



AALBORG UNIVERSITET

STUDIEORDNING FOR KANDIDATUDDANNELSEN I PRODUKTIONSLEDELSE, 2022

**CIVILINGENIØR
AALBORG**

MODULER SOM INDGÅR I STUDIEORDNINGEN

INDHOLDSFORTEGNELSE

| | |
|--|----|
| Designing Global Business Systems and Value Chains 2024/2025 | 3 |
| Advanced Operations Management 2024/2025 | 5 |
| Development of Quality, Risk, and Project Management Systems 1 2024/2025 | 7 |
| Flexible Manufacturing 2024/2025 | 9 |
| Development and Innovation of Global Business Systems and Value Chains 2024/2025 | 11 |
| Business Intelligence and Analytics 2024/2025 | 13 |
| Manufacturing and Supply Chain Systems 2024/2025 | 15 |
| Development of Quality, Risk, and Project Management Systems 2 2024/2025 | 17 |
| Global implementation 2024/2025 | 19 |
| Global implementation A 2024/2025 | 21 |
| Project Electives 2024/2025 | 23 |
| Implementation in Global Operational Systems 2024/2025 | 25 |
| Organisation Analysis and Design 2024/2025 | 27 |
| Operations Development and Strategy 2024/2025 | 29 |
| Project Oriented Study in an External Organisation 2024/2025 | 31 |
| Master's Thesis 2024/2025 | 33 |
| Innovation and Change Management 2024/2025 | 35 |
| Global Business Performance 2024/2025 | 37 |
| Implementation in Global Business Systems 2024/2025 | 39 |

DESIGNING GLOBAL BUSINESS SYSTEMS AND VALUE CHAINS

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Can account for the relationships between theories on global business systems and value chains.
- Can understand the role for and the deployment of choices in the design of (global) companies, supply chains, manufacturing systems, and production networks.

SKILLS

- Can analyze and develop an integrated solution to a practical problem, usually in the form of a project developed in and together with a company.
- Can write a well-structured project report, written with clear arguments.
- Can critically explore empirical problems and account for the choice of theories and approaches to analyze and solve the selected problem.

COMPETENCES

- Is able to operationalize theoretical contributions on global business systems and value chains as well as other relevant scientific fields in a practical setting.
- Can work together as a team to analyze and develop integrated and feasible solution(s) to a practical organizational problem.
- Can work together with an organization in an academically yet practically adequate manner.
- Is able to demonstrate how to operationalize theoretical contributions to practical settings.
- Possess the ability to identify and propose solutions with special focus on cross-functional issues.

TYPE OF INSTRUCTION

The module is carried out as group-based, problem-oriented project work. The group work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor. The project is carried out in groups with normally no more than 6 members.

EXTENT AND EXPECTED WORKLOAD

Since it is a 15 ECTS project module the expected workload is 450 hours for the student.

EXAM

EXAMS

| | |
|-----------------|--|
| Name of exam | Designing Global Business Systems and Value Chains |
| Type of exam | Oral exam based on a project |
| ECTS | 15 |
| Assessment | 7-point grading scale |
| Type of grading | External examination |

| | |
|------------------------|--|
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |
|------------------------|--|

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Design af globale forretningssystemer og værdikæder |
| Module code | M-OM-K1-1 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 15 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen , Charles Møller |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

ADVANCED OPERATIONS MANAGEMENT

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have gained both theoretical and practical knowledge about stochastic simulation and its utilisation in improvement of planning and control systems in companies and supply chains
- Have gained knowledge of a number of numerical and mathematical methods and models for designing and improving planning and control concepts in companies and supply chains
- Have gained knowledge and understanding about numerical analysis of demand patterns
- Have gained knowledge about advanced order management systems
- Have gained knowledge about stochastic discrete event simulation and simulation tools
- Have gained knowledge to identify key performance indicators relevant to evaluate stochastic simulation models.

SKILLS

- Be able to analyse and develop order management systems for both industrial and service companies
- Be able to conduct a numerical analysis of a company's and supply chain's performance. This involves both choice and utilisation of statistical analysis methods on selected elements of companies and supply chains
- Show understanding the utilisation of probabilistic models in connection with design and usage of planning and control systems. This includes knowledge and insight into the opportunities and limitations of probabilistic models
- Be able to utilise stochastic discrete event simulation to assess opportunities and limitations of a production system and be able to utilise simulation as a tool for analysis and synthesis in their project work
- Be able to model and simulate a specific company's production system and evaluate the performance of this system
- Be able to design and redesign planning and control systems in production and service management companies and supply chains adapted to a company's or supply chain's specific situation.

COMPETENCES

- Be able to combine a number of mathematical tools in an appropriate manner to conduct an analysis of the as-is situation of a company or supply chain.

TYPE OF INSTRUCTION

The course consists of a number of lectures as well as the student's independent learning effort. The form and extent of the course is determined and described in connection with planning the semester. The lesson plans, literature etc. are created in connection with this. The course is conducted as a combination of single-disciplinary, problem-oriented and cross-disciplinary fields of study, and it is structured from a work and evaluation form which combines skills and reflection:

- Lectures
- Class work
- Project work
- Workshops
- Exercises (alone and in groups)
- Teacher feedback
- Reflection on content
- Portfolio work.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|------------------------|---|
| Name of exam | Advanced Operations Management |
| Type of exam | Written or oral exam |
| ECTS | 5 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--------------------------------|
| Danish title | Advanced Operations Management |
| Module code | M-OSM-K1-2 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Peter Nielsen |

ORGANISATION

| | |
|-------------|--|
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

DEVELOPMENT OF QUALITY, RISK, AND PROJECT MANAGEMENT SYSTEMS 1

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have gained knowledge of theories of quality control; business processes and supply chains
- Have gained knowledge of project planning and control as well as techniques for this
- Have gained knowledge of IT-systems for project planning and control
- Have gained knowledge of financial control of activities in engineer/manufacture to order companies with long project durations.

SKILLS

- Be able to understand quality control in relation to the company's business processes and analyse an organisation's need for quality control emphasising the supply chain, as well as give suggestions to changes and improvements of parts of or the entire system
- Be able to understand financial control of activities in engineer/manufacture to order companies. This includes: liquidity control, financial capacity control and calculations for planning, control and follow-up on the company's order-based production
- Be able to understand resource-constrained project management problems and plan the execution of projects under constraints (e.g. budgetary, time, resource), including the use of methods for project planning and control
- Be able to understand how IT-systems can support business processes and work flows in project-driven companies.

COMPETENCES

- Be able to design quality and project management systems in companies with order based production while taking into account how such systems interact with a company's core activities and other control systems, especially the financial control systems
- Be able to specify projects and constraints as well as problems which may arise in project-driven companies
- Be able to use the attained knowledge in regards to how companies develop quality control systems.

TYPE OF INSTRUCTION

The course consists of a number of lectures as well as the student's independent learning effort. The form and extent of the course is determined and described in connection with planning the semester. The lesson plans, literature etc. are created in connection with this. The course is conducted as a combination of single-disciplinary, problem-oriented and cross-disciplinary fields of study, and it is structured from a work and evaluation form which combines skills and reflection:

- Lectures
- Class work
- Project work
- Workshops
- Exercises (alone and in groups)
- Teacher feedback
- Reflection on content
- Portfolio work.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|------------------------|---|
| Name of exam | Development of Quality, Risk, and Project Management Systems 1 |
| Type of exam | Written or oral exam |
| ECTS | 5 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--|
| Danish title | Udvikling af kvalitets-, risiko - og projektstyringssystemer 1 |
| Module code | M-OSM-K1-4 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Izabela Ewa Nielsen |

ORGANISATION

| | |
|-------------|--|
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

FLEXIBLE MANUFACTURING

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have gained knowledge about mass customization systems in an operations management context
- Have gained knowledge about assessment of mass customization performance
- Have gained knowledge about product architecture, manufacturing architecture and their relations to mass customization
- Have gained knowledge about flexible manufacturing systems, reconfigurable manufacturing systems, changeable manufacturing systems, automated manufacturing systems and the differences between these.
- Have gained knowledge of planning methods designed specifically for flexible manufacturing systems.

SKILLS

- Be able to analyze a product family in terms of variety and product architecture
- Be able to evaluate different IT solutions supporting mass customization, including product configurators and perform basic modelling
- Be able to analyze a range of manufacturing tasks and evaluate different types of manufacturing systems to determine the appropriate level of flexibility vs. automation
- Be able to model flexible manufacturing problems

COMPETENCES

- Have the competence to evaluate a company's product portfolio in terms of volume, variety and manufacturing tasks and identify solutions for IT system support and manufacturing system design.

TYPE OF INSTRUCTION

The course consists of a number of lectures as well as the student's independent learning effort. The form and extent of the course is determined and described in connection with planning the semester. The lesson plans, literature etc. are created in connection with this. The course is conducted as a combination of single-disciplinary, problem-oriented and cross-disciplinary fields of study, and it is structured from a work and evaluation form which combines skills and reflection:

- Lectures
- Class work
- Project work
- Workshops
- Exercises (alone and in groups)
- Teacher feedback
- Reflection on content
- Portfolio work.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|------------------------|---|
| Name of exam | Flexible Manufacturing |
| Type of exam | Written or oral exam |
| ECTS | 5 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|-------------------------------------|
| Danish title | Fleksibel produktion |
| Module code | M-OSM-K1-3 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Ann-Louise Andersen |

ORGANISATION

| | |
|-------------|--|
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

DEVELOPMENT AND INNOVATION OF GLOBAL BUSINESS SYSTEMS AND VALUE CHAINS

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in 1st semester. Furthermore, this project builds on the three courses taught in the 2nd semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Has gained in-depth knowledge of development and innovation of global business systems and value chains using supply chain operations on real life problems.

SKILLS

- Can demonstrate the skills to choose among and apply in practice the theories, concepts, methods and tools taught in this semester.
- Can analyze, and develop an integrated solution to a practical problem, usually in the form of a project developed in and together with an organization.

COMPETENCES

- Is able to operationalize theoretical contributions on global business systems and value chains as well as other relevant scientific fields in a practical setting.
- Can work together as a team to analyze and develop integrated and feasible solution(s) to a practical organizational problem.
- Can work together with an organization in an academically yet practically adequate manner.
- Is able to demonstrate how to operationalize theoretical contributions to practical settings.
- Possess the ability to identify and propose solutions with special focus on cross-functional issues.

TYPE OF INSTRUCTION

The module is carried out as group-based, problem-oriented project work. The group work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor. The project is carried out in groups with normally no more than 6 members.

EXTENT AND EXPECTED WORKLOAD

Since it is a 15 ECTS project module the expected workload is 450 hours for the student.

EXAM

EXAMS

| | |
|--------------|--|
| Name of exam | Development and Innovation of Global Business Systems and Value Chains |
| Type of exam | Oral exam based on a project |
| ECTS | 15 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--|
| Danish title | Udvikling og innovation af globale forretningssystemer og værdikæder |
| Module code | M-OM-K2-1A |
| Module type | Project |
| Duration | 1 semester |
| Semester | Spring |
| ECTS | 15 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen , Charles Møller |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

BUSINESS INTELLIGENCE AND ANALYTICS

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Account for Business Intelligence (BI) concepts, theories and methods including:
 - Creation of knowledge from either people/employees/"experts" or from analysing existing data
 - Knowledge representation
 - Traditional BI handling systems such as expert systems, knowledge base systems, decision support systems and executive information systems.

SKILLS

- Make decisions about the optimal use of the BI concepts, theories, methods and selected systems for identification of needs, development of alternative solutions, evaluation selection and implementation
- Use BI in disciplines such as enterprise engineering/modelling, business analytics, data mining, etc.

COMPETENCES

- Apply knowledge and skills in relation to business intelligence development projects and thereby apply the knowledge handling activities: knowledge acquisition, knowledge verification, knowledge representation and knowledge engineering.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme curriculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|------------------------|---|
| Name of exam | Business Intelligence and Analytics |
| Type of exam | Written or oral exam |
| ECTS | 5 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Business Intelligence og analytiske metoder |
| Module code | M-OIM-K2-3 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Spring |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen |

ORGANISATION

| | |
|-------------|--|
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

MANUFACTURING AND SUPPLY CHAIN SYSTEMS

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have gained knowledge of the structure and functionality of manufacturing and supply chain systems such as Enterprise Resource Planning, Advanced Planning & Scheduling, Vendor Managed Inventory, Optimisation Suites and Shop Floor Planning & Control
- Have gained knowledge of planning technologies and configuration of manufacturing and supply chain systems
- Have gained knowledge of how to share information and coordinate decisions in a supply chain

SKILLS

- Be able to work with differentiated manufacturing and supply chain control
- Be able to work with manufacturing and supply chain control principles
- Be able to work with information sharing levels

COMPETENCES

- Be able to select and design differentiated manufacturing and supply chain control principles
- Be able to develop planning and control solutions

TYPE OF INSTRUCTION

The course consists of a number of lectures as well as the student's independent learning effort. The form and extent of the course is determined and described in connection with planning the semester. The lesson plans, literature etc. are created in connection with this. The course is conducted as a combination of single-disciplinary, problem-oriented and cross-disciplinary fields of study, and it is structured from a work and evaluation form which combines skills and reflection:

- Lectures
- Class work
- Project work
- Workshops
- Exercises (alone and in groups)
- Teacher feedback
- Reflection on content
- Portfolio work.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|--------------|--|
| Name of exam | Manufacturing and Supply Chain Systems |
| Type of exam | Written or oral exam |
| ECTS | 5 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--|
| Danish title | Fremstillings- og forsyningskædesystemer |
| Module code | M-OSM-K2-2 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Spring |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Iskra Dukovska-Popovska |

ORGANISATION

| | |
|-------------|--|
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

DEVELOPMENT OF QUALITY, RISK, AND PROJECT MANAGEMENT SYSTEMS 2

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in the 1st semester of the MSc in Operations and Supply Chain Management programme.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have gained knowledge of a range of selected models and methods in the area of quality and project management, including:
 - Planning, control and optimising in multi-project environments
 - Models, methods and tools to develop advanced quality, environmental and project management systems
 - Risks management and performance measurements.
- Have gained knowledge of how quality, project and management accounting systems can be incorporated as strategic elements in a company
- Have gained knowledge of how quality, project and management accounting systems can be integrated with a company's other management systems
- Have gained knowledge of risk identification and risk management in ETO productions, and how such risks can be addressed as a strategic business advantage.

SKILLS

- Be able to analyse an organisation's need for quality and project management, internal as well as external in relation to customers and suppliers
- Be able to analyse a group of projects with simultaneous lifetime and to evaluate existing project portfolios
- Be able to apply advanced methods and models in the improvement suggestions for an organisation's current quality and project management systems
- Be able to identify and analyse risk factors for project portfolios and understand risk management systems, also with a strategic focus
- Be able to evaluate the effect of the implementation of suggested methods and models.

COMPETENCES

- Be able to understand and identify the connection between the quality system and a company's other control systems as well as relations to suppliers and customers in the value chain
- Be able to design and understand project management systems with conflicting success criteria, limited resources available and limited budgets
- Be able to analyse risk factors for a project portfolio, understand risk management systems and to turn risks into business opportunities.

TYPE OF INSTRUCTION

The course consists of a number of lectures as well as the student's independent learning effort. The form and extent of the course is determined and described in connection with planning the semester. The lesson plans, literature etc. are created in connection with this. The course is conducted as a combination of single-disciplinary, problem-oriented and cross-disciplinary fields of study, and it is structured from a work and evaluation form which combines skills and reflection:

- Lectures
- Class work

- Project work
- Workshops
- Exercises (alone and in groups)
- Teacher feedback
- Reflection on content
- Portfolio work.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|------------------------|---|
| Name of exam | Development of Quality, Risk, and Project Management Systems 2 |
| Type of exam | Written or oral exam |
| ECTS | 5 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Udvikling af kvalitets-, risiko- og projektstyringssystemer 2 |
| Module code | M-OSM-K2-4 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Spring |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Izabela Ewa Nielsen |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

GLOBAL IMPLEMENTATION

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in the 1st and 2nd Semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Holds knowledge of analytical and experimental methods for analysis of advanced engineering tasks.
- Understands the connection between theory and practice.

SKILLS

- Is able to solve complex business problems by applying advanced management engineering theory, methods and tools.
- Is able to evaluate and choose among potentially relevant theories, concepts and methodologies applied in the analysis and solution design of a practical business engineering problem.
- Is able to develop solution alternatives and evaluate consequences of solution alternatives and make a well-informed choice based on that.
- Is able to evaluate the relevance and limitations of the theories, concepts, methods and tools actually applied in the project.

COMPETENCES

- Is able to analyze and solve an actual problem of industrial relevance through application of systematic research and development processes, including advanced analytical, experimental and/or numerical methods and models.

TYPE OF INSTRUCTION

The project work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor.

The project may be carried out individually or in groups. The project may be finalized with a project report or in the form of a scientific paper with supporting appendices.

The total workload of the semester has to be equivalent to 30 ECTS. For further information about the organization of the module please see the Joint Programme Regulations.

EXTENT AND EXPECTED WORKLOAD

Since it is a 30 ECTS project module the expected workload is 900 hours for the student.

EXAM

EXAMS

| | |
|--------------|------------------------------|
| Name of exam | Global implementation |
| Type of exam | Oral exam based on a project |
| ECTS | 30 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Global implementering |
| Module code | M-OM-K3-1 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 30 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen , Harry Boer |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

GLOBAL IMPLEMENTATION A

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in the 1st and 2nd Semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Understands the connection between theory and practice.

SKILLS

- Is able to solve complex business problems by applying advanced management engineering theory, methods and tools.
- Is able to develop solution alternatives and evaluate consequences of solution alternatives and make a well-informed choice based on that.
- Is able to evaluate the relevance and limitations of the theories, concepts, methods and tools actually applied in the project.

COMPETENCES

- Is able to analyze and solve an actual problem of industrial relevance through application of systematic research and development processes, including advanced analytical, experimental and/or numerical methods and models.

TYPE OF INSTRUCTION

The project work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor.

The project may be carried out individually or in groups. The project may be finalized with a project report or in the form of a scientific paper with supporting appendices.

The total workload of the semester has to be equivalent to 30 ECTS. For further information about the organization of the module please see the Joint Programme Regulations.

EXTENT AND EXPECTED WORKLOAD

Since it is a 20 ECTS project module the expected workload is 600 hours for the student.

EXAM

EXAMS

| | |
|----------------|---|
| Name of exam | Global implementation A |
| Type of exam | Oral exam based on a project |
| ECTS | 20 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |

| | |
|------------------------|--|
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Global implementering A |
| Module code | M-OM-K3-8 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 20 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen , Harry Boer |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

PROJECT ELECTIVES

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in the 1st and 2nd Semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Holds knowledge of analytical and experimental methods for analysis of advanced engineering tasks.

SKILLS

- Is able to evaluate and choose among potentially relevant theories, concepts and methodologies applied in the analysis and solution design of a practical business engineering problem.

TYPE OF INSTRUCTION

The project work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor.

The project may be carried out individually or in groups. The project may be finalized with a project report or in the form of a scientific paper with supporting appendices.

The total workload of the semester has to be equivalent to 30 ECTS. For further information about the organization of the module please see the Joint Programme Regulations.

EXTENT AND EXPECTED WORKLOAD

Since it is a 10 ECTS project module the expected workload is 300 hours for the student.

EXAM

EXAMS

| | |
|------------------------|---|
| Name of exam | Project Electives |
| Type of exam | Oral exam based on a project |
| ECTS | 10 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Projekt med valgfrihed |
| Module code | M-OM-K3-9 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 10 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen , Harry Boer |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

IMPLEMENTATION IN GLOBAL OPERATIONAL SYSTEMS

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in the 1st and 2nd semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Demonstrate an understanding of strategic development or organizational design problems in the context of operations and supply chain management.
- Understands the connection between theory and practice.

SKILLS

- Is able to solve complex business problems by applying advanced management engineering theory, methods and tools.
- Is able to develop solution alternatives and evaluate consequences of solution alternatives and make a well-informed choice based on that.
- Is able to evaluate the relevance and limitations of the theories, concepts, methods and tools actually applied in the project.

COMPETENCES

- Is able to analyze and solve an actual problem of industrial relevance through application of systematic research and development processes, including advanced analytical, experimental and/or numerical methods and models.

TYPE OF INSTRUCTION

The project work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor.

The project may be carried out individually or in groups. The project may be finalized with a project report or in the form of a scientific paper with supporting appendices.

The total workload of the semester has to be equivalent to 30 ECTS. For further information about the organization of the module please see the Joint Programme Regulations.

EXTENT AND EXPECTED WORKLOAD

Since it is a 20 ECTS project module the expected workload is 600 hours for the student.

EXAM

EXAMS

| | |
|--------------|--|
| Name of exam | Implementation in Global Operational Systems |
| Type of exam | Oral exam based on a project |
| ECTS | 20 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--|
| Danish title | Implementering i globale virksomhedssystemer |
| Module code | M-OM-K3-10 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 20 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

ORGANISATION ANALYSIS AND DESIGN

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Account for theories and their paradigmatic underpinning on the design of industrial and professional service organisations
- Describe the impact of corporate and operations strategies, technologies and (competitive) environments on the design of such organisations

SKILLS

- Identify organizational design problems in industrial and professional service organization
- Operationalize these problems and collect relevant information concerning the industrial/competitive, strategic, technological, and organization design aspects describing these problems
- Analyse, evaluate and (re)design organisational designs in their contexts
- Apply concepts and theories to cases and (real-life) examples.

COMPETENCES

- Visualize in, for example, exercises and cases of:
 - The paradigms in organisation theory
 - The principles of organisation design, including division and coordination of labour, and the impact of key contextual characteristics (including strategy, technology and environment) on organisation design parameters
 - Decision making, and the role of power, politics, control and conflicts in organisations
 - The similarities and differences between designing and managing start-ups, mature, expert-based, innovative, diverse, networked and virtual organisations
 - The needs, challenges, dilemmas, dualities and paradoxes in combining exploration and exploitation.
- Take the lead in diagnosing and solving problems in organization designs of various types of industrial and professional service companies

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme curriculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|----------------|---|
| Name of exam | Organisation Analysis and Design |
| Type of exam | Written or oral exam |
| ECTS | 5 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |

| | |
|------------------------|--|
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--------------------------------|
| Danish title | Organisationsanalyse og design |
| Module code | M-OIM-K1-1 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Harry Boer |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

OPERATIONS DEVELOPMENT AND STRATEGY

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- A coherent and profound understanding of how and why operations globalise, including an in-depth knowledge of the associated theories and strategies
- Insight into the strategic analysis and synthesis of global operations footprints including the understanding of; the strategic situation; the process of globalisation; and the theory-based conceptualisation of operations strategy
- Knowledge of strategic configuration of operations, including structures and infrastructures, the extended operations system and strategic capabilities
- Knowledge about strategic innovation in an operations system context.

SKILLS

- Developed skills to evaluate different options and argue for specific choices for strategic design of global operations systems and operations development strategies, including recognising of competitive opportunities, configuring operations capabilities, organisational processes and organisational designs
- Developed relevant skills to apply theories and methods to the improvement and reorganisation of global operations
- Developed skills to identify and implement options for reorganisation and improvements in the context of global operations.

COMPETENCES

- Be able to discuss the complex of problems associated with globalisation of operations to outline the different paths and strategies a company may choose
- Develop abilities to craft and implement relevant operations strategies.

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme curriculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

PREREQUISITE FOR ENROLLMENT FOR THE EXAM

- Hand-in of written assignment

EXAMS

| | |
|--------------|-------------------------------------|
| Name of exam | Operations Development and Strategy |
| Type of exam | Written or oral exam |
| ECTS | 5 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--|
| Danish title | Global produktionsudvikling og -strategi |
| Module code | M-OIM-K1-3 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Brian Vejrum Wæhrens |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

PROJECT ORIENTED STUDY IN AN EXTERNAL ORGANISATION

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in the 1st and 2nd Semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Holds knowledge of analytical and experimental methods for analysis of advanced engineering tasks.
- Understands the connection between theory and practice.

SKILLS

- Is able to solve complex business problems by applying advanced management engineering theory, methods and tools.
- Is able to evaluate and choose among potentially relevant theories, concepts and methodologies applied in the analysis and solution design of a practical business engineering problem.
- Is able to develop solution alternatives and evaluate consequences of solution alternatives and make a well-informed choice based on that.
- Is able to evaluate the relevance and limitations of the theories, concepts, methods and tools actually applied in the project.

COMPETENCES

- Is able to analyze and solve an actual problem of industrial relevance through application of systematic research and development processes, including advanced analytical, experimental and/or numerical methods and models.

TYPE OF INSTRUCTION

The project work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor.

The semester is completed as a project-oriented stay in a company where the student is included in the company's daily work and carry out independent project work on an industrial problem relevant for the company. Concurrent to the work in the company, the student makes a project report, which is evaluated after the ending of the stay. A project-oriented stay in a company has to be approved by the study board.

EXTENT AND EXPECTED WORKLOAD

Since it is a 30 ECTS project module the expected workload is 900 hours for the student.

EXAM

EXAMS

| | |
|--------------|--|
| Name of exam | Project Oriented Study in an External Organisation |
| Type of exam | Oral exam based on a project |
| ECTS | 30 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Projektorienteret forløb i en virksomhed |
| Module code | M-OM-K3-6 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 30 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen , Harry Boer |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

MASTER'S THESIS

2024/2025

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Has attained thorough understanding of a broad range of theoretical and experimental methods within the area of specialization.

SKILLS

- Is able to apply scientific methods to solve a wide variety of problems within the field of advanced operations management.
- Is able to participate in and/or lead projects within the field of advanced operations management.

COMPETENCES

- Is able to work independently with a project on a specific problem within their field of interest on the highest possible level within their specialization.
- Is able to conduct technological development and research, and solve complex problems using scientific methods.
- Can plan, execute and report an extensive individual research project within an agreed time frame.
- Can take part in both discipline-specific and interdisciplinary cooperation to solve complex problems.
- Is able to compare and critically evaluate the results of the project in relation to existing knowledge and accepted theories within the subject area.
- Is able to communicate a balanced view of the results and conclusions of the project in well-organized written and oral presentation.
- Is competent to solve new and complicated technical problems.

TYPE OF INSTRUCTION

In this module, the Master's Thesis is carried out. The module constitutes independent project work and concludes the programme. Within the approved topic, the Master's Thesis must document that the level of the programme has been attained.

EXTENT AND EXPECTED WORKLOAD

Since it is a 30 ECTS project module the expected workload is 900 hours for the student.

EXAM

EXAMS

| | |
|-----------------|---|
| Name of exam | Master's Thesis |
| Type of exam | Master's thesis/final project |
| ECTS | 30 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | External examination |

| | |
|------------------------|--|
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |
|------------------------|--|

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Kandidatspeciale |
| Module code | M-OM-K4-1 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Spring |
| ECTS | 30 |
| Language of instruction | English |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen , Harry Boer |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

INNOVATION AND CHANGE MANAGEMENT

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge gained on the 1st Semester of the Operations and Innovation Management programme.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Understand the role of technology, and various forms of innovation and change (including incremental/radical, business process redesign/continuous improvement, product/process/position/paradigm, business model) in established and emerging businesses
- Understand the characteristics and drivers of innovation and change, as well as the practical means of handling them in a business context
- Understand the range, scope and complexity of challenges related to the management of technology, innovation and change
- Understand organizing for and management/leadership of innovation and change, including aspects of culture, power and politics, enablers of and barriers to change, factors of innovation success and failure

SKILLS

- Describe, analyze and redesign innovation and change management processes
- Identify and analyze the field of innovation and change management including the value position of stakeholders; customers, suppliers and other network partners
- Design, evaluate and audit the innovative and change capabilities of a business organization
- Apply principles of business model innovation and risk management to suggest redesign and improvement of business models

COMPETENCES

- Realize and implement innovation- and change management initiatives, including the design, implementation and execution (management/leadership) of innovation and change management projects in companies, supply chains and networks, as well as relating practical innovation and change management experiences to conceptual understanding of innovation leadership and change management

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme curriculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|--------------|----------------------------------|
| Name of exam | Innovation and Change Management |
| Type of exam | Written or oral exam |
| ECTS | 5 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|--|
| Danish title | Innovations- og forandringsledelse |
| Module code | M-OIM-K2-1 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Spring |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Frank Gertsen , Astrid Heidemann Lassen |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

GLOBAL BUSINESS PERFORMANCE

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge gained on the 1st Semester of the Operations and Innovation Management programme.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Understand various perspectives and theories that inform the formation and functioning of contemporary extended enterprise which consist of the focal company and its suppliers
- Understand complexity management principles and tool kits based on systems science and systems methodology
- Account for various orientations of companies' operations systems (technology, innovation, cost, quality, flexibility) and can explain how these orientations affect performance management and control
- Understand risk types (both internal and external) and their impacts in extended enterprises
- Understand the principles of value stream costing, using value stream mapping and business process re-engineering
- Understand and can explain value engineering, target costing and chained target costing in cooperation between the focal company and its 1st, 2nd, etc. tier suppliers
- Understand total cost of ownership (TCO), differentiated on the basis of product-/supplier type, techniques in the form of 'Monetary-based method' (Activity Based Cost Systems), 'Cost-ratio/value-based method' and 'Mathematical programming decision model'
- Understand and can explain supply chains financial and non-financial performance and its sensitivity as a function of the market and selected divide between push and pull operations
- Understand and can explain conflicting and colliding cases of Lean and the company's financial management and reporting, as well as possible solutions, including financial reporting that complies with Lean's seven waste categories

SKILLS

- Conduct analysis and evaluation of operations performance in the context of extended enterprises
- Use tools and techniques for measuring and managing performance of activities that cross both geographical and organizational boundaries
- Initiate performance improvement programs and their implementation in contemporary extended enterprises

COMPETENCES

- Identify and diagnose problems with performance management systems in contemporary extended enterprises
- Conceive appropriate performance management system designs
- Take responsibility for implementation and control of operations performance management systems in contemporary extended enterprises

TYPE OF INSTRUCTION

The teaching is organized in accordance with the general form of teaching. Please see the programme curriculum §17.

EXTENT AND EXPECTED WORKLOAD

Since it is a 5 ECTS course module the expected workload is 150 hours for the student.

EXAM

EXAMS

| | |
|------------------------|---|
| Name of exam | Global Business Performance |
| Type of exam | Written or oral exam |
| ECTS | 5 |
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Præstationsmåling og -vurdering af globale forretningsprocesser |
| Module code | M-OIM-K2-2 |
| Module type | Course |
| Duration | 1 semester |
| Semester | Spring |
| ECTS | 5 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Jesper Hemdrup Kristensen |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |

IMPLEMENTATION IN GLOBAL BUSINESS SYSTEMS

2024/2025

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

This module is based on knowledge obtained in the 1st and 2nd semester

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Demonstrate an understanding of risk, quality or project control challenges in the context of operations and innovation management.
- Understands the connection between theory and practice.

SKILLS

- Is able to solve complex business problems by applying advanced management engineering theory, methods and tools.
- Is able to develop solution alternatives and evaluate consequences of solution alternatives and make a well-informed choice based on that.
- Is able to evaluate the relevance and limitations of the theories, concepts, methods and tools actually applied in the project.

COMPETENCES

- Is able to analyze and solve an actual problem of industrial relevance through application of systematic research and development processes, including advanced analytical, experimental and/or numerical methods and models.

TYPE OF INSTRUCTION

The project work is carried out as an independent work process in which the students themselves organize and coordinate their workload in collaboration with a supervisor.

The project may be carried out individually or in groups. The project may be finalized with a project report or in the form of a scientific paper with supporting appendices.

The total workload of the semester has to be equivalent to 30 ECTS. For further information about the organization of the module please see the Joint Programme Regulations.

EXTENT AND EXPECTED WORKLOAD

Since it is a 20 ECTS project module the expected workload is 600 hours for the student.

EXAM

EXAMS

| | |
|--------------|---|
| Name of exam | Implementation in Global Business Systems |
| Type of exam | Oral exam based on a project |
| ECTS | 20 |

| | |
|------------------------|---|
| Permitted aids | Information about allowed helping aids for the examination will be published in the description of the semester/module. |
| Assessment | 7-point grading scale |
| Type of grading | Internal examination |
| Criteria of assessment | The criteria of assessment are stated in the Examination Policies and Procedures |

FACTS ABOUT THE MODULE

| | |
|----------------------------|---|
| Danish title | Implementering i globale forretningsystemer |
| Module code | M-OM-K3-11 |
| Module type | Project |
| Duration | 1 semester |
| Semester | Autumn |
| ECTS | 20 |
| Language of instruction | English |
| Empty-place Scheme | Yes |
| Location of the lecture | Campus Aalborg |
| Responsible for the module | Kjeld Nielsen |

ORGANISATION

| | |
|-----------------|---|
| Education owner | Master of Science (MSc) in Engineering (Management Engineering) |
| Study Board | Study Board of Production |
| Department | Department of Materials and Production |
| Faculty | The Faculty of Engineering and Science |