**Basic Information**

**Name of Program:** *Associate of Science/Oregon Transfer - Computer Science (AS/OT-CS)*

**Contact Name and Title**: John Blackwood, Faculty

**Department:** Computer Information Systems

**Supervisor:** Jesse Morrow, CTE Dean

**Program-Specific Information**

**Date, Year, and Term of Proposed Implementation:** Fall term, 2015

**Program Award:**

\_\_Less than 1 year certificate

\_\_1 year certificate

\_\_2 year certificate

\_\_Career Pathway certificate

X Degree

**Number of Credits: 91**

**New Program/Certificate Title**: Associate of Science/Oregon Transfer - Computer Science (AS/OT-CS)

**Program Description *(This is the description that will appear in the catalog, so make sure it is exactly what you want)***

Computer Science (CS) is the study of programs, data, computing machinery, and how these interact. Majors in computer science are offered at OSU, PSU, SOU, UO, and WOU in Oregon. Please be aware that the core CS curriculum and major options vary at the above-listed schools. Consult with a UCC faculty adviser before beginning your first term at the UCC as a CS transfer major.

**Labor Market Need *(Brief description; you will also need to complete an LMI worksheet, EXCEPT for Career Pathways Certificates)*:**

Computer and Information Systems Managers (11-3021)

Computer and Information Research Scientists (15-1111)

Computer Systems Analysts (15-1121)

Computer Programmers (15-1131)

Software Developers, Applications (15-1132)

Software Developers, Systems Software (15-1133)

Computer Hardware Engineers (17-2061)

**Target Student Population:**

Douglas County high school students, UCC students who have not declared a college major, and others seeking higher education who meet the criteria for entry into our program. Particular emphasis will be placed on students from underrepresented populations.

**Program Outcomes: (please list numerically)**

* Acquire new information and adapt to changes in the computer technology field.
* Apply a logical and systematic approach to solve problems.
* Use written, oral, and visual interpersonal skills to communicate with individuals or small groups.
* Design and implement computer software applications.
* Develop an application for an N-tiered environment.
* Evaluate and compare different algorithms applicable to a given task.
* Apply theoretical foundations learned when developing software.
* Use current database technologies to create and build database objects.

**Program Impacts:**

X Standard Instructional Costs (staff, materials, equipment or facilities) are required.

\_\_Additional instructional costs ((staff, materials, equipment or facilities) are needed.

\_\_Impact to other divisions in terms of scheduling or staffing.

**Program Impact Description (for any of the program impacts listed above, please describe):**

The AS-CS degree requires offering a number of courses already listed in the UCC catalog, along with one new course.

Existing courses in the catalog but not regularly offered:

* CS 160 – Orientation to Computer Science (fall term)
* CS 161 – Computer Science 1 (winter term)
* CS 162 – Computer Science 2 (spring term)
* CS 260 – Data Structures (fall term)
* MTH 231 – Elements of Discrete Mathematics 1 (fall term)

New courses for the CS degree:

* CS 271 – Computer Architecture & Assembly Language (spring term)
  + This course is currently CS 171, which is modified to CS 271 in this degree.

**Additional Instructor Requirements (FT/PT, number, qualification, ability to recruit):**

No additional instructors are required beyond existing faculty. However, the temporary CIS/CS/ENGR instructor position would need to continue as a permanent position with the approval of this transfer degree.

**Program Standards**

*Using new or parent program information, create a short description that provides the requested data. These descriptions will be entered exactly as they appear in the New Program From into the official record with the State of Oregon. The maximum number of characters for each standard is 4,000.*

**Standard A – Need:**

***The community college provides clear evidence of the need for the program.***

Computer Science employment in Oregon, depending on the CS option selected by the student, is expected to grow generally larger than the statewide average for all occupations; the total number of job openings is expected to grow (sometimes much) higher than the statewide average for all occupations; and its growth is expected to occur at a rate (sometimes much) higher than the statewide average for all occupations.

Nationwide figures are similar. Research can be located at these two URLs:

<http://stemcareer.com/topcareers/>

<http://www.cs.fsu.edu/prospective/cs_career_stats.php>

**Standard B – Collaboration:**

***The community college utilizes systemic methods for meaningful and ongoing involvement of the appropriate constituencies.***

Students will complete their freshman and sophomore years at UCC and transfer to a 4-year college to complete of their 4-year degree in Computer Science. UCC faculty will facilitate this process by introducing UCC students to faculty at Oregon 4-year colleges and assist in arranging campus visits. UCC faculty will also help transferring UCC students understand the transition from a community college to a 4-year college campus.

**Standard C – Alignment:**

***The program is aligned with the appropriate education, workforce development, and economic development activities.***

This degree is designed to meet the needs of students who want to complete their lower-division coursework prior to transferring to a 4-year college to complete their BS - Computer Science degree.

**Standard D – Design:**

***The program leads to student achievement of academic and technical knowledge, skills, and related proficiencies.***

Students completing the Associate of Science - Computer Science transfer degree will be eligible to transfer to Oregon 4-year colleges offering a major in computer science. We anticipate that a majority of students will elect to transfer to Oregon State University, but the courses in this degree are commonly offered at the other 4-year colleges in Oregon.

**Standard E – Capacity:**

***The community college identifies and has the resources to develop, implement, and sustain the program.***

The UCC currently has the capacity and resources to adequately meet the needs of an additional 12-30 computer science students per year. No new equipment or faculty is needed for the implementation of this degree.

**Proposed Courses – please attach course outlines**

|  |  |  |
| --- | --- | --- |
| **Course #** | **Course Title** | **Credits** |
| WR 121 | English Composition | 4 |
| Social Science | Social Science\* | 3 |
| MTH 112 | Elementary Functions | 4 |
| CS 160 | Orientation to CS | 4 |
| WR 122 or 227 | English Composition or Technical Report Writing | 4 |
| MTH 251 | Calculus 1 | 4 |
| Cultural Literacy | Cultural Literacy\*++ | 3 |
| CS 161 | CS 1 | 4 |
| CIS 275 | Introduction to DBMS 1 (recommended CS elective) \*\* | 4 |
| MTH 252 | Calculus 2 | 4 |
| CS 162 | CS 2 | 4 |
| Arts & Letters | Arts & Letters\* | 3 |
| HPE 295 | Wellness & Health Assessment | 3 |
| Arts & Letters | Arts & Letters\* | 3 |
| Social Science | Social Science\* | 3 |
| PH 211 | General Physics w/calculus 1 | 4 |
| CS 260 | Data Structures | 4 |
| SP 111 | Fundamentals of Public Speaking | 4 |
| PE | PE 102 or higher (recommended CS elective) \*\* | 1-4 |
| PH 212 | General Physics w/calculus 2 | 4 |
| Social Science | Social Science\* | 3 |
| Social Science | Social Science\* | 3 |
| PH 213 | General Physics w/calculus 3 | 4 |
| CIS 125D | Computer Applications – Database (recommended CS elective) \*\* | 3 |
| CIS 151C | Networking Essentials (recommended CS elective)\*\* | 4 |
| Arts & Letters | Arts & Letters\* | 3 |
|  |  |  |
|  | Total minimum credits for graduation | 91 |
|  | \*Please refer to the UCC college catalog for approved electives |  |
|  | \*\* Please refer to the UCC college catalog for approved CS electives |  |
|  | ++ This course is not an additional course. At least one of the Discipline Studies courses listed above must be designated as meeting the criteria for Cultural Literacy. |  |
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**Additional Process Items**

*Please check all of the additional forms and documents you have completed and submitted to Curriculum Committee. Links to fill-able versions of these forms can be found at* [*http://umpqua.edu/resources-and-services/faculty-and-staff/committees-taskforces*](http://umpqua.edu/resources-and-services/faculty-and-staff/committees-taskforces)*.*

X **Required: Labor Market Information (LMI) Form (not needed for Career Pathway Certificate)**

X **Required: Course Outlines for all courses**

\_ **Specialized Form: Advisory Committee**

\_ **Specialized Form: Start Up Budget**

**Link to edit the New Program Form I submitted on 10/10/2014 @ 10:20 AM:**

<https://docs.google.com/forms/d/1d64mTsPuy_hrEmR5uZLtTeA7Xra_oKbMGXLerDgZ0Zw/viewform?usp=form_confirm&edit2=2_ABaOnucMlZTI7KnYKt_lAOsKTi5VIeVm23uirNj3hPAxJ-zxplbFpBDAhrw7uA>

**Resubmit URL for 10/24/14 submission:**

<https://docs.google.com/forms/d/1d64mTsPuy_hrEmR5uZLtTeA7Xra_oKbMGXLerDgZ0Zw/formResponse?edit2=2_ABaOnucMlZTI7KnYKt_lAOsKTi5VIeVm23uirNj3hPAxJ-zxplbFpBDAhrw7uA>

**Resubmit URL for 10/27/14 submission to add MTH 231 to list of electives:**

<https://docs.google.com/forms/d/1d64mTsPuy_hrEmR5uZLtTeA7Xra_oKbMGXLerDgZ0Zw/formResponse?edit2=2_ABaOnucMlZTI7KnYKt_lAOsKTi5VIeVm23uirNj3hPAxJ-zxplbFpBDAhrw7uA>

**Resubmit URL for 10/28/14 submission to add more PE elective credits to list of electives:**

<https://docs.google.com/forms/d/1d64mTsPuy_hrEmR5uZLtTeA7Xra_oKbMGXLerDgZ0Zw/formResponse?edit2=2_ABaOnucMlZTI7KnYKt_lAOsKTi5VIeVm23uirNj3hPAxJ-zxplbFpBDAhrw7uA>

**Resubmit URL for 10/29/14 submission to add GPA and course grade requirements:**

<https://docs.google.com/forms/d/1d64mTsPuy_hrEmR5uZLtTeA7Xra_oKbMGXLerDgZ0Zw/formResponse?edit2=2_ABaOnucMlZTI7KnYKt_lAOsKTi5VIeVm23uirNj3hPAxJ-zxplbFpBDAhrw7uA>

**Resubmit URL for 11/05/14 submission to change degree name and amend minimum credits to 91:**

<https://docs.google.com/forms/d/1d64mTsPuy_hrEmR5uZLtTeA7Xra_oKbMGXLerDgZ0Zw/formResponse?edit2=2_ABaOnucMlZTI7KnYKt_lAOsKTi5VIeVm23uirNj3hPAxJ-zxplbFpBDAhrw7uA>