

**Exploring Topics and Careers in Mathematics**  
**Math 1480, Section 501**  
**Spring 2022**  
**Meeting Once a Week in Zoom**

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Office Hours  
MW 8:15 - 9:00 AM at Tomé  
MW 12:45-1:30 PM at WTC  
TR 4:30-6:00 PM in Zoom  
or by appointment

## 1 Overview

Welcome to Math 1480. Here is the UNM course description.

This introduction course will prepare students planning to major in Mathematics or Statistics. The course will emphasize career options, concentrations, and research and job opportunities. Activities are designed to engage students in their chosen field.

Pre-requisites/placement: Successful completion of MATH 1230 and MATH 1240, or ACCU-PLACER score of 100-120 (College-Level Math) or ACT>=32 or SAT>=700.

Note: This syllabus is subject to change, if needed.

## 2 Course Structure

The course content includes the following.

- Assignments / Projects (80 points)
  - 8 scientific computing projects in Python (10 points each)
    - \* Polynomial interpolation
    - \* Numerical solutions of ordinary differential equations using
    - \* Finite differences for approximating derivatives
    - \* Boundary value problems
    - \* Quadrature (numerical integration)
- Attendance each week in Zoom (20 points)
- Total (100 points)

### 3 Grading Policy

Your grades will be calculated as follows.

| <b>Point Total</b> | <b>Grade</b> |
|--------------------|--------------|
| [98,100]           | A+           |
| [92, 98)           | A            |
| [90,92)            | A-           |
| [88,90)            | B+           |
| [82,88)            | B            |
| [80,82)            | B-           |
| [78,80)            | C+           |
| [70,78)            | C            |
| [68,70)            | D+           |
| [62,68)            | D            |
| [60,62)            | D-           |
| [0,60)             | F            |

### 4 Possible Additional Topics of Discussion

1. Typing Mathematics using LaTeX
2. Actuarial Science
3. Computer Programming / Algorithm Development
4. Data Science / Machine Learning
5. Engineering
6. Physics
7. Quantitative Finance
8. Research at a Government Lab or Private Contractor
9. Statistics
10. Teaching/Research at a College/University

### 5 Academic Integrity

We will follow university policy on academic integrity.

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy: <https://policy.unm.edu/regents-policies/section-4/4-8.html>. The policy states:

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

## **6 Students with Disabilities**

If you have a documented disability, please provide me with a copy of your letter from Equal Access Services as soon as possible to ensure that accommodations are provided in a timely manner.

## **7 EQUAL OPPORTUNITY AND NON-DISCRIMINATION:**

In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education (see page 15 of this [link](#)). This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity ([oeo.unm.edu](http://oeo.unm.edu)). For more information on the campus policy regarding sexual misconduct, see: <https://policy.unm.edu/university-policies/2000/2740.html>.