



BSc Fire & Safety (F&S)



PROGRAM DOSSIER

1. Name of the Program

BSc Fire & Safety

2. Duration of the Program

- 3 years full time program

3. Eligibility criteria for the Program

- Candidate must have passed 12th or equivalent (Science Stream with Maths /Physics/Chemistry) Examination from the recognized Board. With min 45% marks.
- Physical Criteria - **Male** - Height -165cm, Chest-81cm (unexpanded), weight - 50kg; **Female** - Height -157cm, weight - 46kg.
- **Medical standards for male & female** - vision - 6/6 - (worst-6/12), No color blindness and any physical defects like flat foot, stammering or knock-knee.

4. Objectives of the Program

- ✓ Preparing the students who can design, implement and evaluate solutions for industrial and societal requirements by laying strong foundation of core courses in Fire & Safety.
- ✓ To prepare qualified and competent professionals who can design solutions for complex problems in the field of Fire & Safety .
- ✓ Making students industry ready & employable by offering hands-on experience from industry experts and working on real industrial problems in the areas of Fire & Safety (F &S) and delivering intelligent solutions
- ✓ Developing expertise in the specialized domains like Legislations related to Fire & EHS, Disaster Risk Management, Building Fire Prevention & Protection, Safety Management & Engineering, Fire & Safety codes & laws in chemical process industry & specialized sectors like Marine & Aircraft, Industrial Hygiene, First Aid, Structural fire

protection & fire protection systems, Fire operations & rescue techniques

- General Uniqueness of the Program (USPs)
- **State of Art Laboratory in Fire & Safety:** Exposure of working on industrial problems in the State-of-the-art Fire lab, Safety lab & Fire testing sponsored and supported by Airport Authority of India (AAI).
- **Access to GSFC Ltd Fire stations & Fire Safety department:** Prospect of working at the live Fire Stations of GSFC Limited and access to of 22 process plants & Fire Safety Department of GSFC Ltd to learn about Fire Prevention, Fire Fighting & Fire Protection and learn fighting equipments from the industry experts
- **Industrial Internship:** Compulsory industrial internship of 4 weeks in every semester starting from the first year itself and the opportunity to work on the projects offered by industry partners/organizations like Gujarat Institute of Disaster Management (GIDM), Airport Authority of India (AAI), TATA Power – Kutch.
- **Hands on session:** More focus on hands on training on fire and safety equipments to impart greater knowledge on its applications.
- **Industry Driven Curriculum:** Industry driven and flexible curriculum designed with the support of industry experts appointed on Board of Studies
- **Strong industry linkages:** Expert talks, Symposiums, Projects and Hands on experience from industry resources because of strong industry connects. MoUs with GIDM, AAI, and foreign universities like University of Maryland (US), Victoria University (Australia).
- **Support for Startup and Innovation:** Inculcating innovation, funding support for innovative projects and extending support for startups through GUIITAR (GSFC University Incubation Innovation Technology and Applied Research) Council

5. How teaching is unique at the program (Pedagogies and innovation).

- ✓ Learning through Case Studies, Industrial Internships and Innovative Projects
- ✓ Making students industry ready as 50 % of the courses are taught by the highly experienced Industry Experts.

- ✓ Keeping abreast with the technological developments/ Emerging Technologies by organizing Workshops/Expert Talks/Symposium on regular basis
 - ✓ Use of ICT tools, Google Classroom, innovative pedagogies like breakout rooms for team building activities, flipped classroom for making sessions more engaging
 - ✓ Blended learning (Online & Offline classrooms)
6. How practical orientation is incorporated.
- ✓ Exposure to Wet Drills, Dry Drills & Fire Drills using the State-of-the-Art infrastructure.
 - ✓ Exposure of working on industrial & research problems in the specialized laboratories setup for Fire lab, Safety lab & Fire testing laboratory.
 - ✓ Hands on experience during 4 weeks of industrial internship in every semester
 - ✓ Conduction of laboratories and practical sessions by the industry experts to give real time experience of industrial applications
7. Skills that students learn during the program.
- ✓ Basic Introduction to Fire & safety in various engineering.
 - ✓ Job oriented skills like Legislations related to Fire & Safety, Fire & Safety codes in all chemical/petrochemical/oil gas/ Marine/Aviation/ Nuclear, Fire service operations & Rescue techniques, Fire dynamics Fire protection systems Building fire prevention & structural fire safety etc.
 - ✓ Analytical and Critical Thinking
 - ✓ Problem Solving Skills
 - ✓ Out of box thinking and working on innovative projects with the support of GUIITAR Council
8. How students will experience the study at the program
- ✓ Best learning environment at lush green campus with the ample of resources, campus wide wi-fi connectivity, digital library, array of research laboratories, sports facility and state-of-the-art infrastructure
 - ✓ Completely different model of inculcating employability skills through hands-on practical and experiential learning through strong industry linkages

- ✓ Holistic development of the students by participating in the co-curricular and extra-curricular activities organized through different Student Managed Clubs and Student Chapters
- ✓ Continuous Grooming of students by Developing Soft Skills, Preparing for Placements, Preparing for Competitive Exams by arranging special sessions and through Foundation Course & Bridge Course

9. Program facilities available.

- ✓ State of Art labs such as Fire Lab, Safety lab & Fire testing & Environment lab sponsored by Airports Authority of India Ltd (AAI)
- ✓ High Tech classrooms with Digital Podium and Well-Equipped Laboratories
- ✓ Robotics Lab, e-Yantra Lab setup in collaboration with IIT Bombay
- ✓ Specialized laboratories for Data Science, Artificial Intelligence & Machine Learning along with the laboratories for core subjects
- ✓ Digital Campus System and Digital Library to access e-resources

10. How is the program different from other Universities / Institutions?

- **Courses taught by industry experts:** 50% of the courses are taught by highly experienced industry professionals
- **Access to GSFC Ltd laboratories:** Prospects of working at the laboratories of GSFC Limited and access to of 22 process plants for internship opportunities as well as learning from the industry experts **Industrial Internship:** Compulsory industrial internship of 4 weeks in every semester starting from the first year itself and the opportunity to work on the projects offered by industry partners/organizations like IOCL, GSFC Ltd, Gujarat Institute of Disaster Management (GIDM),
- **Industry Driven Curriculum:** Industry driven and flexible curriculum designed with the support of industry experts appointed on Board of Studies
- **Strong industry linkages:** Expert talks, Symposiums, Projects and Hands on experience from industry resources because of strong industry connects. MoUs with GIDM, AAI, IIT - Gandhinagar and foreign universities like University of Maryland (US), Victoria University (Australia).

- **Support for startup and innovation:** Inculcating innovation, funding support for innovative projects and extending support for startups through GUIITAR (GSFC University Incubation Innovation Technology and Applied Research) Council

11. What extra students learn during the program?

- ✓ Holistic development of the students by participating in the co-curricular and extra-curricular activities organized through different Student Managed Clubs and Student Chapters
- ✓ Learning of Life skills and Multidisciplinary subjects by the courses offered through CBCS
- ✓ Know-hows of starting startups through incubation center of GUIITAR Council
- ✓ Visit to Fire Safety department of various plants, fire stations, manufacturers etc. to learn & solve the real-world problems because of the exposure of industrial internship

12. Career opportunities after completion of the program.

Plenty of career options are available after completing the program with wide range of Job Roles as follows. Fire and Safety is considered to offer one of the most lucrative jobs in the industries.

- ✓ Fire & Safety Officers
- ✓ Fire & Safety Auditors
- ✓ Fire Protection officer
- ✓ Safety officers
- ✓ Fire specialist officer
- ✓ Chief fire officer
- ✓ Loss prevention officer
- ✓ HSE Professionals
- ✓ HSE consultants
- ✓ Fire consultants

13. Why to study the program at GSFC University.

- ✓ GSFC University is recognized under the Gujarat Private University (Second Amendment) Act, 2014 and is promoted by Gujarat State Fertilizers and Chemicals Ltd, six decades old industrial giant whose

strong vision is to establish the distinct University with the objective of making industry-ready graduates with cutting-edge knowledge in all the frontier of development.

- ✓ Promotes Complete paradigm shift in teaching-learning methodology which focuses more on developing Higher Order Thinking Skills, Hands-on practice, Compulsory Industry Internship in every semester, Lecture delivery by visiting faculty members from industries, Skill enhancement through various clubs, Choice Based Credit System gives ample opportunities to grow and excel in almost all the facets of learning
- ✓ Inculcating innovation, funding support for innovative projects and extending support for startups through **GUITAR** (GSFC University Incubation Innovation Technology and Applied Research) Council
- ✓ Strong industry linkages and MoUs signed with more than 22 Industries/Organizations
- ✓ Compulsory industrial internship for student and faculties ensures to stay updated and to keep pace with the recent industry developments.
- ✓ Lush green digital campus with state-of-the-art infrastructure, campus wide wi-fi connectivity, research laboratories, sports facilities, well developed hostel facilities, well established library with an array of thousands of books/journals, digital library to access the plenty of e-resources
- ✓ Vibrant and dynamic campus whose prime objective is to facilitate in all the respects for the holistic development of students