Code	GEEN1140
Course Title	**GROUP DESIGN**

Aims

- To give students knowledge and experience in project planning and control methods.
- To set an engineering design problem that requires a solution to be developed by a team.
- In developing the solution to allow students to identify and experience the special organizational and communication needs required when working in groups.

Learning Outcomes:

On successful completion of this course a student will be able to:

1	Be conversant with project planning and control procedures relating to projects, and be familiar with typical software tools designed for this purpose
2	Work constructively as a member of a team or group engaged in a common aim; namely the solution of an engineering design problem
3	Draw together the knowledge and experience previously gained in the students programme of by applying this knowledge to a realistic engineering design problem

Indicative Content

Project management: Methods of achieving specified performance within the agreed time scale and budget; organization of project task forces; use of software tools for planning; scheduling and project control; adherence to appropriate quality standards.

Students will be encouraged to undertake a methodological approach to design, employing synthesis, analysis, and evaluation techniques. In particular the students will be made aware of the integrating aspects of the design process. For example, designing from a resources aspect, i.e. providing finance production/assembly facilities. Of particular importance will be integrating engineering principles, design, materials, construction / manufacturing, costs, environmental considerations etc.

Problems of group-management and teamwork will be identified and resolved so that the group develops into a cohesive problem-solving unit. Where appropriate/possible the supervisor will emphasize the wider role of the professional engineer in relation to society and the relevant legal and ethical responsibilities. Advice will be given on costing design solutions and in approaches to critical appraisal and justification of chosen approaches to planning, management and design.

Learning and Teaching Activities

The course will be interactive and practical that requires students to work within a project team to achieve a specific aim and objectives.

Weekly meetings, seminars and discussions both within the group and with the supervising lecturer, who will offer guidance and advice to ensure the group moves effectively towards a reasonable and structured solution to the problem set.

Each student will keep a personal log. Formal meetings will be convened every week, with a complete record of minutes being kept.

Each group will produce a full written report on the design project and will give a formal audio-visual presentation of their findings and the project's management and development.

Assessment Details:

Methods of SUMMATIVE Assessment	**Group Assessment** Group written	Audio Report visual presentation	**Individual Assessment** Log book	Individual Performance	Individual review report
Nature of FORMATIVE assessment supporting student learning	Project proposal and specification report		Progress report and project plan (Gantt Chart)		
Outcome(s) assessed by summative assessment (*Please use the numbers above to refer to these*)	2, 3		1, 2		
Grading Mode	Numeric	Numeric	Numeric	Numeric	Numeric
Weighting %	40	10	20	20	10
Pass Mark	40% overall				
Word Length					
Outline Details	Each student will produce a short written report of 500 words in which he/she should reflect on the way the group project progressed, the solution which developed and the way in which the group interacted to produce the design solution.				
Last Item of Assessment	✓				
Are students required to pass all components in order to pass the course?	No				

Indicative Course Materials and Reading

Author	Date	Title	Publisher	ISBN
Draycott T. & Bullman P.	2009	Structural Elements Design Manual: Working with Eurocodes	Butterworth-Heinemann	
	2006	Manual for the design of concrete building structures to Eurocode 2 (2006)	IStructE	