



Climate KIC Education

Creating a community of knowledgeable and entrepreneurial climate change innovators

Climate-KIC's education and training programmes will instil climate-change entrepreneurship into hundreds of top students and leading practitioners every year by combining climate change science and entrepreneurship with a strong programme of active learning and exposure to KIC innovation. This process has already begun with the Climate-KIC Summer School 2010 and will be further developed in 2011 through scholarships, fellowships, and executive education.

Climate-KIC Summer School

The first Climate-KIC Summer School, covering a broad range of climate science and business topics, ran from the 5th of July to the 13th of August 2010. Top international students were selected to undertake this contextual learning journey across Paris, London, and Zurich. 44 students successfully completed the Summer School, with 9 teams developing promising business ideas. Three of these ideas have already been taken forward into active projects:

- Cloud Factory: Master thesis started (project: Re-use waste heat / Aquasar)
- DeCo!: coaching and access to grant organizations to finance pilot
- ElectricFeel: coaching and 3 months stipend from ETH Zurich

Climate-KIC education programmes

1. Scholars programme

A programme for Climate-KIC Masters students that is implemented with existing Masters courses.

Overview of the scholars programme:

- The programme will select international scholars from top talent for entrepreneurial aptitude
- Students enrol at partner institutes and the final award is from the home University with EIT label
- Modules consist of: Face-to-face and e-learning courses taught by academic and non-academic lecturers, a contextual learning journey across two European locations focusing on two R&I themes, and internships or research projects with partner organisations

2. Fellows Programme

Climate-KIC PhD students participate in the scholars programme and it is optional for other Climate-KIC researchers.

Overview of the fellows programme:

- The programme will select international scholars from top talent for entrepreneurial aptitude
- Students enrol at partner institutes, participate in the scholars programme in their first year, and the final award is from the home University with EIT label
- Student teams work on problem-oriented research projects defined by the KIC
- Collaboration across nodes via virtual environments and regular face-to-face skill building modules

3. Executives Programmes

Programmes for managers and change agents in private and public sectors.

Overview of the executives programme:

- Aims to attract 100 Associates per year
- Courses taught at partner institutes leveraging e-learning environment and block taught courses shared with Scholars and Fellows
- Facilitation of community building with academics, e.g. through secondments and joint events
- KIC Festival to mark the end of the first year courses and attract Executive Associates

4. Learning support and outreach

A set of electronic materials will be developed to provide background learning for Scholars and Fellows, and ensure access to learning at other sites. This material will be made open source and available to the wider community.



EIT ICT Labs - Education Strategy

Prof. Hannu Tenhunen
Education Coordinator
EIT ICT Labs
hannu@kth.se

EIT ICT Labs has the strategic ambition to equip students, researchers and teachers with skills for creativity, risk taking and entrepreneurial capacity by catalyzing and renewing the key educational programs at master and PhD level. The guiding principles are (i) robust entrepreneurship education, (ii) broad stake-holder integration to educational programs, and (iii) hands-on experience on innovation and entrepreneurship. The aim is to breed entrepreneurial talent through broad educational activities.

A number of coherent and joint European wide catalyst will be deployed to existing and new local educational programs , which are integrated at European level to innovation action lines in (i) Master School, (ii) Graduate School, (iii) Post-doctoral program, and (iv) Outreach towards the stakeholders outside the KIC. In catalyst development and deployment joint work and partnership with Business Schools, which have strong background and programs in innovation and entrepreneurship, is utilized. Critical element of the execution of the program is the strong integration with co-location centre activities in innovation and research and using co-location centre for co-operation and crossover between various stakeholders in KIC. Hands-on experience is provided by extensive embedded project work, with external projects owners, and integrating innovation and entrepreneurship content to these projects in form of Business Development Lab execution.

EIT ICT Labs Master School has a comprehensive collection of M.Sc. programs covering the thematic and competence needs of EIT ICT Labs. It also includes development and maintenance of EIT ICT Labs defined Innovation and Entrepreneurship educational modules towards robust entrepreneurship education. The I&E module can be seen as a deeply embedded minor in engineering curricula, where the major comes from the technical focus of the master program. At this stage 6 such core master program has been identified and under joint development in partnership of 3-6 partner universities within EIT ICT Labs.

These core M.Sc. programs provide the EIT specific diploma supplement to accompany the M.Sc. degree certificate granted by the host university. Similarly, but formally simpler arrangements are provided for the Graduate School as well as Graduate Programs within EIT ICT Labs. The Master School and Graduate School action lines additionally integrate (i) various mobility instruments for teachers and students, especially towards organizational mobility like internships, (ii) summer/winter schools and camps for interdisciplinary work and for more advanced I&E training, (iii) coordinated usage of co-location centers and innovation and research activities within co-location centers for increased integration and "buzz" towards forming the innovation hot-spots.



KIC InnoEnergy Education for a sustainable future

The KIC InnoEnergy has as strategic goal to implement the Knowledge Triangle Education-Research-Innovation into the mindset of European energy students. InnoEnergy aims to become the world's foremost energy educational platform. InnoEnergy will world-wide attract the most talented students and will offer different educational material to university students globally as well as to engineers and businesses active in the energy area. InnoEnergy will educate several hundred new energy students every year into the perspective of sustainability, their technical implications and especially look into how existing and future technologies can be implemented much faster, through modern research into innovation and entrepreneurship than has historically been the case. The basic InnoEnergy principles are robust engineering and entrepreneurial education, coupled with industrial internships on different levels throughout the educational programmes and the life-long career.

InnoEnergy has identified a number of Master and PhD programmes that will be implemented in 2011. These programmes cover different aspects of the InnoEnergy portfolio and give the students both the basic energy training as well as an in-depth analysis of how the knowledge can be translated into the market. Industrial training is an omnipresent element in these programmes. One of these MSc programmes already started in September 2010, and recently launched a "*Product of the year*"-project in which 28 students work coherently towards the establishment of a free-standing "Rescue Module Container" during their complete MSc studies. The project includes combined supervision from all six InnoEnergy Co-location Centres, a significant industrial component as well as business-plan creations. This "Rescue module" will be fully operational by 2015, on the market and produce electricity, heat, cooling and clean water out of renewable energy sources for catastrophe regions. The module will, in a somewhat different setting, like-wise be a stand-alone unit for the large parts of the world where large-scale electricity infrastructure is not yet operational (remembering that 2.4 billion of the world's population do not yet have access to any, or reliable, electricity supply). On the road towards the full module on the market by 2015 there are already "specialized spin-offs", with shorter development time, identified.

Another example of an already launched educational programme is the PhD School in Smart Grids, which combines education at the different co-location centres with innovation research projects performed jointly between industry and university.

InnoEnergy Education is also preparing an extended educational programme for post-university education, in which short courses, self-e-learning and blended learning will be incorporated towards "learning modules", which professional engineers can undertake to become more acquainted with specific technologies in the energy area and especially to identify which of these has a short- and long-term market possibility. InnoEnergy offers students, scholars and industry a significant cultural experience, both related to specially designed courses and mobility as well as towards virtual mobility in the European multi-cultural environment.