

<b>Study program:</b> bachelor
<b>Course title:</b> Aviation meteorology
<b>Teacher:</b> Dr Dušanka Obadović
<b>Course status:</b> elective
<b>ECTS:</b> 3
<b>Preconditions:</b> none
<p><b>Learning objectives:</b></p> <p>Goal of the course is to gain understanding of specific atmospheric events and conditions that are necessary for insure safe and economical travel of passengers and air shipments. Introduction to meteorological minimum necessary for airport security.</p>
<p><b>Learning outcomes:</b></p> <p>Student should possess:</p> <ul style="list-style-type: none"> <li>- General abilities of using the expert literature and reference data, having knowledge of scientific and expert terminology in the field of aviation meteorology;</li> <li>- Course specific abilities of having knowledge of basic characteristics and structure of atmosphere, as well as atmospheric events that are significant for safety and cost of airplane travel, i.e. determination of height using pressure, density, standard atmosphere, winds and knowledge of wind models, creation and types of precipitation, dangerous atmospheric events (wind shear, aircraft electrification and freezing) and meteorological minimums required for airport security. In addition, students should understand the role of physics in aviation meteorology.</li> </ul>
<p><b>Course contents:</b></p> <p><i>Theoretical</i></p> <p>Introduction. Task of aviation meteorology and its development. Structure and characteristics of atmosphere. Altimetry. Barometric formula (exponential atmosphere). Pressure in aviation. Height using pressure. Height using density. Wind, vertical air movement and stability. Wind terminology, meaning and wind observation. Fundamental wind models. Sources of vertical air movements. Cloudiness and precipitation. Formation and types of clouds and hazes. Problems of cloudiness observations. Formation and types of precipitations. Problems of precipitations observations.</p> <p>Atmospheric circulation systems. General circulation. Monsoon circulation. Air masses, air fronts, extra tropical cyclones. Tropical cyclones. Thundering event. Local circulation. Dangerous weather conditions. Wind shear. Aviation turbulence. Freezing. Instrumental meteorological conditions. Other dangerous events.</p> <p>Aviation meteorological documentations. Organization of aviation meteorological office. Aviation meteorological reports. Aviation meteorological wind and temperature maps. Significant weather charts.</p> <p><i>Practical</i></p> <p>Computational exercises and practical teaching.</p>
<p><b>Literature</b></p> <ol style="list-style-type: none"> <li>1. Zlatoje Čobanov, "Vazduhoplovna Metereologija ", Beograd, Naučna knjiga (1992)</li> <li>2. Milivoj Gavrilov, "Vazduhoplovna metereologija ", JAT Pilotska akademija, Vršac (2001)</li> </ol>

<b>Hours of active teaching: 45</b>	<b>Theoretical teaching: 30</b>	<b>Practical teaching: 15</b>	
<b>Teaching methods:</b> Monologue – dialogue Experimental			
<b>Grading (maximum 100 points)</b>			
<b>Pre-exam obligations</b>	<b>Points</b>	<b>Final exam</b>	<b>Points</b>
Attendance and activity in classes	5	Prepared and defended project	50
Practical teaching	5	Oral exam	40
Preliminary exam(s)			
Tests			