

<b>Course Title</b>	<b>MECH 3345 System Dynamics</b>	<b>Fall/2017</b>
<b>INSTRUCTOR:</b>	Angel Flores-Abad, Office: Engineering Building, Room E331, Email: afloresabad@utep.edu	
<b>ASSISTANT:</b>	TR, 1:00 – 2:00 PM. 3D printing Lab.	
<b>OFFICE HOURS:</b>	Tuesday and Thursday at 11:00 am.	
<b>LECTURE</b>	MW 10:30 am - 11:50 am, Undergraduate Learning Center 346.	
<b>PREREQUISIT</b>	Electromechanical systems and Dynamics	
<b>COURSE DESCRIPTION:</b>	The course educates students in system modelling, time-domain performance analysis, frequency-domain analysis and control systems design.	
<b>COURSE OBJECTIVES:</b>	<ul style="list-style-type: none"> <li>• Students will use mathematical tools and physical laws to represent mechanical and electromechanical systems.</li> <li>• Students will use computer tools to validate and analyze dynamical systems.</li> </ul>	
<b>TEXTBOOKS:</b>	[1] Palm, W. J. System dynamics. McGraw-Hill Higher Education. 3 <sup>rd</sup> Edition (Main reference) [2] Ogata, K. System dynamics. New Jersey: Prentice Hall.	
<b>SOFTWARE:</b>	Matlab. Register at iClicker Reef: <a href="https://app.reef-education.com/#/login">https://app.reef-education.com/#/login</a> Course ID: MECH 3345 FALL 2017	
<b>GRADING:</b>	<ul style="list-style-type: none"> <li>• Assignments (homework, quizzes, etc.) 300</li> <li>• Midterms (three, one is dropped. Only two count) 400 (200 each)</li> <li>• Project (simulation and/or experimental): 100</li> <li>• Final Exam (Comprehensive): 200</li> </ul> <p style="text-align: right;"><b>Total points 1000</b></p> <ul style="list-style-type: none"> <li>○ Students with a total of 360 points or more in the two midterm exams are exempted from taking the final.</li> </ul> <p><b>ESCALE</b>  A ≥ 900  B ≥ 800 but &lt;900  C ≥ 700 but &lt;800  D ≥ 600 but &lt;700  F &lt;600</p> <ul style="list-style-type: none"> <li>• There will not be make up exams. If you miss an exam due to a UTEP approved reason (see the catalog) that will be your exam to drop.</li> </ul>	
<b>Midterm exam 1:</b>	September 27	
<b>Midterm exam 2:</b>	October 23	
<b>Midterm exam 3:</b>	November 20	
<b>Final Exam:</b>	Dec 15, 10:00 AM-12 :45 PM.	
<b>MATERIAL FOR CLASS</b>	Laptop and Basic scientific calculator (Non-programmable)	
<b>TOPICS COVERED</b>	<ul style="list-style-type: none"> <li>• Dynamic response and Laplace transform method</li> <li>• Transfer function</li> <li>• Rigid-body mechanical systems</li> <li>• Spring damper mechanical systems</li> <li>• Electrical Systems</li> <li>• Electromechanical systems</li> <li>• State space representation</li> <li>• System analysis in time domain</li> </ul>	
The above schedule, policies, and assignments in this course are subject to change in the event of contingency or by mutual agreement between the instructor and the students.		