

These slides, as well as all the information about the course, can be found at:  
(shortcut: Google "Moira Chas")

<http://www.math.stonybrook.edu/~moira/courses/mat336-sp2020/>

## MAT 336 History of Mathematics

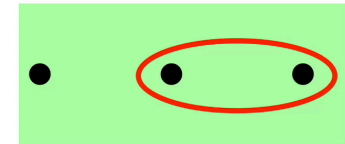
## Space, cyberspace and time coordinates of your instructor



- ❖ Moira Chas, Associate professor
- ❖ Best way to contact me:
  - ❖ moira.chas at stonybrook.edu
  - ❖ Website: <http://www.math.sunysb.edu/~moira/>
  - ❖ Office: 3-119 Math Tower
  - ❖ How to address me? Professor Chas is OK

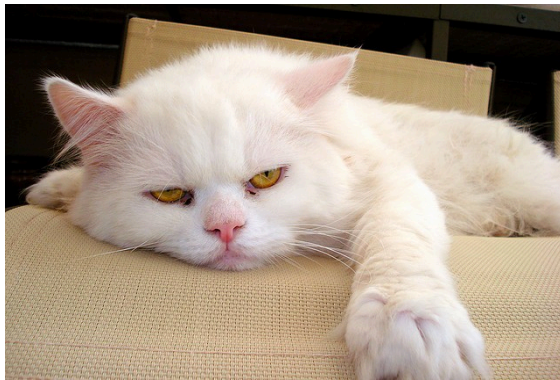
### Office hours:

- ❖ Tu- Th 11:30 to 12:30pm,  
Thursday 9 to 10am in 3-119  
Math Tower. and/or by  
**appointment**



By appointment

## Administrative stuff



## Online Resources

- ✦ Course Website:
  - ✦ <http://www.math.stonybrook.edu/~moira/courses/mat336-sp2020/>
    - ✦ Syllabus, homework schedule, announcements, due dates, link of forms.
  - ✦ <http://www.math.stonybrook.edu/~moira/courses/mat336-sp2020/Material>
    - ✦ Slides, and other materials (including the one you are reading)
- ✦ Blackboard:
  - ✦ Grades
  - ✦ Submission of term paper

## (Google) forms - in the course schedule

- ♦ Homework 0
- ♦ Choice of in-class presentation topic
- ♦ In-class presentation topic materials
- ♦ Paper
- ♦ (Optional) Absences

## Textbooks

Textbooks:

David M. Burton, The History of Mathematics, 6th or 7th edition

William Dunham, Journey Through Genius, Penguin 1990. paperback ISBN 978014014739-1. (Recommended)

Tentative Schedule Homework is updated each Friday Morning

### MAT 336 History of Mathematics Spring 2020 Lecture 2

Schedule Syllabus The term paper

**MAT 336 Schedule** (This schedule is subject to change.)

Week #	Sec	Topic (Readings indicated in brown)	Homework	Presentations	Due dates/Forms/Material
Jan 27	1	Administrative stuff. What is mathematics? Primitive counting; Number recording of Egyptians and Greeks	S1.2: 1,2,3,4,11,12,13		If you have been absent or will need to, please fill this form.  Form for choosing the topic of the in-class presentation

## Grades policy

- ♦ The final grade will be based on
  - ♦ Weekly quizzes 30%
  - ♦ Presentation 20%
  - ♦ Term paper 45%
  - ♦ Class participation 5%
- ♦ Class participation means being active and present in class, asking relevant questions and working on the proposed activities.

---

## Quizzes

---

- ❖ About 15 minutes long.
- ❖ On the previous weeks material.
- ❖ Homework-type problems and basic questions.
- ❖ The weekly quizzes will be about what has been discussed in class during the previous couple of weeks, as well as the reading.
- ❖ A Sample Quiz is posted in the course website.
- ❖ There will be no make-ups for the quizzes. Anyone absent will receive a zero unless there is a serious documented reason. In this case, the grade will be determined based on the balance of the work in the course.

---

## Homework

---

- ❖ Homework problems will be posted each Friday before 10am (and will be the “inspiration” of the following weeks quizzes).
- ❖ Problems will not be collected.

---

## Presentation

---

- ❖ 15 minutes long
- ❖ Afterwards, there will be a 5 minute class discussion, in which the other students can ask questions, or make comments about the presentation.
- ❖ If you want to use PowerPoint or other presentation software, you have to email me the slides at least a two days before the presentation.
- ❖ The slides cannot contain more than 100 words in total. (If you really need to put more than 100 words, discuss it with me)
- ❖ Notes to help your memory are fine.

---

## Presentation

---



- ❖ Speaking in public can be scary, but we will be a kind, supporting audience, rooting for you.
- ❖ It is fine not to be able to answer questions in the spot. If that happens, keep thinking about it and tell us the following week.
- ❖ After some presentations, each student will write a few sentences about its content.
- ❖ The schedule for student in-class presentations is subject to change. All changes will be announced in class.

---

## Presentation Topics

---

- ❖ *How to distribute them?*

---

## Presentation rubrik

---

- ❖ (10 points) Outline Content (due the week before)
- ❖ (10 points) Outline Bibliography (due the week before)
- ❖ (5 points) Time Management (no less than 10 mins, no more than 15)
- ❖ (5 points) Speaking in a Clear, Easily-Audible Voice
- ❖ (5 points) Creativity/Originality of Presentation
- ❖ (5 points) New information and/or important issues are considered and/or sparks questions
- ❖ (20 points) Historical context
- ❖ (40 points) Mathematical Content

Handouts are encouraged

There are no dumb questions

---

## Paper

---

- ❖ Each student will write a term paper on a topic that must be approved by the instructor.
- ❖ The content should be mathematical and historical.
- ❖ The target length of the paper should at least 2500 words (excluding the bibliography), in an easily readable font (possibly Times New Roman or Cambria), in 12pt size, double spaced.
- ❖ It must contain relevant diagrams or figures.

---

## Paper

---

- ❖ The term paper will be graded on its content, as well as on how well it is written. A way to start writing a good paper is first **understand** the topic the paper is about.
- ❖ The term paper should be submitted on Blackboard, before Tuesday May 5th.
- ❖ The bibliography and outline should be submitted beforehand (all due dates are announced on the schedule).

---

## ACADEMIC DISHONESTY

---

- All work you submit **MUST** be your own work.
- If you cheat or aid someone in cheating, you will automatically fail this course and be brought up on charges of academic dishonesty without warning.
- Cheating includes: presenting work of other as your own, copying other student work, facilitate that other student copies your work, use of notes, calculators and/or electronic devices during examinations.
- The term paper will be checked with SafeAssign and if cheating is detected, it will be reported to the Academic Judiciary.

---

## Cellphones, computers, books... during lecture

---

- ❖ The policy is ?

---

## Attendance

---

- ❖ Attendance and participation is expected and is part of the grade.

---

## Tips to succeed in this course

---

- ❖ Work on the assigned homework (which will not be collected but will help you in the quizzes.)
- ❖ Start working on the presentation and paper *early*
- ❖ Attend the lectures, and when you do, *be completely* in the class. (This implies no use of electronics for non-class purposes. Note: cell-phone is electronic)
- ❖ Read the book... but not during the lecture.

---

## Also

---

- ❖ If there is any issue that interferes with your work in this course, communicate with me as soon as possible.
- ❖ I tend to ask questions in the class, not to evaluate the audience but to guide their thoughts.
- ❖ Asking questions in a class setting is not always easy, but it does get easier with practice.

Constructive feedback is welcomed by me, your instructor.

---

## Email communications

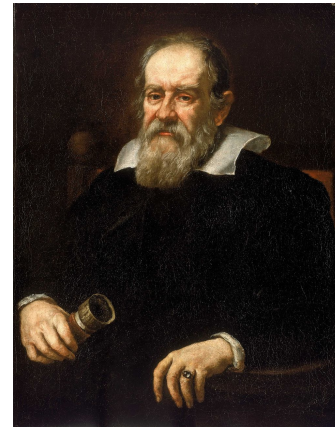
---

- During the semester, I will send a few emails. Please make sure that you check the Stony Brook email account regularly.
- Messages should be written in complete English sentences.
- I check my email about once a day, so expect my answer accordingly.
- I cannot answer long questions by email. This is office hours are for.

Make groups of 3, 4 students.

- ❖ Exchange ways of communication (email, phone number, smoke signals, whatever you are comfortable with).
- ❖ Write down two or three sentences explaining what is mathematics.

Philosophy is written in that great book which ever lies before our eyes – I mean the universe – but we cannot understand it if we do not first learn the language and grasp the symbols, in which it is written.



This book is written in the mathematical language, and the symbols are triangles, circles and other geometrical figures, without whose help it is impossible to comprehend a single word of it; without which one wanders in vain through a dark labyrinth.

Galileo Galilei

## Timeline for the History of Mathematics

[Link on the schedule](#)

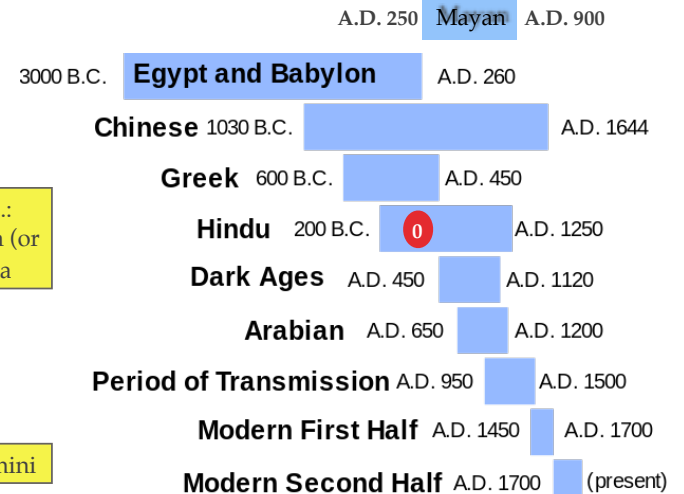
### A Time-line for the History of Mathematics (Many of the early dates are approximates)

This work is under constant revision, so come back later. Please report any errors to me at [richardson@math.wichita.edu](mailto:richardson@math.wichita.edu).

It should be noted that the brief descriptions given are just that "brief." Their purpose is to hopefully instill a little curiosity and encourage the reader to seek out further knowledge on these people and topics.

50,000 B.C.E. Evidence of counting	50,000 B.C.E. Neanderthal man
25,000 B.C.E. Primitive geometrical designs	25,000 B.C.E. Paleolithic art: Cro-Magnon man
	4000 B.C.E. Use of metals
3000 B.C.E. Hieroglyphic numerals in Egypt	3500 B.C.E. Writing
2773 B.C.E. Likely introduction of the Egyptian calendar (Some hypothesize 4241 B.C.E. as the origin.)	3000 B.C.E. Use of wheeled vehicles
2400 B.C.E. Positional notation for numbers in Mesopotamia	2500 B.C.E. Great Pyramid
1850 B.C.E. Moscow Papyrus: arithmetic	2400 B.C.E. Sumerian-Akkadian Empire
1650 B.C.E. Rhind Papyrus	1800 B.C.E. Code of Hammurabi
	1700 B.C.E. Stonehenge in England
	1400 B.C.E. Catastrophe in Crete-fall of the Minoan Civilization
	1350 B.C.E. Use of iron: sundials; water clocks
	1200 B.C.E. Trojan war
	776 B.C.E. First Olympiad
	753 B.C.E. Founding of Rome
	740 B.C.E. Works of Homer and Hesiod
	...

Also, last pages of the book contain a time table.



This file is licensed under the [Creative Commons Attribution-Share Alike 3.0 Unported](#) license.

TABLE 1

Fixed mindset	Instead of	Try thinking	Growth mindset
	I am not good at this	What am I missing?	
	I am awesome at this	I am on the right track	
	I give up	This might take longer than I expected	
	This is too hard	I'll try to use some of the strategies we learned	
	I can't make it any better	I can improve if I keep trying	
	I am not a math person	I can train my brain to do math.	
	I am upset because I made a mistake	Mistakes help me learn better	
	The problem is that X is smarter than me	I'll try to learn how X does it.	
	It is good enough	How can I improve this?	
	My strategy didn't work.	What other strategy I can try?	
	This is too easy for me	Can I understand this more deeply?	
	Unknown source		