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Northeast Wisconsin Technical College

Land Acknowledgement Statement

The region served by NWTC **occupies the ancestorial 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

Electricity-Basic

Catalog #31-413-353 & Class #51399 & 51400

Starts: June 6, 2023 Ends: August 1, 2023

NORTHEAST WI Technical College

INSTRUCTOR INFORMATION & RESPONSIBILITIES

Instructor	Tim Schmitz
Office	ET104L
Telephone	(920) 498-6849
Email	timothy.schmitz@nwtc.edu
Availability	Tuesdays and Thursdays 11:30am – 1:20pm or by appointment

As a NWTC instructor, I am expected to:

- Maintain a professional, safe learning environment while adhering to the policies of the college.
- Provide open and frequent communication with learners regarding their progress in this class.
- Reply to communications within 48 business hours.
- Grade assignments and post scores in Blackboard regularly.
- Provide feedback to guide learners toward improvement of their coursework.
- Post information about assignments in Blackboard Learning Plans and Grade Center.
- In the event of a college level cancellation communicate with learners a detailed plan regarding expectations for responding to the cancellation within 24-hours.

CLASS INFORMATION

Class Schedule & Class Meeting Location: This class meets in EE202 on the following days/times:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
	#51399 9:30am-11:15am #51400 1:30PM – 3:15PM		#51399 9:30am-11:15am #51400 1:30PM – 3:15PM	

Class Delivery Mode & How to Participate: This class meets in-person.

Course Description: This course provides the opportunity for the learner to develop the knowledge skills process and understanding of basic electricity: fundamental laws and circuit analysis.

Credits: 1

Pre-requisites/Corequisites: Accepted into Electrical Power Distribution

Textbooks: Delmar's Standard Textbook of Electricity, Stephen L. Herman, 7th Edition,
ISBN: 13: 978-1337900348. 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:

- Paper and pen or pencil.
- TI-30XIIS solar calculator (or equivalent).
- Optional Resource: UGLY'S Electrical References, George C. Hart & Sammie Hart, Current Edition, ISBN: 978-0-7637-9099-8. NWTC Bookstore or any electrical supply store.

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

1. Define, and explain the structure of an atom and its relationship to the electron theory.
2. Define the key concepts of voltage, current, and resistance.
3. Explain the interrelationship of voltage, current, resistance, and power as described by "Ohm's Law," and apply them to solve for unknown electrical values.
4. Define and describe resistance, and the common types of resistors used in electrical circuitry.
5. Describe the relationship between magnetism and electricity.
6. Apply the basic electric meters, to measure the electrical values of voltage, current, and resistance.
7. Identify the characteristics of, and analyze, a DC series circuit.
8. Identify the characteristics of, and analyze, a DC parallel circuit.
9. Analyze a DC compound circuit.

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 or in-person. For more information, please visit us at 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. 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**

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 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 and class participation is required. Failure to attend classes may affect your grade and program status. All students are expected to attend scheduled sessions, complete assigned homework, labs, **quizzes,** and exams. This is a **8** week course (1**6** sessions) and every session is important. Please see me if you miss a class. You must complete makeup work prior to the next class session.

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: Use of cell phones, iPods, and other irrelevant (as determined by instructor) electronic devices is prohibited. Calculator applications (apps) on electronic devices such as "smart" phones will not be allowed for any assessments. Students are to utilize scientific calculators.

Safety, Housekeeping, and Property Guidelines

To remain in the program, students must adhere to safety guidelines and treat the lab, classroom, and equipment as they would at work. Horseplay will not be tolerated. Work performed in the lab must be executed in accordance with the safety standards as set forth by NWTC and the specific safety precautions for each task. It is the duty of all students to watch out for safety throughout the area and bring any unsafe practices they might observe to the attention of the instructor.

Students are required to know the location of all fire exits, fire extinguishers, eyewash and shower stations, emergency evacuation routes, and a procedure to obtain help in an emergency.

Tools that you did not bring to class belong to NWTC and are not to be taken from the classroom and lab. All tools are to be used safely and with respect. Tools are to be returned to their proper storage space at the end of each class. Supplies are provided by NWTC and are to be used with discretion. Wasting supplies will not be tolerated.

Good housekeeping is important to safety in any operation, and the utilities industry is no exception. Students are expected to keep their work areas neat and orderly, minimizing potential safety hazards.

Campus Closure Day(s) Procedure: In the event of a campus closure, scheduled coursework will be covered online with instructor guidance.

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:

40% - Assignments
60% - Tests
Attendance & participation will be considered to justify an increase or decrease in final grading.

Grading Scale:

Percentage	Grade
90 – 100	A
80 – 89.9	B
70 – 79.9	C
60 – 69.9	D
< 59.9	F

Course Calendar: See next page

Basic Electricity: Linesperson

31-413-353

Date	Topic	Reading	Homework To be submitted via Blackboard
6/6	Introduction, Atomic Structure, Electric Charge, Electron Flow	1-1 thru 1-7	
6/8	Conductors, Insulators & Semiconductors Methods of Producing Electricity	1-8 thru 1-13	Review Questions: Unit 1: 1, 4, 5, 6, 7
6/13	Electrical Quantities Basic Electric Circuits Power, Energy, Ohm's Law, Prefixes	2-1 thru 2-8 2-9 thru 2-12	Review Questions: Unit 2: 1, 2, 3, 4, 5 Unit 2: 6, 7, 8, 12, 13, 14
6/15	Continued: Power, Energy, Ohm's Law, Prefixes Static Electricity	3-1 thru 3-6	Review Questions: Unit 3: 1, 2, 7, 8
6/20	**Review & Quiz 1: Chapters 1, 2, and 3**		
6/22	**No Class**		
6/27	Magnetism Resistors	4-1 thru 4-10 5-1 thru 5-7	Review Questions: Unit 4: 1, 2, 3, 4 Unit 5: 5, 6, 7, 8, 10
6/29	Series Circuits	6-1 thru 6-5	
7/6	Voltage Dividers, Ground Reference, Kirchoff's Voltage Law, Troubleshooting	6-6 thru 6-9	Review Questions: Unit 6: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
7/1	**Review and Quiz 2: Chapters 4, 5, and 6**		
7/13	Parallel Circuits	7-1 thru 7-2	Review Questions: Unit 7: 7, 6, 7, 8, 9
7/18	Combination Circuits, Kirchhoff's Current Law	8-1 thru 8-3	Review Questions: Unit 8: 1, 2, 3, 4, 5Review
7/20	Measuring Instruments	9-1 thru 9-7 9-9 thru 9-12 9-14	Review Questions: Unit 9: 6, 7, 9
7/25	Conductors	10-1 thru 10-8	Review Questions: Unit 10: 2, 5, 9
7/27	Batteries Magnetic Induction	12-1 thru 12-7 13-1 thru 13-5	Review Questions: Unit 12: 12, 13, 15 Unit 13: 2, 3
8/1	**Review & Quiz 3: Chapters 7 through 13**		