AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY

Module name: Ethics in research and scientific work

Academic year: 2019/2020 Code: ZSDA-3-1014-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: English Profile of education: Academic (A) Semester: 1

Course homepage: —

Responsible teacher: prof. dr hab. inż. Koleżyński Andrzej (kolezyn@agh.edu.pl)

Module summary

The course, intended for Ph.D. students, will be devoted to the main ethical issues faced by every person involved actively in scientific research.

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	The students will gain tools and skills that will increase their ability to contribute to the ongoing debate and development of research ethics and professional conduct.	SDA3A_K03	Participation in a discussion, Essay, Activity during classes
Skills: he can			
M_U001	Student can analyze practical ethical problems he/she is facing when conducting scientific work.	SDA3A_U01, SDA3A_U07	Participation in a discussion, Essay, Activity during classes
M_U002	Student can correctly identify ethical risks in research and to apply ethical constructs to individual research projects.	SDA3A_U01, SDA3A_U07	Participation in a discussion, Essay, Activity during classes
Knowledge: he knows and understands			
M_W001	Student has basic knowledge of fundamental ethical issues related to scientific research.	SDA3A_W06	Participation in a discussion, Essay, Activity during classes

Number of hours for each form of classes

	Form of classes										
Suma	Lectures	Auditorium classes	Laboratory classes	Project classes	Conversation seminar	Seminar classes	Practical classes	Fieldwork classes	Workshops	Prace kontrolne i przejściowe	Lektorat
10	5	0	0	0	0	5	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	The students will gain tools and skills that will increase their ability to contribute to the ongoing debate and development of research ethics and professional conduct.	+	-	-	-	-	+	-	-	-	-	-
Skills: he can												
M_U001	Student can analyze practical ethical problems he/she is facing when conducting scientific work.	+	-	-	-	-	+	-	-	-	-	-
M_U002	Student can correctly identify ethical risks in research and to apply ethical constructs to individual research projects.	+	-	-	-	-	+	-	-	-	-	-
Knowledge: he knows and understands												
M_W001	Student has basic knowledge of fundamental ethical issues related to scientific research.	+	-	-	-	-	+	-	-	-	-	-

Student workload (ECTS credits balance)

Student activity form	Student workload
Udział w zajęciach dydaktycznych/praktyka	10 h
Preparation for classes	5 h
przygotowanie projektu, prezentacji, pracy pisemnej, sprawozdania	5 h
Realization of independently performed tasks	10 h
Summary student workload	30 h
Module ECTS credits	1 ECTS

Additional information

Module content

Lectures

Lectures
This short course will be a survey of the main ethical issues in research and scientific work. Main issues to be covered include bias, fraud, plagiarism, conflicts of interest, fabrication and falsification of research results, mentor and trainee responsibilities, informed consent, collaborative research and attribution of authorship and adequacy of peer review publication processes.

Seminar classes

Seminars
Students will critically analyze research ethics topics and case studies and learn how to manage and evaluate a research project (from design to publication), from an ethical standpoint.

Teaching methods and techniques:

Lectures: Lectures in a form of multimedia presentations.
Seminar classes: A discussion on selected topics from reading assignments during classes.

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

At least 80% attendance rate is required for passing grade. Each student is required to write a final essay at the end of the class, the grade of which will constitute an essential part of the final grade.

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

Lectures:
– Attendance is mandatory: Yes
– Participation rules in classes: Class attendance is obligatory.
Seminar classes:
– Attendance is mandatory: Yes
– Participation rules in classes: Class attendance is obligatory.

Method of calculating the final grade

The basis for the passing grade will be active participation and a short written essay, in which the course participant analyzes a research ethical problem related to his/her own research project/field of research.
The final grade is calculated as a weighted average of partial grades: activity during classes (20%), attendance (10%) and the final essay (70%).

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

Write an extra essay on a given topic.

Prerequisites and additional requirements

None

Recommended literature and teaching resources

1. David Koepsell, *Scientific Integrity and Research Ethics. An Approach from the Ethos of Science*, SpringerBriefs in Ethics, Springer, 2017
2. Stewart, C. Neal Jr., *Research ethics for scientists: a companion for student*, Wiley-Blackwell, 2011.
3. Oliver, Paul, *The student's guide to research ethics*, Open University Press, 2003.
4. Caroline Whitbeck, *Ethics in Engineering Practice and Research*, Second edition, Cambridge University Press, 2011.
5. *The European Code of Conduct for Research Integrity*, 2017, https://allea.org/code-of-conduct/
6. Peter Pruzan, *Research Methodology. The Aims, Practices and Ethics of Science*. Chapter 10: *Ethics and Responsibility in Scientific Research*, Springer International Publishing 2016

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

Additional scientific publications not specified

Additional information

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