BIS M23B: MICROSOFT EXCEL – ADVANCED

Originator
fmasci

College
Moorpark College

Discipline (CB01A)
BIS - Business Information Systems

Course Number (CB01B)
M23B

Course Title (CB02)
Microsoft Excel – Advanced

Banner/Short Title
MS Excel – Advanced

Credit Type
Credit

Honors
No

Start Term
Fall 2020

Catalog Course Description
Provides an advanced understanding of spreadsheets with Microsoft Excel. Includes data validation, advanced charts and tables, conditional formatting, format trouble shooting, and data analysis.

Additional Catalog Notes
This course begins preparation for the Microsoft Office User certification exam (Excel Advanced)

Taxonomy of Programs (TOP) Code (CB03)
0702.10 - *Software Applications

Course Credit Status (CB04)
D (Credit - Degree Applicable)

Course Transfer Status (CB05) (select one only)
B (Transferable to CSU only)

Course Basic Skills Status (CB08)
N - The Course is Not a Basic Skills Course

SAM Priority Code (CB09)
C - Clearly Occupational

Course Cooperative Work Experience Education Status (CB10)
N - Is Not Part of a Cooperative Work Experience Education Program

Course Classification Status (CB11)
Y - Credit Course

Educational Assistance Class Instruction (Approved Special Class) (CB13)
N - The Course is Not an Approved Special Class

Course Prior to Transfer Level (CB21)
Y - Not Applicable

Course Noncredit Category (CB22)
Y - Credit Course

Funding Agency Category (CB23)
B - Partially Developed Using Economic Development Funds

Course Program Status (CB24)
1 - Program Applicable

General Education Status (CB25)
Y - Not Applicable

Support Course Status (CB26)
N - Course is not a support course

Field trips
Will not be required

Grading method
Letter Graded

Does this course require an instructional materials fee?
No

Repeatable for Credit
No

Is this course part of a family?
No

Units and Hours

Carnegie Unit Override
No

In-Class

Lecture
Minimum Contact/In-Class Lecture Hours
26.25
Maximum Contact/In-Class Lecture Hours
26.25

Activity
Minimum Contact/In-Class Activity Hours
0
Maximum Contact/In-Class Activity Hours
0

Laboratory
Minimum Contact/In-Class Laboratory Hours
0
Maximum Contact/In-Class Laboratory Hours
0

Total in-Class

Total in-Class
Total Minimum Contact/In-Class Hours
26.25

Total Maximum Contact/In-Class Hours
26.25

Outside-of-Class

Internship/Cooperative Work Experience

Paid
Minimum Paid Internship/Cooperative Work Experience Hours
0
Maximum Paid Internship/Cooperative Work Experience Hours
0

Unpaid
Minimum Unpaid Internship/Cooperative Work Experience Hours
0
Maximum Unpaid Internship/Cooperative Work Experience Hours
0

Total Outside-of-Class

Total Outside-of-Class
Minimum Outside-of-Class Hours
52.5
Maximum Outside-of-Class Hours
52.5

Total Student Learning

Total Student Learning
Total Minimum Student Learning Hours
78.75
Total Maximum Student Learning Hours
78.75

Minimum Units (CB07)
1.5
Maximum Units (CB06)
1.5

Advisories on Recommended Preparation
BIS M20 and BIS M23A

Entrance Skills

Entrance Skills
Preferred understanding the use of MS Excel as an application within the Business Information Environment.

Entrance Skills
Preferred understanding of the function of MS Excel in the business environment.

Entrance Skills
Preferred completion of BIS M20 Microsoft Office – Introduction and BIS M23A MS Excel – Intermediate

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Student Learning Outcomes (CSLOs)

	Upon satisfactory completion of the course, students will be able to:
1	plan, create, edit, and complete production of complex business spreadsheets.
2	use advanced Excel tools and formulas to quickly summarize and aggregate numeric information.
3	utilize advanced Excel tools and macros to summarize and report key information.

Course Objectives

	Upon satisfactory completion of the course, students will be able to:
1	manage workbooks.
2	manage workbook review.
3	apply custom data formats and validation.
4	apply advanced conditional formatting and filtering.
5	create and modify custom workbook elements.
6	prepare a workbook for internationalization.
7	apply functions in formulas.
8	look up data by using functions.
9	apply advanced date and time functions.
10	perform data analysis and business intelligence.
11	troubleshoot formulas.
12	define named ranges and objects.
13	create advanced charts.
14	create and manage PivotTables.
15	create and manage PivotCharts.

Course Content

Lecture/Course Content

- **10% - Manage workbook options and settings**
  - Save a workbook as a template, copy macros between workbooks, reference data in another workbook, reference data by using structured references, enable macros in a workbook, display hidden ribbon tabs
  - Restrict editing, protect a worksheet, configure formula calculation options, protect workbook structure, manage workbook versions, encrypt a workbook with a password
- **20% - Apply custom data formats and layouts**
  - Create custom number formats, populate cells by using advanced Fill Series options, configure data validation
  - Create custom conditional formatting rules, create conditional formatting rules that use formulas, manage conditional formatting rules
  - Create custom color formats, create and modify cell styles, create and modify custom themes, create and modify simple macros, insert and configure form controls
  - Display data in multiple international formats, apply international currency formats, manage multiple options for +Body and +Heading fonts
- **40% - Create advanced formulas**
  - Perform logical operations by using AND, OR, and NOT functions; perform logical operations by using nested functions; perform statistical operations by using SUMIFS, AVERAGEIFS, and COUNTIFS functions
  - Look up data by using the VLOOKUP function, look up data by using the HLOOKUP function, look up data by using the MATCH function, look up data by using the INDEX function
  - Reference the date and time by using the NOW and TODAY functions, serialize numbers by using date and time functions
  - Reference the date and time by using the NOW and TODAY functions; import, transform, combine, display, and connect to data; consolidate data; perform what-if analysis by using Goal Seek and Scenario Manager; use cube functions to get data out of the Excel data model; calculate data by using financial functions
  - Trace precedence and dependence, monitor cells and formulas by using the Watch Window, validate formulas by using error checking rules, evaluate formulas
  - Name cells, name data ranges, name tables, manage named ranges and objects
- **30% - Create advanced charts and tables**

- Add trendlines to charts, create dual-axis charts, save a chart as a template
- Create PivotTables, modify field selections and options, create slicers, group PivotTable data, reference data in a PivotTable by using the GETPIVOTDATA function, add calculated fields, format data
- Create PivotCharts, manipulate options in existing PivotCharts, apply styles to PivotCharts, drill down into PivotChart details

Laboratory or Activity Content

None.

Methods of Evaluation

Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):

Problem solving exercises
Skills demonstrations
Written expression

Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):

Computational homework
Essay exams
Group projects
Individual projects
Objective exams
Problem-solving exams
Quizzes
Reports/papers
Research papers
Skills demonstrations
Skill tests

Instructional Methodology

Specify the methods of instruction that may be employed in this course

Audio-visual presentations
Computer-aided presentations
Class activities
Class discussions
Distance Education
Demonstrations
Instructor-guided interpretation and analysis
Instructor-guided use of technology

Describe specific examples of the methods the instructor will use:

- Demonstrate the program's advanced options; such as using scenarios, goal seek and data validation.
- Show how specific tools are available to address the common needs of a business, such as
  - the ability to show receivable information by aging.
  - breaking down reporting into departments.
  - forecasting possible scenarios for the future of the business.
- Use PowerPoint to demonstrate possible examples of documents used in the business environment and how to customize them.
- Lecture on possible pitfalls of using MS Excel and explore common misconceptions, common mistakes, and inconsistencies within the program.
- Create lab assignments that can be done in class to show mastery of the topic or area being covered, such as
  - creating combinations of charts from internal and external data.
  - using data validation to prevent incorrect data from being input.
  - combining functions to isolate data using multiple criteria.

Representative Course Assignments

Writing Assignments

1. Explain the mathematical limitations of Excel and why it is useful for finance, but not science.
2. Describe how the advanced formulas can remove unwanted format errors in a template, that does not have any data in the spreadsheet.

Critical Thinking Assignments

1. Create a spreadsheet that utilizes validation to prevent incorrect information from being entered.
2. Use conditional formatting and sorting to create an accounts receivable aging report.
3. Use VLOOKUP and match functions to convert data from a 2 field output to an annual reporting table by month.
4. Use a combo graph to show company monthly earnings with the U.S. GDP overlapping it in the presentation.

Reading Assignments

1. Read an article about the evolution of spreadsheets in the digital age.
2. Read about the differences between MS Excel and Apple's Numbers and where each of them is more productive in their own target environment.

Skills Demonstrations

1. Use formulas to combine data from several worksheets into a summary worksheet at the front of a workbook.
2. Using raw information and the remove duplicate tool and list function, create a data validation that will only allow pre-existing data to be entered into a field in a spreadsheet.
3. Using the Dependents and Precedence to determine if there are any errors in how formulas are interacting.

Outside Assignments

Representative Outside Assignments

1. Build multiple personal budgets using the scenario manager for different possible raises.
2. Create a ToDo list with dates and use the Today function to automatically calculate how long you have to complete each task when you open the spreadsheet.

Articulation

C-ID Descriptor Number

BSOT 132 X

Status

Aligned

Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
Cerro Coso Community College	BSOT C163	Advanced Excel	1
College of the Desert	AIS 7B	Advanced Excel	2
Norco College	CAT 98B	Advanced Excel	1.5

District General Education

A. Natural Sciences

B. Social and Behavioral Sciences

C. Humanities

D. Language and Rationality

E. Health and Physical Education/Kinesiology

F. Ethnic Studies/Gender Studies

Course is CSU transferable

Yes

CSU Baccalaureate List effective term:

FALL 2020

CSU GE-Breadth

Area A: English Language Communication and Critical Thinking

Area B: Scientific Inquiry and Quantitative Reasoning

Area C: Arts and Humanities

Area D: Social Sciences

Area E: Lifelong Learning and Self-Development

CSU Graduation Requirement in U.S. History, Constitution and American Ideals:

IGETC

Area 1: English Communication

Area 2A: Mathematical Concepts & Quantitative Reasoning

Area 3: Arts and Humanities

Area 4: Social and Behavioral Sciences

Area 5: Physical and Biological Sciences

Area 6: Languages Other than English (LOTE)

Textbooks and Lab Manuals

Resource Type
Textbook

Classic Textbook
Yes

Description
Freund, Steven M., and Joy L. Starks. *Microsoft® Office 365® and Excel 2019 Comprehensive*. Shelly Cashman Series®: Cengage, 2019.

Resource Type
Textbook

Description
McFedries, Paul. *MOS 2016 Study Guide for Microsoft Excel Expert*. Pearson, 2016.

Resource Type
Textbook

Classic Textbook
Yes

Description
Smart, Mike. *Learn Excel 2019 Expert Skills with The Smart Method: Tutorial Teaching Advanced Skills including Power Pivot.* The Smart Method, Ltd., 2018.

Resource Type
Textbook

Classic Textbook
Yes

Description
Urban, Chris. *Advanced Excel for Productivity.* Chris Urban, 2016.

Library Resources

Assignments requiring library resources
Research using the Library's print and online periodical resources.

Sufficient Library Resources exist
Yes

Example of Assignments Requiring Library Resources
Read an article in a business periodical or industry publication on a topic such as how Excel's auto-formatting may be creating errors when reporting scientific data.

Distance Education Addendum

Definitions

Distance Education Modalities
Hybrid (51–99% online)
Hybrid (1–50% online)
100% Online

Faculty Certifications

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.
Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.
Yes

Regular Effective/Substantive Contact

Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Face to Face (by student request; cannot be required)	Student will have partial course time that is face to face
Asynchronous Dialog (e.g., discussion board)	Discussions will cover various topics on the use of advanced Excel along with feedback and potential solutions.
Other DE (e.g., recorded lectures)	Lectures will be recorded showing examples of specific tools in advanced Excel and how they can be used to solve problems and provide useful information.
E-mail	Email can be used for individual interaction with the professor.
Asynchronous Dialog (e.g., discussion board)	Projects assignments and quizzes will test the students ability to use Excel.

Hybrid (51%–99% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussions will cover various topics on the use of advanced Excel along with feedback and potential solutions.

Other DE (e.g., recorded lectures)	Lectures will be recorded showing examples of specific tools in advanced Excel and how they can be used to solve problems and provide useful information.
E-mail	Email can be used for individual interaction with the professor.
Asynchronous Dialog (e.g., discussion board)	Projects assignments and quizzes will test the students ability to use Excel.

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	Discussions will cover various topics on the use of advanced Excel along with feedback and potential solutions.
Other DE (e.g., recorded lectures)	Lectures will be recorded showing examples of specific tools in advanced Excel and how they can be used to solve problems and provide useful information.
E-mail	Email can be used for individual interaction with the professor.
Asynchronous Dialog (e.g., discussion board)	Projects assignments and quizzes will test the students ability to use Excel.

Examinations

Hybrid (1%–50% online) Modality
Online
On campus

Hybrid (51%–99% online) Modality
Online

Primary Minimum Qualification
COMPUTER INFORMATION SYS

Review and Approval Dates

Department Chair
11/20/2019

Dean
11/22/2019

Technical Review
12/05/2019

Curriculum Committee
01/21/2020

DTRW-I
02/13/2020

Curriculum Committee
MM/DD/YYYY

Board
03/10/2020

CCCCO
MM/DD/YYYY

DOE/accreditation approval date
MM/DD/YYYY