

## **MECH-2410 RIGGING** 4 CREDITS

### **SYLLABUS**

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#### **CATALOG DESCRIPTION**

This course teaches how to safely move loads of different shapes and sizes using a variety of methods. Students will use hoists, slings, ropes and fittings to learn how to safely lift a wide variety of loads.

Prerequisites: MECH 2350

Semester Offered: Fall

#### ***GENERAL EDUCATION STUDENT LEARNING OUTCOMES***

*In the New Mexico General Education Curriculum students take courses in a variety of content areas, which may include Communications, Mathematics, Science, Social and Behavioral Sciences, Humanities, and the Creative and Fine Arts. Specific course requirements depend on your program. All general education courses focus on at least three of these skills. Other courses may also develop these skills.*

*Through these courses, students develop five essential skills:*

**COMMUNICATION**

**QUANTITATIVE REASONING**

**CRITICAL THINKING**

**PERSONAL AND SOCIAL RESPONSIBILITY**

**INFORMATION AND DIGITAL LITERACY**

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or general education learning outcomes. For more information, please refer to the Dean of the appropriate School.

## ***COURSE LEARNING OUTCOMES***

*Upon successful completion of the course, students will be able to...*

Students will learn and put into practice the following concepts in rigging:

Load weight calculations, load balance, rigging hooks and eye-bolts.

Use of block and tackle, manual hoists, power hoists to include selection and inspection.

Sling force calculations, assembly, the use of spreader bars, and sling efficiency factors.

Wire rope types, wire rope selection and inspection, wire rope slings. Maintenance of wire rope.

Rigging chain types and use of chain slings.

Fiber rope types, whipping and splicing of fiber rope, selection, inspection and maintenance of fiber rope.

Crane types, crane operation, special lifting applications, and load turning.

Wire mesh sling types and use, wire mesh sling selection and inspection.

Synthetic sling types and application, synthetic sling selection and inspection.

Equipment movement using dollies, roller bars, and jacks.

Tie common knots.