

CSCI 1301, Computer Science I
SYLLABUS AND CLASS POLICIES
Spring Semester 2012

INSTRUCTOR: Carolyn Nelson
OFFICE HOURS: TTH 2:00pm - 3:30pm;
5 pm - 6:30pm

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COURSE DESCRIPTION: The course includes an overview of computers and programming: problem-solving and algorithm development; simple data types; arithmetic and logical operators; selection structures; repetition structures; text files; arrays (one-and two-dimensional); procedural abstraction and software design; modular programming (including subprograms or the equivalent). A high level programming language will be used. (3 lecture – 0 lab – 3 semester credit hours)

PREREQUISITE: A grade of C or better in MATH 1101 or higher (or equivalent placement score).

PROGRAM OUTCOMES: The CS curriculum is built on six core program outcomes. Successful completion of this course will contribute to the following subset of these nine outcomes. Graduates will demonstrate a **Developing** level of mastery for the following outcomes:

- 1) Solve complex and significant problems with professional skill by formulating efficient and effective algorithmic solutions.
- 2) Express algorithms clearly and correctly in a variety of programming languages.
- 3) Demonstrate sufficient foundational knowledge of computer science: Operating Systems, Databases, Networking, Graphics, Software Engineering, Gaming and Web.
- 5) Demonstrate mastery of the theoretical underpinnings of computer science.

COURSE LEARNING OBJECTIVES: Students are expected to obtain a developing level of mastery in computer science. Students will demonstrate an emerging level of knowledge of a broad range of fundamental computer science concepts and topics. Students should show potential to perform independently and should exhibit a high level of reasoning, critical thinking and problem solving skills. Course objectives are listed for each CS program outcome:

- 1) Solve complex and significant problems with professional skill by formulating efficient and effective algorithmic solutions
 - Convert real-world problems into computer programs
 - Work with current Integrated Development Environments
 - Trace and implement recursive functions and iterative structures
 - Understand how data abstraction (e.g. structures) and procedural abstraction are used in developing solutions
- 2) Express algorithms clearly and correctly in a variety of programming languages.
 - Work with the fundamentals of modern programming languages
 - Declare and use variables.
 - Work with conditionals to change program path execution.
 - Declare and implement arrays.
 - Develop and use functions.
 - Understand pointers and their use.

3) Demonstrate sufficient foundational knowledge of computer science, that is - Operating Systems, Databases, Networking, Graphics, Software Engineering, Gaming and Web.

- -Demonstrate understanding of software engineering principles.
- -Show knowledge of how information is encoded/digitized and stored in a computing system.

4) Demonstrate mastery of the theoretical underpinnings of computer science.

- Understand the Fetch-Decode-Execute cycle.
- Work with binary, signed and unsigned data, including addition.
- Demonstrate high-level understanding of computer architecture, including gates, circuits, and logic.

OPERATION STUDY: At Clayton State University, we expect and support high motivation and academic achievement. Look for Operation Study activities and programs this semester that are designed to enhance your academic success such as study sessions, study breaks, workshops, and opportunities to earn Study Bucks (for use in the University Bookstore) and other items.

GENERAL OUTLINE OF CONTENT: CSCI 1301 consists primarily of topics from data, algorithms, with an introduction to programming. Tentatively, the topics to be included from the required textbook(s) are:

- Data Storage (B-Chapter 1)
- Data Manipulation (B-Chapter 2)
- Algorithms
- Programming Languages (Chapter 6)
- Data Abstraction (B-Chapter 8)
- C++ Syntax, Expressions, I/O (G-Chapters 2 & 3)
- Relational and Conditional Operators (G-Chapter 4)
- Iterations and Loops (G-Chapter 5)
- Functions (G-Chapter 6)
- Arrays (G-Chapter 8)

REQUIRED MATERIALS:

- **COMPUTER:** A notebook computer is required in CSCI 1301. Students will use their notebook computers during class sessions and tests. Clayton State University **requires** that students have ready access throughout the semester to a notebook computer that meets faculty-approved hardware and software requirements for the student's academic program. See the website <http://itpchoice.clayton.edu> for full details of this policy.
- **SOFTWARE:** The software that will be used in the course is C++. This course uses the Microsoft Visual Studio C++ Express IDE which is freely available, and is found at <http://www.microsoft.com/express/downloads/>. Students are required to download and install the IDE by the 2nd class meeting. Link to online [tutorial located here](#).
- **TEXTBOOKS:**
 - (1) [Computer Science An Overview, 11th Edition](#), J. Glenn Brookshear.
 - (2) [Starting Out with C++, 7th Edition](#), Gaddis et al.

The textbooks are available at the bookstore OR online at www.coursesmart.com.

WEB MATERIALS: The course syllabus, important information, and electronic files for download are available on the instructor's course website. Students should refer to this course website frequently for information pertaining to this class. You will be using the website titled **WebSubmit** for submitting assignments, which is maintained by the College of Information and Mathematical Sciences. Instructions for using WebSubmit are located at <http://cims.clayton.edu/itfn1303/Tutorials/WebSubmitLab.htm>. Rolls are uploaded after the drop/add period is over. It is your responsibility to ensure that you are able to successfully login to WebSubmit and see a listing for CSCI 1301 BEFORE the first assignment is due.

YOU SHOULD BRING YOUR COMPUTER AND YOUR TEXTBOOK TO EACH CLASS MEETING.

UNIVERSITY POLICIES: See the current online Academic Catalog at, <http://publications.clayton.edu/catalog/> for details on the following policies.

1. Any student who has failed to attend a class by the final payment deadline for the term will be identified as a "no show." Each "no show" student is administratively withdrawn from the class, a grade of W will be posted, and the student is NOT be reinstated. Any appeals on the decision are made to the Dean.
2. A student who has withdrawn or earned less than a satisfactory grade (F, U, D, WF, W) a total of three times in a credited course at CSU will not be allowed to take the course again. Any appeals on the decision are made to the Dean.
3. The mid-term grade in this course, which will be issued by March 2nd, reflects approximately 30% of the entire course grade. Based on this grade, students may choose to withdraw from the course and receive a grade of "W." Students pursuing this option must fill out an official withdrawal form, available in the Office of the Registrar, by mid-term, which occurs on March 2nd.
4. For students in CSCI 1301 a grade of C or better is a prerequisite for subsequent CS courses at CSU.
5. Students are expected to abide by the Student Code of Conduct in the [Clayton State University Student Handbook](#), and the [Basic Undergraduate Student Responsibilities](#). Academic integrity is of paramount importance at Clayton State University. Students who violate the conduct code regulations will face disciplinary action and/or University sanctions.
6. Students are expected to attend and participate in every class meeting. The university reserves the right to determine that excessive absences, whether justified or not, are sufficient cause for institutional withdrawals or failing grades. Academic integrity is of paramount importance at Clayton State University.
7. For information about Disability Services or to obtain this document in an alternative format, contact: The Director of Disability Services (Office of Disability Services, University Center) at 678-466-5445, disabilityservices@clayton.edu.

TECHNOLOGY PREREQUISITE: The computer is used extensively in this course. *You should bring your computer and your textbook to each class meeting* and immediately set up your computer, unless otherwise informed by your instructor. Basic computer skills such as windows file management and using email are necessary to succeed in CSCI 1301. If you do not have the skills covered in both of these workshops, then it is strongly recommended that you seek additional assistance as soon as possible. These skills will not be taught in CSCI 1301. Individual assistance and workshops are offered through the HUB when there is enough demand. Students should make an appointment with the HUB to have software loaded on their computers. Please see the [DUCK](#) for information about activating email accounts. More information on the services that are offered through the HUB can be found at <http://thehub.clayton.edu>.

BASIC INITIAL SKILLS:

- Use the **WINDOWS**[™] operating system.
- Access and navigate web sites
- Send and receive e-mail using your campus email account via Outlook[™] or Outlook Express[™] program
- Attach and retrieve files via email.
- Install and run a CD Rom.

RESOURCES AVAILABLE TO CSCI STUDENTS:

- You paid a handsome sum for your book so use it for more than just the exercises. Your text has many explanations and examples that are surprisingly helpful when read in conjunction with class discussions.
- Your instructor holds regular office hours and is willing to assist you with any questions you may have during the semester.
- The Center for Academic Assistance (CAA) is located on the lower level of the Library. Go to <http://adminservices.clayton.edu/caa/> for information on tutoring programs and other assistance.

ASSESSMENT AND EVALUATION: The grade for this course will be determined by the points earned on the 4 tests and homework as follows

- There are four major tests, including the Final Exam, worth 100 points each approximately 4 weeks apart. Each test will cover approximately 3-5 chapters.
- Your grade in this course will be determined by the points that you earn on 7 homework assignments (14.3 pts each for a total of 100 points) that comprise 20% of your overall grade

Type Assessment	Points Possible	Grade Scale	Percentage	Points
7 Homeworks	100	A	90%	450
4 Tests	400	B	80%	400
Total Points	500	C	70%	350
		D	60%	300
		F	< 60%	<300

TESTS/EXAMS: No student will be excused from taking tests. Failure to take three tests will result in the grade of "F" for the course. Because of the concentrated nature of the tests, and the logistical difficulties of make-up exams, students **will NOT be allowed to make-up tests** unless they have contacted the instructor PRIOR to the exam in question with a legitimate, verifiable reason. In such a case, the student will be allowed to make up the exam before the next meeting of the class after the test. The student is responsible for contacting the instructor to make arrangements for the make-up exam, and must bring documentation of the reason for the missed test. An unexcused absence will result in a zero for that test. Please note that it is in your best interest to take tests as they are scheduled, as students almost invariably score more poorly on make-up exams and the final if they have missed the prior unit tests.

HOMEWORK: There will be regular graded homework assignments. Due dates for each of these assignments will be posted in assignment and on WebSubmit. All homework is due on the assigned date. ***No late assignments will be accepted.*** Homework may always be turned in early. In order to succeed in this course, a student must do each homework assignment. On average, homework will require three hours, per semester credit hour, of work outside of class each week.

ELECTRONIC MESSAGES:

- The instructor may send e-mails with information vital to your success in the course. Check your e-mail often, at least once a day.
- Any voice-mail or e-mail messages are returned during the regular workweek.
- ABSOLUTELY NO GRADED ASSIGNMENTS WILL BE ACCEPTED VIA E-MAIL. Assignments must be turned in as the instructor directs.
- The instructor will NOT email or telephone to tell you everything you missed in class if you did not attend that day.
- Because of the number of students we typically have, there may be some delay in the instructor's response to an individual's e-mail.
- Do not send time-sensitive information via e-mail, speak to the instructor in person. A delivered e-mail does not relieve you of the responsibility of informing the instructor about some concern.

- Do not send a personal email correspondence to the instructor via the email class list.

ATTENDANCE: Students are expected to attend each class session. Students who leave class early or arrive late will be counted absent for that class, unless prior approval has been obtained by the instructor. Students are responsible for knowing about announcements/assignments made in class, whether or not the student is present. Attendance is required for examination periods.

EXCUSED ABSCENCES: The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. Among the reasons absences are considered excused by the university are the following:

- Participation in an activity appearing on the university authorized activity list.
- Death or major illness in a student's immediate family. Immediate family may include: mother, father, sister, brother, grandparents, spouse, child, spouse's child, spouse's parents, spouse's grandparents, stepmother, step-father, step-sister, step-brother, step-grandparents, grandchild, step-grandchild, legal guardian, and others as deemed appropriate by faculty member or student's academic dean.
- Illness of a dependent family member.
- Participation in legal proceedings or administrative procedures that require a student's presence.
- Injury or illness that is too severe or contagious for the student to attend class. The student should obtain a medical confirmation note from his or her medical provider. The medical confirmation note must contain the date and time of the illness and medical professional's confirmation of needed absence. An absence for a non-acute medical service does not constitute an excused absence.
- Required participation in military duties.

Students with disabilities who require reasonable accommodations need to register with Disability Services (DS) in order to obtain their accommodations. You can contact them at 678-466-5445 or disabilityservices@clayton.edu. If you are already registered with DS and are seeking accommodations for this course, please make an appointment with your instructor to discuss your specific accommodation needs for this course and give the instructor your accommodations letter.

The content of this course syllabus correlates to education standards established by national and state education governing agencies, accrediting agencies and learned society/ professional education associations. Please refer to the course correlation matrices located at the following web site:

<http://a-s.clayton.edu/teachered/Standards%20and%20Outcomes.htm>

DISTRACTIONS: The use of pagers, radios, and cellular phones in class is PROHIBITED. Out of courtesy and respect for everyone's learning environment, TURN THEM OFF!!!

VISITORS: It is against CSU policy to allow any person not registered for a course to attend a class meeting. In particular, it is not reasonable to expect children to be able to sit quietly throughout a class meeting or testing period; please make alternate arrangements sufficiently ahead of time to avoid being "stuck" in a childcare dilemma.

Disruptive Classroom Behavior

Disruptive behavior in the classroom can negatively affect the classroom environment as well as the educational experience for students enrolled in the course. Disruptive behavior is defined as any behaviors that hamper the ability of instructors to teach or students to learn. Common examples of disruptive behaviors include, but are not limited to:

- Eating in class
- Monopolizing classroom discussions
- Failing to respect the rights of other students to express their viewpoints
- Talking when the instructor or others are speaking
- Constant questions or interruptions which interfere with the instructor's presentation
- Overt inattentiveness (e.g., sleeping or reading the paper in class)
- Creating excessive noise
- Entering the class late or leaving early
- Use of pagers or cell phones in the classroom
- Inordinate or inappropriate demands for time or attention
- Poor personal hygiene (e.g., noticeably offensive body odor)
- Refusal to comply with faculty direction

Students exhibiting these types of behaviors can expect a warning from the instructor or dismissal for the lesson in which the behavior occurs. Failure to correct such behaviors can result in dismissal from the course.

More extreme examples of disruptive behavior include, but are not limited to:

- Use of profanity or pejorative language
- Intoxication
- Verbal abuse of instructor or other students (e.g., taunting, badgering, intimidation)
- Harassment of instructor or other students
- Threats to harm oneself or others
- Physical violence

Students exhibiting these more extreme examples of disruptive behavior may be dismissed from the lesson or the entire course.

Students dismissed from a lesson will leave the classroom immediately or may be subject to additional penalties. Dismissed students are responsible for any course material or assignments missed.

Students dismissed from a course have the right to appeal the dismissal to the department head responsible for the course. Appeals beyond the department head may also be pursued. If no appeal is made or the appeal is unsuccessful, the student will receive a grade of WF (withdrawal – failing) regardless of the current grade in the course.

Conditions attributed to physical or psychological disabilities are not considered as a legitimate excuse for disruptive behavior.