University of Gdańsk

Subject card

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| Subject name and code | Biology of Fishes - lecture, PG_00205294 | | |
| Field of study | Oceanography | | |
| Date of commencement of studies | October 2026 | Academic year of realisation of subject | 2028/2029 |
| Education level | Bachelor's studies | Subject group | Obligatory subject group in the field of study<br>Optional subject group<br>Subject group related to scientific research in the field of study |
| 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 | 2.0 |
| Learning profile | academic | Assessment form | exam |
| Conducting unit | Laboratory of Ichthyology -> Department of Marine Ecology -> Faculty of Oceanography and Geography -> Rector | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | dr hab. Mariusz Sapota, prof. UG | |
| | Teachers | | |

**Lesson types**

| Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
|---|---|---|---|---|---|---|
| Number of study hours | 30.0 | 0.0 | 0.0 | 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 | 18.0 | 50 |

**Subject objectives**

Familiarization with the basic issues in the field of general ichthyology

**Learning outcomes**

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [OCEANL3-W01] has an advanced knowledge and understanding of the terminology used in oceanography and related exact and natural sciences (in Polish and a selected foreign language) | knows and understands the terminology appropriate for ichthyology (in Polish, English and Latin) at an advanced level | [SW4] test/exam - oral or written |

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|---|---|
| Subject contents | Subject of interest in ichthyology. Occurrence and diversity of fish. The most important groups of modern fish, their origin and development. Fish taxonomy and systematic nomenclature.<br><br>Fish swimming mechanism. Skeleton and muscles.<br><br>Buoyancy (floating) of fish.<br><br>Gas exchange and circulatory system. Blood. Respiration.<br><br>Osmoregulation and ion exchange. Excretion.<br><br>Food and nutrition. Digestive.<br><br>Reproduction. Development and growth.<br><br>Senses and communication.<br><br>Endocrine organs. Hormonal regulation.<br><br>Central nervous system.<br><br>Genetics and evolution.<br><br>Ecology and zoogeography.<br><br>The role of fish in the Baltic Sea ecosystem. |
| Prerequisites and co-requisites | Basic knowledge of zoology |
| Assessment methods and criteria | |

| Subject passing criteria | Passing threshold | Percentage of the final grade |
|---|---|---|
| exam | 51.0% | 100.0% |

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|---|---|---|
| Recommended reading | Basic literature | Brylińska M., 2000. Ryby słodkowodne Polski. Państwowe Wydawnictwo Naukowe. Warszawa<br><br>Jasiński A., 1973. Zootomia kręgowców. Państwowe Wydawnictwo Naukowe<br><br>Klimaj A., Rutkowicz S., 1970. Atlas ryb Północnego Atlantyku. Wydawnictwo Morskie. Gdańsk<br><br>Rutkowicz S., 1982. Encyklopedia ryb morskich. Wydawnictwo Morskie. Gdańsk<br><br>Gąsowska M., 1962. Krągłouste i ryby. Państwowe Wydawnictwo Naukowe. Warszawa<br><br>Grodziński Z., 1981. Anatomia i embriologia ryb. Państwowe Wydawnictwo Rolnicze i Leśne. Warszawa<br><br>Opuszyński K., 1979. Podstawy biologii ryb. Państwowe Wydawnictwa Rolnicze i Leśne. Warszawa<br><br>Pliszka F., 1964. Biologia ryb. Państwowe Wydawnictwa Rolnicze i Leśne. Warszawa<br><br>Suworow E., 1954. Podstawy ichtiologii. Państwowe Wydawnictwo Naukowe. Warszawa |
| | Supplementary literature | Bone Q.M.A., Marshall N.B., 1982. Biology of fishes. Blackie. Glasgow and London<br><br>Cailliet G.M., Love M.S., Ebeling A.W., 1986. Fishes. Wadsworth Publishing Company, Belmont, California<br><br>Lagler K.F., Bardach J.E., Miller R.R., May Passino D.R., 1977. Ichthyology. John Willey & Sons. New York, Chichester, Brisbane, Toronto |
| | eResources addresses | |
| Example issues/ example questions/ tasks being completed | | |
| Work placement | Not applicable | |

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