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Lund University Centre for
Sustainability Studies

A. Programme Syllabus for the Master of Science (120 credits) Programme in Environmental Studies and Sustainability Science (LUMES)

Credits: 120 credits

Cycle: Second cycle

Programme name: Lund University International Master's Programme in Environmental Studies and Sustainability Science, LUMES

Programme code: XAESS

Language of instruction: English

The syllabus was approved by the Board of the Faculty of Social Sciences, Lund University, on May 3, 2012. The syllabus was revised and approved by the Dean on September 18, 2013 in accordance with the delegation of authorities, reg. no S2012/60.

The syllabus is valid for those students starting autumn semester 2013.

B. General Information

Lund University International Master's Programme in Environmental Studies and Sustainability Science (LUMES) focuses on today's sustainability challenges. The programme builds on the knowledge the student has acquired during the first cycle education, giving the student the knowledge and competencies to both better comprehend and govern the challenges.

LUMES consists of four terms. The first term provides a foundation for understanding global to local sustainability challenges, providing both the basic knowledge required for understanding how natural systems function and interact, and the social theories that help us understand our present societal development paths. In addition, the field of sustainability science is introduced and scrutinised. The second term is comprised of perspectives in governance and development, using cases in global and local place-based contexts to both apply the programme foundations and provide a basis for the remainder of the programme. The third term studies involve a choice of modules dealing with different sustainability themes. The fourth term comprises a Master's thesis of 30 credits.

Students graduating from LUMES will have acquired both the scientific approach that is essential for third cycle education, as well as a solid basis for qualified research, investigation, and management posts. LUMES graduates are problem-solving leaders in many facets of society

whose training in a pluralistic, interdisciplinary, and international environment allows them to build bridges between academics and actors in politics, economy, and civil society. The LUMES graduates are thus prepared for both post-graduate studies in various sustainability-related subjects, and for qualified positions at various levels within consultancy, industry and government agencies, and in different types of organizations both nationally and internationally.

C. Learning Outcomes

In accordance with the Swedish Higher Education Ordinance (Annex 2 Qualification ordinance), for a degree of Master of Science (120 credits) in Environmental Studies and Sustainability Science the student shall have

Knowledge and Understanding

- demonstrated knowledge and understanding about the complex sustainability problems: scope, causes, interactions, impacts and possible societal responses in a holistic perspective, especially in relation to the different dimensions of human and/or natural systems,
- demonstrated knowledge and understanding of complex sustainability problems, including both general knowledge of the field sustainability science and a considerable degree of specialised knowledge in certain areas of the field, as well as deeper insight into current research and development work in the sustainability field, and
- demonstrated methodological knowledge in the field of sustainability science, including methodologies to identify more sustainable governance measures for sustainability problems.

Competence and Skills

- demonstrated the ability to use systems thinking approaches to critically, systematically, autonomously, and creatively identify issues and integrate knowledge to analyse, assess, and deal with complex phenomena, issues and situations, including anticipating possible futures, even with limited information,
- demonstrated the ability to analyse and identify improved technological, ecological, and governance measures to address complex sustainability problems,
- demonstrated the ability to implement, evaluate, and modify as needed the use of measures to achieve transformative change,
- demonstrated the independent ability to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames and so contribute to the formation of knowledge and implementation of measures, as well as the ability to evaluate this work,
- demonstrated the ability to involve stakeholders in research design, and to clearly communicate research findings, including the evidence on which they are based, in speech and writing to diverse audiences, and
- demonstrated the skills required for contributing to sustainable development in a variety of settings, including interdisciplinary, international, scholarly and applied arenas, with an emphasis on collaboration and group facilitation skills.

Judgment and Approach

- demonstrated the ability to make assessments in the field of sustainability science, informed by relevant scientific, social and ethical aspects, including recognizing differing perspectives on values and goals and demonstrate awareness of ethical aspects of research and development work,
- demonstrated insight into the potential contributions and limitations of science, its role in society and the responsibility of the individual for how it is used, and
- demonstrated the ability to identify the personal need for further knowledge and to take responsibility for developing his/her knowledge.

D. Course Information

The first term comprises three compulsory full-time courses offered in the following order:

- Earth System Science, 10 credits;
- Social Theory and Sustainability, 10 credits, and
- Sustainability Science, 10 credits.

The second term comprises four compulsory full-time courses offered in the following order:

- Governance of Sustainability, 7.5 credits;
- Urban and Rural Systems and Sustainability, 10 credits;
- Economy and Sustainability, 7.5 credits, and
- Knowledge to Action, 5 credits.

The third term is made up of elective courses totalling 30 credits. The students will be given information on which the elective courses are before applying. The third term of the programme strives for flexibility permitting all students to take courses that best suit their interests and future career or research paths. Should any course attract too many students and a selection has to be made, the students will be ranked on the basis of credits and grades earned within the programme.

During the fourth term the student is required to write and successfully defend a Master's thesis of 30 university credits. The thesis should be a synthesis of the knowledge and competences that the student has acquired during the three terms of course work and undergraduate studies. The work should develop the students' potential for professional work that places great demands on independence, or for research and development work by both developing the student's ability to independently integrate and use knowledge, and the student's ability to handle complex phenomena, issues, and situations.

The thesis work should focus on a local, regional or global sustainability-related phenomenon or problem, and analyse it in relation to the different dimensions of long-term sustainable development. The work puts great demands on independence; during this period, each student has access to a qualified individual supervisor. The thesis will be defended in public at a final seminar with a qualified opponent.

Term 1	Earth System Science 10	Social Theory and Sustainability 10	Sustainability Science 10	
Term 2	Governance of Sustainability 7.5	Urban and Rural Systems and Sustainability 10	Economy and Sustainability 7,5	Knowledge to Action 5
Term 3	Block of elective courses 30			
Term 4	Thesis Work 30			

The courses in most cases have one course examiner, but are usually conducted by teams of teachers with specific competencies in the course subject area. All courses are conducted in English.

Grades are awarded for every course. Unless otherwise specified in the syllabus of a particular course the grading scale used for courses offered by LUMES is 5 – 4 – 3 - *Fail*.

A student who fails an examination has the right to re-examination. A student who has taken two examinations in a course or a part of a course without obtaining a pass grade is entitled to the nomination of another examiner, unless there are special reasons to the contrary. Students getting pass mark cannot re-take an exam or re-submit a paper to get a higher grade.

E. Degree Information

On completion of the LUMES programme, the student is awarded a degree of *Master of Science (120 credits) in Environmental Studies and Sustainability Science* (in Swedish: *Filosofie Masterexamen i miljö- och hållbarhetsvetenskap.*)

F. Admission Requirements and Selection Criteria

Admission requirements and selection criteria for acceptance to advanced university education are stipulated in chapter 7 in the Swedish Higher Education Ordinance (Swedish Code of Statutes 2006:1053) and in *Lunds universitets antagningsordning* (LU dnr I G 219 5515/2006).

Admission to LUMES requires an undergraduate degree (BA/BSc) of at least 180 credits, or the equivalent foreign degree, in a completed major in disciplines of relevance for the programme, e.g., agronomy, behavioural sciences, economics, engineering, forestry, humanities, law, medicine, natural sciences, planning and architecture, or social sciences. English B (advanced) language proficiency shall be demonstrated in one of the following ways:

- IELTS score of 6.5 (with no section less than 5.5);
- TOEFL paper-based score of 4.5 (scale 1-6) in written test and a total score of 575, or an internet based score of 20 (scale 0-30) and a total score of 90;

- Cambridge/Oxford – Advanced Certificate of Proficiency;
- A Bachelor’s degree from a university where English is the only language of instruction, according to the International Handbook of Universities, or
- A pass on English course B (Swedish upper secondary school).

The selection to the programme is based on a combination the grades other merits, in addition to letters of recommendation and the applicant’s Statement of Purpose.

G. Further Information

Students who started LUMES Programme studies prior to August 2013 must follow earlier educational plan valid for that time period. Conversely, students can get the completed courses accredited when continuing their studies according to this curriculum, and thereby will be awarded the degree of *Master of Science (120 credits) in Environmental Studies and Sustainability Science*.