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# Advance Diploma in Fire and Safety Engineering – 2 Years

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## Year 1 – Semester I

S. No.	Paper Numerical	Unique Class & Papers	Paper Name / Subject
1	17101	1ADFSE1	Fundamentals of Fire Engineering
2	17102	1ADFSE2	Engineering Mathematics (Safety)
3	17103	1ADFSE3	Industrial Safety Management
4	17104	1ADFSE4	Fire Equipment Operation

### Course Details:

- **Fundamentals of Fire Engineering** – Fire chemistry, fire behavior, fire stages, heat transfer.
- **Engineering Mathematics** – Basic math used in pump calculations, pressure, flow rate.
- **Industrial Safety Management** – Safety regulations, factory act, hazard control, accident prevention.
- **Fire Equipment Operation** – Hose handling, pump operation, extinguishers, hydrant usage.

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## Year 1 – Semester II

S. No.	Paper Numerical	Unique Class & Papers	Paper Name / Subject
1	17201	2ADFSE1	Fire Protection Engineering
2	17202	2ADFSE2	Structural Fire Safety
3	17203	2ADFSE3	Electrical & Mechanical Safety

S. No.	Paper Numerical	Unique Class & Papers	Paper Name / Subject
4	17204	2ADFSE4	Practical Training – I

### Course Details:

- **Fire Protection Engineering** – Sprinklers, detectors, hydrant system, fire alarm panels.
- **Structural Fire Safety** – Fire-resistant materials, building codes, smoke control systems.
- **Electrical & Mechanical Safety** – Electrical hazards, LOTO, machine guarding, equipment safety.
- **Practical Training – I** – Fire drill, equipment testing, system inspection, safety audit file.

### Year 2 – Semester III

S. No.	Paper Numerical	Unique Class & Papers	Paper Name / Subject
1	17301	3ADFSE1	Fire Control Technology
2	17302	3ADFSE2	Environmental & Occupational Health
3	17303	3ADFSE3	Disaster Response & Rescue
4	17304	3ADFSE4	Simulation Lab / Drill

### Course Details:

- **Fire Control Technology** – Use of foam, CO<sub>2</sub> flooding, dry chemicals, fire suppression systems.
- **Environmental & Occupational Health** – Air monitoring, waste handling, workplace safety.
- **Disaster Response & Rescue** – Rope rescue, confined space rescue, emergency evacuation.
- **Simulation Lab / Drill** – Real-time mock fire scenarios, rescue practice, command system.

### Year 2 – Semester IV

S. No.	Paper Numerical	Unique Class & Papers	Paper Name / Subject
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S. No.	Paper Numerical	Unique Class & Papers	Paper Name / Subject
1	17401	4ADFSE1	Advanced Fire & Safety Engineering
2	17402	4ADFSE2	Safety Audit & Inspection
3	17403	4ADFSE3	Internship / Field Work
4	17404	4ADFSE4	Major Project / Viva

### Course Details:

- **Advanced Fire & Safety Engineering** – Explosion science, advanced suppression systems, risk modeling.
- **Safety Audit & Inspection** – Audit procedures, checklists, compliance, report preparation.
- **Internship / Field Work** – On-site industrial training, fire department visit, real safety tasks.
- **Major Project / Viva** – Complete safety project, case study, viva presentation.