TEACHING PORTFOLIO

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1 Teaching Philosophy Statement

A concept web created by my students hangs central on the wall above my desk. It is eleven by seventeen inches of gold construction paper with carefully distributed green sticky notes. Each sticky note is labeled with a concept such as “Invertible” or “Determinant” and is connected to a few close neighbors by a dark line drawn in Sharpie marker. Each connection is labeled with a relationship between the ideas on the stickys, e.g. “$A$ is invertible iff $\det A \neq 0$”. This concept web was synthesized from six others created by small groups of students in my discussion section of an honors course in Linear Algebra and Differential Equations. Each day, this office decoration reminds me of the infectious enthusiasm of my students to devour knowledge.

Students are the motivating force behind my endeavors in mathematics. I have worked as the instructor of record and as a teaching assistant in a variety of courses at the University of Minnesota (UMN). This semester, I commute to St. Olaf College to teach a small, active classroom of exceptionally inspiring students. The following series of examples demonstrate how this inspiration manifests itself in my classroom for student benefit.

Concept Webs  The concept web activity simultaneously promoted student learning on multiple levels. First, students reviewed fundamental concepts and identified the most important objects for the stickies. Next, students focused on the interdependence of fundamental concepts as they drew the connecting lines, highlighting the relationships that underlie an entire unit of linear algebra. After the initial web’s creation, groups compared their concept web to the synthesized one (now above my desk), evaluated the accuracy of their web, and revised it to correct any misconceptions. Thus students practiced analytical skills that develop tools for independent learning. Finally, situating the fundamental concepts in their broader structure reinforced students’ retention of the essential material.

Despite the theoretical effectiveness of such active learning projects, generating sufficient student buy-in can represent a practical obstacle. As I held up construction paper and sticky notes to introduce the concept web activity, my students weren’t necessarily ready for “an arts and crafts project” in their honors math class. However, I had introduced small-group activities early in the semester and shared personal stories about my visual relationship with mathematics; developing familiarity, respect, and trust. So, after a dorky joke about my love of crafts, they settled into their usual groups and bought into physically constructing the theory. By establishing an open and honest atmosphere early, I have successfully implemented projects outside the scope of what students might expect to find in mathematics. A second challenge in actualizing such projects is not relational, but rather a matter of time management.

Active Classrooms  Students began my Intensive Precalculus class with plenty of small-group work and project-based learning. After the first exam I arranged for an outside consultant to collect feedback. Students expressed concern that my presentations in class did not prepare them for the worksheets or homework saying, “In class problems are generally easier”. The quantity of small-group work combined with the course’s additional content (necessitated by the “intensive” designation) left little time for traditional front-of-the-room teaching. As circumstances required, I adjusted our use of class time to include more time for explanation. However, traditional lecture does little for long-term retention and higher cognitive processes. In my Precalc classroom, students periodically engaged in active learning through warm-up problems, mid-lecture computations, and writing exercises for self-assessment after quizzes or exams. Punctuating the efficiency of lecture with these activities stimulates higher-levels of learning, preparing students to take skills from precalculus into the next step of their lives.

Study Kits  Through student feedback and office-hour discussions, I discovered that most of the Intensive Precalculus students studied for the first exam using methods from high school. So in preparation for our midterm on trigonometry, I gave an optional assignment to create a “study kit”. I prescribed subject material for the kit and students could choose whatever form they deemed most helpful for themselves.
They produced a wide variety of creative kits, including a zine-style pamphlet and a unit circle with fold-out angles and formulas. In return for a successful kit, students could choose to retake the trig midterm (a new version). Thus the midterm became formative, as well as summative. All students with a satisfactory kit improved their performance over earlier midterms, even if they chose not to retake the exam. While anecdotal, such evidence suggests that the students developed new study skills. I continue to implement similar projects in other courses.

Decreasing Test Anxiety  By allowing a retake of the exam, the “study kit” project also helped to decrease test anxiety. This is one part of my efforts to create an equitable course and classroom environment. A recent study suggests that test anxiety disproportionately affects the performance of young women in STEM and the authors advise, “instructors seeking equitable classrooms can aim to decrease test anxiety”. Students tell me that they feel exams in mathematics have especially high stakes. However, nothing about assessing mathematical learning outcomes requires that exams be so important. I de-emphasize tests by increasing the weight of homework and other assessments in the final grade, by using test questions where students can earn partial credit, and by incorporating exam rewrites that allow students to earn back points they lost on the initial exam. In the future, I hope to explore mastery tests, which are graded pass/fail and allow numerous retakes, and to use take-home exams in upper level courses. In order to reduce student anxiety, these initiatives must be paired with clear communication as to their purpose.

The St. Olaf students in my present Calculus II course expressed usual nerves ahead of their first exam. With one week to go, we discussed the weight of the exam in their final grade (10%) and their option to rewrite the test. The weekend before the test, we discussed the number and type of questions, they were assigned a study project for extra credit, and I provided full solutions to prototype exam problems. In our last class before the test, we used small groups to generate a list of topics and students confirmed with me which concepts and techniques were particularly important. In the weeks following the exam, all students provided feedback on their experience of the test. I closed the student-instructor feedback loop by describing the anonymized results of the survey and promising necessary changes in the process for the second midterm.

Comment Cards  In my courses, students regularly turn in index cards with feedback on the instructor and the course structure. I pass out blank comment cards and ask directed questions about the length of a homework assignment or, “What is Jasper doing that most helps your learning?” Additionally, they can turn in comment cards at any time on any aspect of the course. I respond with written answers in a document hosted on the course website and we take a few minutes at the end of class to discuss poignant comments and intended outcomes. By asking students to provide thoughtful feedback they practice meta-cognitive skills and become more invested in their own success in the course. Finally, soliciting regular feedback helps me evolve as a teacher; I still have plenty to learn from my students.

***

In my classroom yesterday afternoon, students sat four to a table and chatted as they discussed their solutions to our worksheet. A few were up at the whiteboard-painted walls, demonstrating how they took a different approach from their classmates. At 2:53pm I paused and listened, hesitant to interrupt and wrap up class.

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2 Teaching Experience

Lead Instructor

- **Calculus II, St. Olaf College (Fall 2018)**
  Students learned the basics of techniques of integration, sequences and series, differential equations, and multivariable calculus. They were engaged through a partially-flipped classroom style, with textbook reading over the weekends and daily small-group worksheets in class. I was the sole instructor for the class and set up colleague observation to ensure compatibility with the St. Olaf pedagogy and curriculum.
  Class Size: 18 students

- **Intensive Precalculus, University of Minnesota (Fall 2017)**
  Students studied fundamental functions through their equations and graphs beginning with linear and including with trigonometric. They explored inverses, compositions, systems of equations, polar coordinates, vectors, matrices, and basic sequences. I was the lead instructor, developing the course structure and schedule, writing exams, and supervising a teaching assistant.
  Class Size: 31 students

- **Calculus II, University of Minnesota (Summer 2015)**
  Students learned techniques of integration, sequences and series, and basic differential equations. In this 8-week summer course, they attended two hours of class every day which blended interactive lecture, small group worksheets, and time for review. I collaborated with three graduate student colleagues to organize the structure of the course, write exams, and develop materials.
  Class Size: 16 students

Teaching Assistant

As a teaching assistant at the University of Minnesota, I taught two meetings of two discussion sections per week. Each class meeting, we reviewed central topics from lecture through warm-up problems and interactive lessons, and practiced problem solving methods using small-group worksheets and projects.
Class Size: 25-35 students

- **Introduction to Proofs through Analysis (Fall 2015, Spring 2014)**
  This writing and revision intensive course assigns each TA only one discussion section, in order to allow students more time for one-on-one work and feedback.

- **Linear Algebra and Differential Equations (Spring 2019, Fall 2016, Spring 2015)**
  I taught an honors version of this course and a version in the College of Science and Engineering (CSE), with computer labs in Matlab.

- **Multivariable Calculus (Spring 2017, Spring 2016, Fall 2014)**
  I taught an honors version of this course and a version in the CSE, with computer labs in Mathematica.

- **Calculus I (Fall 2013)**

Tutoring

- **Private Tutor, Kay Tutoring, MN (2014-2016)**
  Working with a local tutoring company, I tutored mostly high school students in calculus.

- **Mathematical Writing Tutor, Bard College, NY (2010-2012)**
  I worked with students on writing style, clarity, and technique as the dedicated tutor for a writing-intensive class that introduced students to proof writing.
3 SAMPLE COURSE MATERIALS

Concept Web Project

This activity created the concept web featured on the front of this portfolio. Students in my discussion sections of honors Linear Algebra and Differential Equations course at UMN completed the activity. I wrote the following instructions to share with graduate student colleagues. On the following page, you’ll find the concept web that the students produced.
Linear Algebra Concept Web Activity

*This activity was borrowed from Kate Meyer, Math 2243, 2016. See that folder for original. I’ve modified it a little bit.*

I did this activity with my 2574H discussion section after they had learned some basics of linear algebra (e.g. Edwards and Penney Chapter 3):

You will need:
- Large colored construction paper
- Size-small sticky notes
- (Optional) Markers and clear tape

The activity, step by step (25-30 min):
1. Ask students to write down every new terms that they’ve learned from Linear Algebra in 60 seconds. Tell them to be ready to share one idea with the class.
2. At the board, take suggestions until the class runs out of steam. Disallow repeated answers.
3. Use your favorite in-class voting method to select the “most important”. YOU are the electoral college… with my help the class ended up with:
   - Identity Matrix
   - Invertible
   - Unique
   - RREF
   - Determinant
   - Linearly Independent
   - Basis
   - $Ax = b$
4. Form students into groups of about four. Hand out one large piece of construction paper and a stack of sticky notes to each group.
5. Instruct students to: write concepts on stickies, place related concepts nearby on the construction paper, draw lines between related concepts, and to describe the relationship in writing along the line. Walk around answering questions.
6. Collect each group’s concept web after ~15 minutes. On your own time, compile them (the correct parts) into a version of your own. See LinAlgConceptWeb.pdf in this folder for an example.
7. You can also append a clarification page after the compiled concept web, addressing misconceptions that you found when going over students’ work. Share both your correct web and your clarifications with the class. Return each group’s web and encourage them to hang it in their dorm room! (They think this is hilarious!)
Notes:
1) A is always assumed to be a square matrix.
2) The word "iff" (if and only if) means "if and only if," referring to logical equivalence of the statements it connects.
Active Learning Worksheet

In my Calculus II course at St. Olaf College, every class meeting included time for small group work. Students used this worksheet on the first day we began our work in three dimensions, corresponding to Chapter 12 of Stewart. (In St. Olaf’s curriculum, Calculus II includes a significant amount of Multivariable Calculus – we made it all the way up to integrals over rectangles.) Following the blank worksheet you’ll find handwritten solutions I provided at the end of class.
12.1,2 - 3D Space and Vectors

Describe (in words) what each equation looks like in (a) 2D, and (b) 3D.

1. \( x = 2 \), \( y = 3 \)

2. \( y = 3x \)

3. \( x^2 + y^2 = 4 \)

4. \( x^2 + y^2 + z^2 = 1 \) (in 2D, assume \( z = 0 \))

5. Stand up and use a nearby wall to draw a picture for each problem (1)-(4), in both 2D and 3D.

6. Find the sum of the two vectors and illustrate geometrically on a nearby wall.

(a) \( \langle 1, 3 \rangle \), \( \langle -2, 1 \rangle \)  
(b) \( \langle 1, 0, -1 \rangle \), \( \langle 2, 1, -1 \rangle \)

7. \( a = \langle 3, -7, 1 \rangle \), \( b = \langle 1, -3, 2 \rangle \)

Find \( a + b \), \( 3a - b \), \|a\|, and \|a + b\|.

8. \( a = 2i + j - 3k \), \( b = -i + 2j \)

9. (Extra!) First, draw the vectors \( a = \langle 3, 2 \rangle \), \( b = \langle 2, -1 \rangle \), and \( c = \langle 7, 1 \rangle \). Then find scalars \( s \) and \( t \) so that \( sa + tb = c \).
12.1.2 - 3D Space and Vectors

Describe (in words) what each equation looks like in (a) 2D, and (b) 3D.

1. \( x = 2, y = 3 \)
   a) a point
   b) a line

2. \( y = 3x \)
   a) a line
   b) a plane

3. \( x^2 + y^2 = 4 \)
   a) a circle
   b) a cylinder

4. \( x^2 + y^2 + z^2 = 1 \) (in 2D, assume \( z = 0 \))
   a) a circle (the "belt")
   b) a sphere

5. Stand up and use a nearby wall to draw a picture for each problem (1)-(4), in both 2D and 3D.

6. Find the sum of the two vectors and illustrate geometrically on a nearby wall.

   (a) \((1,3), (-2,1)\)
   \[ \begin{pmatrix} 1-2 \cr 3+1 \end{pmatrix} = \begin{pmatrix} -1 \cr 4 \end{pmatrix} \]

   Find \( a + b, 3a - b, |a|, \) and \( |a + b| \).

   (b) \((1,0,-1), (2,1,-1)\)
   \[ \begin{pmatrix} 1+2 \cr 0+1 \cr -1-(-1) \end{pmatrix} = \begin{pmatrix} 3 \cr 1 \cr -2 \end{pmatrix} \]
   (This is very hard to see what's happening.)

7. \( a = (3,-7,1), b = (1,-3,2) \)
   \[ \begin{pmatrix} 3 \cr -7 \cr 1 \end{pmatrix} + \begin{pmatrix} 1 \cr -3 \cr 2 \end{pmatrix} = \begin{pmatrix} 4 \cr -10 \cr 3 \end{pmatrix} \]

   \[ |3a - b| = \sqrt{389} \approx 19.72 \text{ units} \]

8. \( a = 2i + j - 3k, \quad b = -i + 2j \)
   \[ \begin{pmatrix} 2 \cr 1 \cr -3 \end{pmatrix} + \begin{pmatrix} -1 \cr 2 \cr 0 \end{pmatrix} = \begin{pmatrix} 1 \cr 3 \cr -3 \end{pmatrix} \]
   \[ 5a - b = 7i + 5j - 9k \]
   \[ |3a - b| = \sqrt{1+9+9} = \sqrt{19} \]
   \[ |b| = \sqrt{1+4+9} = \sqrt{14} \]

9. (Extra!) First, draw the vectors \( a = (3,2), b = (2,-1), \) and \( c = (7,1) \). Then find scalars \( s \) and \( t \) so that \( sa + tb = c \).
1. \(a)\) \(b)\) 

2. \(a)\) \(b)\) 

3. \(a)\) \(b)\) 

4. \(a)\) \(b)\) 

5. \(a)\) \(b)\) 

\[ s^2 + t^2 = c^2 \]

Is the same as

\[ \langle s.3, s.2 \rangle + \langle t.2, t(-1) \rangle = \langle 7, 17 \rangle. \]

From this, get two eq’ns:

\[ \text{x-component eq’n} \]

\[ s.3 + t.2 = 7 \]

\[ \text{y-component eq’n} \]

\[ s.2 - t = 1 \]

Now solve y-comp. for \( t = 2s - 1 \). Plug this into x-comp, and get \( 3s + 2(2s-1) = 7 \Rightarrow s = \frac{9}{4} \). 

Plug this into either above, and get \( t = \frac{11}{7} \).
Trig Study Kit - Extra Credit Project

As part of my efforts to reduce test anxiety, I often allow students to earn retakes or revisions of tests. This extra credit project allowed students in my Intensive Precalculus course at UMN to earn the option of retaking their exam on our trigonometry unit.
Trig Study Kit – Extra Credit Project

This extra credit project is optional. It is quite substantial, however the payoff is high. It will be graded with either “satisfactory” or “unsatisfactory”. If you complete the assignment and earn a “satisfactory”, then you will be allowed to retake Exam III.

Assignment (optional): Create a Trig Study Kit, including subjects listed on back (at a minimum)
Due: in Lecture Monday, November 27th
Grading basis: “satisfactory” or “unsatisfactory”
Extra Credit Earned: Option to retake Exam III

Option to Retake Exam III
If you earn the option to retake Exam III, the logistics are as follows. You will take Exam III with the rest of the class. At the end of the exam, you will choose whether or not to use your option to retake. As you hand in your exam and choose to retake, you’ll also sign up for one of these two sessions:

A. 2:30–3:20pm on Tuesday, December 5th in Tate Hall 105
B. 3:35–4:25pm on Tuesday, December 5th in Tate Hall 105

If you choose to retake, your first version will not be graded or returned to you. The second version of Exam III will not be identical to the first. However, it will be quite similar.

Trig Study Kit
A Trig Study Kit could be a number of things. You have a significant amount of creative license! We highly encourage the use of visual aids in the Kit; color coding, highlighting, crafty cut-out circles, etc. Some examples include:

- unit circle and a set of flashcards with identities and types of problems
- a cheat sheet similar to the last extra credit assignment along with step-by-step examples for each main section
- a completed practice exam with exceedingly clear step-by-step solutions and an attached page covering anything not on the practice test
- a practice exam of your own creation, with solutions
- a detailed concept web relating different formulas and ideas by the essential algebraic steps used to derive one from another

You should spend at least 6 hours carefully constructing your Trig Study Kit. It will be graded on the following criteria:

i. Substantial: covering at least the below topics, in detail.

ii. Accurate: the information presented in the Kit must be correct.

iii. Helpful: clearly written and easily usable by another Precalc student.

iv. Authentic: handwritten with hand-drawn figures, your Kit should be a product of your own creation.
If two Kits are exceedingly similar, neither will receive a “satisfactory”.

Our goal is that by completing your Kit, you will have studied quite comprehensively for Exam III.
Topics in a Trig Study Kit

These topics represent a minimum necessary. Covering only these walks the line between “unsatisfactory” and “satisfactory”. All of the material is from Chapters 6 through 8. It is up to you to decide which topics deserve more or less emphasis, but be careful not to leave anything important out.

1. degrees ↔ radians relationship
2. all the information of a complete unit circle
3. trig functions in terms of lengths of a triangle inscribed in a circle
4. properties of sine, cosine, and tangent (domain, range, even/odd, period,...)
5. reciprocal and quotient identities
6. Pythagorean identities
7. graphs of sine, cosine, and tangent (including transformations)
8. inverses of sine, cosine, and tangent
9. trigonometric equations (including methods)
10. establishing trigonometric identities
11. sum, difference, double, half, and square identities
12. SOH CAH TOA
13. Law of Sines, Law of Cosines and when to use them
14. word problems
15. area of a triangle
16. simple harmonic motion
17. examples of problems using the topics above

Careful! Remember to study Chapter 9 for Exam III! Chapter 9 is not strictly Trigonometry, and so it doesn’t figure into your Trig Study Kit. However, it will still be on Exam III.
Dream Course Syllabus: Math of Elections

I wrote this syllabus as part of an assignment in a course on teaching at UMN. We were asked to develop a course that we would like to teach one day. Inspired by a recent educator’s workshop on Gerrymandering, I chose to begin designing this 100-level course be accessible to non-majors.
Mathematics of Elections: Voting Theory, Decisions, and Districting

Hours and Location: Tuesday, Thursday 10:10-11:30am, Olin Hall 105

Instructor: Jasper Weinburd  
Office: 524 Vincent Hall  
Email: weinburd@umn.edu  
Office hours: M 2:30 – 4:30pm  
W 3:30 – 4:30pm

Course website: Moodle will be used primarily to distribute readings and grades to the class.  
https://ay17.moodle.umn.edu/course/view.php?id=4956


Course Description: We will explore the bizarre rules and results of democracy. We will analyze the inherent properties of various voting systems in a vacuum and in historical, societal, and economic contexts. How may we compare disparate voting systems (e.g. direct democracy vs. representative republic)? How can we evaluate the fairness or unfairness of a voting system or a result it produces? We will examine the types decisions that voters actually face at the polls and how the power of the ballot box stacks up to its mythology. Does your vote really count and when should you vote? When should you choose a likely winner and when should you vote your conscience? The last third of the course will focus on the problem of redistricting in the United States. What is Gerrymandering and how can we detect it? Why is one set of district boundaries preferable to another? We will use a mathematically rigorous framework to begin defining and answering these questions.

Learning Goals: By the end of the course, you will be able to...

- ... apply the rules of logic and the language of voting theory to diverse voting systems which you might encounter throughout the heterogeneous American republic.
- ... compare and contrast decision-making systems of government by way of multiple, quantifiable criteria in order to determine which may best fit a given situation.
- ... consider the complicated effects of historical, societal, and economic contexts on elections in addition to the clean versions existing in a mathematical vacuum.

Prerequisites: Three years of high school math or grade of at least C in Fundamentals of College Algebra. Some high school statistics will be helpful, but is not required.

Class Logistics: This class will mostly operate in a “flipped classroom” model. This means that you will see new material via readings at home before we discuss it in class or learn about it through lecture. Most weeks, we will start class with a reading quiz, which checks your understanding of that week’s reading assignment. Next, we might spend a little time in a mini-lecture or in full-class discussion. The majority of the rest of class will be taken up by work in small groups on problem sets. Your homework assignments will be to finish problem sets and write them up neatly. The semester will be divided into three units: (1) Decisions and game theory, (2) Voting Theory and strategies, and (3) Redistricting in winner-take-all systems. Each unit will end with a midterm exam. There will be no final exam. Instead, you will complete a final project, completing milestones for this project throughout the course.

Productive Discussion: Politics is becoming increasingly tricky to discuss. This class requires you to do so anyway. Although the topics we study are strictly non-partisan, we will sometimes discuss historical or contemporary political parties, elections, or events. You are encouraged to develop and state opinions on these within the context of the course. Academic freedom of expression is essential to a productive discussion. However, it is also your responsibility to state such opinions or disagreements with poise and reserve. Be calm and diplomatic, treating your classmates as colleagues.
Math 123 Math of Elections Fall 2019

Discussion with Difference: We will seek to understand all sides of each issue but especially those sides that history or the mainstream typically ignore. Such discussions will acknowledge the existence of difference and diversity while emphatically offering voice to all participants regardless of race, religion, gender identity, or sexual orientation. For the University’s full policy on Equity and Diversity, see http://regents.umn.edu/sites/regents.umn.edu/files/policies/Equity_Diversity_EO-AA.pdf.

Attendance and Participation:
Students are expected to attend class and actively participate discussions and groupwork. If you must miss class, make sure to obtain notes and handouts from one of your classmates as soon as possible. Experience shows that lackadaisical attendance or participation often result in a poor grade. On the other hand, with appropriate verification you will not be penalized for a legitimate absence (e.g. illness, intercollegiate athletic event, family emergency). In such circumstances, please be in touch with me as soon as you are able. Find more under Missed Exam Policy and at http://policy.umn.edu/education/makeupwork.

Study Groups: Class time will be collaborative, and I encourage you to continue working with classmates outside the classroom as well! It is probably the single most effective way to succeed in this course. I will provide a convenient way for students interested in forming study groups to contact each other. You are encouraged to share class notes with your classmates, and you may always find course materials available online. Please do not widely share these materials outside the classroom without my permission.

Grades:
Grades will be assigned on a curve based on weekly reading quizzes, homework assignments, three midterm exams, and a final project. Requests for regrading must be made in writing within a week.

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Quizzes</td>
<td>30%</td>
</tr>
<tr>
<td>Homework</td>
<td>25%</td>
</tr>
<tr>
<td>Midterm Exams</td>
<td>30% (total)</td>
</tr>
<tr>
<td>Final Paper</td>
<td>15%</td>
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</tbody>
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Reading Quizzes:
Each week, your assigned reading may come from our textbook or from an external sources posted to Moodle. With the assignment, you will also receive a set of questions about the reading. These questions will check your understanding of fundamental concepts and ask you to reflect on how the reading relates to your own experiences in the real world. Your reading quizzes will have questions drawn from these sets. Reading quizzes will be closed book and closed notes. You must attend class to complete a reading quiz.

Homework:
Each homework assignment will be to compile solutions or answers to (some of) the in-class problems from the prior two weeks. You will have five homework assignments. Each assignment will be graded out of 10 points:

- 6 points for accuracy on the problem(s) selected and graded
- 3 points for completion of the remainder of the assignment
- 1 point for writing the names of classmates with whom you collaborated

All submitted homework should be in your own words (even though you will usually solve the problems with your group). For more, see Academic Misconduct below.

Midterm Exams:
There will be three 60-minute midterm exams. They will be on Thursdays on:
- October 3rd (10% of total grade), November 7th (10%); and December 12th (10%).
There is no final exam.

Missed Exam Policy: If you have a legitimate conflict with any of these dates, please contact me.
immediately. Except in extraordinary situations, you should obtain permission from the instructor to miss an exam *in advance* (the sooner the better); otherwise, you will be awarded a 0. If you are excused from taking a midterm, your course grade will be determined by giving extra weight to the other two midterms or to the final project (your choice).

**Final Paper:** See separate assignment sheet.

**Questions? Looking for Help?**
- Work in study groups and learn from each other.
- Come to office hours to discuss a homework problem or any aspect of the course.
- Check the document “Comment Card Responses.pdf” on Moodle.
- E-mail: Send questions to Jasper. Please include “Math 123:” in the subject.
- The library course page offers additional study resources, such as sample final exams, alternative textbooks, and study guides. The Instructional Center at the Multicultural Center for Academic Excellence also has sample finals and other study resources.
- Free tutoring services are offered by the SMART Learning Commons at Walter and Wilson Libraries. There is a similar program at the Multicultural Center for Academic Excellence, which offers tutoring, group study space, review sessions before exams, and more.
- If you would like to hire an outside tutor (for a fee), you can find a list of tutors through the undergraduate mathematics office 115 Vincent Hall or ugrad@math.umn.edu.

**Drop Deadlines:**
The schedule for drop deadlines can be found at: https://onestop.umn.edu/dates-and-deadlines/canceladd-deadlines

**Calculators, Laptops, and Electronic Devices:**
Many of the in-class problems will require the use of a calculator or even a spreadsheet program. You are encouraged to bring a laptop for use during the groupwork portion of class. Please leave your cell phones on silent and stored off the tables during class.

Your in-class assessments will *not* require calculators or any other electronic devices and you will not be allowed to use them on any of the reading quizzes or midterms.

**Disability Accommodations:**
If you have, or think you may have, a documentable learning disability that would prevent you from doing your best on exams within the given time frame, you should immediately contact the Office for Students with Disabilities to see if they can authorize accommodations for you. Reasonable accommodations will be provided for students with disabilities on an individualized and flexible basis. The staff at Disability Services will determine said accommodations through consultation with the student. Information is available on their website at https://diversity.umn.edu/disability/, by calling 612-626-1333 (for both voice and TTY), or by sending an email to drc@umn.edu.

**Student Conduct and Academic Misconduct:**
The University of Minnesota Student Conduct Code governs all activities in the University, including this course. Students who engage in behavior that disrupts the learning environment for others may be subject to disciplinary action under the Code. This includes any behavior that substantially or repeatedly interrupts either the instructor’s ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities. Students responsible for such behavior may be asked to cancel their registration (or have their registration canceled).

Academic misconduct includes plagiarizing, cheating on assignments or exams, using a forbidden calculator while taking an exam, and taking, acquiring, or using exam materials without faculty permission. Academic
misconduct in any portion of the academic work for a course shall be grounds for awarding a grade of F or N for the entire course. For more information see http://www.oscai.umn.edu.

**Sexual Harassment:**
Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature will not be tolerated. This kind of behavior unreasonably interferes with a student’s (or professor’s) academic performance and, more importantly, creates an intimidating, hostile, and offensive working environment. The University’s full policy can be found here: http://regents.umn.edu/sites/regents.umn.edu/files/policies/SexHarassment.pdf.

**Mental Health:**
As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug overuse or abuse, feeling down, difficulty concentrating, and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. University of Minnesota services are available to assist you in addressing these and other concerns you may experience. You can learn more about the broad range of confidential mental health services available on campus at www.mentalhealth.umn.edu.
Schedule of topics, assignments, and exams

**Week 1:**
Introductions to each other and the course  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture: Electoral College

**Week 2:**
EC vs. Other Procedures?  
*Tues:* Reading Quiz  
*Thurs:* Discussion  
• Due: HW 1

**Week 3:**
Voter Preferences or Procedure?  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture

**Week 4:**
Approval or Cumulative voting?  
*Tues:* Reading Quiz  
*Thurs:* Exam 1

**Week 5:**
Chaotic Election Outcomes  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture  
• Due: HW 2

**Week 6:**
Chaotic Election Outcomes 2: Consequences  
*Tues:* Reading Quiz  
*Thurs:* Discussion  
• Due: Paper Milestone 1  
  - Examples of the World

**Week 7:**
How to be Strategic: Choice of a procedure  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture and Discussion

**Week 8:**
How to be Strategic 2: Changing the Outcome  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture  
• Due: HW 3

**Week 9:**
What Do the Voters Want?  
*Tues:* Reading Quiz  
*Thurs:* Discussion  
• Due: Paper Milestone 2  
  - Case Study Analysis

**Week 10:**
Other Assumptions: Beyond Voting  
*Tues:* Reading Quiz  
*Thurs:* Exam 2

**Week 11:**
Apportionment  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture

**Week 12:**
Districting and Gerrymandering  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture and Discussion  
• Due: HW 4

**Week 13:**
Partisan Fairness  
*Tues:* Reading Quiz  
*Thurs:* Mini-lecture  
• Due: Paper Milestone 3  
  - Legal Cases

**Week 14:**
Compactness and Geometry  
*Tues:* Reading Quiz  
*Thurs:* Squaretopia  
• Due: HW 5

**Week 15:**
Why Gerrymander?  
*Tues:* Reading Quiz  
*Thurs:* Discussion  
• Due: Final Paper
Responses to Feedback

In my courses, I ask students to provide feedback through anonymous comment cards and regular surveys. I wrote this to address student questions and concerns in my *Intensive Precalculus* course at UMN.
Responses to Comment Cards

Friday, November 11th – Student Feedback through Concensus

Thank you to everyone who was in class on this day and did the activity with Kris! I got a lot of useful information and I’m planning some specific adjustments based on your comments. Some of these I’ve already started this past week!

More complex problems in lecture

Typically, I’ve been choosing easier Example problems from each given chapter such as Exercises from the beginning of a set with the same instructions. I’ll try doing more difficult Examples, for instance from near the end of the Exercises for each section.

Less time on warm-up problems

I think this one is directly related to the above. For a simple warm-up problem I’ll start only pointing out the key idea, instead of going through a full solution. In general, I’ll move on before 10:15am.

Restructure small group activities

I want to continue doing small group work from time to time; the benefits to higher levels of learning are well documented by educational research. I’ll modify what we’re doing in two ways (1) choose difficult problems, for which you’ll really need your group’s help, and (2) always provide a significant amount of time to work on them. For a simpler problem, we’ll just work on it alone or maybe with a neighbor. In group/neighbor work, I will start calling on groups/pairs randomly – without taking volunteers.

Additional online resources

Adrienne has been doing this with some regularity, no? I also want to make sure to point out the resources you already have: Examples and odd numbered Exercises. The Examples in the textbook are all linked to a certain kind of HW problem. Following this linkage backwards, you can see step-by-step instructions when you get stuck. Secondly, odd numbered Exercises have answers in the back of the book. If you are having trouble telling whether you did a problem the right way, apply the same method to a nearby odd problem (perhaps one of the “suggested” ones) and then check your answer at the back of the book.

Preparation for exams

People liked the review we did for Exam 1 more than what we did for Exam 2, which was less extensive. If we have the time, we can do something similar before Exam 3.

People felt that Exam 2 had problems not covered by the HW. I’m very sorry to hear that, I intend problems on exams to be about the same difficulty as HW problems. It is not my intention to trick you. I want to point that you should also study the types of problems on the Practice Exam. I think 4/5 of the problems on Exam 2 had nearly the same wording as problems on Practice Exam 2.

Discussion session is helpful

There were some other comments about discussion, which I’ve passed on to Adrienne.
Wednesday, October 4th

We tend to rush through material in the last 15 minutes of class... Maybe if we shorten or skip the warm up, and leave the review to Adrienne, we will have enough time to go through the lesson.

Great comment. Yes, I have misjudged timing a couple of times in the last week or so. This course has a lot of material to get through; sometimes the best way to do that is to plow ahead and other times it is best to see a subject multiple times. Overall, I'd prefer lecture never felt rushed and so I will need to make an adjustment. I like your suggestion, thank you for the comment!

Do you know of any good resources to learn “polynomial long division”?  

Our textbook covers this topic in the appendix. It begins in §A.3, page A25, and continues with “synthetic division” (which is a shortened version of the same thing) in §A.4 on page A.33. You might also try a web search to find more resources, but I don’t have a favorite from among the first page of results.

How did we get \( x = \frac{-1 \pm \sqrt{-3}}{2} \)?

We used the quadratic formula on the equation \( x^2 + x + 1 = 0 \). (I might have made a typo at the board today and left off a negative sign.)

Monday, September 25nd

Example of Hyperbola Equation (from Lecture)

At the end of lecture today, I stumbled over an example with a hyperbola from §10.4. The full example can be found on page 654 in the textbook, but we approached it slightly differently in class. Here is the (corrected) way I intended to approach the equation in lecture.

The graph of this equation is a hyperbola.

\[
\frac{x^2}{4} - \frac{y^2}{5} = 1 \quad \text{or} \quad \frac{x^2}{2^2} - \frac{y^2}{(\sqrt{5})^2} = 1
\]

• Since the \( x \) is positive, it opens horizontally.  
  [Check: Search for \( y \)-int’s, what happens?]  

• It has vertices at \((-2, 0), \( \text{and} \) \((2, 0))\).

• It has foci at \((-3, 0), \( \text{and} \) \((3, 0))\).

• It fits the general form on the left below, with  
  \( a = 2, b = \sqrt{5}, c = 3 \) satisfying \( 3^2 = 2^2 + (\sqrt{5})^2 \).

The general equations for hyperbola centered at \((0, 0)\) are:
Math 1155, Lecture 010 Intensive Precalculus Fall 2017

<table>
<thead>
<tr>
<th>Horizontal opening Hyperbola</th>
<th>Vertical opening Hyperbola</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ \frac{x^2}{a^2} - \frac{y^2}{b^2} = 1 ]</td>
<td>[ \frac{y^2}{a^2} - \frac{x^2}{b^2} = 1 ] (we switch ( x ) with ( y ), but keep ( a ) and ( b ) in the same place)</td>
</tr>
<tr>
<td>with ( c^2 = a^2 + b^2 )</td>
<td>with ( c^2 = a^2 + b^2 )</td>
</tr>
<tr>
<td>vertices at ((\pm a, 0))</td>
<td>vertices at ((0, \pm a))</td>
</tr>
<tr>
<td>foci at ((\pm c, 0))</td>
<td>foci at ((0, \pm c))</td>
</tr>
<tr>
<td>asymptotes ( y = \pm \frac{b}{a} x )</td>
<td>asymptotes ( y = \pm \frac{a}{b} x )</td>
</tr>
</tbody>
</table>

The general equations for hyperbola centered at \((h, k)\) are similar, find them in the table on page 659.

**Friday, September 22nd**

We recently saw an equation for a parabola in §3.3 and a different equation for a parabola in §10.2. How do they compare?

**Note:** In §10.2, we learned TWO new equations for a parabola. This question is asking about the one which opens upwards (i.e. with axis of symmetry parallel to the \( y \)-axis).

The equations from §3.3 and §10.2 are similar, but the constants \( a \) in each equation mean slightly different things. The graph of each equation is a parabola with

1. axis of symmetry parallel to the \( y \)-axis
2. vertex at \((h, k)\)
3. opening up (for \( a > 0 \))

Below, I use a subscript to differentiate the constants: \( a_{3.3} \) is from Ch 3 and \( a_{10.2} \) is from Ch 10.

In §3.3
\[ y = a_{3.3}(x - h)^2 + k \]

vs.

In §10.2
\[ 4a_{10.2}(y - k) = (x - h)^2 \]

\[ \vdots \]

algebra...

\[ \vdots \]

\[ y = a_{3.3}(x - h)^2 + k \]

\[ y = \frac{1}{4a_{10.2}}(x - h)^2 + k \]

So the upshot is that \( a_{3.3} = \frac{1}{4a_{10.2}} \).

I apologize for this confusion. It is one of the disadvantages of covering Conic Sections now. The positive is that you get to see how these different equations are related and unify the two as simply slightly different versions of the same thing.

**Monday, September 18th**

Graph Transformation Table and Linear Modeling...

... Appear in a separate PDF document below. See the week of “September 18 - September 24”.

3
Friday, September 15th

Can we change the order of transformations and still get the same graph?

No, in general you cannot. Sometimes there are special cases, and sometimes there are two different sequences of transformations which will allow you to arrive at the same graph. See Figure 1.

Figure 1: Two different sequences of transformations. Both change the graph of the fundamental function $g(x) = \sqrt{x}$ into the desired graph of $f(x) = \sqrt{1-x} + 2$.

Feedback on HW 1

Here are the results from the cards you turned in today. Twenty-six students turned in cards.

1. How many hours did you spend on HW 1?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-2</td>
<td>7</td>
</tr>
<tr>
<td>2-4</td>
<td>8</td>
</tr>
<tr>
<td>4-6</td>
<td>3</td>
</tr>
<tr>
<td>6-8</td>
<td>0</td>
</tr>
<tr>
<td>8+</td>
<td>3</td>
</tr>
</tbody>
</table>

The expectation for this course is that you spend roughly 10 hours/week outside of class. Typically, I would expect HW to be about 6 of those hours (the other 4 are divided between doing the unbolded problems and reading the textbook in preparation for class). Based on this data, it looks like this homework was either too short or too easy.

Notable answer: “around 30 minutes each day” – This is exactly the right way to approach Precalculus! Do a little bit of work every day. In the coming weeks, it might need to be more than 30 minutes. Still, this person has the right idea!

2. HW 1 was...
The left box is about what I expected. We are building fundamental skills and some of the problems will simply be about “getting reps” in. The middle box tells me that this homework was skewed a little bit to the easy side. The right box tells me that I haven’t clearly outlined how much work I expect this course to be. The majority of students took less than 4 hours to complete the assignment, and yet thought it was a “medium” length. Meanwhile, I would think 5–7 hours would be “medium” length. I will try to highlight this disparity in class.

3. How well prepared were you? Here I did some interpreting...

<table>
<thead>
<tr>
<th>had to review prerequisite material (Appendix A)</th>
<th>medium prepared</th>
<th>well prepared</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

This is about what I expected for the start of the course.
4 Evidence of Effective Teaching

Graduate Student Teaching Award
In my first semester of teaching, I earned this award from the Council of Graduate Students. It is granted annually to a selection of teaching assistants across the University on the basis of student recommendations.

Student Evaluations
The remainder of this section includes summaries of student evaluations of my performance as an instructor. Upon request, I’m happy to provide full teaching evaluations and evaluations from courses for which I was a teaching assistant.

Calculus II, St. Olaf College (Fall 2018)
At the end of the semester, students filled out a college-wide St. Olaf course evaluation form. Of the 18 students enrolled, 15 were present in class and filled out the form. Students were asked “How consistently did the instructor engage in the following practices?” On the next page, I have compiled a summary of scored responses on a scale from 1 (Not at all) to 5 (Almost always).
<table>
<thead>
<tr>
<th>Projected Audience</th>
<th>How consistently did the instructor engage in the following practices?</th>
<th>No answer</th>
<th>Not at all</th>
<th>A few times</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Almost always</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 Responses</td>
<td>1. Accommodating different learning needs and styles</td>
<td>2</td>
<td>3</td>
<td>10</td>
<td>4.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response %</td>
<td>2. Explaining important information ideas, or concepts clearly</td>
<td>1</td>
<td>9</td>
<td>5</td>
<td>4.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Responses</td>
<td>3. Encouraging students to develop and express their own ideas and perspectives</td>
<td>7</td>
<td>8</td>
<td>4.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Response %</td>
<td>4. Encouraging students to consider carefully the ideas and perspectives of others</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>4.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>83.33%</td>
<td>5. Using class time to stimulate intellectual engagement with course topics</td>
<td>4</td>
<td>4</td>
<td>7</td>
<td>4.20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Providing opportunities for students to apply their learning to new problems, issues, or topics</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>4.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Communicating clear expectations for student work</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>4.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Providing assistance as needed outside of class</td>
<td>4</td>
<td>11</td>
<td>4.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Providing helpful feedback on assignments</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>4.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Providing timely feedback on assignments</td>
<td>7</td>
<td>8</td>
<td>4.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Conveying respect for students</td>
<td>15</td>
<td>5.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.45</td>
</tr>
</tbody>
</table>

Calculus II, St. Olaf College (Fall 2018)
Intensive Precalculus, University of Minnesota (Fall 2017)

At the end of the semester, students filled out a University-wide course evaluation form. Of the 27 students enrolled, 20 were present in class and filled out the form. Students were asked to select a response in agreement or disagreement with five statements. In the following pages, I have included a summary of scored responses on a scale from 0 (Strongly disagree) to 6 (Strongly agree).
SRT Individual Report for MATH 1155 010 Intensive Precalculus (Jasper Weinburd) - Fall 2017

Student Rating of Teaching - Fall 2017
Project Audience 27
Responses Received 20
Response Ratio 74.07%

Report Comments
Office of Measurement Services
Phone: 612.626.0006
Fax: 612.624.1336
879 29th Ave. S.E. Room 103
Minneapolis, MN 55414
http://oms.umn.edu
eval@umn.edu

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Creation Date   Tue, Sep 18, 2018
Instructor Items
Carefully read each statement and select a response: - Score

Overall
Mean 5.25

1. The instructor was well prepared for class.
Mean 5.65

2. The instructor presented the subject matter clearly.
Mean 4.90

3. The instructor provided feedback intended to improve my course performance.
Mean 5.05

4. The instructor treated me with respect.
Mean 5.55

5. I would recommend this instructor to other students.
Mean 5.10
**Instructor Items**

Carefully read each statement and select a response: - Frequency

1. The instructor was well prepared for class.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>14 (70.00%)</td>
</tr>
<tr>
<td>Agree</td>
<td>5 (25.00%)</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>1 (5.00%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Statistics**

- **Mean**: 5.65
- **Median**: 6.00
- **Standard Deviation**: 0.59

2. The instructor presented the subject matter clearly.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>6 (30.00%)</td>
</tr>
<tr>
<td>Agree</td>
<td>9 (45.00%)</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>3 (15.00%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>1 (5.00%)</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Statistics**

- **Mean**: 4.90
- **Median**: 5.00
- **Standard Deviation**: 1.07

3. The instructor provided feedback intended to improve my course performance.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>10 (50.00%)</td>
</tr>
<tr>
<td>Agree</td>
<td>4 (20.00%)</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>4 (20.00%)</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>1 (5.00%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>1 (5.00%)</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Statistics**

- **Mean**: 5.05
- **Median**: 5.50
- **Standard Deviation**: 1.19

4. The instructor treated me with respect.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>15 (75.00%)</td>
</tr>
<tr>
<td>Agree</td>
<td>3 (15.00%)</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>2 (10.00%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Statistics**

- **Mean**: 5.55
- **Median**: 5.50
- **Standard Deviation**: 0.94

5. I would recommend this instructor to other students.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>10 (50.00%)</td>
</tr>
<tr>
<td>Agree</td>
<td>7 (35.00%)</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>2 (10.00%)</td>
</tr>
<tr>
<td>Disagree</td>
<td>0 (0.00%)</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>1 (5.00%)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

**Statistics**

- **Mean**: 5.10
- **Median**: 5.50
- **Standard Deviation**: 1.33
Calculus II, University of Minnesota (Summer 2015)

At the end of the semester, students filled out a University-wide course evaluation form. Of the 14 students enrolled, 13 were present in class and filled out the form. Students were asked to select a response in agreement or disagreement with five statements. In the following pages, I have included a summary of scored responses on a scale from 0 (Strongly disagree) to 6 (Strongly agree).
SRT Individual Report for MATH 1272 003 Calculus II (Jasper Weinburd) - Summer 2015

Student Rating of Teaching - Summer 2015
Project Audience 14
Responses Received 13
Response Ratio 92.86%

<table>
<thead>
<tr>
<th>Report Comments</th>
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<tbody>
<tr>
<td>Office of Measurement Services</td>
</tr>
<tr>
<td>Phone: 612.626.0006</td>
</tr>
<tr>
<td>Fax: 612.624.1336</td>
</tr>
<tr>
<td>879 29th Ave. S.E. Room 103</td>
</tr>
<tr>
<td>Minneapolis, MN 55414</td>
</tr>
<tr>
<td><a href="http://oms.umn.edu">http://oms.umn.edu</a></td>
</tr>
<tr>
<td><a href="mailto:eval@umn.edu">eval@umn.edu</a></td>
</tr>
</tbody>
</table>

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Creation Date    Thu, Jun 23, 2016
Instructor Items Carefully read each statement and select a response: - Score

Overall

1. The instructor was well prepared for class.

2. The instructor presented the subject matter clearly.

3. The instructor provided feedback intended to improve my course performance.

4. The instructor treated me with respect.

5. I would recommend this instructor to other students.
1. The instructor was well prepared for class.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Strongly Agree</td>
<td>10</td>
<td>76.92%</td>
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<tr>
<td>Agree</td>
<td>3</td>
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<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
<td></td>
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</tbody>
</table>

Statistics
- Mean: 5.77
- Median: 6.00
- Standard Deviation: +/-0.44

2. The instructor presented the subject matter clearly.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Agree</td>
<td>4</td>
<td>30.77%</td>
</tr>
<tr>
<td>Somewhat Agree</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
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<td>0.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
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Statistics
- Mean: 5.54
- Median: 6.00
- Standard Deviation: +/-0.66

3. The instructor provided feedback intended to improve my course performance.

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
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</thead>
<tbody>
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<td>69.23%</td>
</tr>
<tr>
<td>Agree</td>
<td>2</td>
<td>15.38%</td>
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<tr>
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<td>7.69%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>0</td>
<td>0.00%</td>
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<tr>
<td>Disagree</td>
<td>1</td>
<td>7.69%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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Statistics
- Mean: 5.38
- Median: 6.00
- Standard Deviation: +/-1.19

4. The instructor treated me with respect.

<table>
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<tr>
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</thead>
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<tr>
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<td>0.00%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
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</tbody>
</table>

Statistics
- Mean: 5.85
- Median: 6.00
- Standard Deviation: +/-0.38

5. I would recommend this instructor to other students.

<table>
<thead>
<tr>
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<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
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<tr>
<td>Somewhat Agree</td>
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<td>0.00%</td>
</tr>
<tr>
<td>Somewhat Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>13</strong></td>
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</tbody>
</table>

Statistics
- Mean: 5.69
- Median: 6.00
- Standard Deviation: +/-0.48
5 Pedagogical Training

Seminar on Scholarship of Teaching and Learning in Mathematics

Center for Educational Programs, School of Mathematics, UMN 2018–present

This monthly seminar invites an internal speaker to present on the scholarship of teaching and learning around a technique or idea, often one they have recently implemented in their own teaching. Past topics include video textbooks in active learning classrooms, project-based learning through the cognitive load perspective, and flipping the classroom in an upper division course.

Student Seminar in Undergraduate Mathematics Education

School of Mathematics, UMN 2013–present

This monthly seminar is organized for and by graduate students as a forum to discuss and improve our teaching. Often, we invite visitors from the Center for Educational Innovation, UMN. Common topics include facilitating group work, writing activities and assessments, and collecting and responding to feedback. Additionally, the seminar organizes class observations between participants.

To Include is to Excel

St. Olaf College Fall 2018

◦ Teaching Research and Writing: Inclusive Practices
  An outside consultant lead this discussion for St. Olaf faculty. We explored ways that identity and experience shape students as writers and researchers, from how they choose a research topic to how they express their linguistic diversity in a final draft. We discussed concrete practices for a pedagogical toolkit to help ensure that students from all backgrounds can thrive.

◦ Creating an Inclusive Campus Environment
  An outside facilitator lead this discussion as part of orientation for the full St. Olaf faculty. This session focused on strategies and tools faculty can to create a more welcoming and inclusive environment. We engaged in small and large group discussions on enhancing communication across cultures, reducing implicit bias, and preventing microaggression.

Difficult Dialogues Workshop: How to be a Better Ally

SIAM Annual Conference, Portland, OR August 2018

This afternoon-long workshop was the best-attended minisymposium I’ve ever seen at a SIAM Conference! An independent consultant lead an audience of faculty, postdocs, and students from diverse institutions through a presentation on the essential elements of acknowledging, recognizing, and acting on the structures of white supremacy and patriarchy.

Geometry of Redistricting: Educator’s Workshop

Metric Geometry and Gerrymandering Group, Madison, WI October 2017

This two-day workshop followed a two-day conference on gerrymandering that included talks by mathematicians, political scientists, and lawyers. The Educator Workshop provided concrete tools for incorporating mathematical topics related to voting, gerrymandering, and civil rights into coursework at the undergraduate and high school levels.

Teaching in Higher Education

Preparing Future Faculty Program, Graduate School, UMN Fall 2017

I took this semester-long graduate course to become a more reflective and responsive teacher. The instructor modeled a variety of active learning strategies and facilitated discussions addressing educa-
tional theory and practice. By combining action and analysis, we developed teaching skills that promote learning within a diverse student body across a variety of settings.

**Philosophy of Education**

*Bard College Spring 2011*

This undergraduate course introduced modern western pedagogy through a seminar-style classroom. We read authors from Plato and Rousseau to Friere, Dewey, and Arendt.

**Writing Pedagogy and Practice**

*Academic Resource Center, Bard College Fall 2017*

I took this undergraduate course in order to become a writing tutor for proof-based classes. It covered basic elements of pedagogical theory and focused on practical tools for teaching the processes of starting, writing, revising, and revising some more.