

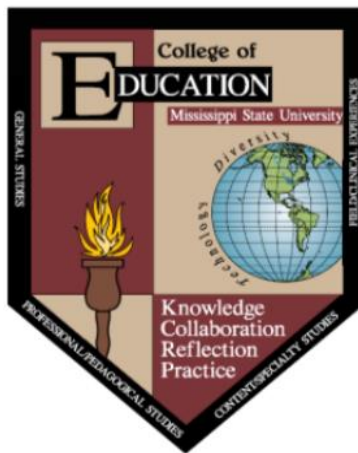
**MISSISSIPPI STATE UNIVERSITY COLLEGE OF EDUCATION**  
**DEPARTMENT of INSTRUCTIONAL SYSTEMS and WORKFORCE DEVELOPMENT**  
Course Syllabus

**Course Prefix and Number:** TECH 2133  
**Course Title:** Spreadsheet Design & Analysis  
**Credit Hours:** 3 credit hours  
**Method of Instruction:** B = Lecture/Lab

**Catalogue Description**

(Prerequisite: TECH 1273, TKT 1273, or BIS 1012). Two Hours Lecture, Two Hours Laboratory. An exploration of the design and analysis of electronic spreadsheet technology, with hands-on practices.

**College of Education Conceptual Framework**



The faculty in the College of Education at Mississippi State University are committed to assuring the success of students and graduates by providing superior learning opportunities that are continually improved as society, schools, and technology change. The organizing theme for the conceptual framework for the College of Education at Mississippi State University is educational professionals - dedicated to continual improvement of all students' educational experiences. The beliefs that guide program development are as follows:

1. **KNOWLEDGE** - Educational professionals must have a deep understanding of the organizing concepts, processes, and attitudes that comprise their chosen disciplinary knowledge base, the pedagogical knowledge base, and the pedagogical content knowledge base. They must also know how to complement these knowledge bases with the appropriate use of technology.
2. **COLLABORATION** - Educational professionals must continually seek opportunities to work together, learn from one another, forge partnerships, and assume positions of responsibility.
3. **REFLECTION** - Educational professionals must be willing to assess their own strengths and weaknesses through reflection. They must also possess the skills, behaviors, and attitudes necessary to learn, change, and grow as life-long learners.
4. **PRACTICE** - Educational professionals must have a rich repertoire of research-based strategies for instruction, assessment, and the use of technologies. They must be able to focus that array of skills on promoting authentic learning by all students or clients, while exhibiting an appreciation and commitment to the value and role of diversity.

## **Course Objectives:**

Upon completion of this course, students will be able to:

1. Apply and reinforce spreadsheet functions to solve problems. CFPO #10
2. Organize numeric information using electronic spreadsheet software. CFPO #7
3. Create tables, charts, and professional reports by using electronic spreadsheet software. CFPO #7
4. Design spreadsheets to solve realistic problems. CFPO #3, 10, 7

## **Detailed Course Outline:**

1. Creating a Worksheet and a Chart (7 hrs)
  - a. Entering Text (1 hr)
  - b. Calculating a Sum (1 hr)
  - c. Using the fill Handle to Copy Adjacent Cells (1 hr)
  - d. Formatting the Worksheet (2 hrs)
  - e. Adding Pie Charts (2 hrs)
2. Formulas, Functions, and Formatting (6 hrs)
  - a. Entering Formulas (2 hrs)
  - b. AVERAGE, MAX, and MIN (2 hrs)
  - c. Formatting the Worksheet (2 hrs)
3. Working with Large Worksheets, Charting, and What-if Analysis (7 hrs)
  - a. Rotating Text and Using the Fill Handle (0.5 hr)
  - b. Copying a Range of Cells (0.5 hr)
  - c. Inserting and Deleting Cells in a Worksheet (1 hr)
  - d. Absolute Versus Relative Addressing (1 hr)
  - e. The IF Function (1 hr)
  - f. Adding and Formatting the Worksheet (1 hr)
  - g. Adding a Clustered Column chart (1 hr)
  - h. What-If Analysis (1 hr)
4. Financial Functions, Data Tables, and Amortization Schedules (7 hrs)
  - a. Creating Cell Names (1 hr)
  - b. Using a Data Table to Analyze Worksheet Data (2 hrs)
  - c. Creating an Amortization Schedule (2 hrs)
  - d. Formula Checking (2 hrs)
5. Working with Multiple Worksheets and Workbooks (7 hrs)
  - a. Creating the Consolidated Expenses Worksheet (1 hr)
  - b. Formatting the Consolidated Worksheet (1 hr)
  - c. Working with Multiple Worksheets (1 hr)
  - d. Adding a Header and Footer, Changing the Margins (2 hrs)
  - e. Consolidating Data by Linking Workbooks (2 hrs)
6. Creating, Sorting, and Querying a Table (7 hrs)
  - a. Creating a Table (0.5 hr)
  - b. Adding Calculated Fields to the Table (0.5 hr)

- c. Using a Lookup Table (1 hr)
  - d. Conditional Formatting (1 hr)
  - e. Sorting a Table (1 hr)
  - f. Working with Tables in Excel (1 hr)
  - g. Querying a Table Using Autofilter (1 hr)
  - h. Using Database Functions (1 hr)
7. Creating Templates, Importing Data, and Working with SmartArt Images, and Screen Shots (6 hrs)
- a. Creating Templates (1 hr)
  - b. Importing Data (2.5 hrs)
  - c. Working with SmartArt (1 hr)
  - d. Using Screen Shots on a Worksheet (1 hr)
  - e. Inserting a 3-D Cone Chart (.5 hr)
8. Working with Trendlines, PivotTable Reports, PivotChart Reports, and Slicers (7 hrs)
- a. Creating and Formatting PivotTable (2 hrs)
  - b. Creating and Formatting PivotChart Reports (2 hrs)
  - c. Working with Slicers (2 hrs)
  - d. Adding a Trendline to a Chart (1 hr)
9. Using Macros, Controls, and Visual Basic for Application (6 hrs)
- a. Recording Macros and Assigning Them (2 hrs)
  - b. Automating Mailing List Data Entry (2 hrs)
  - c. Solving Complex Problems (1 hr)
  - d. Data Validation (1 hr)

**Text(s):**

Freund, S. M., Schmieder, J. L., & Starks, J. L. (2016). *Microsoft Office 365 Excel 2016*. Boston, MA: Cengage Learning. Comprehensive, 1<sup>st</sup> Edition

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MindTap ISBN: 9781305870741 – Recommended if not prefer hardcopy  
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- Purchase Only One Version, Not Both
- You will need the MindTap Software

**USB Drive:**

To save and access your files used for class, you will need a USB drive.

## Description of Instruction:

**(Campus 1)** Lecture. Instruction will be delivered through face-to-face lectures. The teaching format will include lecture, discussion, demonstration, hands-on activities and simulations, project assignments, and exams.

**(Campus 5)** Lecture. This course will be delivered via an on-line platform – Canvas. Class materials will include handouts, preparation guidelines, supplementary materials, and recorded lectures. Class activities such as group discussions will be held on Canvas in the format of threaded discussion topics.

## Honor Code:

**(Campus 1& 5)** Mississippi State University has an approved Honor Code that applies to all students. The honor code states: "As a Mississippi State University student I will conduct myself with honor and integrity at all times. I will not lie, cheat, or steal, nor will I accept the actions of those who do."

Upon accepting admission to Mississippi State University, a student immediately assumes a commitment to uphold the honor code, to accept responsibility for learning, and to follow the philosophy and rules of the honor code. Ignorance of the rules does not exclude any member of the MSU community from the requirements or consequences of the honor code.

For additional information please visit: <http://www.honorcode.msstate.edu>

**(Campus 5 specifically)** Online tests will be administered with random ordered questions. All written assignments must be submitted through Turnitin.

## Technology:

**(Campus 1)** Students will be required to use Canvas to access course syllabus, class preparation guidelines and handouts, and supplemental course materials, as well as to check their grades. Students may also be required to submit assignments using Canvas.

**(Campus 5)** Students will be required to use Canvas to access course syllabus, recorded lectures, class preparation guidelines and handouts, and supplemental course materials, as well as to check their grades. Students will also be required to submit assignments using Canvas. In addition to these, students will engage in class discussions by creating or relying to threaded discussion topics on Canvas.

*Technical Support:* The MSU [Help Desk](#) is a service provided at no charge to all students, staff, and faculty at Mississippi State University. The consultants are there to help you with various computer-related information or problems. Check the Information Technology Services (ITS) Web site at <http://www.its.msstate.edu> for handouts and/or resolutions to common computer problems. If you cannot find an answer to your question on the Web or you do not have access to the Internet, please call ITS at 325-0631 or 888-398-6394 (7:30 a.m. to Midnight Monday through Thursday; 7:30 a.m. to 5:00 p.m. Friday; 1:00 p.m. to Midnight Sundays). You can also e-mail ITS directly for help with technical problems at [helpdesk@msstate.edu](mailto:helpdesk@msstate.edu) or go by their office at 108 Allen Hall with walk-in hours from 8:00

a.m. to 10:00 p.m. Monday to Thursday; 8:00 a.m. to 5:00 p.m. Friday; 1:00 p.m.-10:00 p.m. Sunday.

**Diversity:**

This course will comply with the Mississippi State University diversity policies. Issues in diversity (gender, race, SES, culture) will be noted as concerns with individual differences in the field and will be identified and regularly assessed when discussing topics.

**Accommodation for Students with Disabilities:**

Students with disabilities in need of accommodations to meet the expectations of this course are encouraged to bring this need to the attention of the instructor and should register with the Office of Student Support Services as soon as possible. The Office of Student & Disability Support Services is located in 01 Montgomery Hall, (662) 325-3335 (phone), and <http://www.sss.msstate.edu> (web address).

**University Safety Statement:**

Mississippi State University values the safety of all campus community members. Students are encouraged to register for Maroon Alert texts and to download the Everbridge App. Visit the Personal Information section in Banner on your mystate portal to register. To report suspicious activity or to request a courtesy escort via Safe Walk, call University Police at 662-325-2121, or in case of emergency, call 911. For more information regarding safety and to view available training resources, including helpful videos, visit [ready.msstate.edu](http://ready.msstate.edu).

**Field Component:**

There is no field component in this course.

**Evaluation of Student Progress: (Campus 1 and Campus 5)**

Student progress will be measured as follows:

**Assignments and Cases:** Students are expected to complete all classroom assignments to show ability to complete the specific database competencies. They are also expected to analyze and solve database cases that are designed to be realistic problems encountered in designing and maintaining databases in a contemporary environment. (Objectives 2, 3, 4)

**Quizzes and Exam:** Students will complete quizzes and a comprehensive final examination. Quizzes and exam will contain questions covering knowledge and understanding of the material, as well as explanation of this knowledge. Questions may be taken from the text, lecture materials, laboratory experiments, supplementary materials (handouts), and from instructor demonstrations. Students who will not be able to take an exam at a scheduled time are responsible for contacting the instructor and arranging to make up the exam, prior to that scheduled exam. The quizzes and exam will be objective and performance based. (Objectives 1, 2, 3, 4)

**Comprehensive Final Project:** Students are expected to complete a final project to show ability to complete the specific database competencies. (Objectives 1, 2, 3, 4)

Grading will be based on achievement in four main areas using the following weights:

Activity	Percentage
Assignments and Cases	35%
Quizzes and Exam	45%
Comprehensive Final Project	20%
TOTAL	100%

A	=	90 – 100.00 %	Excellent
B	=	80 – 89.99 %	Good
C	=	70 – 79.99 %	Satisfactory
D	=	60 – 69.99 %	Poor

### Attendance Policy:

The class is responsible to read the MSU Attendance Policy AOP 12.09.

<https://www.policies.msstate.edu/policy/1209>

In accordance with university policy (AOP 12.09), students should attend all classes. When an absence from class is essential, the student must inform the instructor via phone or Email, and provide appropriate documentation.

Attendance in the **online course** is evaluated on a weekly basis. Each student is expected to join the online environment at the scheduled time for a combination of lecture and discussion. Just as in the face-to-face environment, not being logged in for class constitutes a single absence.

### Title IX:

MSU is committed to complying with Title IX, a federal law that prohibits discrimination, including violence and harassment, based on sex. This means that MSU's educational programs and activities must be free from sex discrimination, sexual harassment, and other forms of sexual misconduct. If you or someone you know has experienced sex discrimination, sexual violence and/or harassment by any member of the University community, you are encouraged to report the conduct to MSU's Director of Title IX/EEO Programs at 325-8124 or by e-mail to [titleix@msstate.edu](mailto:titleix@msstate.edu). Additional resources are available at <http://www.msstate.edu/web/security/title9-12.pdf> or at <http://students.msstate.edu/sexualmisconduct/>.

### Bibliography:

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