# Goodwin University

## Mathematical Applications for Health Sciences
## MATH 125 (Section XX) – 3 Credits

**Semester:**
**Day(s):**
**Time(s):**
**Classroom:**
**Instructor:**
**Office Hours:**
**Office Location:**
**Phone Number:**
**Email:**

INSERT
Professional
Headshot Here

**Prerequisite/Co-Requisites:** Placement Evaluation Score or Completion of MATH 097 with "C" or higher

## Course Description

- This course is designed for those entering the health professions. The course is designed to prepare students for their science classes and future career. Students become proficient at arithmetic, algebra, converting measurements using dimensional analysis, interpreting data, and translating real world situations into math to make decisions.

## Course Goal

- This course will prepare students for the calculations they will need in their classes and careers in Health Sciences.

## Required Learning Tools
### Hawkes Learning Access Code

- Viewing Life Mathematically Software and EBook. Hawkes Learning.(2015) ISBN: 978-1-941552-99-5.
- Viewing Life Mathematically Software + EBook + Guided Notebook. Hawkes Learning.(2015) ISBN: 978-1-64277-126-8
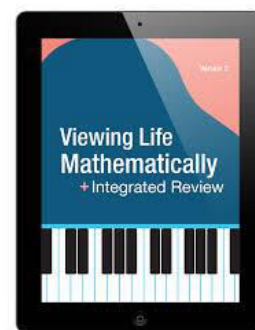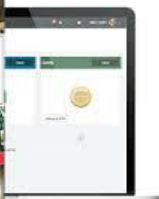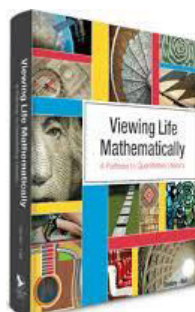
### Student Learning Outcomes and Assessment Methods
By the end of this course students should be able to:

| Learning Outcomes | Assessment Methods |
|---|---|
| 1. Apply formulas containing percentages, fractions, and decimals to calculate solutions to consumer mathematics | Pre-Certification Certification Quiz Exam |
| 2. Demonstrate the use of perimeter, area, volume, and surface area to compare rates, | Pre-Certification Certification Quiz Exam |

| | | |
|---|---|---|
| | pricing comparisons, and project planning | |
| 3. | Illustrate, label, and solve conversions within the metric and/or household measurement systems using Dimensional Analysis | Pre-Certification<br>Certification<br>Quiz<br>Exam |
| 4. | Collect, Display, Describe, and Analyze Data | Pre-Certification<br>Certification<br>Quiz<br>Exam |
| 5. | Solve, construct, and interpret graphs of linear equations and exponential growth in two variables | Pre-Certification<br>Certification<br>Quiz<br>Exam |

### Grading Policy

Your performance in this course is assessed using multiple, varied methods in the areas listed below within Hawkes Learning Management System and based on the expectations as described in the syllabus. If you do not understand the expectations, it is your responsibility to ask the instructor questions.

| | |
|---|---|
| Homework Assignments | 10% |
| Integrated Review Homework | 5% |
| Quizzes | 15% |
| Exam 1 | 15% |
| Exam 2 | 15% |
| Exam 3 | 15% |
| Cumulative Final Exam | 25% |
| Total: | 100% |

### LATE PENALTY

**Only applies to Homework Assignments and Integrated Review Homework.** There will be a graduated late penalty when Homework and Integrated Review is handed in or completed late. **All uncompleted homework assignments will automatically become a zero on the last day of class**.

| | |
|---|---|
| **1 Day Late** | 2% |
| **2 Days Late** | 6% |
| **3 Days Late** | 8% |
| **Greater than 3 Days Late** | 50% |

### Coursework Expectations

**Homework Assignments**

- Your homework will be done online using Hawkes Learning software. Complete the homework assignments for the sections that we completed in class before the **next** class. **You must complete the homework online on Hawkes Learning and earn at least an 80% on the Certify portion of each assignment to receive credit.** If you do not earn above an 80% on the Certify portion of any assignment, you will be directed to practice problems that must be completed correctly before you can reattempt to Certify. Any grade of 80% or higher in Certify will receive full credit.

**Integrated Review Homework Assignments**

- Most chapters have a corresponding integrated review that goes over fundamental math topics for the upcoming content. Students without a strong math background are **strongly encouraged** to purchase and use the corresponding Guided Notebook to help them with the integrate review homework assignments.

**Hawkes Learning Software:**

- **Learn**: Learn is a multimedia presentation that includes the information you will need to successfully answer each question in your assignment(s). Each lesson includes definitions, rules, properties, and examples, along with instructional videos. **This is the section that goes with the Guided Notebook**.

- **Practice (Pre-Certify)**: Practice gives you unlimited opportunities to practice the types of problems you will receive in Certify. In Practice, you have access to learning aids through the Interactive Tutor. Step-By-Step breaks a problem down into smaller steps; Solution offers guided solutions to every problem; and Explain Error gives targeted feedback specific to your mistake.

- **Certify**: This is the credit component of your homework! You will answer your problem set by using your knowledge and the foundation you built in Learn and Practice. You will have the opportunity to try again with no penalty if you do not demonstrate Mastery in your initial attempt(s). Pay close attention to any due dates assigned by your instructor.

### EXAMS

- No exams can be retaken and there is no "extra credit." No exam grade is "dropped." You must be prepared and make your best effort on each exam. *You are encouraged to take them early in the week they are assigned because if you do not finish it before the due date, it will not be accepted, and extensions will not be given. Exams are not to be open notes or book. That is cheating and academic fraud. You will need to be able to perform the math in this class as you move through your program at Goodwin, so cheating will only hurt you and potentially waste a lot of your money.*

This section of the syllabus contains a listing with brief descriptions of the assessment methods for this course.

They are designed to align with the student-learning outcomes and provide you with varied ways to demonstrate mastery of the course content. *Additional instructions, course materials and grades are posted to Blackboard*. **All work must be completed in HAWKES LEARNING. You must have a full access code by Class 2 to continue in the course.**

**Homework + Integrated Review (15%):** Course expectations related to homework focus on demonstrating mastery and application of topics. In this course, you will be assessed based on the following criteria: (a) acting ethically and with integrity, (b) demonstrating foundational knowledge pertaining to the week's topic, and (c) advancing the level and depth of learning.

To earn full credit, be sure to be actively engaged in using Hawkes Software (a)Full Access Code by week 2 of course, (b) logging in for 30-45 minutes daily at minimum, (c) complete Learn and Pre-Certify sections, (d) demonstrate mastery of topic(s) in Certify mode in Hawkes Learning majority of assignments are 80% for mastery , (e) complete assigned quizzes, and (f) use online "Send To Instructor" button for questions in Practice (Pre-Certify) mode.

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**Quizzes (15%):** The purpose of the quizzes is to confirm mastery to see what you are learning and where you need more focus. You will complete quizzes that are based on assigned Homework and Integrated Lessons. The quizzes are to be done with formulas sheet given if applicable. *Each quiz must be completed on or before the due dates at 11:59 pm, which are typically every Sunday and Wednesday.*

**Exams and Cumulative Final Exam (70%,3 Exams @ 15% = 45%, 1 Cumulative Final Exam @25% = 25%):** The purpose of this assignment is confirming mastery of a unit or body of work spanning multiple topics or concepts. Exams and the Cumulative final exam will assess for mastery of the integration of concepts and real-world applications.

# Course Outline / Class Schedule for M125 Online Mod Course – 7.5 Weeks

| Week / Date(s) | Topic(s) To be Covered Each Week | Assignments, Quizzes, and Readings to be Completed *Before* Sunday/Wednesday at 11:59 pm in Hawkes Learning; Except Final Exam DUE on last Friday of Semester at 11:59 pm |
|---|---|---|
| 1 | Introduction to Fractions and Mixed Numbers<br>Introduction to Decimal Numbers<br>U.S. Measurements<br>US and Metric Equivalents<br><br>Rates and Unit Rates<br>Ratios | • Integrated Homework: 4.R1., 4.R.2, 12.R.4, 12.R.6<br>• Homework Assignments: 4.1 and 4.2<br>• E-Text/Textbook Sections 4.1 and 4.s<br>• **Quiz: 4.1 – 4.2** |
| 2 | Decimals and Percent's<br>Fractions and Percent's<br>Solving Percent Problems Using Proportions<br><br>Proportions and Percentages<br>Using Percentages | • Integrated Homework: 4.R.3, 4.R.4, and 4.R.5 4<br>• Homework Assignments: 4.3 and 4.4<br>• E-Text/Textbook Sections: 4.3 and 4.4<br>• **Quiz: 4.3 – 4.4** |
| 3 | The Cartesian Coordinate System<br>Exponents and Order of Operations<br>Translating English Phrases and Algebraic Expressions<br>Solving Linear Equations: $ax + b = c$<br><br>The Language of Linear Growth | • Integrated Homework:5. R.1, 1.R.3, 1.R.5, and 1.R.6<br>• Homework Assignments:5.1<br>• E-Text/Textbook Sections: 5.1<br>• **Quiz: 5.1** |
| 4 | Graphing Linear Equations in Two Variables<br><br>Linear Growth | • Integrated Homework: 5.R.2<br>• Homework Assignments:5.2<br>• E-Text/Textbook Sections: 5.2<br>• **Quiz: 5.2** |
| 5 | Rules for Exponents<br><br>Exponential Growth | • Integrated Homework: 5.R.3<br>• Homework Assignments: 5.4<br>• E-Text/Textbook Sections: 5.4<br>• **Quiz: 5.4** |
| 6 | Rates and Unit Rates<br>Ratios<br>Proportions and Percentage<br>Using Percentages<br>The Language of Linear Growth<br>Linear Growth<br>Exponential Growth | • **Exam 1: 4.1 – 4.3, 5.1-5.2, and 5.4** |
| 7 | Angles and Triangles<br>Square Roots and the Pythagorean Theorem<br>Simplifying Algebraic Expressions<br><br>Angles<br>Circles and Polygons | • Integrated Homework: 11.R.3, 6.R.2, 6.R.3<br>• Homework Assignments: 6.1<br>• E-Text/Textbook Sections: 6.2<br>• **Quiz: 6.1 – 6.2** |
| 8 | Perimeter and Area<br>Volume and Surface Area | • Integrated Homework: None<br>• Homework Assignments: 6.2 – 6.3<br>• E-Text/Textbook Sections: 6.2 – 6.3<br>• **Quiz: 6.2 – 6.3** |

| Week / Date(s) | Topic(s) To be Covered Each Week | Assignments, Quizzes, and Readings to be Completed *Before* Sunday/Wednesday at 11:59 pm in Hawkes Learning; Except Final Exam DUE on last Friday of Semester at 11:59 pm |
|---|---|---|
| 9 | Angles Circles and Polygons Perimeter and Area Volume and Surface Area | • **Exam 2: 6.1 – 6.4** |
| 10 | Decimals and Percent's  Collecting Data | • Integrated Homework: 8.R.1 • Homework Assignments: 8.1 • E-Text/Textbook Sections: 8.1 • **Quiz: 8.1** |
| 11 | Working with Formulas The Cartesian Coordinate System Graphing Linear Equations in Two Variables  Displaying Data | • Integrated Homework: 8.R.3, 8.R.4, 8.R.5 • Homework Assignments: 8.2 • E-Text/Textbook Sections: 8.2 • **Quiz: 8.2** |
| 12 | Slope-Intercept Form Evaluating Radicals  Describing Data | • Integrated Homework: 8.R.6 and 8.R.7 • Homework Assignments: 8.3 • E-Text/Textbook Sections: 8.3 • **Quiz: 8.3** |
| 13 | Collecting Data Displaying Data Describing Data | • **Exam 3: 8.1 – 8.3**: |
| 14 | **All Topics** | • Review for Final Exam |
| 15 | **All Topics** | • **Cumulative Final: Due Friday, April 24th at 11:59** |

*\*This syllabus is subject to change at the discretion of the instructor.*

**Class Policies**

 **Hawkes Learning:** Instructions for setting up your Hawkes Learning account is in Blackboard. **You must use your Goodwin Email account to setup Hawkes Learning. Please follow instructions**. **If you have any questions or need assistance with setting up your account, please contact your instructor via Goodwin Email Only**. **To establish attendance, you must complete (certify) in one assignment on or before Sunday at 11:59 pm.** Log in multiple times on or before Wednesdays/Sunday at 11:59 pm to complete the assignments due for the week. At bare minimum you should spend 30-45 minutes per day in Hawkes Learning. If you have an emergency that can be documented and need to miss an assignment, contact instructor immediately using your Goodwin email account**. Hawkes is like Blackboard therefore it contains an accurate reflection of your current grade at that point in time**.

 **Blackboard:** Blackboard contains class materials such as login to Hawkes Learning, Hawkes TV, formula sheets, and additional course materials. Be sure to *check Blackboard often* to stay up to date on announcements, new course materials, and other important information. *All assignments are completed in Hawkes Learning. Once instructor has reviewed assignments, they will import grades into Blackboard.*

 **Late Assignments:** Deadlines are an integral part of all professional careers. You must manage your time and complete all coursework thoroughly and on time (e.g., pre-certification, certification, quizzes, and exams). **Per department policy for online course, any exam or quiz not submitted in Hawkes Learning on or before the due date will result in a zero for that exam or quiz. Late exams, quizzes, or make-up exams are not permitted except when there are documented extenuating circumstances (i.e., medical and family emergencies), and the instructor has been notified 24 hours before or after the deadline. These are circumstances in which the instructor or Director of the Math department will extend due dates.**

 **Laptops and Computers:** Laptops or computers with Google Chrome or Firefox are required for the course.

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 **Course Decorum:** We will create a positive learning environment in this course. There is an expectation of respect and professionalism. The professional conduct policy includes, but is not limited to:
1. Abiding by Goodwin's academic integrity policy
2. Actively working on assignments in Hawkes Learning.
3. Planning outside activities to avoid conflicts with the due dates outlined in the syllabus.
4. Demonstrating respect for instructor through appropriate communications (see below)

 **Communication and E-mail:** Students are expected to communicate in a professional manner (i.e., verbal, written, and electronic).Remember to use your Goodwin Email account for all course communications I will send course updates and announcements through Blackboard so please *check your Goodwin e-mail account regularly*.

**Goodwin University Policies and Services**
*This course adheres to all policies outlined in the Goodwin University catalog.*

General academic policies of Goodwin University may be found on the University web site at and in the University catalog at http://www.goodwin.edu/academics/catalogs.asp.

Student services information may be found on the Goodwin University website at https://www.goodwin.edu/student-affairs/ and http://www.goodwin.edu/library/.