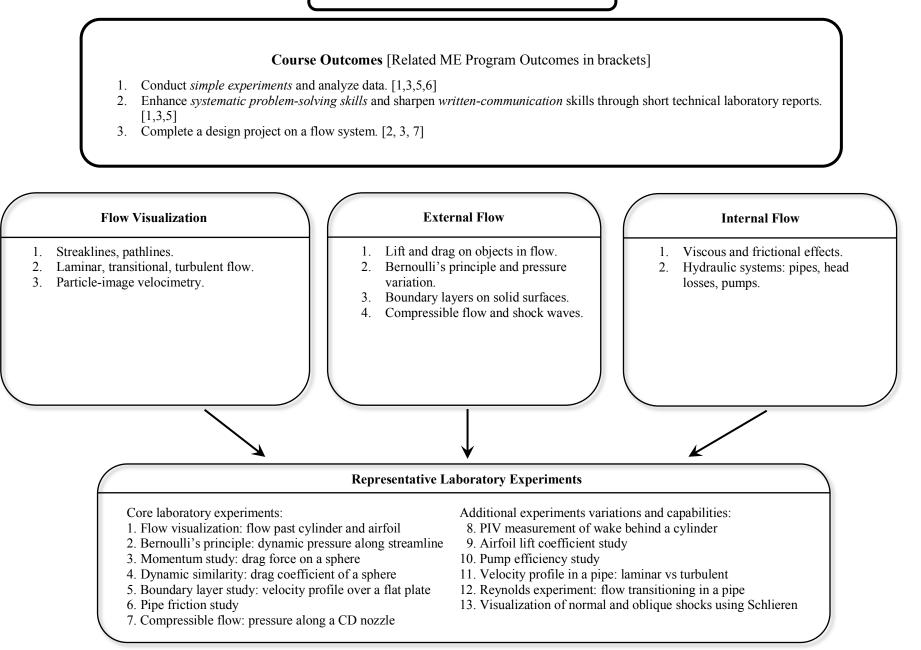
## ME 30801 FLUID MECHANICS LABORATORY



COURSE NUMBER: ME 30801	COURSE TITLE: Fluid Mechanics Laboratory (1 credit)
<b>REQUIRED COURSE OR ELECTIVE COURSE:</b> Required	TERMS OFFERED: Fall and Spring
<b>TEXTBOOK/REQUIRED MATERIAL:</b> None. Handouts provided by the instructors.	PRE-REQUISITIES: ME 30800 – Fluid Mechanics
COORDINATING FACULTY: P. Vlachos & C. Wassgren	
<b>COURSE DESCRIPTION:</b> Physical experiments in fluid mechanics. Application of fluid mechanics theory and fundamental concepts to measuring and analyzing fluid systems and flows. A laboratory design project on a flow system reinforces the design process.	<ol> <li>COURSE OUTCOMES [Related ME Program Outcomes in brackets]:</li> <li>1. Conduct <i>simple experiments</i> and analyze data. [1,3,5,6]</li> <li>2. Enhance <i>systematic problem-solving skills</i> and sharpen <i>written-communication</i> skills through short technical laboratory reports. [1,3,5]</li> <li>3. Complete a design projects on a flow system. [2, 3, 7]</li> </ol>
ASSESSMENTS TOOLS: • Laboratory reports. • Project reports. • Pre-lab quizzes.	
<b>NATURE OF DESIGN CONTENT:</b> The students participate in a design project lab, in which a fluid flow system is designed to achieve a performance goal.	<ul> <li>RELATED ME PROGRAM OUTCOMES:</li> <li>1. Engineering fundamentals</li> <li>2. Engineering design</li> <li>3. Communication skills</li> <li>5. Teamwork skills</li> <li>6. Experimental skills</li> <li>7. Knowledge acquisition</li> </ul>
<ul> <li>PROFESSIONAL COMPONENT:</li> <li>1. Engineering Topics: Engineering Science - 90% Engineering Design - 10%</li> </ul>	
<b>COMPUTER USAGE</b> : Knowledge of word processing, spreadsheet software, and basic programming (for example, MATLAB) are necessary for laboratory report preparation and homework assignments.	
<ul> <li>COURSE STRUCTURE/SCHEDULE:</li> <li>a. Laboratory Prep – 1 day per week at 50 minutes</li> <li>b. Laboratory – 1 day per week at 100 minutes</li> </ul>	
PREPARED BY: I. Christov, P. Vlachos & C. Wassgren	<b>REVISION DATE:</b> January 28, 2020