

# An empirical study on inclusion of forensic management as super specialization in Masters of Business Administration with special emphasis to engineering graduate aspirants

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**ABSTRACT:** This paper proposes to establish forensic management as an optional super specialization in Masters in Business Administration course in India offered by institutes affiliated to AICTE & UGC. This course will overview the engineering techniques of past, present and future. It will also provide students with a broad background on forensic management along with the knowledge of additional information sources to investigate issues in their professional careers.

This cutting edge combination of forensic science with management would have a deep learning impact on the graduates especially from similar engineering backgrounds. The management program which is offered by affiliated colleges for 2 years would have an unique proposition for engineering graduates who aspires to acquire a management degree. In many situations, it has been noticed, that engineering graduates who actually enrol for a 2 year full time management program, finds it tedious, strenuous & different from their background & face tad difficulties in understanding non engineering linked subjects. Hence, forensic management as a super specialization paper would give that required weightage for a an engineering graduate from the same background.

The subject of forensic management has its strong connections with mechanical engineering, industrial safety & Law. This makes it a cutting edge package of higher learning when it is clubbed with management lessons & strategies. Thus having a very good potential of becoming a popular super specialization among MBA aspirants from engineering backgrounds.

Hence, a student of MBA studying varied subjects in first year, followed by selecting single or dual specialization in second or final year, also gets an added opportunity to gain knowledge & super specialization certificate in this scenario.

**Keywords :** MBA, Value-added, Super-Specialization, AICTE, Engineering, Forensic management.

## I. INTRODUCTION

For engineers with a sound technical background, a job in their own technical specialization seems like the perfect fit. For instance, a computer engineer would most probably be happy to work in top IT companies such as Google, Facebook, or Infosys.

However, mid-career, when the software professional has leveraged his or her skills to maximize learning as well as career growth, there can come a time when the career graph plateaus. This is because, for any professional to climb further up, the professional would need management skills.

To break from the technical mould, and blend seamlessly into mainstream management roles, it makes good sense for engineers to upskill by studying in an MBA program. Masters of Business Administration is a two years course affiliated to AICTE. In which the students need to study & gain knowledge over varied areas like marketing, human resource, business communication, financial management, statistics, economics, Law etc. While in second year of study, a student has to pick a particular specialization to deep dive on ones interest & specific learning. Additional to that, super specialization course

which is additional to specialization papers, would be a give a value added knowledge & enhanced learning scope for students, especially for those students who are already having engineering background.

The advantage of this subject is, it is applied most commonly in civil law cases, although may be of use in criminal law cases. It is essentially a failure analysis program for litigation support. This cutting edge combination of forensic science with management would have a deep learning impact on the graduates especially from similar engineering backgrounds. The management program which is offered by affiliated colleges for 2 years would have an unique proposition for engineering graduates who aspires to acquire a management degree. In many situations, it has been noticed, that engineering graduates who actually enrol for a 2 year full time management program, finds it tedious, strenuous & different from their background & face tad difficulties in understanding non engineering linked subjects. Hence, forensic management as a super specialization paper would give that required weightage for a an engineering graduate from the same background.

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## II. STATEMENT OF THE PROBLEM

Unlike Masters in Engineering Management (MEM) which is a professional master's degree exclusively designed to bridge the gap between engineering, technology, and management. Popularly known as the 'Engineer's MBA' or "MBA for Engineers", Masters in Engineering Management is an ideal choice among engineering graduates who wish to combine their technical skills with business acumen and thus move to a higher managerial role with a technology core. But the options of forensic studies is not available so far. Moreover, the MEM is mostly available for enrolment in United States.

However, Popular electives offered across MEM programs includes-

- Computer Simulation for Risk & Operational Analytics
- Project Management
- Product Management
- Manufacturing Management
- Systems Engineering and Architecture
- Environmental Systems Analysis, Economics & Public Policy
- Applied Machine Learning
- Data Science for Business Intelligence
- Operations and Supply Chain Management
- Technology Development and Commercialization
- Core or compulsory courses vary with universities but the popular ones include Leadership and Organizational Behaviour, Strategic Management, Accounting, and Finance, etc.

### Limitations of Study

There are multiple level of approvals & recognitions required from authorities & stake holders in order to formalize a course of this structure. AICTE & UGC must realize the need & demand for the course in the future

### Approval & Affiliations

Ministry of Human Resource Development, (MHRD) Government of India - The Ministry of Human Resource Development (MHRD) is under Government of India, responsible for the development of human resources. It was created on September 26, 1985, through the 174th amendment to the Government of India (Allocation of Business) Rules, 1961. MHRD is currently working through two departments:

1. Department of School Education & Literacy.
2. Department of Higher Education.

University Grants Commission, (UGC) Government of India - The University Grants Commission of India is a statutory body set up by the Indian Union government in accordance to the UGC Act 1956 under Ministry of Human Resource Development, and is charged with coordination, determination and maintenance of standards of higher education. It provides recognition to universities in India, and disburses funds to such recognised universities and colleges. All India Council for Technical Education (AICTE) -The All India Council for Technical Education (AICTE) is

the statutory body and a national level council for technical education, under Department of Higher Education, Ministry of Human Resource Development. AICTE is responsible for proper planning and coordinated development of the technical education and management education system in India. Therefore for an engineering and management, Institute must be recognised by UGC and the course from AICTE, approval from both the bodies is essential to have valid degree & certifications. Ministry of Home Affairs, (MHA) Government of India - Perspective plan for Indian Forensics was been presented to the Ministry of Home Affairs (MHA), Government of India on July 2010. Further 499 addressees representing direct & indirect forensic promoters and beneficiaries a letter of hardcopy & softcopy was sent. These addressees included

1. Directorate of Forensic Science (DFS), MHA
2. Director of Central Forensic Laboratories (CFLs) Under Directorate of Forensic Science (DFS) & Central Bureau of Investigation (CBI)
3. Directors of State/Union Territories Forensic Science Laboratories (FSLs)
4. Forensic Medicine Expert & Police Surgeon's
5. Officers of Central Bureau of Investigation (CBI), National Security Guard (NSG), Narcotic Control Bureau (NCB), Central Industrial Security Force (CISF) & Indo Tibetan Border Police (ITBP)
6. Deputy Controllers of Explosives
7. Officers of Defence Service
8. Principals of Central Detective Training Schools
9. Directors National Institute of Criminology & Forensic Science (NICFS), MHA
10. Heads of Academia (Universities/Collages/Institute) offering forensic science courses.

State Government Technical Board-The state government technical Board which are been established by the passing of legislation by a state government. It is an educational institute established by the state government and also funded by it. Most of the technical as well as management courses are conducted by the affiliation by the state government technical board. It is also been governed by the guidelines laid down by the UGC & AICTE.

### Syllabus

- Introduction

Wind Damage to Residential Structure Lightning Damage to Well Pumps

- Evaluating Blasting Damage
- Building Collapse Due to Roof Leakage Putting Machines & People Together Determining the Point of a Fire
- Electrical Shorting Explosions
- Determining the Point of Ignition of an Explosion
- Arson and Incendiary Fires Simple Skids
- Simple Vehicular Falls Vehicle Performance Momentum Methods Energy Methods
- Curves and Turns
- Visual Perception and Motorcycle Accidents
- Interpreting Lamp Filament Damages Automotive Fires
- Indian Evidence Act, (1872)
- The Information Technology Act, (2000), Cyber Law

B

- Indian Penal Code

C

- Code of Criminal Procedure Case Study

### Faculty

Faculty for forensic engineering can be hired from field of engineering, Law professionals, below are some of the examples which can be implemented at the time of recruitment of faculty in this course.

1. Civil Engineers for structural engineering
2. Mechanical Engineers for failure programs in applied mechanics
3. Industrial Safety Engineers for Industrial Accidents
4. Electrical Engineer for Electric Shorting and Lightning Damage.
6. Advocates for Civil, Criminal & Basic Bare Acts.

### Internship

Internship is very important part of technical education. It indicates the Real-world working skills for an Industry which is a great opportunity for a engineering students to learn to use their education for more practical purpose. Forensic Engineers can take internship from some of the industries like: -

1. Indian Railways (Collision, Train Marooned, Derailment, Tunnel Collapse, Fire Explosion in Train)
2. Director General of Civil Aviation (Mid Air Collision, Defective Runways, Mechanical Failure, air traffic control error)

3. Directorate General of Shipping (Offshore Oil Rig Mishaps, Accidents on Crude Oil Tankers, Cruise, Tugboats & Cargo ships, Grounding of Ships, Crane Mishaps, Cargo Hauling Accidents)
4. National Disaster Management Authority (Industrial Safety Security, Emergency & Crisis Management, Risk Assessment & Safety Audits,)

### Placements

Forensic Engineer's can get placed in both private and public sector, followings are some of the examples where they can be placed: -

1. Central Bureau of Investigation
2. Criminal Investigation Department
3. Police
4. Intelligence Bureau
5. Indian Army
6. Indian Airforce
7. Indian Navy
8. Defense Research & Development Organization
9. Indian Space Research Organisation
10. Forensic Laboratory
11. Insurance Companies
12. Private Detective Agencies
13. Universities
14. Public & Private Industries

### III. CONCLUSION

Talented engineers will advance within the engineering roles early in their careers. To advance to senior management, they need to be more than just good engineers. They need the broader business knowledge and skills to become strategic leaders of their organizations. An MBA gives an engineer the broader business knowledge to make strategic business decisions and to understand the full impact of those decisions. They need to be able to manage people. An understanding of the business from all aspects including marketing, sales, finance, and supply chain are critical in a senior leadership role. Leaders must be able to make strategic decisions, negotiate and persuade others and lead a high-performance team. Other critical skills include oral and written communications, ability to work in teams, problem solving, and analytical skills. Cross function effectiveness is critical to success. Leaders need to work effectively with people who think differently than they do. One of the best examples of the difference between an engineer and a business leader with engineering experience comes from the world of product design. The engineer wants to

include all the features and functions in the product that they are capable of designing. The business leader wants to include the features and functions that are important to their clients and prospects and that differentiate from their competition. The paper gives an overview of a possible combination of forensic science with management as a new age area in education & learning. Especially engineering graduates who aspire to pursue management education would get an option similar sort-of, to their previous area of learning.

An MBA helps engineering students tackle larger and more abstract strategic problems, instead of the structured engineering-focused problems they would have faced before. This means learning how to manage people and how to systematise business structures effectively. The combination of forensic with management would enable students to increase their domain of learning with this optional super specialization paper in varied fields.

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