Department of Mathematics

June 4, 2025

Thank You, Calculus Help Center Tutors!

It's not easy to be expected to help students answer questions from all calculus courses from Math 105 through Math 117, "on demand," but that is exactly what our unbelievable Calculus Help Center (CHC) tutors do, regularly! For doing this to help the math department and its students, we give hearty **THANK YOU** to the **Calculus Help Center tutors: Ananya Gupta, Frankie Morone, Nabeel Naqvi**, and **Abby Wilder.** Your efforts are truly appreciated!

Twelve Students Inducted into Pi Mu Epsilon

The Union College math department has a chapter of Pi Mu Epsilon (PME), a national undergraduate mathematics honors society. The purpose of this organization is the promotion and recognition of scholarly activity in the mathematical sciences among student at the academic institutions that have been chartered as Chapters of the Society. On Tuesday, June 3, twelve students were inducted into PME: Jacob Danziger, Connor Dufresne, Richard Farina, Olivia Gwinnett, Ledia Hoxhaj, Talha Khan, Minhyong Lee, Francesca Morone, Nabeel Naqvi, Isobel Petersen, Janak Subedi, and Atharv Tekurkar. Please join us in congratulating them!



Pieces from Thesis: Jeremy Perez

Jeremy wrote his thesis this winter under the guidance of **Professor Christina Tønnesen-Friedman**

Building on Euclidean geometry, where space behaves much like our everyday physical world, we find that this framework doesn't always align with how we perceive our surroundings. I open my thesis with the following analogy.

Consider a road stretching into the distance. The sides are parallel, but they seem to meet at the horizon. Is that an illusion? Or is something missing from our mathematical model?

I explore this phenomenon in an expository one-term study on Projective Geometry, where I got to work with not just a single point at infinity but infinitely many! By the end of the term, aside from refining my Linear Algebra tool kit, I was able to get a little glimpse at Category Theory, and I was able to explore a notion of Duality after proving that finite-dimensional vector spaces are naturally isomorphic to their double dual spaces ... and their double double dual spaces, haha! (continued)

Coming from a Computer Science background, I was a bit skeptical about its possible applicability in my future work. This experience reminded me that just broadly exploring different mathematical structures can significantly change how you approach new problems. There's a ton of transferable concepts and techniques embedded in the design of math, including those that seem to depart from reality.

My main advice for any underclassmen is to remain skeptical and speak your mind about things you find interesting to others. I was matched to my thesis essentially after conversing with my Math Advisor, Professor Khatami, about alternative coordinate systems and the dimensionality of space. For those who will begin their thesis soon, don't be afraid to ask questions and embrace the opportunity to study a topic independently. Although writing the thesis will be challenging, the results are rewarding. All in all, explore your imagination with your professors and have fun!

Course #	Course Name	Professor	Day	Date	Time	Room
MTH-067-01	Math for Digital Humanities	Plofker, K.	Т	6/10	2:30 to 4:30 PM	BAIL 102
MTH-112-01	Calculus 2: Integral Calc	Moles, G.	М	6/9	11:30 to 1:30 PM	BAIL 201
MTH-112-02	Calculus 2: Integral Calc	Gajek-Leonard, R.	М	6/9	2:30 to 4:30 PM	BAIL 207
MTH-115-01	Calculus 3: Diff Vector Calc	Friedman, P.	W	6/11	8:30 to 10:30 AM	BAIL 102
MTH-115-02	Calculus 3: Diff Vector Calc	Qian, J.	W	6/11	6:00 to 8:00 PM	VART 204
MTH-115-03	Calculus 3: Diff Vector Calc	Qian, J.	W	6/11	6:00 to 8:00 PM	VART 204
MTH-115-04	Calculus 3: Diff Vector Calc	Tønnesen-Friedman, C	Т	6/10	2:30 to 4:30 PM	BAIL 201
MTH-117-01	Calculus 4: Integral Vector	Xu, F.	W	6/11	8:30 to 10:30 AM	BAIL 106
MTH-117-02	Calculus 4: Integral Vector	Jauregui, J.	Т	6/10	6:00 to 8:00 PM	VART 204
MTH-117-03	Calculus 4: Integral Vector	Jauregui, J.	Т	6/10	6:00 to 8:00 PM	VART 204
MTH-130-01	Ordinary Differential Equation	Carney, S.	W	6/11	8:30 to 10:30 AM	BAIL 207
MTH-130-02	Ordinary Differential Equation	Mariano, P.	М	6/9	11:30 to 1:30 PM	BAIL 100
MTH-197-01	Discrete Math for Comp Sci	Plofker, K.	W	6/11	8:30 to 10:30 AM	BAIL 201
MTH-199-01	Intro to Logic & Set Theory	Friedman, P.	М	6/9	11:30 to 1:30 PM	BAIL 102
MTH-199-02	Intro to Logic & Set Theory	Moles, G.	Т	6/10	2:30 to 4:30 PM	BAIL 106
MTH-228-01	Probability Theory	Xu, F.	М	6/9	11:30 to 1:30 PM	BAIL 106
MTH-332-01	Abstract Algebra 1	Gajek-Leonard, R.	Т	6/10	2:30 to 4:30 PM	BAIL 312
MTH-334-01	Partial Differential Equations	Carney, S.	М	6/9	2:30 to 4:30 PM	BAIL 102
STA-164-01	Strategies of Experimentation	Hoerl, R.	Т	6/10	2:30 to 4:30 PM	ISEC 187
STA-364-01	Big Data Analytics	Hoerl, R.	W	6/11	8:30 to 10:30 AM	ISEC 187
IMP-121-01	Int Math/Physics 2 W/Lab	Wang, J.	Т	6/10	2:30 to 5:30 PM	ISEC 118

Spring 2025 Math Final Exam Schedule



Good Luck on your Finals! Study Hard then Enjoy your Summer!

