



**Nature of Mathematics**  
**#BiolaMath**  
**MATH 120 – Fall 2014**  
**Syllabus Summary**



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

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

**Canvas site:** <http://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 also use your @biola.edu email as a way of making class announcements and sending reminders.

**My contact information:**

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

By Phone: Cell phone: (562) 322-7427 (*OK to call/text 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: White 48A, Math Department (in McNally). My office is in White 49.

**Lectures:** Tues/Thrs: 1:30–2:45 p.m.; 3:00–4:15 p.m.; 4:30–5:45 p.m.; Business building room 109.

**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. To further develop logical thinking and problem-solving 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 – 1200 points total**

25% Homework (23 Assignments), 300 points.

8% Quizzes/Participation (*19 throughout the semester; I drop the lowest 3*) – 96 points.

12% Paper on the 80-page novel *Flatland* (700-900 words), due Oct 30 – 144 points.  
Or: Creative Option – more details on Canvas.

55% Test 1, Chapters 1-7, September 18 – 220 points. *Best three test scores out of four.*

Test 2, Chapters 8-13, October 14 – 220 points.

Test 3, Chapters 14-20, November 18 – 220 points.

Test 4, Chapters 21-26, Dec 16 or 18 – 220 points. By Final Exam Week Schedule:

**1:30pm**=Tues, 12:30pm; **3:00pm**=Thrs, 12:30pm; **4:30pm**=Tues, 3:00pm

(See [biola.edu/registrar/academic\\_schedules/finals](http://biola.edu/registrar/academic_schedules/finals) Exam Week schedule.)

I will drop your lowest test score (up to 220 points). 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 in the Biola Bookstore (\$20.63), used books okay. Also on Canvas online for free in PDF format.

*Flatland*, by Edwin A. Abbott, a short novel available [free online](#) (Or \$3.30 in the bookstore.)

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

Week	Tuesday	Thursday
0	<b>Summer Vacation</b>	Aug 28 – Lecture Ch 1
1	Sep 2 – Lecture Ch 2	Sep 4 – Lecture Ch 3
2	Sep 9 – Lecture Ch 4	Sep 11 – Lecture Ch 5
3	Sep 16 – Lecture Ch 6, 7	<b>Sep 18 – TEST 1 (Ch 1-7)</b>
4	Sep 23 – Lecture Ch 8	Sep 25 – Lecture Ch 9
5	Sep 30 – Lecture Ch 10	Oct 2 – Lecture Ch 11
6	Oct 7 – Lecture Ch 12	Oct 9 – Lecture Ch 13
7	<b>Oct 14 – TEST 2 (Ch 8 – 13)</b>	<b>Oct 15-17 Torrey Conf</b>
8	Oct 21 – Lecture Ch 14	Oct 23 – Lecture Ch 16
9	Oct 28 – Lecture Ch 15	Oct 30 – Ch 17 – <b>Paper Due</b>
10	Nov 4 – Lecture Ch 18	Nov 6 – Lecture Ch 19
11	Nov 11 – Lecture Ch 20	Nov 13 – Ch 20, Review
12	<b>Nov 18 – TEST 3 (Ch 14–20)</b>	Nov 20 – Lecture Ch 22
13	Nov 25 – Lecture Ch 23	<b>Thanksgiving Nov 26-28</b>
14	Dec 2 – Lecture Ch 24	Dec 4 – Lecture Ch 25
15	Dec 9 – Lecture Ch 26	Dec 11 – Lecture Ch 21
Finals	<b>Dec 16 or 18 – Test 4 (Ch 21-26)</b> , according to finals schedule: <b>1:30=Tues, 12:30pm; 3:00=Thrs, 12:30pm; 4:30=Tues, 3:00pm</b>	

Final exam schedule: [biola.edu/registrar/academic\\_schedules/finals](http://biola.edu/registrar/academic_schedules/finals)

**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).

Homework is due at the beginning of class on the due date.

**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 is due, when you turned it in, and your scores. I recommend putting these dates, the test dates, and paper due date on your calendar.

	Chapter	Due Date	Points	
Section 1	1	Sep 02 Online	15	Green: Submit answers online on Canvas
	2	Sep 04	14	
	3	Sep 09 Online	9	Yellow: Turn in paper copy in class.
	4	Sep 11	11	
	5	Sep 16	10	
	6	Sep 18	9	
	7		7	
Section 2	8	Sep 25	12	Last Day to turn in any late homework, Ch 1-7 is Sep 18
	9	Sep 30 Online	15	
	10	Oct 02	16	Last Day to turn in any late homework, Ch 8-13 is Oct 14
	11	Oct 07	14	
	12	Oct 09 Online	6	
	13	Oct 14	12	
Section 3	14	Oct 23 Online	15	Last Day to turn in any late homework, Ch 14-20 is Nov 18
	16	Paper Due Oct 30		
	15	Oct 30 Online	11	Last Day to turn in any late homework, Ch 21-26 is Dec 11
	17	Nov 04 Online	16	
	18	Nov 06 Online	12	
	19	No Homework		
Section 4	20	Nov 18	21	Last Day to turn in any late homework, Ch 21-26 is Dec 11
	21	No Homework		
	22	Nov 25 Online	14	Last Day to turn in any late homework, Ch 21-26 is Dec 11
	23	Dec 02 Online	12	
	24	Dec 04 Online	13	
	25	Dec 09	21	
	26	Dec 11 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. 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.

The **Quizzes** are worth 6 points each, and there are 19, but I will drop your 3 lowest scores. Your highest 16 quiz scores are worth 96 points. Some quizzes may be via cell phone polls. You may want to store this number in your cell phone: **Math 120 Quiz#** (949) 390-9936

**Students desiring accommodations** on the basis of physical, learning, or psychological disability are to contact the Learning Center (x4542) located in room U137, on the upper level of the library.

The **Flatland Paper** is worth 144 points. Here is the assignment:

This paper is to be your personal reflections about the book *Flatland*. Do not just retell the story, unless there is a small portion of the story you need to refer to in order to make your point. Read the whole book, but I do not expect you to write about the whole book. Pick one or maybe two ideas, and focus your reflections on that. Since these are to be your personal reflections, I would expect, even encourage you to look at the book from your own unique perspective. This could mean your cultural background, your life experiences, your political views, etc. Do not just tell me what you think I want you to say – tell me your ideas and explain them. This book is a bit slow at the beginning, and you may even find yourself wondering why you are reading it. Two words of advice: first, if you have concerns or questions, raise them and we can talk about them as a class; and second, persevere – the second half of the book is more interesting for most people than the first half. This paper should be **between 700 and 900** words long, and is due **October 30, 2014** preferably by the time of class but sent by 11:59 p.m. is not considered late.

You can buy a copy of *Flatland* at the Biola Bookstore for \$3.30 (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.

### Final Semester Letter Grade

The total number of points possible for the class is 1200 points. This chart shows your final semester letter grade based on how many points you earn:

To get this grade	You need this many points	Which is this percent
A	1116	93%
A-	1080	90%
B+	1044	87%
B	996	83%
B-	960	80%
C+	924	77%
C	876	73%
C-	840	70%
D+	804	67%
D	756	63%
D-	720	60%
F	719	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), I will drop you from the class (or give you a grade of “UW” – Unofficial Withdrawal – if it is after the last day to drop, October 24, 2014).

**Homework extensions.** I cannot grant any kind of homework extension beyond the day of the final exam, December 18, 2014. 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.”