



STATEWIDE ARTICULATION  
AGREEMENT: MAJOR  
TRANSFER MAP IN  
COMPUTER SCIENCE

A statewide transfer agreement that identifies the community college courses needed to transfer to any Oregon public university as a junior seeking a Bachelor of Science in Computer Science.



Statewide Transfer Articulation Agreement:

Major Transfer Map in Computer Science

90-100 Credits or Optimal  
Transfer Point

From: All Oregon Community Colleges

To: All Oregon Public Universities

Introduction: Major Transfer Maps (MTMs) represent a streamlined path for students transferring from an Oregon community college to an Oregon university who know which major/bachelor's degree program they want to pursue. In contrast to other statewide transfer tools that prioritize university general education requirements (i.e. AAOT and ASOT), MTMs specify clear course-taking paths necessary for on-track progress towards a specific major/bachelor's degree, with a guarantee of transfer from any Oregon community college to any Oregon public university. MTMs build on the 30-credit general education foundation defined by the generic Core Transfer Map (CTM), although MTMs may specify particular relevant/required General Education courses as part of the 30-credit CTM component of the MTM.

The statewide Computer Science Major Transfer Map (MTM) will use the format of an Associate of Science Transfer degree.

The MTMs identify the optimal and specific set of community college courses students need to take to transfer efficiently into the major at the university. The successful completion of the MTM allows students to receive status at the public university, based on the number of academic credits referenced in the transfer agreement, including at least 30 credits of general education satisfied, that is comparable to the status of students with the same number of academic credits in the major course of study who began their postsecondary studies at the public university. The students will not be required to retake a course, as long as the minimum required grades have been earned.

Students must have earned a cumulative grade point average of 2.0 and meet the residency requirements at the community college awarding the MTM.

When students complete an MTM, the general education courses in the "Core Transfer Map" portion of the MTM, for which minimum required grades have been earned, are guaranteed to transfer into general education, degree, or major requirements for a bachelor's degree at any Oregon public university (ORS 350.404). However, while CTM-related courses are guaranteed to transfer into general education, degree, or major requirements, students completing an MTM will not be awarded a CTM also.

Students who want to transfer prior to completing the MTM should talk with their community college advisor and an advisor at their target university prior to transfer about how their courses will count towards general education requirements and degree/major requirements. If the MTM is not awarded advisors can guide students to determine if they are eligible for a CTM.

Students are responsible for informing the admissions counselor or intake advisor at their receiving four-year institution that they are completing an MTM. It is important for students to understand that completing the MTM in two years and the bachelor's degree in four years requires them to complete a minimum average of 15 credits per quarter (or 45 credits per year).

The guarantees and limitations below describe the minimum requirements to which all participating institutions have agreed. If an institution is not meeting the guarantees described below a complaint can be filed with the Oregon Transfer Advisory Committee (OTAC).<sup>1</sup>

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<sup>1</sup> Sections of this contract are modified versions of contracts from Colorado and Washington.

## Part 1: Guarantees

Students who complete all the requirements of an MTM (i.e. an MTM associate's degrees or an MTM non-degree package when optimal transfer requires fewer than 90 credits) as defined in the specific MTM agreement, who have earned the minimum required grades and a cumulative 2.0 GPA or higher, meet residency requirements, and who are admitted to the receiving institution's corresponding major/degree program are guaranteed the following:

1. Status within the major at the public university that is comparable to the status of students with the same number of academic credits in the major course of study who began at the public university (when the MTM is equal to at least 90 credits this would equate to receiving "junior status in the major course of study at the public university").
2. Eligibility to graduate following the degree/major requirements in effect at the university during the academic year the student first enrolled in the community college that awarded the MTM. If the student does not complete the degree within 7 years of the first enrollment at the community college awarding the MTM, they should meet with an advisor to determine which catalog to use.
3. All courses in the MTM will transfer individually. If a student transfers before completing the MTM, all courses will still transfer but may not apply in the same way as they would if the MTM was completed. If the CTM has been awarded, the guarantees inherent in the CTM apply.
4. The ability to file a complaint with the Oregon Transfer and Articulation Committee (OTAC) if the guarantees of the MTM are not being met. OTAC will review complaints submitted to the Higher Education Coordinating Commission (HECC) or to OTAC regarding Oregon's statewide transfer tools and degrees and recommend next steps that support dispute resolution. Note:
  - Students should first follow their home institution's internal complaint process (e.g. talk to their academic advisor, academic unit, Registrar, or Provost)
  - The HECC has authority to handle student complaints but only if they are related to discrimination or retaliation
5. While OTAC does not have legal authority over transfer complaints, as the only statewide transfer advisory body, OTAC can make recommendations and assist institutions and students in resolving compliance issues.
6. Students who successfully complete the MTM at a community college will have the MTM noted on their transcript. If the MTM takes the form of an associate's degree, it will be reflected in the standard degree posting format used by the community college. If the MTM is not an associate's degree, but rather an optimal transfer point with fewer than 90 credits, it will be posted as a notation on the community college transcript.

## Part 2: Limitations

Completion of the prescribed curriculum in the statewide transfer articulation agreement does not guarantee admission to a participating receiving institution. Students must meet all admission and application requirements at the receiving institution in place at the time of admission, including the submission of all required documentation by stated deadlines.

1. Minimum grades required for general transfer and for application to major requirements and pre-requisites may vary by each Oregon public university and by each degree/major. Each MTM agreement will specifically list the minimum grade requirements that will guarantee transfer including minimum required grades for major courses and Pass/No Pass limitations. All schools

accept a grade of a “C -” or better in all general education courses. Students should contact the admissions counselor or intake advisor at the university they intend to transfer to for more information.

2. Completion of an MTM and admission to a receiving institution does not guarantee enrollment in a specific degree program. Some programs at receiving institutions have controlled and/or competitive entry due either to space limitations or academic requirements.
3. The credit and course transfer guarantees described in the specific MTM agreements apply only to the specific degree programs covered by the agreement. Therefore, if a student changes to a new major some courses may not apply the same way towards the new major as they would for the original major. When students change majors the old MTM major guarantees may no longer apply and receiving institutions will evaluate applicability of transfer on a course-by- course basis.
4. AP (Advanced Placement) and IB (International Baccalaureate) credit:
  - General Education Courses in the MTM:  
AP and IB articulated credits used to meet the general education components of the Major Transfer Map will transfer, and are guaranteed to fulfill general education requirements at the receiving institution, as long as the articulated credits are listed on the Advanced Placement and International Baccalaureate Statewide Course Credit Policy found on the HECC website.
  - AP (Advanced Placement) and IB (International Baccalaureate) in the MTM:  
Using the current AP and IB Statewide Course Credit Policy as a reference, the Major Transfer Map workgroup will assess how AP/IB exam scores apply to the MTM (range of credits and course articulations). In particular, the MTM workgroup will identify whether the credit range and course articulation of AP/IB exam scores differ among the 17 community colleges and 7 public universities in ways that create transfer misalignment for students earning the MTM.  

The workgroup will refer all areas of misalignment to the AP/IB Statewide Policy Group, which will work with the higher education institutions’ appropriate representatives (including faculty and academic leadership) to resolve the areas of misalignment by establishing common range of credits and defined articulations across the 17/7 so that AP/IB exam credit awarded at any community college will transfer to all public universities and apply as intended in the MTM.

If 17/7 alignment in range of credits and course articulation for AP/IB exam scores is not possible, the MTM workgroup will determine whether the differences constitute acceptable and warranted variance within the MTM. If so, the workgroup will recommend the variance to OTAC when it submits the MTM to OTAC for the approval process. If the MTM workgroup determines that uniformity is necessary, and a particular institution elects not to conform, that school is choosing not to be a participant in that particular MTM. Please note that each Oregon public university has differing policies on institutionally administered exams (sometimes called Challenge Exams) and students should contact the admissions counselor or intake advisor at the university students intend to transfer to for more information.
5. Students should consult with advisors at their community college and receiving university if they have additional questions.

### Part 3: Institutional Obligations

1. Oregon public universities and community colleges, under advisement from OTAC and HECC, will build an alert mechanism into their curriculum review process for changes related to courses, programs, or admission that may impact the MTM.
  - The institution proposing a change in required or pre-requisite courses, with potential to impact lower-division course taking will alert their Registrar and Major Transfer Map group to review the change.
  - If the proposed change creates a need to modify lower-division course taking as defined in the existing MTM, the OTAC representative from the particular MTM group will bring the issue to OTAC for review to determine if updates need to be made to the agreement.
  - All public higher education institutions who are signatories of the agreement are expected to stay in alignment with the approved MTM. Changes to courses included in the MTM that will affect their transferability must be approved by the MTM group and OTAC before taking effect.
  - MTM groups are expected to meet annually or as needed to ensure continued alignment and the effective dates will be reflected in each MTM. Catalog rights follow the MTM.
  - If valid reasons exist that prevent sufficient alignment, a given institution may have to exit the agreement. In such cases, the Provost of the university must notify OTAC and work out an effective timeline for leaving the agreement such that the university honors the catalog year guarantees and provides a workable teach-out plan so students in the pipeline are held harmless.
2. Oregon public higher education institutions agree that where university-specific curricular variance exists within the MTM, it is identified and justified. Acceptable justifications should be related to student benefit, necessity for academic success in meeting future requirements at the junior/senior/graduate school/employment level, and immovable external requirements such as accreditation requirement differences.
3. Participating institutions agree to continue to work toward maximizing course alignment as much as possible with the goal of awarding direct equivalency for all MTM courses, even when a transferring student has not completed the entire MTM.

#### Part 4: Prescribed Curriculum

The Computer Science Major Transfer Map (MTM) outlines Oregon community college coursework to complete in order to transfer seamlessly to any Oregon four-year public university to earn a bachelor of science (B.S.) in computer science. The Computer Science MTM is intended for students who know they want to transfer and earn a B.S. in computer science, but who are unsure of their intended transfer destination when they begin their community college studies. Students should work with their community college advisor to ensure they properly fulfill the requirements of this Computer Science MTM.

Students who complete courses that fit the listed Computer Science MTM categories and complete all science series coursework at one school can expect that all of their courses will transfer into general education, major requirements, or electives at any Oregon public university offering a bachelor of science (B.S.) in computer science. Students who complete all of the listed coursework and have a total of 90 credits can also complete an associate degree. Because completion of the listed coursework or an associate degree is not required, students can transfer to their intended university at any time. Completion of the CTM and the MTM required courses are sufficient to enable transfer at Junior standing within the major. **The course substitutions and recommendations listed below should only be considered by students who are certain of both their intended major and transfer destination.** There is a decision point at the end of the first year of community college studies, at which point a student must decide between transfer to the OSU/PSU/UO cluster or the EOU/SOU/WOU cluster of university degree programs.

Note that in order for a student to successfully transfer to an Oregon public university, students must: 1) earn a minimum letter grade in courses in the major (see Table 3 below); 2) take courses in the major for a letter grade—they will not be accepted as “pass/no pass”; and 3) earn a cumulative grade point average of 2.0 (unless otherwise indicated below in Table 3). Students must also regularly meet with an advisor. Students are strongly encouraged to: 1) seek advising before registering for their first term of community college; 2) seek advising after they have completed the 30-38 credits of the Core Transfer Requirements; and 3) seek advising and meet with a transfer coordinator before registration opens at the beginning of the students second year in college. Students should also be aware that if they want to complete this Major Transfer Map in two years, they should take an average of 45 credits per year (average of 15 credits per quarter). Finally, to earn an associate degree, students will need to successfully complete at least 90 credits.

Six of the seven public universities in Oregon offer a computer science B.S. degree:

Eastern Oregon University: (<https://www.eou.edu/computer-science/>)

Oregon State University: (<https://eecs.oregonstate.edu/undergraduate-programs/computer-science>)

Portland State University (<https://www.pdx.edu/computer-science/>)

Southern Oregon University: (<https://sou.edu/academics/computer-science/>)

University of Oregon: (<https://cs.uoregon.edu/undergraduate-education>)

Western Oregon University: (<https://wou.edu/academics/computer-science/>)

Table 1

CORE TRANSFER REQUIREMENTS		
<i>See an advisor for recommended courses before your first term</i>		
<i>Writing</i>		
1 course	WR121	3-4
<i>Arts &amp; Letters</i>		
1 <sup>st</sup> course	Choose from AAOT-approved courses	3-4
2 <sup>nd</sup> course	Choose from AAOT-approved courses	3-4
<i>Social Sciences</i>		
1 <sup>st</sup> course	Choose from AAOT-approved courses	3-4
2 <sup>nd</sup> course	Choose from AAOT-approved courses	3-4
<i>Natural Sciences</i>		
2 courses	Select two lab science courses; this selection should occur after deciding between OSU/PSU/UO and EOU/SOU/WOU clusters <ul style="list-style-type: none"> <li>OSU/PSU/UO: Phys 211-212 OR Chem 221-222 OR Bio 211-212</li> <li>EOU/SOU/WOU: any two lab science courses</li> </ul>	8-10
<i>Mathematics</i>		
2 courses	MATH 111, MATH 112	8
<i>At least 1 Core Transfer Requirement course must also be an AAOT-approved Cultural Literacy Course.</i>		
<b>Core Transfer Requirement Total</b>		<b>31-38</b>



Table 2

ADDITIONAL MAJOR TRANSFER MAP COURSES				
<i>See an advisor for recommended courses</i>				
	EOU/SOU/WOU cluster		OSU/PSU/UO cluster	
<b>General Education</b>				
Writing	WR122	3-4	WR227	3-4
<b>Oral Communication</b>				
	COMM111	3-4	COMM111	3-4
<b>Major Requirements</b>				
Computer Science	CS160, CS161, CS162, CS260	16	CS160, CS161, CS162, CS260 CS205 <sup>2</sup>	16 4-5
Mathematics	MTH251-252	8	MTH251-252	8
<i>Discrete Math</i>			MTH231-232 OR CS 250-251	8
<i>Natural Sciences</i>			Complete sequence done under CTM: Phys 213, Bio 213, or Chem 223	4-5
Additional MTM Courses Total		30-32		46-50
<b>Electives</b>	Elective courses to 90 credits	20-29	Elective courses to 90 credits	2-13
	MTM TOTAL	90	MAJOR TRANSFER MAP TOTAL	90

<sup>2</sup> new course that integrates CS271 and CS201 contents.

**Minimum letter grade and/or GPA requirements**

If the cell is blank, you must achieve a minimum letter grade of C- in that course.

Table 3

Minimum Letter Grade and/or GPA requirements							
Category	Course	EOU/SOU/WOU cluster			OSU/PSU/UO cluster		
		EOU	SOU	WOU	OSU	PSU	UO
CTM	WR 121				C		
CTM	A&L 1						
CTM	A&L 2						
CTM	SocSci 1						
CTM	SocSci 2						
CTM	NatSci 1				C		
CTM	NatSci 2				C		
CTM	MTH 111						
CTM	MTH 112						
MTM	WR 122						
MTM	WR227				C		
MTM	COMM 111				C		
MTM	CS 160			C	C		
MTM	CS 161		B	C	C		B-
MTM	CS 162		C	C	C	C	B-
MTM	CS 260			C	C	C	B-
MTM	MTH 112						
MTM	MTH 251			C	C		
MTM	MTH 252			C	C		
MTM	CS 205			C	C	C	
MTM	MTH 231 or CS250			C	C	C	B-
MTM	MTH 232 or CS251			C	C	C	B-
MTM	NatSci 3				C		
	GPA	2.25	2.0	2.0	2.0	2.0	2.0

Year 1

<b>Q1</b>		<b>Q2</b>		<b>Q3</b>	
Class	Credits	Class	Credits	Class	Credits
CS 160	4	CS 161	4	CS 162	4
MTH 111	4	MTH 112	4	MTH 251	4
WR 121	3-4	COM111	3-4	A&L 2	3-4
A&L 1	3-4	SS 1	3-4	SS 2	3-4
	14-16		14-16		14-16

Year 2 - OSU/PSU/UO cluster

<b>Q1</b>		<b>Q2</b>		<b>Q3</b>	
Class	Credits	Class	Credits	Class	Credits
CS 260	4	CS 205	4	WR227	3-4
MTH 252	4	MTH 231 or CS 250	4	MTH 232 or CS 251	4
Science 1	4-5	Science 2	4-5	Science 3	4-5
elective	3-4	elective	3-4	elective	3-4
	15-17		15-17		14-17

Year 2 - EOU/SOU/WOU cluster

<b>Q1</b>		<b>Q2</b>		<b>Q3</b>	
Class	Credits	Class	Credits	Class	Credits
CS 260	4	WR122	3-4	elective	3-4
MTH 252	4	elective	3-4	elective	3-4
Science 1	4-5	Science 2	4-5	elective	3-4
elective	3-4	elective	3-4	elective	3-4
	15-17		13-17		12-16

**Appendix A. University-specific flexibility with respect to MTM required courses**

Some of the universities have flexibility in the courses listed in the CTM and the MTM for their cluster. That flexibility is documented in the following table. The way to use this table is as follows: if a student has decided to transfer to a particular university, the student may take advantage of the listed flexibility in the remaining courses in the MTM degree. Note that taking advantage of that flexibility is likely to cause a student's course of study to no longer qualify for junior standing at the other universities in that cluster.

Table A.1

Course	EOU	SOU	WOU
<b>WR 122</b>		May substitute WR227	
<b>COMM 111</b>			
<b>CS 160</b>	Not required	Not required if prerequisite to CS 161 otherwise met	
<b>CS 161</b>			
<b>CS 162</b>			
<b>CS 260</b>		May substitute CS258 Fall term of Junior year	
<b>MTH 112</b>			Not required if student does MTH 231-232
<b>MTH 251</b>			Accepts MTH 231
<b>MTH 252</b>			Accepts MTH 232
<b>NatSci 1</b>			
<b>NatSci 2</b>			

Table A.2

Course	OSU	PSU	UO
<b>WR227</b>			
<b>COMM 111</b>			
<b>CS 160</b>		Not required	VERY STRONGLY ENCOURAGED, but not required
<b>CS 161</b>		Not required	
<b>CS 162</b>			
<b>CS 260</b>			
<b>MTH 112</b>			
<b>MTH 251</b>			
<b>MTH 252</b>			
<b>CS 205</b>			VERY STRONGLY ENCOURAGED, but not required
<b>MTH 231 or CS250</b>			
<b>MTH 232 or CS251</b>			
<b>NatSci 1</b>			GEOL 201, 202, 203 are also accepted
<b>NatSci 2</b>			
<b>NatSci 3</b>			

**Appendix B. University-specific recommended elective courses**

Some of the universities have recommendations for elective courses that appear in the schedule for their cluster; following those recommendations will give the student more choice once they transfer. Those recommendations are documented in the following table. The way to use this table is as follows: if a student has decided to transfer to a particular university, the student should attempt to follow those recommendations for any remaining electives in their MTM-CS studies. Note that there is no guarantee that following the recommendations for one university in a cluster will also serve the same purpose in another university in that cluster.

Table B.1

Elective	EOU	SOU	WOU
7 Electives	<ul style="list-style-type: none"> <li>• C++ programming course</li> <li>• A&amp;L 3 in a 2<sup>nd</sup> or 3<sup>rd</sup> disc</li> <li>• SS 3 in a 2<sup>nd</sup> or 3<sup>rd</sup> disc</li> <li>• A general elective that fulfills “Difference, Power &amp; Discrimination” Baccalaureate Core requirement</li> </ul>	<ul style="list-style-type: none"> <li>• 200-level database</li> <li>• 200-level computer org/architecture</li> <li>• CS 250 OR MTH 231</li> <li>• 200-level web design</li> <li>• 200-level networking</li> <li>• 200-level OO programming course</li> <li>• 200-level C/C++ course if neither used in 161/162</li> </ul>	<ul style="list-style-type: none"> <li>• CS 205 (Comp Arch)</li> </ul>

Table B.2

Elective	OSU	PSU	UO
3 electives	<ul style="list-style-type: none"> <li>• WR 122 (min grade C)</li> <li>• A general elective that fulfills “Difference, Power &amp; Discrimination” Baccalaureate Core requirement</li> <li>• a general elective that is equivalent to HHS 231, Physical Activity or PAC equivalent</li> <li>• CS 290 (if offered at your college)</li> </ul>	<ul style="list-style-type: none"> <li>• MTH 253</li> <li>• MTH 261 (linear alg)</li> <li>• Additional science elective (4 credits) from Bio, Chem, Phys, Geol, or Env Sci</li> <li>• Additional ASOT-approved A&amp;L or ASOT-approved SS elective</li> </ul>	<ul style="list-style-type: none"> <li>• At least 7 credits of ASOT-approved A&amp;L courses</li> <li>• At least 7 credits of ASOT-approved SS courses</li> </ul>

Part 5: Signature of Participating Institutions

**Computer Science Major Transfer Map: Statewide Articulation  
Agreement Participants to the Agreement**

The Oregon Transfer and Articulation Committee (OTAC) reviewed this agreement on November 27, 2018 and forwarded it for approval by the chief academic officers of Oregon’s public universities offering a Bachelor of Science in Computer Science degree and the chief academic officer of Oregon’s community colleges (*Note: Signatures are on file at the Higher Education Coordinating Commission*)

Signatures on file:

_____		_____	
Eastern Oregon University	Date	Oregon State University	Date
_____		_____	
Portland State University	Date	Southern Oregon University	Date
_____		_____	
Western Oregon University	Date	University of Oregon	Date
_____		_____	
Blue Mountain Community College	Date	Central Oregon Community College	Date
_____		_____	
Chemeketa Community College	Date	Clackamas Community College	Date
_____		_____	
Clatsop Community College	Date	Columbia Gorge Community College	Date
_____		_____	
Klamath Community College	Date	Lane Community College	Date
_____		_____	
Linn-Benton Community College	Date	Mt. Hood Community College	Date
_____		_____	
Oregon Coast Community College	Date	Portland Community College	Date



Part 6: Computer Science Major Transfer Map Participants

Group Coordinators:

Joe Sventek                      University of Oregon

Public Universities:

Tim Harrison                      Eastern Oregon University  
 Phil Howard                      Oregon Institute of Technology  
 Calvin Hughes                    Oregon State University  
 Mark Jones                        Portland State University  
 Barbara Sabbath                Portland State University  
 Fabrizzio Alphonsus Alves de Melo Nunes Soares      Southern Oregon University  
 Kathleen Freeman                University of Oregon  
 Becka Morgan                      Western Oregon University

Community Colleges:

Peter Hernberg                    Blue Mountain Community College  
 Ken Swartwout                    Central Oregon Community College  
 Andrew Scholer                   Chemeketa Community College  
 Jen Miller                         Clackamas Community College  
 Paul Wilkins                       Lane Community College  
 Joseph Jess                        Linn-Benton Community College  
 Pamela Wiese                      Mt. Hood Community College  
 Doug Jones                        Portland Community College  
 Jeremy Taylor                      Rogue Community College

Higher Education Coordinating Commission Staff:

Kia Sorensen                      Office of Academic Policy & Authorization  
 Brittany Miles                      Office of Community Colleges & Workforce Development



Part 7: Oregon Transfer Advisory Committee Members 2020-21

Chair: Edward Feser, Provost and Executive Vice President, Oregon State University

Incoming Chair: David Plotkin, Vice President of Instruction and Student Services, Clackamas Community College

Elizabeth Brand Cox, Executive Director, Student Success Center, Oregon Community College Association

Dana Richardson, Executive Director for the Council of Presidents, Oregon Public Universities Council of Presidents

Teresa Rivenes, Vice President of Instruction, Tillamook Bay Community College

Sal Castillo, Director-Institutional Research, Oregon State University

Erin Bird, Transfer Transitions Coordinator, Oregon State University

Frances White, Professor and Department Head, Anthropology, University of Oregon

Kevin Walker, Professor, College of Business, Eastern Oregon University

Seth Anthony, Associate Professor, Oregon Institution of Technology

Ann Cary, Interim Dean of Academic Affairs, Portland Community College

Blake Hausman, Instructor DE Reading, Writing & English, Portland Community College

John Copp, History, Political Science Instructor, Department Chair, Columbia Gorge Community College

Laurette Scott, Education Faculty, Department Chair, Clackamas Community College

Erin Baumgartner, Director of General Education; Interim Associate Provost for Academic Programs and Effectiveness, Western Oregon University

Thaddeus Shannon, Associate Professor, Computer Science, Western Oregon University

Kathy Smith, Associate Professor of Math, Central Oregon Community College

Rick DeBellis, Associate Director for Enrollment Management, Degree Partnership Programs and Transfer Student Services, Oregon State University

Melissa Frey, Dean & Registrar, Student Recruitment, Enrollment and Graduation Services Director, Chemeketa Community College

Mindy Williams, Oregon Writing English Advisory Committee Chair, Central Oregon Community College

Cindy Baccar, Associate Vice Provost & University Registrar, Academic Affairs, Portland State University

Linda Samek, Professor of Education in Residence, George Fox University

Patrick Crane, Director, Community Colleges and Workforce Development

Veronica Dujon, Director, Academic Policy and Authorization



**Office of the Vice Provost for Undergraduate Education**

Oregon State University, 500 Kerr Administration Building, Corvallis, Oregon 97331-0759

T 541-737-5105 | F 541-737-8082

February 9<sup>th</sup>, 2021

Higher Education Coordinating Commission

3225 25<sup>th</sup> St. SE

Salem, OR. 97302

Info.HECC@state.or.us

To whom it may concern,

In order to support the creation of the MTM degree in Computer Science, Oregon State University – Corvallis campus, in partnership with the School of Electrical Engineering and Computer Science, agrees to make the following exceptions to degree requirements for students entering the Computer Science – Applied Option, B.S. degree at the Corvallis campus after successful completion of the MTM:

1. To apply WR 122 from PCC to fulfill the WR 214/222 major requirement in the degree (department level)
2. To apply MTH 232 or CS 251 & all-Natural Science courses (from the list of approved options) in sequence towards the Applied Option 32-credit block (4 courses in total). (department level)
3. To accept the new creation of CS 205 to articulate for CS 271 in the major. (department and Registrar's level)
4. To accept the selected Natural Science sequence (from the list of approved options) to fulfill the three Biological and Physical Baccalaureate Core science requirements. (Registrar's level)

Sincerely,

DocuSigned by:  
*Alix Gitelman*  
2F8A8604D9584AA...

**Alix I Gitelman** | *she/her/hers* | **Vice Provost**

Office of Undergraduate Education

Professor of Statistics | College of Science

**Oregon State University**

541-760-3418 (cell)

**Office of Academic Affairs**

Post Office Box 751                      503-725-3422 tel  
Portland, Oregon 97207-0751        503-725-5262 fax



February 11, 2021

Re: Major Transfer Map in Computer Science

Dear HECC,

Portland State University commits to making the following changes in support of the proposed Major Transfer Map in Computer Science:

- Adjustments to procedures for admission to the PSU Major in Computer Science sufficient to ensure that any student who transfers to PSU at the start of the academic year after completion of the MTM in CS will have a path to completing the Bachelor's degree within two years.
- Adjustments to articulation agreements to ensure that PSU will accept CS 205, from any student who completes the MTM in CS, as meeting our major requirement for CS 201.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Jeffords".

Susan Jeffords, PhD  
Provost & Vice President for Academic Affairs



# Oregon Transfer Compass Computer Science Major Transfer Map Crosswalk

Core Transfer Map	CC Credits	EOU	OSU	PSU	SOU	UO	WOU
Writing: WR 121	3-4	Transfers as WR 121 in Gateway group.	1 of 1 Writing I course	Meets general education requirement for WR 121	USEM 101 (Strand ABC writing course)	1 of 2 required Writing courses	1 of 2 Foundations: Writing courses
Arts & Letters: 2 Courses	6-8	Transfers as 6-8 credits in Aesthetics and Humanities group or Artistic Process and Creation group	1 of 1 Literature/Arts course 1 of 1 Western Culture course	6-8 Credits of Arts & Letters or Social Science courses	2 courses toward strand E: Humanities	6-8 of 15 credits of Core Education Arts & Letters group	2 of 2 Exploring Knowledge: Literary and Aesthetic Perspectives courses
Social Science: 2 Courses	6-8	Transfers as 6-8 credits in Social Sciences group	1 of 1 Social Processes & Institutions course 1 of 1 Cultural Diversity course	6-8 Credits of Arts & Letters or Social Science courses	2 courses toward Strand F: Social Science	6-8 of 15 credits of Core Education Social Science group	2 of 2 Exploring Knowledge: Social, Historic, and Civic Perspectives courses
Natural Sciences: 2 Courses	8-10	Transfers as 8-10 credits in Natural, Mathematical & Informational Sciences group	2 of 3 Science courses	8-10 credits of 15 credit Lab Science requirement	2 courses w/ lab toward Strand G: Science	8-10 of 15 credits of Core Education Science group & 2 of 3 courses required by major additional science sequence	2 of 2 Exploring Knowledge: Scientific Perspectives courses & 2 of 3 required by major in BI 211-213 sequence
Math: 2 Courses (MTH 111 and MTH 112)	8	Transfers as MATH 111 and MATH 112	Transfers as MTH 111 and MTH 112. One course satisfies Math requirements for Baccalaureate Core; the other as a general elective.	Elective credits	Strand D: Quantitative Reasoning & Prerequisites for MTH 251/252 requirement	Transfer as MTH 111 and MTH 112: 2 of 3 BS Math/Computing classes Can also use MTH 231 or MTH 251 or CIS 161 to satisfy this requirement	1 of 1 Foundations: Math course - Can also use MTH 231 or 251 to satisfy this reqt; MTH 112 transfers as MTH 112
1 course must also satisfy AAOT Cultural Literacy Requirement		Transfers as Difference, Power and Discrimination group course.				1 of 2 Core Education Cultural Literacy courses	
Courses must total minimum of 30 credits, can be filled by an elective credit if needed		Additional credits taken to reach 30 will be applied to the appropriate Gen Ed requirements.	Additional credits taken to reach 30 will be applied to the appropriate Gen Ed requirements.	Include additional Arts & Letters or Social Science Electives as necessary to ensure (at least) 24 credits of general education (including	Additional credits taken to reach 30 will be applied to the appropriate Gen Ed requirements.	Additional credits taken to reach 30 will be applied to the appropriate Core Ed requirements.	Additional credits taken to reach 30 will be applied to the appropriate Gen Ed requirements.



# Oregon Transfer Compass Computer Science Major Transfer Map Crosswalk

Major and Elective Courses	CC Credits	EOU	OSU	PSU	SOU	UO	WOU
				WR 121 and COMM 111)			
COMM 111	3-4	Transfers as COM 111 in Gateway group.	Transfers as COMM 111	Meets general education requirement for COMM 220	USEM 103	Transfers as Core Education Arts & Letters group	3-4 credits of Foundations: Communication and Language
CS 160	4	Transfers as CS Lower Division Elective.	Transfers as CS 160	Elective credits (transfers as CS LD)	Transfers as CS200	Transfers as CIS 1xxT	Transfers as CS 160
CS 161	4	Transfers as CS 161	Transfers as CS 161	Elective credits (transfers as CS 161)	Transfers as CS 256	Transfers as CIS 210	Transfers as CS 161
CS 162	4	Transfers as CS 162	Transfers as CS 162	Transfers as CS 162	Transfers as CS 257	Transfers as CIS 211	Transfers as CS 162
CS 260	4	Transfers as CS 260	Transfers as CS 261	Transfers as CS 163	Transfers as CS 258	Transfers as CIS 212	Transfers as CS 260
MTH 251	4	Transfers as Math 251	Transfers as MTH 251	Transfers as MTH 251	Transfers as MTH 251	Transfers as MATH 251	Transfers as MTH 251
MTH 252	4	Transfers as Math 252	Transfers as MTH 252	Transfers as MTH 252	Transfers as MTH 252	Transfers as MATH 252	Transfers as MTH 252
EOU/SOU/WOU only	CC Credits	EOU	OSU	PSU	SOU	UO	WOU
Writing - WR 122	3-4	Transfers as WR 122 in Gateway GenEd.			USEM 102 (Strand ABC writing course)		Transfers as WR 122
OSU/PSU/UO only	CC Credits	EOU	OSU	PSU	SOU	UO	WOU
Writing - WR 227	3-4		Transfers as WR 327. Satisfies both major requirements and Writing requirements for Baccalaureate Core	Meets major requirement for WR 227	May substitute for WR 122 to meet USEM 102 (Strand ABC writing course)	2 of 2 required Writing courses AND substitutes for WR 320 major requirement	Transfers as elective WR 300
CS 205	4		Transfers as CS 271	Meets major requirement for CS 201	Transfers as CS 314	Transfers as CIS 2xxT	Transfers as CS 271
Discrete Math: MTH 231-232 or CS 250-251	8		Transfers as MTH 231, 232	Meets major requirement for CS 250 and CS 251	CS 250 transfers as CS 250	Transfers as MATH 231-232; B.S. or Core Education Science group; CS 250-251 transfers as CIS 2xxT and substitutes for MATH 231-232 for major	Transfers as MTH 231-232 or satisfied by MTH 251-252
Natural Science:	4-5		Transfers as PH 213,	Completes 15 credit		Complete science	



# Oregon Transfer Compass Computer Science Major Transfer Map Crosswalk

Complete sequence started under CTM			CH 223 or BIO 213	Lab Science requirement for major		sequence started under CTM PHYS 213, BIO 213, or CHEM 223 12-15 of 15 credits of Core Education Science group & 3 of 3 courses required by major additional science sequence	
Major and Elective Courses	CC Credits	EOU	OSU	PSU	SOU	UO	WOU
Electives		Additional elective courses to 90 credits.	<p>Elective Courses to get to 90 credits Will apply to gen ed, or major requirements, or as electives.</p> <p>Recommended:</p> <ul style="list-style-type: none"> <li>WR 122 – transfers as WR 222. (CS dept. will accept WR 122 at PCC which transfers as WR 122)</li> <li>A general elective that fulfills “Difference, Power &amp; Discrimination” Baccalaureate Core requirement</li> <li>a general elective that is equivalent to HHS 231, Physical Activity or PAC equivalent</li> <li>CS 290 (if offered at your college)</li> </ul>	<p>Additional elective courses to 90 credits.</p> <p>Recommended: additional Arts &amp; Letters or Social Science Electives as necessary to ensure (at least) 24 credits of general education (including WR 121 and COMM 111)</p>	Additional elective courses to 90 credits.	Additional elective courses to 90 credits.	Additional elective courses to 90 credits.
Major Transfer Map credit total	90	90	90	90	90	90	90

Remaining	EOU	OSU	PSU	SOU	UO	WOU
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# Oregon Transfer Compass Computer Science Major Transfer Map Crosswalk

Degree Reqts						
<b>General Education</b>	0-14 credits in Aesthetics and Humanities (AEH) in two different disciplines	Difference, Power & Discrimination (3-4)	Junior Cluster (Univ. Studies) (12 credits)	1 course in Strand E: Humanities (for a total of 3 courses or at least 9 credits)	3-6 credits of Core Ed A&L courses, possibly including one multicultural course	3-4 credits of Foundations: Critical Thinking
	0-14 credits in Artistic Process and Creation (APC) in two different disciplines	Fitness (3)	Additional Arts & Letters or Social Science Elective (3 credits)	1 course in Strand F: Social Sciences (for a total of 3 courses or at least 9 credits)	7-9 credits of Core Ed Social Science courses, possibly including one multicultural course	4 credits of Foundations: Health Promotion
	0-14 credits in Social Sciences (SSC) in two different disciplines	Contemporary Global Issues (3-4)		1 course in Strand G: Sciences (for a total of 3 courses or at least 11 credits; one course may be a non-lab science)		3-4 credits of Integrating Knowledge: Science, Technology, Society (upper-division)
	0-14 credits in Natural, Mathematical & Informational Sciences (SMI) in two different disciplines, including at least one physical/biological science.			Upper-division course in Strand I: Science, Technology & Society (3-4 credits)		3-4 credits of Integrating Knowledge: Science, Technology, Society (upper-division)
	0-14 credits in Natural, Mathematical & Informational Sciences (SMI) in two different disciplines, including at least one physical/biological science.			Upper-division course in Strand H: Citizenship and Social Responsibility (3-4 credits)		*** First Year seminars requirements waived
				Upper-division course in Strand J: Diversity, Equity, and Inclusion (3-4 credits)		
<b>General Education Credits</b>	<b>30</b>	<b>9-11</b>	<b>15</b>	<b>18-24</b>	<b>10-15</b>	<b>13-16</b>
<b>Major Requirements</b>	CS 221 (4 credits) CS 311 (3 credits) CS 318 (4 credits) CS 330 (4 credits) CS 331 (3 credits) CS 360 (4 credits) CS 361 (4 credits) CS 362 (3 credits)	CS 361 (4 credits) CS 290 (4 credits) CS 362 (4 credits) CS 325 (4 credits) CS 372(4 credits) CS 344 (4 credits) CS 444 (4 credits) CS 381 (4 credits)	CS 202 (4 credits) CS 300 (4 credits) CS 305 (2 credits) CS 320 (4 credits) CS 333 (4 credits) CS 350 (4 credits) CS 469 (3 credits) CS 470 (3 credits)	CS 314 (4 credits) CS 336 (4 credits) CS 360 (4 credits) CS 357 (4 credits) CS 411 (4 credits) CS 418 (4 credits) CS 452 (4 credits) CS 459 (4 credits)	CIS 313 (4 credits) CIS 314 (4 credits) CIS 315 (4 credits) CIS 330 (4 credits) CIS 415 (4 credits) CIS 422 (4 credits) CIS 425 (4 credits) MATH choice group (8)	IS 278 (4 credits) CS 360 (4 credits) CS 361 (4 credits) CS 363 (4 credits) CS 364 (4 credits) CS 366(4 credits) CS 367 (4 credits) CS 460 (4 credits)



# Oregon Transfer Compass Computer Science Major Transfer Map Crosswalk

	CS 401 (1-6 credits) CS 407 (2 credits) MATH 231 (4 credits) MATH 341 (4 credits)	CS 340 (4 credits) CS 461 (3 credits) CS 462 (3 credits) CS 463 (2 credits) CS 352 (4 credits) "CS 391 (3 credits) – Also fulfills Synthesis Bacca laureate Requirement " ST 314 (3 credits) WR 214/222 (3 credits)	CS 486 (4 credits) ECE 341 (4 credits)	CS 469 (4 credits) CS 470 (8 credits)	credits)	CS461 (4 credits) CS 462 (4 credits) CS 365 (4 credits)
<b>Major Requirements Credits</b>	<b>40-45</b>	<b>57</b>	<b>35</b>	<b>44</b>	<b>36</b>	<b>40</b>
<b>Major Electives</b>	COM 252 and CS Upper Division electives (16)	2 courses of CS Restricted Electives (6-8)  Approved Applied Plan Electives – approved by CS Head Advisor (16)	Approved CS Upper Division Electives, including at least one "Programming Intensive" course: (6 courses/24 credits)	Complete 20 credits of computer science electives chosen from upper-division computer science courses, not including CS 310, CS 346, CS 401, CS 405, and CS 407. A maximum of 4 credits of CS 409 - Practicum may be counted toward upper-division CS elective credits.	CIS upper-division electives (20 credits)	(2) 400 level electives (8 credits)
<b>Major Electives Credits</b>	<b>16</b>	<b>22-24</b>	<b>24</b>	<b>20</b>	<b>20</b>	<b>8</b>
<b>Additional Electives</b>			Additional Math Elective: MTH 253 or MTH 261 (4 credits)		MATH upper division elective (4 credits)	18 additional elective credits
			Approved Science Elective (4 credits)		up to 10 credits, including upper-division credits to at least 62 total	
			Approved Math Electives (7 credits)			
<b>Additional Electives Credits</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>2-8</b>	<b>14</b>	<b>18</b>
<b>Remaining Degree Requirements Credits</b>	<b>90</b>	<b>88-92</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>90</b>





# Oregon Transfer Compass Computer Science Major Transfer Map Crosswalk

## NOTES

1. CIP: 11.0101
2. CIP 7 = ^
3. Professional Learning Outcomes (PLOs)
  - a. Develop software using both structured and object-oriented paradigms that meets the requirements of a written specification.
  - b. Explain the software development lifecycle and the specific tools and processes used to create software.
  - c. Design, analyze, and implement algorithms to solve computational problems using various data structures as problem-solving tools. These data structures must include arrays, stacks, queues, linked lists, trees, and hash tables.