

# Indian Institute of Technology Goa

## B.Tech. Electrical Engineering Curriculum

– 2022 Batch

Semester 1
Computer Programming
Calculus
Quantum Physics
Physical Chemistry
Organic Chemistry & Inorganic Chemistry
National Sports Organisation
Chemistry Lab
Introduction to Profession
Introduction to Manufacturing
Foundation Programme in Humanities

Semester 2
Introduction to Electrical and Electronics Engineering
Basic Linear Algebra
Ordinary Differential Equations
Circuit Theory
Fundamentals of CAD and Manufacturing
National Sports Organisation
Physics Lab
Electricity and Magnetism
Biology

Semester 3
Electronic Devices and Lab
Digital Circuits and Lab
Electromagnetic Waves
Signals and Systems
Complex Analysis I
Differential Equations II
Open Elective

Semester 4
Analog Circuits and Lab
Analog Communication Systems
Electrical Machines and Lab
Probability and Random Processes
Open Elective

Semester 5
Digital Signal Processing and Lab
Digital Communication Techniques and Lab
Control Systems and Lab
Open Elective

Semester 6
Power Electronics and Lab
Power Systems
Introduction to Internet-of-Things
Open Elective
Program Elective

Semester 7
BTP/Program Elective I
Program Elective II
Open Elective I
Open Elective II

Semester 8
6-MONTH INTERNSHIP OR
Program Elective I
Program Elective II
Open Elective I
Open Elective II

List of Open Electives offered
Computer Graphics using OpenGL
Numerical Simulation and its applications
Introduction to Quantitative Finance
Language and Society
Economics of Sustainability
Economy and Public Policy
Introduction to Bioinformatics
Linear Algebra and Applications
Sensors and Actuators: Fabrication and Applications

List of Program Electives offered
Analog/Digital Integrated Circuit Design
Control of Electric Drives
Insulation in Power Apparatus and System
Power Electronic Converters
Power Systems Dynamics and Control