



Mathematical Applications for the Health Sciences
Math 125
Section – 3 Credits
Spring 2016

Day(s): **Time(s):** **Classroom Number:**

Instructor :

Office Hours:

Office Location:

Phone number :

Prerequisite: Placement evaluation score or completion of Math 095/096 with a grade of “C” or better.

Course Description:

This course is designed for those entering the health professions. Students learn techniques for solving mathematical problems encountered in health related fields. Students become proficient at solving algebraic equations, graphing in two variables, converting measurements using dimensional analysis, calculating a variety of prescribed dosage amounts, determining intravenous flow rates, preparing solutions, and reading measuring instruments

Required Text

Mathematics for the Health Sciences: Custom edition for Goodwin College, Pearson, 2015, ISBN 978-1-323-38952-2

Calculator Policy

Students will need a **basic calculator** for this course, one that adds, subtracts, multiplies, divides, and does square roots. You do not need a calculator that is any more sophisticated than this. Students will not be able to use their cell phones as a calculator on quizzes and exams.

Course Learning Goals:

- For students to become comfortable and confident applying the appropriate mathematical skills to the determination of proper dosage amounts and IV flow rates.
- For students to successfully convert a measure from one unit to an equivalent measure using another unit for lengths, weights, and volumes.
- For students to become patient, well-organized, systematic, and confident problem solvers.

Grading Policy

- | | |
|----------------------------------|-----|
| • Exam 1 | 20% |
| • Exam 2 | 20% |
| • Exam 3 | 20% |
| • Class Attendance/Participation | 5% |
| • Quizzes | 10% |
| • Cumulative Final Exam | 25% |

Class Policies

- **All** assigned problems must be done. **Although homework assignments are not collected**, it is absolutely essential that you **complete all assignments**. **You will be graded on the amount of problems completed**. Your skills will improve only to the extent that you practice them. You must follow up in the next class session with questions on any of the exercises that you are uncomfortable with or having difficulties completing.
- Cell phones **must be shut off or set to vibrate** during class.
- You are encouraged to **form study groups** with other members of the class. Exchange email addresses and meet regularly to go over course assignments and anything that you are having difficulties with.
- **Homework & Class Participation**- Students must be actively involved in each class session. This includes responding to questions posed, asking to have points explained, staying focused, and trying all practice problems.
- Students will be required to demonstrate completion of homework by either showing completed work to instructor, asking a question, going to the board and illustrating a problem for peers, and active participation in group activities
- **Class Notes** -It is suggested that anything that is written on the board should be copied into your notes for future reference.

Attendance Policy

- Students are **required to attend every class session and be punctual.** Please email me to explain any class absence.
- **Up to 2 absences may be excused** for the following reasons **if documentation is provided:**
 Illness of yourself or a family member
 Death in the family
 Car trouble
 Religious observance
- **If you are absent on the day of an exam, the exam may be made up if it is considered an excused absence. A make-up must be taken within a week of the day the exam was given.**
- A break will be provided midway through the class. **Students should not be walking in and out while class is in session.** This is discourteous and disrespectful to the class.
- Do not underestimate how important it is to attend every class and be on time.
- **Vacations and Family Reunions are not considered an excused absence please be mindful of your exam dates as well as your Final Exam Date.**

Class attendance points: maximum is 5 points

Unexcused absences or lates	0	1	2	3	4 or more
Total points	5	4	3	2	0

Math 125 Course Outline (15 Weeks)

CLASS	DATE	TEXT SECTIONS	TOPICS	ASSIGNMENT
1		1.1 2.1 2.2	Simplifying expressions The Addition Principle The Multiplication Principle	p. 7 #'s 1, 5, 9, 13, 17, 25, 41, 43-65 odd p 16 #'s, 13- 37 odd p. 22 #'s 1 – 27 odd
2		2.3 2.4 13.1 13.2	Using Principles together Formulas Scientific notation Working with measurements and numbers Quiz 1	p. 31 #'s 1 – 13 odd, 21, 25, 45, 47, 49, 59 – 60 odd p 39, 1- 8, 9-33 odd, 34, 35 Pg 418 A 1 -21 odd B 1-9 odd 1 – 9 odd Pg 433. A 1-7 odd B 1-7 odd C 1- 11 odd
3		2.5 2.6	Applications of Percent Applications and problem solving Quiz 2	Pg 47 1-21 odd 39-45 odd Pg 63 1- 10
4		3.1 3.2	Graphs of Linear equations Graphing and Intercepts Quiz 3	Pg 102 #'s 21-41 odd Pg 113 #'s 1-23 odd
5		3.4 3.5	Equations of lines Slope Intercept form Quiz 4	Pg 133 #'s 1-19 odd Pg 141 #'s 1-21 odd
6			Exam 1	
7		Chapters 5 6 7	Dimensional Analysis Household and Metric Systems Converting between systems	p. 210 Exercises: 1 – 19 odd p. 227 Exercises: 1 – 19 odd p. 241 Exercises: 1 – 19 odd
8		Chapters 9	Syringes	p. 313 Exercises: 1 – 14 Add. Exercises: 2 – 14

		8	Oral Medications Quiz 5	(even) p. 274 Practice Reading Labels: 2 – 30 (even) p. 281 Exercises: 1 – 20
9			Exam 2	Chapter 5,6,7,8,9
10		Chapter 10	Solutions	p. 347 Exercises: 1 – 20 Add. Exercises: 2 – 20 (even)
11		Chapter 11	Flow Rates and Durations of Enteral and Intravenous Infusions Quiz 6	p. 375 Exercises: 1 – 20 Add. Exercises: 2 – 20 (even)
12		Chapter 12	Flow Rates and Dosage Rates for Intravenous Medications Quiz 7	p. 404 Exercises: 1 – 4, 6, 8, 11, 12 Add. Exercises: 1 – 3, 6 – 9, 11 – 14, 17 - 19
13			Exam 3	Chapters 10, 11, and 12
14			Review for Final Exam	
15			FINAL EXAM	All sections covered.

Student Support Services

Academic Success Center & The Math Lab

The Academic Success Center is located in room 209 and The Math Lab is located in room 219 of the River Campus. Both centers are staffed with Peer and Professional tutors that students can see on a walk-in or appointment basis. The centers provide students with consistent support and guidance throughout the learning process and encourage students to be actively involved. This is done through one-on-one, group tutoring and Academic Skills Workshops.

Academic Success Center & Math Lab Hours:

Monday-Friday 8am-9pm

Saturday 8am-2:30pm

To make a tutoring appointment please call 860-913-2090, email ASCStaff@goodwin.edu or walk into either center

eTutoring

Goodwin College offers eTutoring services through an agreement with the Connecticut Distance Learning Consortium (CTDLC). Students using the eTutoring platform may work with an eTutor in a live session or may submit a question or course assignment for an instructor to correct and/or provide feedback. eTutoring offers instruction, guidance and resources to help each student succeed. Specific information concerning eTutoring is located on the Academic Success Center webpage:

http://www.goodwin.edu/academic_success_center/

Testing

The ASC also provides testing services for those who have missed a test in their class or who have accommodations approved by the Office of AccessAbility Services. Students must talk to their teachers to test in the ASC. Students with accommodations may have their tests proctored in alternate locations. The Academic Success Center provides two testing rooms for students to make up tests that have been previously dropped off by their instructor. These rooms are located in the center.

Scheduling Exams:

Students should contact the Academic Success Center to schedule an appointment in advance. Students can walk-in or call 860-913-2090 to schedule their exam. It is strongly recommended that students reserve a testing room in advance and confirm that their exam has been delivered to the center.

Students are also welcome to take their test without reserving a room; however, if both rooms are occupied or if they are scheduled to be occupied before the student would finish their test (given the time allotted by their teacher), the student will be unable to take their test and will instead be asked to make a reservation or to return when a room becomes available.

Library Services

Read the following paragraph or download the Hoffman Family Library APP to your phone! The Hoffman Family Library is open seven days a week (7am-9:30pm Monday to Thursday, 7-9 Fridays, 8-4 Weekends). Librarians are on site during all open hours to help students conduct research, find valuable resources, and create citations. There are many ways to get help from a librarian: call 860-913-2042, text ASKGOOD and your question to 66746, email GoodwinLibraryPersonnel@goodwin.edu, click the "Ask a Librarian" button on the library web site, or just walk in. The campus library offers computers, Wi-Fi, group study rooms, a quiet atmosphere, and an ever-growing collection of resources. The majority of the library's resources are available online 24/7 via the web site <http://www.goodwin.edu/library>. Through the web site students can access the research databases and find helpful guides and tutorials on where to find good resources for any subject, tips on how to write great papers with proper citation and formatting, and much more.

Counseling Services

Counseling services are free, confidential and available to currently enrolled students. Students visit counseling services for a variety of reasons, including:

- Mental Health: anxiety, depression, low self-esteem, mood disorders
- Relationships: family, friends, partner, bereavement
- Financial: medical, housing, food, employment
- Physical: poor body image, sexual orientation, gender identity, eating disorder
- Academic: lack of study skills, struggling with a learning disability or yet to be identified, challenges with a professor, not getting accepted into your career choice, low GPA

Please visit the website for further details: <http://www.goodwin.edu/counseling/>

- Also on the Counseling page you will find a tab on the left labeled "Resources" that offers many links to supports that may be helpful as well.

Goodwin College Policies

These general academic policies of Goodwin College may be found on the college web site at <http://www.goodwin.edu/policies/>. Additional information may be found in the college catalog at <http://www.goodwin.edu/academics/catalogs.asp>.

Academic Integrity

The Academic Integrity Policy prohibits cheating, fabrication or falsification of information, multiple submissions of academic work, plagiarism, abuse of academic materials, and complicity in academic dishonesty as well as other forms of fraudulence. It is the students' responsibility to know and observe the requirements of the Goodwin College Code of Academic Integrity. The entire policy is located in the Academic Dean's Office. Academic Integrity policy may be found at http://www.goodwin.edu/student_handbook/

AccessAbility Services

Students with disabilities may be eligible to receive accommodations as mandated by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. Students may request accommodations by contacting the AccessAbility Services Coordinator. Accommodations become effective on the date that a Letter of Accommodation is delivered to the professor. Accommodations are not retroactive. Please visit the website for further details: <http://www.goodwin.edu/AccessAbility/>

Establishing Attendance

Students must establish attendance in each course for which they are registered. Faculty report attendance on Census Day which occurs on the fifteen calendar day of each semester/module and records attendance through the fourteenth calendar day. Students who have not attended and/or participated in their course by the fourteenth day of the semester or module will be withdrawn from the course.

In order to establish attendance, students must do at least one of the following, prior to Census Day:

- Student attends an on-ground class OR
- Student posts to online discussion about an academic matter OR
- Student submits an academic assignment either on-ground or online OR
- Student takes a quiz or test either on-ground or online

Please note that posting to an introductory discussion board assignment does not constitute as establishing attendance.

Students who do not establish attendance will be administratively withdrawn from the course(s) and will be listed as a No Start (NS). These courses will not be listed on the transcripts or counted as credits attempted.

For students who do not establish attendance for all/any course(s) by Census Day a refund of 100% of applicable tuition charges less applicable fees and books, less \$500 for course withdrawn will be granted.

Students receiving Title IV funds should reference the Financial Aid and Refund Policy in the catalog or on the Goodwin College website for any financial consequences related to non-attendance.

Online Discussion Board Policy

Faculty members retain the right to remove posts deemed to contribute to a negative online environment.

Technology Policy

Access to all computer systems, networks and electronic devices owned by Goodwin College imposes certain responsibilities and obligations to all faculty, staff and students. The college's technology policy outlines the acceptable usage for all computers and

peripherals, network resources, telephones and all other electronic devices owned and maintained by Goodwin College. Users failing to adhere to this policy may face disciplinary actions by Goodwin College and/or local and federal law enforcement agencies. The complete technology policy is located on the Goodwin website <http://www.goodwin.edu/pdfs/policies/technologypolicy.pdf> and in the student handbook.

This course adheres to all policies outlined in the Goodwin College catalog. For further information, see Academic Regulations as stated in the catalog.