ICS 290 – Computer Science Careers: An exploration of the specialties of computer science focusing on job hunting skills. POST 127

Purpose and Objective of the Course

Having a goal and being motivated are two keys to great student academic performance. ICS 290, Computer Science Careers: An in-depth exploration of the specialties of computer science is designed to help the student formulate both.

The purpose and objective of this course is to help students early in their major to identify potential academic and career paths they wish to pursue. By the end of the course, students will have achieved the following learning objectives:

- Student will have knowledge of job hunting skills including: resume writing and interviewing.
- Students will demonstrate an understanding of the philosophy, principles, policies, professional attitudes and ethical issues of several computer science specialties.
- Students will understand the needs of different computer science organizations including: industry, government and academia.
- Students will have knowledge of dozens of career opportunities in computer science specialties and understand what academic requirements are needed to work in those specialties.
- Students will have first hand exposure to experts working in computer science, the scope of computer science projects and skills required to execute those projects.
- Students will have knowledge of opportunities available before graduating (e.g., internships and undergraduate research projects).

Organization of the Course

Every two weeks students will meet to hear speakers from computer related organizations, visit computer organizations or participate in student group presentations. The discussion will focus on four topics.

- Ethical Issues and Professional Attitudes in Computer Sciences
- Computer Sciences in Industry (Small, Medium and Large Business)
- Computer Sciences in Government (Federal, State & County)
- Computer Sciences in Academia (Post baccalaureate education and careers)

At the end of class students will have made one group presentation on a computer science specialty area and submit an action plan for their career based on the contents of the course.
Syllabus: This class is one credit (CR/NC), with no prerequisites and meets every two weeks for 2.5 hours for a total of 20 class hours per semester.

Spring 2011 - Note that the schedule changes on 3/18 because of Spring Break (3/25)

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<td>Date</td>
<td>1/14/11</td>
<td>1/28/11</td>
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Class schedule will depend on the availability of speakers from the various organizations.

**Class 1: Introduction**
- What careers are there in the world, US and Hawaii.
- The types of organizations and computer science needs in industry, government and academia.
- Assignment of computer science specialties for group research: Student groups will present their research of different computer science specialties in subsequent weeks. The class will then discuss the specialty areas.
- Discussion of how to develop an academic action plan to lead to a desired career in computer science.

**Class 2: Ethical Issues and Professional Attitudes in Computer Sciences Specialties**
- Presentation from computer related organizations, site visit or student group presentations focusing on ethical issues and professional attitudes.
- Discussion on the topic of ethical issues and professional attitudes.

**Class 3: Computer Sciences in Industry (Small Business)**
- Presentation from computer related organizations, site visit or student group presentations focusing on small businesses.
- Discussion of the academic requirements.

**Class 4: Computer Sciences in Industry (Medium and Large Business)**
- Presentation from computer related organizations, site visit or student group presentations focusing on medium and large businesses.
- Discussion on the differences between small, medium and large businesses.

**Class 5: Computer Sciences in Government (State & County)**
- Presentation from computer related organizations, site visit or student group presentations focusing on state & county organizations.
- Discussion on the differences between industry and government.

**Class 6: Computer Sciences in Government (Federal)**
- Presentation from computer related organizations, site visit or student group presentations focusing on the opportunities in the federal government.
- Discussion on ethical issues and professional attitude differences between industry and government.

**Class 7: Computer Sciences in Academia (Post baccalaureate education)**
- Presentation from computer academic related organizations, site visit or student group presentations focusing on graduate education.
- Discussion of the academic requirements for graduate school.

**Class 8: Action plan discussions**
- Student action plans due. Students will discuss their action plans for their career.
Text
http://books.google.com/books?id=JRJCertpCmQC&pg=PP1&dq=Ace+the+IT+Interview#v=onepage&q=&f=false
The course will use a combination of guest speakers, lecture notes prepared by the instructor and on-line tutorial material about computer science specialties. One such online resource is the Association for Computing Machinery website (http://www.acm.org/), which is the preeminent computer science professional organization. There are numerous publications available on the curricula requirements for different computer science specialty career paths.

Class Duration:
The first class and last class are fully planned classes, but the other classes will be filled with multiple speakers and possible site visits. With speakers, there should be some discussion after the speakers leave. The site visits will need the full 2 hours and 30 minutes of a class.

Grading
To receive credit for the class, the student must:
• Attend at least 5 of 6 presentation days or site visits.
• Complete all associate assignments for each class.
• Participate in the class discussion and oral communication activities.
• Must attend last class meeting.
  o Complete a career action plan.
  o Satisfactorily complete the career presentation.
Alternate Class Site:
All lectures will be conducted and exams will be administered even in the event we are prevented from accessing our classroom. We will meet in front of POST.

Academic Dishonesty:
The each occurrence of academic dishonesty will result in a grade of 0 for the assignment or exam and a memo in your ICS department file describing the incident. This will be done for each student involved. Should there be more than one memo of this type in your file, the incident will be referred to the Dean of Students.

DISCIPLINARY SANCTIONS - http://www.hawaii.edu/student/conduct/discipline.html
Sanctions include: Warning, Probation, Rescission of Grades or Degree, Suspension & Expulsion.

Academic Dishonesty - http://www.hawaii.edu/student/conduct/imper.html
Because UHM is an academic community with high professional standards, its teaching, research, and service purposes are seriously disrupted and subverted by academic dishonesty. Such dishonesty includes cheating and plagiarism as defined below. Ignorance of these definitions will not provide an excuse for acts of academic dishonesty.
Cheating includes but is not limited to giving or receiving unauthorized assistance during an examination; obtaining unauthorized information about an examination before...
it is given; submitting another's work as one's own; using prohibited sources of information during an examination; fabricating or falsifying data in experiments and other research; altering the record of any grade; altering answers after an examination has been submitted; falsifying any official University record; or misrepresenting of facts in order to obtain exemptions from course requirements.

Plagiarism includes but is not limited to submitting, in fulfillment of an academic requirement, any work that has been copied in whole or in part from another individual's work without attributing that borrowed portion to the individual; neglecting to identify as a quotation another's idea and particular phrasing that was not assimilated into the student's language and style or paraphrasing a passage so that the reader is misled as to the source; submitting the same written or oral or artistic material in more than one course without obtaining authorization from the instructors involved; or "drylabbing," which includes obtaining and using experimental data and laboratory write-ups from other sections of a course or from previous terms.

If you have any questions, please contact the instructor and obtain authorizations in writing.

Special Needs:
If you need reasonable accommodations because of the impact of a disability, please:
1. contact the Kokua Program by telephone (V/T) at 956-7511 or 956-7612 or in person at the Queen Liliuokalani Center for Student Services building, room 013;
2. speak with me privately to discuss your specific needs. I will be happy to work with you and the KOKUA Program to meet your access needs related to your documented disability.

Information about the Kokua Program is available online at:
http://www.hawaii.edu/kokua/.