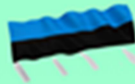




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URBAN RESILIENCE AND ADAPTATION FOR INDIA AND MONGOLIA: Curricula, Capacity, ICT and Stakeholder Collaboration to Support Green & Blue Infrastructure and Nature-Based Solutions

URGENT PROJECT

619050-EPP-1-2020-1-DE-EPPKA2-CBHE-JP

THE IMPACT ON INSTITUTIONAL AND LOCAL LEVEL

Most important impacts of the project were:

1. **E-courses:** 3 courses revised and 2 courses newly developed with 30 ECTS, and converted to online.

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NATURE CONSERVATION AND SPECIAL PROTECTED AREA MANAGEMENT

Revised course:
Nature conservation and special protected area management
- ECTS: 6.0
- 12 weeks
- 150 hours
- Full online
- For PhD level
- Open for life-long learners
- Lecture: 12 videos
- Seminar: 12 videos

Objective:
The course examines traditional and modern methods of environmental protection, human-caused environmental problems, and human actions for conservation/rehabilitation, including science, politics, business, the role of people, and sustainable development. It aims to provide students with a broad understanding of development issues facing humanity, such as global climate change, from the perspective of ecological science and nature conservation.

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Environmental management

New course:
- ECTS: 6.0
- 12 weeks
- 150 hours
- Full online
- For graduated students
- Open for life-long learning
- Lecture: 12 videos
- Seminar: 12 videos

Objective:
The course objective is to provide about the knowledge of natural systems which make life possible on Earth; an understanding that humans are part of these systems and depend on them; an appreciation of the diverse influences of human activity on natural systems; an awareness of the need to manage natural systems; an understanding of sustainable development to meet the needs of the present, without compromising the ability of future generations to meet their own needs; a sense of responsibility and concern for the welfare of the environment and all organisms; an awareness of their own values concerning environmental issues; an awareness of the values of others; a willingness to review their own attitudes in the light of new knowledge and experiences; a sound basis for further study, personal development and participation in local and global environmental concerns.

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Sustainable Development

Revised course:
- ECTS: 6.0
- 16 weeks
- 150 hours
- Full online
- For bachelor/master level
- Open for life-long learners
- Lecture: 16 videos
- Laboratory: 16 videos

Objective:
The goal of this course is to observe and evaluate the global development process of implementing policies and strategies to ensure sustainable development at the international level, to use the mechanisms of global multilateral cooperation in the field of environment especially for the green development strategy of MI, and to ensure sustainable development.

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Urban Logistics

Revised course:
- ECTS: 6.0
- 16 weeks
- 150 hours
- Full online
- For bachelor level
- Open for life-long learning
- Lecture: 16 videos
- Seminar: 16 videos

Objective:
This course covers different approaches to the management and operation of logistics and transportation systems. At the end of the lecture, students will gain knowledge of transportation engineering which involve the operation, design, planning, and maintenance of transportation systems to help build safe, secure, and livable communities. Moreover, at the end of the course, students will obtain a basic understanding of the side effects of city logistics on the urban economy, environment, and human health. In addition, the course is to compare and analyze the advantages and disadvantages of city logistics in national and international contexts. Finally, students will discuss a solution and their opinions on national issues in logistics based on the lecture materials and self-learning references.

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Application of remote sensing and geographic information systems to environmental research

Revised course:
- ECTS: 6.0
- 16 weeks
- 150 hours
- Full online
- For bachelor level
- Open for life-long learners
- Lecture: 16 videos
- Laboratory: 16 videos

Objective:
The course objective is to provide knowledge about the basic concepts of geographic information systems (GIS) and remote sensing (RS) through lecturers, and to teach its application in environmental research through laboratory classes. By studying the course, the student will acquire the ability to develop a map using the results of research.

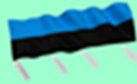
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- Link of e-course: <https://online.num.edu.mn/courses/course-v1:NUM+ENVI802+2022/about>
- Link of e-course: <https://online.num.edu.mn/courses/course-v1:NUM+ENEN301+2022/course/>
- Link of e-course: <https://online.num.edu.mn/courses/course-v1:NUM+ENVI803+2022/course/>
- Link of e-course: https://online.num.edu.mn/courses/course-v1:num+envi312-envi618+2022_T2/course/
- Link of e-course: <https://online.num.edu.mn/courses/course-v1:NUM+ENVI402+2022/course/>

2. Copyright certificates of the e-courses

Before the project, none of e-courses of the university get the copyright certificate. 3 e-courses out of 5 get the copyright certificate from Intellectual Property Office of Mongolia.





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3. A new process to revise and develop e-course:

To meet the European standard, a new process that consisted of 25 steps was applied to revise/develop e-courses.

1. Analyze the topic and content of the same or similar subjects in the university.
2. Find and compare the same or similar course content from the top 100 universities in the world
3. Discuss with the department's curriculum committee and make a decision on whether the course can be further developed in the context of the content.
4. Prepare a poster with the presentation of the course
5. Prepare video presentation of the course in English and Mongolian
6. Send to employers and collect their comments and recommendations
7. Send to partner university and collect their comments and recommendations
8. Collect comments and recommendations of the department to which the course belongs
9. Send to EU reviewer and collect his/her comments and recommendations
10. Teach and get student feedback after the course
11. Make improvements according to the comments received, if necessary
12. Prepare course descriptions according to the given format
13. Collect and prepare reading materials
14. Collect and prepare additional materials
15. Prepare examination materials
16. Prepare lecture's PPT and convert to video lectures for each course topic
17. Prepare seminar/lab's PPT and convert to video seminars/laboratories for each course topic
18. Develop e-courses and upload them to open EDX - <https://online.num.edu.mn/>
19. Prepare teaching and learning materials for the subject
20. Discuss the developed/revised course with the department's curriculum committee
21. Approve syllabus by department level
22. Prepare hardware information of the e-course
23. Export file of the e-course
24. Prepare students attendance report of each semester
25. Deliver ready-to-use e-course to the university

4. Equipment – use of it within and outside of the university

Under the project, 6 equipment purchased and used it to the courses.



Drone DJI Mavic 2 pro



Water Level Meter



Multiple Water Quality Meter



Discrete Interval Sampler



Sound level meter



Air quality meter

