The Researcher's Toolkit
- COURSE SYLLABUS

1.	**Course title:**	
	The Researcher's Toolkit	
2.	**Lecturer:**	
	Dr Katarzyna Rusinek-Abarca	
3.	**Field, type and level of studies, year of study:**	
	Interdisciplinary, all years of study	
4.	**Course character:**	
	General interdisciplinary lecture (item 1a, Tab. 1, Program of the studies)	
5.	**Teaching method:**	
	in person in CAMKPAN and on-line (hybrid)	
6.	**Language:**	*English*
7.	**Course type and number of hours:**	
	lecture 20h	
8.	**Estimated load of student's independent work:**	*20 h*
9.	**Total workload and number of ECTS points:**	*40 h, 2 ECTS*
10.	**Short description and main focus of the course:**	
	This course introduces students to the realities of academic life, helping them to understand the expectations and responsibilities of researchers, as well as their everyday practices. Students gain practical teamwork and leadership skills within research groups. They develop core competencies in scientific writing and publishing, and learn to navigate communication challenges within diverse audiences. They become familiar with the principles of open science and the fundamentals of FAIR data management. A significant part of the course focuses on grants, covering how to identify appropriate funding opportunities, prepare competitive proposals, and manage funded projects responsibly. By the end of the course, students will have a clearer sense of how to build their academic careers, make informed decisions, and operate with confidence within the research environment.	
11.	**References:**	
	Articles: *Woolston, C. (2019). PhDs: The tortuous truth. Nature, 575(7782), 403–406. https://www.nature.com/articles/d41586-019-03459-7*	

	Chamba, N., Knapen, J. H., & Black, D. (2022). How to plan your astronomy research paper in ten steps. Nature Astronomy, 6(9), 1015–1020. https://doi.org/10.1038/s41550-022-01757-1 *Knapen, J. H., Chamba, N., & Black, D. (2022). How to write and develop your astronomy research paper. Nature Astronomy, 6(9), 1021–1026. https://doi.org/10.1038/s41550-022-01759-z* *Madsen, C. (2014). Public communication of astronomy. In Astronomy Communication (pp. 231–246). Springer. https://doi.org/10.1007/978-3-319-02201-6_10* *Henson, K. T. (2003, June 26). Debunking some myths about grant writing. The Chronicle of Higher Education. https://www.chronicle.com/article/debunking-some-myths-about-grant-writing/* *Moffat, A. S. (1994). Grantsmanship: What makes proposals work? Science, 265(5180), 1921–1922. http://www.jstor.org/stable/2884681* *Official documents of a few most recent calls of chosen funding schemes - found on the following websites (as for 04.02.2026):* *National Science Centre (NCN). (2025). Funding schemes: Types of calls. https://www.ncn.gov.pl/en/finansowanie-nauki/konkursy/typy* *National Science Centre (NCN). (2025). PRELUDIUM 24 call announcement. https://www.ncn.gov.pl/en/ogloszenia/konkursy/preludium24* ** We will work on the PRELUDIUM 25 call documents, which shall be released in the second half of March 2026.* *National Science Centre (NCN). (2025). SONATINA 10 call announcement. https://www.ncn.gov.pl/en/ogloszenia/konkursy/sonatina10* *National Science Centre (NCN). (2025). OPUS 30 call announcement. https://ncn.gov.pl/en/ogloszenia/konkursy/opus30* *NAWA – Polish National Agency for Academic Exchange. (2025). Main page. https://nawa.gov.pl/en/* *European Commission. (2025). Marie Skłodowska-Curie Actions: About MSCA. https://marie-sklodowska-curie-actions.ec.europa.eu/about-msca* *European Research Council (ERC). (2025). Starting Grant: Apply for funding. https://erc.europa.eu/apply-grant/starting-grant*	
12.	**Prerequisites:** *none*	
13.	**Educational outcomes:** ***Knowledge:*** *Students are aware of the academic environment, especially the often overlooked administrative duties. Students understand the complexity of working in a research group, the different roles of its members, and how to lead it. Students are familiar with scientific writing and the world of publishing, as well as the importance and necessity for*	**PQF level 8 codes:** *P8S_WG*

	dissemination of scientific results (including through open access). Students have knowledge of the nuances of grant writing, their management, and reporting.	
	Practical Skills: *Students can organize and undertake personal and group research, also by engaging with the international community, and formulate a research hypothesis. They know how to communicate and disseminate their research to various groups, including specialists, students, and the general public. They can perform critical analysis and evaluation of the results of scientific research, which allows them to identify and define the aim and subject of their own research idea.*	*P8S_UW, P8S_UK, P8S_UO, P8S_UU*
	Social Skills: *Students can critically assess their own achievements as well as those of others. They are prepared to carry out independent research. They are competent to work in and lead a team.*	*P8S_KK*
14.	**Evaluation of the educational outcomes:**	
	Homework assignments — writing a grant proposal. *Those planning to apply for an NCN PRELUDIUM 25 grant in June 2026 are welcomed to work on their proposals and those will be evaluated as this lecture's assessment.* *All students will be obliged to prepare a grant proposal for one of the NCN funding schemes, chosen by the lecturer and provided to all in April 2026. Work can be conducted solo or in small groups (up to 3 people). The proposals should be complete with regards to administrative part and budget, while the substantive description will be limited to max 5 pages.*	
15.	**Criteria to complete the course:**	
	at least 80% attendance, final grade depends on the evaluation of the report	
16.	**Contact with the lecturer:**	
	email (krabarca@camk.edu.pl), room 108 @ CAMK	