

## CWU Department/Program Assessment Plan Preparation Form

**Department: Computer Science**

**Program: Bachelor of Science**

Department/Program Goals	Related College Goals	Related University Goals	Method(s) of Assessment (What is the assessment?)	Who/What Assessed (population, item)	When Assessed (term, dates)	Criterion of Achievement (Expectation of how good things should be?)
1. Promote the role of computer science and computer literacy in undergraduate education at Central Washington University.	Goal I: Provide for an outstanding academic and student experience in the College of the Sciences.	Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	<p>Student involvement in general education courses.</p> <p>Student involvement in service courses.</p> <p>Senior projects conducted for the university community and regional groups.</p> <p>Interest in major, minor and associated programs.</p> <p>Interest in outreach programs.</p>	<p>Students enrolled in CS 101 &amp; 105. Feedback from Gen. Ed. Committee.</p> <p>Students enrolled in CS 105, 110, 111 &amp; 367. Feedback from associated majors.</p> <p>Community participation in projects.</p> <p>Students enrolled in CS-related programs.</p> <p>Student and faculty participation in GearUp, STEP, Robotics institute</p>	<p>Annual review.</p> <p>Annual review.</p> <p>Fall annually.</p> <p>Annual review.</p> <p>Annual Review</p>	<p>Fully enrolled general education sections. (#FTES high) No concerns expressed by Gen. Ed. Committee.</p> <p>Reasonably enrolled service course sections. (#FTES stable) No concerns expressed by departments requiring these classes.</p> <p>Number of annual requests high. Sufficient projects for our senior project capstone course. No complaints from project clients.</p> <p>Range from a constant to an increasing number students enrolled as majors, minors and associated programs (CompE).</p> <p>Range from a constant to an increasing number student and faculty participation in these outreach programs.</p>
2. Offer undergraduate programs that train students as computer specialists with a fundamental understanding of technology.	Goal I: Provide for an outstanding academic and student experience in the College of	Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	<p>Senior Project Results</p> <p>Major Field Test</p> <p>SOURCE participation</p>	<p>Seniors in CS</p> <p>Seniors in CS</p> <p>CS-related students</p>	<p>Annual Review</p> <p>Annual Review</p> <p>Annual Review</p>	<p># of successful projects</p> <p>&gt; 50 percentile, combined score</p> <p>&gt; 20% students in SOURCE</p> <p>Range from a constant to an</p>

	the Sciences.		Awards received	CS-related students	Annual Review	increasing number of students receiving awards
			Accreditation for CompE	CompE program	6yr review	ABET accreditation received
3. Maintain an intellectually stimulating learning environment where diverse perspectives are valued and encouraged.	Goal VII: Create and sustain productive, civil, and pleasant learning environments.	Goal VI: Build inclusive and diverse campus communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.	Scholarship program participation	Scholarship recipient diversity & achiev.	Annual Review	Continuing ability to offer scholarships to CS majors; range from a constant to an increasing number of underrepresented group recipients; > 25% participate in SOURCE or independent research.
			Mentoring program participation	Program participant diversity & achiev.	Annual Review	Range from a constant to an increasing number of underrepresented group participating; > 25% participate in SOURCE or independent research.
			Service project participation	Student participation	Annual Review	> 5 service related projects
			Non-traditional student outreach	Student diversity	Annual Review	Entry classes and degree tracks that attract non-traditional students.
4. Sustain a productive team of faculty and staff.	Goal IV: Develop a diversified funding base to support curriculum and academic facilities, student and faculty research and scholarships, as well as faculty development, service and applied research in college disciplines.	Goal III: Strengthen and further diversify our funding base and strengthen infrastructure to support academic and student programs.	Faculty productivity	Faculty	Annual Peer Review	All faculty successfully completing their professional goals – scholarship, teaching & service – described and agreed to by peers and the Dean. Review includes contribution to the program and role of faculty member.
			Staff productivity	Staff	Annual Review	All staff successfully completing their PDP.

<p>5. Play a leadership role in scholarship by making basic and relevant scientific contributions to our respective sub-disciplines.</p>	<p>Goal III: Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</p>	<p>Goal V: Achieve regional and national prominence for the university.</p>	<p>Scholarship</p>	<p>Faculty scholarship integrated with the undergraduate program.</p>	<p>Annual Review</p>	<p>A departmental average (per faculty) of one conference, journal and book publications  A departmental average (per faculty) of one submitted grant  A departmental average (per faculty) of six students participating in SOURCE, conferences, independent research</p>
<p>6. Build an interdisciplinary program and an associated Masters Degree program.</p>	<p>Goal III: Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</p>	<p>Goal III: Strengthen and further diversify our funding base and strengthen infrastructure to support academic and student programs.</p>	<p>Program foci  Master's degree progress</p>	<p>Faculty planning</p>	<p>Annual review</p>	<p>Successful program review  Range from a constant to an increasing number of interdisciplinary projects – both student and faculty.  Successfully inaugurated MS program.</p>

CWU Student Learning Outcome Assessment Plan Preparation Form

Department: **Computer Science**

Program: **Bachelor of Science**

Student Learning Outcomes (performance, knowledge, attitudes)	Related Program/ Departmental Goals	Related College Goals	Related University Goals	Method(s) of Assessment (What is the assessment?)*	Who Assessed (Students from what courses – population)**	When Assessed (term, dates) ***	Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)
<p><b>1. Basic knowledge:</b> Graduates will demonstrate an understanding of each of the subject areas that define the discipline as well as the interrelationships that exist among them.</p>	<p>Goals 1 &amp; 2. Promote the role of computer science and computer literacy in undergraduate education at Central Washington University.</p> <p>Offer undergraduate programs that train students as computer specialists with a fundamental understanding of technology.</p>	<p>Goal I: Provide for an outstanding academic and student experience in the College of the Sciences.</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>MFT taken by graduating seniors</p> <p>Performance in the core courses of the major</p>	<p>Senior CS majors</p> <p>Majors at all levels</p>	<p>Reviewed annually.</p> <p>Reviewed on a three year cycle.</p>	<p>&gt; 50<sup>th</sup> percentile overall and in content areas of the MFT</p> <p>All graduates have a GPA of better than 2.5 in core courses.</p>
<p><b>2. Critical Thinking Skills:</b> Graduates will demonstrate the ability to utilize appropriate theoretical constructs for problem solving: definitions, and</p>	<p>Goal 2. Offer undergraduate programs that train students as computer specialists with a fundamental understanding of technology.</p>	<p>Goal I: Provide for an outstanding academic and student experience in the College of the Sciences.</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>MFT taken by graduating seniors</p> <p>Performance in the core courses of the major</p> <p>Performance in CS 427</p>	<p>Senior CS majors</p> <p>Majors at all levels</p> <p>Students in CS 427</p>	<p>Reviewed annually.</p> <p>Reviewed on a three year cycle.</p>	<p>&gt; 50<sup>th</sup> percentile overall and in content areas of the MFT</p> <p>All graduates have a GPA of better than 2.5 in core courses.</p> <p>Students meet the student learning outcomes of CS 427</p>

axioms, theorems, proofs, and interpretation of results.							
<p><b>3. Research Skills:</b> Graduates will have the ability to apply basic research methods in computer science.</p>	<p>Goals 3, 5 &amp; 6. Maintain an intellectually stimulating learning environment where diverse perspectives are valued and encouraged.</p> <p>Play a leadership role in scholarship by making basic and relevant scientific contributions to our respective sub-disciplines.</p> <p>Build an interdisciplinary program and an associated Masters Degree program.</p>	<p>Goal VII &amp; III: Create and sustain productive, civil, and pleasant learning environment.</p> <p>Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</p>	<p>Goal VI &amp; V: Build inclusive and diverse campus communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.</p> <p>Achieve regional and national prominence for the university.</p>	<p>Performance in CS 489</p> <p>Student participation in SOURCE</p> <p>Student participation in research projects and groups.</p>	<p>Graduating seniors</p> <p>Students involved with SOURCE</p> <p>Students involved in undergraduate research</p>	<p>Reviewed annually.</p>	<p>All graduates will produce a successful research paper.</p> <p>Range from a constant to an increasing number presenting at SOURCE</p> <p>An annual average of two students (per faculty) involved in undergraduate research.</p> <p>&gt; 3 external research presentations or publications annually with student participation.</p>
<p><b>4. Applied Design Skills:</b> Graduates will have the ability to apply appropriate design constructs: requirements analysis and specification, design, implementation, and testing.</p>	<p>Goal 2. Offer undergraduate programs that train students as computer specialists with a fundamental understanding of technology.</p>	<p>Goal I: Provide for an outstanding academic and student experience in the College of the Sciences.</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>Performance in CS 480-481 the senior capstone courses.</p>	<p>Graduating seniors</p>	<p>Reviewed annually.</p>	<p>&gt;75% of project groups produce successful projects. All teams produce minimally successfully documents as measured by the content rubrics.</p>

<p><b>5. Ethics and Society:</b> Graduates will demonstrate knowledge of ethical codes and societal issues associated with the computing field.</p>	<p>Goal 1. Promote the role of computer science and computer literacy in undergraduate education at Central Washington University.</p>	<p>Goal I: Provide for an outstanding academic and student experience in the College of the Sciences.</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>Performance in CS 489</p>	<p>Graduating seniors</p>	<p>Reviewed annually.</p>	<p>All graduates successfully produce a research paper studying a societal issue or develop a case study of an ethical situation.</p>
<p><b>6. Technical and Theoretical Background:</b> Graduates will demonstrate knowledge of recent technological and theoretical developments, general professional standards, and have an awareness of their own strengths and limitations as well as those of the discipline itself.</p>	<p>Goals 3 &amp; 5. Maintain an intellectually stimulating learning environment where diverse perspectives are valued and encouraged.  Play a leadership role in scholarship by making basic and relevant scientific contributions to our respective sub-disciplines.</p>	<p>Goal VII &amp; III: Create and sustain productive, civil, and pleasant learning environment.  Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</p>	<p>Goal VI &amp; V: Build inclusive and diverse campus communities that promote intellectual inquiry and encourage civility, mutual respect, and cooperation.  Achieve regional and national prominence for the university.</p>	<p>Performance in CS 311 and 312.  Performance in CS 480-481 the senior capstone courses.</p>	<p>Students in CS 311 and 312.  Graduating seniors.</p>	<p>Reviewed on a 3 year cycle.  Reviewed annually.</p>	<p>Students meet the student learning outcomes of CS 311 and 312.  All student groups will meet professional standards in generating course documents.</p>
<p><b>7. History of Computing:</b> Graduates will be aware of the history of computing, including those major developments and trends - economic,</p>	<p>Goal 1. Promote the role of computer science and computer literacy in undergraduate education at Central Washington University.</p>	<p>Goal I: Provide for an outstanding academic and student experience in the College of the Sciences.</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>Performance in CS 112</p>	<p>Students in CS 112</p>	<p>Reviewed annually.</p>	<p>Students meet the student learning outcomes of CS 112.</p>

scientific, legal, political, and cultural - that have combined to shape the discipline.							
<b>8. Graduate Preparation:</b> Graduates will have the necessary background for entry into graduate study.	<p>Goal 2, 4 &amp; 6. Offer undergraduate programs that train students as computer specialists with a fundamental understanding of technology.</p> <p>Sustain a productive team of faculty and staff.</p>	<p>Goal I, IV &amp; III: Provide for an outstanding academic and student experience in the College of the Sciences. Develop a diversified funding base to support curriculum and academic facilities, student and faculty research and scholarships, as well as faculty development, service and applied research in college disciplines.</p> <p>Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>Performance in CS 427</p> <p>Student participation in SOURCE</p> <p>Student participation in research projects and groups.</p> <p>Graduate school acceptance.</p>	<p>Students in CS 427.</p> <p>Students involved with SOURCE</p> <p>Students involved in undergraduate research</p> <p>Survey of graduating seniors.</p>	<p>Reviewed on a 3 year cycle.</p> <p>Reviewed annually.</p>	<p>Students meet the student learning outcomes of CS 427.</p> <p>Range from a constant to an increasing number presenting at SOURCE</p> <p>An annual average of two students (per faculty) involved in undergraduate research. &gt; 3 external research presentations or publications annually with student.</p> <p>Range from a constant to an increasing number of students accepted to graduate school.</p>

<p><b>9. Communication Skills:</b> Graduates will have the ability to communicate effectively.</p>	<p>Goal 2. Offer undergraduate programs that train students as computer specialists with a fundamental understanding of technology.</p>	<p>Goal I: Provide for an outstanding academic and student experience in the College of the Sciences.</p>	<p>Goal I: Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>Performance in CS 325.</p> <p>Performance in CS 480-481.</p> <p>Performance in CS 489.</p>	<p>Students in CS 325.</p> <p>Graduating seniors</p>	<p>Reviewed on a 3 year cycle.</p> <p>Reviewed annually.</p>	<p>Students meet the student learning outcomes of CS 325.</p> <p>All teams produce minimally successfully documents as measured by the writing rubrics.</p> <p>All students participate in three successful midterm and final presentations.</p> <p>All graduates will produce a successful research paper.</p>
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\*Method(s) of assessment should include those that are both direct (tests, essays, presentations, projects) and indirect (surveys, interviews) in nature

\*\*Data needs to be collected and differentiated by location (Ellensburg campus vs University Centers – see NWCCU standard 2.B.2)

\*\*\*Timing of assessment should be identified at different transition points of program (i.e., admission, mid-point, end-of-program, post-program)