

## Northeast Wisconsin Technical College

### *Land Acknowledgement Statement*

The region served by NWTC **occupies the ancestral home** of the Menominee Nation, who have **persisted here** in Northeast Wisconsin from **before recorded history** to the present day. The College's Green Bay campus exists **upon lands ceded from the Menominee Tribe to the Oneida Nation**. We acknowledge this land we stand upon today as sacred, historical, and significant to the Menominee and Oneida Nations as are the **lands of all First Nations People**.

See more detail at <https://tinyurl.com/244wh3xf>

## Fluids 2: Basic Hydraulics Syllabus

Catalog #10-620-101

**Starts: Spring 2023 (refer to student schedule for dates)**

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### INSTRUCTOR INFORMATION & RESPONSIBILITIES

<b>Instructor</b>	as posted
<b>Office</b>	as posted
<b>Telephone</b>	as posted
<b>Email</b>	see Blackboard
<b>Availability</b>	By Appointment

### CLASS INFORMATION

**Class Schedule & Class Meeting Location:** This class follows the schedule found on your student schedule. All labs will be completed in either ET120 or ET129. Please refer to those rooms for the current open scheduled times.

**Class Delivery Mode & How to Participate:** This class is Blended. For a definition of this delivery mode, please see information on the [Ways of Learning](#) page. For a detailed explanation of class participation and expectations, please see the Attendance & Participation section.

**Course Description:** This course provides the opportunity for the learner to develop the knowledge skills process and understanding of hydraulic pumps, basic hydraulics actuator circuits, hydraulic schematics, apply Pascal's Law, summarize the effects of fluids friction, define properties of hydraulic energy, design hydraulic circuits with directional control valves

**Credits:** 1

**Pre-requisites/Corequisites:** 106-20-100 Fluids 1: Basic Pneumatics

**Textbooks:** "Eaton Industrial Hydraulics Manual" - Primary Reference material  
"INDUSTRIAL PNEUMATIC TECHNOLOGY" – Add'l Reference material

To order your course materials from the NWTC Bookstore for shipping to your home or pick up, please [click here](#) to find the instructions to start your order.

**Supplies/Technology:** At a minimum, students would need access to a computer for email and Blackboard. You will also need a calculator. Refer to the Technology Skills & Assistance for additional support on hot spots/laptop checkout or technical assistance with Blackboard and email. You will need safety glasses per ANSI87.1 standard for all lab activities.

**Course Competencies:** Upon successful completion of this course, you will be able to:

1. Explain Hydraulic Components, Schematics and Applications
2. Apply Fundamental Laws to Hydraulic Systems
3. Apply Control Components of Hydraulic Circuits
4. Design Pressure Valve Circuits
5. Design Hydraulic Circuits with Directional Control Valves

**Employability Skills:** In addition to specific job-related training, NWTC has identified the following transferrable employability skills reaching beyond the context of a specific course:

1. Communicate Effectively
2. Work Cooperatively and Professionally
3. Think Critically and Creatively
4. Solve Problems Effectively
5. Value Individual Differences and Abilities
6. Demonstrate Personal Accountability
7. Demonstrate Community and Global Accountability

### **Student Services to Support You:**

Being in college is an exciting time to develop skills, further your career path, and build community. We don't want financial challenges to get in your way! Our team is ready to support basic needs such as groceries, housing assistance, transportation assistance, and more. Our goal is to keep you on track with your studies and educational goals. If you are experiencing a financial emergency or an unexpected event in your life, let us help. Support services are available at all NWTC locations. Our main office is located on the Green Bay campus in SC133. We can be reached by phone (920) 498-6258, email [supportservices@nwtc.edu](mailto:supportservices@nwtc.edu) or in-person. For more information, please visit us at [www.nwtc.edu/student-experience/student-support-services](http://www.nwtc.edu/student-experience/student-support-services).

Additionally, NWTC provides many services and support networks to assist our students. Descriptions of these services can be found in the NWTC Student Handbook or at [www.nwtc.edu/students](http://www.nwtc.edu/students). We encourage you to learn about the resources available to you, ranging from student involvement and personal counseling to academic, financial aid, or career advising. When you are looking for services, please contact your instructor or academic advisor via Starfish, or by calling (920) 498-5444.

**Academic Coaching (Tutoring) at NWTC:** Academic Coaching provides an additional layer of support to ensure students achieve their academic goals. Academic Coaching is committed to serving all students as an academic resource to promote student growth and success. Students who use Academic Coaching receive content help, but also gain study skills, organization skills, time management, and confidence. We understand that school can be challenging; let us help you reach your academic goals at [www.nwtc.edu/academiccoaching](http://www.nwtc.edu/academiccoaching)

### **NWTC ALL-COLLEGE POLICIES**

These policies are in effect for all classes at NWTC.

This syllabus is a learning contract between you and your instructor. In addition to your syllabus, there are policies and procedures listed in the NWTC Student Handbook that all students must uphold. Please refer to the NWTC Student Handbook to raise your awareness and understanding of the College's expectations.

#### [NWTC Student Handbook](#)

- [Academic Integrity \(includes Plagiarism, cheating and collusion\)](#)
- [Drop from a Class or Program](#)
- [Student Academic Grievance](#)

- **Discrimination and Harassment Prevention:** NWTC is committed to embracing the worth of every individual and promoting a respectful environment. Discrimination and harassment of protected categories in its employment and educational programs is prohibited. For questions or concerns, contact Mohammed Bey, Chief Diversity Officer, by email at [mohammed.bey@nwtc.edu](mailto:mohammed.bey@nwtc.edu) or by phone at (920) 498-6826.
- **Disability Act Statement:** NWTC is committed to creating a learning environment that meets the needs of its diverse student body. NWTC complies with all provisions of the Americans with Disabilities Act and makes reasonable accommodations upon request. If you have a disability, please call Disability Services at (920) 498-6904 to begin a conversation regarding the support services available to you or to request an official accommodation.
  - [Accessibility & Data Privacy](#)

**Student Academic Calendar:** Visit [Academic Calendar page](#) for important College dates you should add to your personal calendar.

### CLASS SPECIFIC POLICIES

In addition to the college policies referenced, the following instructor policies also apply to this course.

**Attendance and Participation:** Attendance is an important part of the success in the course. Missing class may impact opportunity to learn and/or grade. All students are expected to attend all the scheduled sessions. If a student is unable to attend the lecture, he/she must coordinate with the instructor in advance, watch all media site recordings on the internet via Blackboard access, complete all homework assignments, labs, and quizzes by the due dates set by the instructor in accordance with the weekly planner.

**Estimated number of hours required to be successful in the class, (class hours and outside hours for homework, readings, etc.): 30**

**Technology Skills & Assistance:** This class will require you to utilize a computer to access Blackboard to complete assigned work. You may also need to communicate with your instructor via email if any other questions come up.

Research Help:

Find resources through [Library Search](#), the [online databases](#), or your [program guide](#). Visit the [Ask a Librarian FAQ site](#) to contact librarians, explore the [Research Skills Tutorial](#), or learn to [Cite Sources](#).

#### Technology Help

Get technical assistance by calling the Student Help Desk at (920) 498-6900 or 1-866-235-5037.

Learn more about the technology skills needed to be successful at NWTC (such as sending email, using software for assignments, submitting online work, and using test monitors) by watching the [Technology 101 video series](#) or visiting the [Ask a Librarian FAQ site](#).

Find out how to [Download Office 365 for Free](#) and access [Off-Campus Software](#). Learn how to [borrow equipment from NWTC](#).

**Appropriate Use of Technology in Class:** Calculators are permitted for use during class and exams. All other electronic devices including, but not limited to cell phones are not permitted during class time.

**Campus Closure Day(s) Procedure:** In the event of a campus closure, you will be notified by NWTC Alerts (sign up [here](#)). Due to the flexibility of our lab space, there will be no scheduled make up days. If you were to have lecture that day, you are to watch the prerecorded material and your instructor will communicate any changes as a result of the lost lecture day.

**Syllabus Changes:** Instructors retain the right to make changes based on the timeline of the class, feedback from learners and/or logistical issues. Students will be informed as soon as a change is made. A current copy of the course syllabus will be maintained by the division office.

**Grading Policy:**

1. **All** coursework (homework, lab work, quizzes, etc.) **must** be completed/submitted prior to final examination. It is student's responsibility to insure that all work is submitted before final examination is taken.
2. **All** coursework (homework, lab work, quizzes, etc.) must be completed. **If assignments are missing the minimum course competencies have not been met and the student will then receive an F at the end of the term.** The student will then have to re-take the course to pass.
3. Students may have the option to withdraw from a course to avoid failure, please see "Withdrawal from Classes or Programs/Certificates" in the NWTC Student Handbook for details/limitations/implications related to withdrawing from a course.
4. **Late work** will be accepted

**Grading Scale:**

Assignments and Assessments	% of Total Grade	# of Activities
Homework	20%	4
Labs	20%	4
Lab Final Exam	30%	1
Final Exam	30%	1

Percentage	Grade
100% - 92%	A
91.99% - 84%	B
83.99% - 76%	C
75.99% - 68%	D*
<68%	F

\*D is the minimum passing grade for this class.

**Course Calendar:** see Blackboard for calendar