Subject programme

1. Subject name / subject module: **Master's seminar**
2. Lecture language: **English**
3. The location of the subject in study plans:
   - Area or areas of the studies: **Computer Control Systems Engineering**
   - Degree of the studies: **2nd degree studies**
   - Field or fields (implementation of effects standard): **Mechatronics**
4. Supervision of subject implementation:
   - The Institute / Another unit: **The Institute of Informatics and Mechatronics**
   - The person responsible for the subject: **Szychta Elżbieta, prof. dr hab. inż.**
   - People cooperating in the development of the programme of the subject:
5. The number of hours and forms of teaching for individual study system and the evaluation method

Teaching activities with the tutor																						Total
Form of classes / Mode of study		SOW	ECTS	Classes	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	...	SOW	ECTS	ECTS
Full-time studies				28	97	5																5
Part-time studies																						
Credit rigor	...			pass/fail grading																		

6. Student workload – ECTS credits balance
   1 ECTS credit corresponds to 25-30 hours of student work needed to achieve the expected learning outcomes including the student's own work

Activity (please specify relevant work for the subject)	**Hourly student workload (full-time studies/part-time studies)**
Participation in classes	**28**
Preparing homeworks	**50**
Preparing reports	**25**
Independent study of the subject	**20**
Participation in an exam / graded assignment / final grading	**2**
Total student workload	**125**
ECTS credits	**5**
* Student's workload related to practical forms	**125**
Student's workload in classes requiring direct participation of academic teachers	**28**

7. Implementation notes: recommended duration (semesters), recommended admission requirements, relations between the forms of classes:

   Knowledge of the field of study

   Recommended duration of the subject is taken from the course plan.
8. Specific learning outcomes – knowledge, skills and social competence

Specific learning outcomes for the subject		Form	Teaching method	Methods for testing of (checking, assessing) learning outcomes
Outcome symbol	Outcome description			
Skills				
K_U04	**Student is able to prepare a scientific study in Polish or English, e.g. a brief report in Polish and English or a short paper presenting the results of experimental research obtained by him.**	**Classes**	**Inquiry methods**	**Student learning activities**
K_U06	**Student has communication skills on specialist topics in English and in a foreign language, in accordance with the requirements specified for the B2 + level of the Common European Framework of Reference for Languages.**			

K_U07	Student has language skills allowing for oral presentations, conducting debates in Polish or English, on technical issues, in particular in the field of mechatronics.			
Social competence				
K_K01	Student is ready to critically assess the acquired knowledge and received content, understands the need for continuous improvement of the substantive workshop, can set directions and areas of personal professional self-improvement, and inspire and organize the learning process of other people.	Classes	Inquiry methods	Student learning activities
K_K02	Student is ready to recognize knowledge in solving cognitive and practical problems and to consult experts in case of difficulties with solving the problem on their own.			
K_K03	Student correctly evaluates the scale of the challenges ordered or undertaken on his own initiative, typical and new, occurring in problematic situations, and skillfully indicates the priorities in solving them.			

9. Assessment rules / criteria for each form of education and individual grades

0% - 50%	ndst	**81% - 90%**	db
51% - 70%	dst	**91% - 93%**	db+
71% - 80%	dst+	**94% - 100%**	bdb

Activity	Grades	Calculation	To Final
Reports	**bdb(5)**	**5*50%**	**2,5**
Classes activities	**Example: db, dst, bdb (4, 3, 5)**	**Avg.: (4+3+5)/3=4 4*20%=0,8**	**0,8**
Homeworks	**Example: ndst, db, dst (2, 4, 3)**	**Avg.: (2+4+3)/3=3 3*20%=0,6**	**0,6**
Attendance	**on 80% classes**	**0,8*5=4 4*10%=0,4**	**0,4**
Final results			**4,3**

10. The learning contents with the form of the class activities on which they are carried out

(Classes)

Master thesis. The research nature of the master's work, the principles of writing literature and literature references in technical works, the methods of formulating an objective of work, and ways of achieving an objective of work - the idea of a master's work. Activity formulating a goal for selected topics. Use of scientific bibliographic databases, scientific articles and patent databases.

11. Required teaching aids

Exercises - a room adapted for conducting classes in the form of exercises / workshops, multimedia projector

12. Literature:

a. Basic literature:

1. Sowińska B., graduate's guidebook, Bydgoszcz, 2012, ISBN 978-83-61036-62-3.

2. Sowińska B., Rules for making footnotes, references and bibliography attached, Ed. 2 supplements and amendments, Bydgoszcz, 2012, ISBN 978-83-61036-548.

a. Supplementary literature:

1. PN-ISO 690: 2012 Information and documentation. Guidelines for the preparation of footnotes bibliographic references and information resources.

2. Węglińska M., How to write a master's thesis? Krakow, 2004, ISBN 83-7308-328-6.

3. Zaczyński W., A guide for the author of seminar, diploma and master theses, Warsaw, 1995, ISBN 83-903103-7-6.

4. Kaczmarek T. T., A guide for students writing a bachelor's or master's thesis [online] 2009 [access: August 30, 2011], Available on the World Wide Web:

5. Kawczyński S., The problem of plagiarism in higher education. Characteristic electronic anti-plagiarism system, "E-mentor" [online], No. 2 (19) / 2007 [access: 26 July 2011], Available on the World Wide Web:, ISSN 1731-7428.

b. Internet sources:

13. Available educational materials divided into forms of class activities (Author's compilation of didactic materials, e-learning materials, etc.)

14. Teachers implementing particular forms of education

Form of education	Name and surname
1. Classes	Szychta Elżbieta, prof. dr hab. inż.