

Karelia University of Applied Sciences

ERDI MODULES FINLAND 2017

BIOECONOMY HUB

INNOVATION ECOSYSTEM

- » 3x5 = 15 ECTS
- » strategic regional planning
- » social and environmental infrastructure
- » sustainable and innovative business



ENVIRONMENTAL MANAGEMENT

- » 3x5 = 15 ECTS
- » social and environmental responsibility
- » climate and energy planning
- » environmental management project



CONNECT THE DOTS TRAINING

- » 1, 2 or 3x5 ECTS
- TRAINING IN LOCAL BUSINESS**

MODULE 1: INNOVATION ECOSYSTEM 30.1 – 17.3.2017

Module 1	INNOVATION ECOSYSTEM
Credits	15 ECTS /400 h; 3 x 5 ECTS courses (1 ECTS= 28 hours student work)
Teacher coordinator	Karelia UAS, responsible person clarified during autumn 2016
Learning goals	<p>The module provides the student an opportunity to build understanding about innovation ecosystem and applied development practises. The process will be supported with an applied development project provided by the working-life partners. The project is a holistic learning assignment for the whole module binding the courses as an entity.</p> <p>Student</p> <ul style="list-style-type: none"> - understands the concepts of bioeconomy, regional development and sustainable growth - can recognise different layers of innovation ecosystem and learns to apply tools to work efficiently in this innovation environment - learns to choose and apply different tools to boost innovations and development processes. <p>The learning process relies on participatory project-based learning methods, team assignments and joint development venture with working-life partners.</p>
Disciplines	Economy, Energy and Environmental Technology, Forestry, International Business, Marketing, Rural Industries
Special features	Module will be implemented in an international teacher team and the classroom will be multicultural bringing together students from different countries.

COURSE DESCRIPTIONS

1.1

Name of the course	Strategic Regional Planning
Credits	5 ECTS
Coordination	HAS, Elke Kunen Other teachers clarified during autumn 2016
Learning outcomes/ competences	<p>The student</p> <ul style="list-style-type: none"> • understands the concepts of bioeconomy, regional development and sustainable growth • is able to find, understand and apply strategic development documents at regional level

	<ul style="list-style-type: none"> • is able to elaborate project idea and make a plan • is able to communicate effectively in diverse teams • is able to involve relevant stakeholders into regional development processes.
Core content	<ol style="list-style-type: none"> 1. Bioeconomy frame and indicators in SMART regions 2. EU bioeconomy and regional policy framework, legislation and main challenges 2014-2020 3. Practical examples/cases from participating countries 4. Multicultural communication: concepts and processes 5. Basics of project management: project cycle, project work plan 6. Integration of communication strategies and stakeholders engagement
Key words	Bioeconomy Regional policy framework Regional development and challenges Regional cases Diversity, identity, ethics Project management Stakeholder involvement
Mode of delivery and method:	Interactive workshops and excursion On-line studies
Specific skills	<ul style="list-style-type: none"> • ability to identify potential of bioeconomy in a region • ability to identify causes and solutions of development problems • ability to propose instruments for development processes
Share of student's workload	Total: 140 hours *1ECTS =28 hours student work
Learning assignments	- will be clarified within the project assignment provided by the working lifer partner
Assessment scale	1 – 5 Transcript of records, conversion table for Erasmus students

1.2

Name the course	Social and Environmental Infrastructure
Credits	5 ECTS
Coordination	Savonia UAS, Petri Kainulainen Other teachers clarified during autumn 2016
Learning outcomes	<ol style="list-style-type: none"> 1. What are the most important present-day environmental and social issues in the region 2. How to analyse/measure environmental and social issues (tools, databases) 3. Understand the effects of environmental and social issues on quality of life and regional development 4. Understand environmental and social issues on different levels (EU level, national, regional level)

	5. How can Bioeconomy play a role in addressing regional issues
Core content	How can we use bioeconomy to solve environmental and social issues within a region
Key-words	<ul style="list-style-type: none"> • Environmental indicators and data bases • Threats to biodiversity • Economic, social and employment status of population • Quality of life • Bioeconomy
Mode of delivery	Face to face and virtual
Implementation methods	Lectures, workshops, computer and practical training, excursion, independent study.
Specific skills	<ul style="list-style-type: none"> • Data collection (interviews, data mining) • Data analysing and interpreting (e.g. SWOT, GIS)
Share of student's workload	± 35 contact hours and 105 hours project and independent studies.
Learning assignments	<p>Project work/ case-study: 80% of grade:</p> <ol style="list-style-type: none"> 1. What are the environmental issues for the region 2. Who are the main land users/stakeholders 3. Visualize the impacts/issues (use maps, data bases, graphs, etc.) 4. Prioritize the issues in the region to be solved based on bioeconomy 5. Performing of the qualitative interview research on the target groups within the region 6. Analysing the effects of social challenges related to the case study
Assessment methods and criteria	Inventory and analyses of the environmental and social issues related to the case
Assessment scale	1 – 5

1.3

Name the course	Sustainable and Innovative Business
Credits	5 ECTS
Coordination	Karelia UAS, teachers clarified during autumn 2016
Learning outcomes	<ol style="list-style-type: none"> 1. Importance of entrepreneurship in regional development 2. Trends in business models and innovation ecosystems 3. Awareness of sustainable growth 4. Tools to promote new potential in business
Core content	<ol style="list-style-type: none"> 1. Profile of an entrepreneur 2. Introduction to a business plan

	3. Introduction to green and innovative business models 4. Innovation methods and tools
Key-words	- Entrepreneurial mindset - Sustainable business models - Innovation platforms - Bioeconomy potential - Sustainable resource management
Mode of delivery	Face-to-face learning, group work, site visits and independent study
Implementation methods	- Lectures, assignments, exercises, real-life cases and working in the project group - Innovation workshop - Reflections of site visits
Specific skills	- Identify sectors relevant to bioeconomy - Understanding the main aspects of sustainable growth in local, regional and European level - Knowing the available models and applications for green business - Understanding various aspects of a business plan - Understanding the principles of Life Cycle Analysis
Share of student's workload	140 hours in total
Learning assignments	- SWOT analyses of regional bioeconomy business environments - Preliminary business model for the regional development project - Future vision of a region inspired by sustainable growth
Assessment scale	1 – 5

MODULE 2: ENVIRONMENTAL MANAGEMENT 20.3 – 26.5.2017

Module 2	ENVIRONMENTAL MANAGEMENT
Credits	15 ECTS / 400 h; 3 x 5 ECTS courses
Code	BI703
Coordinator	Karelia UAS, Lasse Okkonen
Learning goals	The module provides the student an opportunity to build environmental management expertise. The process will be supported with an applied development project provided by the working-life partners. Student <ul style="list-style-type: none"> - Knows social and environmental responsible business - Designs and carries out Green Office activities - Knows climate and energy plans and can attend in their local activities - Can apply environmental management expertise in development projects with local working-life partner

	<ul style="list-style-type: none"> - Learns skills to collaborate with different stakeholders, design and perform development activities as a team, and communicate and report the results <p>These learning objectives will be reached through project-based learning methods, team assignments and joint development with working-life partners. English is integrated to studies to support non-native speakers.</p> <p>Integration to the research, development and innovation activities within the focus area of sustainable energy and materials, team and project-based working methods.</p>
Disciplines	Economy, Energy and Environmental Technology, Forestry, International Business, Marketing, Rural Industries
Special features	Module will be implemented in an international teacher team and the classroom will be multicultural bringing together students from different countries.

COURSE DESCRIPTIONS

2.1

Name of the course	Social and Environmental Responsibility
Credits	5 ECTS
Teachers	Lasse Okkonen, Karelia UAS Others to be clarified during Autumn 2016
Learning goals	<p>Student</p> <ul style="list-style-type: none"> - Knows the main principles and guidelines of social and environmental responsibility - Can identify socially and environmentally responsible business activities and practices - Can design and perform Green Office activities as a team, and communicate and report the results for the Karelia-UAS Environmental Programme
Core content	<ul style="list-style-type: none"> - Socially and environmentally responsible business - Social enterprises and entrepreneurships - Communication and reporting of social and environmental responsibility - Corporate responsibility in practice: case examples from local medium-size enterprises - Green Office as an environmental management system for offices
Assessment	1 – 5
Implementation	<ul style="list-style-type: none"> - Lectures, assignments, visits to working-life partners - Green office implementation activities in Karelia campuses.

2.2

Name of the course	Climate and Energy Planning
Credits	5 ECTS
Teachers	Lasse Okkonen, Karelia UAS Others to be clarified during Autumn 2016
Learning goals	Student <ul style="list-style-type: none"> - Knows the climate and energy planning initiatives in regional and European levels - Can analyse the plans and identify and assess good practices - Are able to attend in local and regional planning and implementation activities and organise stakeholder events - Can describe climate and energy activities and analyse their carbon emission reductions
Core content	<ul style="list-style-type: none"> - Climate and energy planning processes in local, regional and international contexts - Sustainable Energy Action Planning (SEAP) based on common European standard (Covenant of Mayors process and its guidelines) - Implementation activities of Regional Climate and Energy Programme, Joensuu city SEAP, or other municipal-level climate and energy plans
Assessment	1 – 5
Implementation	<ul style="list-style-type: none"> - Lectures and research, development and innovation activities related to the climate and energy planning. Activities will be organised in cooperation with the stakeholders from local municipalities and regional authorities.

2.3

Name of the course	Environmental Management Project
Credits	5 ECTS
Teachers	Lasse Okkonen, Karelia UAS Others to be clarified during Autumn 2016
Learning goals	Student <ul style="list-style-type: none"> - Can apply environmental management knowledge to practical assignments from working-life partners, representing mainly small and medium size enterprises and communities - Are able to collaborate with different stakeholders, design and perform development activities as a team, and communicate and report the results
Core content	<ul style="list-style-type: none"> - Project themes include development activities in environmental management, such as environmental management programmes, life-

	cycle analyses of products and services, waste prevention and recycling, and sustainable community development
Assessment	1 – 5
Implementation	<ul style="list-style-type: none"> - The project-based working methods are applied. Work involves periodic meetings, project activities with working-life partners, the presentation of a seminar, and generation of a study report - In this module students from other than Energy and Environmental Technology programme can complement their own specific expertise with environmental aspect

MODULE 3: CONNECT THE DOTS TRAINING 29.5.2017 -

Module 3	CONNECT THE DOTS TRAINING
Credits	5, 10 or 15 ECTS (student may choose four, eight or twelve weeks working in a local business)
Coordinator	Karelia UAS / Savonia UAS
Learning goals	The module provides student an opportunity to gain practise, apply tools, create networks and deepen understanding in an organisation working in a bioeconomy related context.
Special features	<p>Module will be implemented together with the Finnish working life partners, Savonia UAS and Karelia UAS.</p> <p>Number of students will be limited based on the availability of the placements; exact number of placements available will be clarified in autumn 2016.</p>