



What Responsible Management
Competencies do
HA ERHVERVSØKONOMI - MATEMATIK
Students Acquire?



This report was prepared by the CBS Office of Responsible Management Education and is part of our engagement in the UN-backed Principles for Responsible Management Education (PRME).

Photos: Bjarke MacCarthy, Jakob Boserup

INTRODUCTION

This report highlights the role that responsible management education plays in the HA Erhvervsøkonomi - matematik (HA (mat.)) programme. Through the Curriculum Development project, the CBS PRME office has sought to identify and explore which competencies related to responsible management are acquired by HA(mat.) students during their time in the programme. This report presents results based on findings from student focus groups and from meetings and on-going interaction with faculty members. The purpose is to explicitly address how these HA(mat.) competencies in responsible management are integrated in different courses

and to encourage a coherent progression across the entire programme.

The key theme that has emerged can be described as 'Learning how to use mathematical tools responsibly and to take into account the effects that the choice of method and tools have on overall decision-making', which also reflects how management education is approached in the HA(mat.) programme. This central theme is evident in the main courses, and there is a focus on responsible management throughout the programme.

COMPETENCY PROFILE

Discussions with the members of the Study Board and faculty have identified the following competencies in responsible management acquired by HA(mat.) students:

- **The ability to consider socially responsible decision-making from an economic perspective.**
- **The ability to ensure that appropriate analytical methods are used and that conclusions based on data analysis appear in an objective manner.**

While all courses are naturally aimed at supporting the development of these competencies in HA(mat.) students, they are specifically addressed in the flagship course *Afsætningsøkonomi*, and are further elaborated on in the following cornerstone courses: *Erhvervsøkonomi* (1st semester) and *Fagets videnskabsteori* (2nd semester).

Finally, we would like to express our gratitude to all those who contributed to this project. In particular, we would like to thank the study board director, Dorte Kronborg, for all her help with the development of this report and for acting as an ambassador for HA(mat.).

SEMESTER REVIEW OF RESPONSIBLE MANAGEMENT AT HA(MAT.)

FIRST SEMESTER

RESPONSIBILITY DAY is the first opportunity for HA (mat.) students to reflect on business practices through the lens of their study programme. During this day, responsible management education is presented through a selected case, which is then critically discussed by students. Merrill Jones Barradale was the HA(mat.) faculty representative for Responsibility Day in 2015, while Christian Warming facilitated the day in 2016.

Semester 1

Erhvervsøkonomi

Afsætningsøkonomi

Lineær algebra og matematisk analyse

Numerisk analyse og datalogi

ERHVERVSØKONOMI addresses profit optimization through theories of the firm, among other things. Students gain an understanding of the complexities of profit optimisation and the challenges involved in balancing the needs of multiple stakeholders while simultaneously maintaining an air of transparency and legitimacy.

AFSÆTNINGSØKONOMI presents students with a view of modern marketing that is far from the traditional perception whereby the aim is to sell products that consumers do not really want or need. The course strongly emphasises the fact that both customers and employees wish to be associated with responsible behaviour, specifically in terms of saving resources, protecting the environment and taking care of the employees. Other internal and external stakeholders involved in the entire value chain, including suppliers, intermediaries, sub-contractors and those involved in production, sales and distribution processes, are also considered important. Students learn that marketing also encompasses after-sales service such as the publication of guidelines for recycling resources. Students are also taught that, while marketing was traditionally implemented via the marketing mix focused on the 'four P's' (i.e. price, product, promotion, and place), the number of p's has been extended with parameters such as people, processes, policy and physical evidence. All these 'new' p's show how the classical marketing concept has expanded to include broader corporate social responsibility. This is the flagship course of the HA(mat.) programme.

SECOND SEMESTER

FAGET VIDENSKABSTEORI presents students with the challenges involved in the scientific search for truth, and introduces them to a range of relevant methods in presenting subjects, for example sustainability and accounting. During the course, students are taught to identify, analyse and reflect on problem areas and appropriate qualitative and quantitative methods and solutions. By the end of the course they are expected to have gained an understanding of the possible effects on decision-making of different methodological choices, including the mathematisation of subject areas and the choice of statistical methods. To help students achieve this understanding, they discuss various cases of accounting, CSR and sustainability paradigms of economics. Among these are the cases: 'Sales of shares in Dong Energy: between economic reason and moral feeling and scientific theory reflection', 'Organization Theory: Between economic rationales and environmental considerations', and 'CSR – science theory set'. In 'The Lomborg case', students are asked to reflect on issues of public knowledge management in democratic societies with a free press, and on how non-scientific mass media select scientific material when crucial research information is to be communicated to the public and the political spheres of discussion. The case also teaches students about dealing with responsible knowledge management in the conflict between scientific knowing and economic, political and religious knowing. The skills developed by students in reflecting on problem formulation equip them with the tools they need to take responsibility for their research choices and interpretations.

Semester 2

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| Mikroøkonomi |
| Videregående lineær algebra og matematisk analyse |
| Fagets videnskabsteori |
| Numerisk analyse og datalogi |

THIRD SEMESTER

Explicit examples of responsible management teaching and/or content were not identified in this semester, pointing to a more implicit method of addressing responsible management education.

Semester 3

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| Operationsanalyse |
| Makroøkonomi 1 |
| Matematisk analyse og statistisk optimering |
| Sandsynlighedsregning og statistik |

FOURTH SEMESTER

Explicit examples of responsible management teaching and/or content were not identified in this semester, pointing to a more implicit method of addressing responsible management education.

Semester 4

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| Spilteori |
| Makroøkonomi 2 |
| Differentialligninger og optimal kontrolteori |
| Sandsynlighedsregning og statistik fortsat |

FIFTH SEMESTER

This semester is dedicated to exchange, elective courses and/or internships within companies. Of the **63** electives available to students on the HA(mat.) programme, **2** directly address responsible management: *Business and Global Governance* and *Introduction to Sustainable Business*.

Semester 5

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| Finansiering |
| Statistiske modeller |
| Elective Courses or Exchange |

SIXTH SEMESTER

Explicit examples of responsible management teaching and/or content were not identified in this semester, pointing to a more implicit method of addressing responsible management education.

Semester 6

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|-------------------------|
| Organisation og ledelse |
| Bachelorprojekt |
| Industriøkonomi |

Semester Overview: HA(mat.)

| RESPONSIBILITY DAY | SEMESTER 1 | SEMESTER 2 | SEMESTER 3 | SEMESTER 4 | SEMESTER 5 | SEMESTER 6 |
|--|---|--|--|--|---|--|
| 2016 Christian Warming | Erhvervsøkonomi Eric Bentzen (DM) | Mikroøkonomi Herdis Steingrimsdóttir (ECON) | Operationsanalyse Peter Bogertoft (ECON) | Spilteori Jens Leith-Hougaard (DM) | Finansiering Stine L. Daetz (FI) | Organisation og ledelse Morten Thanning Vendelø (IOA) Christian Warming (DM) |
| 2014-2015 Merrill Jones Barradale | Afsætningsøkonomi Ole Stenwinkel Nilsson (MARKTG) | Videregående lineær algebra og matematisk analyse Jens Erik Wang (KU) Kaare A. Madsen (FI) Per E. Rosenqvist (FI) | Makroøkonomi 1 Birthe Larsen (ECON) | Makroøkonomi 2 Chandler Lutz (ECON) | Statistiske modeller Søren Feodor Nielsen (FI) | Industriøkonomi Thomas Rønde (IND) |
| 2012 - 2013 Thomas Presskorn-Thygesen | Lineær algebra og matematisk analyse Jens Erik Wang (KU) Kaare A. Madsen (FI) Per E. Rosenqvist (FI) | Fagets videnskabs teori Søren Brier (MSC) Kathrine Johansson (MSC) | Matematisk analyse og statisk optimering Jesper Michael Møller (KU) | Differentialligninger og optimal kontrolteori Henrik Schlichtkrull (KU) | Elective Courses or Exchange | Bachelorprojekt Birthe Larsen (ECON) Bjarne Aastrup-Jensen (FI) Dorte Kronborg (FI) |
| | Numerisk analyse og datalogi Dorte Kronborg (FI) Hans Christian Pedersen (FI) | Numerisk analyse og datalogi fortsat Dorte Kronborg (FI) Hans Christian Pedersen (FI) | Sandsynlighedsregning og statistik Peter Dalgaard (FI) | Sandsynlighedsregning og statistik fortsat Peter Dalgaard (FI) | | |

Flagship Course Flagship courses act as anchors in the programme and play a central role in coordinating the generation of responsible management competencies.

Corner Stone Course Corner stone courses act as binding blocks between the semesters and ensure a systematic progression of content and competencies related to responsible management.

CONTACTS AND RESOURCES

Below we have a list of the key people associated with HA(mat.), which you may find useful:

HA(MAT.) AMBASSADOR AND STUDY DIRECTOR

Associate Professor Dorte Kronborg has agreed to be ambassador for HA(mat.). She also serves as the study director for the programme. Please feel free to contact her, if you have any questions regarding responsible management education within the programme.



Dorte Kronborg:

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HA(MAT.) PROGRAMME MANAGER

Lykke Håkonsson serves as the programme manager for the HA (mat.) programme.



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PRME PROJECT MANAGER

Lavinia Iosif-Lazar is responsible for the Curriculum Development project. Please send any suggestions for amendments to her.



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PRME ACADEMIC DIRECTOR

Professor Kai Hockerts is the Academic Director of the Curriculum Development project.



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