

North Central State College
COURSE SYLLABUS
2009-2010

- A. **Course Number and Title:** ENR101 – Introduction to Engineering
- B. **Academic Division:** Technology and Workforce Development
- C. **Department:** Technology
Program: Electronic Engineering Technology
- D. **Lecture Hours:** 3
- E. **Lab Hours:** 2
- F. **Credit Hours:** 4
- G. **Prerequisites:** None
- H. **Course Description from Catalog:** This is an introductory course for engineering technology students. Students will develop a deeper understanding and appreciation of engineering, the problems engineers encounter and the contributions made by engineers from various disciplines. The ethics and responsibilities of the engineer will be discussed. Lab experience includes the following PC applications: operating systems and hardware, word processors, spreadsheets, and engineering graphing. An introduction to basic language programming is included at the end. Emphasis will be placed on using a PC to solve engineering problems and produce results.
- I. **Textbook(s):** None
- J. **Workbook(s) and/or Lab Manual(s):** North Central State College Handouts

K. **Purpose of Course:** The course is designed to give engineering technology students some experience using a PC to accomplish a task. The course will provide the student introductory information and experience on PC operating systems and software applications. The end result will be the ability to present technical results in a professional manner. Emphasis will be on using actual software to produce results. The student will also be introduced to the technique of writing a program.

L. **Supplies Needed:**

- a. PC computer capable of running Windows
- b. Computer disks, at least 2
- c. Computer paper

M. **Course Outcomes/Assessment Procedures:**

The following Core Learning Outcomes are addressed in this course:

Core Learning Outcome	
Communication – Written	
Communication – Speech	
Culture and Community	
Critical Thinking	X
Computer Literacy	X
Computation	X

Upon successful completion of this course, the student will be able to:

Outcome	Assessment
The student will be able to identify hardware of a typical PC.	Quiz, Test, and Lab
The student will be able to work with Windows environment/op system.	Quiz, Test, and Lab
The student will produce a spreadsheet with calculations and results.	Quiz, Test, Project, and Lab
The student will produce a chart using spreadsheet data.	Quiz, Test, and Lab
The student will function on a team in an academic environment.	Quiz, Test, Project, and Lab
The student will discuss a variety of disciplinary and career areas within engineering.	Quiz, Test, and Lab
The student will discuss ethics in engineering practices.	Quiz, Test, and Lab

The student will write a simple BASIC language program with inputs, calculations, decisions, and outputs.	Quiz, Test, and Lab
The student will demonstrate hands-on skills related to applications of engineering.	Quiz, Test, Project, and Lab
The student will understand and solve open-ended problems related to engineering.	Quiz, Test, Project, and Lab

N. **Course Content:**

- a) Intro to a Personal Computer (PC)
 - i) Block diagram
 - ii) Hardware identification
 - iii) Microprocessor fetch/execute cycle
 - iv) Disks and using software
- b) DOS operating system
 - i) What does it do?
 - ii) Files and directories
 - iii) Simple command syntax
 - iv) System tasks and devices
 - v) Paths
- c) Windows, current version(s)
 - i) Environment & Icons
 - ii) Desktop
 - iii) Explorer
 - iv) Multiple Apps
 - v) Properties
 - vi) Clipboard
 - vii) Folders
- d) Word Processor
 - i) Environment & a document
 - ii) Page Setup
 - iii) Fonts and size, super and subscripts
 - iv) Inserting a drawing
 - v) Printing options
 - vi) Importing files
- e) Spreadsheet & Charts (Graphs)
 - i) Cells, rows, columns
 - ii) Text vs. data
 - iii) Formulas & Functions
 - iv) Filters
 - v) Chart Types & Creation
 - vi) Chart Labels & Titles
- f) Integration
 - i) Inserting charts, data into word processor documents

- ii) Linking
- g) Intro to Programming
 - i) QBASIC environment
 - ii) Programming basics & flowcharts
 - iii) Variables
 - iv) Input/Output commands
 - v) Calculations
 - vi) Decisions
 - vii) Loops (IF THEN, FOR NEXT, DO)

O. **Planned Activities:** None

P. **Grading and Testing Guidelines:**

College Grading Scale:

100 to 95	A	79 to 77	C
94 to 92	A-	76 to 74	C-
91 to 89	B+	73 to 71	D+
88 to 86	B	70 to 68	D
85 to 83	B-	67 to 65	D-
82 to 80	C+	64 and Below	F

Grading:

- a. Online quizzes = 30 %
- LABS = 30 %
- 1 Midterm Exam = 20 %
- 1 Final Exam = 20 %
- b. Total = 100 %
- c. All work must be completed by midnight of the due dates listed in the content outline. Late work will have points deducted at 1 point per day.
- d. Midterm and Final Exams will be taken in a classroom, or at a validated test site.
- e. Lab Assignments:

There will be approximately 10 lab assignments turned in for credit.
ALL ARE REQUIRED.

Q. **Attendance Requirements:** All students are required to attend all scheduled classes and examinations. Each faculty member has the right to establish regulations regarding

attendance that he/she considers necessary for successful study.

Students who do not attend classes may be administratively withdrawn from those classes. However, failure to attend classes does not constitute withdrawal, and students are expected to process a formal withdrawal through the Student Records if unable to complete a class.

R. **Other Specific Guidelines and Requirements** None

S. **Statement on Disabilities**

Any student who requires reasonable accommodations related to a disability should inform the course instructor and the Coordinator of Specialized Services (Room 138 in Kee Hall; phone 419-755-4727).

Students who do not have a documented disability but who encounter difficulty in their courses are encouraged to visit the Student Success Center. The following are some of the services available to students: academic assistance, advising services, peer tutoring, personal counseling, and referral for LD testing. Students are welcome to come and discover the kinds of assistance available in the Student Success Center (Room 136 in Kee Hall; phone 419-755-4764).

T. **Statement on Withdrawals**

As a student, you are expected to attend class. If you are unable or choose not to attend class, or if for whatever reason you are unable to keep up with the requirements of a course, you need to officially drop the class at the Student Records Office. You may do this up to the end of the eighth week during a regular eleven-week quarter and up to the end of the fifth week during an eight-week term. Classes not following an eight or eleven-week schedule have different withdrawal and refund dates. Contact the Student Records Office for applicable dates. "The last day to officially drop a class is posted on the academic calendar available on the college's website, www.ncstatecollege.edu, under the Academics heading on the home page, is available at the Student Records Office in Kee Hall, and is published in the college's catalog." If you registered for classes in the Student Success Center, you should return there to officially withdraw from any classes. All other students should go to the Student Records Office to process their withdrawal from any class.

If you choose to walk away from your class without officially withdrawing from it, the faculty member teaching the class must grade your classroom performance on the material available to him or her. This normally results in an "F" grade. An "F" grade can lower your grade point average considerably depending on the total credits accumulated.

U. **Statement of Academic Dishonesty/Plagiarism/Copyright Infringement**

It is the position of the College that the responsibility for academic honesty is that of the student. It is expected that the student's work will be the product of his/her own efforts unless the student clearly indicates otherwise. Academic honesty is an important element of mature, responsible learning.

Dishonest scholarly practices include but are not limited to appropriating, in whatever form, another's work and submitting it as one's own (known as plagiarism), intentionally falsifying information, or taking another's ideas with the intention of passing these ideas off as one's own (also known as plagiarism).

In addition, cases of academic dishonesty may involve photocopied materials. Materials used may fall under the Copyright Act. Violations of said Act may subject the user and/or the College to sanctions. If you have questions whether a particular use is in violation of the Act, please contact the office of the Vice President for Learning.

V. Classroom Conduct

All students are expected to demonstrate professional behavior and use language appropriate for the classroom learning experience.

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