

BTech (ICT) Curriculum 2016

Summary Report



**Dhirubhai Ambani
Institute of Information and Communication Technology**

Near Indroda Circle, Gandhinagar, Gujarat, India. 382007
Tel: +91 7930520000 | Fax: +91 7930520010 | Web: www.daiict.ac.in

Summary

DA-IICT offers a unique four-year undergraduate program leading to the degree of Bachelor of Technology in Information and Communication Technology - BTech(ICT). The pedagogy of ICT discipline should make a well-integration of Information Technology, Communication Technology, Electronics Engineering and Social Sciences courses, which a student cannot be trained in conventional Computer Science and Engineering or Electronics and Communication Engineering alone.

The curriculum review process, started in July 2015, went through intensive interactions amongst specialized groups of faculty, formal meetings with faculty at large, discussion with external experts and multiple rounds of brain storming within the BTCRC. The entire exercise has been lasting close to a year. Structurally there is no major change in the revised curriculum. The curriculum is broadly classified into 3 categories of courses. The first category, referred to as Foundation, is a set of compulsory courses required to be taken by every student in the program. The next one is formed by a set of courses, referred to as the Electives, which adds to both the technical strength and humanities and social science skills of the program. The third one is composed of internships and BTech project (BTP). The curriculum provides students a multi-track option, where a student can acquire knowledge in breadth as well as depth in multiple tracks through an appropriate choice of elective courses, where electives could be in the four forms: ICT, Technical, Science and Open. The ICT electives provide expertise in courses which have components of computer systems and communication tracks; the Technical electives primarily provide expertise in some particular track; the Science electives provide expertise in basic sciences; and the Open electives belong to humanities, social sciences and management courses. Like previous curriculum structure, the revised curriculum has provision of mandatory rural internship and research/industrial internship. The student is also required to take at least a semester long BTech project (BTP) between 7th and 8th semester.

The curriculum accommodates 175 credits, out of which 152 credits for courses and 23 credits for internships and project work. Out of the 152 required coursework credits, 111 credits are allocated to compulsory courses (Foundation courses) and 41 credits are allocated to four kinds of electives (9-17 credits are allocated to ICT electives, 12-20 credits to Technical electives, 6-12 credits to Science electives, and 6-9 credits to Open electives), which the student can take according to his/her inclination and interest.

Graduation Requirements

- Total credits ≥ 175 (Course credits ≥ 152 and Internships and BTP credits = 23)
- Grade points ≥ 760 (from course credits, 152×5)
- Pass all the courses including internships and BTP.

Major changes in the revised curriculum

- A total of 7 credits increased in the revised curriculum and that to the foundation courses.
 - a) Three new courses added to the foundation core – ‘Engineering Design Workshop’, ‘Engineered Materials’ and ‘Digital Communications’.
 - b) The course ‘Object Oriented Programming’ is removed from the foundation core and the course ‘Algorithms’ has been considered as the foundation core.
- The course ‘Communication Skills’ is replaced by a graded course named as ‘Language and Literature’.
- Electives credits remain same. ICT elective is suggested in place of Group electives, which is expected to have ICT flavor altogether instead of IT or CT group wise courses. Students can also do mini-project under starting from their 5th semester.

The revised curriculum accommodates the additional 18 foundation core credits of the Computational Science minor program without adding any extra semester course load to the academic requirement. The revised curriculum intended to build an immediate laboratory infrastructure for the first semester new course ‘Engineering Drawing Workshop’ with a projected budget of Rs. 25 Lakhs and a proposal for the same was submitted to the concerned office. BTCRC is happy to note that the revised curriculum has started functioning from the academic session 2016-17.

Manik Lal Das

Convenor - BTCRC 2016