

## Opleiding

### **Toegekend diploma**

Master of Science

### **Programmaduur**

18 maanden

### **ECTS credits**

90

### **Niveau eindkwalificatie**

Master

### **Vorm**

Voltijd

### **Taal**

Engels

### **School**

Instituut voor Engineering

### **Locaties**

Groningen

## Energy for Society

### **Programmabeschrijving**

The energy transition is one of the great challenges that societies are facing nowadays. In line with the strategy and vision of the Institute of Engineering, the master E4S contributes to strengthening livable and sustainable societies, including energy transition, circularity and sustainability with and for all societal stakeholders. Recent events in the world have shown that the energy transition is a dynamic transition process that impacts every country, every region and every person. The master E4S educates professionals who help communities at local and regional level (villages, neighbourhoods and organisations) to make the transition from fossil energy to more sustainable sources of energy, with possible impact on (inter)national level.

The master programme focuses on the societal aspects of the energy transition from a transdisciplinary perspective. Graduates are able to understand policies on local, national and international level, as well as micro, meso- and macro level dynamics. The master programme educates energy transition professionals who can accelerate change from different perspectives by connecting people and innovative ideas. They do this in the broad context of societal, political and economic realities, technological possibilities, legal frameworks, governance and environmental factors, using a research based systems approach. Analyzing which stakeholders are involved, bringing them together, bridging gaps and breaking down barriers is an important role for future energy transition professionals. Students learn to analyze the context of systems and design interventions to accelerate the energy transition within this context. Navigating the growing complexity of conflicting interests within the system and translating these into effective and accepted interventions requires a reflective approach and interaction with the (social) environment.

### **Leeruitkomsten**

- The energy transition professional can, on the basis of acquired theoretical and practical knowledge, analyse the dynamics in the energy transition
- The energy transition professional can co-create a vision on energy transition pathways and communicate about this vision in an effective and convincing manner to professionals, non-professionals and academic audiences.
- The energy transition professional can realise a system innovation strategy by mobilising and connecting relevant stakeholders
- The energy transition can advise on the implementation of an energy transition strategy by formulating concrete interventions
- The energy transition professional can facilitate and engage multidisciplinary groups in energy transition processes and enable these groups to reflect in an iterative way on the transition process.
- The energy transition professional can balance long term and short term objectives and can navigate conflicts of interests between stakeholders at different levels (micro, meso and macro).
- The energy transition professional can recognise the moral dimensions of a situation and considers these in his approach to energy transition processes
- The energy transition professional can design, carry out and evaluate practice-based research in support of interventions, thereby contributing to the innovation of the profession in the field.
- The energy transition professional can independently and self directly shape his own professional development and the development of others in a (learning) community.

## Programma

### **Energy for Society**

### **credits**

Investigating Energy Transition	30
▫ ESVM21PSS - Politics for the Sustainable Society	5
▫ ESVM21LASS - Legal Aspects for the Sustainable Society	5
▫ ESVM20CB - Communication & Behaviour for the Sustainable Society	5
▫ ESVM19ETS - Energy Technologies and Systems for the Sustainable Society	5
▫ ESVM21ESS - Economy for the Sustainable Society	5
▫ ESVM20SRM - Science & Research Methodology	5
Making Energy Transition happen	30
▫ ESVM21BCEL - Building Communities and Energy Landscapes	10
▫ ESVM21GRO - Governance, Responsibility and Ownership	10
▫ ESVM21CCS - Changing Complex Systems	10
Graduation Programme	30
▫ ESVM20PDT - Professional Development Track	5

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