

CWU Department/Program Assessment Plan Preparation Form

Department: Biological Sciences Program: Bachelor of Arts

<b>Department/Program Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)</b>	<b>Who/What Assessed (population, item)</b>	<b>When Assessed (term, dates)</b>	<b>Criterion of Achievement (Expectation of how good things should be?)</b>
1. Graduates will have a comprehensive knowledge base of the biology of organisms.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 - Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
2. Graduates will be critical thinkers with the ability to reflect upon scientific knowledge and continue to expand upon this knowledge throughout their careers.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 - Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
3. Graduates will be able to employ appropriate experimental design and methodology to solve problems in biology.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	All students conduct research projects in several required courses. The projects require that students design their own studies, analyze the data and draw their own conclusions.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Individual faculty members assess the student projects and assign grades according to their established criteria.
4. Graduates will be able to describe the societal place of biology as a science, and appropriately communicate and apply underlying principles of biology to current issues.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	All students are required to take the BIOL 499 – Senior Seminar course which normally includes an assigned review paper or presentation covering a current topic in biology.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.

CWU Student Learning Outcome Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Arts

<b>Student Learning Outcomes (performance, knowledge, attitudes)</b>	<b>Related Program/ Departmental Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)*</b>	<b>Who Assessed (Students from what courses – population)**</b>	<b>When Assessed (term, dates) ***</b>	<b>Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)</b>
1. Students will exhibit basic mastery of biological content.	Program Goal #1	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 -Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
2. Students will be able to reason analytically.	Program Goal #2	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 -Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
3. Students will be able to critically analyze the primary literature.	Program Goal #2 & #4	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate biology courses.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.
4. Students will employ appropriate experimental	Program Goal #3	Provide for an outstanding academic and	Maintain and strengthen an outstanding academic and	Students will write research proposals and conduct research projects in appropriate courses.	All students are assessed in their courses throughout their	Numerous times throughout their	Students must meet the criteria for the assignments in each course as established by

design and methodology.		student experience in the College of the Sciences.	student life on the Ellensburg campus.		program.	program.	each instructor.
5. Students will effectively communicate underlying principles of biology.	Program Goal #4	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will prepare oral, written, and poster presentations in several different courses, depending on instructor.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Students must meet the criteria for the assignments in each course as established by each instructor.
6. Students will demonstrate basic scientific skills.	Program Goal #2 & #3	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students use various scientific instruments to make measurements in the lab and field.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Students must meet the criteria for the assignments in each course as established by each instructor.

CWU Department/Program Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – General Biology

<b>Department/Program Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)</b>	<b>Who/What Assessed (population, item)</b>	<b>When Assessed (term, dates)</b>	<b>Criterion of Achievement (Expectation of how good things should be?)</b>
1. Graduates will have a comprehensive knowledge base of the biology of organisms.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 - Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
2. Graduates will be critical thinkers with the ability to reflect upon scientific knowledge and continue to expand upon this knowledge throughout their careers.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 - Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
3. Graduates will be able to employ appropriate experimental design and methodology to solve problems in biology.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	All students conduct research projects in several required courses. The projects require that students design their own studies, analyze the data and draw their own conclusions.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Individual faculty members assess the student projects and assign grades according to their established criteria.
4. Graduates will be able to describe the societal place of biology as a science, and appropriately communicate and apply underlying principles biology to current issues.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	All students are required to take the BIOL 499 – Senior Seminar course which normally includes an assigned review paper or presentation covering a current topic in biology.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.

CWU Student Learning Outcome Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – General Biology

<b>Student Learning Outcomes (performance, knowledge, attitudes)</b>	<b>Related Program/ Departmental Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)*</b>	<b>Who Assessed (Students from what courses – population)**</b>	<b>When Assessed (term, dates) ***</b>	<b>Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)</b>
1. Students will exhibit basic mastery of biological content.	Program Goal #1	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 -Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
2. Students will be able to reason analytically.	Program Goal #2	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Students take the MFT as part of the BIOL 499 -Senior Seminar course which is offered each quarter.	Students must score a minimum of 35 on each of the four subscores relating to different disciplines within biology.
3. Students will be able to critically analyze the primary literature.	Program Goal #2 & #4	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate biology courses.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.
4. Students will employ appropriate experimental	Program Goal #3	Provide for an outstanding academic and	Maintain and strengthen an outstanding academic and	Students will write research proposals and conduct research projects in appropriate courses.	All students are assessed in their courses throughout their	Numerous times throughout their	Individual faculty members assess the student projects and assign grades according

design and methodology.		student experience in the College of the Sciences.	student life on the Ellensburg campus.		program.	program.	to their established criteria.
5. Students will effectively communicate underlying principles of biology.	Program Goal #4	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will prepare oral, written, and poster presentations.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Individual faculty members assess the student projects and assign grades according to their established criteria.
6. Students will demonstrate basic scientific skills.	Program Goal #2 & #3	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students use various scientific instruments to make measurements in the lab and field.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Students must meet the criteria for the assignments in each course as established by each instructor.

CWU Department/Program Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – Cell and Molecular Biology

<b>Department/Program Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)</b>	<b>Who/What Assessed (population, item)</b>	<b>When Assessed (term, dates)</b>	<b>Criterion of Achievement (Expectation of how good things should be?)</b>
1. Graduates will be able to critically analyze primary literature in the cell, molecular, and microbiology fields.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate biology courses.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.
2. Graduates will be critical thinkers with the ability to reflect and grow professionally throughout their career.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the cell biology and molecular genetics subscores.
3. Graduates will be able to employ appropriate experimental design and methodology to solve problems in cell, molecular and microbiology.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	All students conduct research projects in several required courses. The projects require that students design their own studies, analyze the data and draw their own conclusions.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Individual faculty members assess the student projects and assign grades according to their established criteria.
4. Graduates will identify themselves as scientists and use the scientific method to address questions in cell molecular, and microbiology.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate biology courses.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.
5. Graduates will be	Provide for an	Maintain and	Students will prepare oral,	All students are	Numerous times	Individual faculty members assess

able to appropriately communicate and apply underlying principles of cell, molecular and microbiology to current issues.	outstanding academic and student experience in the College of the Sciences.	strengthen an outstanding academic and student life on the Ellensburg campus.	written, and poster presentations.	assessed in their courses throughout their program.	throughout their program.	the student projects and assign grades according to their established criteria.
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CWU Student Learning Outcome Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – Cell and Molecular Biology

<b>Student Learning Outcomes (performance, knowledge, attitudes)</b>	<b>Related Program/ Departmental Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)*</b>	<b>Who Assessed (Students from what courses – population)**</b>	<b>When Assessed (term, dates) ***</b>	<b>Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)</b>
1. Students will be familiar with flow of genetic information, cell structure, function and development.	Program Goal #1	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the cell biology and molecular genetics subscores.
2. Students will identify and explain issues in the molecular sciences and biotechnology.	Program Goal #2, #3, #4 & #5	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate biology courses.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.
3. Students will critically analyze primary literature from cell, molecular and microbiology journals.	Program Goal #1, #2 & #5	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate biology courses.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.

CWU Department/Program Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – Ecology

<b>Department/Program Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)</b>	<b>Who/What Assessed (population, item)</b>	<b>When Assessed (term, dates)</b>	<b>Criterion of Achievement (Expectation of how good things should be?)</b>
1. Graduates will recognize the ecological basis for regional and global environmental issues.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	The BIOL 360 – General Ecology course contains content that covers regional and global environmental issues. Several upper division ecology courses also discuss these issues.	All B.S. Ecology majors must take BIOL 360 and at least one other advanced ecology course.	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.
2. Graduates will be critical thinkers with the ability to reflect and grow professionally throughout their career.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the population ecology and evolution subscore.
3. Graduates will identify themselves as scientists and use the scientific method to explore the world.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	All students conduct research projects in several required courses. The projects require that students design their own studies, analyze the data and draw their own conclusions.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.
4. Graduates will recognize the complexity of biotic and abiotic interactions that influence an organism.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the population ecology and evolution subscore.

<p>5. Graduates will recognize major features and characteristic organisms of ecological systems in nature (e.g. shrub-steppe, forests, lakes, rivers)</p>	<p>Provide for an outstanding academic and student experience in the College of the Sciences.</p>	<p>Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</p>	<p>Major Field Test in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).</p>	<p>All students with senior standing in the program take the MFT prior to graduation.</p>	<p>Senior year.</p>	<p>Students must score a minimum of 35 on the population ecology and evolution subscore.</p>
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CWU Student Learning Outcome Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – Ecology

<b>Student Learning Outcomes (performance, knowledge, attitudes)</b>	<b>Related Program/ Departmental Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)*</b>	<b>Who Assessed (Students from what courses – population)**</b>	<b>When Assessed (term, dates) ***</b>	<b>Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)</b>
1. Students will be familiar with characteristic organisms of at least one major biome or ecological assemblage (e.g. shrub-steppe system; aquatic system; forest system; alpine system; or others).	Program Goal #5	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the population ecology and evolution subscore.
2. Students will be familiar with at least one major taxonomic group (i.e. plants, animals, fungi, algae or bacteria).	Program Goal # 4 and #5	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students are required to take at least one upper division taxonomy course.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.
3. Students will identify and explain regional global ecological issues.	Program Goal #1 and #2	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	The BIOL 360 – General Ecology course contains content that covers regional and global environmental issues. Several upper division ecology courses also discuss these issues.	All B.S. Ecology majors must take BIOL 360 and at least one other advanced ecology course.	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.
4. Students will critically analyze primary literature from ecological	Program Goal #2 and #3	Provide for an outstanding academic and student experience in	Maintain and strengthen an outstanding academic and student life on the	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.

journals.		the College of the Sciences.	Ellensburg campus.	biology courses.			
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CWU Department/Program Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – Organismal Biology

<b>Department/Program Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)</b>	<b>Who/What Assessed (population, item)</b>	<b>When Assessed (term, dates)</b>	<b>Criterion of Achievement (Expectation of how good things should be?)</b>
1. Graduates will be able to identify organismal structures and describe the function and evolution of these structures.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the organismal subscore.
2. Graduates will have a comprehensive knowledge base of the morphology, physiology, development, behavior, and taxonomic diversity of animals, plants, fungi, and /or microbes.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the organismal subscore.
3. Graduates will be critical thinkers with the ability to reflect upon scientific knowledge and continue to expand upon this knowledge throughout their careers.	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Students will discuss relevant research during Senior Seminar (BIOL 499S), and appropriate biology courses.	All students take BIOL 499 – Senior Seminar in their senior year.	Senior year.	Students must meet the criteria for the BIOL 499 course as established by each instructor.

CWU Student Learning Outcome Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – Organismal Biology

<b>Student Learning Outcomes (performance, knowledge, attitudes)</b>	<b>Related Program/ Departmental Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)*</b>	<b>Who Assessed (Students from what courses – population)**</b>	<b>When Assessed (term, dates) ***</b>	<b>Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)</b>
Identify the general taxonomy of organisms from at least three major Kingdoms.	Program Goal #1	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the organismal subscore.
Identify major morphological structures of organisms from specific Kingdoms, Phyla, and Classes	Program Goal #2, #3, #4 & #5	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	Major Field Test (MFT) in Biology (A standardized test given nationally to assess knowledge and critical thinking related to the field of biology).	All students with senior standing in the program take the MFT prior to graduation.	Senior year.	Students must score a minimum of 35 on the organismal subscore.
Discuss the function (physiology) of major structures (organs) for members of specific groups of organisms.	Program Goal #1, #2 & #5	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	BIOL 111 (Plant Biology) and BIOL 112 (Animal Biology) as well as advanced physiology courses contain content that covers the structure and function of organisms.	All B.S. Organismal Biology majors must take BIOL 111, BIOL 112 and either BIOL 441 (Plant Physiology) or BIOL 455 (Zoophysiology).	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.
Discuss the evolutionary relationships of organisms within a specific group and differentiate concepts of convergent and divergent evolution.	Program Goal #1 and #2	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	BIOL 111 (Plant Biology) and BIOL 112 (Animal Biology) as well as advanced taxonomy courses contain content that covers the evolutionary relationships among organisms.	All B.S. Organismal Biology majors must take BIOL 111, BIOL 112 and an advanced taxonomy course.	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.

Integrate concepts of behavior, ecology, and development into the evolutionary framework of a specific group of organisms.	Program Goal #1 and #2	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	BIOL 111 (Plant Biology) and BIOL 112 (Animal Biology) as well as advanced taxonomy and physiology courses contain content that integrate specific concepts of groups of organisms into an evolutionary framework.	All B.S. Organismal Biology majors must take BIOL 111, BIOL 112, an advanced taxonomy course and an advanced physiology course.	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.
Apply knowledge of organismal physiology and/or behavior to a unique research project.	Program Goal #3	Provide for an outstanding academic and student experience in the College of the Sciences.	Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.	All students conduct research projects in several required courses. The projects require that students design their own studies, analyze the data and draw their own conclusions.	All students are assessed in their courses throughout their program.	Numerous times throughout their program.	Individual faculty members assess the student exams, assignments, and projects and assign grades according to their established criteria.



CWU Student Learning Outcome Assessment Plan Preparation Form

Department: Biological Sciences

Program: Bachelor of Science – Biology Teaching

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?)
Demonstrate an ability to individually and collaboratively engage in inquiry and integrate the nature of science.	SCED Goal 1, 3, 4	COTS Goal 1, 4, 6	CWU Goal 1, 6	<ul style="list-style-type: none"> <li>• Science Program major/minor teaching portfolio, WEST-E content assessment, entry to and exit from program survey</li> <li>• Practicum field observation</li> <li>• WA pedagogy assessment</li> </ul>	<ul style="list-style-type: none"> <li>• All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</li> </ul>	<ul style="list-style-type: none"> <li>• End of major/minor program, prior to student teaching</li> <li>• SCED 324</li> <li>• Student teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</li> <li>• SCED 324 portfolio performance benchmark proficiency</li> <li>• All standards met for WA Pedagogy Assessment</li> </ul>
Explain and apply fundamental science content concepts, principles, and methods.	SCED Goal 1, 3, 5	COTS Goal 1, 4, 6	CWU Goal 1, 6	<ul style="list-style-type: none"> <li>• Science Program major/minor teaching portfolio, WEST-E content assessment, entry to and exit from program survey</li> <li>• Practicum field observation</li> <li>• WA pedagogy assessment</li> <li>• Major Field Test - Biology</li> </ul>	<ul style="list-style-type: none"> <li>• All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</li> </ul>	<ul style="list-style-type: none"> <li>• End of major/minor program, prior to student teaching</li> <li>• SCED 324</li> <li>• Student teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</li> <li>• SCED 324 portfolio performance benchmark proficiency</li> <li>• All standards met for</li> </ul>

							WA Pedagogy Assessment
Demonstrate an ability to effectively facilitate learning for all students.	SCED Goal 2, 3, 4	COTS Goal 1, 6	CWU Goal 1, 6	<ul style="list-style-type: none"> <li>Science Program major/minor teaching portfolio, entry to and exit from program survey</li> <li>Practicum field observation</li> <li>WA pedagogy assessment</li> </ul>	<ul style="list-style-type: none"> <li>All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</li> </ul>	<ul style="list-style-type: none"> <li>End of major/minor program, prior to student teaching</li> <li>SCED 324</li> <li>Student teaching</li> </ul>	<ul style="list-style-type: none"> <li>Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</li> <li>SCED 324 portfolio performance benchmark proficiency</li> <li>All standards met for WA Pedagogy Assessment</li> </ul>
Create safe, effective learning environments that support inquiry, collaboration, intellectual risk-taking, ethical decision-making, and student construction of knowledge.	SCED Goal 1, 2, 3, 4	COTS Goal 1, 6, 7	CWU Goal 1, 6	<ul style="list-style-type: none"> <li>Science Program major/minor teaching portfolio, WEST-E content assessment, entry to and exit from program survey</li> <li>Practicum field observation</li> <li>WA pedagogy assessment</li> </ul>	<ul style="list-style-type: none"> <li>All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</li> </ul>	<ul style="list-style-type: none"> <li>End of major/minor program, prior to student teaching</li> <li>SCED 324</li> <li>Student teaching</li> </ul>	<ul style="list-style-type: none"> <li>Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</li> <li>SCED 324 portfolio performance benchmark proficiency</li> <li>All standards met for WA Pedagogy Assessment</li> </ul>
Demonstrate an ability to assess teaching and learning outcomes	SCED Goal 2, 3, 4, 7, 8	COTS Goal 1, 6	CWU Goal 1, 6	<ul style="list-style-type: none"> <li>Science Program major/minor teaching portfolio, entry to and exit</li> </ul>	<ul style="list-style-type: none"> <li>All Biology, Chemistry, Earth Science, and Physics Teaching</li> </ul>	<ul style="list-style-type: none"> <li>End of major/minor program, prior to</li> </ul>	<ul style="list-style-type: none"> <li>Minimum requirement is proficiency for this outcome. Student</li> </ul>

using multiple methods, effectively evaluate teaching and learning effectiveness, and improve practice based on reflection and data.				<p>from program survey</p> <ul style="list-style-type: none"> <li>• Practicum field observation</li> <li>• WA pedagogy assessment</li> </ul>	major and minor students	<p>student teaching</p> <ul style="list-style-type: none"> <li>• SCED 324</li> <li>• Student teaching</li> </ul>	<p>must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</p> <ul style="list-style-type: none"> <li>• SCED 324 portfolio performance benchmark proficiency</li> <li>• All standards met for WA Pedagogy Assessment</li> </ul>
Demonstrate an ability to make science personally and socially relevant to individual and community by incorporating current events within collaborative and social networks.	SCED Goal 1, 2, 4	COTS Goal 1, 5, 6	CWU Goal 4, 6	<ul style="list-style-type: none"> <li>• Science Program major/minor teaching portfolio, entry to and exit from program survey</li> <li>• Practicum field observation</li> <li>• WA pedagogy assessment</li> </ul>	<ul style="list-style-type: none"> <li>• All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</li> </ul>	<ul style="list-style-type: none"> <li>• End of major/minor program, prior to student teaching</li> <li>• SCED 324</li> <li>• Student teaching</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</li> <li>• SCED 324 portfolio performance benchmark proficiency</li> <li>• All standards met for WA Pedagogy Assessment</li> </ul>
Participate in a variety of activities that enhance professional development and improve teaching effectiveness.	SCED Goal 2, 7, 8	COTS Goal 1, 6	CWU Goal 1, 6	<ul style="list-style-type: none"> <li>• Science Program major/minor teaching portfolio, entry to and exit from program survey</li> <li>• Practicum field observation</li> <li>• WA pedagogy</li> </ul>	<ul style="list-style-type: none"> <li>• All Biology, Chemistry, Earth Science, and Physics Teaching major and minor students</li> </ul>	<ul style="list-style-type: none"> <li>• End of major/minor program, prior to student teaching</li> <li>• SCED 324</li> <li>• Student</li> </ul>	<ul style="list-style-type: none"> <li>• Minimum requirement is proficiency for this outcome. Student must provide suitable evidence and reflect on performance relative to associated NSES, NSTA, and WA Comp standards.</li> </ul>

				assessment		teaching	<ul style="list-style-type: none"><li>• SCED 324 portfolio performance benchmark proficiency</li><li>• All standards met for WA Pedagogy Assessment</li></ul>
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CWU Department/Program Assessment Plan Preparation Form

Department: Biological Sciences

Program: Master of Science – Biology

<b>Department/Program Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)</b>	<b>Who/What Assessed (population, item)</b>	<b>When Assessed (term, dates)</b>	<b>Criterion of Achievement (Expectation of how good things should be?)</b>
<p>Graduate students will understand the process of conducting biological research and will produce a professional level thesis.</p>	<ul style="list-style-type: none"> <li>- Provide for an outstanding academic and student experience in the College of the Sciences.</li> <li>- Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</li> <li>- Achieve regional and national prominence for the university.</li> </ul>	<ul style="list-style-type: none"> <li>- Research proposal approved by the student's graduate thesis committee.</li> <li>- Oral specialty exam administered by the student's graduate thesis committee.</li> <li>- Completed thesis approved by the student's graduate thesis committee.</li> </ul>	<p>All graduate students</p>	<ul style="list-style-type: none"> <li>- Research proposal to be approved by the end of the second quarter.</li> <li>- Oral exam to be conducted at least one quarter prior to graduation.</li> <li>- Thesis must be completed and approved by the end of the student's sixth year.</li> </ul>	<ul style="list-style-type: none"> <li>- The thesis committee will judge the acceptability of the proposal and feasibility of the project.</li> <li>- Exam is graded as satisfactory or unsatisfactory as determined by the student's thesis committee.</li> <li>- The thesis committee and the office of Graduate Studies and Research will judge acceptability of the thesis.</li> </ul>

CWU Student Learning Outcome Assessment Plan Preparation Form

Department: Biological Sciences

Program: Master of Science – Biology

<b>Student Learning Outcomes (performance, knowledge, attitudes)</b>	<b>Related Program/ Departmental Goals</b>	<b>Related College Goals</b>	<b>Related University Goals</b>	<b>Method(s) of Assessment (What is the assessment?)*</b>	<b>Who Assessed (Students from what courses – population)**</b>	<b>When Assessed (term, dates) ***</b>	<b>Standard of Mastery/ Criterion of Achievement (How good does performance have to be?)</b>
1. Students will take courses designed to enhance their knowledge in their chosen area of specialization and to bolster areas deemed deficient in their undergraduate education.	Graduate students will understand the process of conducting biological research and will produce a professional level thesis.	<ul style="list-style-type: none"> <li>- Provide for an outstanding academic and student experience in the College of the Sciences.</li> <li>- Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</li> <li>- Achieve regional and national prominence for the university.</li> </ul>	Students meet with their advisor to determine their coursework needs and complete a “Course of Study” form which lists all courses to be taken for the degree.	All students in the M.S program.	Coursework will be completed in two academic years.	Students must receive a grade of “B-“ or higher in all courses.
2. Students will define an area of interest within biology and demonstrate historic and current knowledge of that area.	Graduate students will understand the process of conducting biological research and will produce a professional level thesis.	<ul style="list-style-type: none"> <li>- Provide for an outstanding academic and student experience in the College of the Sciences.</li> <li>- Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.</li> <li>- Achieve regional and national prominence for the university.</li> </ul>	Oral examination conducted by the student's Graduate Committee and departmental faculty.	All students in the M.S program	Exam must be completed at least one quarter prior to graduation.	Exam is graded as satisfactory or unsatisfactory as determined by the student's thesis committee.
3. Students will design a research project, which will serve as the basis	Graduate students will understand the process of	<ul style="list-style-type: none"> <li>- Provide for an outstanding academic and student experience</li> </ul>	<ul style="list-style-type: none"> <li>- Maintain and strengthen an outstanding academic and</li> </ul>	A detailed research proposal must be submitted to the student's thesis	All students in the M.S program	The proposal must be submitted to the thesis committee	The thesis committee will judge the acceptability of the proposal and

of the thesis.	conducting biological research and will produce a professional level thesis.	in the College of the Sciences. - Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.	student life on the Ellensburg campus.  - Achieve regional and national prominence for the university.	committee containing a literature review, experimental design and methodology, and proposed analyses to be conducted.		by the end of the students second quarter.	feasibility of the project
4. Students will demonstrate the results of their graduate research in the form of a professional level thesis.	Graduate students will understand the process of conducting biological research and will produce a professional level thesis.	- Provide for an outstanding academic and student experience in the College of the Sciences.  - Provide for outstanding graduate programs that meet focused regional needs and achieve academic excellence.	- Maintain and strengthen an outstanding academic and student life on the Ellensburg campus.  - Achieve regional and national prominence for the university.	The student will write a thesis that will include a literature review, description of methodology, data analysis, and discussion of results.	All students in the M.S program	The thesis committee and the Graduate Studies office representative must sign the thesis within six years of beginning the program.	The thesis committee and the office of Graduate Studies and Research will judge acceptability of the thesis.