



GSFC
UNIVERSITY
EDUCATION RE-ENVISIONED

Bachelor of Technology
in
Fire & Environment, Health,
Safety

July 2021

GSFC University, Fertilizer Nagar
Vadodara- 391750



B. Tech Fire & Environment, Health, Safety (Fire & EHS)

| Code | Course Title | L-T-P | C | Code | Course Title | L-T-P | C |
|-----------------------|---|-----------|-----------|---------|---|-----------|-----------|
| Semester -I | | | | | | | |
| BTEC101 | Basics of Electrical & electronics | 3-0-2 | 4 | BTEC201 | Engineering Fundamentals | 3-0-0 | 3 |
| BTMA102 | Mathematics – I | 3-1-0 | 4 | BTME202 | Engineering Graphics | 3-0-2 | 4 |
| BTCS103 | Computer Programming-I | 3-0-2 | 4 | BTMA203 | Mathematics - II | 3-1-0 | 4 |
| BTPY104 | Engineering Physics | 3-0-2 | 4 | BTME204 | Engineering Mechanics | 4-0-2 | 5 |
| BTME105 | Workshop | 0-0-2 | 1 | BTCY205 | Engineering Chemistry | 3-0-2 | 4 |
| BTFS106 | Fundamental in Fire & Environment, health, Safety | 2-0-0 | 2 | BTCS206 | Computer Programming II | 0-0-2 | 1 |
| AECC101 | Fundamentals of English | 2-0-0 | 2 | BTME207 | AutoCAD | 0-0-2 | 1 |
| SECC101 | Industrial Internship | 0-0-0 | 2 | AECC201 | Communication Skills in English | 2-0-0 | 2 |
| SECC102 | Foundation Course | 0-0-0 | 2 | SECC201 | Industrial Internship | 0-0-0 | 2 |
| | Total | 23 | 25 | | Total | 27 | 26 |
| Semester - III | | | | | | | |
| C301 | Mathematics – III | 3-1-0 | 4 | BTFS401 | Rescue techniques & equipments | 2-0-2 | 3 |
| BTFS301 | Safety management - I | 3-0-0 | 3 | BTFS402 | Building Fire Prevention & Protection measures | 3-0-2 | 4 |
| BTFS302 | Legislations related to Fire & EHS | 3-0-0 | 3 | BTFS403 | Hazard Identification, Risk assessment & Control techniques | 3-1-0 | 4 |
| BTFS303 | Town Planning & Building Design | 3-0-2 | 4 | BTFS404 | Safety in Construction Industry | 3-0-0 | 3 |
| BTFS304 | Strength of Materials | 3-0-2 | 4 | BTFS405 | Machine design & Industrial drafting | 4-0-2 | 5 |
| BTFS305 | Automobile Eng. & Safety | 3-0-0 | 3 | BTFS406 | Fluid mechanics & Pumping machinery | 3-0-2 | 4 |
| AECC301 | Entrepreneurship Development | 2-0-0 | 2 | AECC401 | Environmental Science | 2-0-0 | 2 |
| SECC301 | Industrial Internship | 0-0-0 | 2 | SECC401 | Industrial Internship | 0-0-0 | 2 |
| SECC302 | Case studies & Seminar | 2-0-0 | 1 | SECC402 | Fire Ground Practicals -1 | 0-0-2 | 1 |



| Total | | 27 | 26 | 27 | 26 | Total | 27 | 28 |
|-----------------------|--|-----------|-----------|-----------|-----------|--------------|--|--------------|
| Semester - V | | | | | | | | |
| BTFS501 | Fire Service Operations | 3-0-2 | 4 | | | BTFS601 | Safety Engineering in Industrial Applications | 3-0-0 3 |
| BTFS502 | Safety Management - 2 | 3-0-0 | 3 | | | BTFS602 | Firefighting & Safety Codes & Standards | 3-0-0 3 |
| BTFS503 | Electrical Technology & Safety | 3-1-0 | 4 | | | BTFS603 | Fire Protection Systems - I | 3-0-2 4 |
| BTFS504 | Occupational Health & First Aid | 3-0-2 | 4 | | | BTFS604 | Fire & Safety Hazards in Special Sectors (Aviation, Marine, Nuclear) | 3-0-2 4 |
| BTFS505 | Fire Safety in Refinery, Petrochemical, Fertilizer & Chemical Industry | 3-0-0 | 3 | | | BTFS605 | Professional Elective –I (Even) | 3-0-0 3 |
| BTFS506 | Introduction Of Fire Dynamics | 3-0-2 | 4 | | | OE-1 | Open Elective | 3-0-0 3 |
| AECC501 | Disaster Risk Management | 2-0-0 | 2 | | | AECC601 | Indian Constitution | 2-0-0 2 |
| SECC501 | Industrial Internship | 0-0-0 | 2 | | | SECC601 | Industrial Internship | 0-0-0 2 |
| SECC502 | Fire Ground Practicals-2 | 0-0-2 | 1 | | | SECC602 | Audits & Seminar | 2-0-0 1 |
| Total | | 27 | 27 | | | Total | | 24 25 |
| Semester - VII | | | | | | | | |
| BTFS701 | Fire Protections Systems -2 | 3-0-2 | 4 | | | BTFS801 | Structural Behaviour & Passive Fire Protection | 3-0-0 3 |
| BTFS702 | Chemical Safety Covering Various Types of Industries | 3-0-0 | 3 | | | BTFS802 | Environmental Impact Assessment & Waste Management | 4-0-0 4 |
| BTFS703 | Management & Entrepreneurship Development | 4-0-0 | 4 | | | SECC801 | Minor Project | 0-0-16 8 |
| BTFS704 | Industrial Hygiene, Applied Ergonomics & Occupational Health | 4-0-0 | 4 | | | | HIP | |
| BTFS705 | Professional Electives-2 | 3-0-0 | 3 | | | Total | | |
| SECC701 | Industrial Internship | 0-0-0 | 2 | | | | | |
| SECC 702 | Minor Project | 0-0-4 | 2 | | | | | |
| Total | | 19 | 22 | | | Total | | 7 15 |
| Grand Total | | | | | | | | 193 |