

Frequently Asked Questions on Academic Courses and Examinations

BTech - 2020 Curriculum

1. What is curriculum?

Every programme (For example - B.Tech Computer Science and Engineering) offered by the institute has a fixed number of core courses, elective courses, internships and projects. The curriculum refers to the structure of the programme highlighting the number of core courses and elective courses under different verticals (Basic Science, Design, Humanities, Professional Core/Elective, Free Electives). The curricula of different programmes are available at the [Curriculum](#) page.

2. What is the syllabus?

For each course, the department formulates contents, course delivery plan and textbooks to be referred, which are listed in the syllabus.

FAQ on Credits

1. What is Choice based Credit System (CBCS)?

CBCS promotes a student centric faculty driven model under which a student can choose a few courses of his/her choice based on the interest and future career plans. Such courses are referred to as elective courses.

2. What is the typical range of credits one has to earn per semester?

It is 20-25 credits which would be indicated in your programme curriculum.

3. How many credits should a student earn for the award of B.Tech degree?

- For CSE – a minimum of 170 credits.
- For CSAI - a minimum of 169 credits.
- For ECE - a minimum of 166 credits.
- For MECH - a minimum of 166 credits.
- For SM - a minimum of 166 credits.

To get a detailed breakdown of each, you can visit the following page:- [Curriculum](#) where you can check the curriculum and also the syllabus of courses.

4. What do you mean by credit system/ credit structure? What does 3-1-0-4 refer to?

The credit structure has 4 components (L,T,P,C), namely L:the number of lecture hours for a week, T:the number of tutorial hours for a week, P:the number of practice hours for a week, C:The number of credits associated with the course. A typical 3-1-0-4 credit structure is referring to 3 lecture hours plus 1 tutorial hour per week and students who are crediting such a course shall earn 4 credits.

5. What does 0-0-4-2 indicate?

This indicates the practice course in which a student is expected to spend 4 hours per week in a laboratory/activity for which he/she shall earn 2 credits.

6. Can a student earn more than the number of credits mentioned in the curriculum? Is there any limit to the number of credits that a student can do in a semester?

Yes, a student can earn more than the number of credits mentioned in the curriculum. However, a student can pursue a maximum of 29 credits per semester (33 credits for honors).

7. Does credit structure also indicate the number of hours a student has to spend outside the classroom/laboratory?

No, the credit structure does not indicate this explicitly. However, for every credit, a student is expected to spend at least 2 hours outside the classroom/laboratory.

8. Are credit transfers available?

Credit transfer is not applicable for any in-house courses as you earn all from the Institute. Whereas, if you do courses at outside institutes with which our institute has MoUs or from NPTEL, credit transfers are applicable for such courses.

FAQ for General

1. What is the minimum and maximum duration of a B.Tech programme? Am I allowed to take a break during the programme?

The minimum duration is 4 years and the maximum duration is 6 years. Temporary withdrawal due to medical reasons is permitted for a maximum of 2 semesters.

2. What is the minimum percentage of attendance a student should maintain in any course?

A student is expected to maintain a minimum of 85% of the total number of classes taken to be eligible to write end-semester examinations. An additional 10% consideration is given to accommodate major illness/On-duty/Family calamity etc.

3. What is the minimum CGPA for the award of B.Tech degree?

A student is expected to maintain a minimum CGPA of 5.0 at the end of every semester until he completes the academic requirements and to become eligible for the award of B.Tech degree.

4. What will happen if a student earns less than required no.of credits by the end of 4 years for a B.Tech programme?

The student has to register for at least one more semester to complete the shortage in credits.

5. What are the rules for course registration and enrollment?

The dates for registration and withdrawal of courses shall be mentioned in the academic calendar. Late registration/enrolment will be permitted with a fine as decided from time to time up to two weeks from the last date specified for registration. From the second semester onwards all students have to enroll on a specified day at the beginning of a semester.

The curriculum for any semester, except for the final semester will normally carry credits between 21 and 29. A B.Tech student should earn not less than 10 credits in the first semester and 26 credits at the end of the second semester. Thereafter he must maintain an average of 14 credits per semester including first two semesters to continue his studies. However in the final semester a student may earn less than 14 credits if it is sufficient for him to fulfill the requirements for the award of the degree.

A DD student should earn not less than 12 credits in the first semester and 28 credits at the end of the second semester. Thereafter he must maintain an average of 15 credits per semester including first two semesters to continue his studies. However in the final semester a student may earn less than 15 credits if it is sufficient for him to fulfill the requirements for the award of the degree.

A student should have a minimum CGPA of 5.0 calculated for the courses successfully completed at the end of each semester.

FAQ for CGPA/Grades

1. My CGPA is less than 5.0, what should I do?

You are advised to meet FA/HOD prior to registration of the next semester. Further, FA/HOD may advise you to go for the slow paced programme, you will be under observation for one semester.

2. What are the grade letters (S/A/B/C etc.,) and equivalent grade points?

The Institute awards students with letter grades in each of the courses they have registered based on their performance in the quizzes, assignments and end semester examinations. The letter grades and the associated points are listed below:

Grades	Points
S	10
A	9
B	8
C	7
D	6
E	4

3. What is the passing grade for a course?

For each course, the student needs to earn a grade of at least E to pass the course.

4. What do the grade letters I, U, W, H, L indicate?

The grade letters indicate the following:-

I :- Incomplete (Non-submission of assignments/projects)

U:- Failure in the course (To register for supplementary examination)

W:- Failure due to insufficient attendance in course (To repeat the course)

H:- Completed (Example for courses like SSG/NSO/NCC)

L:- Incomplete (Example for courses like SSG/NSO/NCC)

FAQ for Courses

1. What are core courses (PCC and PMC)?

For each programme, there are mandatory courses which are referred to as core courses which must be completed as part of academic requirements. PCC refers to Professional Core Course and PMC refers to Professional Major Course.

2. What are Professional Elective Courses (PEC and PME)?

Professional elective courses are the elective courses offered/prescribed by your parent department. (If you belong to the CSE branch, then the elective courses offered by the CSE department are **Professional elective courses**). An elective course offered by the Mathematics department (example: Mathematics for Machine

Learning) which is prescribed by the CSE department for CSE students is also considered as a Professional Elective Course. PME refers to Professional Major Elective course.

3. What are online elective courses?

To reinforce the CBCS and to encourage students to learn the best materials available online, the institute promotes “Learning from Elsewhere” pedagogy. Such courses which students register online are called online elective courses. Currently, students are encouraged to credit courses offered by NPTEL (National Programme on Technology Enhanced Learning), contributed by Professors from IITs/ IISC and other reputed institutions. Students can register online courses only as professional elective or free elective courses.

4. What are in-house courses?

Any course offered by any department of the institute is referred to as in-house course.

5. What are free Elective courses (ELC)?

Any elective course offered by any department is a candidate for a free elective course. The term free refers to the choice that the student gets in selecting the course based on his/her interest. For instance, a Computer Science student wishes to credit a course on Indian History offered by Humanities department/ NPTEL is an example of a free elective course.

6. Is a student permitted to do online elective courses offered by NPTEL?

Yes, however there is a cap on the number of credits one can earn under NPTEL. As of now, it is 9 credits for B.Tech/DD.

7. Can a student register for 1-credit or 2-credit courses under NPTEL?

Yes.

8. A student has exhausted the NPTEL credits, can he/she still credit some more NPTEL courses?

Yes. However, excess credits will not compensate for the credit requirements of in-house elective courses. A maximum of only 9 credits can be transferred from NPTEL.

9. Is there any criteria in choosing in-house/NPTEL elective courses?

Yes, there is a criteria while choosing in-house/NPTEL elective courses,

- There should not be an overlap of more than 20 percent with the syllabus of any of the core courses listed in the curriculum.
- There should not be an overlap of more than 20 percent with the syllabus of elective courses that have already been credited. This applies to all types of elective courses (in-house, online, honors, minors and specialization).

If there is a confusion whether a particular course’s syllabus has an overlap with another course, you may approach your FA/HOD for clarification.

10. For a B.Tech, DD and M.Tech programme, what is the minimum number of credits to be earned under elective courses ?

- For B.Tech CS- Science Elective Courses (SEC):12 credits, Professional Elective Courses (PEC):12 credits, Free elective courses (ELC):24 credits.
- For B.Tech CS AI- Professional Major Elective (PMC):16 credits, Free elective courses (ELC):12 credits

- For B.Tech ECE- Science Elective Courses (SEC):12 credits, Professional Elective Courses (PEC):8 credits, Free elective courses (ELC):24 credits.
- For B.Tech ME- Science Elective Courses (SEC):12 credits, Professional Elective Courses (PEC):12 credits, Free elective courses (ELC):24 credits.
- For B.Tech SM- Science Elective Courses (SEC):12 credits, Professional Elective Courses (PEC):12 credits, Free elective courses (ELC):24 credits.
- For DD CS (2023 batch)- Science Elective Courses (SEC):12 credits, Professional Elective Courses (PEC):32 credits, Free elective courses (ELC):20 credits.
- For DD ECE-MVS (2023 batch)- Science Elective Courses (SEC):12 credits, Professional Elective Courses (PEC):20 credits, Free elective courses (ELC):16 credits.
- For DD ECE-CS (2023 batch)- Science Elective Courses (SEC):12 credits, Professional Elective Courses (PEC):24 credits, Free elective courses (ELC):16 credits.

11. Is there any limit to the number of electives or the number of credits in electives that a student can do? Can a student do more than that?

There is no limit to the number of electives or the number of credits in electives that a student can do during his whole programme. However, there is a limit to the number of credits that he/she can take per semester which is 29 credits (33 credits for Honors). If a student wants to do extra electives / earn extra credits, he/she can do it within the number of credits limit per semester, and it will be added to your mark sheet, but the additional electives will not be considered for your graduation eligibility check.

12. What happens if I do extra credits in Free elective course (ELC), will they be accounted under PEC?

Yes, if the student has earned the extra credits from a course which is offered/prescribed by the parent department. Also, it is to be noted that partial credits from courses cannot be accounted under PEC, only the whole course can be accounted for.

No, if all the credits earned from the courses are neither offered nor prescribed by the parent department.

13. Are science elective courses mandatory?

Yes, a B.Tech student (except from CS-AI) has to earn 12 credits (normally from 3 science elective courses of 4 credits each) which are usually offered in semesters 2, 3 and 4.

14. A student has a credit shortage (earned 11 credits instead of 12 credits) in science-elective-courses credits, can he/she compensate it with PEC/ELC by crediting additional courses under PEC/ELC?

No.

15. Are NPTEL elective courses mandatory?

No. If a student does not want to do online elective courses under NPTEL, he/she can earn the total number of elective courses credits by crediting all in-house elective courses.

16. What is COT?

It is the Consent Of the Teacher (COT) that a student has to obtain before crediting an elective course from the respective course faculty. The faculty checks the prerequisite requirements before approving the requests. For example, a student wishing to do a course on machine learning should have done courses on linear algebra and probability theory as part of prerequisites.

17. Are design elective courses open to B.Tech?

Yes, such courses will be accounted under PEC/ELC which will be decided by the parent department.

18. Where can a student check the elective course details like syllabus, prerequisites etc.?

On the institute website -> Curriculum -> List of electives

19. If a student has any query related to elective courses (registration / adding of courses etc) who should he/she approach?

Course faculty -> Faculty advisor -> HOD -> Dean (Academic Affairs)/ PIC (Academics)

20. I am a student of Semester 5 and I do not have any elective courses in the current Semester as per the Curriculum. The semester 6 has an elective course in the Curriculum which I wish to credit now. Can I advance my elective course?

Yes, provided the total number of credits registered for the Semester 5 including the added elective does not exceed 29 credits (33 credits for Honors). Plus, other requirements as per the Regulations must be satisfied.

21. I am a student of Semester 6 and I do have an elective course in the current Semester as per the Curriculum. Can I credit that course in Semester 7? Can I postpone my elective course to later semesters?

Yes, both advancement and postponement of elective courses are permitted as long as the number of credits registered in that particular semester does not exceed 29 credits (33 credits for Honors).

22. Will a student get grades from NPTEL?

No. Only credits earned from NPTEL courses will be transferred and marks/grades will not be taken into consideration for CGPA calculation.

23. Can a student drop an elective course in his / her semester if he / she feels a burden during that semester? If yes, what is the procedure?

Yes, the request will be permitted until the closing date of the ADD/DROP/CHANGE course facility.

24. If a student gets less grade for a particular elective and in any other extra elective he/she gets a better grade, can he/she drop that elective or swap it with another elective that has a better grade?

No, all successfully completed courses irrespective of the grades (S to E) shall appear in the grade sheet and will be taken into consideration for CGPA calculation. A successfully completed course can neither be dropped nor be repeated nor be replaced with some other course.

25. I have secured grade E in the core/elective course, can I repeat that course when it is offered the next time to improve my CGPA?

No, a successfully completed course cannot be repeated.

26. A student failed (secured grade U) in a core course and he/she could not clear even after multiple supplementary exams. Can that course be replaced with some other course?

No, student has to mandatorily complete all the core courses as per curriculum.

27. A student has secured grade W in a core course? What should the student do?

He/she is advised to repeat the core course when it is offered next and most importantly, he should not violate the attendance rule.

28. A student has secured grade W in an elective course? Can that student drop that course and register for some other course?

Yes, a student can either repeat the same course or register for a different course.

29. What happens if a student gets U grade in an elective course offered by either NPTEL or in-house?

In case of in-house elective, a student can either register for supplementary examination or register for a new course by dropping this course. For NPTEL courses, there are no supplementary examinations, hence a student is expected to repeat this course or register for a new course.

30. What if I complete extra in-house elective credits than what is required, do I get a chance to pick the best of them or will all the electives be considered for the grade sheet?

No, you cannot pick the best and all successfully completed courses will be considered for CGPA calculation.

31. Is there any categorization of NPTEL courses so that a student can follow that prior to registering for the course?

Yes. During the registration of courses, HOD of the department shall release the list of courses that are available for registration in NPTEL in that particular semester. The list will also be available in the registration portal from which students can choose the NPTEL courses accordingly.

32. What if a repeat core course is not offered in particular semester?

The student must either repeat the course in the next semester when it is offered or do the course as contact course. A Contact course may be offered during the regular semester or summer term ONLY to a final year student who has obtained "U" grade in a CORE course.

33. Should a student mandatorily register for exact number of elective courses in a particular semester as mentioned in his/her curriculum?

No, both preponement and postponement of elective courses are permitted as long as the number of credits registered in that particular semester does not exceed 29 credits (33 credits for Honors).

34. Is a student allowed to take any elective from any year offered in that particular semester? For example -Can a 3rd year ME student take a 2nd year MSM course as ELC?

Yes, based on the recommendation of course faculty / FA / HOD.

35. I want to repeat a course? Will the repeat option will be available in the portal?

Yes.

36. What if a student wishes to do following conversion of courses - PEC to Honors/ Honors to PEC / PEC to ELC /or ELC to PEC?

The forms for the change of course category are available online and the students must submit requests in the academic office. Normally, only the ELCs offered by the parent department can be converted to PECs.

FAQ for Honors

1. What is Honors? What are the benefits of pursuing Honors?

A student with a CGPA of 9.0 and above at the end of 4 semesters and willing to take additional academic challenges in one's parent department are encouraged to register for B.Tech (hons). Such students are expected to earn additional 12 credits over and above the B.Tech programme credit requirements. These students normally register for courses related to cutting edge research which will further enhance and deepen their knowledge base. These students will certainly have an edge over other students in internship/projects/placements/higher studies.

2. How many additional courses should we do for honors?

One must complete an extra of 12 credits equivalent to 3 courses of 4 credits each which are offered/prescribed by the parent department (in-house). Further, these courses cannot be credited under NPTEL.

3. Is it possible to drop Hons in between semesters?

Yes, it is possible to drop honors in between semesters. In such a case, the successfully completed courses under honors shall be accounted under PEC.

4. Can we do multiple courses under honors in a single semester?

Yes, provided the number of credits registered in that semester does not exceed (29+4) in that semester.

5. What is the minimum grade (S/A/B) that should be maintained in a Honors elective course?

It is grade D and a student should not earn E,U,W. If the prospective honors student earns E,U,W in an honors course then his/her registration for honors programme stands cancelled.

6. What happens to my Hons if my CGPA goes below 9 in the subsequent semester?

The registration for honors programme stands canceled and courses completed successfully under honors shall be listed under PEC.

7. If a student completes a 2-credit course, two 3-credit courses, and a 4-credit course for Honors, is the criteria for Hons fulfilled?

No, a student is expected to take three 4-credit courses.

8. Can Honors be awarded for a student who has a CGPA of at least 9.0 after the 5th semester or further if he does not have 9 CGPA by the end of 4th semester?

No.

9. My CGPA at the end of semester 4 is 9.1 and I had a backlog course in semester 2, which I successfully completed in semester 3. Am I eligible to register for Hons?

No, a student should not have any history of backlog at the time of registration.

10. If a student loses his Honors in 6th semester and again secured 9 CGPA at the end of 6th semester, will he be awarded Honors again?

No, the student is expected to maintain a CGPA of 9.0 in every semester starting from Semester 5.

11. Can a student take minor/specialization along with Hons?

Yes.

12. Will the name of the Honors be mentioned on the degree Certificate?

Yes.

13. In grade sheet, whether courses taken as Honors will be mentioned as Honors courses?

Yes.

FAQ for Minors

1. What is a Minor programme?

To promote inter-disciplinary thinking and to excel in areas which are industry demanding, the departments have identified a set of courses which are listed under the banner “MINOR”. Currently, the Institute offers

S.No	Name of the Minor	Offered By	Offered For	Credits
1.	Machine Learning	CSE	ECE, ME	16
2.	Internet of Things	ECE	CSE, ME	16
3.	VLSI System Design	ECE	CSE, ME	16
4.	Design	SIDI	CSE, ECE, ME	38

2. Who is eligible for a minor programme?

The Minor Programme offered by the parent department of the student is meant for other department students and not for oneself. This means that a CSE department student is eligible to enroll for S.No. 2,3,4 but not 1 in the above table.

3. What are the eligibility criteria for a Minor Programme?

Enrollment commences from Semester 5 and by the end of Semester 4 one should have a CGPA greater than equal to 8 with no history of backlog and disciplinary actions. To earn a minor, one should maintain a CGPA of 8.0 every semester and GPA of 8.0 in the courses registered under Minor.

4. Is there a minor in Computer Science and Engineering?

No.

5. Can a student studying in ECE do four PEC in the CSE domain to obtain a Minor in Computer Science and Engineering?

No, the department of CSE does not offer minor in CSE.

6. Can a student change minors between semesters?

No. In case a student drops out of a minor, the courses credited under minor shall be accounted for under free elective courses.

7. A student registered for a minor in ML, failed to meet a GPA of 8.0/ has a backlog/ faced disciplinary action.

The student registration for Minor stands canceled and the courses credited under minor shall be accounted for under free elective courses.

8. Can a computer science student get a minor in Machine Learning, if he earns 16 credits of ML?

No. Minor in ML is meant for other department students (ECE,ME).

9. How are the credits earned for Minor accounted?

The credits earned for a Minor Programme is accounted under free elective courses and these credits are within the academic requirements of the programme.

Note that the credits earned as a part of “Honors” are not within the academic requirements, , they are accounted over and above the minimum credit requirements for a B.Tech programme.

10. My CGPA is 9.0 and above at the end of Semester 4 with no backlogs/ disciplinary actions, can I register for both Honors and Minors?

Yes, (Ex: a student of CSE is eligible to register for Honors in CSE and minor in VLSI). However, he/she cannot register for Honors in CSE and minor in Design.

11. What is the difference between Minor and Specialization?

To have a breadth of knowledge in one specific domain, Minor programmes are offered which are meant for other department students. Further, to have a depth of knowledge in one specific domain, Specialization programmes are offered for parent department students.

FAQ for Specializations

1. What are Specializations?

Specializations offered by the departments are meant for the parent department students who wish to concentrate on one specific vertical (For example - Data Science, VLSI, Communications, Thermal, Manufacturing) and wish to explore advanced subjects in that vertical.

2. What Specialization programmes are offered by the Institute?

The Department of ECE offers VLSI systems and Microelectronics for ECE students. Currently, there are no other specialization programmes.

3. Who is eligible for a Specialization programme?

The Specialization Programme offered by the parent department of the student is meant for parent department students and not for others. This means that a ECE department student is eligible to enroll for specialization in VLSI and Microelectronics and not other department students.

4. What are the eligibility criteria for a Specialization Programme?

Enrollment commences from Semester 5 and by the end of Semester 4 one should have a CGPA greater than equal to 8 with no history of backlog and disciplinary actions. To earn a Specialization, one should maintain a CGPA of 8.0 every semester and GPA of 8.0 in the courses registered under Specialization.

5. Can a student change Specialization between semesters?

No. In case a student drops out of Specialization, the courses credited under Specialization shall be accounted for under PEC and/or ELC.

6. A student registered for a Specialization in VLSI and Microelectronics, failed to meet a GPA of 8.0/ has a backlog/ faced disciplinary action.

The student's registration for Specialization stands cancelled and the courses credited under Specialization shall be accounted under Professional Elective Courses.

7. Can we drop out of Specialization?

Yes. The courses registered under Specialization shall be accounted under PEC and/or ELC.

8. Can a student register for Specialization and Minor?

No.

9. Can a student register for Specialization and Honors?

Yes.

10. How are the credits earned for Specialization accounted?

The credits earned for a Specialization Programme is accounted under Professional elective courses and these credits are within the academic requirements of the programme. Note that the credits earned as a part of "Honors" are not within the academic requirements and they are accounted over and above the minimum credit requirements for a B.Tech programme.

11. Will the name of the specialization/minor be mentioned in the degree certificate?

No. It will be mentioned on the consolidated grade sheet and not on the degree certificate. Further, courses credited under specialization/minor shall be mentioned separately on the grade sheet.