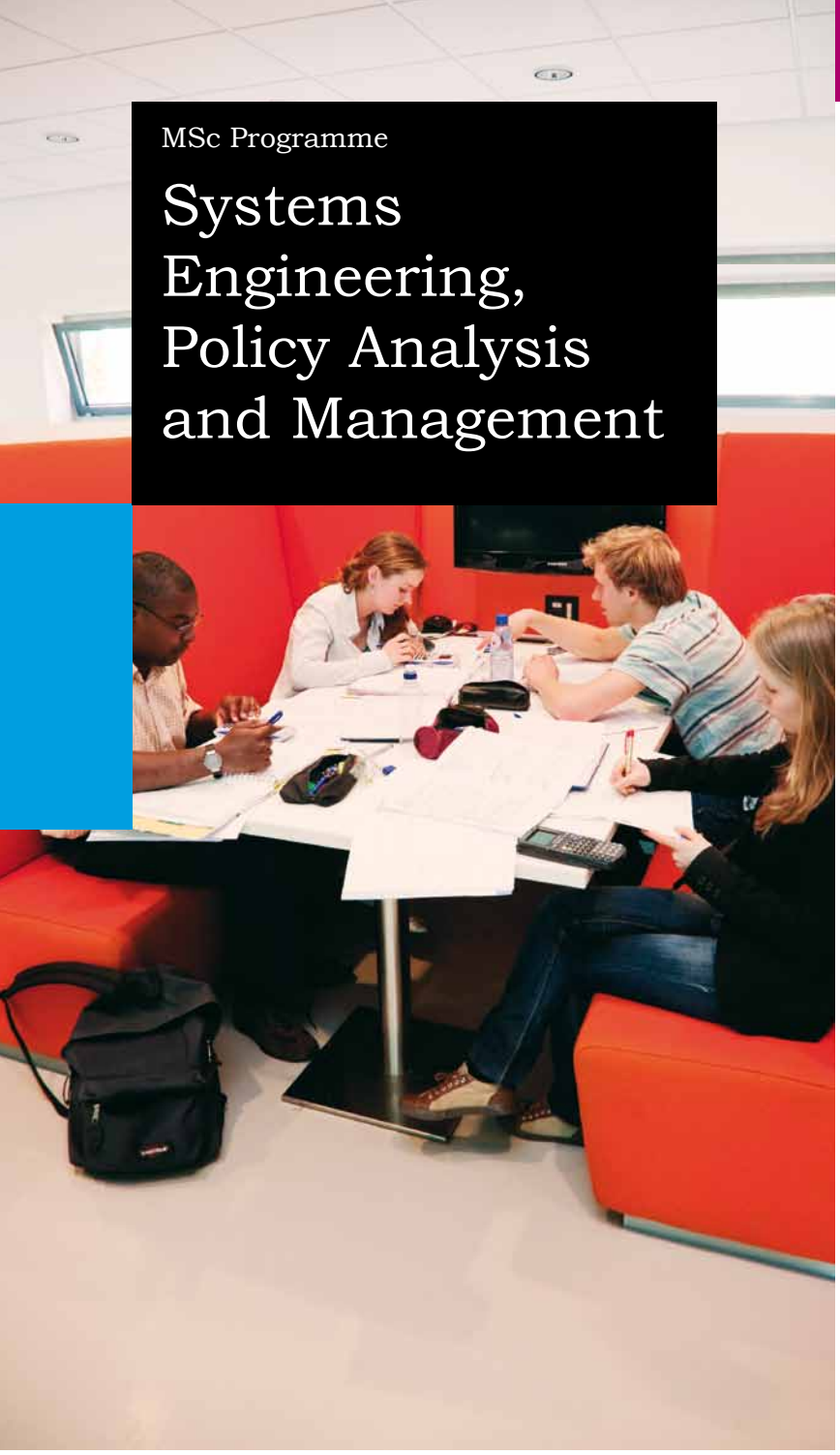
MSc Programme

Systems Engineering, Policy Analysis and Management



In an interdependent world, organisations are continuously faced with the challenge of designing solutions that use the newest technology and satisfy stakeholders with widely divergent interests. This demands engineers having a range of skills rarely taught in one programme. The purpose of the Master's Programme in Systems Engineering, Policy Analysis and Management (SEPAM) is to give students the ability to solve large and complex problems in which social, political, organisational and technical elements must all be given consideration. In this programme, you will specialise in one specific technological domain: information and communication; energy and industry, transport and logistics, or built environment and spatial development. Within that domain, you will deal with complex issues both systematically and creatively.

You will learn to make sound judgments in the absence of complete data and to communicate your conclusions clearly to specialist and non-specialist audiences. You will be challenged to look beyond the technical design and deal with essential socio-political processes, including change management, that are crucial to implement designs in the public arena or business.

At the intersection of technology, organisation and governance

As a graduate you will have the opportunity to act autonomously in planning and implementing tasks at a professional level, to design solutions, to manage the change process, and to think critically about the proposed solutions to real-world problems under discussion in contemporary society.

Programme domains

In the first year students choose one of the following domains:

- **Information & Communication (I&C):** the focus in I&C is on the development of designs for ICT (mobile) systems and services.
- **Energy & Industry (E&I):** some examples are eco-industrial parks and infrastructure for electrical and gas delivery.
- **Transport and Logistics (T&L):** topics in this domain include the movement of persons or freight, and traffic management for road, rail, air and water.
- **Built environment & Spatial development (B&S):** this domain focuses on the formulation of integrated strategies for spatial development and the restructuring of urban areas.

Students may also choose the Information Architecture track, offered in collaboration with the Faculty of Electrical Engineering, Mathematics and Computer Science. In this track students will acquire in-depth knowledge of business processes, information systems and ICT infrastructures.

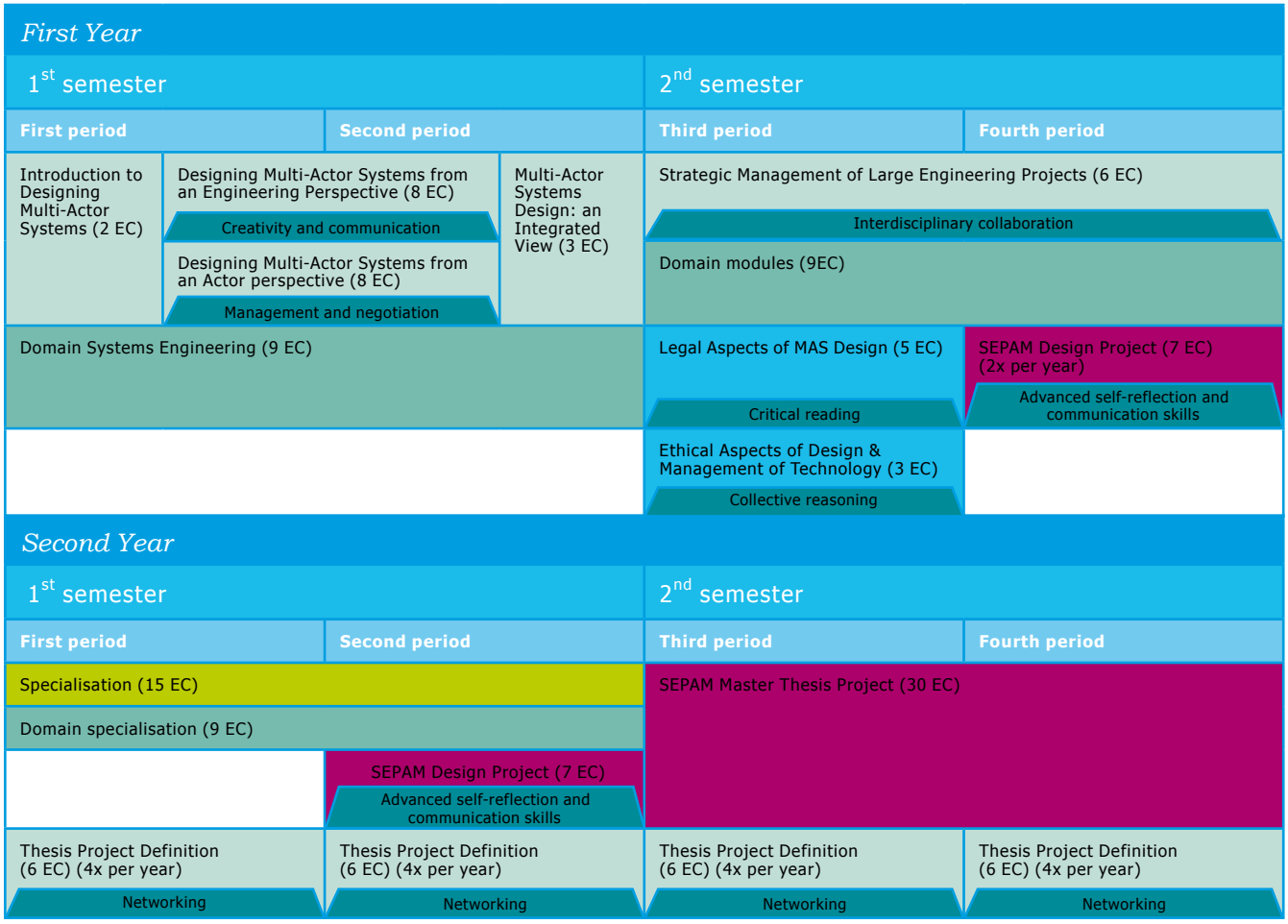
Within your selected domain, you will choose one of the following specialisations[1]:

- ICT Management and Design
- Infrastructure and Environmental Governance (annotation)
- Innovation Systems
- International Finance & Economics
- Modelling, Simulation and Gaming
- Research Specialisation
- Safety and Security

[1] Specialisations are subject to constant change; for the most recent information about the specialisations, please visit the website.

Systems Engineering, Policy Analysis and Management curriculum

During one semester you will have the opportunity to go abroad and/or to conduct an external project.



Foundations | Ethics and Law | Domain Specialisation | Project | Skills

• 1 EC = 28 hrs study, according to the European Credit Transfer System (ECTS) • One academic year = 60 EC • Total amount of credits MSc programme = 120 EC

Career prospects

SEPAM graduates are equally comfortable speaking to technical experts and to management, and often work in interdisciplinary environments. They are much appreciated for their systematic approaches to problem solving, their analytical thinking and their tendency to ask the right questions. SEPAM graduates typically accept positions as project managers, policymakers and (strategic) consultants. Many SEPAM graduates currently work in large organisations such as Shell, Unilever, and Heineken, consultancy firms such as Accenture and McKinsey, engineering firms such as Arcadis and Heijmans, insurance companies, financial institutions, or governmental ministries and agencies. In addition, a substantial number have launched their own ventures.

Admission requirements

- Graduates with a multi-disciplinary Bachelor's degree from a Dutch HBO are eligible for admission after following a bridging course.
- Applicants with a relevant multidisciplinary technical Bachelor's degree from a Dutch university are eligible for admission. Technical domain choice will depend on the subject studied in the Bachelor's programme. Applicants with a mono-disciplinary technical Bachelor's degree are eligible for admission but must first complete the SEPAM minor.
- International applicants: Prospective students are advised to contact one of the academic counsellors.

For further information: www.sepam.msc.tudelft.nl

Academic Counsellors
Drs. Marja Brand and Drs. Danielle Rietdijk T +31 (0)15 27 89801 E studieadviseurs-tbm@tudelft.nl

International Academic Counsellor
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