

Mathematics for Liberal Arts

MATH-115

CG Section 8WK 11/08/2019 to 04/16/2020 Modified 06/08/2022

Course Description

A survey course for liberal arts majors including a review of algebra and an introduction to logic, probability and statistics, mathematical structures, problem solving, geometry and consumer applications.

Requisites

For information regarding prerequisites for this course, please refer to the [Academic Course Catalog \(https://catalog.liberty.edu/\)](https://catalog.liberty.edu/).

Rationale

Since Math 115 is the only mathematics course that many students will take, it is designed to dispel the common notion that mathematics is only arithmetic or algebra. The student will obtain a basic working knowledge of several branches of mathematics. It will meet the general education requirement in mathematics for some majors. Math 115 is not the prerequisite for Math 121 (College Algebra), Math 201 (Statistics), or Math 117 (Elements of Mathematics).

Course Learning Outcomes

Upon successful completion of this course, the student will be able to:

- A. Demonstrate knowledge of the topics listed in the course description by solving problems in written form using proper mathematical notation and terminology.
- B. Communicate math concepts accurately using vocabulary and symbolic language.
- C. Apply math concepts to problems involving real life situations.
- D. Demonstrate an appreciation of the diversity of mathematics and its applications.

General Education Foundational Skill Learning Outcomes: Technological Solutions and Quantitative Reasoning (TSQR)

TSQR 1: Analyze data and inform action through a structured method.

TSQR 2: Predict the output based on an input in practical scenarios using technological solutions and/or quantitative reasoning.

TSQR 3: Apply the skills needed for successful financial stewardship in various contexts.

TSQR 4: Relate technology and quantitative reasoning to participation in God's redemptive work.

Course Resources

Click on the following link to view the required resource(s) for the term in which you are registered: [Liberty University Online Bookstore \(https://bncvirtual.com/liberty/\)](https://bncvirtual.com/liberty/).

Additional Materials for Learning

- A. Computer with basic audio/video equipment
- B. Internet access (broadband recommended)
- C. Canvas [recommended browsers \(https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66\)](https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66)
- D. Microsoft Excel

E. A scientific calculator

Please note, technical skills for this course include:

- A. Creating and submitting files in Microsoft Word and Excel
- B. Using built-in formulas in Excel
- C. Basic Canvas navigation skills

☰ Course Assignments

Textbook readings and lecture presentations

Course Requirements Checklist

After reading the Course Syllabus and [Student Expectations \(https://www.liberty.edu/institutional-effectiveness/student-expectations/\)](https://www.liberty.edu/institutional-effectiveness/student-expectations/), the student will complete the related checklist found in the Course Overview.

Getting Started With WebAssign

The student must complete the "Getting Started with WebAssign" assignment in WebAssign and must receive a score of 100% before he/she can start any of the other assignments in WebAssign. This assignment covers the basics of how to input answers into the WebAssign software.

Discussions (2)

Discussions are collaborative learning experiences. Therefore, there will be 2 Discussions in this course. The student is required to write a thread in response to the provided prompt. Each thread must be at least 200 words and demonstrate course-related knowledge. In addition to the thread, the student is required to reply to 2 other classmates' threads. Each reply must be at least 50 words (CLO: C, D; FSLO: TSQR 3, 4).

Homework Assignments (7)

Using WebAssign, the student will complete 7 Homework Assignments in this course. There will be a set of questions assigned for each of the homework exercises. A score of at least 70% must be earned on the homework in order to open the quiz for that week (CLO: A, B, C; FSLO: TSQR 1, 2, 3).

Homework: Exam Reviews (4)

The student will complete a review in WebAssign prior to each Quiz: Exam and the Quiz: Final Exam. For each exam and the final exam, the student must first complete the Review assignment with a score of at least 70% in order to open the test/exam. The exam will remain inaccessible until this minimum score is reached (CLO: A, B, C; FSLO: TSQR 1, 2, 3).

Quizzes (4)

Using WebAssign, the student will complete 4 quizzes in this course. Each quiz will be open-book/open-notes and will contain multiple-choice and short answer questions. Each quiz may be taken up to 3 times.

Quiz: Exam (3)

The student will complete 3 open-book/open-notes exams throughout the course in WebAssign. Exams are based on the Learn material and homework assignments. Tests are timed and are expected to be completed in one sitting.

NOTE: The student must submit written work for all test and final exam questions. Any tests or final exams submitted without written work will not be accepted.

Written work means that the student records the work needed to answer each test/exam question on paper. The student should number the work for each question as he/she works through the test so that his/her instructor can easily tell what work goes with each question. After the student submits your test, either scan or take cell phone photos of the written work and then upload them through the submission link to the Written Work Assignment for the Module: Week in which they are due.

Quiz: Final Exam

The student will complete a comprehensive, open-book/open-notes Final Exam in WebAssign. The Final is timed and is expected to be completed in one sitting.

NOTE: The student must submit written work for all test and final exam questions. Any tests or final exams submitted without written work will not be accepted.

Written work means that the student records the work needed to answer each test/exam question on paper. The student should number the work for each question as he/she works through the test so that his/her instructor can easily tell what work goes with each question. After the student submits your test, either scan or take cell phone photos of the written work and then upload them through the submission link to the Written Work Assignment for the Module: Week in which it is due.

✓ Course Grading

Course Requirements Checklist		10
Interact: Getting Started With WebAssign		0
Discussions	(2 at 30 pts ea)	60
Homework Assignments	(7 at 15 pts ea)	105
Homework: Exam Reviews	(4 at 10 pts ea)	40
Quizzes	(4 at 40 pts ea)	160
Quiz: Exams	(3 at 145 pts ea)	435
Quiz: Final Exam		200
Total		1010

Policies

Mathematical Late Assignment Policy

Mathematical assignments that are submitted after the due date without prior approval from the instructor will receive the following deductions

1. Late *mathematical* assignments submitted within one week after the due date will receive a 10% deduction.
2. *Mathematical* assignments submitted more than one week late or after the final date of the course will not be accepted.
3. Discussion board assignments submitted within one week after the due date will receive a 10% deduction.
4. Discussion board submitted more than one week and less than 2 weeks late will receive a 20% deduction.
5. Discussion board submitted more than 2 weeks late will not be accepted.
6. Group projects, including group discussion board threads and/or replies, and assignments will not be accepted after the due date.

Special circumstances (e.g. death in the family, personal health issues) will be reviewed by the instructor on a case-by-case basis.

For other assignments, please refer to the standard Late Assignment Policy, below.

Late Assignment Policy

Course Assignments, including discussions, exams, and other graded assignments, should be submitted on time.

If the student is unable to complete an assignment on time, then he or she must contact the instructor immediately by email.

Assignments that are submitted after the due date without prior approval from the instructor will receive the following deductions:

1. Late assignments submitted within one week after the due date will receive up to a 10% deduction.
2. Assignments submitted more than one week and less than 2 weeks late will receive up to a 20% deduction.
3. Assignments submitted two weeks late or after the final date of the course will not be accepted outside of special circumstances (e.g. death in the family, significant personal health issues), which will be reviewed on a case-by-case basis by the instructor.
4. Group projects, including group discussion threads and/or replies, and assignments will not be accepted after the due date outside of special circumstances (e.g. death in the family, significant personal health issues), which will be reviewed on a case-by-case basis by the instructor.

Disability Assistance

Students with a disability and those with medical conditions associated with pregnancy may contact Liberty University's Online Office of Disability Accommodation Support (ODAS) at LUOODAS@liberty.edu for accommodations. Such accommodations require appropriate documentation of your condition. For more information about ODAS and the accommodations process, including how to request an accommodation, please visit <https://www.liberty.edu/online/online-disability-accommodation-support/> (<https://www.liberty.edu/online/online-disability-accommodation-support/>). Requests for accommodations not related to disabilities or pregnancy must be directed to the Registrar's Office, which generally handles medical needs support.

If you have a complaint related to disability discrimination or an accommodation that was not provided, you may contact ODAS or the Office of Equity and Compliance by phone at (434) 592-4999 or by email at equityandcompliance@liberty.edu. Click to see a full copy of Liberty's [Discrimination, Harassment, and Sexual Misconduct Policy](https://www.liberty.edu/media/1226/Liberty_University_Discrimination_Harassment_and_Sexual_Misconduct_Policy.pdf) (https://www.liberty.edu/media/1226/Liberty_University_Discrimination_Harassment_and_Sexual_Misconduct_Policy.pdf) or the [Student Disability Grievance Policy and Procedures](http://www.liberty.edu/media/8021/Disability_Grievance_Procedures.pdf) (http://www.liberty.edu/media/8021/Disability_Grievance_Procedures.pdf).

Course Attendance

In an effort to comply with U.S. Department of Education policies, attendance is measured by physical class attendance or any submission of a required assignment within the enrollment dates of the course (such as examinations, written papers or projects, any discussion posts, etc.) or initiating any communication with one's professor regarding an academic subject. More information regarding the [attendance policy](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FOnline%2BAttendance%2BAnd%2BNon-Attendance&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613719138&sdata=%2BNBTsPOoXuHAPLfiSQrugK7cRSuV6UyC7qD3agf3l2k%3D&reserved=0) (<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FOnline%2BAttendance%2BAnd%2BNon-Attendance&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613719138&sdata=%2BNBTsPOoXuHAPLfiSQrugK7cRSuV6UyC7qD3agf3l2k%3D&reserved=0>) can be found in the [Academic Course Catalogs](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.liberty.edu%2Findex.cfm%3FPID%3D791&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=DjjhMiRBNf%2B2ZJUC8eBd1OdNb26S9ADukODYsilXIA%3D&reserved=0) (<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.liberty.edu%2Findex.cfm%3FPID%3D791&data=02%7C01%7Caccollins2%40liberty.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=DjjhMiRBNf%2B2ZJUC8eBd1OdNb26S9ADukODYsilXIA%3D&reserved=0>). Regular attendance in online courses is expected throughout the length of the term. Students who do not attend within the first week of a sub-term by submitting a required academic assignment (such as the Course Requirements Checklist, an examination, written paper or project, discussion post, or other academic activity) will be dropped from the course. Students who wish to re-engage in the course are encouraged to contact Academic Advising to discuss their enrollment options. Students who begin an online course, but at some point in the semester cease attending, and do not provide official notification to withdraw, will be assigned a grade of "FN" ([Failure for Non-Attendance](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FUnofficial%2BWithdrawals&data=02%7C01%7Caccollins2%40liberty) (<https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwiki.os.liberty.edu%2Fdisplay%2FIE%2FUnofficial%2BWithdrawals&data=02%7C01%7Caccollins2%40liberty>)).

[.edu%7Cd91431fa6ac547056b5408d833029e1a%7Cbaf8218eb3024465a9934a39c97251b2%7C0%7C0%7C637315433613729132&sdata=MoMvZdPfa69InuhVHMHAVgu59ZP0Fw45xJTU9PIBrU%3D&reserved=0](#)). Students wishing to withdraw from courses after the official start date should familiarize themselves with the [withdrawal policy](#).

Grading Scale

A	B	C	D	F
900-1010	800-899	700-799	600-699	0-599

For courses with a Pass/NP final grade, please refer to the Course Grading section of this syllabus for the assignment requirements and/or point value required to earn a Passing final grade.

Add/Drop Policy

The full policy statement and procedures are published in the [Policy Directory](#) (<https://wiki.os.liberty.edu/display/IE/Dropping+and+Adding+Online+Classes>).

Honor Code

Liberty University comprises a network of students, Alumni, faculty, staff and supporters that together form a Christian community based upon the truth of the Bible. This truth defines our foundational principles, from our Doctrinal Statement to the Code of Honor. These principles irrevocably align Liberty University's operational procedures with the long tradition of university culture, which remains distinctively Christian, designed to preserve and advance truth. Our desire is to create a safe, comfortable environment within our community of learning, and we extend our academic and spiritual resources to all of our students with the goal of fostering academic maturity, spiritual growth and character development.

Communities are predicated on shared values and goals. The Code of Honor, an expression of the values from which our Doctrinal Statement was born, defines the fundamental principles by which our community exists. At the core of this code lie two essential concepts: a belief in the significance of all individuals, and a reliance on the existence of objective truth.

While we acknowledge that some may disagree with various elements of the Code of Honor, we maintain the expectation that our students will commit to respect and uphold the Code while enrolled at Liberty University.

Adherence to the principles and concepts established within facilitates the success of our students and strengthens the Liberty community.

The Code of Honor can be viewed in its entirety at <http://www.liberty.edu/index.cfm?PID=19155> (<http://www.liberty.edu/index.cfm?PID=19155>).

Schedule

When	Topic	Notes
Course Overview	Student Acknowledgements	Course Requirements Checklist
	Technology Integration Set-Up	Interact: Getting Started with WebAssign
Module 1: Week 1	Learn	Read: 1 item Watch: 2 items
	Apply	HW: Problem Solving & Logic Pt. A Assignment Quiz: Problem Solving & Logic Pt. A
Module 2: Week 2	Learn	Read: 2 items Watch: 1 item

When	Topic	Notes
	Apply	HW: Logic Pt. B Assignment Discussion: The Purpose of a Christian Liberal Arts Education Quiz: Logic Pt. B
Module 3: Week 3	Learn	Read: 1 item Watch: 1 item
	Apply	HW: Logic Pt. C, Voting & Apportionment Assignment HW: Review for Exam 1 Assignment Written Work: Exam 1 – Problem Solving, Sets, Logic & Voting Assignment Quiz: Exam 1 – Problem Solving, Sets, Logic & Voting
Module 4: Week 4	Learn	Read: 1 item Watch: 1 item
	Apply	HW: Geometry & Measurement Assignment Quiz: Geometry & Measurement
Module 5: Week 5	Learn	Read: 1 item Watch: 1 item
	Apply	HW: Applied Equations Assignment HW: Review for Exam 2 Assignment Written Work: Exam 2 – Geometry, Measurement & Equations Assignment Quiz: Exam 2 – Geometry, Measurement & Equations
Module 6: Week 6	Learn	Read: 1 item Watch: 1 item
	Apply	HW: Personal Finance Assignment Discussion: Saving for the Future Quiz: Personal Finance
Module 7: Week 7	Learn	Read: 1 item Watch: 1 item
	Apply	HW: Introduction to Statistics Assignment HW: Review for Exam 3 Assignment Written Work: Exam 3 – Equations, Finance & Statistics Assignment Quiz: Exam 3 – Equations, Finance & Statistics

When	Topic	Notes
Module 8: Week 8	Learn	Watch: 1 item Review: 1 item
	Apply	HW: Review for Final Exam Assignment Written Work: Final Exam Assignment Quiz: Final Exam