Central Campus – Instructor, Philip Ahern

Math 0106: Basic Mathematics

CRN 16766 – Summer II, 2016

Room 141, San Felipe Bldg|9:00-10:40 A.M.| Mon,Wed

16 classroom hours per semester

Topics include fundamental operations fractions and decimals, percents, ratios, and proportions. All students who enroll in this course are expected to complete MATH 0409 in the following consecutive semester before attempting either MATH 0312 or MATH 1332. A comprehensive Departmental Final Exam will be given in this course.

***Credits**: 1 credit hour (1 Lecture).*

***Prerequisites**: TSIA ABE Levels 3−4 TSIA Math Score 323 – 335 or TSIA Math Score 336 – 347 with Elementary Algebra Score 0−4.*

Course Goal

This course provides students with the basic arithmetical skills enabling them to proceed to the next level mathematics course. It is also designed to strengthen many of the skills that an individual must demonstrate or master in order to achieve college readiness.

Student Learning Outcomes (SLO):

1. *Correctly choose and apply the four basic arithmetic operations (addition, subtraction, multiplication, division) with decimals and fractions to estimate and solve application problems.*
2. *Apply "Proportional Reasoning" to solve related problems including ratios, rates, proportion, and percent.*

***Textbook**: None*

System-Wide Policies:

1. *The final exam is comprehensive and questions on it may deal with any of the course objectives.*
2. *Each student will receive a copy of the instructor's course syllabus during the first week of class.*
3. *A minimum of three in-class quizzes and a comprehensive final departmental examination must be given. All students must take the final examination.*
4. *The final exam must count for at least 50 percent of the final grade.*
5. *The final examination is departmental and consists of 25 multiple-choice problems. The problems cover only the material required in this course.*
6. *The System-Wide Final Examination must be passed with a score of at least 60%. No D− grades or IP−grades are allowed.*
7. *Letter grades will be calculated in this way: (90–100 "**A**", 80–89 "**B**", 70–79 "**C**", 60-69 or below "**F**"). Note: The grades of **W** or **IP** are no longer available for instructors to assign.*
8. **No calculators are to be used on graded course work and in particular all examinations.**

Specific Polices for Math 0106, CRN 16766:

1. *There will be four quizzes and a final exam. Quizzes contain ten questions; the final exam contains thirty-three multiple-choice questions.*
2. *Your answers on the final exam must be submitted on a Scantron sheet, which can be purchased at the HCC Bookstore.*
3. *Your lowest quiz score will be disregarded. Only your best three quizzes count.*
4. *Each of these best three quizzes counts as 15% of the overall score and the final exam counts as 55% of the overall score.*
5. *There are no makeups for quizzes, since you can drop your lowest quiz score. If you miss a quiz, your score is zero for that quiz. However, this zero will not be counted in your overall score, since only your best three quizzes count. Don't miss two quizzes! If you miss two quizzes, one of the zeros will be discarded, but the other zero will count!*
6. *There will be four homework assignments. The homework will be graded, but the homework scores will not be counted as part of your overall score in the course. However, if you earn a score of 84 or above on a homework assignment, your score on a certain quiz will be increased by 8 points. To be specific,*
   If you earn 84 or above on Homework 1, 8 points will be added to your score on Quiz 1.
   If you earn 84 or above on Homework 2, 8 points will be added to your score on Quiz 2.
   If you earn 84 or above on Homework 3, 8 points will be added to your score on Quiz 3.
   If you earn 84 or above on Homework 4, 8 points will be added to your score on Quiz 4.
7. *Homework assignments must be turned in on the due date. Late homework assignments will not receive any credit.*
8. *On the homework assignments you must show your work. That is, in order to earn a 90 or above, it's not enough to get the right answer; you must show how you got the right answer.*
9. *Attendance will be taken every class. Attendance will not be counted as part of the grade. However, if you miss four classes or more, you may be dropped from the course.*
10. *The dates of all quizzes and the final exam and the due dates for homework assignments are listed below.*

Suggested Methods*: You are encouraged to get free help from the tutors in the Learning Emporium, Room 384 in the San Felipe Building at the HCC Central Campus. The Learning Emporium is open six days a week. Also, your instructor, Philip Ahern, will be tutoring math during the summer at the HCC Northline Campus, 8001 N. Fulton, at these hours: Mon-Wed: 12:00 – 5:00, Mon-Wed: 3:30 – 6:00.*

Americans with Disabilities Act (ADA)*: Persons needing accommodations due to a documented disability should contact the ADA counselor for their college as soon as possible.*

IMPORTANT DATES: MATERIAL TO BE COVERED,
QUIZ AND EXAM DATES, HOMEWORK DUE DATES

WEEK 1
Monday, July 11 and Wednesday, July 13 – In Class
Unit 1 FRACTIONAL NOTATION: MULTIPLICATION AND DIVISION

This unit addresses multiples of a number, divisibility tests for 2,3,5,6,9,10; factoring an integer; identifying prime numbers from 1 to 100; prime factorization of composite numbers; identification of numerator and denominator; simplifying fractions; problem solving using fractional multiplication; determining whether two fractions are equivalent; working with the reciprocal of a number; addition, subtraction, multiplication and division of fractions and mixed numbers.

WEEK 2 – One quiz and one homework assignment this week
Mon July 18, QUIZ I*: COVERS SECTION 1*
Mon July 18, Homework #1 Due

Monday, July 18 and Wednesday, July 20 – In Class
Unit 2 FRACTIONAL NOTATION: ADDITION AND SUBTRACTION
This unit consists of finding the LCM of two or more numbers; converting from mixed numerals to fraction notation; converting from fractional notation to mixed numbers; addition and subtraction of fractions; using fractions in problem solving situations.
Unit 3 DECIMAL NOTATION
This unit provides coverage of writing word names for decimal notation; converting between fractions and decimals; comparing decimal numbers; rounding and estimating decimals; addition, subtraction, multiplication and division of decimals. The unit concludes with problem solving that requires an application of decimals.

WEEK 3 – Two quizzes and two homework assignments this week
Mon July 25, QUIZ 2*: COVERS UNIT 2*
Mon July 25, Homework #2 Due

Wed July 27, QUIZ 3*: COVERS UNIT 3*
Wed July 27, Homework #3 Due

Monday, July 25 and Wednesday, July 27 – In Class
Continue Unit 3 DECIMAL NOTATION

Monday August 1, LAST DAY TO DROP A CLASS BY SUBMITTING OFFICIAL FORM (IF YOU SIMPLY STOP COMING TO CLASS, YOU WILL RECEIVE A GRADE OF "F").

WEEK 4 – One quiz and one homework assignment this week
Wed August 3, QUIZ 4*: COVERS UNIT 4*
Wed August 3, Homework #4 Due

Monday, August 1 and Wednesday, August 3 – In Class
Unit 4 PERCENT NOTATION
This unit covers finding fraction notation for ratios; giving the ratio of two different measures as a rate; determining whether two pairs of numbers are proportional; solving proportions; solving application exercises involving ratios; writing three kinds of notation for a percent; converting between percent notation and decimal notation; converting from fraction notation to percent notation; converting from percent notation to fraction notation; translating percent problems to percent equations; solving basic percent problems; translating percent problems to proportions; solving basic percent problems; solving applied problems involving percent; solving applied problems involving percent of increase or decrease.

FINAL EXAMS WEEK
Thursday, August 11, 9:00 A.M., FINAL EXAM: COVERS UNITS 1-4