

BUS R103: BUSINESS MATHEMATICS

Originator

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Co-Contributor(s)
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College

Oxnard College

Discipline (CB01A)

BUS - Business

Course Number (CB01B)

R103

Course Title (CB02)

Business Mathematics

Banner/Short Title

Business Mathematics

Credit Type

Credit

Start Term

Fall 2021

Catalog Course Description

This course utilizes mathematical operations to solve practical business problems. The topics include solving equations, percents with applications, cash and trade discounts, markups and markdowns, simple interest, compound interest, present value, annuities and sinking funds, installment buying and revolving credit cards, statistics and reading and analyzing financial statements. Other topics may be covered.

Taxonomy of Programs (TOP) Code (CB03)

0506.00 - *Business Management

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)

B - Advanced 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)

Y - Not Applicable (Funding Not Used)

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

52.5

Maximum Contact/In-Class Lecture Hours

52.5

Activity

Laboratory

Total in-Class

Total in-Class

Total Minimum Contact/In-Class Hours

52.5

Total Maximum Contact/In-Class Hours

52.5

Outside-of-Class**Internship/Cooperative Work Experience**

Paid

Unpaid

Total Outside-of-Class**Total Outside-of-Class****Minimum Outside-of-Class Hours**

105

Maximum Outside-of-Class Hours

105

Total Student Learning**Total Student Learning****Total Minimum Student Learning Hours**

157.5

Total Maximum Student Learning Hours

157.5

Minimum Units (CB07)

3

Maximum Units (CB06)

3

Student Learning Outcomes (CSLOs)**Upon satisfactory completion of the course, students will be able to:**

- | | |
|---|---|
| 1 | Perform conversions of decimals, percentages, and fractions |
| 2 | Define compound interest and calculate effective rate |
| 3 | Define an annuity and calculate future and present value of annuities and lump sums |
| 4 | Explain the "rule of 78" and utilize to compute rebates and payoffs |

Course Objectives**Upon satisfactory completion of the course, students will be able to:**

- | | |
|---|--|
| 1 | Solve equations for drill and word problems |
| 2 | Calculate percentage changes |
| 3 | Explain trade and cash discounts |
| 4 | Calculate markup based on cost and convert to markup on selling price |
| 5 | Calculate dollar markups and markdowns based on selling price |
| 6 | Calculate simple interest and maturity value |
| 7 | Differentiate between interest and non-interest bearing notes |
| 8 | Define compound interest and calculate effective rate |
| 9 | Compute finance charges in installment buying and revolving charge account |

Course Content**Lecture/Course Content**

1. Whole Numbers: How to Dissect and Solve Word Problems
 - a. Use place values to read and write numeric and verbal whole numbers.
 - b. Add, subtract, multiply, and divide whole numbers; check and estimate computations.

2. Discounts: Trade and Cash
 - a. Calculate single trade discounts with formulas and complements.
 - b. Explain the freight terms FOB shipping point and FOB destination.
 - c. Find list price when the net price and trade discount rate are known.
3. Markup and Markdowns: insight into perishables
 - a. Calculate dollar markup and percent markup on cost.
 - b. Calculate cost when you know the selling price and percent markup on cost.
 - c. Convert from percent markup on cost to percent markup on selling price and vice versa.
4. Simple Interest
 - a. Calculate simple interest and maturity value for months and years.
 - b. Using the interest formula, calculate the unknown when the other two (principal, rate, or time) are given.
5. Compound Interest and Present Value
 - a. Calculate the compound amount and interest manually and by table lookup.
 - b. Compare present value (PV) with compound interest (FV).
 - c. Check the present value answer by compounding.
6. Percents and their Application
 - a. Conversions.
 - b. Applications of Percents.
7. Discounts: Trade and Cash
 - a. Trade discounts—single and chain.
 - b. Cash discounts, credit terms, and partial payments.

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

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

Mathematical proofs

Problem-Solving Assignments

Problem-solving exams

Instructional Methodology

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

Class activities

Class discussions

Distance Education

Group discussions

Guest speakers

Lecture

Describe specific examples of the methods the instructor will use:

1. This course will be taught solely online and all resources, lecture and assistance will be available through Canvas and professor's office hours.

Representative Course Assignments

Writing Assignments

1. Answers to discussion questions in the text related to the business mathematics formula.
2. Summary and analysis of other readings on the interpretation of business problems through problem solving and selective questions.
3. Solve problem questions on exams on finance and business terminology.

Critical Thinking Assignments

1. Various Business Math calculation problems and word problems

Reading Assignments

1. Assignments will include instructor-generated assignments on content, form, and purpose of the business mathematical formula.
2. Textbook assignments for pre-class preparation in reading of chapters and assignments.

Other assignments (if applicable)

1. Assigned readings from the text and other sources as appropriate related to business problems.
2. Problem solving using business statements and documents.
3. Preparing for class discussion.
4. Financial and spreadsheet analysis.

Outside Assignments**Representative Outside Assignments**

1. Students are assigned weekly reading homework and lesson questions that must be answered and submitted

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

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

Description

Slater, Jeffrey, *Practical Business Math Procedures*, New York, NY, McGraw-Hill Publishers; 2017

Resource Type

Other Resource Type

Description

Company websites as it relates to text and chapter outlines, such as Fidelity Investments; www.fidelity.com, US Treasury Department; www.treasury.gov, Realtor; www.realtor.com..

Resource Type

Other Resource Type

Description

Newspaper such as: Los Angeles Times, New York Times, Pacific Coast Business Times..

Resource Type

Other Instructional Materials

Description

Financial Calculator.

Library Resources

Sufficient Library Resources exist

Yes

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 attend, participate (verbal and nonverbal) and engage during class periods.
Telephone	Student will have the ability and option to call or schedule a telephone call with the instructor.
E-mail	Student will have the ability and option to email the instructor with questions or concerns they may have in the class.

Hybrid (51%–99% 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 attend, participate (verbal and nonverbal) and engage during class periods.

Asynchronous Dialog (e.g., discussion board)	Students must show participation in online discussions in Canvas. To receive any credit for the discussion, a student must post their own original input/thoughts from the original discussion question posted. After this is completed by the first deadline, the student has the ability to earn the remaining points for the particular discussion by replying to a fellow student's post, asking or answering questions and/or expanding on agreeable entries.
Telephone	Student will have the ability and option to call or schedule a telephone call with the instructor.
E-mail	Student will have the ability and option to email the instructor with questions or concerns they may have in the class.

100% online Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Other DE (e.g., recorded lectures)	Students will have access to previously recorded lectures on the Power Point presentations for the class and recorded message from the instructor
Video Conferencing	Students will attend, participate (verbal and nonverbal) and engage in video conferences for the class. However, students are not required to have video "on".
Face to Face (by student request; cannot be required)	Students can request and schedule a face-to-face meeting to cover material and lessons from classwork
Asynchronous Dialog (e.g., discussion board)	Students must show participation in online discussions in Canvas. To receive any credit for the discussion, a student must post their own original input/thoughts from the original discussion question posted. After this is completed by the first deadline, the student has the ability to earn the remaining points for the particular discussion by replying to a fellow student's post, asking or answering questions and/or expanding on agreeable entries.
Telephone	Student will have the ability and option to call or schedule a telephone call with the instructor.
E-mail	Student will have the ability and option to email the instructor with questions or concerns they may have in the class.

Examinations**Hybrid (1%–50% online) Modality**

Online

Hybrid (51%–99% online) Modality

Online

Primary Minimum Qualification

BUSINESS

Additional Minimum Qualifications**Minimum Qualifications**

Management

Accounting

Review and Approval Dates**Department Chair**

09/13/2020

Dean

09/13/2020

Technical Review

10/28/2020

Curriculum Committee

10/28/2020

Curriculum Committee

12/09/2020

CCCCO

MM/DD/YYYY

Control Number

CCC000512995

DOE/accreditation approval date

MM/DD/YYYY