

## TEACHING EXPERIENCE

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FALL 2022	<u>ME 478/578: Design and Analysis of Mechatronic Systems (Graduate)</u> <ul style="list-style-type: none"><li>◇ Basic circuit theory</li><li>◇ Introduction to microcontrollers and systems integration</li><li>◇ Communication between electronic systems</li><li>◇ Motor control with H-bridge</li></ul>
SPRING 2022	<u>ME/ECE 360: System Modeling and Control (Undergraduate)</u> <ul style="list-style-type: none"><li>◇ Laplace Transforms and Stability of Differential Equations</li><li>◇ Modeling: mass-spring-damper, rigid bodies, dc-motors</li><li>◇ Block Diagrams and System Responses</li><li>◇ Tracking and Disturbance Rejection</li><li>◇ Place Placement, 2-DoF Controllers, and Internal Stability</li></ul>
FALL 2017-2021	<u>ME 380: Kinematics and Dynamics of Machines (Undergraduate)</u> <ul style="list-style-type: none"><li>◇ Kinematic and dynamic analysis of mechanisms</li><li>◇ Motion planning and synthesis of mechanisms</li><li>◇ Kinematic analysis of gears and cams</li></ul>
SPRING 2018	<u>ME 467–564   ECE 464–564:</u>
SPRING 2019	<u>Robotics and Automated Systems (Graduate)</u>
SPRING 2021	◇ Kinematic and dynamic analyses of robots
SPRING 2023	◇ Navigation and localization of mobile robots
	◇ Motion planning and control of robots
SPRING 2020	<u>ME   ECE 597: Optimization Theory and Practice (Graduate)</u>
FALL 2023	◇ Linear Programming and applications
	◇ Unconstrained optimization
	◇ Constrained optimization
	◇ Convex optimization
	◇ Neural network training
SEPT 2015	A short course on Geometric Mechanics <ul style="list-style-type: none"><li>◇ Five 2-hour lectures delivered at University of Naples, Federico II</li><li>◇ Coordinate-free Lagrangian and Hamiltonian Mechanics</li><li>◇ Symmetries and Conservation Laws</li><li>◇ Derivation of Geometric Control Laws</li></ul>
AUG 2013 - MAY 2014	Teaching Assistant at The University of Texas at Dallas <ul style="list-style-type: none"><li><u>SYSM 6302 – Optimization Theory and Practice</u></li><li>Instructor: Prof. James Primbs</li><li><u>MECH 6313 – Nonlinear Control Systems</u></li><li>Instructor: Prof. Mark W. Spong</li></ul>
SEP 2008 - JUNE 2010	Teaching Assistant at Sabanci University <ul style="list-style-type: none"><li><u>ME 303 – Control System Design</u></li><li>Instructor: Prof. Kemalettin Erbatur</li><li><u>EE 521 – Kinematics and Dynamics of Mechanisms</u></li><li>Instructor: Prof. Volkan Patoğlu</li></ul>