



*All India Council for Technical Education*

(A Statutory body under Ministry of HRD, Govt. of India)

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## **AICTE Guidelines for starting Integrated course in Engineering/Tech/Pharmacy/Architecture/HMCT/Management**

### **1.1 Objective:**

- To create technologists and engineers from all branches ready with management skills
- To ensure that the graduating students are 'industry ready' with managerial skills
- To inspire students to start and run own ventures in their basic field of study with good business skills & knowledge.

### **1.2 Degrees awarded:**

This course is five and half year course integrating management courses with undergraduate courses in Engineering/Tech/ Pharmacy/Architecture/HMCT with a six month internship leading to:

Bachelor's Degree	<ul style="list-style-type: none"> <li>in Engineering/Tech/Pharmacy/ HMCT after successful completion of 4 years (8 semesters) or</li> <li>in Architecture after successful completion of 5 years (10 semesters)</li> </ul>
Master of Management (in the respective discipline), MTM for Engineering/Technology, MPM for Pharmacy Management, MAM for Architecture Management, MHM for Hotel management	<p>on successful completion of,</p> <ul style="list-style-type: none"> <li>bachelor degree in Engineering/Tech/Pharmacy/Architecture/HMCT/;</li> <li>credits in management subjects in semester 3 to 8 for Engineering/Tech/Pharmacy/ /HMCT along with bachelor degree curriculum ; or</li> <li>credits in management subjects in semester 5 to 10 for Architecture along with bachelor degree curriculum ;</li> <li>credits at 9<sup>th</sup> and 10<sup>th</sup> semester for Engineering/Tech/Pharmacy/ /HMCT or</li> <li>credits at 11<sup>th</sup> &amp; 12<sup>th</sup> semester in Architecture and</li> <li>completion of 6 month internship in the respective discipline in 11<sup>th</sup> semester for Engineering/Tech/Pharmacy/HMCT or</li> <li>completion of 6 month internship in 13<sup>th</sup> semester for Architecture</li> </ul>

### 1.3 Duration:

- The course shall be of a total period of 5 ½ years including ten semesters of curriculum followed by one semester of industry internship for Engineering/Tech/ Pharmacy /HMCT or;
- of 6 ½ years including twelve semesters of curriculum followed by one semester of industry internship for Architecture.

### 1.4 Entry qualifications / Eligibility:

Entry level qualifications shall be same as prescribed for admission to bachelor degree courses in Engineering/Tech/ Pharmacy/Architecture/HMCT as specified in Approval Process Handbook 12-13.

### 1.5 Curriculum:

National Knowledge Commission has suggested that 180 credits be required for completion of an Undergraduate degree in Engineering. NKC also suggested the breakup of the credit requirement for the Bachelor's degree as follows:

<b>Category</b>	<b>% credits</b>		<b>Category</b>	<b>% credits</b>
Humanities & Social sciences	10		Basic engineering	10
Basic Sciences	12		Engineering skills	5
Mathematics	8		Professional lab	10
Minor including management	6		Professional core	30
Industrial training	1		Electives	5
Project	3			

Accordingly, most of the current syllabi of Undergraduate engineering include subjects on Communication, Project management, Environmental studies and Entrepreneurship etc. In addition credit requirement which is compulsory for the bachelor degree curriculum, students need to study six additional subjects (1/semester) of 24 credits during the third to eighth semester. These subjects may be based on,

- Communication skills
- Principles of management
- Financial accounting
- Engineering economics
- Project management
- Environmental studies
- Entrepreneurship
- Strategic management
- Business environment
- Creativity & innovation

These credits shall be necessarily completed simultaneously with bachelor degree curriculum.

Completion of these credits is essential for admission to fifth year for Engineering/Tech/ Pharmacy/HMCT And sixth year for Architecture

The subjects in the final year are indicated below:

Sem	Subject Title	Credits
IX for Engineering/Tech/ Pharmacy/HMCT and XI for Architecture	Organizational Behaviour	4
	Operations Management	4
	Financial Management	4
	Marketing Management	4
	Business law	4
	Specialization Elective I	4
X for Engineering/Tech/ Pharmacy/HMCT and XII for Architecture	Materials management	4
	Production management	4
	Logistics management	4
	International business	4
	Specialization Elective II	4

	Seminar	4
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Sample Specializations and associated Elective subjects are shown in following table:

International Business	IPR
	Export-import procedures
	International economics
Finance	International finance
	Corporate finance
	Taxation
Human resource management	Labour law
	Organizational dynamics
	Managing change
Manufacturing management	Technology management
	Supply chain management
	Inventory management
Infrastructure management	Project appraisal
	Advanced project management
	Facilities management
Project management	Risk & value management
	Team building & leadership
	Contract management

In the 11<sup>th</sup> semester (13<sup>th</sup> semester for Architecture) student shall undergo internship in the industry in respective discipline.

Evaluation of all these subjects shall be done as,

- Continuous assessment (40%) based on internal evaluation. Internal evaluation shall be based minimum two class tests/semester, class assignments, group discussions and semester attendance.
- End semester examination (60%)

Credit requirement for completion of course would be,

Semester	3	4	5	6	7	8	9	10	11	12	13
Credits for Courses other than Architecture	4*	4*	4*	4*	4*	4*	24	24	20	-	-
Credits for Architecture Courses	--	--	4*	4*	4*	4*	4*	4*	24	24	20

\*credits to be obtained from Semester 3 to 10 along with the Bachelor's degree curriculum.

### 1.6 Sanctioned Intake and admission

AICTE approved Institutes where at least one batch has passed out shall be eligible to apply for approval of this course. Approval shall be considered in existing programme only.

Institute can apply for only one division of 60 students. However, this intake shall be within the sanctioned intake for UG courses of 1<sup>st</sup> shift in the Institute and not an additional intake.

When approval of 60 is accorded for this integrated course, maximum of 60 students can be selected from total Sanctioned UG Intake (all UG courses in 1<sup>st</sup> shift) in the given programme. Hence, total intake of the Institute will not change in any case.

As additional subjects in management commence in 3<sup>rd</sup> semester of the course for Engineering/Tech/ Pharmacy/HMCT, the student selection for integrated course for academic year 2012-13 shall be done at the start of 3<sup>rd</sup> semester based on course wise merit of first year result of the respective discipline. However the division of 60 shall have equal number of students from each course like civil, Electrical, mechanical etc.

As additional subjects in management commence in 5<sup>th</sup> semester of the course for Architecture the student selection for integrated course for academic year 2012-13 shall be done at the start of 5<sup>th</sup> semester based on merit of second year result.

State/UT admissions authority shall monitor procedure related to this selection.

This selection shall be effected only on obtaining affiliation from the University.

### **1.7 Procedure for Grant of AICTE Approval**

Please refer to **Annexure-I**

### **1.8 Norms & Standards and other Requirements**

Please refer to **Annexure-II**

