# Math 1030Q: Elementary Discrete Mathematics

## Fall 2016 Syllabus

## Goals for Math 1030Q

One of the main points of this course is for us to see mathematics in a new light. Our focus will be on discovering and exploring ideas rather than following procedures. In this course, we will

- use mathematics as a way to highlight methods for thinking effectively (not just about mathematics).
- focus on clear communication (using numbers, pictures, symbols, and words).
- explore some great ideas in mathematics (just like people explore great works of art).
- see some ways that mathematics can be applied in the world.
- improve our quantitative reasoning skills and become more confident with mathematics.
- gain an increased appreciation for mathematics (hopefully).

**Good News:** We will NOT focus on memorizing formulas, notation, and terminology. These are the things we forget soon after the end of the semester unless we continue to use them. Also, we will NOT focus on final answers. Instead, we will focus on developing strategies that can help lead to a solution and on explaining our solution once we find one.

## Some Advice for How to Succeed in Math 1030Q

- ***Become an active participant in the class.*** Ask questions. Participate during class activities. Do your best to keep up with the material. Come to office hours. Work on assignments as soon as they are assigned instead of at the last minute. Write rough drafts and final drafts for your work (just like for papers).

- ***Spend some time reading and engaging with the online textbook.*** It was actually designed to be read by students (for a change)! Use a notebook to keep track of your progress. Write down questions that come up. Write down important concepts. Work through examples as you read. Explore without worrying about being correct all the time. We all learn the most from figuring out why a strategy did NOT work.

- ***Work with other students in this section of this class*** during in-class activities and on group assignments. Form exam and quiz study groups. Build a little math community.

# Course Materials and Resources

**Class Webpage:** All course-related materials and assignments will be posted on the HuskyCT site for this course. Go to **https://lms.uconn.edu**. Click on "Login" and sign in using your UConn NetID and password. Click on "MATH-1030Q-Elementary Discrete Mathematics-SEC00#-1168". Please visit the HuskyCT site daily. I will regularly upload and update all course materials on this site.

**WileyPLUS:** We will be using the WileyPLUS online homework system. This will be integrated into our HuskyCT site. **An access code for WileyPLUS is required for this course.** You can sign up for a **free 14-day trial of WileyPLUS** at the beginning of the semester. All of your work will be saved and transferred over to your permanent WileyPLUS account once you purchase an access code.

**Textbooks:**

1. **Main Textbook:** ***The Heart of Mathematics: An Invitation to Effective Thinking (4th Edition)*** by Edward B. Burger and Michael Starbird
    - **An electronic textbook comes "free" with a WileyPLUS access code.**
    - You can get a WileyPLUS access code by
        - purchasing an access code online when you access WileyPLUS via HuskyCT ($92.50),
        - purchasing an access code from the **UConn Bookstore** (BUY NEW $112.65), or
        - purchasing the hardcopy textbook from the **UConn Bookstore** that is bundled with an access code (BUY USED $123.00, BUY NEW $164.00).

2. **Book for Most Reading/Writing Assignments:** ***The 5 Elements of Effective Thinking*** by Edward B. Burger and Michael Starbird
    - ISBN-13: 978-0691156668
    - BUY NEW $12.00-$16.00 (approx.) on **amazon.com**.
    - **UConn Bookstore** prices:
        - RENT USED $9.00 (Return by 12/18/2016)
        - RENT NEW $12.95 (Return by 12/18/2016)
        - BUY USED $14.95
        - BUY NEW $19.95

# Assessments

**Online Homework:** ***Online WileyPLUS homework assignments***, one for each section we discuss, will be assigned during the semester. See the schedule below for tentative due dates.

**Individual Written Homework:** ***Three written homework assignments*** will be assigned during the semester. See the schedule below for tentative due dates. The assignments will be based on the WileyPLUS online homework. **It is HIGHLY recommended that you keep a journal of all of your WileyPLUS scratch work so that you can more easily write up a final draft of certain solutions. The first written homework assignment (Written Homework Assignment 0) will not count for a grade.** This will give you a chance to receive constructive feedback on the assignment and use this feedback for future graded assignments.

**In-Class and Online Quizzes:** ***Two in-class quizzes*** will be given during the semester. Also, ***two online WileyPLUS review quizzes*** will be given during the semester, one due before Exam 1 and one due before Exam 2. See the schedule below for tentative quiz dates. **You will be able to drop your lowest quiz grade.** This is meant to reduce your stress about grades. This also allows you to miss a quiz due to travel, illness, etc.

**Individual Reading/Writing Assignments:** ***Five reading/writing assignments*** will be assigned during the semester. See the schedule below for tentative due dates.

**Group Assignments:** ***Two group assignments*** will be assigned during the semester. See the schedule below for tentative due dates.

**Midterm Examinations:** There will be ***two midterm examinations*** (Exam 1 and Exam 2). See the schedule below for the tentative exam dates. These may be in-class examinations or examinations with both in-class and take-home portions. **Note that Option 2 below allows you to drop your lowest midterm exam score and add the weight of this exam to the final exam.** This is meant to reward improvement as the semester progresses.

**Final Examination:** There will be a ***cumulative final examination*** at the end of the semester. The date, time, and location of the final examination is determined by the university and will be announced as soon as it becomes available.

# Grading

**Grading Schemes:** Final course grades (as a percentage) will be determined by **Option 1** and **Option 2** below. **Everyone will automatically be given whichever option results in a higher grade.**

| **Option 1** | **Weight** | **Option 2** | **Weight** |
|---|---|---|---|
| Online Homework | 10% | Online Homework | 10% |
| Written Homework | 10% | Written Homework | 10% |
| Quizzes (lowest score dropped) | 5% | Quizzes (lowest score dropped) | 5% |
| Reading/Writing Assignments | 15% | Reading/Writing Assignments | 15% |
| Group Assignments | 10% | Group Assignments | 10% |
| Exam 1 | 15% | Exam 1 or Exam 2 (lower score dropped) | 15% |

| | | | |
|---|---|---|---|
| Exam 2 | 15% | | |
| Final Exam | 20% | Final Exam | 35% |

**Final Grades:** The following grading scale will be used to determine final course grades.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **A** | [92, 100] | **B** | [82,88) | **C** | [72, 78) | **D** | [62, 68) |
| **A-** | [90, 92) | **B-** | [80, 82) | **C-** | [70, 72) | **D-** | [60, 62) |
| **B+** | [88, 90) | **C+** | [78, 80) | **D+** | [68, 70) | **F** | [0,60) |

# Policies and Resources

**Working with Other Students:** This class will involve a mixture of ***individual assignments*** (to be completed by yourself) and ***group assignments*** (to be completed with one or more students in the class). Because of this, please **pay very close attention to the directions for each assignment**. Receiving any sort of outside help on a graded assignment—from the internet (unless told otherwise), from other people in this class (except for members of your group for group assignments), from other people not in this class, or from any other source—is academic dishonesty and will be taken seriously.

**Attendance:** You should attend all class meetings and are responsible for what we discuss. If you miss a class meeting, you should talk with a classmate to figure out what you missed, get any handouts/materials you missed from the HuskyCT site, and get caught up as soon as possible.

**Make-Up/Late Policy:** In fairness to everyone, there are generally NO make-ups and NO extensions for any form of assessment (online homework assignments, written homework

assignments, quizzes, reading/writing assignments, group assignments, and exams). Only extreme situations with an officially documented excuse will allow you to make up an assessment. Whenever possible, these excuses must be presented before the assessment is due or is supposed to take place in class.

**Grading Policy:** If you have any questions about the grading of any assessment, please ask as soon as possible (usually by the end of the day the assessment is returned). If too much time has passed, then grading changes may not be made.

**Calculator Policy:** Unless stated otherwise during the semester, calculators will NOT be allowed (or needed) on any in-class assessments (quizzes, midterm exams, or the final exam).

**Academic Integrity:** It is in everyone's best interest to maintain his or her academic integrity. Any form of academic dishonesty undermines the goals of our course and devalues the learning process. Academic dishonesty is a serious offense at UConn and can result in a zero grade on an assessment and/or failure in the course. For more information, see the **Student Code**. For strategies to minimize academic misconduct, follow **this link**.

**The Quantitative Learning Center:** The **Quantitative Learning Center** (Q Center) at UConn provides free drop-in tutoring. The Q Center is located on Level 1 of the **Homer Babbidge Library**.

**Accommodations for Students with Disabilities:** Students who think that they may need accommodations because of a disability are encouraged to meet with me privately early in the semester. Students should also contact the Center for Students with Disabilities as soon as possible to verify their eligibility for reasonable accommodations. For more information, please go to the website **http://www.csd.uconn.edu/**.

# Tentative Schedule for Math 1030Q

**Textbook Chapters/Sections Covered:** Ch. 1, Sec. 2.1, Sec. 2.4, Sec. 4.1, Sec. 4.2, Sec. 4.7, Sec. 6.1, Sec. 6.4, Sec. 10.4, Sec. 10.5

| Day | Date | Sections Discussed, Assignment Due Dates, Quiz/Exam Dates, Etc. |
|---|---|---|
| | | Introductions |
| Tuesday | 08/30/16 | Syllabus |
| | | Ch. 1 |
| | | Ch. 1 |
| Thursday | 09/01/16 | **Reading Writing Assignment 1 Assigned** |
| | | **Written Homework Assignment 0 Assigned** |
| | | 2.1 |
| Tuesday | 09/06/16 | **WileyPLUS Ch. 1 Assignment Due at 11 p.m.** |
| | | 2.1 |
| | | **Reading/Writing Assignment 1 Due** |
| Thursday | 09/08/16 | **Written Homework Assignment 0 Due** |
| | | **Reading Writing Assignment 2 Assigned** |
| | | 2.4 |
| Tuesday | 09/13/16 | **WileyPLUS Sec. 2.1 Assignment Due at 11 p.m.** |
| | | 2.4 |
| | | **Reading/Writing Assignment 2 Due** |
| Thursday | 09/15/16 | **Reading Writing Assignment 3 Assigned** |
| | | **Written Homework Assignment 1 Assigned (Ch. 1, 2.1, 2.4)** |
| | | 4.1 |
| Tuesday | 09/20/16 | **Quiz 1 (Ch. 1, 2.1, 2.4)** |
| | | **WileyPLUS Sec. 2.4 Assignment Due at 11 p.m.** |
| Thursday | 09/22/16 | 4.2 |

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|---|---|---|
| | | **Reading/Writing Assignment 3 Due** |
| | | **Group Assignment 1 Assigned** |
| | | 4.2 |
| Tuesday | 09/27/16 | **Written Homework Assignment 1 Due** |
| | | **WileyPLUS Sec. 4.1 Assignment Due at 11 p.m.** |
| Thursday | 09/29/16 | 4.7 |
| | | 4.7 |
| Tuesday | 10/04/16 | |
| | | **WileyPLUS Sec. 4.2 Assignment Due at 11 p.m.** |
| | | Exam 1 Review (Ch. 1, 2.1, 2.4, 4.1, 4.2) |
| Thursday | 10/06/16 | |
| | | **Group Assignment 1 Due** |
| Sunday | 10/09/16 | **(WileyPLUS Online) Quiz 2 Due at 11 p.m. (Ch. 1, 2.1, 2.4, 4.1, 4.2)** |
| | | **Exam 1 In-Class Part (Ch. 1, 2.1, 2.4, 4.1, 4.2)** |
| Tuesday | 10/11/16 | |
| | | **Exam 1 Take-Home Part Assigned (Tentative)** |
| | | 6.1 |
| | | **Exam 1 Take-Home Part Due (Tentative)** |
| Thursday | 10/13/16 | |
| | | **Reading Writing Assignment 4 Assigned** |
| | | **Group Assignment 2 Assigned** |
| | | 6.1 |
| Tuesday | 10/18/16 | |
| | | **WileyPLUS Sec. 4.7 Assignment Due at 11 p.m.** |
| | | 6.1, 6.4 |
| Thursday | 10/20/16 | |
| | | **Reading/Writing Assignment 4 Due** |
| | | 6.4 |
| Tuesday | 10/25/16 | |
| | | **WileyPLUS Sec. 6.1 Assignment Due at 11 p.m.** |
| | | 6.4 |
| | | **Quiz 3 (4.7, 6.1)** |
| Thursday | 10/27/16 | |
| | | **Group Assignment 2 Due** |
| | | **Written Homework Assignment 2 Assigned (4.7, 6.1, 6.4)** |

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|---|---|---|
| | | 10.4 |
| Tuesday | 11/01/16 | |
| | | **WileyPLUS Sec. 6.4 Assignment Due at 11 p.m.** |
| | | 10.4 |
| Thursday | 11/03/16 | |
| | | **Written Homework Assignment 2 Due** |
| Tuesday | 11/08/16 | 10.4, 10.5 |
| | | Exam 2 Review (4.7, 6.1, 6.4, 10.4) |
| Thursday | 11/10/16 | |
| | | **WileyPLUS Sec. 10.4 Assignment Due at 11 p.m.** |
| Sunday | 11/13/16 | **(WileyPLUS Online) Quiz 4 Due at 11 p.m. (4.7, 6.1, 6.4, 10.4)** |
| | | **Exam 2 In-Class Part (4.7, 6.1, 6.4, 10.4)** |
| Tuesday | 11/15/16 | |
| | | **Exam 2 Take-Home Part Assigned (Tentative)** |
| | | **Exam 2 Take-Home Part Due (Tentative)** |
| Thursday | 11/17/16 | |
| | | **Reading Writing Assignment 5 Assigned** |
| Tuesday | 11/22/16 | **NO CLASS (Thanksgiving Break)** |
| Thursday | 11/24/16 | **NO CLASS (Thanksgiving Break)** |
| Tuesday | 11/29/16 | 10.5 |
| | | 10.5 |
| Thursday | 12/01/16 | |
| | | **Reading/Writing Assignment 5 Due** |
| | | Final Exam Review (Everything) |
| Tuesday | 12/06/16 | |
| | | **WileyPLUS Sec. 10.5 Assignment Due at 11 p.m.** |
| Thursday | 12/08/16 | Final Exam Review (Everything) |
| ???day | 12/??/16 | **Final Exam (Date, Time, and Location TBA)** |