

Working study program of *Satellite communication systems*

No.	Subjects, blocks and types of activities	Student's study hours										Yearly, semester, weekly hours				
		Volume of overall hours and ECTS			Auditoria works (in hours)						Self-Study	1 <sup>st</sup> year		2 <sup>nd</sup> year		
					Overall	Lecture	Practice	Laboratory	Seminar	Course work (project)		Weeks in the year		Weeks number in semester		
		30		24							Semesters					
				hours	%	ECTS							1	2	3	4
				3	4	5	6	7	8	9	10	11	12	13	14	15
<b>1.00</b>	<b>General Methodological Subjects</b>	<b>600</b>	<b>42</b>	<b>20</b>	<b>150</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>450</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>0</b>	
1.01	Research methodology	120		4	30	30					90	2				
1.02	Innovation and project management	120		4	30	30					90		2			
1.03	Search and extract information	120		4	30	30					90	2				
1.04	Artificial intelligence and neural networks	120		4	30	30					90			2		
1.05	Design and analysis of algorithms	120		4	30	30					90		2			
<b>2.00</b>	<b>"Satellite communication systems" specialty elective disciplines</b>	<b>360</b>	<b>25</b>	<b>12</b>	<b>90</b>	<b>60</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>270</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	
2.01	Satellite communication	180		6	45	30	15				135		3			
2.02	Satellite positioning and navigation systems	180		6	45	30	15				135			3		
<b>3.00</b>	<b>"Satellite communication systems" specialty elective disciplines</b>	<b>480</b>	<b>33</b>	<b>16</b>	<b>120</b>	<b>90</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>360</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>0</b>	
3.01	Specialty selective subjects	180		6	45	30	15				135		3			
3.02	Specialty selective subjects	180		6	45	30	15				135			3		
3.03	Specialty selective subjects	120		4	30	30					90	2				
	<b>Overall</b>	<b>1440</b>	<b>100</b>	<b>48</b>	<b>360</b>	<b>300</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1080</b>	<b>6</b>	<b>10</b>	<b>8</b>	<b>0</b>	
<b>4.00</b>	<b>Science activities</b>	<b>2160</b>		<b>72</b>								<b>8</b>	<b>8</b>	<b>8</b>	<b>20</b>	
4.01	Preparation and defending the master thesis	1560		52								7	7	6	10	
4.02	Scientific pedagogical work	240		8								1	1	2		
4.03	Internship	360		12											10	
	<b>Overall</b>	<b>3600</b>		<b>120</b>	<b>360</b>	<b>300</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1080</b>	<b>14</b>	<b>18</b>	<b>16</b>	<b>20</b>	

Specialty selective subjects:

- 3.1. Satellite TV and Radio Broadcasting
  - 3.1.1. Modeling and design of satellite communication antennas
- 3.2. Design of nodes and devices of satellite communication systems
  - 3.2.1. Satellite systems and communication networks
- 3.3. Digital radio communication
  - 3.3.1. Space technology

Working study program of *Mobile Communication Systems*

No.	Subjects, blocks and types of activities	Student's study hours										Yearly, semester, weekly hours			
		Volume of overall hours and ECTS			Audiaria works (in hours)						Self-Study	1 <sup>st</sup> year		2 <sup>nd</sup> year	
					Overall	Lecture	Practice	Laboratory	Seminar	Course work (project)		Weeks in the year		Weeks in the year	
		30		24											
		Semesters		Semesters											
hours	%	ECTS	1	2	3	4									
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
<b>1.00</b>	<b>General Methodological Subjects</b>	<b>600</b>	<b>42</b>	<b>20</b>	<b>150</b>	<b>150</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>450</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>0</b>
1.01	Research methodology	120		4	30	30					90	2			
1.02	Innovation and project management	120		4	30	30					90		2		
1.03	Search and extract of information	120		4	30	30					90	2			
1.04	Artificial Intelligence and Neural Networks	120		4	30	30					90			2	
1.05	Algorithm design and analysis	120		4	30	30					90		2		
<b>2.00</b>	<b>Specialty subjects for <i>Mobile Communication Systems</i></b>	<b>360</b>	<b>25</b>	<b>12</b>	<b>90</b>	<b>60</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>270</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>
2.01	MIMO	180		6	45	30	15				135		3		
2.02	GSM and mobile network management	180		6	45	30	15				135			3	
<b>3.00</b>	<b>Specialty selective subjects of the <i>Mobile Communication Systems</i></b>	<b>480</b>	<b>33</b>	<b>16</b>	<b>120</b>	<b>90</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>360</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>5</b>
3.01	Specialty selective subjects	180		6	45	30	15				135				5
3.02	Specialty selective subjects	180		6	45	30	15				135			3	
3.03	Specialty selective subjects	120		4	30	30					90	2			
	<b>Overall</b>	<b>1440</b>	<b>100</b>	<b>48</b>	<b>360</b>	<b>300</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1080</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>5</b>
<b>4.00</b>	<b>Science activities</b>	<b>2160</b>		<b>72</b>								<b>8</b>	<b>8</b>	<b>8</b>	<b>20</b>
4.01	Preparation and defending the master thesis	1560		52								7	7	6	10
4.02	Scientific pedagogical work	240		8								1	1	2	
4.03	Internship	360		12											10
	<b>Overall</b>	<b>3600</b>		<b>120</b>	<b>360</b>	<b>300</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1080</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>25</b>