CASPER COLLEGE COURSE SYLLABUS
(BADM 1005 –Business Mathematics)

Semester/Year: Spring 2019
Lecture Hours: 03  Lab Hours: N/A  Credit Hours: 03
Class Time: Moodle  Days: MTWTHF  Room: Moodle
Instructor’s Name: Joseph Simon
Instructor's Contact Information: Office Phone: 268-2376  Email:
Information: BU 203  Home Phone: jsimon@caspercollege.edu

Office Hours:  Monday, Tuesday, Wednesday and Thursday 10am to 11am and 1-2pm, Friday hours by appointment

Course Description: This course is designed to review basic mathematics skills and build a proficiency in how to apply these skills to practical business problems in bank services, payroll, taxes, risk management, mark-u, discount, depreciation, financial analysis and simple and compound interest.

Statement of Prerequisites:  Math 0920 or Algebra domain 40-65

Institutional Outcomes
Students taking this course will be able to:
1. Demonstrate effective oral and written communication
2. Use the scientific method
3. Solve problems using critical thinking and creativity
4. Demonstrate knowledge of diverse cultures and historical perspectives
5. Use appropriate technology and information to conduct research
6. Describe the value of personal, civic, and social responsibilities
7. Use quantitative analytical skills to evaluate and process numerical data

Program goals

Program goals:
- The School of Business and Industry provides students with the academic programs of general and specialized learning in preparation for responsible careers in the world of business.
- Students wishing to pursue a Bachelor’s degree in Business can complete the first two years of a baccalaureate degree through Casper College by completing requirements for a degree in Business
Administration or Pre-Law Business. The program provides students with the opportunity to transfer at junior standing to a four-year college or university.

- Business majors have the opportunity to pursue a top-quality two-year degree in Management, Leadership, or Entrepreneurship that provides the skills and abilities to succeed in the business world upon graduation.
- This educational experience enables students to develop the expertise needed to function in a business environment and to develop an understanding of the social and economic forces shaping the future of the world’s economy.

Course Goals:

Students will master the learning concepts, which are outlined at the beginning of each chapter. Mastery of these concepts will come through the text readings, PowerPoints slides, homework and exams.

Course Objectives:

Chapter 1
- Change improper fractions and mixed numbers
- Change fractions to lower and higher terms
- Add fractions and mixed numbers
- Subtract fractions and mixed numbers
- Multiply and divide fractions and mixed numbers

Chapter 2
- Read and round decimal numbers
- Add two or more decimal numbers
- Subtract one decimal number from another
- Multiply and divide decimal numbers
- Multiply and divide decimal numbers that end with zeros
- Approximate products and quotients

Chapter 3
- Use a systematic approach to solve word problems
- Apply formulas to solve rate, time and distance problems
- Solve simple numerical equations and recognize numerical relationships in a series
- Do quick mental calculations through a process of rounding numbers

Chapter 4
- Recognize and apply the basic elements of the International System of Units, commonly known as the metric system
- Understand metric system measurements for length and volume and be able to convert between the metric system and the US system
- Understand the metric system measurements for weight and be able to convert between the US and metric systems.

Chapter 5
- Change Percents to decimals
- Change fractions and decimals to Percents
- Find base, rate and percentage
- Use Percents to measure increase and decrease
- Use Percents to allocate overhead expenses

Chapter 6
- Commute sales commissions and gross pay
- Compute graduated sales commissions
- Compute sales and purchases for principals

Chapter 7
- Compute trade discounts, both individually and in a series
- Compute the equivalent single discount rate for a series of trade discounts
- Compute cash discounts and remittance amounts for fully paid invoices
- Compute cash discounts and remittance amounts for partially paid invoices

Chapter 8
- Compute the variables in the basic markup formula
- Compute the markup variables when the markup percent is based on cost
- Compute markup percent based on cost
- Compute the markup variables when the markup percent is based on selling price
- Compute markup percent based on selling price

Chapter 9
- Maintain a checking account
- Reconcile a bank statement with a checkbook balance

Chapter 10
- Prepare a payroll register
- Compute federal income tax withholding amounts
- Compute social security, Medicare and other withholdings
- Complete an employee’s earnings record
- Complete an employer’s quarterly tax return
- Compute an employer’s federal and state unemployment tax liability

Chapter 11
- Compute sales taxes, using rate tables and Percents
- Compute assessed valuations and property taxes based on assessed valuation
- Compute tax rates in Percents
- Compute property tax payments involving special assessments, proration and exemptions
- Make basic computations to determine taxable income and tax liability for taxpayers who use the standard 1040 tax form

Chapter 12
- Compute costs and savings for auto insurance
- Compute auto insurance premium rates for high risk or low risk drivers
- Compute short rate refunds
- Compute coinsurance on property losses
- Compute life insurance premiums
• Compute cash surrender and loan values
• Compute medical insurance contributions and reimbursement

Chapter 13
• Compute simple interest with time in years or months
• Compute ordinary simple interest, using a 360 day year, or exact simple interest using a 365 day year
• Estimate exact simple interest computation
• Compute the principal, rate and time from the basic interest formula

Chapter 14
• Convert between annual and monthly interest rates
• Compute simple interest on a monthly basis
• Compute finance charges
• Compute costs of installment purchases
• Compute effective interest rate
• Be able to amortize a loan and compute a monthly mortgage payment

Chapter 15
• Compute the number of interest days in a promissory note
• Determine the due date of a promissory note
• Compute the maturity value of a promissory note
• Discount a promissory note
• Compute the proceeds and actual interest rate on a bank discount loan
• Compute the savings from borrowing money to take a cash discount

Chapter 16
  Compute future values
  Compute present value
  Compute using present value factors

Chapter 17
  Account for inventory using inventory sheets and reports from a perpetual inventory system
  Compute inventory value by using average cost, LIFO, and FIFO methods
  Compute inventory by using the lower of cost or market value
  Estimate inventory by using cost of goods sold
  Compute inventory turnover

Chapter 18
  Compute depreciation using the straight-line method, the units of production method, the Declining balance method or the sum-of-the-years digits method
  Compute depreciation for income tax purposes using MACRS( Modified Accelerated Cost Recovery System
  Compute partial-year depreciation using the five different primary depreciation methods

Chapter 19
  Analyze balance sheets and income statements, comparing items and periods
  Compute commonly used business operating ratios
Chapter 20
- Compute currency exchange rates
- Compute the effects of exchange rate changes
- Compute duties on imports

Chapter 21
- Compute the costs and proceeds of stock buy and/or sell transactions
- Compute the differences in costs and proceeds of round and odd lot buys or sales
- Compute rates of yield and gains or losses on the purchase and sale of stocks
- Compute comparative earning potential of the major classes of corporate stocks

Chapter 22
- Compute gains and losses on convertible and callable corporate bond transactions
- Compute annual interest on bonds
- Compute accrued interest on bond transactions made between interest payment dates
- Compute annual yield on bonds selling at a premium or at a discount
- Compute a rate of yield to maturity

Chapter 23
- Compute the future value of an annuity
- Compute the regular payments of an annuity from the future value
- Compute the present value of an annuity
- Compute the regular payments of an annuity from the present value
- Compute the loan payment required to amortize a loan
- Create a loan amortization schedule

This course is designed to provide students the opportunity to learn and understand the various math skills that are necessary in a variety of decision-making scenarios. We will begin with basic math computations involving whole numbers, fractions, mixed numbers and decimals and conclude at the end of the semester examining how investors deal in stocks and bonds.

Outcomes: Students will be expected to demonstrate, through exams, written assignments, online exercises and participation in the online discussions when we start talking about financial markets…

1. An understanding of various types of math skills and how they relate to business.
2. How effective business operation supports the economy and how important these math skills are to effective business operation.
3. How business math can be used not just in a person’s professional life but in everyday life situations involving things such as budgets and/or investments.

Methodology: This class will consist of PowerPoints, exams, homework assignments, discussion questions and reading your text. We will practice, practice and practice some more since that is the best way to get proficient at math!
Evaluation Criteria:

Five chapter tests  .  100 points each.
A final = 200 points
There will be 15 homework assignments = 450 points
5 discussion questions = 100 points

In addition:
Your homework assignments and exams will be posted in Moodle. For your exams, I will be using multiple-choice questions except for the last question in each exam. That will be an essay question, but not really a question…it will be a question for you to submit a file showing your work on the problems that you will do in the exam. I do not accept late assignments. With the schedule in the syllabus, you can work ahead on whatever homework assignments have been posted. You will also have a three day time period in which to work on an exam. The exam is timed (50 minutes, a normal class period), so once you start you will need to finish.

Grading as follows: 1250 points possible

1137-1250 A (91-100%)
1012-1136 B (81-90%)
887-1011 C (71-80%)
762-886 D (61-70%)
Below 762 F


Class Policies: Last date to withdraw or change to audit status: April 18, 2019

Student Rights and Responsibilities: Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

Chain of Command: If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Academic Dean, and lastly the Vice President for Academic Affairs.

Academic Dishonesty - Cheating & Plagiarism: Casper College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Casper College Student Code of Conduct.
**Official Means of Communication:** Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly.

**ADA Accommodations Policy:** If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college’s Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu. The Disability Services Counselor is responsible for reviewing documentation provided by students requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

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**Tentative Course schedule**

**PART ONE**
Fundamental Applications

| January 22 | Classes begin |
| January 28 | Chapter 1: Fractions |
| March 4    | Chapter 10: Payroll Records |

<p>| January 28 | Assignment # 1 Moodle-fractions assignment |
| January 28 | Chapter 2: Decimals |
| February 4 | First Exam posted must complete by February 7 |
| February 11 | Chapter 5: Percents |
| February 11 | Chapter 6: Commissions |
| February 11 | Chapter 7: Discounts |
| February 18 | Presidents Day-college is closed |
| March 4    | Exam # 2 - must complete by February 28 |
| March 4    | Chapter 9: Banking |
| March 4    | Chapter 11: Taxes |</p>
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<thead>
<tr>
<th>Date</th>
<th>Chapter or Event</th>
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<tbody>
<tr>
<td>March 11</td>
<td>Chapter 12-Insurance</td>
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<td>Exam 3 posted-must complete by March 14</td>
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<td>March 18-22</td>
<td>Spring break</td>
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<td>March 25</td>
<td>Chapter 13-Simple interest</td>
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<td>Chapter 14-Installment purchases</td>
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<td>April 1</td>
<td>Chapter 15-Promissory Notes and Discounting</td>
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<td>Chapter 16-Compound Interest</td>
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<td>April 8</td>
<td>Exam 4 posted-must complete by April 11</td>
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<td>Chapter 17-Inventory and Turnover</td>
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<td>April 12</td>
<td>Advising Day-no classes that day</td>
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<td>April 15</td>
<td>Chapter 18-Depreciation</td>
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<td>April 18</td>
<td>Institutional withdrawal deadline</td>
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<td>April 19</td>
<td>Spring holiday-college closed</td>
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<td>April 22</td>
<td>Chapter 19-Financial Statements</td>
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<td>Chapter 20-International Business</td>
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<td>Exam 5 posted-must complete by April 25</td>
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<td>April 29</td>
<td>Chapter 21-Corporate stocks</td>
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<td>Chapter 22-Corporate and Government Bonds</td>
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<td>May 6</td>
<td>Chapter 23-Annuites</td>
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<td>May 13-16</td>
<td>Final exam</td>
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