



GSFC
UNIVERSITY

EDUCATION RE-ENVISIONED
An ISO 9001:2015 Certified



B.TECH
FIRE & ENVIRONMENT,
HEALTH, SAFETY
(SCHOOL OF TECHNOLOGY)

ABOUT GSFC UNIVERSITY:

GSFC University, a testament to corporate social responsibility, is a distinguished private institution born of the vision of Gujarat State Fertilizers & Chemicals Ltd. (GSFC). Established under the Gujarat Private Universities Act, 2009, and initiated by the GSFC Education Society in December 2014, the university embarked on its academic journey in the 2015-16 academic year.

With a mission to cultivate a student-centric culture, **GSFC University** is dedicated to molding industry-ready professionals equipped with comprehensive skills. Our esteemed Governing Body and Board of Management, led by **Shri P K Taneja (IAS Retd)**, include luminaries from industry, government, and academia, ensuring a forward-thinking educational environment.

From its inception with two undergraduate programs and 141 students, **GSFC University** has flourished into an academic hub offering over 25 undergraduate and postgraduate programs to more than 2150 scholars. The University has many USPs which differentiate from other Universities.



UNIQUE SELLING PROPOSITIONS (USPs):

- A Student-Centric University producing industry-ready graduates
- Strong Industry Associate to enhance employability
- Internships integrated into every semester for real-world experience
- State-of-the-Art Laboratories and Training facilities
- Collaborative Curriculum Development with Industry and Student Input
- A Campus that champions inclusivity and safety for female students



ORIGIN OF THE FIRE & EHS PROGRAM AT GSFC UNIVERSITY:

In India, fire services are constitutionally mandated under the 12th schedule, Article 243W, entrusting municipalities with the responsibility of fire prevention and firefighting. The States, Union Territories (Uts), and Urban Local Bodies (ULBs) currently manage these critical services.

The Fire & Environment, Health, Safety (EHS) program at GSFC University was conceived in response to the pressing need for specialized expertise in this domain. As per the Accidental Deaths and Suicides in India report of 2022, there were 7566 fire incidents, highlighting the urgency for well-trained professionals in fire safety and management.

GUJARAT'S INDUSTRIAL LANDSCAPE AND THE IMPERATIVE FOR SKILLED FIRE SAFETY PROFESSIONALS:

Gujarat, a powerhouse of industry with over 400 Major Accident Hazard (MAH) entities, demands a workforce that embodies the pinnacle of safety standards. The state's industrial expanse necessitates fire safety professionals who are not only adept in their field but also possess a deep understanding of environmental and health considerations for the workforce.

Tragic events, such as the Takshashila complex fire in Surat and the hospital fires during the pandemic, underscore the critical need for proficient fire safety experts in Gujarat. These professionals are increasingly sought after for their expertise in fire code enforcement, fire prevention strategies, safety design in infrastructure, consultancy for industrial projects, and the installation of fire protection systems.

B.TECH IN FIRE & ENVIRONMENT, HEALTH, SAFETY (F&EHS):

In response to this pressing need, GSFC University pioneered the B.Tech in Fire & Environment, Health, Safety (F&EHS) program in 2019, becoming the first university in Gujarat to offer such a vital and socially significant course.

PROGRAM OVERVIEW:

The B.Tech (F&EHS) program commenced with an inaugural cohort of 24 students. The curriculum, crafted by a blend of academic and industry experts in Fire & EHS, is overseen by the Board of Studies (BoS). It is tailored to meet the current demands of industries, relevant organizations, and government fire & EHS services.



B.TECH IN FIRE & ENVIRONMENT, HEALTH, SAFETY (F&EHS):

The B.Tech program in Fire & Environment, Health, Safety (F&EHS) at GSFC University is a comprehensive course that encompasses a wide range of critical topics, including:

1. **Fire Dynamics:** Understanding the principles and behavior of fire
2. **Fire Protection Systems:** Comprehensive study of systems designed to detect and extinguish fires
3. **Building Fire Protection:** Strategies for safeguarding structures against fire
4. **Structural Behaviour of Building Materials:** Analysis of materials used in construction and their response to fire
5. **Design of Fire Systems:** Engineering of fire detection and suppression systems
6. **Safety Engineering:** Application of engineering principles to ensure safety in the workplace
7. **Fire & Safety in Major Accident Hazards:** Management of fire safety in high-risk environments
8. **Safety in the Chemical Industry:** Specific safety considerations for the chemical sector
9. **Legislations Related to Fire & EHS:** Legal framework governing fire safety and environmental health
10. **Fire & Safety Codes:** Standards and codes of practice for fire safety
11. **Rescue Techniques:** Methods and procedures for rescuing individuals from hazardous situations
12. **Hazardous Waste Management:** Handling and disposal of hazardous materials
13. **Environment Impact Assessment:** Evaluation of the potential environmental effects of a proposed project
14. **Industrial Hygiene and Toxicology:** Study of workplace health hazards and the effects of toxic substances
15. **Occupational Health:** Promotion and maintenance of the highest degree of physical, mental, and social well-being of workers

For a detailed curriculum, please scan the accompanying QR code.

Other Programs

The department of F&EHS also offers other programs:

- **Post Graduate Diploma in Industrial Safety (1 Year)**

INFRASTRUCTURE FACILITIES:

GSFC University is strategically situated on the verdant outskirts of Vadodara—a city renowned for its rich cultural tapestry and cosmopolitan ethos. The university's campus, set amidst the expansive greens of GSFC-Fertilizernagar, provides an oasis of tranquility, fostering a conducive learning atmosphere. Our comprehensive facilities are designed to nurture academic brilliance and practical expertise.



CAMPUS AMENITIES: B.TECH IN FIRE & ENVIRONMENT, HEALTH, SAFETY (F&EHS)

	Residential Excellence		Sports and Wellness		Academic Proximity
	FirePlex Training Complex		Knowledge Hub		Event Spaces
	Healthcare Services		Exclusive Access		Innovative Laboratories

FIREPLEX (AGNISANKUL): PREMIER TRAINING FACILITIES



Spanning a plot area of 2875 sq mtr, the FIREPLEX (AGNISANKUL) stands as a testament to GSFC University’s commitment to practical education. This state-of-the-art facility includes:

FIRE DRILL GROUND



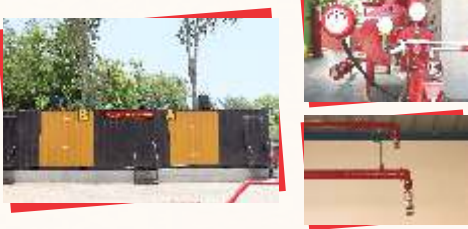
A dedicated space for conducting comprehensive fire drills.

FIRE PUMP HOUSE



Equipped with the latest technology for firefighting simulations.

SPECIALIZED ROOMS



Including a Sprinkler Room, Foam Spray Room, and Smoke Chamber.

FIRE DRILL TOWER



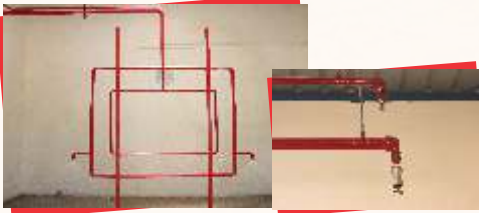
An imposing structure for advanced firefighting training.

BREATHING APPARATUS ROOM



A robust network for firefighting practice.

WATER SPRAY SYSTEMS



Both Medium and High Velocity Water Spray Systems (MVWS, HVWS) for diverse training scenarios.

The university is committed to helping students achieve academic excellence by providing the finest resources and support for their educational journey

PRACTICAL DRILLS AND TRAINING:

At GSFC University, students enrolled in the B.Tech Fire & Environment, Health, Safety (F&EHS) program engage in a rigorous regimen of practical training and drills designed to prepare them for real-world challenges. These exercises include:

1. **Physical Training:** Comprehensive physical conditioning and squad drills to build stamina and teamwork
2. **Firemanship:** Hands-on experience in practical firefighting techniques
3. **Hydrant Drills:** Mastery of fixed installations, knots, and lines through 3- and 4-person team exercises
4. **Fire Extinguisher Usage:** Training in the deployment of various types of fire extinguishers and personal protective equipment
5. **First Aid & CPR:** Instruction in essential first aid and ambulance procedures
6. **Rescue Operations:** Utilization of the drill tower for rescue scenario training
7. **Foam Tender Operations:** Team-based drills focusing on foam application and pump operations
8. **Ladder Drills:** Proficiency training with hook up ladders, hydraulic platforms, and extension ladders
9. **Building Firefighting:** Simulated exercises in structural firefighting strategies
10. **Breathing Apparatus:** Safe use of breathing apparatus in hazardous environments
11. **Confined Space Operations:** Navigation and operation within smoke-filled confined spaces
12. **Hazardous Materials Handling:** Identification and management of chemical and hazardous materials
13. **Scaffolding:** Construction and use of scaffolding for elevated work
14. **Fire Detection Systems:** Training on smoke detectors, alarms, and sprinkler systems
15. **Industrial Health and Hygiene:** Education on workplace health, hygiene, first aid, and CPR
16. **Noise Pollution Measurement:** Techniques for assessing and managing noise levels
17. **Mock Drills:** Execution of on-site and off-site emergency response simulations



UNIFORM REQUIREMENTS:



To foster a sense of discipline and professionalism, students of the B.Tech Fire & EHS program are required to adhere to a uniform dress code:

- **Drill Attire:** Navy blue coverall Dangiri, suitable for both men and women, paired with a protective cap
- **Classroom Uniform:** A crisp white shirt, black trousers, shoulder badge, belt, black shoes, and a formal cap

Uniforms are to be acquired by the students upon admission to the program, ensuring that students are appropriately equipped for both practical drills and academic sessions.

ELIGIBILITY CRITERIA, FEE STRUCTURE AND ACCOMMODATION DETAILS FOR B.TECH (FIRE & EHS) :

For information about the Eligibility criteria, Fee structure and Accommodation details for students interested in the B.Tech -Fire & Environment, Health, Safety program visit our website :

<https://www.gsfcuniversity.ac.in/apply-for-admission>



PLACEMENTS AND ACHIEVEMENTS:

The inaugural batch of B.Tech Fire & EHS graduates in June 2023 achieved a 100% placement rate, securing positions in prestigious companies throughout Gujarat. Notable recruiters include Reliance, Jindal Saw, Alembic, IMC Ltd, and GCPTL, among others. The B.Tech Fire & EHS program gets one of the highest placement packages for its graduates.

2019 - 2023





2020 - 2024



2021 - 2025



Deepkumar Ahir

adani



Moksha Suthar

adani



Dev Jaiswal

adani



Yuvrajsinh Gandhvi



GNFC



Vidit Khona



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MoU / Collaborators





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For Admission
Scan QR code



GSFC
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An ISO 9001:2015 Certified

Anviksha, Fertilizernagar, Vadodara

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log on to www.gsfcuniversity.ac.in



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