De Montfort University

Course Template

1. Basic information

- Course Name: Engineering Year Zero
- Course Code: CE023A
- Level (UG, PG): Undergraduate
- Academic Period: 2014
- Faculty: Faculty of Technology
- Department: Engineering
- PMB ENGT
- Offered at: DM - DMU Leicester
- Type (single, joint.): SI
- Highest Award : Bachelor of Engineering (Honours)
- All possible exit awards :
- Award notes : To progress onto year 1 on any Engineering programme in Faculty of Technology, in the subject group of Engineering, the following progression rule must be met:

  Student must pass all four modules (ENGZ0001, ENGZ0002, ENGZ0005 and ENGZ0006). The minimum pass mark for each module is 40%. Compensation is not permitted.

  Re-assessment:
  If a student has not met the above progression criteria he/she will be permitted re-assessment opportunities equivalent to two modules (60 nominal credits). This could be for example reassessment in two different modules or two separate attempts in one module.

Professional Body Recognition

- Accreditation by Professional/Statutory body:
  No
- Exemption by Professional/Statutory body:
  No
- Details
  Not Applicable

- Modes of attendance: Main MOA: Full-Time
  Other MOA:
- Mode Notes: Part time is only available exceptionally for students resitting with attendance

- Course leader: Hobina Rajakaruna

2. Entry Requirements and Profile

Profile:
Engineering Year-0 is part of the BEng Mechanical Engineering programme. Successful completion of this course will allow students to progress to any Engineering course within the School of Engineering Media and Sustainable Development. The default progression route will be for the BEng Mechanical Engineering programme.

Award
No specific award - meeting the progression criteria will allow entry to Y-1 of engineering programmes

Standard Entry Requirements Applicants should normally be 18 years of age by the 1st of October in the year of entry.

Normally 120 UCAS Points from at least one GCE A Level or equivalent plus five GCSEs at grade C or above, including Mathematics and English.

Alternative Qualifications include:

Study of an Advanced GNVQ or a BTEC certificate or diploma in a relevant discipline.

Any qualification deemed equivalent to the above, including recognised access courses

Applications are welcomed for individual consideration from candidates offering experience or prior learning in place of part or all of the formal entry qualifications.

3. Course Description

Characteristics and Aims

The course has four modules. The aim of these modules is to prepare students for Under Graduate Study at De Montfort University.

Modules: Quantitative Methods (ENGZ0001), Engineering Applications (ENGZ0002), ICT & Business Practice (ENGZ0005), Design and Technology (ENGZ0006)

Quantitative Methods ENGZ0001:
This module develops mathematical techniques necessary for the study of engineering. It provides students with knowledge in mathematical theories & concepts and application of these concepts to engineering problems necessary to study in Year-1 of an Engineering programme.

Engineering Applications ENGZ0002:
The module introduces fundamental concepts of both mechanical and electrical engineering theory and practice, necessary to study engineering at under graduate level.

ICT and Business Studies ENGZ0005
This module has two parts. ICT part will include how to use spreadsheets to find solutions to engineering problems, create reports, use of HTML for web page design and an introduction to MATLAB programming software. In the Business part, elements of business analysis such as basic finance, aspects of human resource and project management useful for engineering relevant to foundation level is covered.

Design and Technology ENGZ0006
Module introduces students to basic design principles; it also includes an introduction to a 3D solid modelling (CAD) package.

Teaching, Learning and Assessment Strategies

The four modules making up the programme employ a range of learning and teaching strategies; including:

Staff directed learning via lectures, tutorials and lab classes for the dissemination of knowledge, information and analytical & experimental skills.

Student centred learning via 'research & presentation of findings', scientific report writing for development of analytical concepts and presentation of information (via these reports) in technical/scientific formats.

Main assessment methods:

Phase Tests are used to develop analytical skills and to provide feedback to students on their progress in analytical subjects.

Laboratory experiments are used to develop measurement skills, group work, experimental techniques and formal scientific report writing skills.

CAD assignment is used to develop technical drawing and solid modelling skills

In ENGZ0001 final examination is used to assess the ability of students to apply analytical concepts studied under a time constrained condition.

Assignments are used to enable students to research and apply learnt knowledge to specific problems. Students should show the ability to review, critically appraise, organise their time, work to deadlines and demonstrate transferable skills.

4. Outcomes

Generic outcome headings	**What a student should know and be able to do upon completion of the course**
• **Knowledge & understanding**	Upon successful completion of the course, the student will have the knowledge and understanding of: mathematical and scientific principles that can be applied in Y-1 of an engineering programme Essential facts, concepts, principles and theories fundamental to the study of engineering Report writing and presentation skills required to study engineering
• **Cognitive skills**	Upon successful completion of the course, the student will have the skills to: Identify the information requirements to solve a problem, research and assess available data to see if the data is sufficient to solve basic engineering problems Be able to communicate and convey ideas in an analytical and scientific manner, appropriate to this level of study. Lateral thinking abilities
• **Subject specific skills**	The student will be able to apply the knowledge gained to analyse and solve basic engineering problems relevant to Year-1 under graduate level of study. Student will be able to write technical reports and communicate at a level appropriate to Undergraduate study in the UK
• **Key Skills**	Key Skills On completion of the course the student will acquire the following skills: Application of numbers: The student will have experience of handling quantitative data and collecting, interpreting, recording and reporting numerical information. Communication: The student will have experience of communicating scientific information in a variety of ways, including verbally and via scientific reports.

	Improving own learning and performance: The methods developed throughout the course will improve organisational skills such as time management and working to deadlines. Information Technology: A range of computer based tools will be used throughout the course, including word processors, spreadsheets, CAD and scientific programming software. All modules will teach students problem solving skills. Working with others: The Laboratory exercises will impart skills on team work.

5. Structure and Regulations

Relationship Details

Module	Credits	Level	Take/Pass		Semester	Locations
ENGZ0001	**0.00**	**1**	**Both**	**Y**	**DM**	
ENGZ0002	**0.00**	**1**	**Both**	**Y**	**DM**	
ENGZ0005	**0.00**	**1**	**Both**	**Y**	**DM**	
ENGZ0006	**0.00**	**1**	**Both**	**Y**	**DM**	

Structure

Structure notes

1 Course Info

Course Specific Differences or Regulations

1
To progress to Year-1 of an Engineering Programme student must Pass all four modules: ENGZ0001, ENGZ0002, ENGZ005 and ENGZ0006. The minimum pass mark is 40%.

Re-assessment: If a student has not met the above progression criteria he/she will be permitted re-assessment opportunities equivalent to 60 nominal credits

Numbers at sites, including partner institutions

1 Not applicable.

Relevant QAA Subject Benchmarking statement(s)

1 Not Applicable

6. Quality Assurance Information

QA of Workbased Learning

Not Applicable

Liaison with Collaborative Partners

Procedures for Maintaining Standards

Course Handbook Descriptor