Programs and courses

ENG2102 Engineering Problem Solving and Analysis

Subject	Cat-nbr	Term	Mode	Description	Units	Campus
ENG	**2102**	**2, 2010**	**ONC**	**Engineering Problem Solving and Analysis**	**1**	**Springfield**

Academic group:	FOENS
Academic org:	FOENSV
Student contribution band:	2
ASCED code:	39999

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STAFFING

Examiner: John Worden
Moderator: Lyn Brodie

REQUISITES

Pre-requisite: ENG1101

RATIONALE

This is the second of four courses that use a `problem based learning approach' to extend the students knowledge of the complex world of engineering. In course ENG1101 Engineering Problem Solving 1, the student was introduced to the concept of systems analysis and used a number of given case studies to acquire relevant knowledge and skills. This course now enhances the students skills in team-work, communications, systems analysis and engineering problem solving. The four courses seek to continuously develop distinct

engineering skills that surround and incorporate a range of different content material. Student learning is to be driven by the need to solve various engineering problems employing design concepts. The student learning experience will be different in this course to other more traditionally taught courses in the program. The principles of problem-based learning (PBL) acknowledge prior knowledge and encourage self-directed learning. Today's engineers must actively pursue life-long learning which requires this latter attribute. Thus students will `learn how to learn' so that they are better able to apply problem-solving to new situations in the workplace and in the community throughout their professional career. This course is intended to develop the student's skills in problem solving within an engineering design context. A number of real world problems are analysed in a systematic way. It is intended that this course will develop a student's ability for independent learning. The student will undertake a sequence of problem solving tasks, working as part of a team. The student will also need to develop an understanding and application of analytical tools as prescribed in this course.

SYNOPSIS

This course will increase a student's ability to work as part of an engineering team. It presents a range of engineering theory and applications through engineering design concepts that are learnt within the context of solving a range of real world problems. This course focuses primarily on the use of statistical analysis to analyse data, propose solutions, solve problems and to evaluate possible solutions. In addition the student is required to further develop their computer skills (especially Excel) to illustrate and present the results of their work.

OBJECTIVES

This information will be available from 19-02-2010

TOPICS

This information will be available from 19-02-2010

TEXT and MATERIALS required to be PURCHASED or accessed

This information will be available from 19-02-2010

REFERENCE MATERIALS

This information will be available from 19-02-2010

STUDENT WORKLOAD REQUIREMENTS

This information will be available from 19-02-2010

ASSESSMENT DETAILS

This information will be available from 19-02-2010

IMPORTANT ASSESSMENT INFORMATION

This information will be available from 19-02-2010

ASSESSMENT NOTES

This information will be available from 19-02-2010

EVALUATION AND BENCHMARKING

In meeting the University's aims to establish quality learning and teaching for all programs, this course monitors and ensures quality assurance and improvements in at least two ways. This course: 1. conforms to the USQ Policy on Evaluation of Teaching, Courses and Programs to ensure ongoing monitoring and systematic improvement. 2. forms part of the Bachelor of Engineering and/or Bachelor of Engineering Technology program and Bachelor of Spatial Science program and is benchmarked against the: - USQ accreditation/reaccreditation processes which include (i) stringent standards in the independent accreditation of its academic programs, (ii) close integration between business and academic planning, and (iii) regular and rigorous review; and - professional accreditation standards of Engineers Australia and Surveyors Board of Queensland.

OTHER REQUIREMENTS

This information will be available from 19-02-2010

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