BACHELOR 'S PROGRAMME
1ST YEAR OF STUDY, 2nd SEMESTER

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
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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 3. Gâştescu, P., Murarescu, O., Dinu, I., Bretcan, P., (2002), Hidrologie continentala, Edit. Roza Vânturilor, Târgovişte 4. Minea I., Romanescu Gh. (2007), *Hidrologia mediilor continentale. Aplicaţii practice,* Casa Editorială Demiurg, Iaşi; 5. 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