University of Gdańsk

Subject card

Subject name and code	Diploma Laboratory in Monitoring and Protection of Marine Waters - laboratory classes, PG_00201544		
Field of study	Water Management and Protection of Water Resources		
Date of commencement of studies	October 2027	Academic year of realisation of subject	2029/2030
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study Optional subject group Subject group related to practical vocational preparation
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	3	Language of instruction	Polish
Semester of study	6	ECTS credits	9.0
Learning profile	practical	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Dorota Burska, prof. UG	
	Teachers		

Lesson types

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	30.0	0.0	0.0	30

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	30	2.0	193.0	225

Subject objectives

To familiarise students with the methodology for the creation of simple works of the nature of a scientific monograph and to provide technical support in the independent preparation and editing of diploma (undergraduate) theses by students;

Technical support in students' independent preparation and editing of thesis (bachelor's thesis) in the specified methodological convention and with correct documentation;

Preparation of the bachelor thesis.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GWOZWL3-U17] learn and plan his development independently in a targeted manner.	He or she is able to independently plan his or her professional development and organize the learning process in a focused manner, expanding his or her professional competencies in the field of integrated marine environmental protection and water management.	[SU1] oral statement/conversation/ discussion [SU8] observation of student's independent or team work
[GWOZWL3-W07] knowledge of data sources and the theoretical foundations of data collection, compilation and evaluation for a dissertation.	The student knows and understands the sources of data and the theoretical foundations of data collection techniques (as they relate to the marine environment and its protection), which serve as the basis for independently gathering and preliminarily evaluating research material for the thesis.	[SW3] text preparation/written work
[GWOZWL3-K03] systematic further education and professional development, updating and expand his knowledge and skills, understands the limitations of his own knowledge in the context of civilization progress and recognizes authorities in the professional and scientific environment.	He is prepared to engage in ongoing professional development and to continually review and expand his knowledge and skills in the field of marine environmental protection, particularly in light of rapid scientific and societal progress	[SK1] oral statement/conversation/ discussion [SK3] text preparation/written work [SK8] observation of student's independent or team work
[GWOZWL3-U07] use literature and other available sources of information, including information technology, multimedia, Internet, databases, and select and critically evaluate information.	Is able to search for and use specialized literature and digital resources (databases, multimedia, information technology), demonstrating the ability to select and critically evaluate interdisciplinary information on aquatic environments, including marine environments	[SU1] oral statement/conversation/ discussion
[GWOZWL3-K01] act independently and effectively organize own and team work, is ready to critically assess the degree of its advancement and completion of the tasks set.	He is prepared to systematically expand his knowledge of environmental protection and to continually review it; he understands the limitations of his own expertise in light of rapid scientific progress; he is prepared to work both independently and as part of a team (comprising specialists and non-specialists), recognizing that activities in this field are interdisciplinary in nature	[SK1] oral statement/conversation/ discussion [SK3] text preparation/written work
[GWOZWL3-W12] basic concepts and principles in the field of protection of industrial property and copyright.	knows and understands the basic concepts, principles, and mechanisms for implementing industrial property protection and copyright law, including the principles governing the lawful use of external information sources and the protection of one’s own research findings	[SW1] oral statement/ conversation/discussion [SW3] text preparation/written work

<table>
<tr><td>Subject contents</td><td>1. The topic of a bachelor’s thesis, guidelines for formulating its objective and research hypotheses, and structuring the content. (Establishing a research framework in the context of marine environmental protection and the role of water management in this regard).
2. Methods for effectively collecting scientific literature and searching for reliable source materials (e.g., creating a database of bibliographic references and research results).
3. Analysis of data sources in water sciences, taking into account statistical data, cartographic materials, and open databases (including national and international environmental monitoring).
4. Selected research methods and methodologies for collecting environmental data in mixed-methods studies (theoretical foundations of measurement techniques versus independent data collection in field and laboratory research).
5. Principles of validation, selection, logical use, and critical evaluation of the quality of data and scientific texts (e.g., critical verification of units, values, and accuracy).
6. Principles of proper editing, content organization, and formatting of scientific texts (including content organization, editorial requirements regarding, among other things, figures, tables, equations, and appendices, as well as proper citation of sources such as reports, published materials, and media information).
7. Preparing the individual stages of the work as outlined in the schedule (preface/introduction, theoretical chapters, results, discussion and conclusion, bibliography, list of appendices, tables, and figures)</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
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<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>literature/data database</td><td>51.0%</td><td>30.0%</td></tr>
<tr><td>assessment of the thesis manuscript</td><td>51.0%</td><td>70.0%</td></tr>
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<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Literature related to the prepared diploma thesis.</td></tr>
<tr><td>Supplementary literature</td><td></td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Compiling a bibliography on the thesis topic.
Preparing an environmental database based on various digital platforms, databases, and original research.
Graphical presentation of the results.
Drafting the individual chapters of the thesis.</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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