



अनुसंधान प्रबंधन और राष्ट्रीय प्रौद्योगिकी संस्थान
RESEARCH MANAGEMENT AND NATIONAL INSTITUTE OF TECHNOLOGY
(An Autonomous institution under Ministry of HRD, Govt. of India)
(A 9001-2008 ISO CERTIFIED INTERNATIONAL B-SCHOOL)

Master of Engineering **Chemical**

On
UGC Model Curriculum

Master of Engineering in Chemical Engineering

Duration

2 Years

Type

Degree

Level

Graduation

Eligibility

Graduation

M.E (Chemical Engineering) or Master of Engineering in Chemical Engineering is a Post-Graduate Chemical Engineering course. It deals with the field of science or technology and covers one of the main subjects Chemical Engineering. Chemical engineering is the branch of engineering that deals with the application of physical science (e.g., chemistry and physics), and life sciences (e.g., biology, microbiology, and biochemistry) with mathematics and economics, to the process of converting raw materials or chemicals into more useful or valuable forms.

The duration of Master of Engineering in Chemical Engineering is generally two years but it may vary from institute to institute and also maybe on a part-time basis by certain institutes. The syllabus for the Master of Engineering course in Chemical Engineering

is divided into four semesters plus elective subjects. The Master of Engineering course in Chemical Engineering is a very valuable and important one that offers a lot of job scopes for the candidates after its completion. This Master of Engineering course in Chemical Engineering is mostly done by the students who have expected of becoming lecturers/professors both at colleges and university level.

M.E (Chemical Engineering) Eligibility

- Aspiring candidates should have completed B.Tech / B.E in Biomedical, Chemical, Computer Science, Electrical, Electronics, Instrumentation, Mechanical Engineering, Metallurgy and Materials Science, Telecommunications Engineering, and Engineering Physics degree under any registered University.
- The marks of admission for this course may vary from University to University.
- In various colleges and universities, there is an entrance exam for the admission of the courses.

M.E (Chemical Engineering) Syllabus

Syllabus of Chemical Engineering as prescribed by various Universities and Colleges.

M.E (Chemical Engineering) Semester-I	
Sr. No.	Subjects of Study
1	Advanced Mass Transfer
2	Advanced Fluid Mechanics
3	Advanced Transport Phenomena
4	Chemical Engineering Thermodynamics
5	Mathematical Methods in Chemical Engineering
M.E (Chemical Engineering) Semester-II	
1	Advanced Heat Transfer
2	Advanced Process Dynamics & Control
3	Chemical Reaction Engineering
4	Distillation
5	Process Modelling & Simulation
M.E (Chemical Engineering) Semester-III	
1	Open Electives <ul style="list-style-type: none"> • Analytical Techniques • Composite Materials • Optimization Techniques • Project Management • Research Methodology • Safety & Hazards
2	Elective
3	Preliminary Thesis
M.E (Chemical Engineering) Semester-IV	

1	<p>Thesis</p> <p>Note: The student is required to make a seminar presentation (s) of the results achieved before the submission of the thesis.</p>
	<ul style="list-style-type: none"> • The Post Graduate Student Research Committee (PGRC) of the Institute will evaluate the Thesis. The constitution of the committee is as under: <ul style="list-style-type: none"> ○ Chairperson of the institute ○ Senior professor of the institute ○ Supervisors ○ External examiner • The PGRC will evaluate the final thesis based on an open house presentation by the student, which will be attended by the faculty members, PG students, and other research scholars of the institute. • No marks are assigned to Preliminary Thesis and Thesis evaluation work. On successful completion and presentation of Research Seminars, the candidate will be awarded 'S' grade i.e. satisfactory, or else 'X' grade i.e., unsatisfactory. • The requirement for the award of an M.E in Chemical Engineering degree is 75 credits with a minimum CGPA of 6.0 and successful completion of thesis work.

M.E (Chemical Engineering) Colleges

- National Institute of Technology - NIT Raipur, Raipur
- Institute of Technology and Management, Gwalior
- Institute of Chemical Technology - ICT, Mumbai
- Indian Institute of Technology - IIT Kharagpur, Kharagpur

M.E (Chemical Engineering) Course Suitability

- They should possess strong technical ability and high motivation, excellent analytical, communication and teamwork skills, hardworking, good at organizing and solving problems are the most suitable for it.
- Students who are interested or desirous in Chemical Engineering and willing to go for teaching fields at higher degree level i.e., college and university level both in private and government institutions are most suitable for this course.
- Those who like working with tools, drawing sketches of complex things and operations, and conceptualizing forms and structures and have good computer skills.

How is M.E (Chemical Engineering) Course Beneficial?

- They can find service industries such as scientific research and development services, particularly in energy and the developing fields of biotechnology and nanotechnology.
- Chemical engineers are employed to solve environmental problems such as waste and water treatment, environmental regulations and recycling; in the energy sectors such as energy conservation and research on alternate energy sources and health-related research projects, defense establishments, and atomic power plants.

- It gives a good basis for higher degree programs in respective subjects, e.g. M.Phil. & Ph.D.

M.E (Chemical Engineering) Employment Areas

- Agriculture Sector
- Agricultural Engineering
- Biotechnology
- Bioinformatics
- Biomedical Engineering
- Chemical Engineering
- Environmental jobs
- Equipment Planning & Procurement Service
- Healthcare Recruitments Service
- Medicine and Pharmaceuticals
- Research and development
- Space Technology

M.E (Chemical Engineering) Job Types

- Biomedical Engineer
- Biological Data Observer
- Bioinformatics Researcher
- Chemical Lab Operator
- Equipment Engineer
- Health & Medicine Operator
- Protection Officer
- Procurement Manager
- Researcher