COURSE DETAILS
Course Code: G11GF
Full Course Title: Strategy and Planning
SCQF Level: 11
SCAF Credits: 15
Available as Elective: No

DELIVERY LEVEL
Undergraduate: No  Postgraduate Taught: Yes  Postgraduate Research: No

Additional Information:

COURSE AIMS
The overall aim of this course is to allow the student to:

• Formulate strategies for decision-making in producing fields
• Understand the principles of incremental petroleum economics for producing field projects and how these differ from the economics of new field developments
• Determine criteria for ranking competing projects
• Explain the distinction between risk and uncertainty in development projects; how to quantify the uncertainties and mitigate the risks
• Determine how to quantify value in mature field decision-making

LEARNING OUTCOMES – SUBJECT MASTERY
Students will be explicitly encouraged to:

• Understand the theoretical principles covered during the course, and demonstrate that understanding by examination
• Apply the theoretical principles to practical issues, calculating appropriate project parameters and interpreting them to make strategic investment decisions
• Use statistical techniques to assess risks associated with oil and gas fields, and make economic decisions based on calculated risks
• Link knowledge covered in this course to subjects of other courses or outside the programme

Students will be explicitly encouraged to:

• Read around the subject area to understand the current research being conducted here and elsewhere
• Become involved in research in the subject area via projects and assignments as appropriate

LEARNING OUTCOMES – PERSONAL ABILITIES
Students will be explicitly encouraged to:
• Read around the subject area to understand the current research being conducted here and elsewhere
• Become involved in research in the subject area via projects and assignments as appropriate

Students will be explicitly encouraged to:

• Develop their personal skills including study skills, time management and interpersonal relationships (teamwork)
• Provide constructive feedback to the course leaders on the subject and the delivery of the course

Students will be explicitly encouraged to:

• Develop their personal skills in communicating within a team and to the academic staff
• Develop their skills in problem solving using both paper based and IT solutions

SYLLABUS

The course will cover the following topics:

• ‘The Forth Rail Bridge’ - a model for iterative working in producing fields
• Fundamentals of petroleum economics and incremental project economics
• Project uncertainties – understanding conditional probabilities in oil and gas field settings
• Project risks – definitions and mitigations
• Cognitive bias in risk, uncertainty and decision-making in oil and gas fields
• The use of options matrices and decision matrices to define and rank project options
• The construction of short and long term plans for a field based on the above