Academic course description – Example

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| BACHELOR ‘S PROGRAMME1ST YEAR OF STUDY, 2nd SEMESTER |

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| **Course title** | | **HIDROLOGY AND OCEANOGRAPHY** |
| Course code | | JT1207 |
| Course type | | full attendance/ tutorial |
| Course level | | 1st cycle (bachelor’s degree) |
| Year of study, semester | | 1st year of study, 1st semester |
| Number of ECTS credits | | 5 |
| Number of hours per week | | 4 (2 lecture hours + 2 seminar hours) |
| Name of lecture holder | | Associate Professor Ionut MINEA |
| Name of seminar holder | | Associate Professor Ionut MINEA |
| Prerequisites | | Advanced level of English |
| A | **General and course-specific competences** | |
|  | **General competences**:   * Acquiring the adequate professional and transversal competencies, according to the specific requirements of the subject and the qualifications listed in the National Index of Higher Education Qualifications (RNCIS) for Geography of Tourism   **Course-specific competences**:   * Describe: the components of tourism potential, the main forms of tourism, types of tourists * Use: appropriate terminology and the main instruments used in hydrology * Explain: the anthropogenic impact on water resources | |
| B | **Learning outcomes** | |
|  | * Calculate : principals hydrological and hydrogeological parameters * Explain: the anthropogenic impact on water resources * Design: hydrological and hydrogeological maps | |
| C | **Lecture content** | |
|  | Introduction. Definitions. Water volume in nature  Water cicle. General properties of water  Identification on water resources – field apllication in Iasi metropolitan area  Hydrogeology - Hydrogeological properties of rocks, water categories in rocks, groundwater dynamics  Hydrogeology - Hydrogeological properties of rocks, water categories in rocks, groundwater dynamics  Hydrogeology - Hydrogeological properties of rocks, water categories in rocks, groundwater dynamics  Rivers - River water movement, River hydrometry. Water level in rivers and types of levels, River water speed. River flow and flow types.  Rivers – Water Supply sources, The hydrological regime of the rivers in the world and in Romania, Hydrological balance, Hydrological phenomena associated with maximum leakage  Rivers - River deposits, chemical flow and freezing phenomena  Limnology - The origin of water basins. Classifications. Morphometric parameters of lakes  Telmatology - Marshes and wetlands  Telmatology - Marshes and wetlands  Oceanography - Seas and oceans. Classifications  Oceanography - Seas and oceans. Classifications | |
| D | **Recommended reading for lectures** | |
|  | 1. Fetter C.W., (2001), Applied hydrogeology Prencice Hall, 598 p. 2. Garrison T (2008), Ocenaography . An invitation to marine science, Cengage Learning 3. Gâştescu P., (1998), Hidrologie, Edit. Roza Vânturilor, Târgovişte. 4. Gâștescu, P., (1998), Limnologie și Oceanografie, Edit. H\*G\*A\*, București. 5. Hiscock K, (2005), Hydrogeology. Pricipal and practice, Prencitce Hall, 389 p. 6. Pișotă I., Zaharia L., Diaconu D., (2005), Hidrologie, Edit. Universitară, București. 7. Posea A., (1999), Ocenografie, Edit. Fundației ”România de Mâine”, București. 8. Preda I., Marosi., (1971), Hidrogeologie, Edit. Didactică și Pedagogică, București. 9. Romanescu Gh., (2010), Hidrologie generală, Editura Terra Nostra, Iaşi. 10. Romanescu Gh., (2012), The tourist potential of coast and deltas – a look at the romanian coastal area, Parthenon Verlag, 284, p. 11. SorocovschiV., (2003), Hidrologia uscatului, Editura Casa cărţii de Ştiinţă, Cluj-Napoca. 12. Viessman W., Lewis G., (2002). Introduction to Hydrology, Fifth edition, Prentice Hall, 612 p. | |
| E | **Seminar content** | |
|  | Introduction. Labor protection. Presentation of requirements related to the hydrology and oceanography laboratory.  Measurements that can be made at underground water sources  Ways to elaborate hydrogeological studies. Hydrogeological profile  Identification on water resources – field apllication in Iasi metropolitan area  Hydrogeological data processing and analysis: map of isopreates and isobaths  Hydrogeological data processing and analysis: daily, monthly and annual hydrographic level  Potamology - practical applications Morphometric elements of river basins – tracing water divide  Methods of measuring the surface, length of the river basin  Cross-sectional and longitunal profile of the river  Processing, analysis and interpretation of hydrometric data on hydrological water regime in rivers (levels and flows  Construction the cross section the river and determination of its hydraulic elements  Identification of the main aquatic units at the level of Romania and globally  Oceans and seas - currents sistems  Oceans and seas - bathymetric maps  Assessment test | |
| F | **Recommended reading for seminars** | |
|  | 1. Bătinaş, R.H., Gheorghe, Ş., (2005), *Noţiuni practice de hidrologie*, Edit. Casa Cărţii de Ştiinţă, Cluj-Napoca. 2. Diaconu, C.D., (2003), *Hidrologie aplicată-lucrări de laborator*, Universitatea Bucureşti, Edit. CREDS, Bucureşti.   Gâştescu, P., Murarescu, O., Dinu, I., Bretcan, P., (2002), *Hidrologie continentala*, Edit. Roza Vânturilor, Târgovişte   1. Gâştescu, P., Murarescu, O., Dinu, I., Bretcan, P., (2002), Hidrologie continentala, Edit. Roza Vânturilor, Târgovişte 2. Minea I., Romanescu Gh. (2007), *Hidrologia mediilor continentale. Aplicaţii practice,* Casa Editorială Demiurg, Iaşi; 3. Schram Maria, Pantazică Maria, (1983), *Hidrologia uscatului*, Universitatea „Al.I.Cuza”, Iaşi. | |
| G | **Education style** | |
| learning and teaching methods | | Lecture, explanation, problematization, practical application |
| assessment methods | | Examination + Seminar Grades |
| Language of instruction | | English |