IUPUI MATH 22100: Calculus for Technology I

Instructor information

Instructor : Kang Lu

Office : LD 225

Office Hours : Tuesday and Thursday 15:00–16:00 at LD 225

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Please use the Messages (INBOX) tool in Canvas for all correspondence with me. Do not use Email while you are enrolled in my class.

Course Logistics

Class Number : 22743

Meeting Times : Tuesday and Thursday 09:00–10:15

Room : SL 137

Textbook : Peter Kuhfittig, Technical Calculus with Analytic Geometry, 5th Edition.

Check CANVAS regularly (several times per week) for important information and announcements.

Course Description

Welcome to MATH 22100! This is a 3 credits course on analytic geometry, the derivative and applications, and the integral and applications.

Prerequisites

MATH 15900 (or MATH 15300 and 15400) taken within last 3 terms with a grade of C- or better or an ALEKs placement score of 80 or greater taken within last 12 months.

Note: ALEKs placement test scores will be compared against SAT/ACT Math scores. Additional testing may be required.

I am assuming that you have already mastered the materials covered in the prerequisites (this includes elementary arithmetic). For example, you should know

$$(a+b)^2 \neq a^2+b^2, \qquad \frac{\sin x}{\sin y} \neq \frac{x}{y}.$$

You are responsible for satisfying the prerequisites!

Course work

1. **Quizzes**: The problems for quizzes can be found here, List of Practice Problems for Final Test. Dates for quizzes can be found in Canvas or Daily Schedule 22100. There are ten quizzes. Each quiz is valued 10 points.
2. **MATLAB Assignments**: The Math Department requires MATH22100 students to perform a series of MATLAB project. You will find the instructions and reference materials on Canvas, or at https://math.iupui.edu/math/undergraduate/courses under the tab "MATH 22100 Calculus for Technology I".

No prior knowledge of MATLAB is required. Most on-campus computer labs have MATLAB installed, so you do not need to purchase this program for your own computer.

You can access MATLAB through IUanyWare. (See https://one.iu.edu/task/iu/stream-software.) To receive full credit for an assignment, you must complete the assignment by the deadline stated on Canvas.

I am assuming that I do not need to remind you the deadline of each MATLAB assignment. NO LATE WORK WILL BE ACCEPTED!

Turn in your assignment on (or before) the due day before the lecture. Do not email me any unsolicited assignments, or put them on my desk, etc. They will be discarded without acknowledgement, and you will receive zero for those assignments.

I expect everyone to get 100% for the MATLAB assignments.

3. **Exams**: I hate them. But there will be four in-class exams. They may be cumulative and include material from earlier chapters. Each exam is valued at 100 points, so the total value for regular exams is 400 points. You are expected to take each exam at the scheduled date and time.

   THERE WILL BE NO MAKE-UP EXAMS, except as permitted by university policy, i.e., for jury duty, military duty, pre-approved religious observances, and for participantion in university-sanctioned events (e.g., events for atheletes). This means no make-ups for real emergencies like accidents, illnesses, funerals, traffic problems, etc. Your lowest score will be replaced by your score on the final if it improves your grade. Only one exam score may be replaced. If you miss two exams, you will receive a zero on the second exam.

   Take good care of yourself until you finish the exams.

4. **Final Exam**: The final exam will be on Saturday, April 27 from 15:30– 17:30. (Refer to https://studentcentral.iupui.edu/calendars/spring-exam-schedule.html for the most updated information.) The final exam is a departmental comprehensive exam. More information will be provided in due course.

   There will be no make-up for the final under any circumstances. You will receive 0 if you miss the final. So take good care of yourself until you finish the final.

   I will NOT re-schedule the MATH 22100 final for anyone. If there is a conflict between final exams (which is extremely rare), re-schedule the other one.

Exam and Final Policies will be posted on Canvas in due course.

Grades

Your letter grade for the course will be determined from your percentage total, which will be computed as follows.

Items	Points	Percentage
Quizzes	100 pts	11.6%
Matlab	60 pts	7%
Attendance	100pts	11.6%
Exams	400 pts	46.5%
Final	200 pts	23.3%

Final grades will be based on the following scale: A+ = 97-100%, A =93-96%, A- =90 -92%, B+ = 87-89%, B =83-86%, B- =80-82%, C+ = 77-79%, C =73-76%, C- =70-72%, D+ = 67-69%, D =63-66%, D- =60 -62%, F= Below 60.

Withdrawing from class

Refer to the IUPUI Academic Calendar Spring 2019 at https://studentcentral.iupui.edu/calendars/official-calendar.html for the most updated information.

1. **The last day to withdraw leaving no record is January 13 2019**. Withdrawal with automatic grade of W begins on January 14 2019.
2. **The last day to withdraw with automatic grade of W is Sunday, March 10, 2019**. Requires advisor approval via the late drop/add classes link in One.IU. UCOL students or Engineering/Technology freshmen must see advisor by 5:00PM on the prior Friday. In person transactions must be processed by 5:00PM on the prior Friday.
3. **Withdrawal with grade of W or F begins on March 11 2019. Advisor, instructor and dean's approvals required**. Starting on this day, I have to assign you a grade of W or F. If you do not have at least 60%, you will receive an F, regardless of what your reasons are.
4. **Attendance and Administrative Withdrawal: A student absent from class bears full responsibility for all material covered in class**. If you miss more than half of the required activities within the first 25% of the course without contacting me, you will be administratively withdrawn from this course.

Dishonesty and student misconduct

Cheating will result in a minimum penalty of receiving a grade of F in the course. The IUPUI Department of Mathematical Sciences expects all students to adhere to the regulations put forth in the "IUPUI Code of Student Rights, Responsibilities, and Conduct" concerning academic misconduct or personal misconduct. Procedures for imposing academic and disciplinary sanctions are outlined in the Code. The Code can be found at: http://conduct.iupui.edu.

Special services

Students needing accommodations because of a disability will need to register with Adaptive Educational Services (AES) and complete the appropriate forms issued by AES before accommodations will be given. The AES office is located in Taylor Hall, UC 100. You can also reach the office by calling 274-3241. Visit http://aes.iupui.edu/ for more information.

Tutoring and other resources

Success is not just a matter of how much you study, it also depends on how effectively you use the resources available to you. These resources are listed below. However, you should also be sure to get plenty of practice solving problems on your own, since this is what you will have to do on exams!

1. **Attendance**: A quote from Professor Patrick Morton: "Attendance is required to do well in this class. Based on experience, we can say with a fair degree of certainty, that if you do not come to class, you will not pass the course. Learning mathematics requires steady and persistent effort. Coming to class and making an effort to focus on the material being discussed is half the battle. The other half is practising the concepts by doing the homework."

2. **Office Hours**: Please come to my office hours if you are having trouble on the materials. There is no way I can help you if you do not come to class and office hours. If you do not ask question during lectures or office hours, then I will assume you have already understood the materials.

   Please, help me to help you.

3. **Exercises from the book**: You learn mathematics by solving problems. So be sure to spend a decent amount of time working on the problems/examples from the textbook. There is no harm in taking the approach of trying to solve ALL of the problems from the book in the end of the chapters covered in class.

4. **MAC**: The Mathematics Assistance Center (MAC) is a place for collaboration with peers on math assignments. The MAC is located in Taylor Hall (UC B001) and offers tutoring and peer mentoring from fellow students to anyone in a mathematics course. Assistance with online homework and software projects is available as well. For more information, see the MAC website at https://mac.iupui.edu/.

5. **Each other**: You are very much encouraged to study together. This is an easy way to make your study habits more effective.

6. **CAPS**: During the semester, if you find that life stressors are interfering with your academic or personal success, consider contacting Counselling and Psychological Services (CAPS). All IUPUI students are eligible for individual counselling services at minimal fees. Group counselling ser vices are free of charge. CAPS is located in Taylor Hall, room UC 100 and can be contacted by phone (317-274-2548). For more information, see the CAPS website at http://caps.iupui.edu.