<table>
<tr><td>1.</td><td>Course title</td><td colspan="3">Behaviour based robotics</td></tr>
<tr><td>2.</td><td>Course code</td><td colspan="3">InIS-I-04</td></tr>
<tr><td>3.</td><td>Study program</td><td colspan="3">Intelligent Systems Engineering</td></tr>
<tr><td>4.</td><td>Unit offering the course</td><td colspan="3">FCSE</td></tr>
<tr><td>5.</td><td>Undergraduate/master/PhD</td><td colspan="3">Master</td></tr>
<tr><td>6.</td><td>Year/semester
1(2)/winter/compulsory</td><td colspan="3">7. ECTS: 6</td></tr>
<tr><td>8.</td><td>Teacher(s)</td><td colspan="3">Nevena Ackovska</td></tr>
<tr><td>9.</td><td>Course prerequisites</td><td colspan="3">None</td></tr>
<tr><td>10.</td><td colspan="4">Goals (competences):
The subjects enables the students to study the methods of designing robot behavior. Students should learn how formally to represent behavior of intelligent systems, such as robots. Modelling the behavior of the robots in the environment is another goal of this subject.
Upon completion of this course the students should be able to:
• understand the biological bases of the intelligent systems construction such, as robots.
• formally represent the behavior of the robot in the environment
• model the behavior of the intelligent systems based on the input sensory information</td></tr>
<tr><td>11.</td><td colspan="4">Course content:
• Intelligent robotics,
• Neurological bases of the robotics,
• Physiological bases of the robotics,
• Psychology,
• Emotions and behavior in intelligent systems,
• Robotics behavior,
• Generating behavior,
• From perception to behavior</td></tr>
<tr><td>12.</td><td colspan="4">Teaching methods:
Lectures supported by slide presentations, interactive lectures, trainings (using lab equipment and software packages), team work, case studies, invited guests and lectures, individual practical assignments presentations, seminar paper, e-learning (forums, consultations).</td></tr>
<tr><td>13.</td><td colspan="2">Total available time</td><td colspan="2">6 ECTS x 30 hours = 180 hours</td></tr>
<tr><td>14.</td><td colspan="2">Distribution of the available time</td><td colspan="2">30+30+40+40+40 = 180 hours</td></tr>
<tr><td rowspan="2">15.</td><td rowspan="2">Teaching activities</td><td>15.1.</td><td>Lectures</td><td>30 hours</td></tr>
<tr><td>15.2.</td><td>Training (labs, problem solving), seminar and team work</td><td>30 hours</td></tr>
</table>

16.	Other activities	16.1.	Project work	40 hours
		16.2.	Self study	40 hours
		16.3.	Home work	40 hours

17.	Grading		
	17.1.	Tests	20 points
	17.2.	Seminar work/project (written or oral presentation)	70 points
	17.3.	Active participation	10 points

18.	Grading criteria	to 59 points	5 (five) (F)
		from 60 to 68 points	6 (six) (E)
		from 69 to 76 points	7 (seven) (D)
		from 77 to 84 points	8 (eight) (C)
		from 85 to 92 points	9 (nine) (B)
		from 93 to 100 points	10 (ten) (A)

19.	Final exam prerequisites	Successfully completed activities 15.1 and 15.2
20.	Course language	Macedonian and English
21.	Quality assurance methods	Internal evaluation and student questionnaires

22. Literature

22.1. Compulsory

No.	Authors	Title	Publisher	Year
1.	Ronald C. Arkin	Behavior-Based Robotics	MIT Press	1998
2.	Joseph L. Jones, Daniel Roth	Robot programming: a practical guide to behavior-based robotics	McGraw-Hill	2004
3.	Rolf Pfeifer, Christian Scheier	Understanding Intelligence	MIT Press	2001

22.2. Additional

No.	Authors	Title	Publisher	Year
1.	Valentino Braitenberg -	Vehicles: Experiments in Synthetic Psychology	MIT Press	1986
2.				
3.				