STATUTE ME2

DEGREE OF BACHELOR OF ENGINEERING
(MATERIALS ENGINEERING)

General

1. The period of study for the degree of Bachelor of Engineering (Materials Engineering) is four academic years.

2. During the period of study for the degree of Bachelor of Engineering (Materials Engineering), a candidate for the degree must pursue such courses of study as may be prescribed by Regulations made by the Academic Board on the recommendation of the School of Materials Engineering.

3. Successful completion of the course leading to the degree of Bachelor of Engineering (Materials Engineering) requires a candidate to have -

   (a) obtained a total of not less than 132 academic units within the maximum period permitted;

   (b) passed in all the core subjects for the degree and fulfilled the requirements for the prescribed electives and the general electives as may be determined by the School of Materials Engineering; and

   (c) fulfilled such other requirements as may be prescribed by the Academic Board.

4. No candidate shall be permitted to take more than seven years or less than three and a half years to complete the prescribed course of study for the degree of Bachelor of Engineering (Materials Engineering). For candidates who, at the point of admission, are exempted from not less than ten First Year subjects, the maximum and minimum periods shall be five years and three years respectively.

5. The Academic Board may make Regulations prescribing the form and scope of examinations and the admission of candidates thereto. For this purpose, the Academic Board may, at its discretion, seek the views of the School of Materials Engineering.

6. The Academic Board may, on the recommendation of the School of Materials Engineering, grant such exemptions as it thinks fit from any of the requirements of this Statute.

REGULATIONS MADE UNDER STATUTE ME2

Subjects of Study

1. (1) The subjects of study leading to the degree of Bachelor of Engineering (Materials Engineering) are listed in regulation 2 of these Regulations.
(2) With the approval of the Dean of the School of Materials Engineering, a candidate may offer subjects from the list of subjects in his preceding or subsequent year of study.

(3) Each subject will be assigned a certain number of academic units as may be determined by the School of Materials Engineering.

(4) The distribution of subjects for each semester will be determined by the School of Materials Engineering.

2. The subjects of study in each of the four years are as follows:

   (1) For candidates admitted in academic years 1999-00 and 2000-01

   (a) **First Year**

   SM101 Mathematics I  
   SM102 Chemistry  
   SM103 Physics I  
   SM104 Physics II  
   SM105 Effective Communication: Principles & Methods  
   SM106 Materials Structure & Mechanical Behaviour  
   SM107 Thermodynamics & Phase Transformations  
   SM108 Mechanics of Solids  
   SM109 Basic Engineering  
   SM110 Electronic & Magnetic Properties of Materials  
   SM119 Experiments I *

   * Examined through continuous assessment. No written examination.

   Candidates who have not passed or are not exempted from the Qualifying English Test must offer the following additional subject of study:

   MK101 English Proficiency

   (b) **Second Year**

   SM201 Mathematics II  
   SM202 Analytical Techniques  
   SM203 Introduction to Manufacturing Processes  
   SM205 Engineering Materials: Metals & Ceramics  
   SM206 Corrosion & Non-Destructive Testing  
   SM207 Engineering Materials: Polymers & Composites  
   SM208 Fundamentals of Semiconductor Devices  
   SM219 Experiments II *

   * Examined through continuous assessment. No written examination.

   (c) **Third Year**
SM301  Material Aspects in Design*
SM302  Fundamentals of Microelectronics Processing
SM329  Industrial Attachment
SM133  Principles of Economics
SM135  Human Resource Management & Entrepreneurship
SM136  Quality Control

* Examined through continuous assessment. No written examination.

(d) **Final Year**

SM401  Advanced Materials Science I
SM402  Advanced Materials Science II
SM422  Project
SM144  Principles of Law

In addition to the core subjects listed above, candidates must offer five prescribed elective subjects in the Final Year from the following list:

SM431  Metal Casting
SM432  Welding Technology
SM441  Ceramic & Metal Powder Technology
SM442  Electronic Ceramics
SM451  Composite Materials
SM452  Polymer Technology
SM468  Microelectronics Packaging, Failure Analysis & Reliability
SM469  Microelectronics Process Integration
SM470  Materials & Processes for Liquid Crystal Display
SM471  Corrosion Engineering
SM472  Surface Engineering
SM473  Biomaterials
SM490  Special Topics

Not all prescribed electives are necessarily available in any one semester.

In addition to the core and prescribed electives, a student must offer a minimum of six academic units of general electives which can be chosen from the subjects offered by the School of Materials Engineering or by other Schools with the approval of the Dean.

(2) **For candidates admitted in the academic year 2001-02**

(a) **First Year**

G140  Engineers & Society
G143  Communication Skills
G160  Electric Circuits
G161  Electronics
G162  Statics
G163  Dynamics
G164  Mathematics 1A
G165  Mathematics 1B
G166  Engineering Physics
G167  Engineering Chemistry
G168  Computing
G169  Materials Science
G170  Engineering Graphics  
G171  Laboratory 1A*  
G172  Laboratory 2A*  

* Examined through continuous assessment. No written examination.

Candidates who have not passed or are not exempted from the Qualifying English Test must offer the following additional subject of study:

G149  English Proficiency

(b) **Second Year**

G240  Principles of Economics  
G243  Communication Skills  
G260  Electric Machines  
G261  Thermodynamics  
G262  Strength of Materials  
G263  Fluid Mechanics  
G267  Life Sciences  
G269  Engineering Materials  
G271  Laboratory 2A*  
MS266  Mathematics 2C  
MS272  Laboratory 2B*  
MS279  Engineering Innovation & Design*  
MS281  Electronic Materials & Devices  
MS284  Analytical Techniques  
MS286  Introduction to Manufacturing Processes  

* Examined through continuous assessment. No written examination.

(c) **Third and Fourth Years**

The curriculum is under preparation

**Examinations**

3. There shall be an examination towards the end of each semester. Candidates will be examined in each of the subjects they offer in the semester.

4. Subject to regulations 6 and 7 of these Regulations, there shall be one paper for each of the subjects of study offered as indicated in regulation 2 of these Regulations.

5. A student may proceed with the next stage of his course of study if he satisfies the requirements prescribed by the Academic Board.

**Laboratory classes**
6. During the course of study for the degree, students must attend laboratory classes and perform to the satisfaction of the Dean of the School of Materials Engineering or the Head of the Division concerned.

Assessment of course work

7. For the purpose of these Regulations, subjects of study such as Experiments, Material Aspects in Design, Project and Industrial Attachment may be assessed according to course work and assignments in lieu of an examination paper.