Computer Programming for Engineers, VB .NET Section
COP2271
Academic Term: Spring 2023

Instructor

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Office Hours: Mon and Fri 10:00am-11:00am through Zoom

Teaching Assistants

Office hours are posted on Canvas calendar on a weekly basis

Course Description

Computer programming and the use of computers to solve engineering and mathematical problems. Emphasis will be placed on applying problem solving skills. This course is specifically directed towards those students who are pursuing technical careers in fields employing a reasonably high degree of mathematics (2 credits).

Course Pre-Requisite

MAC2312 (Analytic Geometry and Calculus II)

Course Objectives

Provide VB .NET language skills. Provide engineering problem solving skills using structured and object-oriented programming. Provide experience in project development and meeting requirements.

Materials and Supply Fees

None

Required Textbooks and Software

No textbook is required. Lectures will be provided to students through videos posted on Canvas and in-class presentations. The development software required for this course is Microsoft Visual Studio .NET 2019, downloadable for free from https://azureforeducation.microsoft.com/devtools. Please see the document named *HowToDownloadAndInstallVisualStudio.pdf* on our Canvas website.

Attendance Policy and Class Expectations

Attendance is not required; however, it is strongly recommended. It will be to your benefit to attend all lectures. Students will be responsible for all material covered in class.

Professional Component (ABET)

This course supports the ISE undergraduate program educational objectives of producing graduates who
- "will be successful professionals using industrial and systems engineering skills",
- "can acquire advanced knowledge through continuing education or advanced degree programs"
- "can become active leaders in their profession and/or community"

Relation to Program Outcomes (ABET)

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	Medium
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	Medium
3. An ability to communicate effectively with a range of audiences	
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not part of the course.

Assignments & Grade Disputes

Your grade will be based on four exams, each of which will be worth 25% of your final grade. The exams will be comprehensive, covering all the topics discussed up to that point. I will give you ample time (around 2 hours); in return, I will ask you to develop complete programming solutions on your laptop.

In each exam, I include a few challenging tasks, which only the best students will be able to answer. These are the questions that serve to distinguish the A students.

All exams must be submitted via E-learning unless specified otherwise. Assignment deadlines are rigid. **If you do not submit before the deadline or submit the wrong file, you will receive a zero.** Only the instructor has the authority to grant late submissions.

Grade disputes must be made to the instructor within three days after grades have been posted. Any grade dispute after the specified period will not be considered. The following describes the procedure:

(1) Within 3 days after your grade has been posted, e-mail the instructor requesting a grade breakdown,
(2) Compare your solution to the solution posted on the web-site using the detailed grade breakdown you receive,
(3) If you still have questions about your grade, to resolve the issue either go to the instructor's office hours or request an appointment.

Grading Policy

There may or may not be a curve applied on your grade at the end of the semester depending on the overall performance of the class. throughout the semester.

Please keep in mind that this is a challenging and time-consuming class. You need to study hard and perform well in every class activity in order to deserve an A.

Also, keep in mind that **this is a required course for ISE students. This means that you must earn, at a minimum, a C in order to satisfy the requirement.**

More information on UF grading policy may be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Grade	Range
A	[93, 100]
A-	[90, 93)
B+	[87, 90)
B	[83, 87)
B-	[80, 83)
C+	[77, 80)
C	[73, 77)
C-	[70, 73)
D+	[67, 70)
D	[63, 67)
D-	[60, 63)

Make-Up Policy

Excused absences require appropriate documentation. If you missed an exam due to a health problem, you will need to provide documentation that excuses the student from course work for the day of the exam. In case of an exam conflict, you will need to present evidence of the conflict to the instructor. Please do not ask for a make-up exam to attend a job interview.

Course Schedule

Week	Topic
1	Introduction & VB .NET Programming Basics
2	Decision Making (Branching Instructions)
3	Loops
4	Loops
5	**Exam-1** & Loops
6	Procedures
7	Basic Data Structures & Object Classes
8	**Exam-2** & Object Classes
9	Object Classes
10	*Spring Break*
11	Object Classes
12	**Exam-3** & File Processing
13	File Processing
14	Multi-Form Applications
15	Multi-Form Applications
16	**Exam-4**

Online Course Recording

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352- 392-8565, https://www.dso.ufl.edu/drc) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

University Honesty Policy

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:
• Your academic advisor or Graduate Program Coordinator
• Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.ufl.edu
• Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
• Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: https://registrar.ufl.edu/ferpa.html

Campus Resources:

Health and Wellness

> **U Matter, We Care:**
> If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.
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> **Counseling and Wellness Center:** http://www.counseling.ufl.edu/cwc, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.
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> **Sexual Assault Recovery Services (SARS)**
> Student Health Care Center, 392-1161.
>
> **University Police Department** at 392-1111 (or 9-1-1 for emergencies), or http://www.police.ufl.edu/.

Academic Resources

> **E-learning technical support**, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.
>
> **Career Resource Center**, Reitz Union, 392-1601. Career assistance and counseling. https://www.crc.ufl.edu/.
>
> **Library Support**, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.
>
> **Teaching Center**, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. https://teachingcenter.ufl.edu/.
>
> **Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers. https://writing.ufl.edu/writing-studio/.
>
> **Student Complaints Campus**: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.
>
> **On-Line Students Complaints**: http://www.distance.ufl.edu/student-complaint-process.