COLLEGE OF MICRONESIA – FSM
P.O. Box 159, Pohnpei FM 96941
COURSE OUTLINE COVER PAGE

DATA ANALYSIS USING SPREADSHEETS	CA 105
Course Title	Department and Number

COURSE DESCRIPTION

This course focuses on the use of electronic spreadsheets to analyze data. The student will create and manipulate worksheets in order to derive solutions to typical business (and non-business) scenarios. Topics include data validation methods, protection & input forms; advanced operations and calculations (using functions), descriptive statistics, database functions, pivot tables, advanced filter; charting from pivot tables/ general charting; goal seek; solver; scenarios; group and outline; vlookup; OLE; jazzing up the spreadsheet; preparing workbooks for internet usage.

Course Prepared by: Division of Business Administration   **State** COM-FSM National Campus

	Hours per Week		No. of Week		Total Hours		Semester Credits
Lecture	3	x	16	x	48/16	=	3
Laboratory		x		x		=	
Workshop		x		x		=	

Total Semester Credits   3

Purpose of Course:
Degree Requirement   ✓
Degree Elective
Certificate – 3rd Yr
Other

Prerequisite Course(s):   **CA100 – Computer Literacy**

_____   _____
Signature, Chairperson, Curriculum Committee   **Date Approved by Committee**

_____   _____
Signature, President, COM-FSM   **Date Approved by President**

A: __GENERAL COURSE OBJECTIVE__

The course focuses on the creation and manipulation of data in spreadsheets in order to derive solutions to various business (and non-business) scenarios. Generally, the student will demonstrate competency in the various methods of analyzing data using electronic spreadsheets and a general understanding of the pros and cons of involved in using the various methods.

B: __SPECIFIC OBJECTIVES__

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

1. Format text, numbers, and dates in a workbook using accounting, fraction, and scientific number formats; create a custom format; use AutoFormat.
2. Apply conditional formatting, styles, data, and chart formats.
3. Describe and demonstrate the various ways to print a worksheet and explain advance printing features.
4. Create and use a list using such features as viewing, sorting, and printing records specified in a search or filter.
5. Demonstrate how to use a list to find specific records using the AutoFilter.
6. Explain and demonstrate how to use data analysis tools using scenarios, auditing features, pivot tables and pivot charts, goal seek, and solver features to find unknown values.
7. Create and use macros and explain macros as a timesaving feature.
8. Describe and demonstrate various methods of exchanging information with other programs, such as the import and export function, and publishing worksheets in an HTML format for web accessibility.
9. Demonstrate how to create and save a template, open and use the template, and use some of the templates built into the spreadsheet program.
10. Demonstrate how to name ranges, copy and move data between worksheets, copy an entire worksheet, and create and save a workspace.
11. Perform data consolidation.
12. Create and use a shared worksheet, merge data in shared workbooks, track changes, and add password protection to a workbook.
13. Describe features in an electronic spreadsheet that control how summary data is displayed, such as adding subtotals to column(s) and row(s) of data and grouping data for easier viewing.
14. Apply the advanced features that are available in the electronic spreadsheet to look up information and return a value to a cell, such as the extensive markup language, XML.
15. Write, debug, and execute advanced macro functions using Visual Basic Application (VBA) programming language.

C: <u>COURSE CONTENT</u>

1. **Making the Worksheet Useful**
   a. Sorting data
   b. Auto filter
   c. Hiding Columns and rows
   d. Using draw in the Worksheet
   e. Adding a Picture to a Worksheet
   f. Using Templates
   g. Inserting Hyperlinks in file
   h. Saving Workbooks in different Formats
   i. Viewing and Editing Comments

2. **Applying Advanced Formats to Worksheets and Charts**
   a. Exploring Number formats
   b. Creating a Custom Format
   c. Using Auto Format and Conditional Formatting
   d. Using Style and Data Validation
   e. Enhancing the Appearance of Charts

3. **Working with Multiple Worksheets**
   a. Worksheet in a Workbook
   b. Identifying Worksheets
   c. Positioning Worksheets in a Workbook
   d. Consolidating Workbook Data
   e. Printing a Workbook

4. **Worksheet Charts**
   a. Types of Worksheet Charts
   b. Creating a Chart from a Worksheet
   c. Creating a Chart Sheet
   d. Creating an embedded Chart
   e. Creating other Types of Charts

5. **Printing Workbooks**
   a. Introduction
   b. Print Preview
   c. Choosing sheet preference
   d. Creating Page Breaks
   e. Applying printing Features
   f. Printing Formulas or Zeros
   g. Trouble Shooting Printing

6. **Using Lists**
   a. Introducing Lists
   b. Sorting a list
   c. Searching for Records Meeting a Specific Criteria

7. **Filtering and Extracting Data**
   a. Searching a list Using Auto Filter
   b. Searching for Records Using Top 10
   c. Displaying Record Using Custom Filters and Search Operators
   d. Displaying Records Using Advanced Filters

8. **Working with Analysis Tools and PivotTables**
   a. Creating Scenarios
   b. Using Excel Auditing Feature
   c. Creating a Pivot List and Pivot table Report
   d. Creating a Pivot Chart
   e. Using Goal Seek
   f. Using Solver

9. **Creating Macros and Menus**
   a. Understanding Macros
   b. Creating, Recording, and Running a Macro
   c. Editing a Macro
   d. Customize a Toolbar by Adding Macro Buttons
   e. Removing a Button from a Toolbar
   f. Assigning a macro to a Command Button
   g. Creating a Custom Menu

10. **Importing and Exporting**
    a. Importing Data
    b. Importing External data from Other Data Sources
    c. Exporting Excel Data
    d. Publishing Excel Worksheet and Workbook in HTML Format

11. **Using Template and Protection**
    a. Creating and Saving a Template
    b. Opening and Using a Template
    c. Editing a Template
    d. Using Predefined Templates
    e. Adding Protection Options

12. **Working with Multiple Worksheets and Workbooks**
    a. Naming Ranges
    b. Copying Data Between Worksheets
    c. Consolidating data
    d. Moving Between Workbooks
    e. Saving a Work Space

13. **Working With shared Workbooks**
    a. Creating and Using a Shared workbook
    b. Merging Shared Workbooks
    c. Tracking Changes
    d. Adding Password Protection

14. **Using Outlines**
    a. Creating Outlines
    b. Creating Sub-Totals
    c. Grouping Data

15. **Using Advanced Excel Tools**
    a. Introduction
    b. Creating Look-up Functions
    c. Using XML to share data on the Web
    d. Adding Trendlines

16. **Data Analysis Programming**
    a. Macro Programming Using Visual Basic Application Language
    b. Designing and Debugging Advanced Macro Functions

D: <u>TEXTBOOK</u>

Microsoft Excel 2002 Complete Tutorial. William R. Pasewark, Bill Pasewark, Sandra Cable. Course Technology, 2002

E. <u>REFERENCE MATERIAL:</u>

Data Analysis Using Microsoft Excel. Michael R. Middleton, Thomson Course Technology, 2004 **[For Instructor]**

F: <u>REQUIRED COURSE MATERIALS</u>
Textbook, Diskettes
G: <u>METHODS OF INSTRUCTION</u>

Lecture, computer hands-on/demonstration, class discussion, powerpoint presentations, and various individual and group assignments.

H: <u>EVALUATION:</u>

Assessment will be in the form of projects, quizzes, homework, individual assignments, and exams given throughout the semester. Grades will be assigned based on the following percentage of total points received from projects, quizzes, homework practice sets, and exams.
90 - 100% = A;   80 - 89% = B;   70 - 79% = C;   60 - 69% = D;   59% and under = F

I: <u>CREDIT BY EXAMINATION AVAILABLE FOR THE COURSE</u>
None

J: <u>ATTENDANCE POLICY</u>
The College attendance policy shall be applied.

K: <u>ACADEMIC HONESTY POLICY</u>

The College academic honesty policy shall be applied.