Course Handbook

Algorithm Design and Implementation
CISP 301

Business Division
Computer Information Science Department
Sacramento City College, Spring 2013
Welcome to CISP 301

Ever feel this way about computers?
This class will help you work past these feelings!

Step through the door to CISP 301 where you will find keys to unlocking the mystery about programming computers...from a theoretical standpoint as well as a practical standpoint. You will also be exposed to different problem solving strategies. This course is a prerequisite for all other CIS Programming (CISP) courses.

Now, for a little of my background – this is my fifteenth year teaching full-time at Sacramento City College. Before that, I taught part time for 2 years at American River College. My roots in teaching actually began in the 1980’s at McClellan AFB when personal computers were first becoming popular. I enjoyed teaching back then but due to promotions and politics, I moved to other jobs within the Communications and Computer Squadron while still at McClellan. These jobs ranged from networking computers to customer relations to computer support. In January 2000, I gave up that job to put my full heart into teaching at this institution, as teaching is truly what I enjoy most...at least in the career realm. What does all this mean for you? It means I still bring at least some industry experience into the classroom.

Now, for tips on the best way to succeed in this class - be prepared. Read the chapters before they are discussed in class. Be prompt with turning in your homework and lab assignments. If you do fall behind, please come to my office hours and let’s have a talk. If I am made aware of certain situations or unusual circumstances, I will go to great lengths to help you succeed. On the other hand, if you have not kept me informed, I generally will not be as accommodating.

Regarding my office hours - it is normal and acceptable to ask questions or seek extra help during these hours...that is the reason for which they were designed. If several students are waiting, I do my best to make sure everyone gets my attention. One special note – if I happen to be in my office during non-office hours and I do not answer the door, please do not think me rude or uncaring. I simply need time to prepare for a class, grade assignments or gather my composure for the next portion of my day.
SACRAMENTO CITY COLLEGE

CISP 301 – ALGORITHM DESIGN AND IMPLEMENTATION

INSTRUCTOR: Mrs. Amy Zannakis
PHONE: 558-2375

OFFICE HOURS (B230):
M 8:30 a.m. – 9:00 a.m., 11:35 a.m. – 12:35 p.m.
T 8:30 a.m. – 9:00 a.m., 11:20 a.m. – 11:50 a.m.
W 8:30 a.m. – 9:00 a.m., 11:35 a.m. – 12:35 p.m.
TH 8:30 a.m. – 9:00 a.m., 11:20 a.m. – 11:50 a.m.

EMAIL: zannaka@scc.losrios.edu

MEETING PLACE: SCC Main Campus, Business Building, Room 103, 9:00–10:20 a.m. (lecture), 10:30–11:35 a.m. (mandatory lab MW class), 10:30–11:20 a.m. (mandatory lab TTH class)

HOURS:
54 hours lecture
36 hours scheduled lab
18 hours lab (other, but must be accounted for)

PREREQUISITE: None.

ADVISORY: CISC 310 (Introduction to Computer Information Science); At least one year of high school algebra or MATH 100

DESCRIPTION:
This course provides an introduction to the analysis, design, and implementation of software solutions to business-related problems. An overview of the following topics will also be included: main and cache memory, data representation, two’s complement addition and subtraction, instruction processing by the central processing unit, computer programming languages, and the software development process.

COURSE OUTCOMES:
Students will perform laboratory assignments and take tests make a class presentation to achieve the following outcomes.

- Analyze a real-world business problem and design a structured solution
- Utilize flowcharts and/or pseudocode to document the solution.
- Implement the solution using a programming language (C++ in this course).
- Thoroughly test and debug the solution to be sure it has solved the problem and the output is correct.
- Demonstrate an understanding of high to low level language translation.
- Convert values between the binary, hexadecimal, and decimal numbering systems.
- Demonstrate two's complement addition and subtraction.
RESOURCES:
The following resources are required for this course:

- **Programming Handbook**, available at the SCC bookstore and can be viewed online at cis.scc.losrios.edu/cisp301.
- Use of a microcomputer with access to the Internet, Windows operating system, Microsoft Office 2003 or higher and Microsoft Visual Studio.net (for programming assignments). For work outside of class, the computers in the Business Division Lab in the Business building, room 151 (B151) or for non-programming assignments, the computers in the Business building, room 153 (B153) or the Learning Resource Center may be used. A valid library card is required for the B153 lab and the Learning Resource Center. For the B151 lab, you only need your student identification number. Open hours for each facility are listed outside their respective doors. If you have a computer at home or access to one somewhere else, you may use it as long as it has the minimum configuration previously mentioned.
- Storage media for programs - USB drive (recommended)
- SCANTRONs – 2 Form 815 and 1 Form 882…available at the SCC bookstore.

GRADING POLICY:
Grades will be based on the following:

<table>
<thead>
<tr>
<th>Activities</th>
<th>Percent of Final Grade</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guide to Working with Visual Logic Assignments</td>
<td>30%</td>
<td>A = 90%</td>
</tr>
<tr>
<td>C++ Programming Assignments</td>
<td>35%</td>
<td>B = 80%</td>
</tr>
<tr>
<td>Tests (all closed book, closed note)</td>
<td>20%</td>
<td>C = 70%</td>
</tr>
<tr>
<td>Final Exam (closed book, closed note)</td>
<td>15%</td>
<td>D = 60%</td>
</tr>
</tbody>
</table>

ATTENDANCE:
Each student is expected to attend each class on time and remain in class throughout the designated lecture/lab period. Attendance will be taken each day via a sign in sheet that will be circulated at the beginning of class. It is your responsibility to sign in. If you do not sign in, it may be counted as an absence. Arriving late or leaving early may be documented. Three instances of arriving late or leaving early constitute an absence.

Students may be dropped for non-attendance in accordance with the Sacramento City College campus policy: “Students are expected to attend all sessions of classes in which they are enrolled. A student having excessive absences may be dropped from any course by the instructor any time during the semester. Excessive absences are defined as 6% of the total hours of class time.” (See the catalog for additional information.) For this course, that equates to approximately 3 absences.
ASSIGNMENTS:
Exercises and problems will be assigned relating to most chapters in the *Guide to Working with Visual Logic* book and must be done neatly in blue or black ink or typed. When the class advances to C++ programming, the written portion of all programming assignments must be typed. When turning in a C++ programming assignment, the written portion along with the program listing and its output must be stapled neatly together or it will not be graded. Students are encouraged to study together when working on assignments, but you must turn in your own original work. Additionally, any programming help obtained by a tutor in the computer lab must include only topics covered in this class. If a program contains topics clearly not covered in this class, the program will be considered to be the work of the tutor and not your own original work. Duplicate work or work that is deemed not to be your own will be assigned a value of zero. See Academic Integrity heading further down in this document.

TESTS:
Students are expected to take tests on the scheduled day at the scheduled hour for class. In the event that a student must miss a test due to work or other, a special arrangement can be made to take the test prior to the regularly scheduled time. If a student misses a test due to sickness or an emergency and the sickness or emergency is documented, the test may be made up by special appointment up to 2 class periods following the test.

LATE ASSIGNMENTS:
Late assignments are accepted as long as the assignment has not yet been handed back to the class. Assignments that are late may receive an automatic 50% deduction unless prior arrangements have been made with the instructor. If you cannot attend class on the day an assignment is due, arrange to have someone turn it in for you or drop it off in the mail room, Business 217. Do not put an assignment under my door as it creates a hazard. Under extenuating circumstances, late assignments (even those which have already been passed back to the class) may be accepted without penalty. Such cases will be handled on a one-on-one basis.

TUTORING SERVICES:
Tutoring and assistance for students enrolled in CIS courses is available on a first-come, first-served basis in room 151 of the Business Building. Tutoring subjects and tutor availability are posted in the lab and on the web site: [http://busdiv.scc.losrios.edu/stre_lab.html](http://busdiv.scc.losrios.edu/stre_lab.html).

ACADEMIC INTEGRITY:
Academic honesty is expected. Students are required to do their own work. If cheating or plagiarism occurs on an assignment or exam, a grade of zero will be assigned. The matter will be referred to the Business Division Dean and the Campus Discipline Officer for appropriate action.

ACCOMMODATIONS:
If you are a student with a learning disability, a physical disability, or other special needs, please let me know as soon as possible if you need special accommodations. These discussions are best handled during my office hours or by special appointment. All needs that have been verified through the disability centers on campus will be accommodated.
COMMUNICATION:
All classes at Sacramento City College have different methods of communicating with the instructor and with fellow students. Some forms of communication are e-mails and discussion boards through the campus course management system.

In all cases, the CIS department policy requires appropriate behavior with all contacts between fellow students and with instructors. Please note the following rules:

- Remember that e-mail isn’t private.
- An informal tone is acceptable, but sloppy communication is not.
- Mind your manners and watch your tone.
- Be concise and professional. Treat e-mail as if in a business environment.
- Use correct spelling and proper grammar. No abbreviations or acronyms, such as lol.
- No inappropriate language or images.
- Do not expect immediate response to e-mails.

CLASSROOM BEHAVIOR:
First off, please familiarize yourself with the Student Standard of Conduct brochure. These brochures can be found around campus. Please pick one up. Alternatively, you can find the brochure online at:

https://file.scc.losrios.edu/insidescc/StudentServices/Crisis%20Intervention/Student_Standard_of_Conduct_Brochure.pdf

In addition, please note the following:

- Cellular phones and pagers should be off during all lecture and lab time.
- Headphones are not allowed.
- Children are not allowed in classrooms, labs, or unattended in the halls.
- Sleeping in class is considered as not participating and may directly or indirectly affect your grade.
- Disrespect of the other students in the class and/or the instructor will result in disciplinary action.

EXTRA-CREDIT: None.

IMPORTANT DATES:

- January 21: Holiday - Martin Luther King, Jr. birthday (no classes, offices closed)
- February 1: Last day to drop to qualify for a refund
- February 3: Last day to drop without notation on record
- February 15: Holiday – Lincoln’s Day (no classes, offices closed)
- February 18: Holiday – Washington’s Day (no classes, offices closed)
- February 22: Last day to petition for pass/no pass
- March 25-31: Spring Recess (no classes, offices closed)
- April 21: Last day to drop with “W” grade. A letter grade must be assigned after this date.
- May 20: MW Class Final Examination - 8:00 a.m. – 10:00 a.m.
- May 21: TTH Class Final Examination - 8:00 a.m. – 10:00 a.m.