

## **Rigging and Conveying Systems (HYDR 1301)**

### **CREDIT**

3 Semester Credit Hours (2 hours lecture, 4 hours lab)

### **MODE OF INSTRUCTION**

Face to Face

### **PREREQUISITE/CO-REQUISITE:**

None

### **COURSE DESCRIPTION**

Introduction to directing and moving heavy objects, selecting the appropriate rigging equipment, in conjunction with the suitable hardware and lifting devices with an emphasis on inspection, use, and maintenance of rigging equipment.

### **COURSE OBJECTIVES**

Upon completion of this course, the student will be able to

1. Estimate load weight, determine load center of gravity, and apply principles to rigging.
2. Maintain, inspect, select, and properly use lifting rope devices for securing loads.
3. Use standard hand signals for directing operation of overhead and mobile type cranes while observing safety precautions.
4. Move loads horizontally in a safe manner using jacks, rollers, and skids.
5. Identify construction and maintenance of various types of conveyor used in material handling activities as well as the slider bed and overhead chain system

### **INSTRUCTOR CONTACT INFORMATION**

Instructor: Antonio Menn Williams

Email: amennwilliams@lit.edu

Office Phone: 409-247-5072

Office Location: Tommy Williams 111

Office Hours: TR 12:15p.m-1:20p.m.; 2:00p.m-3:00p.m.

F 8:00 a.m.-1:00p.m. additional hours posted on instructor's office door

### **REQUIRED TEXTBOOK AND MATERIALS**

1. NCCER Basic Rigger Trainee Guide Contren Learning Series 2011

ISBN number: -978-0-13-215456-7

2. Equipment to be furnished by students:

- a. Hard Hat (red)
- b. Hearing protection (Ear plugs or Muffs 29 NRR +)
- c. Safety Glasses (Z87+)

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- d. Gloves (leather or equal)
- e. Shoes or Boots (substantial leather or equal w/heels-no open toes)

**ATTENDANCE POLICY**

I. Students are allowed to miss two days without penalty; each additional day will result in the student’s grade being dropped by a letter grade.

- Example: 1-3 days absent = If student has an A average no penalty
- 4 days absent = A drops to a B
- 5 days absent = B drops to a C
- 6 days absent = C drops to a D (student must retake class)
- 7 days absent = D drops to a F (student must retake class)

II. Absences are counted for unexcused, excused and coming to class late.

III. 3 tardies = 1 absence

- A. Tardy- arriving within 15 minutes after class begins or leaving before the end of class.
- B. More than 15 minutes late you will be counted absent.
- C. If you go to sleep in class you will be counted absent.

IV. Excused absences. Only given to allow students to make up missed work.

- A. Will be given for documented Injury or Illness. Doctor’s excuse required showing proof. Will count toward total days missed.
- B. Will be given for documented Death in immediate family. Will count toward total days missed.
- C. Approved LIT school functions; E.g. SkillsUSA, SGA etc. Will not count toward total days missed
- D. It is the student’s responsibility to obtain from the instructor any handouts or assignments for classes missed. Lectures will not be repeated.

**DROP POLICY**

If you wish to drop a course, you are responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an “F” in the course.

**COURSE CALENDAR**

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Week 1	Slings	Module 1	Lab: Synthetic Slings Practice
Week 2	Slings	Module 1	Lab: Synthetic Slings Practice
Week 3	Slings	Module 1	• Lab: Wire Rope Slings • Performance Testing (Task 1)
Week 4	Slings	Module 1	• Lab: Wire Rope Slings • Performance Testing (Task 1)
Week 5	Hitches	Module 1	• Lab: Vertical Hitch

			• Lab Choker Hitch
Week 6	Hitches	Module 2	• Lab Basket Hitch • Performance Testing (Task 2)
Week 7	Rigging Hardware, Part 1	Module 2	• Lab: Shackles • Lab: Eyebolts
Week 8	Rigging Hardware, Part 1	Module 2	• Lab: Shackles • Lab: Eyebolts
Week 9	Rigging Hardware, Part 2	Module 2	• Lab: Lifting Clamps • Lab: Rigging Hooks
Week 10	Rigging Hardware, Part 2	Module 2	• Lab: Rigging Hooks • Performance Testing (Task 3)
Week 11	Sling Stress and Hoists	Module 3	• Lab: Sling Stress • Lab Chain Hoists
Week 12	Sling Stress and Hoists	Module 3	• Lab: Sling Stress • Lab Chain Hoists
Week 13	Rigging Operations and Practice, Part One	Module 3	• Lab: Rated Capacity • Lab Sling Attachment
Week 14	Rigging Operations and Practice, Part One	Module 3	• Hardware Attachment • Performance Testing (Task 4)
Week 15	Rigging Operations and Practice, Part Two	Module 3	• Lab: Load Control • Hand Signals
Week 16	Rigging Operations and Practice, Part Two	Module 3	• Review • Module Examination

## COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Exams 70% Performance test and module tests
- All other work 30% Lab assignments, participation and lab safety and housekeeping

## GRADE SCALE

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

## TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at <https://lit.edu/online-learning/online-learning-minimum-computer->

[requirements](#). A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

### **DISABILITIES STATEMENT**

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email [specialpopulations@lit.edu](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#).

### **STUDENT CODE OF CONDUCT STATEMENT**

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at [www.lit.edu](http://www.lit.edu). Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

### **STARFISH**

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

### **ADDITIONAL COURSE POLICIES/INFORMATION**

1. No electronic devices of any kind (cell phones, I-pod, headphone, ect.) will be tolerated in the classrooms or labs. If you are seen using any electronic device you will be asked to leave the class for the day.
2. No food or drink will be allowed in the classroom.
3. No derogatory or foul language will be tolerated.
4. We have a zero tolerance policy for sexual harassment.
5. We have a zero tolerance policy of racial or ethnic discrimination.
6. Be considerate of others in the classroom. Remember they paid for the class just like you.

**ACADEMIC DISHONESTY:**

“Academic dishonesty, which includes but is not limited to cheating on an examination or other academic work to be submitted, plagiarism, collusion, or abuse of resource materials, is subject to disciplinary action.

“Students found responsible for an act or acts of academic dishonesty may be subject to either academic sanctions or disciplinary sanctions. Academic sanctions may include, but are not limited to one or more of the following: performance of additional work, withdrawal from the course with a grade of “F”, and/or a reduction of a grade in the course.”