Syllabus Quick Facts Precalculus — Fall 2024

Course Information

Instructor Email: cm264@mailbox.sc.edu

Course Webpage: https://coffeeintotheorems.com/courses/2024-2/fall/math-115/

Office Hours: The instructor's office is LeConte 345C. The office hours are...

Mon. Tues. 4:00pm - 2:00pm Wed. 1:00pm - 5:30pm Thurs. 4:00pm - 2:00pm Thurs. 4:00pm - 5:30pm

Grading Components

Course grades are determined by the following components:

Labs 5%
Check-Ins 10%
Homework 20%
Final Exam 20%
Exams I–III 45%

Attendance

Attend each lecture and show up on time. Anticipated absences should be addressed with the instructor in advance of the absence. If you miss a lecture, you are responsible for any material covered, any work assigned, any course changes made, etc. during the class. Seven or more unexcused absences from lectures could result in receiving a grade penalty per additional absence or an 'F' in the course. Furthermore, excessive lateness will also count as an absence.

Labs

Throughout the semester, there will be a series of labs that will help students connect the mathematics in the course to practical applications. These labs may be done (partially or wholly) during class meetings or assigned to be completed outside of class. Often, these labs will be graded on the effort put into them; however, portions or the entirety of labs can be graded on the correctness of the work.

Check-Ins

There will be a check-in *every* class, typically at the start of class. Because solutions will often then be immediately discussed, no make-up check-ins will be given (except under extraordinary circumstances).

Homeworks

There will typically be a homework assigned each class, due the next class. These homeworks will likely be submitted virtually. Assignments should be started as soon as possible; it is easier to keep up than it is to catch up. You may request extensions on homework assignments (possibly

incurring a grade penalty). Requests for extensions should be submitted to the instructor in a timely fashion—do not delay! You are encouraged to work with others on homeworks; however, be sure to carefully abide by the academic integrity standards excepted by the college and instructor.

Exams

There will be a total of 3 exams that are each worth 15% of the course grade and a final exam worth 20% of the course grade for a total of 65%. The tentative schedule for these exams can be found below. Each exam covers course material, up until the exam preceding it. The final exam is cumulative. There are no make-up exams except under extraordinary circumstances.

Course Schedule

The following is a *tentative* schedule for the course and is subject to change.

| Date | Topic(s) | Date | Topic(s) |
|-------|--|-------|--------------------------------|
| 08/20 | Course Introduction | 10/15 | Other Trig. Functions (§4.5) |
| 08/21 | Real Numbers (§A.1–A4) | 10/16 | Inverse Trig. Functions (§4.6) |
| 08/22 | Equations & Inequalities (§A6–A8) | 10/17 | Fall Break (No Class) |
| 08/26 | Graphs (§1.1, 1.2) | 10/21 | Inverse Trig. Functions (§4.6) |
| 08/27 | Lines (§1.3) | 10/22 | Review |
| 08/28 | Functions (§1.4, 1.5) | 10/23 | Review |
| 08/29 | Function Transformations (§1.7) | 10/24 | Exam 2 |
| 09/02 | Labor Day (No Class) | 10/28 | Trig. Identities (§5.1–5.4) |
| 09/03 | Function Composition (§1.8) | 10/29 | Trig. Identities (§5.1–5.4) |
| 09/04 | Inverse Functions (§1.9) | 10/30 | Trig. Equations (§5.5–5.6) |
| 09/05 | Review | 10/31 | Trig. Equations (§5.5–5.6) |
| 09/09 | Exam 1 | 11/04 | Right-Triangles (§6.1) |
| 09/10 | Quadratic Functions (§2.1) | 11/05 | Election Day (No Class) |
| 09/11 | Polynomials (§2.2, 2.3) | 11/06 | Law of Sines (§6.2 |
| 09/12 | Polynomials (§2.2, 2.3) | 11/07 | Law of Cosines (§6.3) |
| 09/16 | Rational Functions (§2.4) | 11/11 | Review |
| 09/17 | Rational Functions (§2.4) | 11/12 | Sequences & Series (§9.1) |
| 09/18 | Exponential Functions (§3.1) | 11/13 | Limits (§10.1) |
| 09/19 | Logarithmic Functions (§3.2) | 11/14 | Limits (§10.2) |
| 09/23 | Polynomial Inequalities (§2.5) | 11/18 | Review |
| 09/24 | Polynomial Zeros (§2.6) | 11/19 | Review |
| 09/25 | Exponential Functions (§3.1) | 11/20 | Review |
| 09/26 | Logarithmic Functions (§3.2) | 11/21 | Exam 3 |
| 09/30 | Logarithmic Properties (§3.3) | 11/25 | Thanksgiving Break (No Class) |
| 10/01 | Exp./Log. Equations & Applications (§3.4, 3.5) | 11/26 | Thanksgiving Break (No Class) |
| 10/02 | Exp./Log. Equations & Applications (§3.4, 3.5) | 11/27 | Thanksgiving Break (No Class) |
| 10/03 | Review | 11/28 | Thanksgiving Break (No Class) |
| 10/07 | Exam 2 | 12/02 | Review |
| 10/08 | Angles (§4.1) | 12/03 | Review |
| 10/09 | Unit Circle (§4.2) | 12/04 | Review |
| 10/10 | Trigonometric Functions (§4.3) | 12/05 | Review |
| 10/14 | Sine, Cosine, & Tangent (§4.4, 4.5) | 12/11 | Final Exam |