



**ANNEX 2.6**  
**DEGREE PROGRAM DIDACTIC REGULATIONS**  
**AUTONOMOUS VEHICLE ENGINEERING**  
**CLASS LM-33**

**School:** Polytechnic School of Engineering and Basic Sciences

**Department:** Industrial Engineering

**Didactic Regulations in force since the academic year 2024-2025**

<b>Course:</b> GUIDANCE AND NAVIGATION		<b>Teaching Language:</b> English	
<b>SSD (Subject Areas):</b> ING-IND/05		<b>CREDITS:</b> 6	
<b>Course year:</b> I		<b>Type of Educational Activity:</b> C	
<b>Teaching Methods:</b> In-person			
<b>Contents extracted from the SSD declaratory consistent with the training objectives of the course:</b> The subject area studies aeronautical and space systems as a whole and the aspects of sub-system interaction and integration, in relation to the achievement of mission objectives. Topics of interest include the definition of the functional architecture for the individual units and the design, the identification of functional components, the effect of the external environment and dynamic interactions on each system and subsystems. The sector makes use of specific survey methodologies, such as simulation for experimental, analytical and numerical modeling.			
<b>Objectives:</b> The course is intended to provide the needed knowledge to design and develop efficient guidance and navigation solutions for autonomous vehicles. Guidance is the development of the mission plan, i.e. the 3D or 4D trajectory for the vehicle, depending on the type of transport systems. Guidance can be strategic or tactical depending whether it is realized before the mission is started or not. Navigation is the function that provides information about position, velocity, and orientation for the vehicle. It is accomplished by integrating measurement from different sources, such as sensors and receivers.			
<b>Propaedeuticities:</b> None			
<b>Is a propaedeuticity for:</b> None			
<b>Types of examinations and other tests:</b> Written and oral			