

Scholarships for HCMUT/HCMIU students

Do you want to have a semester in Norway taking courses or doing your master project within Micro and Nano Systems Technology or Embedded Systems? University College of Southeast Norway can offer three exchange scholarships for HCMUT/HCMIU students for the spring semester 2018.

University College of Southeast Norway (HSN) is a multi-campus institution offering master programmes in [Micro and Nano Systems Technology](#) and [Embedded Systems](#). Students from HCMUT and HCMIU are welcome to apply for an exchange period spring semester 2018 at one of these programmes. More information about the programmes can be found if you check out the links above. When applying, the student should list the courses he or she wants to follow. Be aware that only courses from **one** programme can be selected as they are offered at different campuses. If interested in doing a project at HSN please indicate that in your application. The list of courses can be found below.

General Requirements

Applicants must

- be enrolled as a master student in Electronics and Telecommunication graduate programs at either Ho Chi Minh City University of Technology (HCMUT), Faculty of Electrical & Electronic Engineering or International University, Ho Chi Minh City (HCMIU), School of Electrical Engineering. **NOTE that applications from other institutions or departments/schools will not be accepted.**
- have a cumulative grade point average in the BSc grade equivalent to, or better than, a C in the ECTS system.
- provide proof of English proficiency. HSN accept IELTS with a minimum overall score of 6.0 (Academic test) or TOFEL with a minimum score of 550 (paper based), 213 (computer based) or 80 (internet based).

Academic Requirements

- **Micro and Nano Systems Technology:** BSc in Engineering in micro/nano systems technology, electrical/electronic engineering, mechanical engineering, chemical engineering, bioengineering, physics or materials science. In the bachelor degree, the student should have completed at least 25 ETCS in mathematics, a course in electrostatics/electromagnetism and a basic course in analogue electronics.
- **Embedded Systems:** BSc in Engineering within either Computer Science or Electrical Engineering. Knowledge of object-oriented programming is an advantage.

Application Deadlines and Application Form

The application deadline is **15 September 2017**. Kindly include the following documents in your application (all in English):

- Application Form
- Transcripts from your bachelor degree and completed courses at master level
- Letter of Motivation
- English proficiency test

Send the application to kristin.imenes@usn.no as one merged pdf-file.

Interview

Qualified applicants will be called for interviews shortly after the application deadline.

What Does the Scholarship Cover?

Selected students will be granted an amount not exceeding NOK 73 000 for the exchange to University of Southeast Norway (HSN) for the spring semester 2018. The exchange is part of NORPART partnership program between HSN and HCMUT/HCMIU. The award will cover travelling expenses, insurance, visa cost, housing and living expenses in the duration of the student exchange.

Contact Persons

HSN: Kristin Imenes, programme manager, kristin.imenes@usn.no

HCMUT: Cuong Huynh, hpmcuong@hcmut.edu.vn

HCMIU: Ngoc Truong Minh Nguyen, nntminh@hcmiu.edu.vn

Available courses

<p><u>Micro and Nano Systems Technology</u> Campus Vestfold</p>	<p><u>Embedded Systems</u> Campus Kongsberg</p>
<p><u>Electronic System Design (10 credits)</u> Advanced course for electronic system covering:</p> <ul style="list-style-type: none"> • general design, performance, and characterizations of electronic systems in which MEMS device will be widely used • principles of sensing and MEMS sensor design • interface technology for MEMS sensors • digital and analog circuits for signal conditioning 	<p><u>Software/Hardware co-development of Embedded Systems (10 credits)</u> Co-development is the set of emerging techniques and methodologies which allow for the simultaneous design of hardware and software, facilitated by a holistic view which profits by modern development process models and non-fragmented tool chains. The course will give an overview of Embedded systems, design productivity, development metrics and cost models, processor technology, tool chains, co-modelling from specification through analysis and design to implementation, co-validation and co-verification, the power dissipation bottleneck Energy efficient co-synthesis and power-saving software and hardware techniques</p>
<p><u>Measurement and Characterisation (10 credits)</u> The student will gain in-depth competence of useful characterization techniques relevant for micro and nanotechnology:</p> <ul style="list-style-type: none"> • Scanning and transmission electron microscopy • Spectroscopy • X-ray diffraction and imaging • Atomic force microscopy • Advanced optical microscopy • Optical thin film measurements • C-V and I-V tests 	
<p><u>Introduction to BioMEMS (10 credits)</u> BioMEMS is an abbreviation of biological/biomedical microelectromechanical systems (MEMS). This interdisciplinary subject represents the merger between biology, chemistry, physics, mechanical and electrical engineering and introduces the tools required to design and understand BioMEMS. Main application areas will be addressed together with the classification system governing approval for medical use.</p>	<p><u>Project (20 or 30 credits)</u> The student is given a specialized task within science and/or engineering. The student is expected to work independently, acquire knowledge from various sources, including textbooks and scientific literature, evaluate the results critically, and present the results in a thesis report. The work will be documented scientifically through a written thesis according to recognized guidelines. The project is carried out over a predetermined period and ends with an oral presentation of the work.</p>
<p><u>MEMS Design (10 credits)</u> Designing microelectromechanical systems (MEMS), such as sensors, actuators and generators requires the ability to analyze and synthesize devices working in several physical domains. This course gives an introduction to modelling and design of MEMS devices based on multiphysics, i.e coupled electrical, magnetical, mechanical and thermal phenomena.</p>	
<p><u>Project (10, 20 or 30 credits)</u> The student is given a specialized task within science and/or engineering. The student is expected to work independently, acquire knowledge from various sources, including textbooks and scientific literature, evaluate the results critically, and present the results in a thesis report. The work will be documented scientifically through a written thesis according to recognized guidelines. The project is carried out over a predetermined period and ends with an oral presentation of the work.</p>	
<p><u>Norwegian Society and Language (5 credits)</u> The course introduces “the Nordic model” as an economic and political system and how this model has contributed to the high level of innovation, affluence and welfare that characterizes the Nordic countries today. The student will also learn the basic Norwegian vocabulary in order to communicate in everyday routine situations.</p>	