Indian Institute of Technology Goa

B.Tech. Computer Science and Engineering Curriculum – 2019 Batch

Semester 1
Introduction to Computing
Calculus
Quantum Physics and Application
Foundation for Humanities and Social Sciences
Physical Chemistry
Organic Chemistry & Inorganic Chemistry
Introduction to Manufacturing
Introduction to Profession
National Sports Organisation
Chemistry Lab

Semester 2
Software Tools
Basic Linear Algebra
Ordinary Differential Equations
Electricity and Magnetism
Introductory Biology
Engineering Graphics and Introduction to Computer-Aided Drawing
Introduction to Electrical and Electronics Engineering
National Sports Organisation
Physics Lab

Semester 3
Data Structures and Algorithms
Digital Systems Design
Discrete Structures
Probability and Statistics for Computer Science
Open Elective

Semester 4
Computer Architecture
Computer Networks
Algorithm Design
Open Elective

Semester 5
Programming Language Paradigms
Operating Systems
Logic in Computer Science
Artificial Intelligence
Open Elective

Semester 6
Machine Learning
Theory of Computation
Compiler Design
Program Elective

Semester 7
6 MONTH INTERNSHIP OR
Program Elective 1
Program Elective 2
Open Elective
Open Elective
Electives yet to be finalised

Semester 8
BTP PHASE 2/ Program Elective 1
Program Elective 2
Program Elective 3/ Open Elective 1
Open Elective 2
Electives yet to be finalised

Electives offered in Semester 3
Signals and Systems
Economics

Electives offered in Semester 4
Aerosol Technology
Numerical Simulation and its applications
Introduction to Quantitative Finance
Econometric Data Science
Learning to Achieve Multidisciplinary Perspectives

Electives offered in Semester 5
Geometric Modelling
Energy, environment, and economics
Language and Society
Quantum Magnetism and Magnetic Materials
Introduction to Graphene: Fundamentals and Applications

Electives offered in Semester 6
Modelling and Simulation of Systems
Introduction to Information Security
Randomised algorithms
Optimization: Theory and Algorithms