

Brazosport College

SYLLABUS for MCHN 2312 - MILLWRIGHT V

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COURSE DESCRIPTION

A study of the recognition and application of gearboxes. A review of drive installations using chain and belt drives. This course will focus on troubleshooting, repairing, and installing gearboxes, chain drives, and belt drives. Also, an advanced trade math unit will be taught. NCCER credit available.

PREREQUISITES

MCHN 1325, MCHN 1329, MCHN2305, MCHN 2307 The student must either have completed or be in the process of completing these courses.

COURSE OBJECTIVES

- Explains how to lay out and install baseplates and soleplates. Describes how to field-verify a plate installation.
- Covers the sizes, uses, and installation procedures of six types of drive belts and two types of chain drives.
- Explains pneumatic system components and compressed-air treatment. Introduces equipment auxiliary and special application equipment used with compressors and with tools.
- Describes types and operation of gearboxes, and gearbox diagnostics. Explains how to troubleshoot, remove, and disassemble gearboxes, how to identify gear wear patterns, and how to install and maintain gearboxes.

STUDENT LEARNING OUTCOMES

Identify, disassemble, inspect, and reassemble various gearboxes

Identify, disassemble, inspect, and reassemble a chain drive

Identify, remove, inspect, and install drive belts

Successfully complete advanced trade math

TEXTBOOK OR COURSE MATERIAL INFORMATION

NCCER TRAINEE GUIDE, Level II, Required

ISBN: 978-0-13-227292-6

Revised: 2007, Third Edition

Publisher: Pearson Education

NCCER TRAINEE GUIDE, Level III, Required

ISBN: 978-0-13-614431-1

Revised: 2008, Third Edition

Publisher: Pearson Education

NCCER TRAINEE GUIDE, Level IV, Required

ISBN: 978-0-13-604506-9

Revised: 2008, Third Edition

Publisher: Pearson Education

NCCER TRAINEE GUIDE, Level V, Required

ISBN: 978-0-13-609960-4

Revised: 2009, Third Edition

Publisher: Pearson Education

Required course materials are available at the Brazosport College bookstore, on campus or online at <http://www.brazosport.edu/bookstore>. A student of this institution is not under any obligation to purchase a textbook from the college bookstore. The same textbook is/may also be available from an independent retailer, including an online retailer.

For Online Courses: Contact the Brazosport College Bookstore with a credit card for course materials. Phone: 979.230.3651. Fax: 979.230.3653. Email: bookstore@brazosport.edu. Website: <http://www.brazosport.edu/bookstore>

LAB REQUIREMENTS

Credit Hours: 3 (2 lecture, 2 lab)

Title IX Statement

Brazosport College faculty and staff are committed to supporting students and upholding the College District's non-discrimination policy. Under Title IX and Brazosport College's policy FFDA (Local), discrimination based on sex, gender, sexual orientation, gender identity, and gender expression is prohibited. If you experience an incident of discrimination, we encourage you to report it. While you may talk to a faculty or staff member at BC, please understand that they are "Responsible Employees" and must report what you tell them to college officials. You can also contact the Title IX Coordinators directly by using the contact information below. Additional information is found on the Sexual Misconduct webpage at www.brazosport.edu/sexualmisconduct.

Kelli Forde Spiers, Director, Student Life and Title IX Coordinator Office J-117D; 979-230-3355; kelli.fordespiers@brazosport.edu

Mareille Rolon, HR Coordinator and Deputy Title IX Coordinator Office C-114; 979-230-3303; mareille.rolon@brazosport.edu

STUDENTS WITH DISABILITIES

Brazosport College is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. For student to receive any accommodation, documentation must be completed in the Office of Disability Services. Please contact Phil Robertson, Special Populations Counselor at 979-230-3236 for further information.

ACADEMIC HONESTY

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Please refer to the Brazosport College Student Guide for more information. This is available online at <http://www.brazosport.edu>.

Academic dishonesty violates both the policies of this course and the Student Code of Conduct. In this class, any occurrence of academic dishonesty will be referred to the Dean of Student Services for prompt adjudication, and will, at a minimum, result in **Zero on assignment, with no option to make up**. Sanctions may be imposed beyond your grade in this course by the Dean of Student Services.

ATTENDANCE AND WITHDRAWAL POLICIES

Your attendance is required to achieve success in this course. It is the student's responsibility to attend class on time and prepared. It is the student's responsibility for add/ drop withdraws from course. See Current Brazosport College Student Guide for information. A student in the Machine Tools/Millwright program will be allowed no more than three unexcused absences. If no attempt is made to contact the instructor, whether by phone, or electronic mediums, the absence will be considered in the same light as an employer and will be considered unexcused. After the third absence, the student will be withdrawn from the course.

STUDENT CONDUCT STATEMENT

Students are expected to be aware of and follow the Brazosport College Student Code of Conduct. Students have violated the Code if they "fail to comply with any lawful directions, verbal or written, of any official at BC." Lawful directions include precautions and requirements taken to prevent the spread of COVID-19 at Brazosport College. Students who do not follow safety requirements, including the wearing of a mask, may be removed from class by their instructor and referred to the Dean of Student Services.

CAMPUS CLOSURE STATEMENT

Brazosport College is committed to the health and safety of all students, staff, and faculty and adheres to all federal and state guidelines. The College intends to stay open for the duration of the semester, and provide access to classes and support services on campus in the safest way possible. The College will also comply with lawful orders given by applicable authorities, including the Governor of Texas, up to and including campus closure. It is possible that on campus activities may be moved online and/or postpone if such orders are given.

COURSE REQUIREMENTS AND GRADING POLICY

Each student will spend at least 4 hours per week preparing for class. The student will have an opportunity to evaluate the instructor. You are expected to complete all assignments in a timely manner.

Student grades will be assigned according to the following criteria:

○ HOMEWORK	20%
○ MODULE EXAMS	20%
○ LABS	20%
○ PARTICIPATION (includes weekly folder; In Class Lecture Daily Notes & Daily Sketch)	20%
○ FINAL EXAM	20%

Grades of A through F will be assigned according to college policy.

TESTING

There will be tests, exams, quizzes to be completed, and you will have ample time to prepare for each of these. Tests, exams or quizzes are expected to be completed on the scheduled day.

MAKE-UP POLICY

All make-up work, late assignments, and retesting, must be completed no later than 2 weeks before the final exam, or as the instructor sees fit.

DATES

Thanksgiving Holiday – November 24 – 27, 2020

Last Day to withdraw – November 2, 2020

Final Exam – December 9, 2020

STUDENT RESPONSIBILITIES

Students are expected to fully participate in this course. The following criteria are intended to assist you in being successful in this course:

- a. understand the syllabus requirements
- b. use appropriate time management skills
- c. communicate with the instructor
- d. complete course work on time, and
- e. utilize online components (such as Desire2Learn) as required.

OTHER STUDENT SERVICES INFORMATION

Information about the Library is available at <http://www.brazosport.edu/library> or by calling 979.230.3310.

For assistance with online courses, an open computer lab, online and make-up testing, audio/visual services, and study skills, visit Learning Services next to the Library, call 979.230.3253, or visit <http://www.brazosport.edu/learningservices>.

For drop-in math tutoring, the writing center, supplemental instruction and other tutoring including e-tutoring, visit the Student Success Center, call 979.230.3527, or visit <http://www.brazosport.edu/studentsuccesscenter>.



Get the information you need – when you need it. Click <http://geni.us/BRAZO> to install **BC Connect** on your mobile device to receive reminders, explore careers, map your educational plan, be in the know about events, find out about scholarships, achieve your goals and much more.

To contact the Millwright Department call **(979-230-3229)**.

The Student Services provides assistance in the following:

Counseling and Advising	979.230.3040
Financial Aid	979.230.3294
Student Life	979.230.3355

To reach the Information Technology Department for computer, email, or other technical assistance call the Helpdesk at 979.230.3266.

MILLWRIGHT V

Millwright V is an introduction to belt & chain drives, basic pneumatic systems, setting baseplates & soleplates and troubleshooting and repairing gearboxes.

Below is the course schedule. Adjustments may be made to the schedule when needed.

Textbook information: Millwright Modules 15207, 15311, 15407, 15411, 15301

WEEK

- 1** Check roll, handout textbooks, overview of syllabus and schedule, class policies, tour and a safety review.
- 2** Module 15311/Installing Belt & Chain Drives – **LAB I**
- 3** Module 15311 Installing Belt & Chain Drives – Module 15311 **Test Film Gears I**
- 4** Module 15411 T&R Gearboxes - **Lab II**
- 5** Module 15411 Gearboxes - **Film Gears II, Lab III**
- 6** Module 15411 Gearboxes - **Lab IV**
- 7** Module 15411 Gearboxes – **Lab V - Module Test 15411**
- 8** Module 15407 Basic Pneumatic Systems
- 9** Module 15407 Basic Pneumatic Systems
- 10** Module 15407 Basic Pneumatic Systems - **Module Test 15407**
- 11** Module 15207 Setting Baseplates & Soleplates
- 12** Module 15301 Adv. Trade Math
- 13** Thanksgiving Holiday – No Class
- 14** Module 15301 Adv. Trade Math **Module 15301 Test**
- 15** **Review for Final Exam**
- 16** **Final Exam**