

Course Title	MECH 3345 System Dynamics Spring/2018
INSTRUCTOR:	Angel Flores-Abad, Office: Engineering Building, Room E331, Email: afloresabad@utep.edu
ASSISTANT:	Luis Calvo, Tuesday and Thursday at 1:30 PM-3:00 PM. 3D printing Lab, Room E101.
OFFICE HOURS:	Tuesday and Thursday at 11:00 am.
LECTURE	TR 4:30 pm – 5:50 pm, Undergraduate Learning Center 128.
PREREQUISIT	Electromechanical systems and Dynamics
COURSE DESCRIPTION :	The course educates students in system modelling, time-domain performance analysis, and frequency-domain analysis.
COURSE OBJECTIVES:	<ul style="list-style-type: none"> • Students will use mathematical tools and physical laws to represent mechanical and electromechanical systems. • Students will use computer tools to validate and analyze dynamical systems.
TOPICS COVERED	<ul style="list-style-type: none"> • Dynamic response and Laplace transform method • Transfer function • Rigid-body mechanical systems • Spring damper mechanical systems • Electrical Systems • Electromechanical systems • State space representation • System analysis in time domain • System analysis in frequency domain
TEXTBOOKS:	<p>[1] Palm, W. J. System dynamics. McGraw-Hill Higher Education. 3rd Edition (Main reference)</p> <p>[2] Ogata, K. System dynamics. New Jersey: Prentice Hall.</p>
SOFTWARE:	<p>-Matlab. Refer to ETC for specific instructions on installation. Engineering building E351D (915) 747-5131.</p> <p>-Mathematica. Refer to ETC for specific instructions on installation.</p> <p>-Register at iClicker Reef: https://www.iclicker.com/students with your UTEP account Course Name: System Dynamics SP2018</p> <p>-Link to UTEP's Classroom Response System (iClicker Cloud) services catalog page: https://admin.utep.edu/Default.aspx?tabid=74573</p> <p>Students who do not have an existing REEF account, need to go to iclicker.com/students or download the iClicker Reef Student app from the App Store or Google Play to sign up for a Reef student account. iPad users need to change the search to iPhone App. You should use your university email address (@miners.utep.edu) when creating your account. If you need to change your email address, or password, edit your account profile. Do not create and use more than one Reef account as you will only receive credit from a single account.</p> <p>Note: You will not need to purchase a subscription to use iClicker REEF this semester because it is provided to you for free.</p>

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GRADING:	<ul style="list-style-type: none"> • Homework, quizzes, labs, in-class activities, iClicker, etc. 300 • Midterms (three, one is dropped. Only two count) 400 (200 each) • Project (simulation and/or experimental): 100 • Final Exam (Comprehensive): 200 <p style="text-align: right;">Total points 1000</p> <ul style="list-style-type: none"> ○ Students with a total of 360 points or more in the two midterm exams are exempted from taking the final. They will obtain the full 200 points. ○ Optional: students with ≥ 340 but <360 will obtain his average exams grade on the final exam. Example: a student with 350 points would get $350/2=175$ points in the final. <p>ESCALE A ≥ 900 B ≥ 800 but <900 C ≥ 700 but <800 D ≥ 600 but <700 F <600</p> <p>Policies:</p> <ul style="list-style-type: none"> • Make up exams are available only due to UTEP accepted reasons. If you miss an exam due to a UTEP approved reason (see the catalog) that will be your exam to drop. Traffic congestion, flat tires, long waiting times in border bridges are not approved reasons. A student representing UTEP in an academic or sport activity is approved. • Correction period: students will have one week after the assignments, quizzes, exams, etc., are returned with grades to ask for any revision on the grade, after that week, no changes can be done in the grades. • Picking up assignments when they are returned help to ask for revision on time. • If you see a zero on blackboard as grade, that means you obtained a zero or you did not submit the assignment. It does not mean the assignment has not been graded. • If an assignment of exam has no name, they will be graded but if they are not picked up, after the one-week period, they lost validity. 		
Academic honesty	Read the supplementary documents available in Black Board: Addendum to syllabi and rules for exams and quizzes.		
Midterm exam 1:	February 20		
Midterm exam 2:	March 27		
Midterm exam 3:	April 26		
Final Exam:	TBD		
MATERIAL FOR CLASS	Laptop and Basic scientific calculator (Non-programmable)		
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.			