



Code	ING-215	Prerequisites	ING-212
Name	Fluid Mechanics	Co-requisites	ING-215L

Credits	Contact Hours
04	44
Categorization of credits	
Math and basic science	
Engineering topic	X
Other	

Coordinator's name	Alfredo Abel, MSA Martín Meléndez, MSA Pablo Guerrero, MSA
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Text book
Other supplemental materials
Meléndez Valencia, M. (2016) Introduction to fluid mechanics. Santo Domingo: Santo Domingo Institute of Technology. Mott, R.L. (2010) Fluid mechanics. Potter, M. C., Wiggert, D.C., Ramadan, B. (2015) Fluid mechanics (4th edition). Sámano Tirado, D. A., Sen, M. (2009) Fluid mechanics Streeter, V.L. (2000). Fluid mechanics. (9th edition).

Description	
<p>Fluid Mechanics studies the fundamentals of physics and general mechanics that deal with the behavior of fluids, both in static form and in motion, and the resolution of associated problems. This subject emphasizes the behavior of the physical properties of fluids, as well as the forces that cause fluids in static and moving form.</p> <p>The contents of it are organized logically, starting with a general introduction of the fundamental characteristics of fluids, systems of units and dimensional analysis. From there, the two main topics of fluid mechanics are addressed: hydrostatics and fluid dynamics.</p>	
Type of course	Required <input checked="" type="checkbox"/> Elective <input type="checkbox"/>

Specific goals for the course	
Outcomes of instruction	EG1.1. It defines the problem of surface pressure from the principles of physics and mechanics.

	<p>EG1.2. Determine the causes that produce pressure difference between two points from the knowledge of the pressure in one of them.</p> <p>EG1.3. Evaluate pressure under the effects of two or more fluids exerting on a submerged surface.</p> <p>EG2.1. Graphically represent the physical phenomenon that results from pressure diagrams.</p>
Student outcomes	<p>CG1. Identify, formulate and solve complex engineering problems by applying the principles of Engineering, Science and Mathematics.</p> <p>CG2. Communicates effectively with a variety of audiences.</p>

Topics
<p>Unit I. Characteristics of fluids</p> <p>Unit II. Fluid static</p> <p>Unit III. Fluid kinematics</p>