

Software Technology



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Advanced software engineering

Industry is facing various challenges. Systems are becoming more complex and interconnected. They have to be developed in an increasingly competitive global market, with shrinking resources and a shorter time-to-market.

The Software Technology (ST) programme is a challenging post MSc training programme in advanced software engineering. As a participant you will focus on developing and strengthening your technical and non-technical competencies related to the design and development of software for potentially resource-constrained software-intensive systems such as real-time embedded systems.

Programme structure

Course part

The training part of the ST programme takes twelve months, with a variety of training on various relevant technology issues (e.g. usage modeling, real-time scheduling, design patterns) and management issues related to the design and development of resource-constrained software-intensive systems (e.g. personal software process, project management, quality control and assurance). All trainings are created

especially for the programme and have the character of projects, without written or oral examination. Many of the facilitators come from industry. The programme organizes excursions to companies on a regular basis, to develop knowledge and awareness of how things work in practice.

Practical part

The practical part of the ST programme is divided into two parts: in-house and on-site. Both are provided and facilitated by industry partners.

The goal of the in-house workshop (three months) is to provide experience on how to manage a real-life product development project in the context of a new technology domain. You will work in a large team, have to deal with incomplete information, the existence of uncertainties etc., and apply the techniques and methods acquired during the various trainings. The on-site practical experience (nine months) consists of an industrial design and development project that covers a large part of the software development life cycle.

The projects aim at establishing a self-managed process that leads you from initial vague requirements to a concrete product fulfilling the

wishes and needs of the customer. In recent years the participants have been involved in projects at various Dutch and foreign industries such as (but not limited to) Philips Research Laboratories, Philips Applied Technologies, Philips Medical Systems, NXP, Philips TASS, Océ Research & Development, ASML, TNO Defense, Security and Safety, Siemens VDO, Embedded Systems Institute, and LogicaCMG.

Career perspective

After successfully completing all requirements, you are awarded a PDEng diploma. Most graduates find jobs like software designer or software architect (including senior positions) and, in the long term, system architect. Some will be project leaders, others will be specialists on one or two aspects, or generalists with specialist knowledge. After successfully completing the ST programme your career growth can be steeper than those who have not. You are usually given more responsibility on the job, or more interesting projects.

Application

Although more than 120 candidates are interested in participating in the ST programme every year, only 20 to 25 are admitted to the programme after a highly competitive selection. Candidates should be highly motivated, ambitious, talented students and young professionals who are willing to invest two years to be trained for a career in (Dutch) industry. To be admitted to the programme you need to have an accredited and recognized MSc degree in computer science or a strongly related scientific or engineering discipline. You need to have better than average social and communicative competencies, including an excellent English proficiency in writing and speaking. Send a letter of motivation and an extended curriculum vitae by email to the address shown on the back of the cover.

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The 3TU. School for Technological Design, Stan Ackermans Institute offers ten two-year postgraduate technological designer programmes. This institute is a joint initiative of the three technological universities of the Netherlands, Delft University of Technology, Technische Universiteit Eindhoven and University of Twente. More information: www.3TU.nl/SAI.

