

Cedar Crest College

Mathematics for Health Care Professionals - MAT-107-70 (Three Credits)

Summer I 2010

Tuesday, Thursday 6:00 PM – 9:00 PM

BHA 2

Professor: Patrick Ratchford

Office: Curtis 217

Phone: ext. 3375

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Office Hours

Tuesday, Thursday 2:00 PM – 6:00 PM

Additional office hours are available by appointment.

Required Text: Morris , *Calculate with Confidence*, 5th ed., Mosby/Elsevier, 2010

Calculator: A calculator is required and should be brought to every class. I may limit the use of a calculator on some quizzes or exams.

Course Description

An exploration of a wide range of mathematical applications to nursing and other health sciences.

Course Outcomes: Upon successful completion of the course the student should be able to demonstrate

- the ability to solve practical problems encountered in health-related professions using multiple problem solving strategies
- proficiency in using basic arithmetic operations on fractions, decimals, and percents
- competence in problem solving using ratio and proportion
- algebraic reasoning
- proficiency in rounding, estimation, and mental math skills
- an understanding of measurement systems commonly used in health care and the ability to convert from one system to another
- competence in calculating drug dosages
- the ability to solve problems involving solutions
- fluency in verbal and written communication of relevant mathematical reasoning

Assessment

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|------------------------------|---|
| Five Unit Quizzes (12% each) | 60% |
| Comprehensive Final Exam | 25% |
| Instructor Evaluation | 15% (Including homework and attendance) |

The grade scale that I will use to assign final grades is A (93 and up), A- (90-93), B+ (87-90), B (83-87), B- (80-83), C+ (77-80), C (73-77), C- (70-73), D+ (67-70), D (60-67), F (Below 60).

Attendance in class is expected of all students and mandatory on exam days. Missing one class during a summer session is roughly equivalent to missing four classes during an ordinary semester. There will be times when

material not included in the text is introduced in class. You are responsible for taking notes on that material or obtaining notes from someone in the class if you've been absent.

Each unexcused absence will lower your participation grade by 10%. If you must miss a class contact me as soon as possible (preferably before your absence) to determine if I consider the absence legitimate or not.

Make-up quizzes and exams will be given only with **prior** notification and documentation of a legitimate excuse.

Notes

- I fully support the Cedar Crest College Honor Code and the Classroom Protocol code as stated in the Customs Book. Appropriate classroom behavior is implicit in the Cedar Crest College Honor Code. Such behavior is defined and guided by complete protection for the rights of all students and faculty to a courteous, respectful classroom environment. That environment is free from distractions such as late arrivals, early departures, inappropriate conversations and any other behaviors that might disrupt instruction and/or compromise students' access to their Cedar Crest College education.
- Cell phones should be turned off or set to vibrate for the duration of the class period.
- The format of the course will be lecture/discussion with much emphasis on homework discussion. In order for this to work it is vitally important for you to come to class prepared. I would suggest you read the sections material and attempt the practice problems in advance of the class.
- Collaboration on daily homework is expected and encouraged, but forbidden on the quizzes and final exam. Any plagiarism or cheating will result in a zero on the particular quiz or exam and will be reported to the provost.
- It is vitally important for you to keep current with the work. Students who fall behind early quickly find themselves in a hole that is very difficult, if not impossible, to get out of. I'm more than willing to meet with you during my office hours or otherwise to help you succeed, but you must make the effort. Feel free to drop by my office, even if it's not my scheduled office hour.
- Professional tutoring is available from Gary Moll in Academic Services. Gary can be reached at extension 3485 or via e-mail at g1moll@cedarcrest.edu .

Tentative Schedule

| Day | Date | Material Covered |
|----------|------|------------------------------|
| Tuesday | 5/18 | Chapters 1-3, numeration |
| Thursday | 5/20 | Chapters 4,5 |
| Tuesday | 5/25 | Quiz 1, Chapters 6-7 |
| Thursday | 5/27 | Chapters 8-10 |
| Tuesday | 6/1 | Quiz 2, Chapters 11-13 |
| Thursday | 6/3 | Chapters 14-16 |
| Tuesday | 6/8 | Quiz 3, Chapter 17-18 |
| Thursday | 6/10 | Chapters 19-20 |
| Tuesday | 6/15 | Quiz 4, Chapters 19-20 |
| Thursday | 6/17 | Chapters 23-25 |
| Tuesday | 6/22 | Quiz 5, Miscellaneous Topics |
| Thursday | 6/24 | Miscellaneous Topics |
| Tuesday | 6/29 | Final Exam |