

**UNIVERSITY OF MUMBAI**  
No. UG/141 of 2015-16

**CIRCULAR:-**

A reference is invited to the Ordinances and Regulations relating to the Master of Engineering (M.E) degree course vide this office Circular No.UG/88 of 2012-13, dated 8<sup>th</sup> November, 2012 and the Principals of affiliated Colleges in Engineering are hereby informed that the recommendation made by the Faculty of Technology at its meeting held on 26<sup>th</sup> August, 2015 has been accepted by the Academic Council at its meeting held on 31<sup>st</sup> August, 2015 vide item No. 2.2 and that in accordance therewith in exercise of the powers conferred upon Management Council under Section 54 (1) of the Maharashtra Universities Act, 1994, the Ordinance 6264, 6265, 6266, 6267, 6268, 6269, 6270, 6271, 6272, 6273, 6274, 6275, 6276, 6277, 6278, 6279, 6280, 6281, 6282, 6283, 6284, 6285, 6286, 6287, 6288, 6289, 6290, 6291, 6292 relating to the Credit Based Semester and Grading System of M.E. Program are amended, which is available on the University's web site ([www.mu.ac.in](http://www.mu.ac.in)) and which is come into force with immediate effect.

Sd/-  
REGISTRAR

MUMBAI - 400 032  
9<sup>th</sup> February, 2016

To,  
The Principals of affiliated Colleges in Engineering.

A.C/ 2.2/31/08/2015.

M.C. 112/31/08/2015.

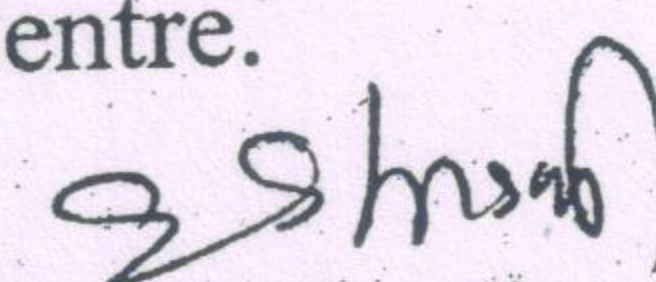
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No. UG/141-A of 2016

MUMBAI-400 032 9<sup>th</sup> February, 2016

Copy forwarded with compliments for information to:-

1. The Dean, Faculty of Technology,
2. The Chairmen/Chairpersons of various Board of the Studies in Engineering and Technology.
3. The Director, Board of College and University Development,
4. The Controller of Examinations,
5. The Co-Ordinator, University Computerization Centre.

  
Deputy Registrar  
Under Graduate Studies



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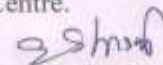
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**Ordinances and Regulations of Master of Engineering (M. E.)**

**Degree with Credit Based Grading System applicable for Rev –**

**2012 scheme applicable from A. Y. 2012-13**

The revised curriculum and credit and grading system is implemented for Master of Engineering programme in the University of Mumbai from the academic year 2012-2013. In view of this it is essential to modify and amend the regulations applicable to Master of Engineering programme and these are as given below;

**O.6264:-** The M. E. degree Examination shall consist of End semester examination, Internal Assessment, Practical and/or Oral examination, seminar, dissertation and viva-voce. The entire programme shall be grouped in four semesters.

**O.6265:-** A learner for the M. E. degree may appear for Semester I examination after filling in at least one semester, semester II examination after filling in at least two semesters, semester III examination after filling in at least three semesters and semester IV examination after filling in at least four semesters after registration.

**O.6266:-** A learner must obtain a minimum of 45 % of the full marks assigned to pass in the individual courses of semester I to III examinations. The minimum of 45 % of the full marks assigned must be obtained in the Internal Assessment, End semester examination, Practical and/or Oral examination, Seminar, Dissertation and viva voce separately in each course as applicable to pass.

A learner also pass in individual courses even if s/he fails in Internal Assessment but secure more than 50 % in total (Internal Assessment + End Semester Examination) in that course. A learner should pass independently in end semester examination by securing minimum 45% marks.

A learner who fails to obtain 45 percent marks in internal assessment and 50 percent marks in total (Internal Assessment + End semester examination) shall reappear for the Internal Assessment again.

Or

A learner who fails to obtain 45 percent marks for seminar, dissertation and viva voce shall improve and resubmit the dissertation or submit another dissertation in subsequent semester.

**O.6267:-** The scheme of instructions and examinations and the syllabi for the programme leading to M.E. degree in different programs of Engineering shall be as approved by the University of Mumbai.

**O.6268:-** A learner who fails in an examination, but secures a minimum of 45% of the marks assigned to the Internal Assessment, End semester examination, practical and/or oral examination in a course will be exempted from reappearing in the Internal Assessment, End semester examination, practical and/or oral examination in that course. The marks secured by such a learner in the Internal Assessment, End semester examination, practical and/or oral examination will be carried forward to the subsequent examination at which s/he reappears.

**O.6269:-** A learner who has not passed in semester I and II examination in all respect shall be also allowed to keep the term in semester III.

**O.6270:-** No learner shall be allowed to appear for the Dissertation and viva voce examination unless s/he has satisfactorily kept the terms for the semester I, II and III and passed fully in semester I, II and III examinations.

**O.6271:-** Credit (C) for a course is dependent on the number of hours of instruction per week in that course, and is obtained by using a multiplier of one (1) for lecture and tutorial hours, and a multiplier of half (1/2) for laboratory hours.

**O.6272:-** Seminar is a course wherein under the guidance of a faculty member a learner is expected to do an in-depth study in a specialized area by doing survey of published technical literature, understanding different aspects of the problem. While doing this, the learner is expected to critically analyze works of various authors/researchers, learn the investigation methodologies, study concepts, techniques and the results presented in these papers, and present a seminar. It is mandatory to give a seminar presentation before a panel constituted for the purpose as mentioned in scheme of instructions and examinations of respective programme. Seminars typically carry 3 credits.

**O.6273:-** A Dissertation is a mandatory requirement for the Master of Engineering Programmes. The Dissertation consists of two stages, spread over one year duration, normally starting from the third semester (Dissertation-I) and ending with the fourth semester (Dissertation-II). These are essentially research and development projects, where a learner trains him/herself, under the guidance of supervisor/s, in in-depth analysis of an engineering problem and attempts synthesis of a solution. It includes literature survey, problem analysis and problem definition, extensive experimental/modeling work, and analysis of results typically form various components of the Dissertation work. Dissertation -I and Dissertation-II carries 12 and 15 credits respectively.

**O.6274:-** The minimum credit required for award of a Master of Engineering(M.E.) programme is 70.

**O.6275:-** Rating of learners' performance in a theory course should be done by using various modes of assessment, which mainly include Internal Assessment and End Semester Examination. Relative weight age for Internal Assessment is typically 20 per cent. This will consist of two test out of which one is compulsory class test and another is either a class test or assignment on live problems or course project in a group/individually. The relative weightage for end semester examination is 80 per cent and will be held as per the university schedule. The end semester examination is mandatory.

**O.6276:-** Rating of learners' performance in a laboratory course will be based on regular supervision of the learner's work, her/his performance in viva-voce examinations, the quality of their work as prescribed through laboratory journals and an end semester test that contains performing an experiment if practical examination is mentioned. It is obligatory to

maintain a laboratory journal as prescribed by the course instructor. Final submission/examination for laboratory courses will normally be held before the end semester examination (final theory examinations).

**O.6277:-** A learners' performance rating in seminar course should be based on a written report, and an oral presentation before a panel of examiners appointed by the University. The supervisor and/or co-supervisor, when involved, are part of the panel.

**O.6278:-** A learners' performance rating in courses such as Dissertation-I and Dissertation-II should be based on continuous assessment. Learner's work in these courses should be supervised or guided, and need regular interaction (at least once a week) with the supervisor/guide. For evaluation of Dissertation-I, a learner has to submit the required number of copies of typed report to the respective department of affiliated Institute/ College as per the University academic calendar. Evaluation will be done, by a panel of examiners appointed by the head of Department / Institute, based on the report and presentation. The criteria of evaluation of Dissertation –I are given in the curriculum manual. The panel shall consist of the supervisor(s) and at least one or two more faculty member, to act as internal examiners.

**O.6279:-** For evaluation of Dissertation-II, a learner has to submit required number of hard bound typed Dissertation reports to the University. The evaluation will be done by a pair of examiners based on the report and a viva-voce as per the criteria given in the curriculum manual. The Pair of Examiners for the assessment of Dissertation-II will be appointed by the University. The supervisor/guide will act as Internal examiner and External examiner should be appointed either from other universities or from reputed industries, research organization such as BARC, TIFR, IIT'S, with minimum qualification as M.E./M.Tech in relevant branch of engineering.

**O.6280:-** A learner is awarded a letter grade in every course, based on the combined performance in all assessments in a particular semester as per scheme of instructions and examinations of the respective programme. These letter grades not only indicate a qualitative assessment of the learner's performance but also carry a quantitative (numeric) equivalent called the Grade Point. The letter grades and their equivalent grade point applicable for Master of Engineering programme are as below:

Percentage of Marks Obtained	Letter Grade	Grade Points	Performance
80.00 and above	O	10	Outstanding
75.00 – 79.99	A	9	Excellent
70.00 – 74.99	B	8	Very Good
60.00 – 69.99	C	7	Good
55.00 – 59.99	D	6	Fair
50.00 – 54.99	E	5	Average
45.00 – 49.99	P	4	Pass
Less than 45.00	F	0	Fail

**O.6281:-** A learner who remains absent in any form of evaluation/examination, letter grade allocated to him/her should be AB and corresponding grade point is zero. S/he should reappear for the said evaluation/examination in due course.

**O.6282:-** The grade for theory courses can be awarded only after successfully completion of both Internal Assessment and End Semester Examination of the respective course as per scheme of instructions and examinations of the respective programme.

**O.6283:-** The grade for laboratory courses can be awarded only after successfully completion of Term Work, Practical and/or Oral examination as per scheme of instructions and examinations of the respective programme.

**O.6284:-** The grade for Seminar can be awarded only after successfully completion of Term Work and Oral Presentation as per the curriculum manual of the respective programme. The evaluation of the seminars is completed before the commencement of the end semester examination.

**O.6285:-** The grade for Dissertation can be awarded only after successfully completion of Term Work and Oral Presentation as per the curriculum manual of the respective programme.

**O.6286:-** The performance of a learner in a semester is indicated by a number called Semester Grade Performance Index (SGPI). The SGPI is the weighted average of the grade points obtained in all the courses by the learner during the semester. For example, if a learner passes five courses (Theory/labs./Projects/ Seminar etc.) in a semester with credits C1, C2, C3, C4 and C5 and learners grade points in these courses are G1, G2, G3, G4 and G5 respectively, then learners' SGPI is equal to:

The SGPI is calculated to two decimal places. The SGPI for any semester will take into consideration the "F or AB" grade awarded in that semester. For example if a learner has failed in course 4, the SGPI will then be computed as:

**O.6287:-** A learner's up to date assessment of the overall performance from the time s/he entered the University of Mumbai is obtained by calculating a number called the Cumulative Grade

Performance Index (CGPI), in a manner similar to the calculation of SGPI. The CGPI therefore considers all the courses mentioned in the scheme of instructions and examinations, towards the minimum requirement of the degree learner have enrolled for. The CGPI is calculated at the end of every semester up to two decimal places and is indicated in semester grade report cards.

**O.6288:-** The CGPI will reflect the failed status in case of F grade(s), till the course(s) is/are passed. When the course(s) is/are passed by obtaining a pass grade on subsequent examination(s) the CGPI will only reflect the new grade and not the fail grades earned earlier.

**O.6289:-** Even if a learner has failed in a course more than once, the course will figure only once in the numerator as well as the denominator. At the end of semester  $r+1$ s/he has appeared for examination for  $k$  number of courses including the backlog course and has cleared all the courses including the backlog course, the CGPI at the end of this semester is calculated as,

**O.6290:-** There will also be a final CGPI calculated which considers all the credits earned by the learner specified for a particular programme.

**O.6291:-** Learners who have passed the Master of Engineering degree examination of the university and who wish to improve their CGPI be permitted to appear again for the same examination with the same courses (all courses of semester I together, all courses of semesters II together) without being required to keep any term again. This provision shall be applicable subsequent to the first passing of the degree examination for not more than three consecutive examinations conducted

by the University. Marks obtained by the candidate in term-work, internal assessment, practical and/or oral examination, seminar and dissertation of semester I to semester IV shall be carried forward for not more than three consecutive examinations.

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Learners who have passed the Master of Engineering degree examination of the university and wish to improve CGPI at any point of time be permitted to appear again for the existing examination with the available courses at that point of time. The learner may appear Semester I and II together or separately but all courses of semester I together and all courses of semester II together without being required to keep any term again. Marks obtained by the candidate in term-work, internal assessment, practical and/or oral examination, seminar and project of semester I to semester IV whichever applicable shall be carried forward.