

Óbudai University		Alba Regia Technical Faculty		
<b>Name and code of the subject:</b> <i>Research methodology</i> GRKKMAKTNC				<b>ECTS: 2</b>
Faculties where the subject is taught: <b>KGK Technical management BSc</b> <b>NIK Informatic engineer BSc, KVK Electrical engineer BSc</b>				
Responsible teacher:	Dr. Halász József		Teacher:	Dr. Halász József
Pre-requirements: (code)	No			
Weekly:	Lecture: 2	Practice.:	Lab practice:	Consultation:
Type of Evaluation (complex exam, exam, practice grade):	Practice grade.			
<b>Curriculum</b>				
Aim: As a part of the talent-care program of Alba Regia University Centre the course aims at facilitating student participation in scientific projects, encouraging them to publish research findings so as to establish solid foundation for their further education in Bologna system.				
<i>Schedule:</i>				
<b>Topic</b>				<b>Number of hours</b>
Lectures:				
1. hét. Forms of recognition. Definition of science and research, their importance. The place of research in the economy and in the society.				2
2. hét. Research institutions and networks. The selection of research topics. Basic, applied and interdisciplinary research. Outlining the research project. The role of the supervisor.				2
3. hét. The personality of the researcher. Individual and team-work. Visualization of a project. Structured work with the members of the team and with the supervisor. Research ethics.				2
4. hét. Methods of literature surveys. Research on specific scientific sources. Libraries, on-line databases, Internet. Proper usage of sources, copyright, citations.				2
5. hét. The process of research through the observation, development and realization. Methods of research and analysis. Planning a research project.				2
6. hét. Applications and sponsors. Effective usage of financial resources. <i>Presentation of selected research aims and methods.</i>				2
7. hét. The rules of scientific publications. Thesis, scientific paper, poster, oral presentation.				2
8. hét. The art of writing in terms of science. Cohesion, structure, contents. Reviews. <i>Test-paper.</i>				2
9. hét. Communication inside and outside the research group. Competition and collaboration. Group communication with other research groups.				2
10. hét. Scientific trends. Value- and self-driven research. <i>Presentation and interpretation of the acquired results.</i>				2
11. hét. Scientific career. Success in research.				2
12. hét. Summary of research methodology. <i>IEEE research paper deadline.</i>				
13. hét. Possibility for replacement.				
14. hét. Final presentations of the students.				2

<b>Mid-term requirements</b>	
<b>Compulsory:</b> <i>week 12 Submission of research project in IEEE format</i>	
Recommended: week 6. Introducing research objectives and methods (individually or in group) week 8. Mid-term paper week 10 Introducing and interpreting interim research findings (individually or in group) week 14 Presentation of research (individually or in group)	
<b>Attendance is mandatory (number of absence: max. 3)</b>	
week 13	Supplementary introduction of research objectives and methods
Missed lessons coverage:	Submission of IEEE format research projects during the last week
Signature:	Attendance , project submission
Type of evaluation (written, oral, test): Examination Components of the exam mark (based on the project work):: A. Mid-term paper (week 8) max. 20 points B. Submitted IEEE format project (week 12). max: 50 points C. Presentation of own project (week 14.) max: 30 points	
<b>Method of grading:</b>	
0-49 pont	insufficient
50-59 pont	sufficient
60-69 pont	satisfactory
70-79 pont	good
80-100 pont	excellent

<b>References</b>	
Compulsory	Majoros P.: A kutatómódszertan alapjai. Perfekt Kiadó, Budapest, 2004. ISBN 963-3945844.
	Csermely P., Gergely P., Koltay T., Tóth J.: Kutatás és közlés a természettudományokban. Osiris Kiadó, Budapest, 1999. ISBN 963-3795281.
Further reading:	Verzuh E.: Projektmenedzsment. HVG Könyvek. HVG Zrt, Budapest, 2007. ISBN 963-7525777.
	Cajal R.: Advice for a young investigator. MIT Press, Boston, 1999. ISBN 0-262-18191-6.
	Booth W., Colomb G.G., Williams J.M.: The craft of research. The University of Chicago Press, Chicago, 2008. ISBN 0-226-06566-9.