

MAC2312-004 CRN 12498 (Fall 2020)

Calculus with Analytic Geometry 2 (4 credit hours)

Instructor: Dr. Frederick Hoffman

Class Time/Location: Tuesday/Thursday 8:00 – 9:50 pm in Webex

Office Hours: Tuesday/Thursday 2:00 – 3:00 pm in Webex via Canvas

Phone Number: (561) 297-3345

Email: hoffman@fau.edu Please send emails directly to this email—do NOT email through Canvas.

COURSE DESCRIPTION

Continuation of MAC 2311. Logarithmic, Exponential, hyperbolic, and inverse trigonometric functions, techniques of integration, partial fractions, area, trapezoid and Simpson's rules, volume, work; analytic geometry; Taylor approximations; sequences and series. This is a General Education course.

COURSE PREREQUISITES

MAC2311

COURSE OBJECTIVES

Upon successful completion of the course the student will be able to solve problems in the following areas and achieve the quantitative skills required for courses requiring calculus 2:

- Apply antiderivatives to compute the area between curves, the volume of solids of revolution, arc length of curves, moments, centers of mass, and the motions of bodies.
- Find antiderivatives by any of the standard techniques of integration.
- Determine the Taylor series expansion of a function, use it for numerical approximations, and compute an error bound for the approximations.
- Apply any of the standard convergence tests to determine the convergence of a series, and compute the radius of convergence of a power series.
- Understand the conceptual foundations of limit and the area under a curve, and their application to other disciplines.
- Apply the process of mathematical modeling to other disciplines and real-world problem situations, using a variety of functions.
- Understand parametric and polar representations of functions and graphs and their applications.

COURSE DELIVERY MODE

This is a fully online course with LIVE LECTURES accessible only through FAU's learning management system, Canvas. Attendance during live lectures is MANDATORY and counts in your grade. You must log into Canvas with your FAU ID and Password to access the lectures, materials, and assignments in this course. If you do not know your FAU ID or Password, [contact OIT for help](#). This course is organized into modules by week. Unless otherwise specified, each module opens at 9:00am on the Monday morning for that week. The course begins with the Start Here module, which will familiarize you with the organization and navigation of the course. The majority of assignments for this course are Worksheets/Homework and Preworksheets—these are assigned during each live lecture and are due at the start of the next live lecture (and must be uploaded to Canvas).

TIME COMMITMENT PER CREDIT HOUR

This course has 4 credit hours. For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

REQUIRED TEXTS AND MATERIALS

Stewart, *Calculus: Early Transcendentals*, 8th ed. *The online learning system “WebAssign” is NOT required for this class.*

MINIMUM TECHNOLOGY AND COMPUTER REQUIREMENTS

Hardware and Software Requirements

Hardware

- Dependable computer (Chromebooks are not acceptable as they do not communicate with Respondus Lockdown Browser)
- Computer speakers
- Microphone
- Webcam

Software

- Reliable web browser (recommended [Chrome](#) or [Firefox](#))
- [Adobe Reader](#)
- [Adobe Flash Player](#)
- Canvas mobile app: Download instructions for [iOS device](#) or [Android device](#)

Internet Connection

- Recommended: Broadband Internet connection with a speed of 4 Mbps or higher.
- To function properly, Canvas requires a high-speed Internet connection (cable modem, DSL, satellite broadband, T1, etc.).
- The minimum Internet connection speed to access Canvas is a consistent 1.5 Mbps (megabits per second) or higher.
- [Check your internet speed here.](#)

Other Technologies

- GeniusScan mobile app, CamScanner mobile app, scanner, or other method to convert written work to a multiple page PDF for online submission.
- Speakers and a microphone for your computer are required as the course includes video lectures and group work.
- A webcam is required for use during the exams.

Computer Requirements

Basic Computer Specifications for Canvas

- Operating system: Windows 10 or macOS Sierra (or higher).
- [Specifications](#)

Peripherals

- A backup option should be available to minimize the loss of work. This can be an external hard drive, a USB drive, cloud storage, or your folder on the FAU server.

Software

- Once logged in to Canvas, make sure your Internet browser is compatible.
- Other software may be required for specific learning modules. If so, the necessary links to download and install will be provided within the applicable module.

Minimum Technical Skills Requirements

The general and course-specific technical skills you must have to succeed in the course include but are not limited to:

- Accessing Internet
- Using Canvas (including taking tests, attaching documents, etc.)
- Using email with attachments.
- Creating and submitting files as PDF.
- Copying and pasting functions.
- Downloading and installing software.
- Posting and commenting in an online discussion.

Technical Support

In the online environment, technical issues are always possible (e.g., lost connection, hardware or software failure). Many of these can be resolved relatively quickly, but if you wait until the last minute before due dates, the chances of these glitches affecting your success are greatly increased. Please plan appropriately. If a problem occurs, it is essential you take immediate action to document the issue so your instructor can verify and take appropriate action to resolve the problem. Most issues in Canvas can be resolved by clicking on the Help tab located on the menu bar.

When a problem occurs, click "Help" to:

- Report a problem
- Live chat with Canvas support
- Search Canvas guides

Additional Technical Support

1. If you can, make a Print Screen of the monitor when the problem occurs. Save the Print Screen as a .jpg file. If you are unfamiliar with creating a Print Screen file, see [Print Screen instructions](#).

2. Complete a [Help Desk ticket](#). Make sure you complete the form entirely and give a full description of your problem so the Help Desk staff will have the pertinent information in order to assist you properly. This includes:
 - a. Select Canvas (Student) for the Ticket Type.
 - b. Input the Course ID.
 - c. In the Summary/Additional Details section, include your operating system, Internet browser, and Internet service provider (ISP).
 - d. Attach the Print Screen file, if available.
3. Send a message to your instructor at hoffman@fau.edu to notify them of the problem. Include all pertinent information of the incident (2b-d above).
4. If you do not have access to a computer, call your instructor with all pertinent information of the incident. If your instructor is not available, make sure you leave a detailed message.
5. If you do not hear back from the Help Desk or your instructor within a timely manner (48 hours), it is your responsibility to follow up with the appropriate person until you obtain a resolution.

CALCULUS 2 – LEARNING ASSISTANT (LA) PROGRAM:

This section of Calculus 2 will incorporate the LA Program. LAs are fellow undergraduate students who have been successful in Calculus 2. LAs will help lead collaborative group work sessions weekly via Zoom and assist students in actively learning and critically thinking about missed course content during additional office hours.

LA's for this class:

The LA's assigned for this class are the following:

LA Garrett Reardon greardon2018@fau.edu Office Hours (via Zoom): Tuesdays: 3-5pm Thursdays: 4-5pm	LA Hannah Mendez hmendez2017@fau.edu Office Hours (via Zoom): Tuesdays: 10-12am Thursdays: 12-1pm
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LA Group Work Sessions (optional):

This LA based curriculum is designed to allow students to learn calculus by *doing* calculus. LA's will hold group work sessions on Mondays, Wednesdays, and Fridays to work with students on assigned worksheets. These sessions are optional, however, students can earn points towards their next exam by attending and engaging in these sessions (see below).

Group work sessions are 50 minutes in length and run by your LAs via Zoom through Canvas. *To join, go to Zoom in your Canvas shell and click JOIN for the session you wish to attend.* Please check the schedule below to see which worksheets are covered during each group work session.

Group work sessions are optional, but students earn points toward exams as follows:

- Students receive 1 point toward the next exam by attending a group work session—maximum allowable is ONE point per day, TWO points per week (giving a possible 6-8 extra points per exam).
- Students may attend more than two sessions per week, but points cap as stated above.
- Students **must engage** with others in the session for credit. *Attendance alone is not sufficient to receive points.*
- Students **must use their webcam** in all sessions.
- LAs will keep a google sheet of attendance/earned points by student for instructors.

LA Group Work Schedule

<u>Mondays</u> 9-9:50am 12-12:50pm 3-3:50pm 4-4:50pm		<u>Wednesdays</u> 9-9:50am 10-10:50am 4-4:50pm 7-7:50pm		<u>Fridays</u> 9-9:50am 11-11:50am 1-1:50pm	
8/24	n/a	8/26	Substitution FTOC	8/28	7.1
8/31	7.1	9/2	7.2	9/4	7.3
9/7	7.3	9/9	7.4	9/11	7.8
9/14	7.8	9/16	6.1, 6.5	9/18	Review
9/21	Review	9/23	Any	9/25	6.2
9/28	6.2	9/30	6.3	10/2	6.4
10/5	6.4	10/7	8.1	10/9	8.2
10/12	8.2	10/14	11.1	10/16	Review
10/19	Review	10/21	Any	10/23	11.2
10/26	11.2	10/28	11.3	10/30	11.4
11/2	11.4	11/4	11.5	11/6	11.6
11/9	11.6	11/11	Holiday	11/13	11.8
11/16	11.9	11/18	11.10	11/20	Review
11/23	Review	11/25	Any	11/27	Holiday
11/30	Any	12/2	11.11	12/4	Review
12/7	Review	12/9	Review	12/11	Review

COURSE ASSESSMENTS, ASSIGNMENTS, AND GRADING POLICY

Worksheet/Homework Assignments (total 19%)

For each section of the textbook, students will receive a worksheet (found in the appropriate module). Students *should* make use of LA group work sessions to work together on these worksheets. Included at the bottom (end) of each worksheet is a list of textbook problems. The homework assignment for each textbook section is to complete and submit the worksheet problems AND the listed textbook problems **as a single PDF** (see details below about online submissions).

Grading of Homework: Only selected problems from each homework will be graded (worksheet plus

textbook problems) and students will NOT be made aware which problems will be graded ahead of time. Students are expected to complete each worksheet and all its assigned homework problems. There will be a standard 20-point deduction if ALL problems are not attempted (regardless if one or all are missing). If all problems are completed, you will start with these 20 points. The remaining 80 points will then be divided up between the problems selected for grading and any additional credit lost will come from these 80 points.

Pre-worksheets (total 2%)

For each textbook section, students will be given a pre-worksheet (found in the appropriate module) to be completed and uploaded BEFORE the lecture for that section. These contain mostly prerequisite reminders and require you to read material in the textbook before we cover it in the next lecture. Pre-worksheets are graded as Complete/Incomplete and solutions will be posted in Canvas (as they can be a great study tool).

Online Submission of Homework and Pre-Worksheets: All homework and pre-worksheets must be turned in on Canvas as PDF files. It is the STUDENT'S responsibility to ensure that all submissions are done completely, correctly, legibly, and on time. ONLY what has been submitted on Canvas by the due time will be graded: forgotten pages cannot be added later, and uploads that did not work or are unreadable will be graded as ZERO. There are NO EXCEPTIONS for this—including the first assignment. Students are encouraged to upload assignments EARLY to avoid computer issues: if a student's computer won't upload an assignment at the last minute and causes the student to miss the deadline, the student will receive a ZERO on the assignment.

Live Lectures—Participation (total 3%)

Students are expected to attend all live lectures. For each lecture, attendance will be graded as either **complete** or **incomplete** and will make up 3% of the course grade. Earning a **complete** for any lesson will require students to be present for the **entire** class.

LA Office Hours (possible return of 20% per homework)

In most cases, all homework will be graded no later than the next lecture after it was due. Students will be given the opportunity to raise their grade 20% points by attending LA office hours in Zoom (hours are listed above) and demonstrating to the LAs that they have learned the missed material. Students will have ONE WEEK (from the date homework was due to be graded) to take advantage of this opportunity. Students are expected to come prepared to explain what was missed and answer LA questions to verify understanding. **Students will not receive the extra points simply for showing up.** Once the LA is convinced that the student understands **all** the missed homework, they will add the points directly in canvas. Homework corrections take precedence at LA office hours. Therefore, if students are struggling with understanding the content, they may need to make use of FREE tutoring through the Math Learning Center (MLC) (see <http://www.math.fau.edu/mlc/remote/index.php>). If you attend LA hours when there is less than 20 minutes remaining, you may be asked to attend another session where there is time to sufficiently review your work. **All** homework missed must be addressed to the LA's satisfaction or there will be no grade change. It is the STUDENT's responsibility to make sure the LA adds the points to their Canvas once corrections are completed. If you would like to discuss corrections confidentially, please let the LA know and they can make use of breakout rooms to satisfy this request.

Free Math Tutoring

The MLC provides the following FREE tutoring for all FAU students in their math courses:

- **ONLINE:** Please see <http://www.math.fau.edu/mlc/remote/index.php> for available days/times

and links to online tutoring. All tutoring is drop-in (no appointments are needed) and is available through Zoom.

- **IN PERSON:** There is VERY LIMITED in-person tutoring during the Fall 2020 semester so that social distancing can be implemented. If your course is not available, please check ONLINE tutoring availability (as stated above). Guidelines for in-person tutoring:
 - All tutoring is appointment based—please go to <https://tutoring.fau.edu/>, login with your FAU ID and password and click on ‘Search for Availabilities.’ For Center, choose ‘SAM Lab’ for Methods of Calculus or ‘Math Learning Center’ for everything else. Choose your section (class) and click ‘Search.’ Choose your time and then click ‘Save.’
 - Each session is 45 mins in length, maximum TWO students.
 - Students may make a MAXIMUM of ONE appointment per week for any course they are currently enrolled in (based on availability).
 - Cancellation policy: You can cancel your appointment no less than two hours prior to the appointment by logging into TutorTrac (<https://tutoring.fau.edu/>) and clicking the “X” next to your appointment on your home screen. Missing an appointment without cancelling is called a no-show. If you accumulate 2 no-shows during the semester, all appointment privileges will be suspended and you will only be able to use the drop-in tutoring via the online environment.

Please email mlc@fau.edu should you need further information or have questions.

Course Examinations (3 exams – total 51% plus cumulative final exam – 25%)

We will have 3 midterm exams, each worth 17% of the final course grade, and a cumulative final exam worth 25% of the final course grade. **No books, calculators, or smart devices** are allowed during exams. These will be administered online in the Canvas Learning Management System utilizing Lockdown Browser with Respondus and will require the use of a WebCam to proctor virtually. Tests will be timed. No makeup exams will be given without a documentable reason. Smartphones, smartwatches, etc. must be PUT AWAY during every exam for the ENTIRE session. The software flags suspicious activity as CHEATING and the instructor will act in accordance with FAU’s procedures in the university’s Code of Academic Integrity.

Tentative exam dates

Exam 1	9/22/20
Exam 2	10/20/20
Exam 3	11/24/20
Final Exam	12/12/20

If the exam dates need to be moved, new dates will be announced during lecture and via Canvas Announcement.

Grade Distribution

Homework (Worksheet+book problems)	19%
Pre-worksheets	2%
Live Lectures – Participation	3%
Exams	51% (17% each)
Final Exam	25%

Course Grading Scale

90-100	A	74-76	C+
87-89	A-	68-73	C
84-86	B+	55-67	D
80-83	B	0-54	F
77-79	B-		

Late Assignments Policy

Students are responsible for arranging to make up work missed due to a legitimate excuse, such as family funerals, military obligations, court-imposed legal obligations, religious observation, or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily within 48 hours. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence. Any excusable absence must be documented by a verifiable source, and the instructor must be notified AT LEAST ONE WEEK prior to the test date.

Pre-worksheet and Homework assignments that are late without documentable reason will be graded as a zero. Please communicate with your instructor within 48 hours of the due date and a makeup arrangement date MAY be set (at the discretion of the instructor). If communication occurs more than 48 hours after the due date, no arrangement will be made, and the score will remain zero.

Exam Make-up Policy

If a student misses a test due to an emergency, the instructor must be notified WITHIN 24 HOURS after the test, and written verifiable documentation is required. Students will not be penalized for absences due to participation in University-approved activities provided they notify their instructor and make appropriate arrangements well in advance of any test. Similarly, reasonable accommodations will be made for students participating in a religious observance. Travel plans are NOT emergencies. Exams missed without approved documentation will receive a grade of 0 (zero).

Incomplete Grade Policy

The University policy states that a student who is passing a course but has not completed all work due to exceptional circumstances, may, with consent of the instructor, temporarily receive a grade of incomplete (I). The assignment of the I grade is at the discretion of the instructor but is allowed only if the student is passing the course.

ADA statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodation due to a disability to properly execute coursework must register with the Office for Students with Disabilities (SAS) and follow SAS procedures. The SAS office is in the SU building, Room 133. See <https://www.fau.edu/sas/> or call 561-297-3880 for more information. If you need accommodations, please register early so that your accommodations will be available as soon as possible.

COURSE POLICIES

Code of Academic Integrity Policy

Students at Florida Atlantic University should endeavor to maintain the highest ethical standards. Academic dishonesty is a serious breach of these ethical standards because it interferes with the University mission to provide a high-quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive to the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

Plagiarism

[Plagiarism](#) is unacceptable in the University community. Academic work must be an original work of your own thought, research, or self-expression. When students borrow ideas, wording, or organization from another source, they must acknowledge that fact in an appropriate manner. Plagiarism is the deliberate use and appropriation of another's work without identifying the source and trying to pass off such work as one's own. Any student who fails to give full credit for ideas or materials taken from another has plagiarized. This includes all discussion board posts, journal entries, wikis, and other written and oral presentation assignments. **THIS INCLUDES HOMEWORK DERIVATIONS.**

Netiquette

Due to the casual communication common in the online environment, students are sometimes tempted to relax their grammar, spelling, and/or professionalism. Please remember that you are adult students and professionals so your communication should be appropriate. For more in-depth information, please see the [FAU statement on netiquette](#).

Classroom Etiquette/Disruptive Behavior Policy Statement

Disruptive behavior is defined in the FAU Student Code of Conduct as "... activities which interfere with the educational mission within classroom. Students who disrupt the educational experiences of other students and/or the instructor's course objectives in a face-to-face or online course are subject to disciplinary action. Such behavior impedes students' ability to learn or an instructor's ability to teach. Disruptive behavior may include but is not limited to non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct."

For more information, please see the [FAU Office of Student Conduct](#).

COMMUNICATION POLICY

Expectations for Students

Announcements

You are responsible for reading all announcements posted by the instructor. Check the course announcements each time you log in.

Email/Video Conferencing

You are responsible for reading all your course email and responding in a timely manner.

Instructor's Plan for Classroom Response Time and Feedback

Email/Video Conferencing Policy

Except for weekends and holidays, the instructor will typically respond to email sent to hoffman@fau.edu within 48 hours. Please DO NOT send email through Canvas. If you have questions of a personal nature, you should email the instructor. If you need to via Zoom live (outside of office hours), please email your request with 3-4 available times.

Assignment Feedback Policy

This course has a grader who will provide feedback on homework assignments. The instructor will provide feedback on all other assignments (including exams), generally, within one week of the submission date.

Course-Related Questions Policy

Except weekends and holidays, the instructor will generally answer questions within 48 hours.

Electronic Communication Policy

In addition to the University's policy, please consider the following:

- Privacy, confidentiality, and security in all electronic communications.
- All electronic communication resources must be used for the course and in alignment with the University's mission.
- Prohibited use of false identity, false identity pseudonyms, or anonymous (senders name or electronic identification is hidden).
- Access without consent.
- Disruption of services including introducing computer contaminants (viruses).
- Harassment of any kind.

Please see the Office of Information Technology's policies on [Cyber Security Awareness](#).

SUPPORT SERVICES AND ONLINE RESOURCES

- [Center for eLearning and Student Success](#)
- [Counseling and Psychological Services](#)
- [FAU Libraries](#)
- [Freshmen Academic Advising Services](#)
- [Math Learning Center](#)
- [Office of Information Technology Helpdesk](#)
- [Office of International Programs and Study Abroad](#)
- [Office of Undergraduate Research and Inquiry](#)
- [Student Accessibility Services](#)
- [University Center for Excellence in Writing](#)

CAPS statement: Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS

provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>.

FACULTY RIGHTS AND RESPONSIBILITIES

Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise.

To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.
- Establish and enforce reasonable behavior standards in each class.
- Recommend disciplinary action for students whose behavior may be judged as disruptive under the *Student Code of Conduct*.

SELECTED UNIVERSITY AND COLLEGE POLICIES

Accessibility Policy Statement

In compliance with the Americans with Disabilities Act (ADA), students who require special accommodations to properly execute coursework due to a disability, must register with Student Accessibility Services (SAS) located in the Boca Raton, Davie, and Jupiter campuses and follow all SAS procedures. For additional information, please consult [Student Accessibility Services](#). Contact

- Boca Raton: (561) 297-3880
Fax: (561) 297-2184, TTY: 711
- Davie: (954) 236-1222
Fax: (954) 236-1123, TTY: 711
- Jupiter: (561) 799-8721
Fax: (561) 799-8721, TTY: 711

Grade Appeal Process

You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructors own grading system.

[Chapter 4 of the University Regulations](#) contains information on the grade appeals process.

Religious Accommodation Policy Statement

In accordance with rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of examinations and work assignments. For further information, please see [Academic Policies and Regulations](#).

University Approved Absence Policy Statement

In accordance with rules of the Florida Atlantic University, students have the right to reasonable accommodations to participate in University approved activities, including athletic or scholastics teams, musical and theatrical performances and debate activities. It is your responsibility to notify the instructor at least one week prior to missing any course assignment.

Drops/Withdrawals

You are responsible for completing the process of dropping or withdrawing from a course. Please click on the following link for more information on dropping and/or withdrawing from a course. Please consult the [FAU Registrar Office](#) for more information.

*****The instructor reserves the right to adjust this syllabus as necessary.*****

Course Schedule MAC2312-004 Fall 2020

This is subject to change—any changes will be announced in class and via Canvas Announcement. There are no in-person classes after Thanksgiving—everything will be delivered online (Week 15).

Dates	Material Covered Tuesday	Material Covered Thursday
Week 1 – 8/24 – 8/30	Syllabus, Substitution/FTOC	7.1
Week 2 – 8/31 – 9/6	7.2	7.3
Week 3 – 9/7 – 9/13	7.4	7.8
Week 4 – 9/14 – 9/20	6.1, 6.5	Review
Week 5 – 9/21 – 9/27	Exam 1	6.2
Week 6 – 9/28 – 10/4	6.3	6.4
Week 7 – 10/5 – 10/11	8.1,8.2	10.1
Week 8 – 10/12 – 10/18	11.1	Review
Week 9 – 10/19 – 10/25	Exam 2	11.2
Week 10 – 10/26 – 11/1	11.3	11.4
Week 11 – 11/2 – 11/8	11.5	11.6
Week 12 – 11/9 – 11/15	11.8	11.9
Week 13 – 11/16 – 11/22	11.10	Review
Week 14 – 11/23 – 11/29	Exam 3	Thanksgiving
Week 15 – 11/30 – 12/6	11.11	Final Review

Final Exam: Saturday, December 12, 2020 from 10:30am – 1:00pm

This exam will be ONLINE via Lockdown Browser with Repondus and requires a WebCam.