

# MA 15400-01 Fall 2021

## MWF 9:00 AM - 9:50 AM Kettler 123

**Instructor:** John LaMaster



**How to Reach Me:** E-mail: [lamaster@pfw.edu](mailto:lamaster@pfw.edu) ← preferred  
Google Voice: 260-267-0416  
Office/voice mail: 260-481-5430  
Math Dept: 260-481-6821  
I normally respond within 24 hours (often sooner)  
except on holidays and weekends.

**Office Hours:** You can find my office hours [HERE](#) on the Math Department tutoring page, along with other faculty who will share their office hours with this class. However, I am also available by appointment. The Piazza Discussion Board can be found on the same page, as well as other resources.

**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:** [purdue.brightspace.com](http://purdue.brightspace.com) (Click on **Purdue Fort Wayne**, enter your PFW username and password, click **Log in**)

**Materials:** In addition to access to a device that is able to play audio and video using a good Internet connection (a computer or laptop is recommended), as well as a notebook plus binder for organizing your notes, please see these three items below.

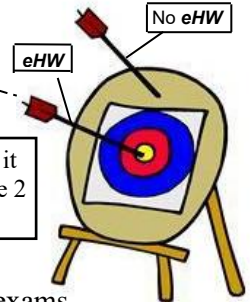
1. Access to *eHW* (commercially called Möbius) will be **required** for all your graded homework, quizzes, and tests, with the exception of the departmental prerequisite skills quiz and final exam. Follow the steps on the [eHW Web Site](#) to pay (\$15) and to access it.



Despite the extra fee for *eHW*, past students have shared that it was worth every penny. It gives you the essential practice you need to succeed.



If you have purchased access to *eHW* from last semester, you need not purchase it again. You just need to self-enroll in our shared eHW Course. To do so, see page 2 of [these instructions](#), specifically [How to Enroll in an eHW Course](#).



2. A **graphing calculator** will be used for activities, assignments, quizzes, and exams. The **TI-84Plus** or **TI-84 CE Plus** the *tools of choice*.  
**Note:** You can rent one at Walb Student Union 225 (260-481-6586). Click [HERE](#) for details.
3. The **text** *Functions Modeling Change, 6th Edition* by Connally, et al. is **optional** but recommended. Some stronger students have shared they did fine without a text and learned everything from doing eHW.



For those who want a text, you can also use the 5th Edition or even the 3rd. You might find it for cheap online at [Chegg](#), [Amazon](#), [eBay](#), [betterworldbooks.com](#), and from [Wiley](#). We do **NOT** use WileyPLUS.

Recommended exercises out of the text will be given to deepen your understanding, but not required.

**Objective:** The purpose of this course is to prepare you for calculus which requires trigonometry, i.e. MA 16500 or MA 22700. If you do not intend to take either of these courses, there is no reason to take this class. An exception is CHM 11500. If that is the only reason you need it, please let me know. This course is not needed for calculus MA 22900.

**Content:** In this course you will solve problems presented as real-world situations by creating and interpreting mathematical models which 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, 8, 9, 10, 12, 13, and 14 of the text.



**Grading:**


Participation.....	25 pts.	(3.125%)
*Prerequisite Skills Quiz.....	25 pts.	(3.125%)
e-HW Assignments.....	100 pts.	(12.5%)
6 Quizzes @ 25 pts each .....	150 pts.	(18.75%)
Test 1 .....	100 pts.	(12.5%)
Test 2 .....	100 pts.	(12.5%)
Test 3 .....	100 pts.	(12.5%)
*Comprehensive Final Exam....	200 pts.	(25%)

90% -100% (720 pts. or more)	A
80% - 89% (640 to 719 pts.)	B
70% -79% (560 to 639 pts.)	C
60% - 69% (480 to 559 pts.)	D
<60% (Below 479 pts.)	F

**Total Points Possible ..... 800 pts.**

\*The *Prerequisite Skills Quiz* and *Comprehensive Final Exam* are departmental and delivered as proctored, paper and pencil tests.


**Participation:** You will earn participation points by completing the *Getting to Know You* survey, by posting your self-introduction on Brightspace, and your participation in class meetings. Absences due to illness or isolation or quarantine are excused. If you have any of [these symptoms of the coronavirus](#), you may have been exposed and I do not want you to attend class. To accommodate anyone who must isolate (if you’ve tested positive for COVID-19) or quarantine (if you’ve come in contact with someone who has tested positive), I have video lecture content available on Brightspace. To keep abreast of current COVID-19 policies and procedures, please check the Website [PFW Ready](#).

 **TIP:** Keep a special section in your notes or a binder to collect any questions as you watch the videos and work on e-Homework.

**Prerequisite Skills Quiz:** This departmental short paper and pencil quiz provides quick and early feedback to you on your proficiency with the skills needed for this course. Study the eHW assignment *Math Background Needed for MA 15400* (and its worked out solutions). There are eHW Flash Cards to prepare for this content on the [eHW Web Site](#) and free MA 15400 Website [HERE](#). Unlike other quizzes which are online, it is given in class, you have one attempt, and it can not be dropped.

**e-HW Assignments:** If you ask any high performing MA 15400 student from a previous semester what was the key to their success in the course, they will uniformly cite eHW, which is described in the document [General Course Information](#). See also the [eHW Web Site](#) for help with how to obtain access and use eHW (commercially called Möbius). You are encouraged to work ahead on an assignment, even before the material is covered, and do the assignment **multiple times** (even after you have earned a perfect score). Research shows that students who do this retain the material better for the exam.



 **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.

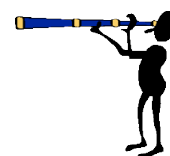
- **Late eHW** may be submitted for some partial credit, but certain conditions apply: for each score above 90% earned before the due date in the *Assignments (for a Grade)* area, you may redo one past due assignment at a 10% late penalty, i.e. for late eHW, a score of 20 would be entered in the Brightspace grade book as a score of 18. Go to a separate area once you login to eHW (called *Rhino Opportunity for Late Assignments*) to access these after the due date. Once you've earned a higher score, please notify your section instructor.
- **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 me, I will gratefully award you double points for that question.



**Quizzes:** To help make quizzes a learning experience, you can **drop all but the top six online quizzes** that are taken on Möbius (except the prerequisite quiz, which is paper and pencil and can not be dropped). Online quizzes serve as “dress rehearsals” for the Chapter Exams, so high performing students find they are worth their best effort even after earning six high scores. Since I take only the top six online quizzes, none of these online quizzes can be made up if missed.


 (See also the *Rhino Quiz Incentive*  on the last page to earn bonus points.)

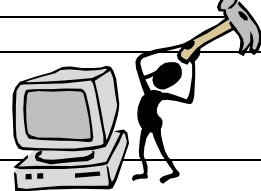
**Exams:** All chapter exams are online through Möbius. Keep track of these dates in your personal calendar:  
Chapter Exam 1 (*Tentatively Sections 7.1-7.5*): Friday, Sept. 17 – Friday, Sept. 24  
Chapter Exam 2 (*Tentatively Sections 7.6-7.8, 8.1-8.3, 9.1-9.3, 10.1-10.2*): Friday, Oct. 22 – Friday, Oct. 29  
Chapter Exam 3 (*Tentatively Sections 12.1-12.3, 13.1-13.4, 14.1-14.3*): Tuesday, Nov. 23 – Sunday, Dec. 5.



**Final Exam:** The departmental final exam is cumulative over all topics, in addition to Section 14.4.  
UPDATE: It will be on Möbius similar to the chapter exams.

**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:	From:	Contact Information:
PFW account/password/ Brightspace Support	Information & Technology Services (ITS) Help Desk	Call: 260-481-6030 Email: <a href="mailto:helpdesk@pfw.edu">helpdesk@pfw.edu</a> See the <a href="#">ITS Website</a>
<i>eHW</i> (Möbius) Purchasing an <i>eHW</i> access code	Digital Ed Customer Support	1-833-450-2211 Email: <a href="mailto:support@digitaled.com">support@digitaled.com</a>
Troubleshooting <i>eHW</i>	<i>eHW</i> Technical Support	Email: <a href="mailto:ehwtechsupport@pfw.edu">ehwtechsupport@pfw.edu</a>
Graphing Calculator Rental	Student Government	Walb 225 or call: 260-481-6586 See the <a href="#">Calculator Rental Website</a>
Using eHW	Check out the resource <a href="#">General Course Information</a> first. Then see the <a href="#">Möbius Support Website</a> for help.	
Tutoring (Face to Face & Online)	Online <a href="#">HERE</a> and limited Face to Face tutoring in KT G19	
Attending PFW in a Pandemic	PFW Prepared	PFW Prepared <a href="#">Website</a> See <a href="#">Information &amp; Support</a> for Current Students and these <a href="#">Support Services</a> for Math Students
Short-term Counseling (Free)	Campus Health Clinic	Call the 24 hour Hotline: 800-342-5653 See their <a href="#">Website</a> . Or call: 800-342-5653
If you don't know where else to turn for resources, then contact...	... the CARE team	See their <a href="#">Website</a> or call: 260-481-6601
Withdrawing from the class	Student Success & Transitions	Call: 260-481-0404, E-mail: <a href="mailto:withdraw@pfw.edu">withdraw@pfw.edu</a> See the Student Success & Transitions <a href="#">Website</a> .
Accommodations for students with disabilities*	Disability Access Center (DAC)	Walb 113, 260-481-6658, See their <a href="#">Website</a> .
How to succeed in MA 15400	Students enrolled in MA 15400 last semester	 See <a href="#">the tips they wrote</a> specifically to you!



**\*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 Disability Access Center (DAC) as soon as possible to work out the details, as well as your section instructor.

**Rhino Success**

I believe in your success and want to support you to meet your goals.

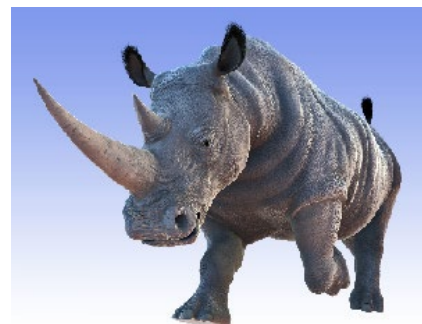
**You can do it!**

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.

If you want to succeed in life, 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!



**Overall Course Calendar:** The tentative course calendar on the next page provides more details about deadlines and may be helpful to see the big picture. The deadlines are also on the eHW Website and on Brightspace and on this handy, clickable [Rhino Checklist](#). If for any reason you are unable to complete an exam during the specified dates for reasons beyond your control, please reach out to us for help. The following page also describes some **RHINO incentives** you can earn. Polish that rhino horn and charge!

# MA 15400 Fall 2021 Tentative Schedule

Topic	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sat
Week 1 (Aug 23-27): Sections 7.1-7.2 Periodic Functions, and the Sine Function (with its sidekick, Cosine)	Aug 22	Aug 23	Aug 24	Aug 25	Aug 26	Aug 27	Aug 28
Week 2 (Aug 30- Sept. 3): Section 7.3, Ch 7 Skills Refresher, 7.4 Radians, Special Angles and the Graph of Sine and Cosine	Aug 29	Aug 30	Aug 31	Sept 1	Sept 2	Sept 3	Sept 4
			Self-intro on Brightspace due Getting to Know You Survey due eHW0: General Course Info due eHW Math Background due			eHW Syllabus Scavenger Hunt closes Prerequisite Skills Quiz in class	
Week 3 (Sept. 7-10): Section 7.5 Transformations of the Graph of Sine and Cosine	Sept 5	Sept 6 Labor Day Free trial access period ends for Möbius	Sept 7	Sept 8	Sept 9 eHW1: 7.1-7.2 due eHW2: 7.3 due	Sept 10 Q1 7.1-7.2 closes	Sept 11
Week 4 (Sept.13-17): Sections 7.6-7.8 The Tangent Function, Reciprocal Functions and Inverse Functions	Sept 12	Sept 13	Sept 14	Sept 15	Sept 16 eHW3: Special Angles due eHW4: 7.4-7.5 due	Test 1 opens Sept 17 Q2: 7.3 & Special Angles closes Q3: 7.4-7.5 closes	Sept 18
Week 5 (Sept. 20-24): Sections 8.1-8.2 Right Triangle Trigonometry, "NonRight" Triangle Trigonometry	Sept 19	Sept 20	Sept 21	Sept 22	Sept 23	Sept 24 Test 1 closes	Sept 25
Week 6 (Sept. 27-Oct 1): Sections 8.2 & 9.1 Solving Triangles and Solving Trigonometric Equations Graphically	Sept 26	Sept 27	Sept 28	Sept 29	Sept 30 eHW5: 7.6-7.8 due eHW6: 8.1 due	Oct 1 Q4 7.6-7.8 closes Q5 8.1 closes	Oct 2
Week 7 (Oct 4-8): Section 9.2-9.4 Trig Identities and Equations & Polar Coordinates	Oct 3	Oct 4	Oct 5	Oct 6	Oct 7 eHW7: 8.2 due	Oct 8 Q6 8.2 closes	Oct 9
Week 8 (Oct 11-15): Sections 10.1-10.2, 12.1 Function Composition, Inverse Functions and Vectors	Oct 10	Oct 11	Oct 12	Oct 13	Oct 14 eHW8: 9.1-9.2 due eHW9 9.2-9.3 due eHW10 9.4 due	Oct 15 Q7 9.1-9.3 closes Q8 9.4 closes	Oct 16
Week 9 (Oct 18-22): Sections 12.2-12.3 Applications of Vectors	Oct 17	Oct 18 Fall	Oct 19 Break	Oct 20	Oct 21 eHW11: 10.1-10.2 due	Oct 22 Q9 10.1-10.2 closes Test 2 opens	Oct 23
Week 10 (Oct 25-29): Sections 13.1-13.2 Sequences	Oct 24 IUFW Last day to drop	Oct 25	Oct 26	Oct 27	Oct 28	Oct 29 PFW Last day to drop Test 2 closes	Oct 30
Week 11 (Nov 1-5): Sections 13.2-13.4 Series	Oct 31	Nov 1	Nov 2	Nov 3	Nov 4 eHW12: 12.1-12.2 eHW13: 12.3 due	Nov 5 Q10 12.1-12.2 closes Q11 12.3 closes	Nov 6
Week 12 (Nov 8-12): Sections 14.1-14.2 Parametric Equations and Circles	Nov 7	Nov 8	Nov 9	Nov 10	Nov 11 eHW14: 13.1 due eHW15: 13.2 due eHW16: 13.3-13.4 due	Nov 12 Q12 13.1-13.4 closes	Nov 13
Week 13 (Nov 15-19): Sections 14.3-14.4 Ellipses and Hyperbolas	Nov 14	Nov 15	Nov 16	Nov 17	Nov 18 eHW17: 14.1 due	Nov 19 Q13 14.1 closes	Nov 20
Week 14 (Nov 22-23): Section 9.6 Complex Numbers	Nov 21	Nov 22	Nov 23	Nov 24	Nov 25 Thanksgiving Break	Nov 26	Nov 27
			T3 opens				
Week 15 (Nov 29-Dec. 3): Section 9.6 Complex Numbers Cont'd	Nov 28 eHW18: 14.2-14.3 due Q14 14.2-14.3 closes	Nov 29	Nov 30	Dec 1	Dec 2	Dec 3	Dec 4
Week 16 (Dec. 6-10): Review for the Final Exam	Dec 5 T3 closes	Dec 6	Dec 7	Dec 8	Dec 9 eHW19: 14.4 due	Dec 10 Q15 14.4 closes	Dec 11
Final Exam Week	Dec 12 All late eHW closes	Dec 13 Final Exam opens	Dec 14	Dec 15	Dec 16	Dec 17	Dec 18 Final Exam closes

All eHW, quizzes, and tests are completed online [HERE](#) on Möbius. They will close at 11:59 PM on the day indicated.

- To help accommodate any possible Internet outages, you will have 3 attempts for each quiz and each exam.

You have 90 minutes to complete each quiz, taking the highest score. Similar to the eHW Assignments, these are short. The longer time limit is so you can take it unrushed. I will drop all but the top six (6) quizzes, so no late quizzes are allowed. You have 180 minutes to complete each test, taking the highest score. Please contact me as soon as possible if you have any issues that prevent you from completing your work. I encourage you to reach out to me.






- Rhino e-Homework Assignment Incentive:**

For each eHW Assignment earned at 90% or above, you can redo one eHW at 10% late penalty.

- Rhino Quiz Incentive:** 


Earn a +2 Rhino Bonus on the chapter test if you earn 90% or above ( $\geq 22.5$ ) on each of the quizzes that are over that test material.

- Rhino Final Exam Exemption Award** – Each item below earns you a shiny, Brightspace Rhino Badge. Earn all of these for the grand prize\*.

- Earn 100% of the Participation points (illnesses/isolation/quarantine are excused). → 
- Contribute a substantive post (a question, answer, or tip) to the [Piazza Discussion Board](#) at least once. → 
- Earn 90% or higher on **each** eHW assignment. → 
- Have a quiz average of 90% or higher on your top 6 quizzes. → 
- Earn 80% or higher on **each** of the three chapter tests. → 



\*If you earn all five of the above, you get the **Rhino Final Exam Exemption Award**. You can keep your grade earned and be exempt from the final exam or you can take the final exam without any risk of it hurting your grade. If it bumps you up, you get the higher grade.

 Keep track of your progress with the click-able [Rhino Checklist](#).