TID 8103: Project Work

Hours per semester				Weighted Total Mark	Weighted Exam Mark	Weighted Continuous Assessment Mark	Credit Units
LH	**PT**	**TH**	**CH**	**WTM**	**WEM**	**WCM**	**CU**
0	0	0	150	100	60	40	10

Short Description

This course provides students with the opportunity to build upon the knowledge and skills he/she has acquired during the basic and advanced course in an industrial setting. The project work is conducted in collaboration with companies and industry.

Course Objectives:

The objective of the course is to further collaboration between the university and industry and in so doing enable the application of the principles and practices of innovation and entrepreneurship to industry.

Learning Outcomes:

By the end of this course the student should be able to;

- Identify different opportunities to apply theoretical knowledge and principles to a given problem faced by industry
- Carry out an analysis of problems faced by industry or group of industries using well-known techniques
- Propose and analyze the impact of different solutions to problems faced by industry
- Produce a detailed report of the project work

Methods of Course Delivery:

The project work will carried out in groups of three to five students. Students will be expected to assemble into a group which has to be approved by the course coordinator. The project must be connected to the student's specialization and must of direct interest to an industry or group of industries.

The steps to be followed in the conduct of project work will in general take the following form:

- Step 1:Proposals of projects are prepared by the course academic staff in consultation with industry
- Step 2: Students assemble into groups and select a project from the list of provided projects
- Step 3: Projects are assigned to students by the course coordinator
- Step 4: Students undertake the project under the supervision of academic staff

- Step 5: Students prepare a report and a PowerPoint presentation of their findings

Method of assessment

The students' work will be assessed on the basis of the innovativeness of the proposals made in respect of the industry that is interested in the project. The project report will be assessed as follows: Internal Examiner 40%, External Examiner 60%.

Basic reading list/references

This will depend on the topic of the chosen research project.

13. PROGRAMME REGULATIONS

General Regulations

The general Master's degree regulations of Makerere University shall apply.

Course Assessment

The courses offered in the programme will be assessed on a course by course basis and will comprise coursework and project assignments, tests and examinations. The details are specified for each course in Section 11.

Grading of Courses

Each course shall be graded out of a maximum of 100 marks and assigned appropriate letter grades and grade points as follows:

Table 14: Course Grading

Marks%	Letter Grade	Grade points	Interpretation
90-100	A+	5.0	Exceptional
80-89	A	5.0	Excellent
75-79	B+	4.5	Very good
70-74	B	4.0	Good
65-69	C+	3.5	Fairy good
60-64	C	3.0	Pass
55-59	D+	2.5	Marginal pass
50-54	D	2.0	Clear fail
45-49	E	1.5	Bad fail

40-45	E-	1.0	Qualified fail
Below 40	F	0	Qualified fail

CALCULATION OF THE CUMULATIVE GRADE POINT AVERAGE (CGPA)

The Cumulative Grade Point Average at a given time shall be obtained by:

$$CGPA = \frac{\sum_{i=1}^{n}(GP_i * CU_i)}{\sum_{i=1}^{n} CU_i}$$

where , GP_i is the Grade Point score of a particular course *i*;
CU_i is the number of Credit Units of course *i*;
and *n* is the number of courses so far done.

i) Multiplying the grade point obtained in each Course by the Credit Units assigned to the Course to arrive at the Weighted Score for the Course.
ii) Adding together the Weighted Scores for all the Courses taken up to that time.
iii) Dividing the Total Weighted Score by the total number of Credit Units taken up to that time.

13.1 Retaking a course or courses

i) A student shall retake a Course or Courses when next offered again in order to obtain at least the Pass Mark (60%) if he/she had failed during the First Assessment in the Course or Courses.
ii) A student who has failed to obtain at least the Pass Mark (60%) during the Second Assessment in the same Course or Courses he/she has retaken shall receive a warning.
iii) A student may retake a Course or Courses when next offered again in order to improve his/her Pass Grade(s) if the Pass Grade(s) got at the first Assessment in the Course or Courses were low. A student who fails to attain higher marks after retaking to improve, the examination results of the first sitting are recorded on the transcript and should not be recorded as Retake.
iv) Where students miss to sit examinations for justified reasons; they should not be recorded as those who retake when they sit the examinations when next offered.

While retaking a Course or Courses, a student shall: -

a. Attend all the prescribed lectures/ tutorials/ Practical's/Fieldwork in the Course or Courses;
b. Satisfy all the requirements for the Coursework Component in the Course or Courses; and
c. Sit for the University Examinations in the Course or Courses.
d. A student shall not be allowed to accumulate more than five (5) Retake Courses at a time. Students are required to register for retake course(s) first before registering for new courses offered in that semester and the retake courses should fit into the approved normal load so as to avoid timetable clashes.

e. A final year student whose final Examination Results has already been approved by the School Board and has qualified for the Award of a Degree in M.Sc. Mech Eng, shall not be permitted to retake any Course or Courses.
f. When a student has retaken a course the better of the two Grades he/she has obtained in that course shall be used in the computation of his/her cumulative Grade Average (CGPA).
g. Whenever a Course or Courses has/have been retaken, the Academic Transcript shall indicate so, accordingly.
h. Students who have a course(s) to retake and these Course(s) fall beyond the set normal semester load for their Academic Programmes shall pay tuition fees for any Course/Courses to be retaken. Besides, such students also pay the re-examination fees per Course retaken as well as the Registration Fees.

13.2 Progression

Normal Progress

Normal Progress shall occur when a student has passed the Assessments in all the Courses he/she had registered for in a particular Semester and not when he/she has passed the Assessments in the Core Courses only.

Probationary Progress

A student who has obtained the Cumulative Grade Point Average (CGPA) of less than 3.0 shall be placed on Probation. Such a student shall be allowed to progress to the next Semester/Academic Year but shall still retake the Course(s) he/she had failed later on and obtain at least the Pass Mark (60%).

13.3 Certificate of due performance

(i) A student who fails to honour the deadline set for handing in an assignment without justifiable reasons shall receive a score of a zero or fail grade in that assignment.
(ii) A student who does not have coursework marks shall be denied the Certificate of Due Performance and will not be allowed to sit the University Examinations.

Conceded Pass

A "Conceded Pass" will be granted for a course in which a final year candidate is within five marks of a pass mark in the course assessment. The pass is conceded on the basis that the student's overall performance in other courses for the programme has been sufficiently strong to counter the deficient percentage in that particular course.

The circumstances warranting a conceded pass shall avail as stipulated in the graduate training and research handbook 2009.

13.4 Discontinuation

When a student accumulates three consecutive probations based on CGPA he/she shall be discontinued.

i) A student who has failed to obtain at least the Pass Mark (60%) during the Third Assessment in the same Course or Courses he/she had retaken shall be discontinued from his/her studies at the University.
ii) A student who has overstayed in an Academic Programme by more than Two (2) Years shall be discontinued from his/her studies at the University.

13.5 Dissertation

The dissertations shall conform to the standing guidelines and regulations of the University on higher degrees. In addition, the following shall also apply:

i) A candidate shall not be allowed to formally start on research work unless he/she has passed at least 10 courses.
ii) A candidate shall submit a research proposal to the Faculty Higher Degrees Committee before the end of first semester of second year of study.
iii) The candidate shall conduct research during the second semester of the second year of study.
iv) The candidate shall hand in three hard copies and one soft copy of the dissertation by the end of the second year.

13.6 Passing a dissertation

To pass a dissertation, the candidate shall satisfy the examiners in both the written report and viva voce.

REVISED DISSERTATION

A candidate who fails to satisfy examiners shall re-submit a revised dissertation within six months after notification.

13.7 Graduation requirements

The degree of M.Sc. (Mechanical Engineering) shall be awarded to a candidate who fulfils both conditions below:-

i) Accumulated a minimum of 60 credit units.
ii) Passed the dissertation.

13.8 Quality assurance

The quality assurance practices like the other programmes in the CEDAT in particular and Makerere University in general shall apply. A student will be required to attend at least 70% of the lectures given in a course, do and pass all the coursework assignments, tests and laboratory exercises before he/she can sit for a written examination. Also the performance of the assigned lecturers to teach these students shall be monitored closely to ensure they comply with the curriculum requirements. This will be partly achieved through giving the students assessment forms to assess their lecturers on the content taught, mode of delivery, self-explanation and appearing for lectures.

13.9 Classification of award

The degree of Masters of Science in Mechanical Engineering will be awarded to a student who fulfils all the requirements for the programme or upon attaining a total of 60 credits for graduation and conducts and passes a Dissertation arising out of research work.

14. RESOURCES

14.1 Human resources

The capacity to run the programme exists within the Department of Mechanical Engineering. Staff from School of Engineering, Engineering Maths and School of Economics and Management in Makerere University and from elsewhere will participate in the teaching, industrial excursions and supervision of students. The Department of Mechanical has over 10 with PhD's. We expect three more members of staff to graduate in 2012 and two more in 2013/14.