

Course Information for Math 136

Course:	Math 136, Section 1 Mondays/Wednesday 3:30 - 4:45 in B321 Van Vleck (room likely will change to room 307 Van Vleck on September 14)
136 Instructor:	Dan McGinn
Email:	mcginn@math.wisc.edu
Office:	316 Van Vleck
Office Phone:	3-3062
Office Hours:	To be determined and/or by appointment
Course Webpage:	http://www.math.wisc.edu/~mcginn/math136.html
Associated Lecture:	Math 171, Lecture 1 Tuesday/Thursday 2:30 - 3:45 in B102 Van Vleck
Instructor:	Professor Sean Paul
Lecture Webpage:	http://www.math.wisc.edu/~stpaul/mat171.html
Texts:	Precalculus: A Prelude to Calculus, Axler; Wiley Thomas' Calculus, Including Second-Order Differential Equations, 11th ed., Weir, Hass and Giordano; Addison Wesley Various supplemental worksheets

Course Overview

Math 136 is part of the Mathematics-Science Dual Minor, which is intended for Elementary Education and Special Education majors looking to enhance their content preparation in mathematics and science. Math 136 connects the pre-calculus and calculus topics presented in the standard Math 171 lecture (Calculus with Algebra and Trigonometry I) to middle school mathematics.

Math 136 has two major sets of goals. The first set of goals is like the other 13x courses you have taken: to have in-depth content knowledge (know *why* a procedure works rather than just being able to implement a procedure); to be able to solve problems in many ways; to be able to clearly articulate your reasoning and flexibly explain yourself; to be able to evaluate potentially incomplete or incorrect mathematical reasoning of others; and to come to understand math as approachable, doable and understandable. Math 136 differs from the other 13x courses in that it is associated with a large math lecture. The second set of goals relate to your participation in Math 171. We want you to experience a typical, first-year undergraduate mathematics course. We want you to experience the content, the pacing, the assessment, and the expectations that your future students will hopefully encounter as they go off to college themselves. The clearer a picture you have of what lies ahead, the better you can prepare your future students.

As such, **attendance** in the 171 lecture is mandatory. If some sort of unavoidable conflict arises, I fully expect you to read the relevant materials and work some example and homework problems to prepare yourself for the next discussion section. There likely will be a few weeks where we work on a different topic in discussion than is covered in lecture. It is especially encouraged

not to miss class or otherwise fall behind those weeks. The course website will have all of the worksheets from discussion section available if you do miss class.

I envision discussion section being a balance of (ideally) spending 30% - 50% of the time clarifying what went on in lecture and discussing problems that arise on the homework, and spending the bulk of discussion working on worksheets that either connect the current Math 171 topic to middle school mathematics or are on supplemental material.

Grading Policy

The dual sets of goals mean that Math 136 will be assessed differently than the other 13x courses.

I want to be upfront about this. You are being asked to do the Math 171 homework and take the Math 171 exams. However, the majority of discussion section will be spent on relating the Math 171 topics to middle school mathematics. Therefore, you will not be getting the equivalent of 5 credits worth of instruction on Math 171 (like the other 171 students are). Accordingly, you will not be assessed by the same standards.

171 Homework - 20%. You will have a weekly assignment that consists of handing in all of the even-numbered problems that are assigned to the 171 students that week. I will grade a range of problems, and likely give feedback on/correct all of the problems. My choice of problems to grade, and the rubric I choose to grade those problems, will be heavily influenced by what topics we emphasize in discussion. Late homework will receive a grade of 0, though I will try to (eventually) give you feedback on it.

171 Exams - 40%. You will have three exams in 171, dates to be determined.

- Exam 1: 10%
- Exam 2: 10%
- Final: **Thursday, December 17, 7:25 - 9:25 pm**, 20%

When you get your exams back, they will have both the feedback and grades you would have gotten were you a standard Math 171 student, as well as the grade that you actually received, which will be based on me grading appropriate problems and holding you to an appropriate standard.

Discussion - 40%. This portion of your grade is based on the content that other 171 students don't see. **Participation** will be an important component to this part of your grade. More than 2 absences will result in a lowered participation grade, as well as chronic tardiness. Even with an excused absence (e.g. you are experiencing flu symptoms), you are expected to make up the work you missed. Check with me to determine the most appropriate way to do this for a given lesson. I expect you to come to discussion having read the relevant sections of the textbooks and prepared to discuss the content from that week. There will also be some **assessment** component of this portion of your grade. We will try to determine the best way to do this together. I could give you a few more homework problems each week (more like the usual 132 homework assignments than the textbook assignments), I could give you a few more exam problems sometime near the 171 exams, I could have you write papers on how certain content topics relate to middle school math, or we could do some combination of these. I'm also open to other suggestions.