

CURRICULUM

Master of Engineering (MEng), Technological Competence Management

The Master's Programme in Engineering provides you with a solid foundation for development work in technology. In your studies, you will deepen your competence in leadership and other aspects of technological competence management while combining your studies with a development project in your own organisation or business sector. The programme enables you to upgrade your degree and competences.

Degree

Degree Title	Master of Engineering (MEng)
Extent	60 cr. / 1-2 years

Typical Tasks for Graduates

Studies in the Master's Programme in Engineering will enable the development of abilities and skills for expert and supervisory positions in private, public or third-sector organisations. After graduating, you will have skills to continually update your professional competence and further develop your expertise. You will be able to anticipate plausible changes in the operative environment and estimate their effects in the strategic planning of the organisation. Moreover, you will be able to recognise developmental needs in organisations and evaluate and choose correct development measures. You will also develop your strategic competence and well as your abilities in Customer Relations Management and Human Relations Management.

A Master's Degree in Engineering will give you the ability to operate in expert and management positions in business, public administration or third sector. Job titles after graduation could include: development manager, project manager, production manager, quality manager, department or section manager, managing director or entrepreneur.

Implementation of Studies

As a graduate, you will be a competent professional with the technological competence management skills and abilities that enable you to responsibly manage and develop organisations and work communities. Your studies will enable you to become a practitioner with strong research and development competence. In addition, you will strengthen your theoretical knowledge in your own area of expertise and learn to understand the factors involved in strategic planning and change processes. Moreover, you will have the capability to adapt to changes and apply your own leadership and management approach according to the situation.

The programme is implemented through blended learning and it takes into account the challenges of time management among adult students. There will be 2-4 contact teaching days per month. At the beginning of studies, each student designs his/her individual study plan together with the principal lecturer in charge of the programme.

Structure and Content of Studies

Your studies include advanced professional studies (55 cr.) and optional studies (5 cr.) The aim of the advanced professional studies is to deepen your ability to apply theoretical knowledge to your own or another organisation. The studies will enable you to develop your analytical and social skills, your abilities in project management and research and development work. The advanced professional studies also include a 30-credit thesis, which you will carry out in cooperation with the commissioning organisation and which is based on an actual development idea or problem at the workplace.

The contents of studies include self-management, values and development of leadership, strategic planning and management, and methods of proactive management. Additionally, the studies contain such courses as Development Competence, International Development Competence and Management of Human Resources

The optional studies can include e.g. Sustainable Management, Managing Research and Development Work, Quality Management and Enterprise Resource Planning.

TECHNOLOGICAL COMPETENCE MANAGEMENT

Master of Engineering (MEng)

60 cr / 1-2 years



Strategic Competence | Leadership Competence | Development Competence | Ethical Competence | International Competence | Learning Skills | Innovation Competence | Working Community Competence

2 nd year		RESEARCHING DEVELOPER OF PROFESSIONAL PRACTICE	
Thesis	10/30 cr	Thesis	15/30 cr
Optional Studies	5 cr		
1 st year		DEVELOPER OF PROFESSIONAL PRACTICE	
Human Resource Management	5 cr	Thesis	5/30 cr
Strategic Planning and Management	5 cr	Methods of Proactive Management and Leadership	5 cr
Leadership Development Plan 2	1 cr	Development Competence	5cr
Leadership Development Plan 1	1 cr	or	
Value Management	2 cr	International Development Competence	5 cr
Self-Management	1 cr		

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Competence Requirements

Competence	Competence Description Master of Engineering (MEng)
Strategic Competence	<ul style="list-style-type: none"> - can anticipate changes in the operative environment and estimate their impact on the strategic planning of the organisation. - is able to make purposeful strategic choices for the organisation. - is able to set strategic organisational objectives and to determine supportive measures together with personnel and management.
Leadership Competence	<ul style="list-style-type: none"> - is able to plan, implement and develop the operations of the organisation. - understands the importance of leadership and supervision for the organisation and can develop them according to the organisational objectives. - is able to support and motivate the personnel in demanding situations of change. - is able to reflect on his/her own actions and make changes when necessary.
Development Competence	<ul style="list-style-type: none"> - is able to recognise the developmental needs of an organisation and choose appropriate development measures. - is able to manage, plan and implement organisational development projects. - knows versatile developmental methods and is able to apply them in his/her own work.
Ethical Competence	<ul style="list-style-type: none"> - is able to assume responsibility for his/her community and the consequences of its actions. - is able to apply the code of professional ethics of his/her field as an expert and developer of professional practice. - is able to make decisions and take into account various individual and collective perspectives. - is able to promote and implement equality principles at work. - is able to promote the principles of sustainable development and social responsibility. - is able to lead and manage a business with a social impact based on ethical principles.

Innovation Competence	<ul style="list-style-type: none"> - is able to produce new information and renew working methods by innovatively combining knowledge from various fields. - is able to manage projects. - is able to manage research, development and innovation projects and use different research and development methods. - is able to develop a customer-oriented, sustainable and profitable business.
International Competence	<ul style="list-style-type: none"> - is able to communicate internationally in professional and development assignments. - is able to operate in various international environments. - is able to anticipate the opportunities and effects of internationalisation at work in his/her own professional field.
Learning Skills	<ul style="list-style-type: none"> - is able to assess and develop one's competences and learning methods. - is able to retrieve, process and analyse information critically. - can assume responsibility for team learning and knowledge sharing.
Working Community Competence (Workplace Skills)	<ul style="list-style-type: none"> - is able to function as a member of a work community and contribute to its well-being. - is able to function in various communication and interaction situations at work. - is able to use information and communication technology in the tasks of one's field. - is able to create business contacts and to work in professional networks. - is able to make decisions in new and unforeseeable situations. - is able to manage and supervise work and to work independently in expert positions. - has entrepreneurial skills and abilities.