**Course Description**

Introduces the fundamentals of procedural programming and object-oriented programming. Topics include: data types, control structures, functions, arrays, I/O, pointers and dynamic memory allocation, and features of object-oriented programming. The mechanics of compiling, linking, running, debugging and testing within a particular programming environment are covered. Ethical issues and a historical perspective of programming within the context of computer science as a discipline are given. Each week lecture meets for 150 minutes and lab meets for 150 minutes. Prerequisite: (1) MATH 0930; or (2) other satisfaction of the Entry Level Mathematics requirement.

**Prerequisite**

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**Textbook**

**HIGHLY RECOMMENDED**

![C++](image)

9th edition

Starting Out with C++: From Control Structures through Objects

Tony Gaddis

Publisher: Addison Wesley, 2018.

ISBN-10: 9780134498379

**Material Covered**

Odin - Linux

Introduction to Computers and Programming

Introduction to C++
Expressions and Interactivity
Making Decisions
Loops and Files
Functions
Arrays
Pointers
Characters, Strings and More about the string Class
Structured Data
Introduction to Classes
Constructors, Destructors, Copy Constructors
Operator Overloading
Friend Functions, Friend Classes
Separate Compilation, Header files Make Files
Inheritance

Attendance:
Students are responsible for their own attendance. The course material and assignments will be posted on Blackboard.

Academic Integrity Policy:
Labs may be worked on and discussed in groups. If the assignment is a group assignment, the group may turn in one assignment for the entire group. If the assignment is an individual assignment, each student must turn in their own code; no direct copying is allowed. Refer to the Academic Integrity policy printed in the campus catalog and class schedule.

Services for Students with Disabilities:
To request academic accommodations due to a disability, please contact the Office of Services for Students with Disabilities (SSD) as soon as possible. They may be reached at 661-654-3360 (voice), or 661-654-6288 (TDD). If you have an accommodations letter from the SSD Office, please present it to me during my office hours as soon as possible so we can discuss the specific accommodations that you might need in this class.

Tutoring Center and Open Use Computer Lab:
The walk-in computer lab in Sci III 324 is available for use by students in this course outside of class time on a first come, first serve basis. Tutoring is also provided on a limited basis in the walk-in lab. A tutoring schedule will be posted on the department website by the end of the first week of classes. Students in this course may ask the tutors for assistance on assignments. The tutors are not allowed to solve the assignment for you, but they can assist with problems like cryptic compiler errors.

Labs:
Lab assignments are posted on the course website. Labs are usually worth 10 points and usually involving writing 1-2 short programs. The labs will be assigned every assigned lab schedule and will be due by midnight on Saturday the same week. Partial credit will be given for incomplete labs. Late labs will be penalized 25% the first day late, and considered zero afterwards. The lowest lab grade will not be counted towards the overall lab grade.

Homework:
Homework assignments are posted on the course website. Homework assignments are usually worth 10 points and consist of multiple small programs. Each homework assignment will generally be assigned every Wednesday or Thursday and will be due by midnight usually a week later.
Programs which do not compile may be given partial credit depending on the severity of the error. Late homework will be accepted and will be marked down 25% the first day late. If there is a notice on the assignment that late homework will not be accepted beyond a certain date, then that is the final day homework will be accepted. Otherwise, assignments more than one day late will not be accepted. Special concessions may apply at my discretion.

**Extra Credit Assignments:**
You are encouraged to tackle any extra credit assignments that are usually given during the quarter. The more practice you get, the better you will be, and the extra points don’t hurt either.

**Labs/Homework Submission:**
Assignments are submitted by emailing the instructor all assignment code files from the Computer Science department server. Do not use GMail, webmail or any other email method as the campus firewall and spam filter may silently reject the email. All assignments MUST be submitted to the instructor’s Odin account.

**Midterms:**
Midterm 1 will be given during week 4 or week 5
Midterm 2 will be given during week 9 or week 10

Makeup midterms will not be given without a compelling or valid reason. Failure to take a midterm without prior notification will result in an automatic score of zero.

**Final:**
Our final will be on Friday, May 17, 5:00pm – 7:30pm. If you have a time conflict, you may arrange to take the final at a different time by emailing or speaking to me.

**Grading:**

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<th>Minimum Score</th>
<th>0</th>
<th>60</th>
<th>64</th>
<th>67</th>
<th>70</th>
<th>74</th>
<th>77</th>
<th>80</th>
<th>84</th>
<th>87</th>
<th>90</th>
<th>94</th>
<th>97</th>
</tr>
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<tbody>
<tr>
<td>Letter Grade</td>
<td>F</td>
<td>D-</td>
<td>D+</td>
<td>C-</td>
<td>C</td>
<td>C+</td>
<td>B-</td>
<td>B+</td>
<td>B</td>
<td>A-</td>
<td>A</td>
<td>A+</td>
<td></td>
</tr>
</tbody>
</table>

Labs/Homework       35%
Midterm 1            20%
Midterm 2            20%
Final                20%
Comprehensive Assignment 5%
Class Participation Bonus 2.0%

At the end of the quarter:
1. I will award—at my discretion—points for class participation. When your total percentage points have been tallied up for the quarter, you can earn:
   a. 0 – For no class participation
   b. 1 – Some participation
   c. 2 – Active, constant participation

   For example, if you have an 88% as your final score, and I know you have been actively participating in class discussion, I will award you 2 additional points to bring your grade score to 90% for the quarter.

**How to win in this class - Three Commandments:**
- The ones who write the most code wins
- The ones who get the most errors wins