Syllabus

Math 130: Exploring Topics and Careers in Mathematics

Instructor: Dr. Alfonso Heras **Email:** aheras@unm.edu

Office Hours: (@ my office) M-TH: 8:00 - 9:00 am and (@ the STEM Center) T\Th: 10:30 - 11:30
Office: A-142A **Class/Schedule:** T&Th 12:30-12:50 pm

Master Syllabus Information

Course Description: Introduction and preparation for students planning to major on Mathematics or Statistics. The course will emphasize career options, concentrations, and, research and job opportunities. We will also perform activities to engage students in the mathematical area.

Prerequisite: Math 123 or Math 150.

Course objective and Student Learning Outcomes
Upon completion of this course students will be able to:

1. Identify career options available to mathematics and statistics majors.
2. Demonstrate an understanding of the aspects of the culture of the mathematics community.
3. Specify a concentration of mathematics they want to follow, and develop a plan of study.

Textbook: Selected Readings.

- Peter Casazza, Steven G. Krantz and Randy D. Ruden. *I, Mathematician*, MAA.
- Lara Alcock. *How to Study as a Mathematic Major,* Oxford University Press.
- Stephen Lambert, Ruth DeCotis, *Great Jobs for Math Majors*, Second edition.
- Independent Reading and Research.

Grading: The grading is explained on the following table:

Assigned Task	Point-Distribution	Points
*Project and Presentation 1	50 points for written project, 50 points for presentation and 100 points for the quiz.	200
*Project and Presentation 2	50 points for written project, 50 points for presentation and 100 points for the quiz.	200
*Project and Presentation 3	50 points for written project, 50 points for presentation and 100 points for the quiz.	200
Poster Presentation	100 points for poster presentation, 100 points for poster quiz.	200
**Final Project: Projects Compilation and Declaration of Major	200 points for the Project Compilation and 200 points for the Major Declaration.	400
Total		**1200**

***The individual projects:** The student will prepare and present an assigned project to the class, then a 15 minute quiz will be administrated the following time the class meet. A rubric for these projects will be given on advance.

****Projects compilation and Declaration of Major:** This is a written document consisting of the compilation of all the individual projects presented by the students. This final work must have the following components:

1. **Title Page:** Containing the title, Name of the corresponding author (Student name), purpose of the compilation, name of the institution and date.
2. **The last Chapter:** The last Chapter will be the declaration of major and the study plan.
3. **Table of content:** Each individual project will be a chapter in the final work and the Bibliography.

Letter Grade Distribution	A: 90-100%.	B: 80-89%.	C: 70-79%.	D: 60-69%.	F: 0-59%.

Student Behavior: According with the Code of Conduct as stated in the Policies and Regulations for UNM, student activities that interfere with the rights of others to pursue their education or to conduct their University duties and responsibilities will lead to disciplinary action. This includes any activities that are disruptive to the class and any acts of academic dishonesty. Students are expected to behave in a courteous and respectful manner towards the instructor and their fellow students.

Attendance: It is the Math Department's policy that attendance is mandatory. A student may be dropped after three absences unless you can document that your situation warrants special consideration. A student may be dropped if you miss a test and do not schedule a make-up.

Disability Statement: We will accommodate students with documented disabilities. During the first two weeks of the semester, those students should inform the instructor of their particular needs.

Tentative Schedule

Week	Individual Study	Book	In class Activities
1	**Who are Mathematicians?**	**1**	Introduction
2	***Part I of the book	**1**	Presentation 1
3	**On Becoming a Mathematician** (Part II in book 1)	**1**	
4	*** Part II of the book	**1**	Presentation 2
5	**Why I Become a Mathematician?** (Part III in book 1)	**1**	
6	*** Part III of the book	**1**	Presentations 3
7	***What Pure Mathematics major is about?	**2**	Guest Speaker 1 (Pure Math)
8	***What Applied Mathematics major is about?	**2**	Guest Speaker 2 (Applied Math)
9	***What Statistics major is about?	**3**	Guest Speaker 3 (Statistics)
10	***Where can we find "Math-jobs"?	**3**	NSF Speaker
11	Preparing My Poster Presentation		**Poster Presentation**
12	Looking for my Major Curriculum	**3**	Constructing your Curriculum
13	Which are the best-fit universities for me?	**3**	Preparing my Portfolio
14	What research and Careers opportunities do I have?	**3**	Preparing my Portfolio
15	Preparing My Final Project (Study Plan Developing)		Presenting My Final Project
16	Preparing My Final Project (Study Plan Developing)		Presenting My Final Project

****Books for the Readings:Book 1: Peter Casazza, Steven G. Krantz and Randy D. Ruden. *I, Mathematician*, MAA.**

- **Book 2: Lara Alcock. *How to Study as a Mathematic Major,* Oxford University Press.**
- **Book 3: Stephen Lambert, Ruth DeCotis, *Great Jobs for Math Majors*, Second edition.**
- **Independent Reading and Research.**