

MAT 336 HISTORY OF MATHEMATICS SYLLABUS

We will study the history of mathematics, from the earliest times to the beginning of the 20th century.

Special attention will be paid to the contributions of the Inca, Mayans, Babylonians, Greeks, Hindus, Arabs, Chinese and to the subsequent later European developments into the modern era.

INSTRUCTOR: Professor C. Denson Hill, Office 2-113 Math Tower
Office Hours: Monday & Wednesday 2:00-3:30 pm.

TEXTBOOKS: (required)

1. David M. Burton, *The History of Mathematics*, 7th edition, McGrawhill 2011.
paperback ISBN 9780071289207.
2. William Dunham, *Journey Through Genius*, Penguin 1990.
paperback ISBN 978014014739-1.

GRADING POLICY: Weekly Quizzes 30 %, Class Presentation 20 %, Term Paper 50 %.

Homework from Burton will be assigned each week, but it is not to be handed in. Reading from both textbooks will also be assigned each week. The weekly quizzes will be over the assigned homework, and the assigned reading, as well as what is discussed in class, usually from the previous week.

Each student will give a 15 minute oral presentation in front of the class over a topic assigned by the instructor. After the presentation, there will be a 5 minute class discussion, in which the other students can ask questions, or make comments about the presentation.

Each student will write a term paper of 15 – 20 pages on a topic that must be approved by the instructor. The term paper will be graded on it's content, as well as on how well it is written. The term paper should be handed in on Monday, May 4, in class. Late papers cannot be accepted. There will be no final exam.

WRITING REQUIREMENT: Successful completion of MAT 336 with a C or better satisfies DEC H and the expository portion of the upper-division writing requirement for the mathematics major, as well as the STAS, WRTD, and SPK objectives in the Stony Brook Curriculum (see statements below)

WEEK BY WEEK ASSIGNMENTS: The homework and reading assignments, week by week are listed on the following pages.

As noted above, a grade of C or better in this course will fulfill the STAS, SPK, and WRTD requirements of the Stony Brook Curriculum, as well as fulfilling DEC H. The learning outcomes corresponding to the SBC objectives are:

Learning Outcomes for “Understand relationships between Science or Technology and the Arts, Humanities or Social Sciences (STAS)”

1. Apply concepts and tools drawn from any field of study in order to understand the links between science or technology and the arts, humanities or social sciences.
2. Synthesize quantitative and/or technical information and qualitative information to make informed judgments about the reciprocal relationship between science or technology and the arts, humanities or social sciences.

Learning Outcomes for “Speak Effectively before an Audience (SPK)”

1. Research a topic, develop an oral argument and organize supporting details.
2. Deliver a proficient and substantial oral presentation for the intended audience using appropriate media.
3. Evaluate oral presentations of others according to specific criteria.

Learning Outcomes for “Write Effectively within One’s Discipline (WRTD)”

1. Collect the most pertinent evidence, draw appropriate disciplinary inferences, organize effectively for one's intended audience, and write in a confident voice using correct grammar and punctuation.

Disability Support Services (DSS):

If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Disability Support Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748. They will determine with you what accommodations, if any, are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: <http://www.stonybrook.edu/ehs/fire/disabilities>

Academic Integrity:

Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty are required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/commcms/academic_integrity/index.html

Critical Incident Management

Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn.

Week	Reading in Burton	Homework in Burton	Reading in Dunham
1	§1.1, 1.3	§1.3: 1-5, 13, 14, 15.	
Jan 25 — Jan 31	§2.5		
2	§1.2	§1.3: 7, 9.	ch 1
Feb 1 — Feb 7	§2.1, 2.6	§2.5: 1, 2, 9, 11.	
3	§2.2, 2.3	§2.6: 1, 2.	ch 2
Feb 8 — Feb 14	§3.1	§2.3: 1, 2, 3.	
4	§3.3	§3.3: 1, 5, 8, 15, 16.	Ch 3
Feb 15 — Feb 21	§4.1, 4.2	§4.2: 11, 12.	
5	§4.3, 4.5	§4.3: 15, 16.	Ch 4
Feb 22 — Feb 28		§4.5: 1, 2, 4, 5.	
6	§5.3, 5.5	§5.3: 13, 14, 16.	ch 5
Mar 1 — Mar 7		§5.5: 1, 2, 10, 11.	
7	§6.2	§6.2: 1, 2, 3, 4.	ch 6
Mar 8 — Mar 14	§7.2, 7.3	§7.3: 3 _{ab} , 5, 8, 16.	
8		SPRING Break	
Mar 15 — Mar 21			
9	§8.1, 8.2	§8.1: 12, 13.	ch 7
Mar 22 — Mar 28		§8.2: 1, 2, 6, 7.	

10	§ 8.3, 8.4	§ <u>8.3</u> : 1, 3, 4. § <u>8.4</u> : 1, 3, 4, 5.	ch 8
Mar 29 — April 4			
11	§ 9.1, 9.2 9.3	§ <u>9.2</u> : 1 _{ac} , 2, 9, 10 _{bc} . § <u>9.3</u> : 1, 4 _{ab} , 11 _{ab} , 14.	ch 9
April 5 — April 11			
12	§ 10.2, 10.3	§ <u>10.2</u> : 2, 4, 11. § <u>10.3</u> : 4, 6, 8, 12, 13.	ch 10
April 12 — April 18			
13	§ 11.3, 11.4 11.1, 11.2	§ <u>11.3</u> : 3, 4, 7, 10 _a . § <u>11.4</u> : 1, 2, 6, 9. § <u>11.1</u> : 1, 2, 11.	ch 11
April 19 — April 25			
14	§ 12.1, 12.2 12.3	§ <u>12.2</u> : 1, 9. § <u>12.3</u> : 5, 7.	ch 12
April 26 — May 2			
15	§ 13.1, 13.2 13.3	Term Papers Due on Monday, May 4 [No late papers accepted]	
May 3 — May 9			