WASHINGTON STATE UNIVERSITY
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School of Engineering and Computer Science

MECH 101: Introduction to Mechanical Engineering

Catalog Data:	**101 Introduction to Mechanical Engineering** 2 Course Prerequisite: MATH 106 and MATH 108, or concurrent enrollment, or MATH 171 or concurrent enrollment. Introduction to mechanical engineering profession, engineering problem solving, computers in engineering design methods. Typically offered Spring.
Class Schedule:	Two 50-minute lecture sessions per week, for one semester.
Laboratory Schedule:	None
Prerequisites by Course:	MATH 106 and MATH 108, or concurrent enrollment, or MATH 171 or concurrent enrollment.
Prerequisites by Topic:	1. Graphs, properties and applications of polynomial, rational, exponential and logarithmic functions. 2. Properties and applications of trigonometric functions.
Textbook:	Hagen, K. D. (2014*). Introduction to Engineering Analysis*, 4th ed. Upper Saddle River, NJ: Pearson Education, Inc. (publishing as Prentice-Hall). ISBN-13: 978-0-13-3485165.
Course Coordinator:	Dr. Dave Kim
Course Objectives:	1. Define mechanical engineering problems and propose solutions. 2. Learn about engineering ethics, the economic, environmental, and societal impacts, etc. 3. Participate in a team-work class project to design and build a prototype with constraints. 4. Write a technical report on the class-project and give a professional presentation at the end of class.
Topics Covered:	1. Overview of the mechanical engineering profession 2. Introduction to mechanical engineering disciplines 3. Engineering problem solving 4. Engineering ethics 5. Fundamentals of mechanics: vectors, forces, work, energy, etc. 6. Design project competition 7. Industrial tours
Lab Experiments and Activities:	None
Course Outcomes:	Students will be able to:

	Assessed for Student Outcomes	2-d. Provide solutions and prototypes that meet specified needs for engineering designs. 4-a. Discuss engineering solutions for design projects in consideration of the economic impacts. 5-a. Establish common goals, tasks, timeline, etc., as a team for design projects. 5-b. Share responsibilities and information on design project schedule and tasks with other members as a team.		
	Other	3-b. Deliver well-organized, logical oral presentations accommodating audience interests and background, including good explanations when questioned.		
Required or Elective Course:		Required		
Relationship of Course to Program:		Meets: Educational Objectives 1, 2, 3 Student Outcomes 2, 3, 4, 5		
Prepared by:		Dr. Dave Kim	Date:	4/6/2018 (4.6.18 mb)
Approved by USC:		4/23/18		