



The Nature of Mathematics

#BiolaMath

MATH 120 – Fall 2018

Syllabus Summary



Instructor: Mr. Matthew Weathers
Matthew.Weathers@biola.edu

Class web site: <http://math.biola.edu/math120> (Syllabus and general info)

Canvas site: <https://canvas.biola.edu> (Online grades, HW, and quizzes)

The class web site will have information and instructions, with links to other things you need. I will also use your **@biola.edu** email as a way of sending class announcements and reminders.

My contact information:

By e-mail: Matthew.Weathers@biola.edu

By Phone: Cell phone: (562) 322-7427 (*OK to text/call 24hrs, I silence it at night & in class*)
Biola ext. 3277 or (562) 944-0351, ext. 3277 (*My Biola office*)

Math Dept. secretary: Jerriane Smith, Biola ext. 4741 or (562) 903-4741

Offices: Math Department, Lim Science Building #141. My office is in Grove #10C.

Lectures: Tuesday/Thursday, 3:00 – 4:15 p.m.; Business building room 109 (Moats Auditorium)

My goals: By the end of the semester, I hope to teach you:

1. An appreciation for the elegance and beauty of mathematics.
2. Some fundamental concepts in various branches of mathematics.
3. An introduction to some core quantitative reasoning skills.
4. To appreciate the historical and conceptual development of mathematics by studying some broad aspects of its history.
5. To gain insight into how mathematics interacts with philosophy and theology, as well as some other disciplines such as art, literature, science, behavioral economics, and astronomy.

Grading Scale

25% Homework (23 Assignments).

8% Quizzes/Participation (19 throughout the semester; I drop the lowest 3).

7% Online Group Discussions (7 throughout the semester; about every other week)

10% Paper on the 80-page novel *Flatland* (700-900 words), due November 6.

Or: Creative Option – more details on Canvas.

50% Test 1, Chapters 1-6, September 25. (*Best three test scores out of four.*)

Test 2, Chapters 8-11,13, October 23.

Test 3, Chapters 14-19, Online test, take any time Nov 16 to Nov 20.

Test 4, Chapters 21-26, Dec 18 or Dec 20, 12:30-2:30 p.m.

(See <http://studenthub.biola.edu/finals> for Final Exam Week schedule.)

I will drop your lowest test score. These tests are not cumulative; I will not give you a cumulative final exam. Test 4 will take place during finals week, but will count the same as the other tests. See the schedule on page 3 for due dates of the 23 homework assignments. Homework turned in late but before the next test is 20% off. **No homework accepted after day of test for those chapters.** There is a 10% penalty for each day late for the *Flatland* paper.

Full Syllabus: This is just a summary – see Canvas for an [online copy](#) of the official, full syllabus.

Required Texts: (These are both also available online for free)

Drawn to Infinity Coursepack written by Walt Stangl and Dave Carlson. Available only in the Biola Bookstore (\$17.25), used books okay. Also [on Canvas](#) online for free in PDF format. *Flatland*, by Edwin A. Abbott, a short novel available [free online](#) (Or \$3.29 in the bookstore.)

Calendar of Lectures and Tests: (Not Homework Due Dates)

Week	Tuesday	Thursday
1	Sept 4 – Lecture Ch 1	Sept 6 – Lecture Ch 2
2	Sept 11 – Online Class Ch 3	Sept 13 – Lecture Ch 4
3	Sept 18 – Lecture Ch 5	Sept 20 – Lecture Ch 6, QR-A
4	Sept 25 – TEST 1 (Ch 1 – 6)	Sept 27 – Lecture Ch 8
5	Oct 2 – Lecture Ch 9	Oct 4 – Lecture Ch 10
6	Oct 9 – Lecture Ch 11	Oct 10–12 Torrey Conf
7	Oct 16 – Ch 13, QR-B	Oct 16 – More Ch 13, Review
8	Oct 23 – TEST 2(Ch 8–11,13)	Oct 25 – Lecture Ch 14
9	Oct 30 – Lecture Ch 16	Nov 1 – Lecture Ch 15
10	Nov 6 – Ch 17 – Paper Due	Nov 8 – Lecture Ch 18
11	Nov 13 – Lecture QR-C	Nov 15 – Ch 19, Review
12	Online TEST 3 (Ch 14–19)	Thanksgiving Nov 21–25
13	Nov 27 – Lecture Ch 22	Nov 29 – Lecture Ch 23
14	Dec 4 – Lecture Ch 24	Dec 6 – Lecture Ch 25
15	Dec 11 – Lecture Ch 26	Dec 13 – Lecture Ch 21
Finals	Dec 18 or 20 – Test 4 (Ch 21-26), according to finals schedule: Tuesday or Thursday, 12:30 p.m., your choice.	

Final exam schedule: <http://studenthub.biola.edu/finals> or see your schedule on myaccount.biola.edu

Homework: Write your name and chapter number legibly. Staple pages together, or write your name on each sheet. Do not staple multiple chapters together. **Show your work** when you can. Some answers are in the book for your reference, but you will not get credit for just copying the answers. Draw a box around each answer. Left edge of paper should be straight (no ragged edges from notebook).

Some homework will be turned in electronically, on Canvas.

During Tests: You may use a calculator, but not a cell phone calculator. No music. Tests are a mix of multiple-choice, fill in the blank and short problems. They last 75 minutes, and have about 45 questions. See Appendix 4 in the coursepack textbook for sample questions. Make-up tests are online.

Biola's Official [Academic Honesty Policy](#): We are committed at Biola University to ethical practice in teaching, scholarship, and service. As such, plagiarism and other forms of academic dishonesty will not be tolerated. Please see the undergraduate/graduate student handbook and/or the departmental / program / school policy on academic honesty. It is imperative that you present all written, oral, and/or performed work with a clear indication of the source of that work. If it is completely your own, you are encouraged to present it as such, taking pleasure in ownership of your own created work. However, it is also imperative that you give full credit to any and all others whose work you have included in your presentation via paraphrase, direct quotation, and/or performance, citing the name(s) or the author(s) / creator(s) and the source of the work with appropriate bibliographic information. To do otherwise is to put oneself in jeopardy of being sanctioned for an act or acts of plagiarism that can carry serious consequences up to and including expulsion from the university.

Homework Due Dates & Point Values

You can use this schedule to help yourself keep track of when homework and online discussions are due. I recommend putting these dates, the test dates, and the paper due date on your calendar.

	Chapter	Due Date	Points		Online Discussion Due Dates
Test 1	1	Sep 06 Online	15	Green: Submit answers online on Canvas	Introductions
	2	Sep 13	14		First Post - Sept 6
	3	Sep 13 Online	9	Yellow: Turn in paper copy in class.	Discussion #1
	4	Sep 18	11		Initial Post - Sept 13
	5	Sep 20	10	Last Day to turn in any late homework, Ch 1-6 is Sept 25	Responses - Sept 15
	6	Sep 25	9		Discussion #2
	QR-A		7		Initial Post - Sept 27
Test 2	8	Oct 02	12	Last Day to turn in any late homework, Ch 8-11,13 is Oct 23	Responses - Sept 29
	9	Oct 04 Online	15		Discussion #3
	10	Oct 09	16	Last Day to turn in any late homework, Ch 14-18 is Nov 20	Initial Post - Oct 16
	11	Oct 16	14		Responses - Oct 18
	QR-B	Oct 18 Online	6	Last Day to turn in any late homework, Ch 21-26 is Dec 13	Discussion #4
	13	Oct 23	12		Initial Post - Oct 30
	14	Oct 30 Online	15		Responses - Nov 1
Test 3	16	Paper Due Nov 6		Last Day to turn in any late homework, Ch 21-26 is Dec 13	Discussion #5
	15	Nov 06 Online	11		Initial Post - Nov 13
	17	Nov 08 Online	16	Last Day to turn in any late homework, Ch 21-26 is Dec 13	Responses - Nov 15
	18	Nov 13 Online	12		Discussion #6
	19	No Homework		Last Day to turn in any late homework, Ch 21-26 is Dec 13	Initial Post - Nov 29
	QR-C	Nov 15	21		Responses - Dec 1
	21	No Homework			Optional Makeup #7
Test 4	22	Nov 29 Online	14	Last Day to turn in any late homework, Ch 21-26 is Dec 13	Initial Post - Dec 13
	23	Dec 04 Online	12		
	24	Dec 06 Online	13	Last Day to turn in any late homework, Ch 21-26 is Dec 13	
	25	Dec 11	21		
	26	Dec 13 Online	15		

If you turn in a homework assignment late, there is a 20% penalty. You cannot turn in a homework assignment after the day of the test for that section. However, I will not take 20% off for the first two assignments you turn in late during the semester, just as long as it is still before you take the test.

About half of the homework assignments are listed as “Online” assignments. Do the homework on paper, as usual, but don’t turn in the paper. Instead, type in your answers on Canvas. You will be able to see your grade immediately (and re-do for more points). For non-online homework, turn in your homework on paper, and we will grade it and within a week or two; you will see your score on Canvas.

There are about 19 **Quizzes** but I will drop your 3 lowest scores. This is how I track attendance. (You must attend the entire 75-min class period to get credit). Most quizzes will be via cell phone text messages, so you may want to store this number in your cell phone: **Math 120 Quiz # (949) 390-9936** (I will have a paper option if do not have a phone or you cannot text.)

Students desiring accommodations on the basis of physical, learning, or psychological disability please contact the [Learning Center](#) (x4542) located in room U137, on the upper level of the library.

The **Flatland Paper** is worth 10% of the grade. [See Canvas](#) for full assignment prompt.

This paper should be **between 700 and 900** words long, and is due **November 6, 2018** preferably by the time of class but uploaded by 11:59 p.m. is not considered late. You can buy a copy of *Flatland* at the Biola Bookstore for \$3.29 (price includes tax), or you can read it online for free at: <http://www.geom.uiuc.edu/~banchoff/Flatland>

To Turn In: Turn this in through the Canvas system. If you use Microsoft Word, you can upload the Word document as-is. If you use any other word processor, do **Save As** and choose **Word format** or **PDF format**, and upload that version. I don't want a paper copy.

Online Group Discussions: Since we have a large class, it's hard for everyone to get a chance to contribute to the discussion, so we will do discussion online, on Canvas. You are in a group with 8 or 9 others. Answer the discussion prompt with a paragraph or two (about 200 words). The purpose of these discussions is to help you learn from each other and to give you a chance to think through some of the issues discussed in the lectures. Your initial post is due by 11:59 p.m. on the due date (**Sept 6, Sept 13, Sept 27, Oct 16, Oct 30, Nov 13, and Nov 29**) You are then required to respond to at least two posts from others by 11:59 p.m., **two days later**. These responses don't have to be long - maybe a sentence or two. However, they should be more substantial than "I agree!" or "Good post." Your responses should contribute to the discussion. Feel free to bring up other topics, or links to relevant content - whatever you think contributes to the discussion. These are worth 7% of your grade.

Final Semester Letter Grade

Your final letter grade will be determined by a weighted percentage, which you can [check here](#) on Canvas. This chart shows your final semester letter grade based on the percent you earn:

To get this grade	You need this percent
A	93%
A-	90%
B+	87%
B	83%
B-	80%
C+	77%
C	73%
C-	70%
D+	67%
D	63%
D-	60%
F	59.9%

Extended Absences: The [student handbook](#) says that “students who miss more than 20% of regular class sessions (even if absences are considered ‘excusable’) may be required to drop the course.” If you miss **more than four weeks’ worth of classes** (8 quizzes), you will earn a failing grade of “UW” – Unofficial Withdrawal. Learning to consistently attend is an important part of class.

Homework extensions. I cannot grant any kind of homework extension beyond the day of the final exam, Dec 20, 2018. According to the [faculty handbook](#), “All assignments must be in by the time of the final examination unless the Office of the Dean of Student Development or the dean of the instructional school has in advance granted an extension of time for some valid reason.” (Ask about “**Report Delay**”)