<table>
<tr><td>Course code</td><td></td></tr>
<tr><td>Type and description</td><td>Background Course</td></tr>
<tr><td>ECTS credit</td><td>2</td></tr>
<tr><td>Course name</td><td>Methodology of Scientific Research</td></tr>
<tr><td>Course name in Polish</td><td>Metodyka badań naukowych</td></tr>
<tr><td>Language of instruction</td><td>English</td></tr>
<tr><td>Course level</td><td>8 PRK</td></tr>
<tr><td>Course coordinator</td><td>Włodzimierz Fechner</td></tr>
<tr><td>Course instructors</td><td>Włodzimierz Fechner</td></tr>
<tr><td>Delivery methods and course duration</td><td>
<table>
<tr><th></th><th>Lecture</th><th>Tutorials</th><th>Laboratory</th><th>Project</th><th>Seminar</th><th>Other</th><th>Total of teaching hours during semester</th></tr>
<tr><td>Contact hours</td><td>0</td><td>15</td><td>0</td><td>0</td><td>0</td><td>0</td><td>15</td></tr>
<tr><td>E-learning</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td></td></tr>
<tr><td>Assessment criteria (weightage)</td><td></td><td>1,00</td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Course objective</td><td>1. Acquiring knowledge about techniques of writing scientific papers in mathematics.
2. Acquiring knowledge about presenting his/her results.
3. Acquiring knowledge about methods of critical scientific discussions.
4. Acquiring knowledge about techniques of conducting research in mathematics.</td></tr>
<tr><td>Learning outcomes</td><td>Having completed the course student can:
1. Apply elementary research techniques to prepare different papers – effects U1, W4
2. Write a proper review of scientific paper and student’s thesis - effects U2, K1
3. Present results of his/her research to different types of audience – effects U2, K1
4. Prepare a research plan, for example for a grant proposal, describe predicted effects of research - effects U1, W4, K1</td></tr>
<tr><td>Assessment methods</td><td>Participation in discussions – U2, K1
Project presentation – W4, U1, K1
The final grade:
Participation in discussions - 40%
Project presentation - 60%</td></tr>
<tr><td>Prerequisites</td><td>none</td></tr>
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Course content with delivery methods	1. Methods of research in mathematics: methods of proving theorems, constructing way of reasoning, methods of describing results. 2. Writing different types of papers - thesis, research papers, cross-sectional papers, survey papers. 3. Preparing a review of a paper and a thesis and writing a detailed answer to a review. 4. Techniques of presentations and participating in a scientific discussions. 5. Using mathematical databases (Mathscinet. Zentralblatt) and other databases (SCOPUS and WoS).
Basic reference materials	1. Mathematical databases: MathSciNet, Zentralballt; Scopus; Web of Science 2. Books and articles depending on candidates profile, to be decided upon entering the course in cooperation with scientific advisor. 3. Donald E. Knuth, Tracy Larrabee and Paul M. Roberts, *Mathematical Writing*, Mathematical Association of America, 1989.
Other reference materials	1. Ramsey W. Haddad and Donald E. H. Knuth, *A programming and problem-solving seminar,* Stanford University, June 1985.
Average student workload outside classroom	10h
Comments	
Last update	