STATUTE ME1

DEGREE OF BACHELOR OF APPLIED SCIENCE
(MATERIALS ENGINEERING)

PART I
GENERAL

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

2. During the period of study for the degree, 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 Applied Science (Materials Engineering) requires a candidate to have –
   
   (a) obtained the following number of academic units within the maximum period permitted:
       
           Not less than 107 academic units.
       (ii) For candidates admitted in academic year 1998-99
            Not less than 108 academic units.
       
   (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 five years to complete the prescribed course of study for the degree of Bachelor of Applied Science.

PART II
HONOURS DEGREE IN MATERIALS ENGINEERING

5. (1) The period of study for the degree of Bachelor of Applied Science with Honours is one academic year.

   (2) For candidates pursuing the course leading to the degree of Bachelor
of Applied Science who are admitted to the Accelerated Honours Stream after the second year of the course the period of study is three semesters.

6. During the period of study for the degree of Bachelor of Applied Science with Honours, a candidate 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.

7. (1) A person who has fulfilled all requirements for the degree of Bachelor of Applied Science may, on the recommendation of the School of Materials Engineering, be admitted by the Academic Board as a candidate for the degree of Bachelor of Applied Science with Honours.

(2) A person who has completed the second year of the course leading to the degree of Bachelor of Applied Science and has fulfilled the conditions laid down by the School of Materials Engineering may, on the recommendation of the School, be admitted by the Academic Board to the Accelerated Honours Stream as a candidate for the degree of Bachelor of Applied Science with Honours.

8. (1) A candidate for the degree of Bachelor of Applied Science with Honours must have fulfilled the core and elective subject requirements and obtained the following number of academic units:

   (i) For candidates admitted in academic years 1996-97 and 1997-98
       Not less than 33 academic units.

   (ii) For candidates admitted in academic year 1998-99
       Not less than 41 academic units.

(2) For a candidate admitted under the provisions of clause 7(2) above the minimum number of academic units that he must obtain throughout the entire course of study is as follows:

   (i) For candidates admitted in academic years 1996-97 and 1997-98
       Not less than 140 academic units.

   (ii) For candidates admitted in academic year 1998-99
       Not less than 149 academic units.

9. The degree of Bachelor of Applied Science with Honours is awarded in the following classes:

   First Class Honours;
   Second Class Honours (Upper Division);
   Second Class Honours (Lower Division);
   Third Class Honours.
The Board of Examiners for the Examination for the degree of Bachelor of Applied Science with Honours in Materials Engineering will determine the class to which a successful candidate will be assigned.

10. No candidate shall be permitted to take any of the Honours Year subjects in the examination for the degree of Bachelor of Applied Science with Honours on more than two occasions.

PART III

11. The Academic Board may, on the recommendation of the School of Materials Engineering, make Regulations prescribing the form and scope of examinations and the admission of candidates thereto.

12. 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 ME1

PART I
B.A.Sc. DEGREE IN MATERIALS ENGINEERING

Subjects of Study

1. (1) The subjects of study leading to the degree of Bachelor of Applied Science are listed in regulation 2 of these Regulations.

(2) With the approval of the Dean of the School of Materials Engineering, a student 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 three years are as follows:


(a) **First Year**

   ME101   Physics
   ME102   Chemistry


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

CK101 English Proficiency

(b) Second Year

ME201 Mathematics II
ME202 Analytical Techniques
ME203 Introduction to Manufacturing Processes
ME205 Engineering Materials: Metals & Ceramics
ME207 Engineering Materials: Polymers & Composites
ME210 Experiments II
ME229 Industrial Attachment

(c) Final Year

Core Subjects

ME080 Financial Accounting
ME301 Heat Treatment
ME302 Casting & Joining
ME303 Corrosion & NDT
ME304 Material Aspects in Design
ME305 Quality Control
ME306 Industrial Management
ME321 Project

and two prescribed electives chosen from the following:

ME331 Ceramic & Metal Powder Technologies
ME332 Fundamentals of Microelectronics Processing
ME333 Polymer Technology
ME334 Fundamentals of Semiconductor Devices

Any subject from a list of SELECTED TOPICS approved by the School.

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

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
(2) For candidates admitted in the academic year 1998-99

(a) First Year

- ME102 Chemistry
- ME103 Mathematics I
- ME106 Material Structure & Mechanical Behaviour
- ME105 Effective Communication: Principles & Methods
- ME107 Thermodynamics & Phase Transformations
- ME108 Mechanics of Solids
- ME110 Electronic & Magnetic Properties of Materials
- ME111 Professional Communication: Strategies & Skills
- ME113 Basic Engineering
- ME114 Physics I
- ME115 Physics II
- ME119 Experiments I
- ME129 In-House Practical Training

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

- CK101 English Proficiency

(b) Second Year

- ME201 Mathematics II
- ME202 Analytical Techniques
- ME203 Introduction to Manufacturing Processes
- ME205 Engineering Materials: Metals & Ceramics
- ME207 Engineering Materials: Polymers & Composites
- ME210 Experiments II
- ME229 Industrial Attachment

(c) Final Year

Core Subjects

- ME133 Principles of Economics
- ME134 Engineers & Society
- ME135 Human Resource Management & Entrepreneurship
- ME136 Quality Control
- ME304 Material Aspects in Design
- ME322 Project

and five prescribed electives chosen from the following

- ME302P Casting & Joining
- ME303P Corrosion & Non-Destructive Testing
- ME331 Ceramic & Metal Powder Technologies
- ME332 Fundamentals of Microelectronics Processing
- ME333 Polymer Technology
ME334      Fundamentals of Semiconductor Devices
ME335      Heat Treatment of Metals
Any subject from a list of SELECTED TOPICS approved by the School.

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

In addition to the core and prescribed electives a student must offer a minimum of two academic units of general electives which can be chosen from subjects offered by the School or by other Schools approved by the Dean.

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 and workshop practice

6. During the course of study for the degree, students must attend laboratory classes and workshop practice and perform to the satisfaction of the Dean of the School of Materials Engineering.

Assessment of Course Work

7. For the purpose of these Regulations, subjects of study such as Design, Laboratory, Workshop, Project, In-House Practical Training, Industrial Attachment, Technical Essays and Industrial Seminars may be assessed according to course work and assignments in lieu of an examination paper.

PART II
HONOURS COURSE IN MATERIALS ENGINEERING

8. The degree of Bachelor of Applied Science with Honours comprises the following subjects of study:

(1) For candidates admitted in academic years 1996-97 and 1997-98

Core Subjects

ME401      Industrial Seminars & Technical Essays
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ME421 Project
ME410 Project (for Accelerated Honours)

and five prescribed electives chosen from the following:

ME431 Advanced Metal Casting
ME432 Advanced Welding Technology
ME433 Surface Engineering
ME442 Corrosion Engineering
ME443 Fracture Mechanics & Failure Analysis
ME452 Electronic Ceramics
ME454 Composite Materials
ME461 Microelectronics Packaging
ME462 Thick Film Technology
ME463 Microelectronics Technology
ME464 Failure Analysis & Reliability Study
ME465 Microlithography
ME466 Thin Film Processes

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

In addition to the core and prescribed electives a student must offer a minimum of three academic units of general electives which can be chosen from subjects offered by the School or by other Schools approved by the Dean.

A candidate may not offer in the Honours Year an elective subject that he has already taken in the course leading to the degree of Bachelor of Applied Science.

(2) For candidates admitted in the academic year 1998-99

Core Subjects

ME402 Technical Essays
ME422 Project
ME423 Project (for Accelerated Honours)
ME144 Principles of Law

and six prescribed electives chosen from the following:

ME431 Advanced Metal Casting
ME432 Advanced Welding Technology
ME433 Surface Engineering
ME442 Corrosion Engineering
ME443 Fracture Mechanics & Failure Analysis
ME452 Electronic Ceramics
ME454 Composite Materials
ME468 Microelectronics Packaging, Failure Analysis & Reliability
ME469 Microelectronics Process Integration
ME470 Materials & Processes for Liquid Crystal Display
ME473 Biomaterials

Not all prescribed electives are necessarily available in any one year.
In addition to the core and prescribed electives a student must offer a minimum of two academic units of general electives which can be chosen from subjects offered by the School or by other Schools approved by the Dean.

A candidate may not offer in the Honours Year an elective subject that he has already taken in the course leading to the degree of Bachelor of Applied Science.

End of Statute ME1