North Central State College

MASTER SYLLABUS	2025-2026

A. Academic Division: Engineering Technology, Business & Criminal Justice Division

B. Discipline: Industrial Technology - Industrial Maintenance

C. Course Number and Title: EMMT2300 - The National Electric Code

D. Assistant Dean: Brooke Miller, M.B.A.

E. Credit Hours: 2

F. Prerequisites: None

G. Last Course/Curriculum Revision Date: Fall 2025 Origin date: 02/10/2012

H. Textbook(s) Title:

Understanding the National Electrical Code, Vol. 1

- Author: Mike Holt
- Copyright Year: 2023
- Edition:
- ISBN #: 9781950431779

I. Workbook(s) and/or Lab Manual: None

J. Course Description: A study of industrial and commercial code specification. Students will learn selected electrical installation requirements along with some hands-on experience. Chapter 1-4 and Chapter 9 of the NEC, with voltage below 600 volts, will be the main focus of this course. This is an entry level course. **This course emphasizes that upon completion the student should work only under the direction of a qualified electrician.**

K. College-Wide Learning Outcomes

College-Wide Learning Outcome	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
1. State a brief history of the National Electric Code (NEC).	Quizzes throughout the semester, and the midterm and final exam.
2. Describe the layout of the NEC.	Quizzes throughout the semester, and the midterm and final exam.
3. List the common symbols and terms used.	Quizzes throughout the semester, and the midterm and final exam.
4. Determine DC and AC conductor resistance using NEC tables and the appropriate approximate AK@ equation.	Quizzes throughout the semester, and the midterm and final exam.
5. Calculate conductor ampacity for a varied number of conductors, varied temperature conditions, and various types of conductors.	Quizzes throughout the semester, and the midterm and final exam.
6. Calculate the recommended voltage drops for branch and feeder circuits.	Quizzes throughout the semester, and the midterm and final exam.
7. Select the appropriate NEC documentation to obtain voltage drops within multi-wire circuits to include single-phase and three-phase circuits.	Quizzes throughout the second half of the semester, and the final exam.
8. Calculate conductor gauge given various loads and distances from the supply.	Quizzes throughout the second half of the semester, and the final exam.
9. Determine electrical box size required for various gauge conductors with conductors of the same size and of various sizes.	Quizzes throughout the second half of the semester, and the final exam.
10. List the basic requirements for installation of; EMT, NMSC, Flexible Metal Conduit, Seal tight, Nonmetallic and Metallic Rigid Conduit, Receptacles, Light Switches, and Lights	Quizzes throughout the second half of the semester, and the final exam.
11. Analyze the load requirements for single-family home and commercial buildings.	Quizzes throughout the second half of the semester, and the final exam.
12. Calculate permissible branch circuit loads, overcurrent protection, and branch circuit wiring size.	Quizzes throughout the second half of the semester, and the final exam.

M. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93–100	A	4.00	Superior
90–92	A-	3.67	Superior
87–89	B+	3.33	Above Average
83–86	B	3.00	Above Average
80–82	B-	2.67	Above Average
77–79	C+	2.33	Average
73–76	C	2.00	Average
70-72	C-	1.67	Below Average
67–69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
00-59	F	0.00	Failure

N. College Procedures/Policies:

North Central State College believes that every student is a valued and equal member of the community.* Every student brings different experiences to the College, and all are important in enriching academic life and developing greater understanding and appreciation of one another. Therefore, NC State College creates an inclusive culture in which students feel comfortable sharing their experiences. Discrimination and prejudice have no place on the campus, and the College takes any complaint in this regard seriously. Students encountering aspects of the instruction that result in barriers to their sense of being included and respected should contact the instructor, assistant dean, or dean without fear of reprisal.

* *Inclusive of race, color, religion, gender, gender identity or expression, national origin (ancestry), military status (past, present or future), disability, age (40 years or older), status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child, status as a foster parent, genetic information, or sexual orientation*

Important information regarding College Procedures and Policies can be found on the syllabus supplement located at
https://ncstatecollege.edu/documents/President/PoliciesProcedures/PolicyManual/Final%20PDFs/14-081b.pdf

North Central State College

SYLLABUS ADDENDUM

Academic Division:	Engineering Technology, Business & Criminal Justice Division	**Discipline:**	Industrial Technology, Industrial Maintenance
Course Coordinator:	Dave Wright		
Course Number:	EMMT 2300	**Course Title:**	NEC
Semester / Session:	Spring 2026	**Start / End Date:**	01/12/2026 thru 05/08/2026

Instructor Information

Name:	Dave Wright	**Credentials:**	Master Electrician, BSBA
Phone Number:	419-755-4529	**E-Mail Address:**	dwright@ncstatecollege.edu
Office Location:	Kehoe Center – IST Lab	**Office Hours:**	Tuesday & Thursday 7am to 7 pm

I. Topical Timeline / Course Calendar (Subject to Change):

Weeks	Topics	Assignment	Due Date
1	Preface, Introduction, & Definitions	Quiz	01/23/2026
2	Requirements for Electrical Installations	Quiz	02/06/2026
3	Branch Circuits, Feeders, & Calculations	Quiz	02/20/2026
4	Overcurrent Protection	Quiz	03/06/2026
5	Grounding and Bonding	Quiz, Mid Term Exam	03/20/2026
6	General Requirements for Wiring methods & Conductors for General Wiring	Quiz	04/03/2026
7	Outlet, Device, Pull and Junction Boxes	Quiz	04/10/2026
8	Specific Materials (art. 320 through 399)	Quiz	04/17/26
9	Industrial Control Panels & Motors, Motor Circuits, and Controllers	Quiz	05/01/2026
10	Hazardous Locations Overview	Quiz, Final Exam	05/08/2026

II. Grading and Testing Guidelines:

Final Grade Calculation

Activity	Qty	Points	Percentage
Section Quiz		100	50
Mid Term exam		100	25
Final Exam		100	25

1. Review the material,
2. Take the quiz for that topic.
3. Complete Mid Term and Final Exam

III. Students are expected to work in a manner that is respectful of others. This includes avoiding loud or abusive language.