

# Syllabus - MTH 102

## Quantitative Literacy II

Spring 2018

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### CONTACT INFORMATION AND OFFICE HOURS.

- Tuesday Instructor: **Dr. Bronlyn Wassink**

Email: [wassinkb@math.msu.edu](mailto:wassinkb@math.msu.edu)

Office Location: C136 Wells Hall

Times:

- Tuesdays 12:15-1:15pm, and Wednesdays 12:30-2:00pm
- Also immediately following lecture, and by appointment.

You do not need an appointment to come to office hours – just show up! 😊

If you would like to meet outside of regularly scheduled office hours, email to request an appointment, and please provide several times that you will be available.

### CONTACT INFORMATION FOR ALL SECTIONS

Day	Name	Email Address	Sections
Tuesday Lecturer	Wassink, Bronlyn	<a href="mailto:wassinkb@math.msu.edu">wassinkb@math.msu.edu</a>	all
Wednesday TA	Bezemek, Zachary	<a href="mailto:bezemekz@msu.edu">bezemekz@msu.edu</a>	3, 6
Wednesday TA	Borellis, M Nicholas	<a href="mailto:borellis@msu.edu">borellis@msu.edu</a>	1, 4
Wednesday TA	Jurasek, Andrew	<a href="mailto:juraseka@msu.edu">juraseka@msu.edu</a>	2, 12
Wednesday TA	Milano, Arielle	<a href="mailto:milanoar@msu.edu">milanoar@msu.edu</a>	11, 14
Wednesday TA	Velkovich, Mariana	<a href="mailto:velkovic@msu.edu">velkovic@msu.edu</a>	5, 10
Thursday TA	Appenzeller, Kathryn	<a href="mailto:appenze2@msu.edu">appenze2@msu.edu</a>	1, 4, 8, 11
Thursday TA	Fessler, Charles	<a href="mailto:fessler7@msu.edu">fessler7@msu.edu</a>	2, 5, 7
Thursday TA	Hale, Melissa	<a href="mailto:halemeli@msu.edu">halemeli@msu.edu</a>	6, 10
Thursday TA	Kumar, Sanjay	<a href="mailto:kumarsa4@msu.edu">kumarsa4@msu.edu</a>	3,
Thursday TA	Oberschlake, Jonah	<a href="mailto:oberschl@msu.edu">oberschl@msu.edu</a>	9, 12, 14

### CLASS TIMES AND LOCATIONS

All class times and locations are listed on Schedule Builder and [schedule.msu.edu](http://schedule.msu.edu). Please check schedule builder regularly in the first couple weeks of classes, as occasionally the location of a class will change. The official and up-to-date information about class times and locations are on Schedule Builder.

## MATH LEARNING CENTER

During specified hours, free walk-in math help for MTH 102 is available in the math learning center (MLC). The times and locations that help is available for MTH 102 will be posted on D2L. You may seek help at the MLC during any of the hours that MTH 102 help is available (listed on D2L) – you may get help from your own recitation leader, or any of the other recitation leaders or tutors that are scheduled for MTH 102. Please be patient when you are there! There are many students, and only a few tutors – the earlier and more prepared you are, the faster your questions will be able to be answered!

Note that the tutors in the MLC are not individual tutors – they must spend time helping all students who need help for Quantitative Literacy.

## GOALS and LEARNING OBJECTIVES.

The purpose of this course is to provide you with opportunities to work with your classmates and your instructor to analyze quantitative information. We will learn appropriate math, statistics, and technology skills and use them as a lens to explore complex real-life situations. Several of the main content-specific learning goals are listed below. These learning objectives will be addressed throughout the course, and are incorporated into each context-based module.

- **Effective Communication**

Students will be able to represent mathematical information in various ways, including graphically, verbally, and symbolically, as well as communicate quantitative results through writing and by oral presentations of their work using appropriate language, symbolism, data and graphs.

Objectives to meet the goal

- Effectively discuss quantitative information with their peers, both verbally and in written form.
- Analyze and use quantitative information to support an argument.
- Be able to read and interpret quantitative information from a variety of real-world sources.
- Be able to recognize and evaluate quantitative assumptions in printed and digital media.

- **Effective Citizenship**

Students will be able to

- Analyze and critique the current method used to elect individuals to the US House of Representatives through a quantitative lens.
- Learn alternatives to the current method of electing representatives, and use quantitative methods to compare with the current method.
- Quantitatively analyze and critique the electoral college.
- Make reasoned decisions about taxation and the federal budget.
- Make reasoned financial decisions.

- **Demonstrate proficiency in multiple mathematical domains.**

Students will be able to

- Interpret mathematical models of social issues and public policy in the form of formulas, graphs, tables, and images, and draw inferences from them.
- Analyze and find the limitations of various voting systems.
- Demonstrate financial literacy, with an emphasis on credit card debt, structured loans, and interest-bearing investments.
- Represent proportional relationships and solve problems that require an understanding of ratios, rates, proportions, and scaling.
- Recognize proportional relationships from verbal and numeric representations and compare proportional relationships represented in different ways.

- **Mathematical Modeling:** Students will engage in a cycle of modeling that involves translating real-world problems to mathematical representations, abstracting from context, solving mathematical models, and interpreting the solution in terms of the original problem context.

Students will be able to

- Make predictions about quantitative situations and check predictions against data in order to determine reasonableness, identify alternatives, and make choices.
- Critically analyze quantitative information and recognize that mathematical and statistical methods have limits.

## REQUIRED COURSE MATERIALS.

1. **Online course book & homework package** through Learning Objects (\$100)
2. **Lecture Notes.** The notes are provided to you for free in .pdf format. You are responsible for printing them and bringing them to class with you.
3. **A calculator (scientific or graphing).** If you do not have a calculator and plan on purchasing one, we would recommend a solar-powered scientific calculator such as the TI-30XS MultiView.  
The only requirement we have about calculators is that you're not allowed to use your cell phone, tablet, laptop, or anything else that can text or access the internet on tests or the final exam.
4. **Computer and internet access** will be necessary outside of the classroom, in accordance with MSU's student computer policy. It is recommended, but not required, to bring a laptop to all recitation classes.

## Learning Objects book and homework

In D2L, you will find a link to purchase the Learning Objects book and homework system for Quantitative Literacy II.

It is expected that you read through the examples in the book, try the examples that are not graded, and also complete all multiple choice questions (which will count towards your grade).

### Show What You Know (Pre-Tests) in Learning Objects

**The pre-tests will not count towards your grade.** However, completing the pre-tests before lecture allows your instructor to know what topics you and your classmates struggle with, which gives us the knowledge to know which topics to spend a little more time on (and provide additional examples). Attempting the Show What You Know questions will help us improve your learning experience!

### Readings and Examples in Learning Objects

We expect that you will read the readings and examples in Learning Objects. Due dates will be given in D2L.

### Quick Checks and Quizzes in Learning Objects

**These will be used in determining your course grade.** Details are in the “descriptions and policies of assessments” section on page 5.

## ATTENDANCE POLICY: Attendance is mandatory.

- One lecture and one recitation is scheduled for each week.
- Students are expected to be present and ON TIME for ALL class sessions.
- You are responsible for all the material covered. Any changes in this syllabus or in the scheduling of homework assignments, projects, labs, or exams will be announced during class meetings.
- Students who miss a class meeting should copy notes from a classmate or the lecture notes are available in the Wells Hall MLC by Wednesday morning after the previous lecture.

## COURSE GRADE and EXAM DATES

Assessment Item	Percent of Grade
Online Homework in Learning Objects (Quick Check & Quizzes) <i>This is the only component of your grade that will be curved. See information in "descriptions and policies of assessments."</i>	10%
Thursday Labs (group work) & Participation on labs	18%
Two Individual Projects	17% (10% and 7%)
Test 1 ( <b>Thursday, February 8</b> , in your Thursday classroom)	10%
Test 2 ( <b>Thursday, March 22</b> , in your Thursday classroom)	10%
Test 3 ( <b>Thursday, April 19</b> , in your Thursday classroom)	10%
Final Exam ( <b>Tuesday, May 1, 10am-noon</b> . The location will be available on Schedule Builder the week before the exam)	25%

## NO EXTRA CREDIT

**There are no extra credit opportunities available this semester!** Failure to complete assignments in the beginning or middle of the semester does not entitle you to special extra credit opportunities at the end of the semester!

## COURSE GRADES will be assigned as follows:

4.0	3.5	3.0	2.5	2.0	1.5	1.0	0.0
90% or more	85%-89%	80%-84%	75%-79%	70%-74%	65%-69%	60%-64%	Less than 60%

According to University Policy, students who do not take the final exam will receive a 0.0 in the course, regardless of previous grades.

## SOMETHING GRADED INCORRECTLY?

- If you have any questions regarding the grading of any of your quizzes or exams, you should return the graded paper to your TA and attach a short note with your questions **before leaving** the classroom.
- **Once the graded material has left the classroom, no grading changes can be made.**
- If you think your **project or lab** was graded incorrectly, please talk to your Thursday recitation leader (TA) within one week of your grade being posted on D2L. Within a week after the meeting with your TA, if you still think your project wasn't graded correctly, schedule a follow-up meeting with the instructor ([wassinkb@math.msu.edu](mailto:wassinkb@math.msu.edu)) After that time, your grade can not be re-examined.
- If your homework assignment from the Learning Objects Book and Homework system was graded incorrectly, please fill out the form on D2L.

## DESCRIPTIONS AND POLICIES OF ASSESSMENTS.

### Online Homework (Quick Check, Quizzes): 10%

In the Learning Objects platform, there are two types of graded questions: Quick Check, and Quiz Questions.

- In the Learning Objects platform, there are two types of graded questions: **Quick Check**, and **Quiz Questions**.
- **Each quiz question can only be completed once.** You are allowed to work with classmates or tutors on these assignments. The website is not programmed to allow for multiple attempts.
- **A quiz question is worth many more points than a quick check question**, and many quiz questions are similar to quick check questions. If you are answering quick check questions incorrectly, consider getting help in the MLC before attempting the quiz.
- This component of your grade will be curved, meaning that it is possible to answer some questions incorrectly and still earn 100% on this part of your grade.
  - The curve will be determined at the end of the semester.
  - The curve will be higher for students who complete all the assignments on time than it will be for students who do not complete the assignments on time.
- The maximum grade you can earn on this part of your grade is 100%.
- Personal issues or internet issues is not a valid excuse for not being able to complete assignments on time. You should plan on having all homework questions completed at least 48 hours before they are due. Due dates will be given on the Learning Objects website.
- Late homework will not be accepted. The official homework grades for your homework assignments will be available on D2L. The grades are not ported over automatically, so there may be a 1 or 2 day delay between the due date and when your grade is updated on D2L.

### Labs (recitation grade) 18% of your grade

- Lab attendance is mandatory.
- There will be 11 labs this semester in your Thursday recitation classes.
- Each lab is worth 20 points.
- You must be in class in order to receive points for a lab.
- There are no make-up labs for missed classes.
- **Lab attendance is mandatory.** However, we understand that sometimes serious situations occur. We will drop 2 lab grades when determining your overall grade.
  - The reason we drop 2 labs will be counted towards your final grade is to account for classes that are missed for
    - medical emergencies
    - personal or family emergencies
    - travel for MSU athletes
    - grief absences
    - religious observances
    - other university-sanctioned absences
  - These two dropped labs are **not** in addition to labs missed for the reasons above!!

If you miss three or more labs, you must schedule a meeting with your Tuesday instructor of the course coordinator during office hours.

## How each Thursday Lab will be graded

Component	Explanation	Points
<b>Participation &amp; reasonable progress on completed work</b>	<p>Participation in class discussions and activities during the entire class time, and participation with your group on activities.</p> <p>Expectations:</p> <ul style="list-style-type: none"> <li>• <b>You are prepared</b> – you went to class on Tuesday, or read the module in the book pertaining to the week’s material before coming to lab, or both.</li> <li>• You are actively participating in class discussions.</li> <li>• You are <b>participating in class discussions or working with your group on the lab for the entire 80 minutes</b>; you are not doing work for other classes, on social media, gossiping with classmates, etc.</li> <li>• Your group works on the questions in the lab in the order they are printed (i.e. don’t skip the “hard” questions).</li> <li>• Your group works together and does not use the divide-and-conquer method.</li> <li>• Students who understand the material politely and patiently explain the material to group members.</li> <li>• Groups focus on quality of the answers, and are sure that all members of the group understand the solutions.</li> </ul>	10
<b>Correctness of completed work</b>	<p>This grade is often the same for all members of a group, with some exceptions. Labs are long, and some groups will not finish a lab during class.</p> <p>If all of the following are true:</p> <ul style="list-style-type: none"> <li>• Your group worked diligently for the entire class time (i.e. you stayed on topic)</li> <li>• Your group members were on time, and stayed to the end of class.</li> <li>• Your group worked on the questions in the order that they are written in the lab.</li> </ul> <p>then there will not be a grade deduction for submitting a lab that has some questions that have not been answered. In this case, of the questions that your group completed, you will be graded on the correctness of those questions.</p>	10
<b>In general for labs: quality is more important than quantity.</b>		

### Exceptions to the policies above

- Students who are present in recitation, but who do not contribute to a group work assignment, will receive a 0 lab grade for that day.
- Students who spend a lot of time texting, on social media, talking to classmates about non-course related material, or working on assignments from other courses will receive a 0 grade for that day.
- Students who arrive late or leave early will have a reduced grade (or a 0 grade) for their lab grade for that day.

### Individual Projects: 17% of your grade

The research projects will be discussed in class and have all necessary information available on D2L.

**These are individual projects** – you are allowed to ask for guidance from your TA or a classmate, but it is important that you complete the projects by yourself.

All projects will be submitted through D2L, where **we will use the Turnitin plagiarism detection software**. Cases of plagiarism will be dealt with very seriously; all cases of plagiarism will result in an academic dishonesty report being filed with the university, and the penalty for plagiarism in this course may be as serious as a 0.0 in the course.

<https://tech.msu.edu/teaching/tools/turnitin/>

Project Assignment	Brief Description	Important Dates	Percentage of Overall Course Grade
Stock Project, Part 1	Set up	Due Jan 23	2%
Stock Project, Part 2	Excel file: Track closing prices and portfolio value from Jan 23 to Mar 13	Due March 15	4%
Stock Project, Part 3	Analysis	Discussed March 13 Due April 3	4%
Starting Salary Project, Part 1	Excel computations	Both parts: Discussed Feb. 27 Due March 20	4%
Starting Salary Project, Part 2	Summary Poster/Graphs		3%
Total			17%



### Tests and Final Exam: 55% of your grade

There will be three tests and a final exam this semester.

- The three tests will be on Feb. 8, March 22, and April 19.
- Each test will be in your recitation (Thursday) classroom during your usual class time.
- The final exam is Tuesday, May 1, 10:00am-noon. The location will be posted on Schedule Builder. The final exam is cumulative.

For each test, you may have **a calculator and one formula sheet** (one 8½ by 11 inch sheet of paper, which may be handwritten or printed, and may have examples, definitions, and formulas on both front and back).

- You may not share a formula sheet with a classmate. However, you may work with classmates to create a formula sheet before the test (provided you each bring your own separate formula sheets to the test).

It is your responsibility to remember to bring a calculator and to have batteries for your calculator. It is your responsibility to know how to use your calculator.

- During a test, you may not share a calculator with a classmate.
- During a test, you may not use your cell phone as a calculator.
- During a test, we will not answer how to use your calculator (for example, if you need to know how to compute an exponent, we can not answer during the test. Please practice using your calculator before the test!)

There will be multiple versions of every test. Students caught cheating on any test will be given a 0 on the entire test (not just the question that was cheated on), and have an academic dishonesty report filed with the university. Talking to classmates, using a cell phone (even if it is only being used as a clock or calculator), sharing calculators or formula sheets, failure to follow instructions, etc. are considered cheating.


**There are no make-up tests.**

### What if you miss a test or exam?

- If you know ahead of time that you are going to miss a test for a university-sanctioned event, you must contact your instructor or the course coordinator at least 2 weeks before the missed test, and appropriate accommodations will be made.
- Commercial travel or family vacations are not a valid excuse for missing a test.
- Sleeping through your exam is not a valid excuse for missing an exam.
- If you miss a test because of a death in the family, please complete a grief absence form with the university. Information about grief absences appear later in the syllabus.
- If you have a serious medical emergency, then contact your Tuesday Instructor or the Course Coordinator as soon as possible. We will require documentation from your doctor stating that you were too ill to come to class – a note simply stating that you were seen by a physician is not sufficient documentation.

## FINAL EXAM REMEDIATION POLICY

- If you scored a higher percentage on the final exam than on your lowest test grade, then, when calculating your course grade, we will replace your lowest test grade with the average of the lowest test grade and your final exam percentage. The only exception is if you scored a 0 for cheating on an exam; a 0 for cheating can not be replaced by its average with the final exam grade.
- For example, if your test grades are Test 1 = 78%, Test 2 = 42%, Test 3 = 85%, and your final exam grade is a 70%, then, since 70% is higher than the lowest test grade of 42%, **we will replace the 42% with  $(42\%+70\%)/2 = 56\%$ .**

Example	
Earned Grades	Grades used to determine course grade
Test 1: 78%	Test 1: 78%
Test 2: 42% 	Test 2: 56%
Test 3: 85%	Test 3: 85%
Final Exam: 70%	Final Exam: 70%

## GRIEF ABSENCES.

According to university policy, we will accommodate the bereavement process of a student who has lost a family member or who is experiencing emotional distress from a similar tragedy so that the student is not academically disadvantaged in their classes or other academic work. If you experience such a tragedy during the semester, contact the lecturer and your recitation leader as soon as possible to make necessary arrangements. You also need to notify the Associate Dean of your college, according to the policy:

...it is the responsibility of the student to: a) notify the Associate Dean or designee of their college of the need for a grief absence in a timely manner, but no later than one week from the student's initial knowledge of the situation, b) provide appropriate verification of the grief absence as specified by the Associate Dean, and c) complete all missed work as determined in consultation with the instructor.

The grief absence request form can be accessed on the Student Resources page  
<https://reg.msu.edu/StuRes.aspx>

## ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES.

(from the Resource Center for Persons with Disabilities, RCPD): Michigan State University is committed to providing equal opportunity for participation in all programs, services, and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD, or on the web at [rcpd.msu.edu](http://rcpd.msu.edu). Once your eligibility for an accommodation has been determined, you will be issued a "VISA" form. Your VISA form must be given to both your professor and your Recitation Leader (if applicable) a minimum of two weeks prior to the date that the accommodations are required.

## DROPS AND ADDS.

The last day to add this course is January 12, 2018. The last day to drop this course with a 100% refund is February 2, 2018, and the last day to drop with no grade reported is February 28, 2018. If you have either added or dropped this course, you should immediately make a copy of your amended schedule to verify that you have added or dropped this course.

## POLICY ON ACADEMIC HONESTY:

The University's policy concerning academic integrity is covered in the Spartan Life booklet, under General Student Regulations. For more information about this and other academic integrity issues, please visit: <https://msu.edu/~ombud/academic-integrity/student-faq.html>.

## IMPORTANT UNIVERSITY DATES:

**Class Begins** 1/8/2018

**Open adds end (8:00pm)** 1/12/2018

**Last day to drop with refund (8:00pm)** 2/2/2018

**Last day to drop with no grade reported (8:00pm)** 2/28/2018

**Class Ends** 4/27/2018

**Final Exam** 5/1/2018

# January 2018

# MTH 102

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
31	1	2	3	4	5	6
7	8	9 Syllabus and Module 1: Computing your course grade	10	11 Lab 1	12	13
14	15	16 Module 2: The Electoral College  Discuss Stock Project, Part 1	17 Module 1 Homework due	18 Lab 2	19	20
21	22	23 Module 3: Voting Systems,  <b>Stock Project Part 1 due.</b>	24 Module 2 Homework due	25 Lab 3	26	27
28	29	30 Module 4: Gerrymandering & Mixed Member Proportional Representation	31 Module 3 Homework due	1 Lab 4	2	3
4	5	6 Feb 6:  Review for Test 1	7 Module 4 Homework due	8 Feb 8:  <b>Test 1</b>	9	10

# February 2018

# MTH 102

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
29	30	31	31	1 Lab 4	2 Last day to drop with a refund	3
4	5	6 Review for Test 1	7 Module 4 Homework due	8 <b>Test 1</b>	9	10
11	12	13 Module 6: Financial Decisions about Loan Payments	14	15 Lab 5	16	17
18	19	20 Module 7: Financial Decisions about Loan Payments with Excel	21 Module 6 Homework due	22 Lab 6	23	24
25	26	27 Module 8: Financial Decisions about Savings & Investments  Discuss Starting Salary Project (parts 1 and 2) in class.	28 Module 7 Homework due  Last day to drop with no grade reported	1 Lab 7	2	3

# March 2018

# MTH 102

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27 Module 8: Savings & Investments  Discuss Starting Salary Project (parts 1 and 2) in class.	28 Module 7 Homework due  Last day to drop with no grade reported	1 Lab 7	2	3
4	5	6	7	8	9	10
SPRING BREAK						
11	12	13 Module 9: Investments and the Stock Market  Discuss Stock Project, Part 3	14 Module 8 homework due	15 Lab 8  <b>Stock Project, Part 2 due</b>	16	17
18	19	20 <b>Starting Salary Project due (parts 1 &amp; 2)</b>  Review for Test 2	21 Module 9 homework due	22 <b>Test 2</b>	23	24
25	26	27 Module 11: Income Taxes and the Federal Budget	28	29 Lab 9	30	31

# April 2018

# MTH 102

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 Module 12: Federal Income Taxes  <b>Stock Project Part 3 due</b>	4 Module 11 homework due	5 Lab 10	6	7
8	9	10 Module 13: Comparing monetary values over time	11 Module 12 homework due	12 Lab 11	13	14
15	16	17 Review for Test 3	18 Module 13 homework due	19 <b>Test 3</b>	20	21
22	23	24 Review for final exam	25	26 Review for final exam	27 Class ends	28
29	30	1  <b>May 1: Final Exam 10am</b>	2	3	4	5