Welcome to MA 15400-01 & 06 Trigonometry

PURDUE
UNIVERSITY.
FORT WAYNE

Class Meeting Time: MW 10:30 AM - 11:45 AM
Classroom Location: Kettler G51
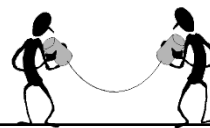**Instructor:** Collin Garmon
Preferred Pronouns: he, him, his

My Office: KT 285

Math Department Office: Kettler 200, 260-481-6821

How to Reach Me: E-mail: **garmca02@pfw.edu** ◄── **preferred**
Please use the following protocol when e-mailing me ──►
Office Phone: 260-481-6227
I normally respond within 24 hours (often sooner)
except on holidays and weekends.

> - To make sure your email reaches me, include in the subject line your full name and course. For example: **Sy Snootles, MA 15400 10:30**
> - University policy requires that you use your university e-mail address to email me to protect your privacy.
>   Please do not use your private email address.
> - Please keep the topic about the class.
> - For questions about assignment due dates check out Brightspace first.

Office Hours: My office hours are posted in Brightspace, along with other faculty who will share their office hours with this class. However, I am also available by appointment.

Prerequisites: MA 15300 with C- or higher or placement by departmental exam. This course is primarily intended for students who have completed at least two years of high school algebra.

Course Website: Go to **purdue.brightspace.com** to access our course. Click on **Purdue Fort Wayne**, enter your PFW username and password, and click **Log in**. The suggested browsers are Chrome and Firefox.
Explore and become familiar with the content and resources available in Brightspace.

Materials: In addition to notebook plus binder for organizing your notes, please see these three items.

1. **e-Homework**, commercially called Möbius, is required for all your graded homework, which has automatically been linked to your Brightspace course so you are already registered and can access Möbius from day one of the course. The cost of Möbius ($27.50 per year) has been added to your tuition statement by the Follett's Bookstore. If you took MA 15300 last semester for the first time, please email Follett's Bookstore (bookstor@pfw.edu) to request a $27.50 refund so you do not pay for it twice.

   > **IMPORTANT!** Always enter Möbius through Brightspace! Otherwise, the marriage between Möbius and Brightspace will separate and they will stop communicating with each other.

2. A **graphing calculator** is required for activities, assignments, quizzes and tests.
   The **TI-84 Plus** or **TI-84 CE Plus** are the *tools of choice*.
   Note: You can rent one at Walb Student Union 225 (260-481-6586).
   Click **HERE** for more information.

   Yo! Optional!

3. The **text** *Functions Modeling Change, 6th Edition* by Connally, et al. is **optional** but recommended.
   Some students have shared they did fine without a text and learned everything from doing eHW.

   > **TIP:** You can also use the 5th Edition or even the 3rd. We do **NOT** use WileyPLUS.
   > You might find it for cheap online at **Chegg, Amazon, eBay, betterworldbooks.com**, and from **Wiley**.

Catalog Description of the Course: Topics covered include the trigonometric functions, analytic geometry, laws of sines and cosines, vectors, dot product, conic sections, and rational functions.

Catalog Description of Student Learning Objectives:
1. understand and be able to use trigonometric functions, inverse trigonometric functions, analytic geometry, laws of sines and cosines, vectors and the dot product to solve application problems.
2. learn about conic sections (ellipses, hyperbolas and parabolas) and rational functions.

In addition to the above, see also the objectives listed here.

Advice on Succeeding in MA 15400: Here is some timeless advice to take to heart so that you do not become overwhelmed: ***There's no substitute for daily preparation.*** In other words, work on this course every day, rather than saving it for the last minute before the deadline. Do not confuse the "due date" with the "do date". More tips are found **HERE**.

Rhino Success
I believe in your success and want to support you to meet your goals.
You can do it!
But it will require that you take charge of your learning, do the work required, and make the commitment to do what it takes to succeed. Be like the rhinoceros! Wake up each morning and CHARGE straight ahead to accomplish your goals. No obstacles get in the way of a 3 ton snorting rhinoceros charging at full speed!

Course Goals: This course emphasizes mathematical modeling of real-world problems using linear, exponential, and trigonometric functions. Topics also include vectors, parametric equations, conic sections, and complex numbers. Solutions to the problems are formulated, validated, and analyzed using mental, paper and pencil, algebraic, and technology-based techniques as appropriate. We will cover portions of Chapters 7-10 and Chapters 12-14. MA 15400 meets all **eight outcomes** (3.1 to 3.8) in *Area 3: Quantitative Reasoning* of the Indiana General Education Core. You can see the complete set of course goals listed on the ***General Course Information*** document.

Grading:

Prerequisite Skills Quiz……………...25 pts. (3%)
Participation………………………..… 25 pts. (3%)
e-HW Assignments………..…..... 100 pts. (14%)
Top 4 Quizzes @ 25 pts each …….. 100 pts. (14%)
Test 1 ……………………………… 100 pts. (14%)
Test 2 ……………………………… 100 pts. (14%)
Test 3 ……………………………..... 100 pts. (14%)
Comprehensive Final Exam ………. 200 pts. (25%)
Total Points Possible ……………..**750 pts.**

Grading Scale:

90% -100% (675 pts. or more)	A
80% - 89% (600 to 674.5 pts.)	B
70% -79% (525 to 599.5 pts.)	C
60% - 69% (450 to 524.5 pts.)	D
<60% (Below 450 pts.)	F

Prerequisite Skills Quiz: This quiz provides quick and early feedback to you on your proficiency with the skills needed for this course so you know if you have the skills needed, if you need to brush up, or if you need to take a refresher course. Study the eHW assignment *Math Background Needed for MA 15400* (and its worked out solutions). See also the portal on Brightspace to *Flash Cards (Just for Fun)* to practice.

Participation: Post your self-introduction on Brightspace and submit the *Getting to Know You* survey, each worth 5 points. Some ways to earn +1 Rhino bonus toward your participation score: attach a photo to your self-introduction on Brightspace, earn a perfect score on your *Syllabus Scavenger Hunt*, or post substantively to the **Piazza Discussion Board (**ask a question, answer another student's question, or positively contribute to the class community by sharing a tip.) You can also earn +1 Rhino bonus getting caught being awesome. Since much of the learning in this course occurs interactively during class time, to earn your participation credit in class meetings I expect you to stay until class ends as well as contribute to the learning environment of the class. If you are blatantly not participating in class - such as on your phone, doing homework for other classes, being disruptive, contributing to a choral "premature departure book bag zip", or anything to lower the class morale, you will not earn your participation points for that day. If you receive credit for each class meeting, you would have 100% participation and thus a score of 15 out of 15. If you were only 90% participating, your score would be 13.5 out of 15, and so on. Absences due to illness or isolation or quarantine are excused. If you miss a class, use Brightspace to check what you missed so you come prepared the next period. Earn back one missed day of class by attending five one hour tutoring visits to **the Tutoring Center** in KT G19. Please reach out to me for help if your life is disrupted for any reason. I am here to help.

e-HW Assignments: Past students cite eHW as the key to their success You have unlimited attempts until the due date and the highest score is taken. The average score of all your best eHW scores (@ 25 pts each) is converted to a percentage and taken out of 100 points. Please read the section on eHW in the ***General Course Information*** for help with how to use *eHW*. You are encouraged to complete the assignment **multiple times** (even after you have earned a perfect score). Research shows that students who do this retain the material better for quizzes and tests.

> **TIP:** You have **unlimited attempts** until the due date and the highest score is taken.
> The average score of all your best eHW scores is converted to a percentage and taken out of 100 points.

Earn the **Rhino Hot eHW Award:** If you earn a 90% or higher on all of the e-Homework Assignments associated with the test before the date the test is given, you earn the Rhino Hot eHW Award for that test, which comes with a +2 Test Bonus Point and a blazing Brightspace badge.

- **Late eHW** may be submitted but at a 10% late penalty, i.e. for late eHW, a score of 25 would appear in the Brightspace grade book as a score of 22.5. All late eHW closes at **11:59 PM, Sunday, Dec. 14.**
- **eHW Guarantee:** The question bank is well scrubbed; however, if you do find that your answer is correct and the system tells you otherwise (due to mathematics, not text entry) and you are the first to report it to the Course Coordinator, John LaMaster, **lamaster@pfw.edu**, then you will be awarded double points for that question.
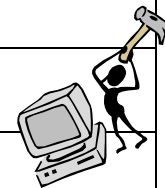
Quizzes: All quizzes are taken in class with paper and pencil. To help make quizzes a learning experience, you can **drop all but the top four quizzes** (except the Department Prerequisite Quiz, which can not be dropped). Quizzes serve as "dress rehearsals" for the tests, so high performing students find they are worth their best effort even after earning four high scores. Since I take only the sum of the top four quizzes, there are no make-up quizzes.

Chapter Exams: There will be three tests (all paper), worth 100 points each. See the last page for the tentative dates. Unexcused absences from exams shall result in a score of zero. If an absence is unavoidable and deemed legitimate, please contact me within 24 hours of the exam (if possible, in advance) in order to schedule a make-up.

Final Exam: The date of the two hour final exam will be **Wed., Dec. 17, 10:30 a.m. - 12:30 p.m.** It is a paper and pencil test. The final exam covers Section **14.4** and **9.5** and is also comprehensive (covering all material previously tested).

Student Support: I want you to be successful. Please reach out if you need help. Below is a directory of resources for specific issues. If technical difficulties affect your ability to complete assignments, please notify me as soon as possible.
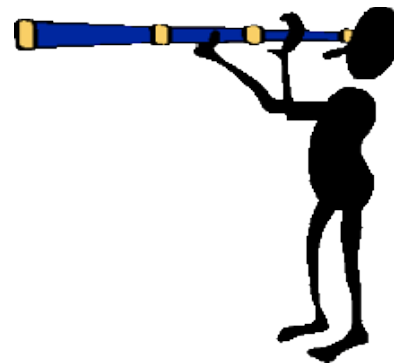
For help with:	Contact:	Contact Information:
General Needs	See next column	See the Student Support Services **Website**
PFW account/password/ Brightspace Support	Information & Technology Services (ITS) Help Desk	Call: 260-481-6030 Email: **helpdesk@pfw.edu** See the **ITS Website**
Troubleshooting *eHW*	*eHW* Technical Support	Email: **ehwtechsupport@pfw.edu**
Graphing Calculator Rental	Student Government	Walb 225 or call: 260-481-6586 See the **Calculator Rental Website**
Using eHW (Möbius)	Check out the resource *General Course Information* in Brightspace first. Then see the **Möbius Support Website** for help.	
Tutoring	Online **HERE** and Face to Face tutoring in KT G19. See Brightspace under Student Support for hours	
Withdrawing from the class	Registrar	Directions are **here** and on the last page of this syllabus.
How to succeed in MA 15400	Students enrolled in a previous MA 15300 semester	See **the tips they wrote** specifically to you!
If you don't know where else to turn for resources, then contact …	… the CARE team	See their **Website** or call: 260-481-6601
Accommodations for students with disabilities (See below*)	Disability Access Center (DAC)	Walb 113, 260-481-6658, See their **Website**.

*For Students with Disabilities
If you have a disability and need assistance, special arrangements can be made to accommodate most needs. Contact the Director of the Disability Access Center (Walb Union, Room 113, telephone number 260-481-6658) as soon as possible to work out the details. For more information, please visit the **Web site for Disability Access Center** (DAC).

Mark Your Calendar with these Important Dates!

No Class Meeting Labor Day: **Monday, September 1**
Departmental Prerequisite Skills Quiz: **Wednesday, September 3**
Test 1 (Tentatively Sections 7.1-7.5 plus Special Angles): **Monday, September 22**
Fall Break: **Monday, October 20 - Tuesday, October 21**
Last Day to Withdraw for IUFW Students with a Grade of W: **Sunday, October 26**
Test 2 (Tentatively Sections 7.6-7.8, 8.1-8.2, 9.1-9.4): **Wednesday, October 29**
Last Day to Withdraw for PFW Students with a Grade of W: **Friday, November 21**
Thanksgiving Break: **Wednesday, November 26 - Friday, November 28**
Test 3 (Tentatively Sections 10.1-10.2, 12.1-12.3, 13.1-13.4, 14.1-14.3): **Wednesday, December 3**
All past-due eHW closes: **11:59 PM, Sunday, December 14**
Departmental Final Exam (Tentatively Section 14.1, 9.5 and all prior content): **Wed., Dec, 17, 10:30 AM – 12:30 PM**

Deadlines for eHW (Möbius) homework assignments and weekly quizzes are found in the Brightspace calendar and are not listed here. To keep track of all deadlines in this course you can use the calendar on Brightspace or use the Brightspace Pulse App to receive notifications. Directions on acquiring Brightspace Pulse App are in the checklist in the **Start Here** module.

What is the best way to use Artificial Intelligence (AI) and eHW (Möbius) as a student in this class?
Use AI and eHW for systematic, regular practice with a targeted focus, the **way professionals develop mastery** in order to help you learn the content as opposed to just getting an answer to earn points.
The use of AI is recommended to:
- help you learn a difficult concept.
- tell you how a concept might be important for your career path.
- create example quiz questions. "In terms of difficulty, on a scale of mild, medium, or spicy, make it <*choose a level*>."
- tell you the best ways to study for an exam.
- help you in **these ways suggested by ChatGPT**

Use caution. Large Language Models (LLM) can hallucinate as in these examples. A healthy distrust is appropriate.
LLM's may apply procedures you have not yet learned, omit steps altogether, or provide incorrect answers.
To coach AI, use these prompts to lower the chance you will get rubbish:
- Ask "Don't give me solutions, but just give me help along the way". Utilize ChatGPT *Study Mode*.
- Say "Hey, slow down, check your results by using Python, and solve the problem step by step."
- Whenever AI skips a step, it is more likely at that point that is hallucinating. Ask AI to tell you to fill in the missing steps. Tell them your grade level. "Drop down a notch, Einstein. Teach a first-year college student how to solve the problem step by step." or "I haven't learned that method yet. Tell me another way to solve it."
- AI perceives emotion. It performs better if you say "It's vital to me you get it correct and that it makes sense to me."

At present, LLM's might **not** do very well with:

TIP: In class you will see how to do this.

- validating if your answer is correct or sharing how you can use other strategies to know if your answer is correct.
- critiquing if your solution is the best one possible or sharing if there is a more efficient or better approach.

If you find yourself overwhelmed or in the wrong class, please make sure you officially process your withdrawal rather than simply stop attending. See the withdrawal deadline at the top of this page.

To officially process a withdrawal, log in to **go.pfw.edu** and, on the Home Page on the first card titled **Student To-do List**, select **Student Common Dashboard** (the fourth item in the list). Then click on **Withdraw Form (after add/drop, until deadline)** and submit the form. This would only put a grade of W on your record instead of a grade of F. A grade of W does not affect your GPA. Future employers will not view a grade of W as a *mar* on your record, but, instead, as a *strategic recalibration*.

You have reached the end of this syllabus, and I am grateful that you took the time to read it. Thank you! In gratitude, click on the image of the rhinoceros in this document for something cool. I look forward to having an awesome semester together.