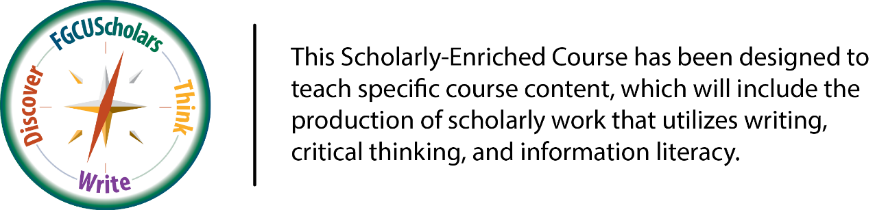
****

# Course Catalog Description:

Advanced computer programming concepts and problem solving are explored using a procedural programming language and software tools. Topics include pointers, dynamic memory allocation, string handling, structures, file I/O, and recursion. Includes two hours of lecture and one hour of lab per week.

# Meeting Information:

Class: T/TR -- 6:00 pm - 7:15 pm – (Holmes Engineering 402)

**Final**: **Apr 28 -- 5:45 pm - 8:00 pm** – (Holmes Engineering 402)

# Prerequisites:

Undergraduate level COP 2006 Minimum Grade of C

Undergraduate level MAC 2312 Minimum Grade of C

# Instructor Information:

***Paul Allen***

Email: **Message in Canvas**

Office location: TBA, **by appointment only**

Office Hours: Monday & Wednesday 4:30pm-5:30pm, **by appointment only**

# Required Course Materials:

* "Problem Solving, Abstraction, and Design" 6th Edition by Friedman and Koffman, Addison Wesley, ISBN-13: 978-0-13-607947-7, Copyright 2011

# Course Learning Outcomes

The student will learn intermediate-to-advanced programming concepts, structures, and application

development, using the C++ object-oriented programming language and its variants. Emphasis will be

placed on software development methods and programming environments. Specifically, the student will

acquire:

* an understanding of programming methodology and data structures
* an understanding of some important programming paradigms, such as object-oriented programming, procedural programming and structured design
* the ability to test program performance
* the ability to evaluate the usefulness of a variety of technological systems and resources
* an awareness of the resources available to software engineers in print & online.

# Tentative Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Day** | **Subject** | **HW Assigned** | **Due** |
| 1/7 | Tue | Intro to Programming |  |  |
| 1/9 | Thu | CPU Architecture |  | Read Ch 1 |
| 1/14 | Tue | C++ Statements |  | Read Ch 2 |
| 1/16 | Thu | IDE Setup |  |  |
| 1/21 | Tue | Variables & Data Types |  |  |
| 1/23 | Thu |  |  |  |
| 1/28 | Tue | Strings & I/O |  | Read Ch 3 |
| 1/30 | Thu |  |  |  |
| 2/4 | Tue | Numbers & Arithmetic |  |  |
| 2/6 | Thu |  | Meal Receipt |  |
| 2/11 | Tue | Conditional Expressions |  | Read Ch 4 |
| 2/13 | Thu |  |  | **Meal Receipt** |
| 2/18 | Tue | Repetition & Loops |  | Read Ch 5 |
| 2/20 | Thu |  | Einstein’s Puzzle |  |
| 2/25 | Tue | Midterm Review |  |  |
| 2/27 | Thu | Midterm Exam |  |  |
| 3/3 | Tue | [Spring Break] |  |  |
| 3/5 | Thu | [Spring Break] |  |  |
| 3/10 | Tue | Modular Programming |  | Read Ch 6 |
| 3/12 | Thu |  |  | **Einstein’s Puzzle** |
| 3/17 | Tue | Constants & Enums |  | Read Ch 7 |
| 3/19 | Thu |  |  |  |
| 3/24 | Tue | Arrays and Structures |  | Read Ch 9 |
| 3/26 | Thu |  |  |  |
| 3/31 | Tue | User Defined Classes | Student Grade Book | Read Ch 10 & 11 |
| 4/2 | Thu |  |  |  |
| 4/7 | Tue | [No Class] |  |  |
| 4/9 | Thu | [No Class] |  |  |
| 4/14 | Tue | Pointers & Recursion |  | Read Ch 12 & 13 |
| 4/16 | Thu |  |  | **Student Grade Book** |
| 4/21 | Tue | Final Exam Review |  |  |
| 4/23 | Thu | [No Class] |  |  |
| 4/28 | Tue | Final Exam |  |  |
| 4/30 | Thu |  |  |  |

# Attendance

Attendance is required in all classes.  No makeup will be given for missed classes, labs or exams, unless a case is made in advance with the instructor's approval.

# Refer to Academic Catalog: Attendance: http://www.fgcu.edu/Catalog/regdetail.asp?FMID=Registration+and+Records&page=9

# ASSIGNMENTS

* There is no grace period for late submission of assignments. All assignments with due dates and times will be posted on Canvas. Alternate schedules can be arranged ahead of time with instructor approval.
* You MUST submit your assignments on Canvas. Any submission to my email will NOT be graded.

# In-Class Labs (15%)

* Each week will be split between lecture on Tuesdays with hands on practice, and some lecture on Thursdays with an in-class lab. In-class labs can typically be completed by the end of the class period and must be submitted in Canvas by 11:59pm the day of the class.
* Labs requirements will be posted in Canvas on classes that have a lab, and while it may be possible to do the lab outside of the class, it will typically be difficult as the labs may be a combination of student-led and instructor-led exercises.

# Homework Assignments (35%)

* Homework assignments are small projects that exercise the current topics and build on previously covered topics.
* Requirements will be posted in Canvas for each homework assignment and you will typically have a week to two weeks to complete them.
* All homework assignments are individual assignments and all required materials must be submitted in Canvas prior to the due date and time.

# Midterm Exam (25%)

* Your mid-term exam will be a comprehensive practical exercise covering all material through week 8.

# Final Exam (25%)

* Your final exam will be a comprehensive practical exercise.

# Grading

* In-Class Labs: 15%, Homework Assignments: 35%, Midterm Exam 25%, Final Exam: 25%

|  |  |  |
| --- | --- | --- |
| GRADE | GPA | PERCENTAGE |
| A | 4.00 | 92 – 100 |
| B+ | 3.25 | 87 – 91 |
| B | 3.00 | 82 – 86 |
| B– | 2.75 | 79 – 81 |
| C+ | 2.25 | 77 – 78 |
| C | 2.00 | 70 – 76 |
| D | 1.00 | 60 – 69 |
| F | 0.00 | 0 – 59 |

 Please note there is no rounding-up in deciding your letter grade.

* Any student that did not withdraw from the course by March 27, 2020 will not be given incomplete grade for non-medical reasons or undocumented family matters.

# Working Independently

**NO assignment is a group assignment in this course**. Students are NOT allowed to collaborate on assignments. It is cheating to see other classmates’ programs or let other classmates to see yours. This does not mean you cannot discuss anything about assignments with your classmates. But programming must be individual work.

\*\*\* IMPORTANT \*\*\*

If two submissions are found to be similar, the grades of both people will be zero for that assignment. If caught again, you will fail this class. Additionally, I am supposed to report any academic sanction to the Dean of Students. This report will be in your conduct file.

**How Will I Help You Debug Your Programs?**

I encourage you to you show me or email me segments of your program that not working. I will help by addressing what you can do to debug your program rather than indicating errors directly.

**Communication**

Every student is responsible for checking his/her FGCU email at least once a day. The instructor will respond to your emails within 24 hours except weekends and holidays.

**Academic Integrity Statement and Statement for Students with Disabilities**

* Academic Dishonesty/Cheating Policy: "All students are expected to demonstrate honesty in their academic pursuits. The university policies regarding issues of honesty can be found under the "Student Code of Conduct" on page 11, and under "Policies and Procedures" on pages 18 - 24. of the Student Guidebook. All students are expected to study this document which outlines their responsibilities and consequences for violations of the policy. "
* Disability Accommodations Services: Florida Gulf Coast University, in accordance with the Americans with Disabilities Act and the university’s guiding principles, will provide classroom and academic accommodations to students with documented disabilities. If you need to request an accommodation in this class due to a disability, or you suspect that your academic performance is affected by a disability, please see me or contact the Office of Adaptive Services. The Office of Adaptive Services is located in Howard Hall 137. The phone number is 590-7956 or TTY 590-7930

**Center for Academic Achievement**

The Center for Academic Achievement (CAA) offers various academic success programs to assist you in reaching your academic goals in a student-centered learning environment. CAA services are for all FGCU students and include:

* **Academic Coaching**: Individual or group sessions facilitated by CAA Academic Success Coordinators who discuss relevant success skills to enhance your academic experience.   
  Coaching topics include -Time Management, Study Habits, Goal Setting, Motivation, and Organization.
* **Tutoring**: Appointment and Drop-in, peer-led tutoring for math, science, and economics. Check our website for specific courses and times <https://www2.fgcu.edu/CAA/schedules.asp>.
* **Supplemental Instruction (SI)**: SI leaders are assigned to specific course sections and hold sessions three times per week for 50 minutes in the Library. Sessions typically focus on the most difficult content in the course. Visit <https://www2.fgcu.edu/CAA/si.html> for full list of courses and schedules.
* **SOAR to Success Workshops**: Interactive workshops focusing on college success topics.

We invite you to visit https://www2.fgcu.edu/caa/ to make a **tutoring** and or **coaching** appointment, and get schedules for **supplemental instruction** and **workshops**. You also can stop by our office in Library 103 to pick up a schedule in person and make coaching appointments. We also have walk-in coaching sessions on Friday! Follow us @fgcu\_CAA.