OCCC Position Paper / White Paper

AAOT Revision Recommendations (2006), CS literacy and CS science distribution areas

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Given the recent Oregon legislation that mandated an update of the Oregon lower division transfer agreement, the Oregon Council of Computer Chairs (OCCC) is strongly recommending two revisions to correct deficiencies in the current transfer agreement in regards to computer literacy and computer science.

It is the position of the OCCC that:

1. Computer Literacy and Computer Science are very different yet critical knowledge areas. Therefore Computer Literacy courses should not be included in the Science/Math/CS distribution of the AAOT but should be a required core competency similar to speech and writing. "Computational Science" oriented CS/CIS courses, however, should remain as an optional component of the Science/Math/CS distribution area.

2. Computer Literacy is a broad definition of competencies concerned with using the computer as a communications tool, knowledge of common applications, and basic knowledge of the structure and function of a computer system. We have accepted as a definition for curriculum coverage the IC3 competencies:
   http://www.certiport.com/portal/common/ImageLibrary/ic3overview.gif
   IC3 provides an internationally recognized description of computer literacy. Note that we are concerned with the coverage of concepts in IC3, not with a specific software application, operating system, machine manufacturer or publisher.

3. Verification of Computer Literacy for college graduates in all degree areas is at least as important in our society today as writing, speech, and mathematics; and therefore should be included in the core competencies of the AAOT and not embedded in optional degree requirements. This requirement can be satisfied in one of two ways: (a) pass a test tied to the IC3 competencies (actual testing tool would be left to the individual colleges); or (b) successfully complete a computer literacy course whose outcomes are tied to the IC3 competencies.

4. The OCCC has designated CS/CIS 120 as the common community college course that will use the IC3 competencies as its base set of outcomes. Individual schools have the freedom to add topics or to include some of the competencies as prerequisites for this course. Schools may identify other additional/alternative courses whose outcomes are tied to the IC3 competencies to satisfy the computer literacy requirement.

5. Literacy is about using a computer as a communication tool; it is not about understanding the nature, capabilities or limitations of computation. At a minimum, a CS/CIS course contained in the Science/Math/CS distribution area should contain the definition and an exploration of the characteristics of algorithms, which is at the core of any study of computational science. To be considered for a Science/Math/CS distribution area, courses should include some coverage of algorithmic complexity and computability.

Therefore, the OCCC recommends to the following changes in the AAOT:

- That a computer literacy requirement be added to the core requirements for the AAOT (similar to writing, speech, and mathematics). The currently OCCC designated course is CS/CIS-120. This requirement can be satisfied using any of the methods described in #3.

- That certain CS/CIS courses as described in #5 and designated by the OCCC be accepted as non-lab courses in the Science/Math/CS distribution area. The designated courses for the Science/CS/Math distribution area are to be determined by OCCC. Currently CS160, CS161, CS162, CS260, and CS233 have been approved.