

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>

Digital 1 : Logic - Syllabus

Catalog #10-660-101 & Class #21798

Starts: January 17, 2023 Ends: February 14, 2023



INSTRUCTOR INFORMATION & RESPONSIBILITIES

Instructor Tim Schmitz
Office ET104L
Telephone (920)-498-6849
Email timothy.schmitz@nwtc.edu
Availability Available by appointment, or the the ET129 Tech Hall as scheduled.

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.*
- *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 on the following days/times:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
	9:30-11:20					

Class Delivery Mode & How to Participate: This class meets in person for lecture, and self paced for lab activities in ET129. 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.

- *This class meets in a 5-Week format with both in-person and online components.*

Course Description: This course provides the opportunity for the student to develop the knowledge, skills, process and understanding of AND, OR, NOT, NAND, NOR, logic operation using switch logic, ladder logic, and gate logic. Simplification methods using Boolean theorems and Karnaugh Maps, and timing diagram analysis.

Credits: 1 credit

Pre-requisites/Corequisites: None

Textbooks: 9780134220130 DIGITAL SYSTEMS:PRIN.+APPL. TOCCI 12TH 17 PEARSON

9781284194531 UGLY'S ELECTRICAL REFERENCES 2020 MILLER 20 NE JONES+BART

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: NWTC supplied computer found in ET129 tech hall

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

1. Convert between decimal and binary whole numbers.
2. Analyze gate circuits using truth tables and timing diagrams.
3. Perform the steps to implement gate circuits from Boolean expression without simplification.
4. Use Boolean theorems to simplify expressions

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 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.) The amount of time you spend on reading, completing course assignments and activities will differ. Typically students spend 20# hours outside of the course studying.

Technology Skills & Assistance: *Assignments will use Multi-Sim software, which is installed on the computers in the ET129 Tech Hall. You can seek assistance from any instructor or lab tech on duty.*

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: Cell phones will not be used during class time, and must be put in a silent mode. If you need to take a call in an emergency, please step out of the classroom.

Campus Closure Day(s) Procedure: In the event of a campus closure, I will send out an email as to how and when the class will be made up. Please use the Rave system to be notified about campus closures.

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.
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, but the point value may be reduced. It is up to the instructor to determine the value of late assignments

Grading Scale:

Assignments and Assessments	% of Total Grade	# of Activities
Homework	20%	4
Quizzes	20%	4
Labs	20%	4
Final Exam	40%	1

Scale	Grade
92 - 100	A
84 - 92	B
76 - 84	C*
68 - 76	D
0 - 59	F

Digital 1 Course Calendar:

WK	INSTR LED ACTIVITIES	READING	HOMEWORK (In Blackboard) Optional practice homework - below	LAB	Due Date
1	1-Introductory Concepts 2-Digital number systems, Binary quantities, Logic Circuits Lab Review	Digital Systems: Section 1 all	Digital Systems Problems: 1-5(a,c), 1-6, 1-11, 1-13a, 1-15, 1-17, 1-19, 1-22	Lab 1 in Blackboard	Day of Class Week 2 Without prior permission
2	1- Conversions, BCD code, Gray Code 2-Byte, Nibble, and Word More Codes, Parity and error detection Lab Review	Digital Systems: Section 2 all	Digital Systems 2-1 (a,c,e), 2-2(a,c,e), 2-3(a), 2-4(a,c,e), 2,5(a,c), 2-11(a,c,e), 2-12(a,c), 2-13(a,c,e,g,i,k), 2-14(a,c,e,g,i,k), 2-19(a,c), 2-20, 2-21(a), 2-22(a)	Lab 2 in Blackboard	Day of Class Week 3 Without prior permission
3	1-AND, OR, NOT gates 2-Simple gate combinations Lab Review	Digital Systems Chapter 3 Intro, 3-1 thru 3-8	Digital Systems: 3-1, 3-7, 3-12(a), 3-16(a,b)	Lab 3 in Blackboard	Day of Class Week 4 Without prior permission
4	1-NAND & NOR gates 2- Complex gate combinations Lab Review Final Exam Review	Digital Systems Section 3-9 thru 3-14	Digital Systems 3-17a, 3-19, 3-23,3-27	Lab 4 in Blackboard	Day of Class Week 5 Without prior permission
5	No Lecture, students should review for and take final exam	None	None	None	Two weeks from last class (week 4) or end of semester, whichever comes first
	<i>Examination</i>		<i>Review</i>	<i>Exam for Digital 1</i>	