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Open Educational Resources Syllabus Review

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2022

### Computer Applications

North Carolina Agricultural and Technical State University

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#### Recommended Citation

North Carolina Agricultural and Technical State University, "Computer Applications" (2022). *Open Educational Resources Syllabus Review*. 16.  
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# NORTH CAROLINA AGRICULTURAL AND TECHNICAL STATE UNIVERSITY

## Spring 2022 Course Syllabus

College Name: College of Science and Technology

Department Name: Applied Engineering Technology

*NOTE: Students are responsible for reading, understanding and following the syllabus.*

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### Undergraduate Course Information

Course Name: Computer Applications

Course Number/Section: AET 121 / 001

Days and Times: online

Credit Hours: 3.0

Class Location: online

### Instructor Contact Information

Instructor:

Office Location:    Email Address:    Office Phone:

### Communication

Email is the preferred method of contact. I will respond within approximately 24 hours. We will have regular online sessions throughout the course to help with questions. Feedback on assignments will be provided within one week of the due date.

### Student Hours

Arranged zoom meeting by email

### Course Prerequisites

None

### Course Description

This course is designed to provide basic computer knowledge and skills required in a typical manufacturing environment. Topics include MS Office Suite, the basics of computer structure and circuitry, software programming and applications in manufacturing processes.

### Student Learning Objectives/Outcomes (SLO)

- Describe the basic concepts of statistical analysis of data using MS Excel
- Explain data visualization by MS Excel
- Describe the basic concepts of numerical calculus using MS Excel
- Explain the fundamental elements of computer programming logics by using MS Excel
- Describe the concept of stochastic simulation by using MS Excel

### Required Textbooks and Materials

*Any course-level subscriptions and tools linked in Blackboard Learn learning management system (LMS) should be listed here. The Blackboard LMS must have links to their student data privacy statement.*

**Required Texts:** Your Office Microsoft® Office 365® Excel™ 2019 Comprehensive by Kinser et al.  
 ©2020, published by Pearson Education, Inc.  
 ISBN-10: 0-13-539472-4, ISBN-13: 978-0-13-539472-4  
**Required Materials:** Personal Laptop with OS of Windows 10 or Mac

## Suggested Course Materials

- Suggested Readings/Texts:**  
 Chapter 1 - Create, Navigate, Work With, and Print Worksheets  
 Chapter 2 - Formats, Functions, and Formulas  
 Chapter 3 - Cell References, Named Ranges, and Functions  
 Chapter 4 - Effective Charts  
 Chapter 5 - Complex Logical and Retrieval Functions  
 Chapter 6 - Integrating Complex Functions into Scientific Analysis  
 Chapter 7- Multiple Worksheets, Workbooks, and Templates  
 Chapter 8 - Building an Application with Multiple Worksheets and Workbooks  
 Chapter 9 -Organize, Import, Export, and Cleanse Data Sets

**Suggested Materials:**  
 Will be posted on BlackBoard as needed

## Grading Policy

### Course Grade Scale *[Undergraduate level courses]*

94% and above	A		76% - 74%	C
93% - 90%	A-		73% - 70%	C-
89% - 87%	B+		69% - 67%	D+
86% - 84%	B		66% - 64%	D
83% - 80%	B-		63% - 60%	F
79% - 77%	C+			

<b>Grading Allocation</b>	
Assignments	100%

## Course Policies

**Use Of Blackboard as The Learning Management System**  
 Blackboard is the primary online instructional and course communications platform. Students can access the course syllabus, assignments, grades, and learner support resources. Students are encouraged to protect their login credentials, complete a Blackboard orientation and log in daily to course.

### [Other Course Policies]

Describe all policies specific to your course, e.g. Make-Up Exams, Late Work, Extra Credit, Special Assignments, Homework, Quizzes, Exams, Academic Dishonesty, Attendance/Participation, or Classroom Citizenship, etc. Utilize any headings as needed. Here you could include any common policies that you feel require special mention.

**Make-Up Exams** None

**Extra Credit** None

**Late Work** No Late work accepted

**Special Assignments** None

### **Class Schedule [or Course Plan]**

Include topics, reading assignments, due dates, exam dates, withdrawal dates, holidays or convocations, etc. Adjust format as needed.

Week	Month	SUBJECT	READING IN TEXT, ACTIVITY, HOMEWORK, EXAM
1		The Common features of Microsoft Excel	
2		Create, Navigate, Work With, and Print Worksheets	
3		Formats, Functions, and Formulas	
		1) Making table of data in Microsoft Excel 2) Using Cell Style to distinct/show different type of cell in tables of Microsoft Excel 3) Calculating Statistical quantities such as Average and Standard Deviation by Microsoft Excel 4) Calculate the simple function in Microsoft Excel	Assignment 01
4		Cell References, Named Ranges, and Functions	
5		Effective Charts	
6		Complex Logic (And, Or)	
		1) Transferring big data between different Excel sheets 2) Using key shortcuts to do selecting data and repeating calculation in Microsoft Excel 5) Plotting the data in Microsoft Excel – using Charts 6) Plotting function (line) in Microsoft Excel – using Charts 7) Calculating the equation of a line using the Microsoft Excel	Assignment 02
7		Integrating Complex Functions into Business Analysis (Optional)	
8		Multiple Worksheets, Workbooks, and Templates	
9		Building an Application with Multiple Worksheets and Workbooks	

Week	Month	SUBJECT	READING IN TEXT, ACTIVITY, HOMEWORK, EXAM
		1) Using random number generator in Microsoft Office 2) Stochastic modeling and Monte Carlo simulation using Microsoft Excel 3) Using simple logic for filtering data 4) Finding the number of positive cases after applying filter by using SUM function in Microsoft Excel	Assignment 03
10		Organize, Import, Export, and Cleanse Data Sets	
11		Data Tables, Scenario Manager, and Solver	
		1) Using Complex Boolean logic (And, OR) to find local Max and Min 2) Using Complex Boolean logic (And, OR) to find intersect of two curves 3) Plotting the trigonometric functions in Microsoft Excel (convert Degree into Radian) 4) Using Scatter plot for Polar Coordinate System	Assignment 04

*\* These descriptions and timelines are subject to change at the discretion of the instructor.*

Please refer to the [Common Policies](#) file for all other University policies. The Common Policies should also be provided to all students or available in the course Blackboard shell.