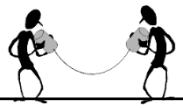
MA 16600-01 Analytical Geometry and Calculus II
Fall 2025

PURDUE UNIVERSITY FORT WAYNE

Class Meeting Time: MW 9:00 AM – 9:50 AM Kettler 218
TR 9:00 AM – 10:15 AM Kettler 218

Instructor: John LaMaster
Preferred Pronouns: he, him, his
Office: Kettler 264

How to Reach Me: E-mail: **lamaster@pfw.edu** ← **preferred**
Please use the following protocol when e-mailing me →
Google Voice: 260-267-0486
Office Phone/voice mail: 260-481-5430
Math Dept: 260-481-6821
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: **Will de l'Hôpital, MA 16600-01**
- 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 or My Math Lab first.
- I prefer to be addressed as *John*.

Prerequisites: MA 16500 with C- or higher.

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.

What You Need: To be successful, make sure you have the following!

1. Access to the Internet and **My Math Lab** (MML). Follow the steps on Brightspace.

TIP: If you have previously purchased 24 month access last semester, when you enter the MML portal you should immediately be taken to the course. If not, contact me and I can help. For those who must take MA 26100 next semester and must purchase MML this semester, you get a price break if you choose the 24 month access. You can get free temporary access 14 days after you register.

The **text** *Briggs, Cochran, Gillet, and Schulz: Calculus: Early Transcendentals, 3e, Pearson.* is included digitally with your purchase of My MyLab. All graded homework will be from MML.

2. A **graphing calculator**. 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 info.
3. A **notebook plus binder** for organizing papers and notes.
4. **The attitude of a Rhino!** 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, participate in every class period, and make the commitment to do what it takes to succeed. If you want to succeed in life, be like the rhinoceros and CHARGE straight ahead to accomplish your goals. No obstacles get in the way of a 3 ton snorting rhinoceros charging at full speed!

5. **Study Buddies!** Join other student rhinoceri on Monday and Wednesday from **11:00 AM to 1:30** in our classroom, KT 218, or join by Zoom for Rhin*OFF*-erous *HOURS*. I hold these office hours on Zoom as well at this link. I am more than happy to set up a one-on-one appointment with you any time, either Zoom or face-to-face. You can Participate in the Piazza Discussion Forum, where you can ask a question (even anonymous to the class), answer a question, or share a tip.

Course Goals: This course develops your ability to apply advanced integration techniques, analyze sequences and series, and explore parametric, polar, and complex representations. You will use these tools to model real-world phenomena, solve applied problems, and think critically.

Learning Outcomes: 1. Apply techniques of integration to compute areas of planar regions, volumes of solids of revolution and areas of surfaces of revolution, work, and other applications. 2. Apply tests of absolute convergence of series to find the interval of convergence of some power series. 3. Find the Taylor and Maclaurin series of some exponential, rational and trigonometric functions. 4. Use polar coordinates to make it possible to sketch the graphs of some curves. 5. Riemann sums.

This course is a continuation of MA 16500, covering topics in Chapters 6, 8, 10-12, Sections 5.5, 7.2, 9.1-9.3, and Appendix C (Complex Numbers) of the text *Briggs, Cochran, Gillet, and Schulz: Calculus:Early Transcendentals, 3e* and meets the General Education Quantitative Reasoning proficiencies 3.1 through 3.8 in Area A Foundational Intellectual Skills

Grading:

Participation	25 pts.	(4%)
MML 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	175 pts.	(25%)
Total Points Possible	**700 pts.**	

Grading Scale:

89.5% -100%	(627 pts. or more)	A
79.5% - 89.4%	(557 to 626 pts.)	B
69.5% -79.4%	(487 to 556 pts.)	C
59.5% - 69.4%	(416 to 486 pts.)	D
<59.5%	(Below 416 pts.)	F

Participation includes consistent attendance and active class participation in class and group discussions and activities, 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 for matters other than MA 16600 without advance permission, doing homework for other classes, being disruptive, contributing to a choral "premature departure book bag zip", refusing to lock in on a learning activity, or anything to lower the class morale, you will not earn your participation points for that day. But such egregious behavior is unthinkable for a rhino like you.

If you receive credit for each class meeting, you would have 100% active class 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.

In addition to your active participation in class meetings (15 pts), you can earn participation points by posting your **Self-introduction on Brightspace** (5 pts) and completing the ***Getting to Know You*** **survey** (5 pts).

Our classroom is a **Ghostfree Zone**. It is impossible to duplicate outside of class the activities and communication that happens within the class. Not only is it important for you as an individual to keep up with class work, but also your group will need your thoughts and voice in their endeavors to solve the problems that we will be doing during each class period. In order to keep up with the course work and to contribute fully to your group, it is absolutely necessary that you be in class every day. No ghosts allowed. Absences due to illness or isolation or quarantine are excused. No doctor's note is required, but please email me to let me know.

No Ghosting Policy: Your group as well as I will miss you if you're not there to participate in the class discussions. Therefore, **more than 4 unexcused absences may lead to the lowering of your final grade one letter grade.** Please reach out to me for help if your life is disrupted for any reason. I am here to help.

If you have any of **these symptoms** of the coronavirus, you may have been exposed. If so, please do not 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), you can also participate live in class through **Zoom**. However, in-person participation is ideal. **TIP**: On Brightspace, you can quickly find it on the **Course Home Page** under John's photo. If you miss a class for other excused reasons (like Godzilla stepped on your car), use Brightspace to watch the class recording posted on under **Content > Class Recordings** so you come prepared the next period.

Reincarnation Opportunity: If you miss a class, you have a way to bring it back to life. By completing five one-hour tutoring visits in the **Math MALL** (Math Assistance Learning Center) in KT G38 or five hours in Rhin*OFF*-erous *HOURS*, you can reincarnate one missed class session. Think of it as transforming from a ghost of attendance past back into a fully present

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 MML *Syllabus Scavenger Hunt*, post substantively to the ***Piazza Discussion Board,*** or more.

MML Assignments: Online homework will be assigned using **My Math Lab (MML)**. Always enter MML through our D2L Brightspace course or the MML and D2L marriage will separate and they will stop communicating with each other. Once the due date is passed, you may continue to work on the assignment, but a 10% penalty will be applied on the problems you missed, giving you unlimited attempts. However, all MML assignments will close at **11:59 PM, Sunday, December 14**. In addition to being better prepared for the in-class quizzes, there is a special incentive for earning 90% or higher on My Math Lab homework. See the section on **Chapter Exams** for more info.

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

MML 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 John you will be awarded double points for that question.

Quizzes: To help make quizzes a learning experience, you can **drop all but the top four quizzes**. All quizzes are taken in class with paper and pencil. Quizzes serve as "dress rehearsals" for the tests, so high performing students find that even after earning four perfect scores, it is most beneficial to dedicate their best effort on quizzes to prepare for exams. Since I take only the sum of the top four quizzes, there are no make-up quizzes. Research shows that students who do this retain the material better for quizzes and tests. Upon achieving four perfect quiz scores, you will receive an additional +2 points on the Final Exam for each subsequent quiz in which you earn a perfect score.

Chapter Exams: There will be three tests (all paper), worth 100 points each. **Perk 1:** Earn a 90% or higher on the MML Homework Assignments associated with the test before the date the test is given to earn the opportunity to retake another version of this exam, keeping the higher score. P**erk 2:** You will earn the **Rhino Hot HW Award** which comes with a +2 Test Bonus Point and a blazing Brightspace badge.

Final Exam: You sit for the comprehensive paper and pencil final on **Tues., Dec. 16, 8:00 am - 10:00 am** in our classroom.

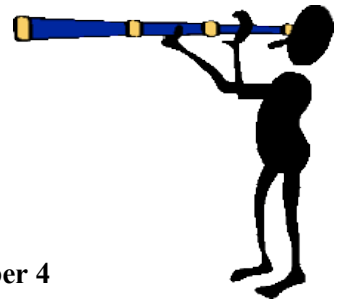
Student Support: I want you to be successful. Please reach out if you need help. Below is a directory of resources for specific issues. If technical difficulties affect your ability to complete assignments, please notify me as soon as possible.

For help with:	Contact:	Contact Information:
PFW account/password/ Brightspace Support	Information & Technology Services (ITS) Help Desk	Call: 260-481-6030 Email: helpdesk@pfw.edu See the ITS Website
Purchasing Pearson MML	Pearson Customer Support	See their Website.
Tutoring	Online HERE and Face to Face tutoring in KT G38. See Brightspace under Student Support for hours	
Graphing Calculator Rental	Student Government	Walb 225 or call: 260-481-6586 See the Calculator Rental Website
Withdrawing from the class	Registrar	Directions are here and on the last page of this syllabus.
How to succeed in MA 16600	Students enrolled in previous math classes with me	See the tips they wrote to students like 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	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 Disability Access Center as soon as possible to work out the details.

Mark Your Calendar with these Important Dates!

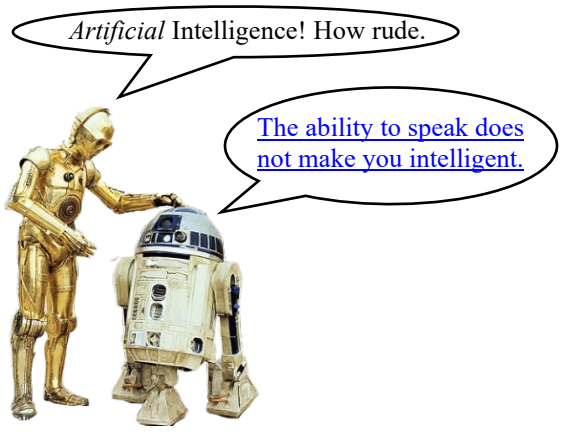


No Class Meeting Labor Day: **Monday, September 1**
Test 1 (Tentatively Sections 6.1-6.3, 6.5-6.7, 5.5/8.1, 8.2): **Thursday, September 25**
Fall Break: **Monday, October 20 - Tuesday, October 21**
Test 2 (Tentatively Sections 7.2, 8.9, 9.1-9.4,10.1-10.5): **Thursday, October 16**
Last Day to Withdraw for PFW Students with a Grade of W: **Friday, November 21**
Thanksgiving Break: **Wednesday, November 26 - Friday, November 28**
Test 3 (Tentatively Sections 10.6-10.8, Chapter 11, 12.1-12.4): **Thursday, December 4**
All past-due eHW closes: **11:59 PM, Sunday, December 14**
Departmental Final Exam (Tentatively Appendix C and all prior content): **Tuesday, Dec, 16, 8:00 a.m. - 10:00 a.m.**

There are several ways you can keep track of deadlines in this course.

- Use the calendar on Brightspace.
- Use the Brightspace **Pulse App** to receive notifications on your phone.
  (Directions on acquiring this are **here**, and in the checklist in the **Start Here** module in our Brightspace course.)
- View the due dates on the Brightspace Assignment page.
- View the due dates on the My Math Lab Assignment page.

What is the best way to use Artificial Intelligence (AI) and My Math Lab (MML) as a student in this class?



Use AI and MML to develop the following skills useful in life:

1. Deliberate Practice
   a. Use AI and MML for systematic, regular practice with a targeted focus, the way professionals develop mastery to help you learn the content as opposed to just getting an answer to earn points.

   b. Click on ***Content*** > ***My Math Lab*** > ***How to Use My Math Lab and Other Learning Aids to be Successful*** for tips specific to our class. Watch the 64 second (silent) video ***Doing MML for earning instead of for learning*** for the rationale on using MML and AI to have the best outcome.

2. Included in your e-text is Pearson's AI-powered study tool (looks like) which is designed to help you do this:
   - learn difficult concepts. "Don't give me solutions, but just give me help along the way"
   - 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.

   ChatGPT has a Study Mode with similar features. Consider **these ways suggested by ChatGPT** to help you learn.

3. Hallucination Detection

   Generative AI is trained to deliver a response with the shortest wait time possible. This may cause it to apply procedures you have not yet learned, omit steps altogether, or provide incorrect answers. A healthy distrust is appropriate. To coach AI, use these prompts:
   - "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 delivering rubbish. 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."
   - Fun Fact: Machine learning uses a **gradient descent algorithm** (similar to Newton's method from Calculus 1 in multiple dimensions using linear algebra with discrete data) which produces best results if you ask it to show steps.

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

   TIP: In class you will learn how to do these skills.

Advice So You Are Not Overwhelmed

Take this advice to heart that was given to me by my Calculus II professor when I took the course more than 40 years ago:

There's no substitute for daily preparation.

In other words, 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**.

If you find yourself overwhelmed or in the wrong class, please make sure you officially process your 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.
Future employers will not view a grade of W as a *mar* on your record, but, instead, as a *strategic recalibration*.