



# **Faculty of Engineering University of Moratuwa Sri Lanka**

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## ***Performance Criterion for the B.Sc. Engineering Honours Degree Programme***

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Latest approval 331<sup>st</sup> Senate on 13<sup>th</sup> June, 2007

Effective for '07 batch onwards

## Table of Contents

1. ADMISSION .....	1
Admission Requirements .....	1
Provision to Transfer from another University .....	1
2. ADMISSION TO FIELDS OF SPECIALIZATION .....	2
Category – Engineering, Earth Resources, Textile .....	2
Change of Field of Specialization .....	3
3. PROGRAM .....	3
Academic Calendar .....	3
Academic Advisors .....	3
Registration .....	3
Change to Registration for each Semester .....	4
4. COURSE STRUCTURE .....	5
Credits .....	5
Modules .....	5
Academic Load and Level of Study .....	5
Leave of Absence .....	6
5. EVALUATION OF PERFORMANCE .....	6
Grading System .....	7
Semester Grade Point Average .....	8
Unsatisfactory Standing and Academic Probation .....	8
Current Grade Point Average .....	8
Overall Grade Point Average .....	9
Non-GPA Modules .....	9
Award of Minors .....	9
Classes .....	9
Academic Concession .....	9
Dean's List .....	9
6. GRADUATION REQUIREMENTS .....	10
Minimum Residence Time .....	10
Credit Requirements .....	10
Maximum Period .....	10
Modules from Other Institutions .....	10
7. EFFECTIVE DATE OF AWARD.....	10
Date of Conferment of the Degree.....	11

# **1. ADMISSION**

## ***Admission Requirements***

The admission requirements to the B.Sc. Engineering Honours Degree Course are determined by the University Grants Commission in accordance with the government policy on university admissions.

Since enrollment in the Faculty of Engineering is limited, admissions will be on competitive placement. Presently, students are admitted to the Faculty under three categories:

- i. Engineering
- ii. Engineering (Earth Resources)
- iii. Engineering (Textiles)

Only full time students would be admitted to this program.

## ***Provisions to Transfer from another University***

The Faculty of Engineering may allow a student admitted by the University Grants Commission (UGC) to another engineering faculty in a National University in Sri Lanka, to transfer to the University of Moratuwa, when there are vacancies in a field of specialization. Such transfers will only be entertained after requests for transfers from students already in the Faculty have been considered. Further, such transfers require the approval of the Senate of the University of Moratuwa.

Only students with overall standing of a Semester GPA of 3.6 or more would be considered for transfer. When a student is allowed to transfer from another university, credits earned in that university may be transferred for course modules considered to be equivalent and in which grades of "C" or higher have been obtained by the student. In addition, transfer of credit for a course module will not be granted unless the student has obtained credit for the prerequisites for that course module specified by the University of Moratuwa. Credit will normally not be granted for course modules taken earlier than four years to the date of application for transfer.

When there are several students who want to enter a fewer number of vacant positions in a specialization, a criterion similar to the one adopted for the level 2 (second year) field selections may be followed considering their performance at the respective university.

For a transfer student to qualify for a degree, a transfer student must be registered in the Faculty of Engineering for a minimum time period of four (04) semesters.

## 2. ADMISSION TO FIELDS OF SPECIALIZATION

There are nine (09) fields of specialization in the B.Sc. Engineering program. Admission to each field is limited and is made from students admitted under each category. The present quotas for each of the respective fields under the three categories given below are indicated in the University of Moratuwa handbook.

- **Category -Engineering:**
  - Chemical & Process Engineering:
  - Civil Engineering:
  - Computer Science & Engineering:
  - Electrical Engineering:
  - Electronic & Telecommunications Engineering:
  - Materials Engineering:
  - Mechanical Engineering:
- **Category- Engineering (Earth Resources):**
- **Category – Engineering (Textiles):**

The selection of students to the fields of specialization under Category- (Engineering) will be made at the end of the Level 1 second semester. While a place in at least one of the fields under this category is assured for every student advancing to level 2 (second year), due to limited resources it is not always possible to accommodate every student's first choice of field. In situations where, the number of applicants for a field is more than the number of places available, such places would be allocated on the basis of the GPA of common core modules of the first and second semesters of level 1 of applicants until all places are filled. Further, in situations where there are a number of applicants with the same GPA but where the number of vacancies available for a particular field are less, then in such a case the performance for the subjects indicated against the respective fields as given below will become the basis of allocating the field in addition to the GPA.

Field of Specialization	Subjects
Chemical & Process Engineering	Process Engineering and Mathematics
Civil Engineering	Fluid Mechanics and Mechanics
Computer Science & Engineering	Computer Systems and Computer Applications
Electrical Engineering	Electrical Engineering and Computer Systems
Electronic Engineering	Electronic Engineering and Computer Systems
Materials Engineering	Engineering Materials and Computer Systems
Mechanical Engineering	Electronic Engineering and Computer Systems

Admission of students to the fields of specialization will be made at the time of registration to the Level 2 (second year) of studies.

Admission of students to specializations, Earth Resources Engineering and Textile & Clothing Technology will be on the basis of admission by the respective categories to the Faculty of Engineering made by the University Grants Commission.

### ***Change of Field of Specialization***

Transfer from an assigned field to another would only be permitted within two (2) weeks of registration for level 2. This would be permitted only in case when:

- i. a student chooses to transfer to a field wherein there is an unsought vacancy or
- ii. a student is offered a placement in the field of a preferred choice due to a vacancy arising therein.

## **3. PROGRAM**

### ***Academic Calendar***

The academic calendar and approximate time of year are given below:

Commencement of Academic Year 1<sup>st</sup> September

1<sup>st</sup> Semester – 20 weeks

2<sup>nd</sup> Semester - 20 weeks

June Term – 12 weeks

End of Academic Year – 31<sup>st</sup> August

### ***Academic Advisors***

After the selection of the field of specialization, each student will be assigned an Academic Advisor from among the members of the academic staff of the Faculty. Students are required to consult and obtain the consent of their respective Academic Advisor prior to applying for registration at the beginning of each semester or term. The students are also required to consult and obtain the Academic Advisor's consent prior to adding or dropping modules after registration; voluntary leave of absence from the course and change of academic load. A student may appeal to the Dean through the Head of respective department when not in agreement with the Academic Advisor.

### ***Registration***

At the commencement of each academic year, semester or term, students are required to complete a Registration Form and pay any fees as may be required by the university. Applicants are required to fill individual registration forms for each module that they wish to register for the semester or term. The Registration Form should be filled with the consent of the student's Academic Advisor with respect to the modules that a student is applying for registration.

In situations where, the number of applicants for an elective module is more than the number of places available, such places would be allocated on the basis of the Current Grade Point Average of the applicants or any other suitable criteria approved by the Faculty and the field of specialization of the applicants until all places are filled. In case when registration for a module is not possible, a student will be permitted to request alternative modules.

In situations where a core module is repeated in both semesters of the same level, the respective department offering the module would allocate applicants for each semester.

All students are responsible for the completeness and accuracy of their Registration Forms and submission prior to the set deadlines. It is also the responsibility of students to arrange and select the modules as may be required to satisfy graduation requirements and the award of a minor field of specialization that they may seek.

### ***Changes to Registration for each Semester***

A student who wishes to de-register from a module should do so in writing within two (02) weeks (Add/Drop period) of the commencement of that semester or term. Discontinuing a module after this deadline will not be allowed and will be considered as an attempt, even if the student does not face any assessments and/or examinations in that module. However, de-registration of core modules will be allowed only under special circumstances and should be approved by the Senate on the recommendation of the Head of the Department and the Dean Faculty of Engineering.

A student, who wishes to take an additional course or a replacement for a de-registered course, may do so within two weeks of the commencement of the semester. In either case, the consent of the Academic Advisor would be required for all students in Level 2 and above. In the case of a late registration, permission from the lecturer in charge of the module would also be necessary.

Under the following conditions, a student can request to withdraw from a course module after the add/drop period specified above:

- (a) The relevant Academic adviser and the Head of the Department should recommend the request;
- (b) Requests for withdrawal will not be entertained for compulsory modules and modules for which registration was done on competitive basis;
- (c) Dropped modules will appear in the transcript as “Withdrawn” modules;
- (d) Request should be made before the last day of classes of the relevant Semester;
- (e) Module(s) cannot be added in place of the dropped module; and
- (f) If a student later decides to register for a withdrawn module, he/she will be considered as a repeat candidate with an F grade for that module.

However, such requests for withdrawal should be approved by the Senate on the recommendation of the Head of the Department and the Dean Faculty of Engineering.

## 4. COURSE STRUCTURE

The program of study leading to the award of the B.Sc. Engineering Honours Degree consists of:

- i. a common core extending over the first year, comprising of two semesters and a term,
- ii. a specialization course extending over the next six semesters and three terms, including a period for industrial placement and
- iii. any other work; camp or training course modules or projects that may be specified for a given field of specialization.

### ***Credits***

Each module is assigned a credit value representing the student's workload. For a typical module extending over one semester, one credit is given for each hour of academic lectures per week or three hours of tutorials/laboratory/field work or design work per week. The industrial placement is of 24 weeks duration and will be assigned credits (06), while design projects and other specified course works and camps have been assigned credit hours commensurate with the respective workloads.

The modules offered in a given semester or term and the number of credits assigned to each module will be determined by the Faculty and students will be duly informed ahead of the commencement of that semester or term.

### ***Modules***

#### **Core Modules**

The First Year program totals 30 credits, and is made up of 17 modules to be taken over two semesters followed by a term. This information is available in the Student Hand Book.

#### **Specialization Modules**

The fields of specialization also have compulsory subjects and optional or elective subjects. These subjects are normally intended to be taken over six (06) semesters and three (03) terms. Some of the subjects have pre-requisites that should be completed prior to registering for it.

### ***Academic Load and Level of Study***

The academic load of a student in a semester differs depending on the department to which the student belongs, but in general this could vary between 10 to 30 credits. Students are required to register for course modules to satisfy normal academic load specified by the respective department in any semester. A student with the consent of the relevant Academic Adviser may be permitted to take a maximum of six credits above or below the normal semester academic load. The additional modules may include previously taken modules repeated for purposes of passing or upgrade of final grade.

The academic progress of a student may determined by the total number of credits a student has earned by the end of preceding semester or term as given below:

Total Credits	Level
	Level 1
Over 30	Level 2
Over 70	Level 3
Over 110	Level 4

### ***Leave of Absence***

A student may be allowed to submit a leave of absence from the course for a maximum duration of twelve months, by submitting an application to the Senate on the recommendations received from the student's Academic Advisor and the Faculty.

## **5. EVALUATION OF PERFORMANCE**

The performance of each student in each module will be evaluated by continuous assessment and an end-of-semester examination. The Senate on the recommendation of the Faculty of Engineering will approve the examiner/(s) and assign a moderator for each module conducted in a semester. The continuous assessment component in a module normally carries a weightage not less than 30% (20% in Level 1) and not more than 60% of the total marks, except in training placement, camps, research projects and other similar modules.

The continuous assessment of a student may be based on a specified combination including laboratory work, tutorials, quizzes, presentations, mid term examinations, term papers and assignments. Weightage of each of the above components used in the determination of the final grade for each course module should be clearly conveyed in writing to the students by the examiner at the commencement of each module along with the outline of the course module.

All Candidates should obtain at least 40% of the Continuous Assessment marks at all Levels to qualify to sit the End of Semester Examination.

A minimum requirement of 20% should be obtained from the written component of the end of Semester Examination in order to obtain a Grade of D or above for a course module.

A Repeat Candidate who has an "I" Grade will be given a Grade based on the marks obtained at the End of Semester Examination given out of 100, subject to a maximum of a "C" Grade, irrespective of the Continuous Assessment marks obtained previously.



The students who obtain F grade should re-do the continuous assessment component and pass it in order to upgrade that result to an I grade before giving the final grade based only on the results of the end of the semester examination.

The highest grade obtainable at a repeat attempt is the grade C except when an Academic Concession has been granted.

A Board of Examiners, appointed by the Council, comprising examiners and moderators of all the modules relevant to a particular level of course and/or a field of specialization, will meet at the end of each semester to decide on the performance and the academic standing of each student registered for that level of course or program of specialization.

### **Grading System**

Letter grades based on the Grade point system and corresponding description, as illustrated in the Table below will be used to express the performance at each module.

<b>Grade</b>	<b>Grade Point</b>	<b>Description</b>
A <sup>+</sup>	4.2	
A	4.0	Excellent
A <sup>-</sup>	3.7	
B <sup>+</sup>	3.3	
B	3.0	Good
B <sup>-</sup>	2.7	
C <sup>+</sup>	2.3	
C	2.0	Pass
C <sup>-</sup>	1.5	Weak Pass
D	1.0	Conditional Pass <sup>(a)</sup>
I	0.0	Incomplete <sup>(b)</sup>
F	0.0	Fail <sup>(c)</sup>
P	---	Pass
N	---	Academic Concession <sup>(d)</sup>
W	---	Withdrawn <sup>(e)</sup>

*(a) Grade **D** or above is required to earn credit for a module.*

*(b) A student satisfying continuous assessment requirements and failing the end-of-semester examination receives an incomplete grade **I**. By repeating only the end-of-semester examination, the grades **I**, **D** or **C<sup>-</sup>** can be improved up to a **C** grade and considered for calculating Semester Grade Point Average.*

*(c) A student receiving an **F** grade must repeat both the continuous assessment and the end-of-semester components. The maximum grade awarded for repeating a course module will be a **C** and it will be used for calculating Semester Grade Point Average.*

*(d) Grade **N** signifies Academic Concession granted with the approval of the Faculty, in the event a student is unable to sit for the end-of-semester examination due to illness or other compelling reason. In such instances the student must notify the registrar within 48 hours of the cause. Further, the student should make an appeal with supporting documents to the Dean for an Academic concession within one week from the date of the examination. The continuous assessment component can be carried*

*forward to the next examination as the first attempt. The grade is not counted in the calculation of the Semester Grade Point Average.*

- (e) *Grade **W** indicates a module withdrawn by the student with the approval of the Faculty and the Senate. Please refer to the section on Changes to Registration for each Semester for the terms and conditions applicable in granting a grade **W**. The grade is not counted in the calculation of the Semester Grade Point Average. If a student later decides to register for a withdrawn module, he/she will be considered as a repeat candidate with an **F** grade for that module.*

Only the grade achieved for each module will be entered on the student's permanent record. The grade at the first attempt or the improved grade earned at a subsequent attempt, if any, will be recorded.

### **Semester Grade Point Average**

The calculation of the Semester Grade Point Average (SGPA) will be based on the summation of Grade Points earned for all modules registered for credit (except those awarded with academic concession or withdrawn) in a semester weighted according to number of credits (see the formula below). The Grade Point Average is rounded to the nearest second decimal place. The Semester Grade Point Average is reported on transcripts and Statement of Results that may be issued for each semester.

$$SGPA = \frac{\sum n_i \times g_i}{\sum n_i}$$

Where  $n_i$  is the number of credits for the  $i^{\text{th}}$  module in a given semester and  $g_i$  is the grade points earned for that module.

### **Unsatisfactory Standing and Academic Probation**

If the student's Semester Grade Point Average falls between 1.99 and 1.50 the student will be placed on Academic Warning. Any student with a Semester Grade Point Average less than 1.50 will be placed on Academic Probation. Academic Probation and/or Academic Warning may be withdrawn when the relevant Semester Grade Point Average is upgraded to 2.00 or more. A student on Academic Warning or Academic Probation will not be allowed to carry any additional academic load. A student who falls into one of the following categories due to failure to upgrade the Semester Grade Point Average (SGPA) will not be permitted to register for a new module until the SGPA improves as required.

- i.  $SGPA < 1.50$  in any two semesters
- ii.  $SGPA < 1.50$  in any semester and  $1.50 \leq SGPA < 2.00$  in any two semesters.
- iii.  $1.50 \leq SGPA < 2.00$  in any four semesters.

### **Current Grade Point Average**

The Current Grade Point Average (CGPA) describes a student's current standing in terms of all modules registered for credits up to given point of time weighted according to the grades assigned to each module and the level of the module. The weight for each level will be uniform except for Level 1 where it will be considered as equivalent to two third ( $2/3^{\text{rd}}$ ) of the weight for other levels.

## **Overall Grade Point Average**

The Overall Grade Point Average (OGPA) is final standing of the student calculated on the basis of CGPA.

## **Non-GPA Modules**

The requirement for graduation is 150 credits. Of this requirement, 15 credits should be earned through modules that are designated as Non-GPA modules. The grades earned at these modules will not be taken for the purpose of calculating the Semester GPA, Overall GPA or in the award of Classes.

## **Award of Minors**

In some programs of specialization, the Faculty will specify a group of subjects, the successful completion of which will make them eligible to be awarded a minor within that field of specialization.

## **Classes**

Awarding of Classes are determined at the completion of all the graduation requirements within five academic years. Overall Grade Point Average as indicated below will be used for awarding of Classes.

<b>Overall GPA</b>	<b>Academic Standing</b>
3.70 - or Above	First Class
3.30 - 3.69	Second Class -Upper Division
2.70 - 3.29	Second Class -Lower Division
2.00 – 2.69	Pass

Under exceptional circumstances, a student who satisfies the overall GPA but takes longer than five academic years to complete the course requirements may be deemed to be eligible for the award of a B.Sc. Engineering Honours Degree with a class by the Senate on the recommendation of the Faculty.

## **Academic Concession**

A student who has missed an end-of-semester examination because of illness or other compelling reason may appeal with supporting documents to the Dean for an Academic Concession within one week from the date of an examination.

## **Dean's List**

Full time undergraduate student who achieve a semester grade point average of 3.80 or better, have completed at least the minimum number of Credits on a letter graded basis during the semester considered, have no "Incomplete" grade or Failures, and have no disciplinary action against them will be recommended by the Board of Examiners to be included in the Dean's List and such a placement will also be noted on the student's transcript.

## **6. GRADUATION REQUIREMENTS**

### ***Minimum Residence Time***

A student enrolled for the B.Sc. Engineering Honours Degree has to follow a course of study as a full time student for a period extending over a minimum period of four academic years. In the case of transfer students this would be two years.

### ***Credit Requirements***

A student should satisfy the following requirements in order to be admitted to the B.Sc. Engineering Honours Degree.

1. A minimum total of 150 credits including GPA and non-GPA credits from among the modules specified for that field of specialization.
2. Completion of development courses and any other mandatory requirements prescribed by the Faculty.
3. A minimum Overall Grade Point Average (OGPA) of 2.00.

### ***Maximum Period***

A student will not qualify for the award of the B.Sc. Engineering Honors degree if the graduation requirements given above are not satisfied within eight academic years from the date of first registration, except when the student has obtained the consent of the Senate on the recommendation of the Faculty.

### **Modules from Other Institutions**

Normally students are expected to complete their programs through modules taken at the University of Moratuwa. Students who wish to take a module elsewhere should obtain written permission from the Faculty of Engineering before registering for the course, to ensure that it is acceptable for credit.

In such instances, it is the responsibility of the student to ensure that an official transcript of grades is forwarded directly to the Senior Assistant Registrar (Academic) of the University of Moratuwa in order that the appropriate grade to be recorded. To receive credit, normally, a minimum grade of **C** must be obtained for a module.

## **7 (a) Effective date of award**

The first day of the month following the satisfactory completion of the graduation requirements as confirmed by the Senate specified in the Section 6.

**(b) Date of Conferment of the Degree**

The date of conferment of the degree shall be the date of the convocation on which the degree is conferred on the candidate.

The Council noted that the following sentence, which was proposed to be included under (b) above, should not be a part of the regulation but could be an explanatory note.

“This will usually be the date of the Convocation immediately following the date of award of the Degree”