

## **Management: operations, organisations and financial analysis**

### **Lecturers:**

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### **Course description:**

The course consists of three parts.

1. Operation management
2. Financial analysis
3. Case study exercise, relating business and environmental performance

1. Operation management (3 days)

After completion of this course students have an understanding about the activities, decisions and responsibilities to manage design, production and delivery of products and services. Lectures discuss the following subjects: process analysis, job design and work measurements, product design and process selection, facility layout, strategic capacity planning and aggregate planning, inventory control, material requirement planning, operations planning and quality management. To apply this knowledge case studies are used. These are about the subjects: Operations strategy and competitiveness and material requirements planning.

2. Financial analysis

This subject offers an introduction to managerial decision-making based on financial data. The main topics are financial reporting, relevant costs and benefits for decision-making, product cost calculations by assigning overheads, and investment decision analysis. The basic knowledge is applied to some relevant situations for environmental and energy managers.

3. Business case (3 days)

The case aims to teach students to apply theories they have learnt to practical situations. By learning about both the value and the constraints and limitations of the theories the students will hone their skills in applying the management tools developed in theory

#### **- Course learning objectives**

1. Operation management

After this course students have understanding about the activities, decisions and responsibilities to manage the design, production and delivery of products and services. More specifically students have knowledge about issues like operations strategy, the design of products and services, the design of operations processes and the operations network, the implementation of process technologies, operations planning and control, operations improvement and total quality management. Finally students are able to apply concepts and instruments for analysing and resolving operational problems in the company.

2. Financial analysis

After successfully completing this course, the participant will have knowledge about basic accounting terms and concepts, be able to critically review financial reporting documents, make an initial financial assessment environmental and / or energy projects / investments, understand how environmental costs are / can be treated in the financial system of organisations, and be able to make simple calculations himself.

3. Case study exercise, relating business and environmental performance

#### **- to exercise analysis and assessment of a company/organisation.**

Students must be able to gain insight into a company's products and markets, developments in those areas, the company's competitive position and other factors.

They have to analyse relevant business processes and the way these are managed.

Main issues include business strategy, the role of technology, the influence of the formal and informal organisation, and the crucial relationship between the production system and the realisation of market demands, including environmental ones.

#### **- to learn to acquire relevant information, and to cope with insufficient and contradictory information.**

Students must be able to acquire relevant information through "interviews"/questionnaires, documents and (if possible) observations. Students should be aware that some information is missing and that this gap might be filled by analysing available information more deeply, and by sound reasoning. Another aspect to be dealt with is the fact that, as in real life, people are sometimes hiding information or providing contradictory information. Similarly, information from documents is not automatically guaranteed to be correct.

#### **- to develop integral managerial assessment abilities.**

This means that students make assessments of the company's position in different functional areas, and link and integrate these assessments to and into managerial problems the company is facing. It's important that students understand the degree of company effectiveness and efficiency, are able to determine the boundary conditions in which the company operates, and detect problems/room for improvement.

#### **- to solve management problems integrally.**

Students must find options for solutions, make qualitative and quantitative analyses of solutions, and offer an integrated solution supported by a reasoned weighing of pros, cons, possible risks and general outlook.

#### **- to make decisions in uncertain circumstances, based on uncertain information and under time pressure**

When proposing solutions for management problems detected students should realise that the perfect solution doesn't exist. Since every choice is made under time pressure and based on insufficient and uncertain information, every proposed solution means taking risks. Execution of the case study in a strictly limited time frame is an important part of the learning experience.

### **Course materials:**

1. Operation management

- Textbook: N. Slack, S Chambers, R. Johnston, *Operations Management*, Prentice Hall, 7th ed. ISBN

<p>978-0-273-70847-6</p> <ul style="list-style-type: none"> <li>- Reader</li> <li>- 2-3 cases from the book: Robert Johnson, Stuart Chambers, Christine Harland, Alan Harrison and Nigel Slack (1997), Case in Operations Management, Pitman Publishing, London, ISBN: 0273624962</li> </ul> <p>2. Financial analysis</p> <ul style="list-style-type: none"> <li>- Drury website: <a href="http://www.drury-online.com">www.drury-online.com</a></li> <li>- Gowthorpe website: <a href="http://www.thomsonlearning.co.uk/accountingandfinance/gowthorpe">www.thomsonlearning.co.uk/accountingandfinance/gowthorpe</a></li> </ul> <p>3. Case study exercise</p> <ul style="list-style-type: none"> <li>- Preferably a "real life" situation will be explored; by consequence materials have to be collected during/in between plenary/group case sessions.</li> <li>- Obviously, the course materials mentioned above provide tools.</li> </ul>
<p><b>Instructional working methods:</b> Lecturers, case studies and assignments</p>
<p><b>Assessment:</b></p> <ol style="list-style-type: none"> <li>1. Operation management (33% percent of final mark) Individual written test</li> <li>2. Business case (33% of final mark): group assignment</li> <li>3. Financial analysis (33% of final mark) Individual written Exam</li> </ol> <p>The average of the three parts should be at least a rounded up 6. Each part individual needs to be at least a 5.0.</p>
<p><b>Relationships with other courses:</b> The course is directly related to, and the knowledge and skills gained can be applied in, the following other courses in the Master of Environmental and Energy Management programme:</p> <ul style="list-style-type: none"> <li>- Management (mainly financial reporting)</li> <li>- Energy subjects (mainly Investment Decisions)</li> <li>- Case study project</li> </ul> <p>Further, there are links with the courses 'Environmental Management', 'Energy Management' and 'Corporate Responsibility and Stakeholder Management'. These courses pay attention to non-financial reporting. Also, actions taken in light of environmental and Energy management will have financial consequences.</p>
<p><b>Relation of course with final attainment targets:</b></p> <ul style="list-style-type: none"> <li>• <b>Primary relationship</b> <ul style="list-style-type: none"> <li>- Graduates have knowledge of and insight in relevant key terms and concepts of organisational theory, operations management and financial analysis. They are able to apply these to analyse (energy and environmental projects in) an organisation, define needs for change and advise about implementation. (3)</li> </ul> </li> <li>• <b>Secondary relationship</b> <ul style="list-style-type: none"> <li>- Graduates have academic and research skills like critically reflecting on literature, designing a research proposal and executing and reporting on an (applied) research project. (7)</li> <li>- Graduates are able to give a structured written and oral presentation in English about individual or team work. They also adhere to existing academic traditions, such as providing proper credits and references. (12)</li> </ul> </li> <li>• <b>Tertiary relationship</b> <ul style="list-style-type: none"> <li>- Graduates are able to make a relevant contribution as an individual or as a member of a multi-disciplinary team to analysing and solving complex environmental or energy problems in an organisation or region. They are able to function in an international team, with English as the language of communication. (10)</li> <li>- Graduates are able and willing to recognise the ethical aspects related to their activities. (11)</li> </ul> </li> </ul>