
COMPUTER APPLICATIONS IN BIOLOGICAL SYSTEMS (ASM 240)

Instructor: Dev Shrestha

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Meeting:

Lecture: (MW) JML 82, 10:30 AM-11:20 PM

Lab: (T) JML 82, 1:30 – 3:20 PM

Office hours:

MW 12:30-2:30 PM (Walk-ins welcome)

COURSE DESCRIPTION:

Application of computers in agriculture and biological systems: Computer principles and operation, word processing for professional documents, problem solving using spreadsheets, graph and charts for effective presentations, web communication, database management and introduction to visual basic for application programming language.

Class: Two lectures and one 2-hr lab a week. Prereq: three credits of college math.

COURSE OBJECTIVES

1. Introduce students to computers applications in agriculture and biological systems. This involves developing a basic understanding of computer terminology and operation.
2. Introduce students with basic problem solving skills frequently encountered in agricultural and biological systems.
3. Introduce students to the online collaboration and organization skill.
4. Acquaint students with the solving unique problems through Visual Basic for Application (VBA) programs on a personal computer.

The course will use the IBM compatible personal computer with the Microsoft Windows operating system. This type of computer is used because it is readily available throughout the campus and around, not because it is or isn't the best. When learning to operate a computer, it doesn't make much difference which one you use as they are all very similar in operation. We will emphasize computer use concepts and terminology.

TEXTBOOK/REFERENCES

Book provided in the beginning of the semester.

Online computer books available through library and online help.

CLASS SCHEDULE

Date	Topic	Homework
13-Jan	No Class - Out of town	
18-Jan	UI holiday; MLK day	
20-Jan	Introduction to computer hardware	
25-Jan	Operating systems	
27-Jan	Spreadsheet I	
1-Feb	Spreadsheet II	Homework 1
3-Feb	Spreadsheet III	
8-Feb	No Class - Out of town	
10-Feb	No Class - Out of town	
15-Feb	UI holiday; President's day	
17-Feb	Spreadsheet IV	Homework 2
22-Feb	Spreadsheet V	
24-Feb	Spreadsheet VI	
1-Mar	Graph and Chart I	Homework 3
3-Mar	Graph and Chart II	
8-Mar	Graph and Chart III	
10-Mar	Database I	Homework 4
15-Mar	Spring Break	
17-Mar	Spring Break	
22-Mar	Database II	
24-Mar	Database III	
29-Mar	Visual Basic for Application I	
31-Mar	Visual Basic for Application II	
5-Apr	Visual Basic for Application III	Homework 5
7-Apr	Visual Basic for Application IV	
12-Apr	Visual Basic for Application V	
14-Apr	Visual Basic for Application VI	Homework 6
19-Apr	Word processing I	
21-Apr	Word Processing II	
26-Apr	Word Processing III	
28-Apr	Word Processing IV	Homework 7
3-May	Word Processing V	
5-May	Word Processing V	

TENTATIVE LAB SCHEDULE

Lab	Topic
19-Jan	Computer hardware
26-Jan	Spreadsheet - I
2-Feb	Spreadsheet - II
9-Feb	No Lab - Out of town
16-Feb	Spreadsheet - III
23-Feb	Spreadsheet - IV
2-Mar	Graph and Chart - I
9-Mar	Graph and Chart - II
16-Mar	Spring Break
23-Mar	Database
30-Mar	Visual Basic for Application - I
6-Apr	Visual Basic for Application - II
13-Apr	Visual Basic for Application - III
20-Apr	Word processing I
27-Apr	Word processing II
4-May	Word processing III

There will be total of about 5-6 quizzes during lab sessions. Each quiz will test the knowledge you have gained as well as the principles and concepts taught in the class. Students are expected to read the class notes before coming to the class and lab.

ATTENDANCE

Your attendance is expected in every class. For lecture classes there will be 5-10 attendances taken on a pre-selected dates. Attendance worth 10% of your grading.

HOMEWORK

There will be total of 6 homeworks. Homework is due on the day specified. Late submissions results in reduced grading. Homework carries total of 40 points.

TEAM PROJECT

The team project is your opportunity to demonstrate your learned skills in problem solving. Your team (2-3 students) will develop both a technical report and presentation on a topic assigned in your discipline. The project is required to use some visual basic for application (VBA) code to automate your task. The PowerPoint presentations will be given during the finals week. The project work should adequately demonstrate your understanding of the overall course material. The document you present should be professional and should be well organized.

CREDIT DISTRIBUTION

Homework	40
Quizzes / Lab work	30
Project	20
Class attendance	10
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Total	100