Syllabus
Math 1101
Fall 2017

Introduction to Mathematical Modeling

Sections 05 & 05S, CRN 80994 & 80995, Monday & Wednesday, 3:35pm – 4:50pm, UC-425

Instructor: Dr. Christopher Raridan
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Office Hours: Mon – Thurs, 12noon – 1:45pm
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Please read this syllabus carefully. You are responsible for any information given here as well as any modification or announcements given in class by your instructor.

Prerequisites: Please review the CSU Catalog & Schedule (http://apps.clayton.edu/courses/schedule) for a complete list of possible prerequisites. Basic computer skills such as word processing, file management, and email usage are expected and will not be taught. Please visit the HUB if help is needed using a computer: http://www.clayton.edu/hub.

Co-requisites/Cross-Listed Support Courses: Not all students in Math 1101 are required to take Support for Math Modeling (Math 0998), but for those who are, attending and participating in Math 0998 is mandatory. Math 0998 is a non-credit course designed to strengthen students’ algebra skills for Math 1101. This co-requisite course is taken along with Math 1101 and will cover intermediate and college level algebra concepts that are needed to ensure success in Math 1101. Please review the CSU Catalog & Schedule (http://apps.clayton.edu/courses/schedule) for a complete list of possible prerequisites for Math 0998.

Course Description: Math 1101 is a three semester credit hour course that is an introduction to mathematical modeling using graphical, numerical, symbolic, and verbal techniques to describe and explore real-world data and phenomena. Emphasis is on the use of elementary functions to investigate and analyze applied problems, on the use of appropriate technology, and on effective communication of quantitative concepts and results. This course in applied college algebra will involve an applications-driven study of functions and models, such as polynomial, exponential, logarithmic, and piecewise-defined models; inverse functions; composition of functions; and systems of equations.

For students in Math 1101, a grade of C or better is a prerequisite for subsequent math courses at Clayton State University.

Course Content: The following sections will be covered in the course:
- Sections 1.1-1.4: Functions, Graphs, and Models; Linear Functions
- Sections 2.1-2.4: Linear Models, Equations, and Inequalities
- Sections 3.1-3.4: Quadratic, Piecewise-Defined, and Power Functions
- Sections 4.1-4.3: Additional Topics with Functions
- Sections 5.1-5.5: Exponential and Logarithmic Functions
- Sections 6.1-6.3: Higher-Degree Polynomial and Rational Functions
Course Learning Outcomes: After successful completion of the course, the student will be able to

- Model situations from a variety of settings in mathematical forms by extracting quantitative data from a given situation, translate the data into information in various modes, evaluate the information, abstract essential information, make logical deductions, and arrive at reasonable conclusions;
- Manipulate and express mathematical information, concepts, and thoughts in verbal, numeric, graphical, and symbolic forms;
- Shift among the verbal, numeric, graphical, and symbolic forms as required for particular situations;
- Solve multi-step problems using inductive, deductive, and symbolic reasoning;
- Use appropriate technology in the evaluation, analysis, and synthesis of mathematical information.

General Education Outcomes:

- Communication: Students will gain a knowledge base of basic mathematics in analytical, graphical, and numerical form. Students will communicate their ideas orally in class discussions and in written form on examinations.
- Critical Thinking: Students will apply their knowledge to solve mathematical problems presented in class and on examinations. Students will determine the mathematical question, apply appropriate concepts, and provide evidence of a logical progression of thoughts in order to draw conclusions and solve mathematical problems.

Course Materials: The following materials are required and should be brought to every class meeting:

- Computer: Students will use their computers during class and on exams as directed by the instructor. Students should have ready access to a computer that meets faculty-approved hardware and software requirements. More information about these requirements can be found on the ITP Choice page (http://www.clayton.edu/hub/ITP-Choice). It is each student’s responsibility to have a working computer. Students having computer issues should inform their instructor and visit the HUB’s Help Center on the first floor of the UC building for support.
- Online Activity: Online activity will take place in Desire2Learn (D2L), Clayton State University’s online classroom. D2L is a learning management system in which the student will be able to access the discussion board, course resources, and the homework and quiz management system MyMathLab. Login to the SWAN portal (https://auth.clayton.edu/login) using your CSU credentials, select “Desire2Learn,” and then select MyMathLab. Please refer to the D2L and MyMathLab login sheet provided by your instructor for further information. If you experience difficulties in D2L please contact the HUB at http://www.clayton.edu/hub.
- Textbook: The textbook is College Algebra in Context, 5th ed., by Harshbarger and Yocco. Students will have access to a digital e-book within MyMathLab. For students who wish to purchase a physical copy of the textbook, please use Price Loch (http://www.priceloch.com) to comparison shop. Students should bring the physical textbook to class or have ready access to the e-book provided in MyMathLab. The textbook has many explanations and examples which are surprisingly helpful when read in conjunction with the in-class discussions. You are encouraged to read the relevant sections of the textbook in advance of the corresponding in-class discussion just to familiarize yourself with upcoming ideas and terminology.
Math Software: This course uses free software called Graph. Follow the directions provided on the Graph website (http://www.padowan.dk) under the Download tab. Windows users should choose “Release,” and Mac users should choose “Graph on Mac.” Mac users may prefer to install Windows on their machines; please visit the HUB Help Center on the first floor of the UC building for help with this. Students will not be allowed to use hand-held calculators in this course. Use of software or technology that is not approved by the instructor will constitute academic misconduct.

Grading Policy: The final course letter grade for Math 1101 will be determined by the following grading scale: A >= 90% > B >= 80% > C >= 70% > D >= 60% > F.

Homework: Homework will account for 10% of the overall course grade and will be completed in MyMathLab. The Homework Average will be computed as the average of a student’s best 21 out of 23 homework assignments (that is, your instructor will drop the two lowest grades). Reading the sections of the textbook that correspond to a homework assignment is considered part of the homework assignment. MyMathLab homework is not timed, and there are unlimited attempts for each problem up to the due date. That is, a student may work on a homework assignment until a grade of 100% is obtained!

Quizzes: Quizzes will account for 10% of the overall course grade and will be completed in MyMathLab. The Quiz Average will be computed as the average of a student’s best 10 out of 12 quiz assignments (that is, your instructor will drop the two lowest grades). MyMathLab quizzes are timed (90 minutes), and the entire quiz may be attempted up to three times prior to the due date.

Tests: There will be four tests given, but your instructor will drop the lowest test grade. The remaining tests will be worth 20% each for a total of 60% of the overall course grade. Test #1 will cover material from Chapter 1 and will be administered on Wednesday, August 30, during class. Test #2 will cover material from Chapter 2 and Section 3.1 and will be administered on Wednesday, September 27, during class. Test #3 will cover material from Sections 3.2-3.4 and 4.1-4.3 and will be administered on Monday, October 30, during class. Test #4 will cover material from Chapter 5 and Sections 6.1-6.2 and will be administered on Wednesday, November 29, during class. The dates of the tests will not change but your instructor reserves the right to move certain sections if that material has not been covered by the scheduled test date. Students who miss a test will receive a grade of zero on that test. Students may be allowed to take a test earlier than the scheduled date if permission is requested via email at least one week prior to the test.

Final Exam: The departmental final exam is comprehensive (it covers all material from Chapters 1-6) and will account for 20% of the overall course grade. The final exam is Monday, December 11, 2:45pm – 4:45pm, in UC-425. No student is excused from the final exam, and any schedule conflicts concerning the final exam must be worked out with your instructor at least one week prior to the last day of class. Failure to take the final exam at the time scheduled or an approved alternate time will result in a final course letter grade of F.

Bonus Points: As mentioned previously, your instructor will drop your lowest two homework grades, your lowest two quiz grades, and your lowest test grade before computing your final course grade. Students with no unexcused absences (see Course Policies) will receive 10 bonus points to their final exam grade. Other bonus points may be awarded at the instructor’s discretion.

Midterm Grades: The midterm grade for the course will be issued via the DUCK by Tuesday, October 3. The midterm grade will reflect about 30% of the overall course grade. Based on this grade, the student may choose to withdraw from the course and receive a W.
• **Withdrawals/Hardship Withdrawals:** Any student who wishes to withdraw from a course before midterm must fill out an official withdrawal form available in the Office of the Registrar no later than the date designated on the official Academic Calendar for the semester in question by visiting [http://www.clayton.edu/calendar](http://www.clayton.edu/calendar). Students who experience an unexpected event or circumstance beyond their control that directly interferes with their ability to continue to make satisfactory progress in their classes, such as serious illness or unexpected major life events, may petition the Dean of their major for a hardship withdrawal from all of their classes. Withdrawal information can be found on the Registrar’s website: [http://www.clayton.edu/registrar](http://www.clayton.edu/registrar). Before withdrawing from a course, please talk with your advisor and your instructor so that you will understand the academic consequences of withdrawing. If you are on financial aid, please meet with a financial advisor to discuss the impact on your academic progress and financial aid eligibility.

**Course Policies:**

• **Attendance:** Attendance is mandatory for all scheduled class meetings. Attendance will be taken daily, usually at the beginning of class. Unless prior approval has been obtained, students who arrive after class starts or before class ends will be issued an unexcused absence. Students are responsible for obtaining information about announcements and assignments made in class, even if absent. In the event of an unexpected instructor absence or university closure, students should check their email for further instructions.

• **Excused Absences:** The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. The student should make every effort to inform the instructor via email before the student misses a class. In such cases where this is not possible, the student will have one week to provide verifiable documentation and request an excused absence.

• **Electronic Messages:** The instructor’s email address is [ChristopherRaridan@clayton.edu](mailto:ChristopherRaridan@clayton.edu). Use only your CSU email account when corresponding with your instructor. Email from another account will not be answered. Students should check their CSU email accounts often, at least once a day. Do not send time-sensitive information via email; instead, speak with the instructor directly. A delivered email does not relieve a student of the responsibility of informing the instructor in person about some concern. Voice mail or email messages to the instructor are usually returned within two business days (that is, not counting weekends or holidays).

• **Email Etiquette:** Any email sent to the instructor should include in the subject heading the student’s first and last name as well as the course and section number. Failure to do so may result in a delayed response (or no response at all) to an email. Remember to act professionally when sending email to the instructor.

• **Cellphones, Headphones, and Earbuds:** Students are required to silence or turn off their cellphones and remove headphones or earbuds and put them away when the instructor is present in the classroom. Failure to do so will constitute academic misconduct.

• **Social Media/Instant Messaging:** Using social media websites or instant messaging services when the instructor is present in the classroom is strictly prohibited and will constitute academic misconduct.

**Student Resources:**

• **The Instructor:** The student’s primary resource is the instructor. The instructor holds regular office hours which are listed on this syllabus, outside the instructor’s office, and on the instructor’s website.
• **Appointments:** Students should make an appointment via email to meet with the instructor, even during office hours. This will ensure that the instructor does not already have someone else scheduled. Typical office appointments are for 15-30 minutes. Please arrive at the appointment on time and prepared to ask questions. Scheduling an appointment during office hours is not required but beneficial to both the instructor and student. For meetings outside of regularly scheduled office hours, though, an appointment must be requested by the student at least 48 hours in advance. In this case, the student should also provide a few acceptable meeting times so that the instructor can try to make proper arrangements.

• **Center for Academic Success:** The Center for Academic Success (CAS) is located in Edgewater Hall, Suite 276. Students can obtain tutoring (drop-in sessions or one-on-one appointments) from peer-tutors in over 100 core subjects. The CAS offers moderated study groups, informal study sessions, a comfortable study environment, and a student lounge. Best of all, these services are free! A complete description of CAS services and hours of operation can be found on their website: [http://www.clayton.edu/cas](http://www.clayton.edu/cas).

• **Writing Assistance:** The Writers’ Studio is located in the Arts & Sciences Building, Room G-224. The goal of the Writers’ Studio is to give rise to better writers, not just better writing. Students will receive both writing guidance and feedback up to 90 minutes per day or three hours per week. Appointments and walk-ins are welcome. Please visit [http://clayton.mywconline.com](http://clayton.mywconline.com) for more information on their services or to schedule an appointment.

• **Operation Study:** The faculty and staff of Clayton State University expect and support high motivation and academic achievement. Look for Operation Study activities and programs that are designed to enhance your academic success.

• **Counseling and Career Services:** Students may obtain help with education, career, and personal concerns from a staff of professional counselors and career advisors. For information about Counseling Services, please visit [http://www.clayton.edu/counseling](http://www.clayton.edu/counseling). For information about Career Services, please visit [http://www.clayton.edu/career](http://www.clayton.edu/career).

• **Disability Resource Center:** The Disability Resource Center (DRC) is located in Edgewater Hall, Suite 255. Students with disabilities who require accommodations need to register with the DRC in order to obtain these accommodations. Students registered with DRC who are seeking accommodations for this course should make an appointment with the instructor early in the semester to discuss specific accommodations. The instructor must be given a copy of the accommodations letter provided by the DRC. The DRC staff can be contacted by phone at (678) 466-5445 or via email at disabilityservices@clayton.edu.

**University Policies:** A complete list of university policies can be found in the current Academic Catalog by visiting [http://www.clayton.edu/publications](http://www.clayton.edu/publications).

• **Student Conduct:** For the health, safety, and general well-being of all students, faculty, and staff, students must abide by the policies set forth in the Clayton State University Handbook ([www.clayton.edu/Portals/46/docs/student-handbook.pdf](http://www.clayton.edu/Portals/46/docs/student-handbook.pdf)) and the Basic Undergraduate Student Responsibilities as listed in the current Clayton State University Academic Catalog ([www.clayton.edu/Portals/5/BasicUndergraduateStudentResponsibilities.pdf](http://www.clayton.edu/Portals/5/BasicUndergraduateStudentResponsibilities.pdf)).

• **Academic Misconduct:** Any type of activity that is considered dishonest by reasonable standards or as set out in the Student Code of Conduct in the Student Handbook may constitute academic misconduct. The most common forms of academic misconduct are cheating and plagiarism. Academic misconduct will not be tolerated and all instances will be reported to the Office of Community Standards ([http://www.clayton.edu/community-standards](http://www.clayton.edu/community-standards)). Information concerning
disputive procedures can be found at http://www.clayton.edu/Portals/47/docs/disciplinary-procedures-2016-2017.pdf. Should the student be found guilty of any academic misconduct, a final letter grade of F will be assigned for the course.

- **Disruptive Behavior**: Behavior which disrupts the teaching-learning process will not be tolerated. Some examples of behavior that will not be tolerated include belligerent, abusive, profane, or threatening behavior toward the instructor or other students in the class. Conditions attributed to physical or psychological disabilities are not considered as a legitimate excuse for disruptive behavior. A student who fails to respond to reasonable faculty direction regarding disruptive behavior may be dismissed from the course. A student who is dismissed is entitled to due process and will be afforded such rights as soon as possible following dismissal. If found in violation, a student may be administratively withdrawn and may receive a grade of WF (withdrawal-failing) regardless of the student’s current standing in the course. More examples of disruptive behavior and the appeal procedure are provided at the Disruptive Classroom Behavior Web Page: http://www.clayton.edu/portals/5/disruptiveclassroombehavior.pdf.

- **No Show Policy**: Any student who has paid and has failed to attend class by the deadline posted in the official Academic Calendar (http://www.clayton.edu/calendar) for the term will be identified as a “no show.” The no show student will be administratively withdrawn from the class and a grade of W$ will be posted on the student’s transcript. More information about the No Show Policy (including criteria and instructions for reinstatement) may be reviewed at http://www.clayton.edu/registrar/No-Show-Policy.

- **Campus Carry Policy**: Clayton State University is committed to providing a safe environment for students, faculty, staff, and visitors. Information on laws and policies regulating weapons on campus are available at http://www.clayton.edu/public-safety/Safety-Security/Weapons.

**Other Information:**

- **Changes to the Syllabus**: The instructor reserves the right to add or delete topics from this course and to adjust due dates as needed. Students will be informed of changes via email or during class.

- **Academic Calendar**: The current Academic Calendar (http://www.clayton.edu/calendar) provides general information concerning university deadlines and holidays.

- **Teacher Education**: The mission of the Teacher Education unit is to prepare professional educators who engage in reflective practice and who are competent, caring, committed, collaborative, culturally responsive, and prepared to teach diverse learners in an ever-changing society. The content of this course syllabus correlates to education standards established by national and state education governing agencies, accrediting agencies, and learned society or professional education associations. For more information about teacher education, including the complete Clayton State University Teacher Education Conceptual Framework and educational correlation matrices, please visit http://www.clayton.edu/arts-sciences/Teacher-Ed.