

## Use of Artificial Intelligence to support regional sustainable development

<b>Unit of study - code study unit</b>	IE1001 (in UTH)
<b>Unit of study - name</b>	Use of Artificial Intelligence to support regional sustainable development
<b>Competences</b>	<ul style="list-style-type: none"> <li>- Competences in AI concepts and tools application</li> <li>- Competences in the field of sustainable regional development</li> <li>- Problem solving competences</li> <li>- Transdisciplinary competences</li> <li>- Communication and social interaction competences</li> <li>- Intercultural competences, including cultural awareness, multilingual and internationalization</li> <li>- Transversal competences</li> </ul>
<b>Learning outcomes</b>	After completing the course, you will be able to utilize multidisciplinary expert networks, creative thinking and AI based technologies for problem solving in the domain of sustainable regional development. You will have a basic knowledge of AI concepts and tools, their applicability in various urban domains and get equipped with the skills to present your findings. You will understand the multidisciplinary nature of regional development and its significance for rural and urban communities as well the basic concepts of sustainability of communities.
<b>Content</b>	During the course, multidisciplinary student groups will work on a challenge posed by a Greek organization related to regional sustainable development. The groups will be introduced to different methods and tools for innovation, expert lectures in AI and its applications will be delivered, as well as in topics related to regional development, sustainability and their interaction with AI. The expert lectures will be given by stakeholders from each of the partner countries (Slovakia, Bulgaria, Greece, Finland and the Netherlands). The groups, working in close cooperation with different stakeholders, will propose solutions and actions to support regional sustainable development employing AI tools. Students will learn about Greek folk culture and participate in an online folk dancing class and also plan and implement a joint cultural evening.
<b>Teaching method(s) and student workload</b>	<p>The course will be implemented online and consists of three phases:</p> <ul style="list-style-type: none"> <li>- Preliminary tasks (18 October – 7 November) <ul style="list-style-type: none"> <li>o 4 x 2h lectures in AI Basics (14 h of workload)</li> <li>o 2 x 2h lectures in AI and Sustainability (7 h of workload)</li> <li>o Presenting yourselves online, background research, designing the evening activity, starting the learning diary <ul style="list-style-type: none"> <li>▪ 32 hours' workload</li> </ul> </li> </ul> </li> <li>- Hackathon process (8 – 15 November) <ul style="list-style-type: none"> <li>▪ 67 hours' workload</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>○ Introduction to AI concepts and tools, expert lectures, group work, coaching, joint activities</li> <li>- Final tasks (16 - 18 November)               <ul style="list-style-type: none"> <li>○ Finalising the learning diary/reports                   <ul style="list-style-type: none"> <li>▪ 17 hours' workload</li> </ul> </li> </ul> </li> </ul> <p>Total estimated workload: 137h</p>
<b>Rating scale</b>	<p>The course is evaluated on a scale of 0-5, where 5 is excellent, 1 is satisfactory and 0 is failed. The evaluation of the course is based on the approved completion of the preliminary assignments (10%), expert evaluation of the presentation (20%), report of the solution (30%), participation in joint online meetings and group work (20%) and the learning diary (20%).</p>
<b>Examination</b>	<ul style="list-style-type: none"> <li>- Continuous assessment</li> <li>- Assessment of group assignments</li> <li>- Assessment of individual assignments</li> </ul>
<b>Mandatory literature</b>	-
<b>Module coordinator</b>	University of Thessaly: Nicholas Samaras, Vasileios Kyriatzis
<b>Language</b>	English
<b>Credits</b>	5
<b>Period</b>	Winter semester
<b>Entry requirements/prerequisites</b>	<ul style="list-style-type: none"> <li>- Minimum requirements for English language level is B2</li> <li>- If student is a BSc, he/she should have completed two years of studies</li> </ul>