

# MA16020 : Applied Calculus II - IMPACT/Hybrid M and W Classroom Instruction

## Course Information - Syllabus(Part II)

### FALL 2021

The Syllabus may need to be updated and emended as needed the remainder of the semester.

**COURSE COORDINATOR:** Owen K. Davis, Office: MATH 812, email: davisok@purdue.edu

**COURSE WEB PAGE:** <http://www.math.purdue.edu/ma16020>

**TEXTBOOK:** No textbook to purchase. Course contents will be provided to students online through LON-CAPA free of charge. [loncapa.purdue.edu](http://loncapa.purdue.edu)

**HOMEWORK ACCESS:** Online homework access through LON-CAPA will be provided to students free of charge. [loncapa.purdue.edu](http://loncapa.purdue.edu)

**COURSE DESCRIPTION:** Credit Hours: 3.00. This course covers techniques of integration; infinite series, convergence tests; differentiation and integration of functions of several variables; maxima and minima, optimization; differential equations and initial value problems; matrices, determinants, eigenvalues and eigenvectors. Applications. Typically offered Fall Spring Summer.

**PREREQUISITE:** Minimum grade of C- in MA16010 or MA16100 or MA16300 or MA16500 or MA16700 or MA22300 or MA22100 or MA23100

**Calculator:** A scientific calculator with a **one-line display** is required. ONLY THIS TYPE OF CALCULATORS WILL BE ALLOWED. NO EXCEPTIONS. **HIGHLY Recommended is the TI-30Xa.** If in doubt, please double check with your instructor. You are allowed to use but NOT to share the approved calculators on quizzes and exams.

**Homework:** Homework assignments will normally be due at **7:59AM**, the day of the next lesson/lecture. **Homework due dates and times will appear in LON-CAPA.** The **three** lowest homework scores will be dropped at the end of the semester. If you are not able to complete your homework on time and have extenuating circumstances with valid supporting documents, please communicate with myself, the Course Coordinator(Owen Davis [davisok@purdue.edu](mailto:davisok@purdue.edu)).

**Special Note:** If you feel one of your homework answers is being graded incorrectly, please get help using the Piazza Discussion Board mentioned further below, posting screenshot(s) of the problem with your answer and the work you think is correct, however actual LON-CAPA grading mistakes are extremely rare. **AFTER homework answers are available for a given HW assignment in LON-CAPA**, when a HW assignment goes past due, then do email the Course Coordinator(Owen Davis [davisok@purdue.edu](mailto:davisok@purdue.edu)) if the answer you submitted was incorrectly graded.

**Quizzes:** There will be frequent quizzes, one or two each week. No make-up quizzes will be given. Only your instructor can excuse a quiz.

Requests to have deadlines extended and/or work excused **must be made at the time of your absence.** No consideration will be given to requests made after that time.

**Exams:** There will be 3 - 90 minute Midterm Exams and a 120 minute Final Exam. **The semester does not end until Saturday, December 18 at 9:00 pm.**

**EXAM 1 Monday, 9/20, Time: 8:00PM 9:30pm** Covers Lessons R to 8

**EXAM 2 Monday, 10/25, Time: 8:00PM 9:30pm** Covers Lessons 9 to 21

**EXAM 3 Thursday, 11/18, Time: 8:00PM 9:30pm** Covers Lessons 21 to 31

**FINAL EXAM ???, 12/??, Time: ??????, 120 minute exam** - Covers Lessons R to 36

**Special Note:** Individuals wanting to leave campus early **will not** be granted early Final Exams to accommodate travel plans.

If you miss an exam for any reason, please contact your instructor **AND the Course Coordinator**(Owen Davis [davisok@purdue.edu](mailto:davisok@purdue.edu)) immediately and explain why you missed the exam. **You should be prepared to present documentation to the Course Coordinator that supports the reason for your absence.** If you contact the course coordinator(Owen Davis [davisok@purdue.edu](mailto:davisok@purdue.edu)) within 24 hours from the scheduled exam, the Course Coordinator **might** allow you to take an alternate exam either with no penalty OR with a 20 point deduction, depending on the reason for your absence. If you miss an exam with no valid and documentable reasons and you do not contact the Course Coordinator within 24 hours from the scheduled exam, you will not be allowed an alternate exam. Not knowing the right time, date or location of an exam is not a valid reason for missing an exam.

**Exam Warning:** If there are any special circumstances that may affect your ability to successfully complete an exam (illness, family emergency, etc.) you must contact your instructor **AND the Course Coordinator**(Owen Davis [davisok@purdue.edu](mailto:davisok@purdue.edu)) before taking the exam, even if you must do so right before the exam. The Course Coordinator(Owen Davis [davisok@purdue.edu](mailto:davisok@purdue.edu)) will then be able to advise you on your options. Do not wait until after you take the exam to contact the Course Coordinator(Owen Davis [davisok@purdue.edu](mailto:davisok@purdue.edu))

**OFFICE HOURS:** Most instructors hold office hours in the Math Resource Room, MATH 211. In addition to instructors from your course, instructors from other courses in the help rooms can also help you. The office hour schedule can be found through the course webpage. The schedule will be finalized during the first week of classes. **You are strongly urged to go to office hours if you have questions. It is the best way to get individual help.**

**Piazza Discussion Forum for Homework questions.** We will use Piazza for the online discussion board for ALL homework questions. There will be multiple moderators that can help you with even smaller issues like typing in answers correctly. Asking a question, posting a screenshot(s) of your solution AND the problem with the answer you are typing in, can all be helpful to getting prompt useful help. This is also a great place for you to interact with other fellow students and get your homework questions answered by one another also. **You are highly encouraged to actively participate in the discussion.**

**SUPPLEMENTAL INSTRUCTION: Will be conducted both in person.** There are Supplemental Instruction (SI) study sessions available for this course. These study groups are open to anyone enrolled in this course who would like to stay current with the course material and understand the material better. Attendance at these sessions is voluntary, but extremely beneficial for those who attend regularly. Times and locations for the help sessions can be found here: [www.purdue.edu/si](http://www.purdue.edu/si) or on the PurdueGuide app ([purdue.edu/asc/PurdueGuide.html](http://purdue.edu/asc/PurdueGuide.html)). Students who attend these interactive sessions will find themselves working with peers as they compare notes, demonstrate and discuss pertinent problems and concepts, and share study and test-taking strategies. Students are asked to arrive with their student ID card, lecture notes and questions to these informal, peer-led study sessions.

**LEARNING OUTCOMES:** Formulate an integral to solve a Word/Application problem. Formulate a differential equation to solve a Word/Application problem. Formulate an infinite series to solve a Word/Application problem. Formulate a multivariable function to solve a Word/Application problem. Formulate a matrix equation to solve a Word/Application problem.

**GRADES:** The course grade will be based on a total of 680 points. Since the 3 midterm exams and the Final Exam are common to all students, a normalization process based on the composite score (sum of the scores for Exams 1 through 3 and the Final Exam; maximum 560 points) is used to determine the number of each letter grade given:

To insure a grade system that is as fair possible, and since the assessments common to all students and graded identically for all students are the five, course-wide exams, the best way to compare the learning of students in different sections with different instructors who will write and grade significantly different quizzes is using these common exams. SO...

**SEMESTER LETTER GRADE CALCULATIONS:**

Homework	60
Quizzes	60
Exams 1 to 3, 120 points each	360
Final Exam	200
Total	680 points

1. Each student's Exams 1 through 4 scores and the Final Exam score will be added together, to form a composite score (out of a maximum of 560 points).
2. The Mathematics Department will decide on the A range, B range, etc., for the composite scores.
3. The course coordinator will count the number of composite scores for each instructor's combined group of students which are in the A range, B range, etc.
4. For course grades, the course coordinator will assign a number of As, Bs, etc, equal to the number of As, Bs, etc. earned as the composite scores. However, the final grades will be assigned based on total score (out of the 680 points as listed in the table above).
5. Example: Suppose there are 8 As, 10 Bs, etc. for the composite scores among your instructor's students, then the students in his/her section with the 8 highest total scores will receive an A; students with the next 10 highest total scores will receive a B; and so on.
6. If your total score is within 2 points of a grade cutoff, your grade will be raised to the higher full letter grade. If your total score is within 3-13 points of a grade cutoff, your grade will be raised and a minus sign added (that is, you will earn an A-, B-, C-, or D-). If your total score is within 14-24 points of a grade cutoff, a plus sign will be added to your grade (that is, you will earn a B+, C+, or D+).

**GRADE SCALE NOTE: This a required syllabus element, but for this course the actual grades will always be more generous than this. So, think of this as a safety net grade guarantee.** Students who get at least 97 percent of the total 580 points in this course are guaranteed an A+, 93 percent guarantees an A, 90 percent an A-, 87 percent a B+, 83 percent a B, 80 percent a B-, 77 percent a C+, 73 percent a C, 70 percent a C-, 67 percent a D+, 63 percent a D, and 60 percent a D-; for each of these grades, it is almost certain that at the end of the semester a somewhat lower percentage will be enough to get that grade.

**ACADEMIC ADJUSTMENTS FOR STUDENTS WITH DISABILITIES:** Purdue University strives to make learning experiences accessible to all participants. If you anticipate or experience physical or academic barriers based on disability, you are welcome to let me know so that we can discuss options. You are also encouraged to contact the Disability Resource Center at: [drc@purdue.edu](mailto:drc@purdue.edu) or by phone at 765-494-1247.

If you have been certified by the Disability Resource Center (DRC) as eligible for accommodations, you should contact your instructor to discuss your accommodations as soon as possible. Here are instructions for sending your Course Accessibility Letter to your instructor: <https://www.purdue.edu/drc/students/course-accessibility-letter.php>

In this mathematics course accommodations are managed between the course coordinator, the instructor, the student, and the DRC Testing Center.

**SUPPORT for Stress, Anxiety, Learning Resources, or Mental Health:**

If you find yourself beginning to feel some stress, anxiety and/or feeling slightly overwhelmed, try WellTrack, <https://purdue.welltrack.com/>. Sign in and find information and tools at your fingertips, available to you at any time.

If you need support and information about options and resources, please see the Office of the Dean of Students, <http://www.purdue.edu/odos>, for drop-in hours (M-F, 8 am- 5 pm).

If you're struggling and need mental health services: Purdue University is committed to advancing the mental health and well-being of its students. If you or someone you know is feeling overwhelmed, depressed, and/or in need of mental health support, services are available. For help, such individuals should contact Counseling and Psychological Services (CAPS) at (765)494-6995 and <http://www.purdue.edu/caps/> during and after hours, on weekends and holidays, or by going to the CAPS office of the second floor of the Purdue University Student Health Center (PUSH) during business hours.

**Academic Guidance in the Event a Student is Quarantined/Isolated:** If you become quarantined or isolated due to COVID- 19, you should contact your instructor regarding resources for remote learning if you are in a face- to-face section.

**Classroom Guidance Regarding Protect Purdue:** The Protect Purdue Plan, which includes the Protect Purdue Pledge, is campus policy and as such all members of the Purdue community must comply with the required health and safety guidelines. As Protect Purdue protocols continue to evolve, please follow the guidelines by the university as they update the policies.

Any student who has substantial reason to believe that another person is threatening the safety of others by not complying with Protect Purdue protocols is encouraged to report the behavior to and discuss the next steps with their instructor. Students also have the option of reporting the behavior to the Office of the Student Rights and Responsibilities. See also Purdue University Bill of Student Rights and the Violent Behavior Policy under University Resources in Brightspace.

**CAMPUS EMERGENCY PROCEDURE:** In the event of a major campus emergency, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar or other circumstances beyond the instructor's control. Announcements regarding campus emergencies will be sent via course-wide emails and posted on the course web page.

**ACADEMIC DISHONESTY:** Academic honesty and integrity is a critical part of all we do at Purdue. Students are expected to adhere to the Purdue Honor Pledge: As a boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do. Accountable together we are Purdue. See the Purdue Honor Pledge for more information.

The Mathematics Department will not tolerate academic dishonesty of any sort. If academic dishonesty occurs, then grade penalties will be imposed, zeros on assessments for sure, and up the extent of a directed F in the course. All cases of academic dishonesty will be reported to the Office of the Dean of Students for disciplinary action (which may include probation, suspension, or expulsion). NOTE: students should be made aware that they can report issues of academic integrity that they observe, either through the Office of the Dean of Students ([purdue.edu/odos](http://purdue.edu/odos)), call 765-494-8778 or email [integrity@purdue.edu](mailto:integrity@purdue.edu) .

**DEADLINES FOR SECTION CHANGES AND DROPS:** During the first week of classes, section changes and drops are made via Banner within myPurdue, and no signatures are required. From the second through ninth weeks of the semester section changes and drops are possible using a Form 23 with the consent of your advisor and the instructor of the section you want to enter or drop. You will find the list of instructors with meeting times near the bottom of the course webpage.

For drop signatures **ONLY**, if your instructor is not available, go to MATH 835 or to see the Course Coordinator Owen Davis in MATH 812.

**LAST ADD DATE:** The last day you can add this course is Tuesday, September 14.

**COURSE EVALUATIONS:** On Monday of the fourteenth week of classes, you will receive an official email from evaluation administrators with a link to online course evaluations.

**EMERGENCY PREPAREDNESS SUMMARY:** A document about emergency preparedness can be found on the course web page. Here is a summary:

If an alarm is heard inside a building, immediately evaluate the building. Get a safe distance from the building. Remain outside the building until police, fire, or other emergency response personnel provide additional guidance or tell you it is safe to leave or return to the building.

If an alarm is heard outside a building, immediately seek shelter in a safe location within the closest building. These types of alarms may indicate a tornado, a civil disturbance, or release of hazardous materials in the outside air. Remain inside the building until police, fire, or other emergency response personnel provide additional guidance or tell you it is safe to leave.

In both cases above, you should seek additional clarifying information by all means possible such as Purdue University home page, email alert, TV, radio, etc.