internal tests each for 20 marks and of one hour duration. (Internally by the College)

Tutorials/Assignments having 10 marks. (Internally by the College)

Course Evaluation

Course Evaluation: Lab/Practical Courses

(Internally by the College)

Practical Records /Outputs (To be submitted in the class itself)	60 marks
Regular Class Viva	10 marks
Final written test (Objective)	30 marks

Course completion and Earning of credits

Theory Course Completion:-

- Register and enroll for the course.
- Attend the class and meet the attendance requirement of 75%.
- Appear for all internal evaluations.

Earning of Credit:-

For theory courses

- Write the Semester examination and get a pass grade.
- For Labs/Practical
  Minimum 50% marks is mandatory for grading.
  Should have completed all experiments. Otherwise an I grade(incomplete) is given which is later changed to the actual grade on completion of all experiments and assessment.

Eligibility for Grading

Eligibility for Grading:-

A minimum of **45%** marks in the Semester / Supplementary examination .

Otherwise an **FS** grade is given [FS-Failed in Semester Examination]

Internal evaluation marks are to be balanced/regulated based on semester examination marks.

Percentage of internal evaluation marks should not exceed over 25% of the Semester examination marks.

Example: Internal evaluation marks = 35/50 [70%]

Semester examination marks = 45/100 [45%]

As per this internal evaluation marks should not exceed 45%+25%= 70% leading to a possible maximum internal marks of 35 . This results in 45+35 = 80/150 [53 %] marks for the course. Had the internal marks given been 40 or above /50 [80% or above], then it will be trimmed to 35.

Grading

- Grading is as per the recent recommendation of the UGC.

Grades	Grade Point	% of Total Marks obtained in the course
O[S]	10	90% and above
A^+	9	85% and above but less than 90%
A	8	80% and above but less than 85%
B^+	7	70% and above but less than 80%
B	6	60% and above but less than 70%
C	5	50% and above but less than 60%
P	4	45% and above but less than 50%
F	0	Less than 45%
FA	0	Failed due to lack of attendance
FS	0	Failed in Semester Examination
I		Course Incomplete

Options available for earning credits

- Students who have “completed” the course have different options to earn the credit for the registered course.

  A) Semester Examination [conducted in all semesters]

  i) Supplementary Examination [conducted in all semesters]

  ii) Summer Courses

  [only in summers, after the 2nd and 4th Semesters]

  iii) Permitted to write the semester examination in the course when held, without registering for the course, if the internal marks are above 50% for the course. (For final grading, the rule regarding the eligibility for grading will be applied)

  iv) Register again for the failed course and earn credit.

  v) Contact course [A very special case]

Eligibility to continue

- Student has to earn a minimum number of credits in a semester to move to the next.
- This is not applicable for the First Semester.
- If the earned cumulative credits are lower than the minimum indicated, then the student has to opt for the options, mentioned earlier, that are available.

ELIGIBILITY CRITERIA FOR MOVING TO HIGHER SEMESTERS

SEMESTER	ALLOTTED CREDITS	CUMULATIVE CREDITS	MIN. CUMULATIVE CRDITS REQUIRED TO REGISTER FOR COURSES IN HIGHER SEMESTERS	OPTIONS AVAILABLE
FIRST	24	24	NOT APPLICABLE	ALL ARE PERMITTED TO MOVE UP
SECOND	23	47	39	OPTION- A
THIRD	24	71	56	OPTION- B
FOURTH	23	94	83	OPTION- A
FIFTH	23	117	102	OPTION- B
SIXTH	23	140	123	OPTION- B
SEVENTH	22	162	145	OPTION- B
EIGHTH	18	180	NOT APPLICABLE	OPTION- B

OPTION- A : Register for summer courses [Refer RE-11.1] / Register again for the course in the regular Semester / Appear only in the Semester Examination for the course when held [Refer RE-11.1.1].

OPTION- B : Register again for the course in the regular Semester / Appear only in the Semester Examination for the course when held. [Refer RE-11.1.1]

Academic system Monitoring

- All students shall have faculty advisors who will mentor them and monitor their academic progress. They will support them in their academics and counsel them and hand hold in any difficulty .
- Course committees and Class committees.
- These committees monitor the conduct of the courses, adherence to the course plan, time schedule, completion of the syllabus, standards of internal tests and evaluation process. Will address the difficulties faced by students and take suitable remedial actions.

Course and Class committees

- Course Committee is for common courses across branches of study. Normally for the first two semesters.
- Example: Mathematics Course Committee
- Class committees are for higher semesters, in each department.
- Example: 3rd Semester Electrical or 4th Semester Civil or 6th Semester Mechanical class committee.
- Both (Course and Class committees) shall have a Senior Professor/Faculty member who does not handle that course (Course Committee) or any courses for that semester (Class Committee) as its chairman and all teachers taking the course/courses and 4 or 2student representatives.

(4 in a course committee and 2 each in all class committees)

Academic Auditing

- Academic accountability is to be ensured and for this an academic auditing procedure is to be put in place.
- The university shall have a detailed academic auditing procedure in place covering all academic activities as given below.
- Course delivery covering syllabus, adherence to course plan, quality of question papers for internal examinations, internal evaluation, laboratory experiments, practical assignments, mini projects and conduct of practical classes and their evaluation.

Academic Auditing

- Conduct of internal and semester examinations.
- Projects and their evaluation, conduct of oral examinations etc.
- Co-curricular and Extra-curricular activities available for students, their organization and mechanism of monitoring of activity points earned by the students.
- Academic functioning of the college encompassing students, faculty and college administration covering punctuality, attendance, discipline, academic environment, academic accountability, grievance redressal mechanism, academic achievements and benchmarking.

Academic Auditing System

- Auditing System shall have two components.

  a)An internal academic auditing cell within the college,

  b)Regular external academic auditing by an academic/s of standing approved by the University, for each college.

- Internal auditing cell in each college shall oversee and monitor all academic activities mentioned earlier including all internal evaluations and examinations. This cell is to prepare academic audit statements at regular intervals of four weeks, for each semester. These reports as well as class and course committee meeting minutes are to be presented to the external academic auditor/s who will use them as additional references for independent auditing and for the final report to the University.

Some of the curriculum changes

- Courses on Sustainable Engineering/Design and Engineering/Life and Professional skills
- Comprehensive viva during 6th Semester
- Design Project – 5th Semester
- Break of study- A student may break study for a maximum duration of two semesters, preferably in one academic year, to initiate start-up ventures, product development etc. This is however permitted only on getting the required credits for the courses listed out in the first four semesters as per the eligibility criteria for moving to higher semesters.

Some of the curriculum changes

- Credit Transfer- University may allow students to transfer credits for courses done at other Universities and academic institutions, as per the guide lines given by the Academic Committee and approved by the Board of Governors.

- There is no provision for revaluation and improvement of grades.

- Students can see their semester examination answer book and verify whether there are any mistakes in the evaluation. Any discrepancies are to be informed to the teacher concerned who will initiate steps for a review. Based on this the answer book will be relooked and a decision on the grade given will be taken and informed to the student.

Some of the curriculum changes

- B. Tech (Honours)
- Accredited departments in institutions, having at least two post graduate programs may offer B. Tech (Honours). It should be noted that students with a CGPA above 8 at the end of the fourth semester and having no credit arrears only are eligible for this option. As only selected institutions may have this provision, students cannot demand this or move later to an institute where this is available. Students have to earn 12 additional credits to get B. Tech (Honours) over and above 180 (182). Further their CGPA at the end of the program should be 8.2 or higher. Those who opted for B. Tech (Honours) but unable to earn the required additional credits in 8 semesters or whose final CGPA is less than 8.2 shall automatically fall back to the B. Tech program. However additional credits thus far earned by them will be given in the grade card but not included for the CGPA.

Some of the curriculum changes

- Points for Student Activities [2 mandatory credits- P/F only]

  On earning 200 activity points 2 credits are given. These credits are not counted for CGPA as there is only a P/F requirement.

  Activities that are covered include:-

- **National Level Activities:-** NCC/NSS/NSO
- **College Level Activities:-**Elected Student representative/ Member/Office bearer of Professional Societies (student Chapters)/Member of sports/games teams/ organizer of tech fest/cultural fest/volunteer etc.
- **Entrepreneurship -** Initiation of Start-ups, Attracted Venture Capital, Filed a Patent, Completed Prototype Development, etc.
- **Self Initiatives:-**Attended national or international conferences/foreign language skills/completed on-line courses etc.

Some of the curriculum changes

- There is free time available for bridge courses/mini/micro projects/ additional curricular as well as for co-curricular and extra curricular activities.

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