

**AGH**AGH UNIVERSITY OF SCIENCE
AND TECHNOLOGY

Module name: Research planning and methodology_variant_III

Academic year: 2019/2020 Code: ZSDA-3-1008-s ECTS credits: 1

Faculty of: Szkoła Doktorska AGH

Field of study: Szkoła Doktorska AGH Specialty: —

Study level: Third-cycle studies Form and type of study: Full-time studies

Lecture language: Polski i Angielski Profile of education: Academic (A) Semester: 1

Course homepage: —

Responsible teacher: dr hab. inż. Miśkiewicz Marek (miskow@agh.edu.pl)

Module summary

The course objective is to prepare students to define, plan, and conduct the research as well as to produce an effective research output.

Description of learning outcomes for module

MLO code	Student after module completion has the knowledge/ knows how to/is able to	Connections with FLO	Method of learning outcomes verification (form of completion)
Social competence: is able to			
M_K001	is able to cooperate in research groups	SDA3A_K01	Presentation
Skills: he can			
M_U001	is able to define research problems and to plan successive research steps	SDA3A_U07, SDA3A_U06, SDA3A_U03, SDA3A_U01	Presentation
M_U002	is able to create an effective research output	SDA3A_U06, SDA3A_U03, SDA3A_U04	Execution of a project
Knowledge: he knows and understands			
M_W001	knows different research types and methodologies	SDA3A_W03	Presentation, Activity during classes

Number of hours for each form of classes

Suma	Form of classes										
	Lectures	Auditorium classes	Laboratory classes	Project classes	Conversation seminar	Seminar classes	Practical classes	Fieldwork classes	Workshops	Prace kontrolne i przejściowe	Lektorat
20	6	0	0	0	0	14	0	0	0	0	0

FLO matrix in relation to forms of classes

MLO code	Student after module completion has the knowledge/ knows how to/is able to	Form of classes										
		Lectures	Auditorium classes	Laboratory classes	Project classes	Conversation seminar	Seminar classes	Practical classes	Fieldwork classes	Workshops	Prace kontrolne i przejściowe	Lektorat
Social competence: is able to												
M_K001	is able to cooperate in research groups	+	-	-	-	-	-	-	-	-	-	-
Skills: he can												
M_U001	is able to define research problems and to plan successive research steps	+	-	-	-	-	+	-	-	-	-	-
M_U002	is able to create an effective research output	-	-	-	-	-	+	-	-	-	-	-
Knowledge: he knows and understands												
M_W001	knows different research types and methodologies	+	-	-	-	-	+	-	-	-	-	-

Student workload (ECTS credits balance)

Student activity form	Student workload
Udział w zajęciach dydaktycznych/praktyka	20 h
Preparation for classes	5 h
przygotowanie projektu, prezentacji, pracy pisemnej, sprawozdania	10 h
Summary student workload	35 h
Module ECTS credits	1 ECTS

Additional information

Module content

Lectures

1. Applied vs. basic research
2. Experimental vs. theoretical research
3. Defining research problem or hypothesis
4. Defining original contribution to the state of the art
5. Selection of research methodology
6. Analyzing and interpreting the results and validation of research hypothesis
7. Cooperation in research groups
8. Research output
9. Requirements for receiving scientific degrees and titles
10. Requirements for PhD thesis and models of PhD defense in different countries
11. Models of scientific careers in different countries

Seminar classes

The workshop is focused on presentation by students of their preliminary research plans and methodologies.

Teaching methods and techniques:

Lectures: The lecture is based on classical presentation.

Seminar classes: The lecture is based on classical presentation by students.

Warunki i sposób zaliczenia poszczególnych form zajęć, w tym zasady zaliczeń poprawkowych, a także warunki dopuszczenia do egzaminu:

The attendance of the classes and the preparation of presentation by students of their preliminary research plans and methodologies.

Zasady udziału w poszczególnych zajęciach, ze wskazaniem, czy obecność studenta na zajęciach jest obowiązkowa:

Lectures:

- Attendance is mandatory: Yes
- Participation rules in classes: The lecture is an introduction to the research methodology.

Seminar classes:

- Attendance is mandatory: Yes
- Participation rules in classes: Students present their preliminary research plans and methodologies, which is discussed in the class.

Method of calculating the final grade

The final score will be evaluated on the basis of quality of presentation, and the student's contribution to discussions during the class.

Sposób i tryb wyrównywania zaległości powstałych wskutek nieobecności studenta na zajęciach:

In case of absence in the class, the extended literature review on the topic related to PhD thesis will be required to pass the course.

Prerequisites and additional requirements

Prerequisites and additional requirements not specified

Recommended literature and teaching resources

1. R. Kumar, "Research Methodology: A Step-by-Step Guide for Beginners", SAGE Publications, 2019
2. C. R. Kothari, "Research methodology: Methods and techniques", New Age International, 2004

Scientific publications of module course instructors related to the topic of the module

Additional scientific publications not specified

Additional information

None