CptS 121 Syllabus - Summer 2015

Program Design & Development

NOTE: Most of these policies and descriptions were derived directly from Andy O’Fallon’s CptS 121 syllabus.

Instructor Information
Instructor: Gina Sprint
Office: EME 127
Email: gsprint@eecs.wsu.edu
Office Hours: M, Tu, W, Th 10:15 – 11:15 am, and by appointment

Teaching Assistant Information
TA: Gene Lee
Office Hour Location: EME 120/128
Email: gene.lee@email.wsu.edu
Office Hours: M 11:30am – 1:30pm, and by appointment

Course Information
Program Design and Development
CptS 121 [4 credits]
Required for Majors

Prerequisites
Before taking this course you need to satisfy the prerequisites listed here:
http://schedules.wsu.edu/List/Pullman/20152/Cpt_S/121/01

Course Times & Location
Lecture: M, Tu, W, Th: 9:00 – 10:15 am; EME 52
Lab: M, W: 1:30 – 4:15 pm; EME 120/128

CptS 121 - Program Design and Development Homepage
http://eecs.wsu.edu/~gsprint/cpts121/

Description
CptS 121 is a first course ("CS 1") in computer science for majors. In this course, we use the C programming language to explore the fundamental concepts, constructs, and techniques of modern computer programming, including functional decomposition, data structures, and software engineering. The primary aim of this course is to give you a thorough introduction into problem solving, algorithm discovery, and program design in C. Some of these concepts include, but are not limited to, the following:

- Algorithm design
- Program design and implementation
- Software processes
- Data structure design and implementation

Learning Objectives
At the conclusion of this course, you should be able to:
- Realize that the field of computer science is about more than just programming, and appreciate its foundations in algorithmic problem solving
- Design, implement, and test a program applying modern tools and techniques
- Analyze a specification of a problem of moderate complexity, and construct a structured, elegant C program that solves the problem

Communication
We will use Blackboard in this course. Blackboard will be used to submit assignments and view your grades. You may use this tool to chat with and email other students in the class and to post discussion items. I will also email important information to you through Blackboard. The website URL is: https://learn.wsu.edu/ (use your WSU network ID and password to login).

Expected Outcomes
The following are WSU and ABET outcomes that will be satisfied in this course. Please refer to http://school.eecs.wsu.edu/undergraduate/cpts for more information.
- An ability to apply knowledge of computing and mathematics appropriate to the discipline. In particular, students should be able to apply this knowledge in a way that demonstrates comprehension of the tradeoffs involved in the modeling, design and development of software systems of various scales and complexity
- An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- An ability to use current techniques, skills, and tools necessary for computing practice

Course Materials
Textbook

Required Hardware
A laptop adhering to EECS requirements. Please refer to http://school.eecs.wsu.edu/node/890

Required Software
Microsoft Visual Studio 2012 (for the programming assignments and labs); Microsoft Visual Studio is designed for Windows machines only. You can download the software for free through the academic alliance that WSU has with Microsoft. You may download the software for download through zzusis, or directly here. In order to install Visual Studio you will need to be able to run the provided image file without having to burn it to a disc (standard in Windows8, right click on the ISO file and click “Mount”). If you do not already have a software utility to do this, you can download and install a tool such as
Daemon Tools Lite (the installer may come with adware so be aware of all the checkboxes). Note: If you have a Mac you will need Boot Camp, VMware Fusion, or other software to run Windows and Visual Studio.

Course Grading

Programming Assignments
You will be given 8 programming assignments to complete. All C code written in assignments must adhere to the recommended C Style and Coding Standards; your TA will let you know if you are not adhering to these standards. Programming assignments should be completed independently. It is easy to detect code sharing, don’t do it.

Please upload assignments as attached .zip files to the corresponding assignment in Blackboard. Recall the site is https://learn.wsu.edu/. Please refer to the schedule for assignments and dates. All programming assignments must be submitted by midnight of the due date.

Labs
You will be given 12 labs to complete. Each lab will give you hands-on experience with using the C language to solve multiple problems. These lab assignments also give you the opportunity to put into practice the techniques and concepts covered in the lectures with the help of your peers and a knowledgeable teaching assistant (TA). You are encouraged to share ideas with your peers in lab! Take advantage of learning from each other. You will receive full credit for a given lab if both:

(a) You show up and actively participate in the entire lab by making a sincere effort to complete all of the problems.

(b) You make a sincere effort to assist other students with the lab in the event that you finish before them.

Hence, you are awarded credit in lab for participation and effort. You may make up some labs if you have an excuse that is acceptable as determined by the instructor. You are responsible for ensuring you receive appropriate credit from your TA for these special circumstances.

Quizzes
Written quizzes will be given most Mondays to ensure that material presented in lecture is understood. Please refer to the schedule for quiz dates. Quizzes may be rescheduled for students that have valid excuses. To increase your chances of your excuse being determined “valid”, notify me no less than two days in advance if you are going to miss class.

Exams
We will have one midterm exam and one final exam in this course. The midterm will be held in class on Monday, July 6th during class, 9:00 – 10:15 am. The final exam will be held in class on Thursday, July 30th, 9:00 – 10:15 am for the written portion and 1:30 – 4:15 pm for the lab portion. You will be allowed to use a "cheat sheet": one side of a page whose dimensions may not exceed 8-1/2" by 5-1/2" for the midterm. For the final exam you are allowed one side of a page whose dimensions may not exceed 8-1/2" by 11".
Participation
You are expected to attend and participate in lectures and laboratories regularly, and to participate regularly in the Blackboard discussion boards. Attendance may positively affect your grade at the end of the semester.

Assignment Weights
- One midterm exam (15%)
- One final exam (20% - 10% for lab final, 10% for written final)
- Quizzes (10%) – there are 5 quizzes, each one is worth 2% of your overall grade
- Programming Assignments (35%) - the weight of individual assignments will be based on the points of each one; ranging from 3-5% of your overall grade
- Labs (20%) – there are 12 labs, each one is worth ~1.7% of your overall grade

Grading Scale

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<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>94-100%</td>
<td>A</td>
</tr>
<tr>
<td>90-93.99%</td>
<td>A-</td>
</tr>
<tr>
<td>86-89.99%</td>
<td>B+</td>
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<tr>
<td>82-85.99%</td>
<td>B</td>
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<tr>
<td>78-81.99%</td>
<td>B-</td>
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<tr>
<td>74-77.99%</td>
<td>C+</td>
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<tr>
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<td>66-69.99%</td>
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<td>62-65.99%</td>
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<td>58-61.99%</td>
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<td>0-57.99%</td>
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Contesting a Grade
If you believe that a mistake has been made with grading an assignment or exam, please speak with the instructor or TA within 2 days of the assignment or exam being returned. Do not wait until the end of the semester to discuss any grade changes. You need to constantly be aware of how you are performing in the class. Thus, there will not be any surprises at the end of the semester when grades are to be formally submitted. You should be able to view your grades via Blackboard. These will be updated weekly. NOTE: the grades in Blackboard may just be raw scores and not be weighted according to the ones described below. Thus, be sure that you keep track of these weights so that you are not surprised by a change in your overall grade at the end of the semester.

Course Policies
Late Work: Assignments are due by the established due dates and times (see schedule). You may hand in a programming assignment up to two days late (the weekend counts as one day), at a penalty of 10% per 24 hours late. Forty-eight hours after the assignment is due, you may no longer hand in the assignment for credit. If an emergency occurs, the instructor will accommodate the student as much as possible. Make-up exams will not be possible unless the student speaks with the instructor at least two days in advance. Emergencies do occur and rescheduling of exams because of these is to be determined by the instructor.

School Computing Policies
You may read about EECS’s school computing policies at the following site http://school.eecs.wsu.edu/files/file/EECS_Computing_Policies.pdf

Academic Integrity Policy
Academic integrity is at the heart of all higher education philosophies. Adhering to academic integrity policies ensures that you provide yourself with the best education possible. Maintaining academic integrity assures you receive the credit you deserve for your ideas.
You are expected to know and understand Washington State University Academic Integrity Policies. Copying and plagiarism of other sources will result in an automatic F on the assignment. For a second offense, an automatic F in the course will be awarded without the option to withdraw. University authorities will be notified and the proper procedures will be followed. Possible outcomes resulting from violating these policies include denial of certification into your program and expulsion.

For this course both group (for labs) and individual work (for all other assignments, quizzes, and exams) will be required. All individual work must be completed alone. Do NOT work with any team members on individual assignments. You may discuss ideas with team members about problems related to individual assignments, but do not discuss implementation details. If help is required please ask the instructor or TA for guidance. We are always more than willing to help!!!

Please thoroughly review the following website for more information about the WSU academic integrity policy: http://academicintegrity.wsu.edu/

Please also review the following website for more information about the EECS academic integrity policy (if any discrepancies are found within the EECS and WSU academic integrity policies, always follow the WSU policy): http://www.eecs.wsu.edu/~schneidj/Misc/academic-integrity.html

WSU's AWARE Network
As a student you have many responsibilities and obligations. One of the most important obligations that you may have is to your friends and peers at WSU. If you feel like one of your friends or peers is struggling with academics because of physical or mental health please inform me and/or appropriate university personnel. For more information refer to http://aware.wsu.edu/

WSU's Campus Safety Plan
Campus safety is a priority for WSU. Please become familiar with the campus safety plan at: http://safetyplan.wsu.edu/. Also, review the Office of Emergency Management website at: http://oem.wsu.edu/. These sites will provide you with information about policies and procedures for campus safety. You should sign up for WSU alerts through http://alert.wsu.edu/

Documented Disabilities
Washington State University has facilities and resources available for accommodating students with disabilities. Please notify me during the first week of class of any accommodations needed for the course.

Pullman Campus Syllabus Statement
“Students with Disabilities: Reasonable accommodations are available for students with a documented disability. If you have a disability and need accommodations to fully participate in class, please either visit or call the Access Center (Washington Building 217; 509-335-3417) to schedule an appointment with an Access Advisor. All accommodations MUST be approved through the Access Center.” You may also contact the Access Center via email: Access.Center@wsu.edu

Final Note
The fastest (and easiest) way to get better at programming is to program! This course moves fast and if you don’t stay on top of the assignments, labs, and reading it will be difficult to catch up. You will do great in the course if you put the time in to learn the material on schedule and practice programming 😊