UNIT REPORT

Fish & Wildlife Sciences-Academic - APR Self-Study Report by Academic Unit/Department

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Program Mission

New Program Mission Item

Program Mission Statement:

As Idaho's land grant institution, we are committed to excellence in education, research, and outreach. We help students develop a strong scientific and quantitative background, a solid foundation in fish and wildlife biology and ecology, appropriate technical expertise, and an appreciation for fish and wildlife as a public trust resource. Our degrees emphasize critical thinking through coursework and hands-on field and laboratory experiences, and our graduates are equipped to be successful natural resource managers and scientists in a rapidly changing world. We are dedicated to conducting novel research that helps our partners manage fish and wildlife populations and their ecosystems in complex and continually changing biological, social, economic and political landscapes. We are committed to supporting and promoting diversity, equity and inclusion for our students, faculty and staff. We support economic enhancement through research and development of methods and approaches for improved and sustainable resource use. We provide natural resource professionals and the general public with current scientific information relevant to policy and management.

Program Goal (add a minimum of 3 program goal "plan items")

Goal 1: Increase undergraduate enrollment

Goal Statement:

The Department of Fish and Wildlife Sciences seeks to increase undergraduate enrollment in all majors.

Alignment to UI Strategic Plan Goals: Transform (Goal 3): Increase our educational impact.

Indicators/Metrics to Evaluate Progress:

Fall enrollment numbers in each major.

List of Actions the Program Will Take to Achieve Goals :

We are adding emphasis areas to our majors to give students more options and to increase recruitment efforts. We will also work on improving retention through high quality advising and freshman and sophomore course work.

Goal Achievement Level: In Progress

Goal 2 - Increase diversity among students

Goal Statement:

Our goal is to increase the number of minority students among our undergraduate and graduate students.

Alignment to UI Strategic Plan Goals:

Transform (Goal 3): Increase our educational impact.
Cultivate (Goal 4): Foster an inclusive, diverse community of students, faculty, and staff and improve cohesion and morale.

Indicators/Metrics to Evaluate Progress:

We will use diversity data provided by the UI on number and percentage of undergraduate and graduate students from underrepresented groups.

We have evaluated % minority undergraduate students using the UI dashboard data and have dropped from 87.7% White to 80.8% White students. The major increases have been in students who identify as Two or More Races, Hispanic and Native American.

We have also increased the number of Native American PHD students to 4.

List of Actions the Program Will Take to Achieve Goals :

We will increase recruitment with local tribes and with minority serving high schools and junior colleges.

Goal Achievement Level: In Progress

Goal 3 - Research excellence

Goal Statement:

The Department of Fish and Wildlife Sciences seeks to be a national and international leader in research.

Alignment to UI Strategic Plan Goals:

Innovate (Goal 1): Scholarly and creative products of the highest quality and scope, resulting in significant positive impact for the region and the world.

Indicators/Metrics to Evaluate Progress:

We will count number of peer reviewed publications per year by faculty using annual review reporting. To indicate research excellence, we should achieve an average of greater than 2 publications when divided by the total number of faculty.

List of Actions the Program Will Take to Achieve Goals :

Faculty will be active in writing grants, mentoring thesis-based graduate students and submitting papers for publication.

Goal Achievement Level: In Progress

Goal 4: Experiential Learning for students

Goal Statement:

All undergraduate students in the Fish and Wildlife Sciences Department will complete a 300 hour internship or a senior thesis project.

Alignment to UI Strategic Plan Goals: Transform (Goal 3): Increase our educational impact.

Indicators/Metrics to Evaluate Progress:

We will evaluate the percentage of students who graduate with senior thesis or internship credits.

List of Actions the Program Will Take to Achieve Goals :

We will require either an internship or senior project in all of our majors and mentor students to successfully achieve this goal.

Goal Achievement Level: Met

Student Learning Assessment Report (add one "plan item" for each major, degree, and/or certificate offered by dept)

Wildlife Resources BS

Assessment Report Contact: Lisette Waits

Program Changes in Past Year:

We revised the curriculum and added 4 emphasis areas: Science and Management, Pre-Vet, Human-Wildlife Interactions and Conservation Law Enforcement. We changed the name from BS Wildlife Resources to BS Wildlife Science.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

1.

Communication Skills

The student will be able to effectively use diverse forms of communication (written, oral, visual) to convey information to scientific and public audiences.

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview

Exceeded	0%	0
Met	96%	96
Partially Met	4%	4
Not Met	0%	0

2.

Professional Skills

1) The student will be able to work effectively in team settings. 2) The student demonstrates an understanding of ethical professional behavior

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview

Exceeded	0%	0
Met	100%	100
Partially Met	0%	0
Not Met	0%	0

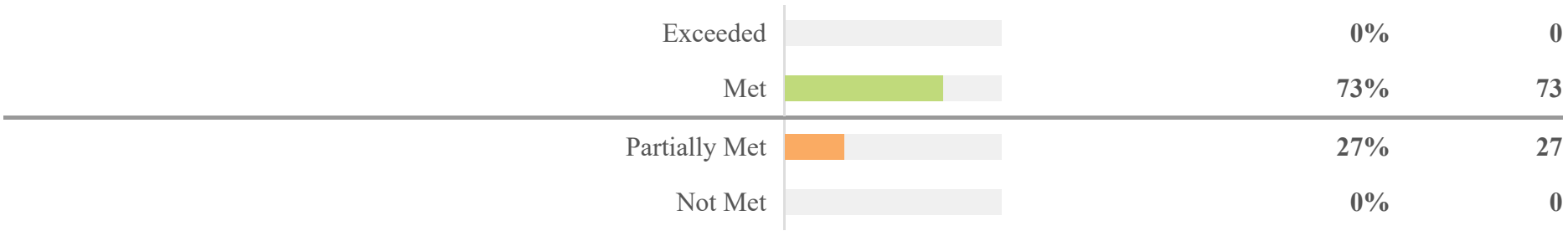
3.

Identification Skills

The student will be able to: 1) identify regional wildlife species and describe their biological characteristics and ecological requirements, 2) identify evolutionary and ecological processes that influence wildlife populations and understand the implications of altering these processes, 3) integrate biological, ecological and social information to make science-based management recommendations for wildlife populations.

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview



Exceeded	0%	0
Met	73%	73
Partially Met	27%	27
Not Met	0%	0

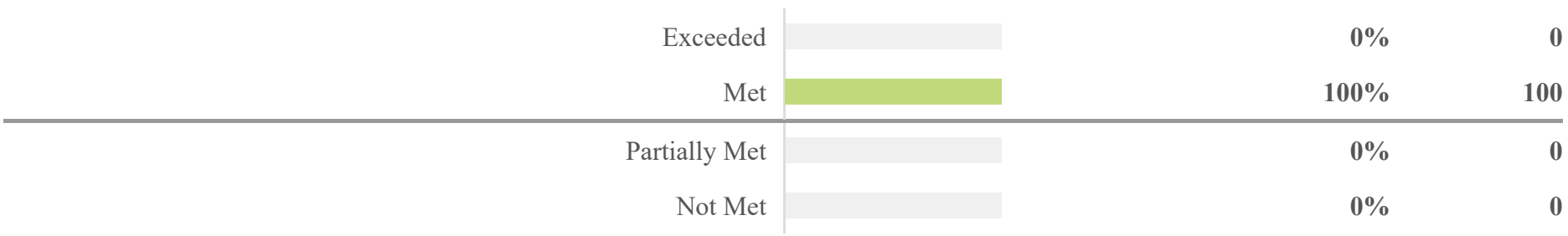
4.

Reasoning Skills

The student will be able to: 1) use logic and reasoning, analysis and synthesis to arrive at defensible scientific conclusions, 2) recognize biases and assumptions in scientific research and writing, and 3) develop and test hypotheses and produce tabular and graphic summaries of quantitative data.

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview



Exceeded	0%	0
Met	100%	100
Partially Met	0%	0
Not Met	0%	0

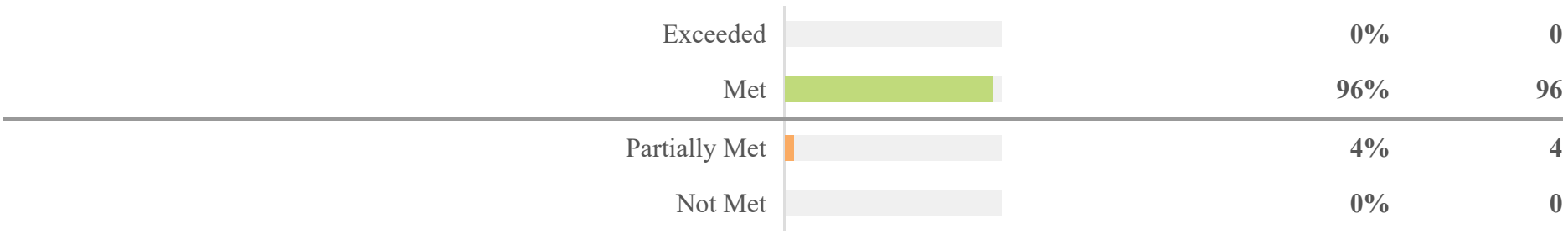
5.

Communication Skills

The student will be able to explain and discuss diverse points of view about natural resource issues.

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview



Exceeded	0%	0
Met	96%	96
Partially Met	4%	4
Not Met	0%	0

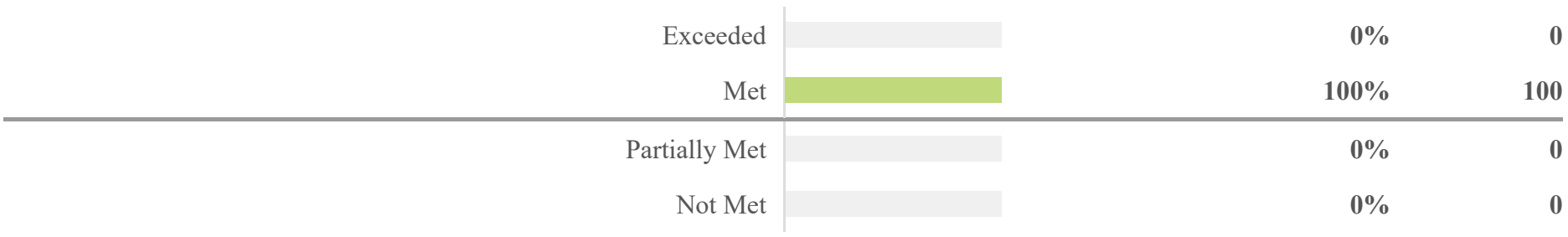
7.

Integration Skills

Students will learn to integrate biological, ecological and social information to develop a fish (or wildlife) management plan.

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview



Exceeded	0%	0
Met	100%	100
Partially Met	0%	0
Not Met	0%	0

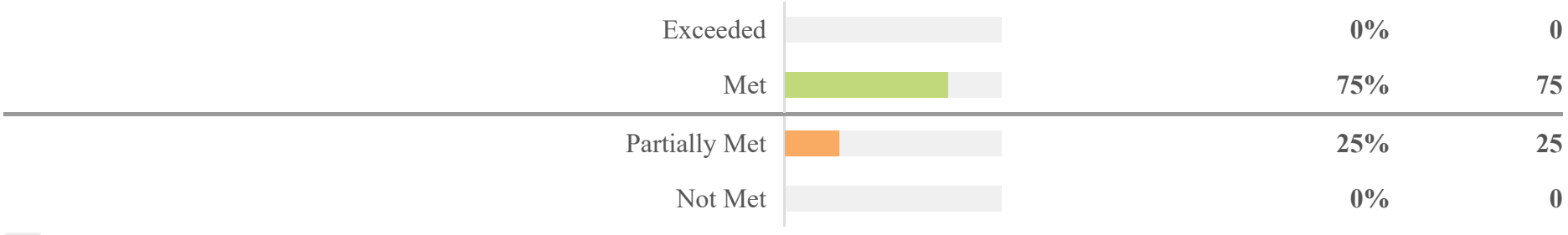
8.

Quantitative Research Skills

Students will learn to develop and test hypotheses and produce tabular and graphic summaries of quantitative data.

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview



Exceeded	0%	0
Met	75%	75
Partially Met	25%	25
Not Met	0%	0

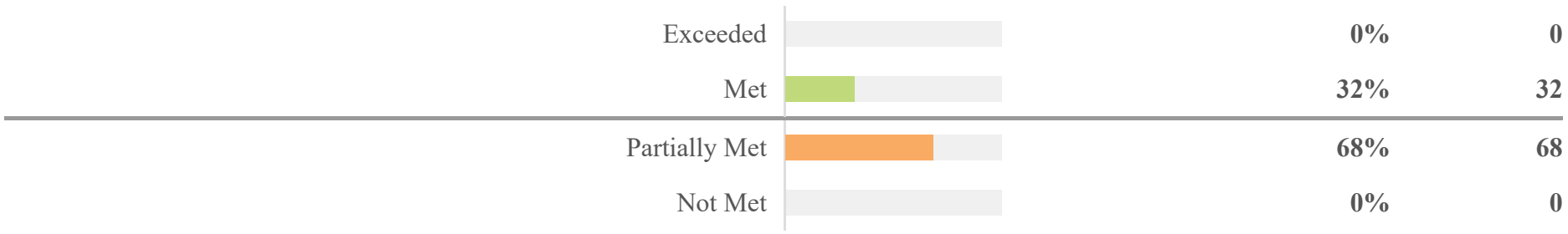
9.

Definition Skills

Students will be able to define physical, evolutionary and ecological elements and processes sustaining ecosystems and recognize the implications of altering those components,

Academic Year 2019-2020: Wildlife Resources (B.S.Wildl.Res.)

Term: Overview



Summary of Student Learning:

Overall our indirect and direct assessment methods indicated that students are meeting the learning outcomes. I attached slides that were shared with faculty when discussing 2021 results. Students did discuss concerns of fewer hands on activities and canceling of field trips due to COVID 19. Also students felt they could be better prepared to communicate with public audiences. Students also wanted more training in R and GIS. Students were in support of our proposed curriculum changes but the exception of some worry that changing to Wildlife Science de-emphases management. However, we clarified that employers support the change and two emphasis areas have a strong management focus. Learning outcome 3 was reworded in 2020 to better reflect our goals and that change led to an increase in student perceptions that they had met the goal. We discovered that students are not confident in developing and testing hypotheses and biology teaches it differently than wildlife faculty.

Attached Files

2021 WLF Assessment in WLF 495.docx

Emphasis areas - assessment info.pptx

Summary of Faculty Discussion:

Faculty discussed unifying how we teach about hypothesis testing in our wildlife classes. We identified which classes teach this and exchanged guidelines to develop a unified approach. We diversified our curriculum to have 4 emphasis areas after a study of national trends, feedback from employers, and students. We developed new learning outcomes in 2021 retaining some of the current ones used. We agreed to expand hands on activities as well as the use of R and GIS in courses.

Summary of Changes/Improvements Being Considered:

We have created a new curriculum and learning outcomes. We are currently discussing metrics for assessing those learning outcomes but won't need that in place until 2023.

Inter-rater Reliability:

We use evaluation rubrics when more than one faculty assesses performance. When evaluating test scores, the same faculty grades each year.

Closing the Loop:

We have used the assessment process and results to discuss what skills are taught in which courses and to determine when faculty and students feel they are not meeting the outcomes. This has led to changes in assignments, course content and new courses. For example, we were not happy with scientific writing and data analysis skills so we created a new course (WLf370) for the end of the sophomore year to focus on these skills so they have consistent training moving into their Junior level coursework.

Fisheries Resources BS

Assessment Report Contact: Lisette Waits

Program Changes in Past Year:

We changed the name of the degree from Fisheries Resources to Fisheries Science. Also we created two emphasis areas: Science and Management and Conservation Law Enforcement. Thus, we revised the full curriculum.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

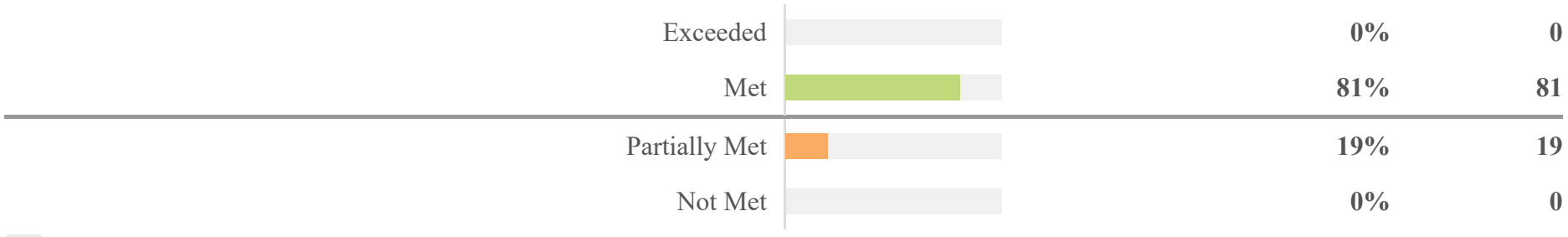
2.

Definition Skills

Student will be able to 2) define physical, evolutionary and ecological elements and processes sustaining ecosystems and recognize the implications of altering those components.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview



3.

Integration Skills

The student will be able to: 3) integrate biological, ecological and social information to develop a fish (or wildlife) management plan.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview

Exceeded	0%	0
Met	59%	59
Partially Met	41%	41
Not Met	0%	0

4.

Analytical Skills

The student will be able to: 1) use logic and reasoning, analysis and synthesis to arrive at defensible scientific conclusions.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview

Exceeded	0%	0
Met	80%	80
Partially Met	20%	20
Not Met	0%	0

6.

Testing Skills

Student will be able to: 3) develop and test hypotheses and produce tabular and graphic summaries of quantitative data.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview

Exceeded	0%	0
Met	85%	85
Partially Met	15%	15
Not Met	0%	0

9.

Cooperative Skills

The student will be able to work effectively in team settings. Specifically the student will be able to develop and complete projects in a team setting and provide criticism to peers and accept criticism.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview

Exceeded	0%	0
Met	100%	100
Partially Met	0%	0
Not Met	0%	0

8.

Diversity Skills

The student will be able to explain and discuss diverse points of view about natural resource issues.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview

Exceeded	0%	0
Met	100%	100
Partially Met	0%	0
Not Met	0%	0

7.

Communication Skills

The student will be able to effectively use diverse forms of communication (written, oral, visual) to convey information to scientific and nonscientific audiences in formal and professional formats.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview

Exceeded	0%	0
Met	93%	93
Partially Met	7%	7
Not Met	0%	0

10.

Professionalism

The student demonstrates an understanding of: 1) ethical professional behavior, and 2) the requirements and process for professional certification.

Academic Year 2019-2020: Fishery Resources (B.S.Fish.Res.)

Term: Overview

Exceeded	0%	0
Met	100%	100
Partially Met	0%	0
Not Met	0%	0

Summary of Student Learning:

Overall our indirect and direct assessment methods indicated that students are meeting the learning outcomes. I attached slides that were shared with faculty when discussing 2021 results. Students did discuss concerns of fewer hands on activities and canceling of field trips due to COVID 19. Also students felt they would be better prepared to communicate with public audiences. Students were in support of our proposed curriculum changes. Learning outcome 3 was reworded in 2020 to better reflect our goals and that change led to an increase in student perceptions that they had met the goal. Students felt the CNR core class NRS383 NR Economics was not useful.

Attached Files

Fish 495 Senior Feedback March 2021.docx

Emphasis areas - assessment info.pptx

Summary of Faculty Discussion:

As noted above, we revised our curriculum to add emphasis areas and revised the Learning outcomes. We will continue to emphasize hands on learning activities in all our classes and will retain the professional mentor activity in WLF201. We are discussing ways to improve focus on writing and speaking for non-academic audiences.

Summary of Changes/Improvements Being Considered:

We updated our learning outcomes for our revised curriculum and are still discussing future assessment methods that will be needed in 2022-2023 when the new curriculum is implemented.

Inter-rater Reliability:

For items evaluated by multiple faculty we have evaluation rubrics. Other items are currently assessed by a single faculty member each year - like exam grades.

Closing the Loop:

We have used the assessment process and results to discuss what skills are taught in which courses and to determine when faculty and students feel they are not meeting the outcomes. This has led to changes in assignments, course content and new courses. For example, we were not happy with scientific writing and data analysis skills so we created a new course for the end of the sophomore year to focus on these skills so they have consistent training moving into their Junior level coursework.

Ecology and Conservation Biology BS

Assessment Report Contact: Lisette Waits

Program Changes in Past Year:

We changed the name from Ecology and Conservation Biology to just Conservation Biology and removed the Ecology option area. We made this change because CNR is adding a new major Ecology and Ecosystem Sciences. We updated the curriculum bins to add new courses and remove courses no longer taught.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):

1.

Evaluation Skills

Locate, organize, analyze, and critically evaluate information: a. Students will demonstrate the ability to locate pertinent ecological, social, economic and political information. b. Students will organize, analyze, and critically evaluate information using professional, discipline-

appropriate standards

Academic Year 2019-2020: Ecology and Conservation Biology - Conservation Biology Opt (B.S.Ecol.Cons.Biol)

Term: Overview

Exceeded	12%	12
Met	82%	82
Partially Met	6%	6
Not Met	0%	0

2.

Knowledge Skills

Understand principles and theories: a. Students will accurately articulate key principles concerning the ecology of species, populations, communities, ecosystems, and landscapes. b. Students will demonstrate an understanding of the interconnection between ecological systems and basic aspects of human ecology (as defined by economics, social sciences, and other related fields).

Academic Year 2019-2020: Ecology and Conservation Biology - Conservation Biology Opt (B.S.Ecol.Cons.Biol)

Term: Overview

Exceeded	27%	27
Met	65%	65
Partially Met	8%	8
Not Met	0%	0

3.

Communication Skills

Effectively communicate ideas and technical knowledge: Students will effectively utilize diverse forms of communication (written oral, visual) to convey information to scientific and nonscientific audiences in formal and professional formats.

Academic Year 2019-2020: Ecology and Conservation Biology - Conservation Biology Opt (B.S.Ecol.Cons.Biol)

Term: Overview

Exceeded	14%	14
Met	82%	82
Partially Met	4%	4
Not Met	0%	0

4.

Collaboration Skills

Work collaboratively: Students will practice effective team management and participatory skills (in disciplinary and interdisciplinary team settings) to evaluate complex situations and formulate solutions to basic problems

Academic Year 2019-2020: Ecology and Conservation Biology - Conservation Biology Opt (B.S.Ecol.Cons.Biol)

Term: Overview

Exceeded	98%	98
Met	2%	2
Partially Met	0%	0
Not Met	0%	0

5.

Ethical Skills

Practice ethical behavior: Students will adhere to professional standards of ethics when using or synthesizing knowledge, doing research, employing field practices, engaging in conservation management, and when working with stakeholders.

Academic Year 2019-2020: Ecology and Conservation Biology - Conservation Biology Opt (B.S.Ecol.Cons.Biol)

Term: Overview

Exceeded	0%	0
Met	100%	100
Partially Met	0%	0
Not Met	0%	0

Summary of Student Learning:

Of the outcomes for Ecology and Conservation Biology in 2021, most outcomes were assessed through our recurrent use of the ECB senior thesis as an assessment tool (see attached rubric/instrument used for evaluation). We met targets for all outcomes assessed using this instrument- the one exception was '*Effectively communicate ideas and technical knowledge'*. In this case, four of 14 students presenting final thesis results were ranked as 'Good' (a three on our five-point rubric) but evidenced a range of minor issues (nervous gestures, poor slide design, etc.).

We also assessed the *Effectively communicate ideas and technical knowledge* outcome through an 11-student focus group. All of these students expressed either complete or qualified confidence in their ability to work collaboratively, and the students that prevaricated did so because they considered collaborative teamwork to be a life-long learning process. Students were all able to provide lucid answers to the questions for this focus group (see below) but some were not expansive- and this was probably due to the phrasing of the questions.

Question 1

What are some reasons why interdisciplinary cooperation is important in contemporary research in ecology/conservation?

Question 2

On a five-point scale, how satisfied are you with your ability to work in an interdisciplinary team setting?

Question 3

What are some important reasons that interdisciplinary team sometimes fail to function well?

In addition, we assessed the '*Work Collaboratively'* Outcome using peer review findings from a Senior level project in Wildlife 440 (Conservation Biology). The criteria for ranking teammates were "Team member practiced effective team management and participatory skills" and "Team member participated collaboratively, evaluating complex situations and formulating solutions to challenges". In 2020, five ECB students in Wildlife 440 exceed expectations for this outcome, and one student met expectations.

Summary of Faculty Discussion:

Based on faculty review of these results, our overall conclusion was that the ECB senior thesis review is a robust assessment tool, and that no changes are currently warranted related to most outcomes. Based on results for the '*Effectively communicate ideas and technical knowledge'* Outcome, *w*e did conclude that students need enhanced access to formal presentation opportunities, and that faculty should add these to their courses where they are not in place.

There was also some discussion about the use of peer evaluations as a tool for gathering data on the 'Work Collaboratively' outcome- given that students often evidence a tendency to be overly generous with their peers. However, peer evaluations were graded, and students were explicitly encouraged to give candid, anonymous feedback… so we were not able to come up with any immediate steps for improving this instrument.

Summary of Changes/Improvements Being Considered:

We concluded that our focus group questions for the '*Effectively communicate ideas and technical knowledge'* outcome need to be revised, so as to ensure that students provide comprehensive answers. Specifically, questions will be re-framed as follows (with added material in italics:

Question 1

What are some reasons why interdisciplinary cooperation is important in contemporary research in ecology/conservation? *List as many as you can think of and provide explanatory detail.*

Question 2

On a five-point scale, how satisfied are you with your ability to work in an interdisciplinary team setting?

Question 3

What are some important reasons that interdisciplinary team sometimes fail to function well? *List as many as you can think of and provide explanatory detail.*

Attached Files

Revised Thesis Rubric 2021.docx

Inter-rater Reliability:

Several of the instruments used in this round of assessment (focus groups, peer review results) deliver categorical data that is not subject to reviewer bias.

For the review of thesis presentations (a primary instrument across all outcomes) faculty reviewers were given an orientation talk, explaining the expectations for review. Specifically, faculty were asked to review student presentations as if they were attending a professional meeting, and to score the rubric accordingly. We do anticipate some variation in reviewer scores- but consider this to be a 'real world' scenario… and mitigate this by ensuring that at least three reviewers assess each presentation.

Closing the Loop:

Presentation skills continue to be emergent for some of our students- and assessment results highlight the importance of providing ongoing opportunities for professional level presentation (poster sessions, formal talks, etc.) across a range of classes.

Our focus group questions for the *Effectively communicate ideas and technical knowledge* outcome needed revision to ensure that students completed the instrument to the fullest level... and we will review focus questions for other outcomes to avoid these issues in the future.

Overall, we're satisfied with the assessment tools for ECB, and the 2021 assessment cycle did not identify critical program-level actions.

Tribal Natural Resource Stewardship Certificate

Assessment Report Contact: Lisette Waits

Program Changes in Past Year:
No changes in the past year.

Learning Outcomes are Communicated to All Students in Program (check box if true):

Learning Outcomes are Communicated to All Faculty (check box if true):

Optional: Framework Alignment:

Import Outcomes Data (from Anthology Outcomes):
We currently have no students registered for this certificate. We need to review and revise the curriculum and create learning outcomes.

Summary of Student Learning:
We currently have no students registered for this certificate. We need to review and revise the curriculum and create learning outcomes.

Summary of Faculty Discussion:
Summary of Changes/Improvements Being Considered:
We currently have no students registered for this certificate. We need to review and revise the curriculum and create learning outcomes.

Inter-rater Reliability:
Closing the Loop:
We currently have no students registered for this certificate. We need to review and revise the curriculum and create learning outcomes.

Student Achievement

New Student Achievement Item FWS

Student Retention:
We use two main methods to track student retention. First, the CNR dean's office provides list of names of any student who does not re-enroll from one semester to the next (excluding graduates). Second, we use the dashboard data to summarize trends over time. Any student who does not re-enroll is contacted by his/her advisor and often the department head. Our freshman retention in 2020 was 67% which is below UI average of 74%. This lower % was driven by loss of 50% of the Fisheries students (4/8). The average in ECB was 75% and 71% in WLF. We also looked at freshman retention before COVID choosing 2018. The UI Avg was 76% that year and the Dept average was 73%. The numbers by program were 50% ECB, 75% Fish, 76% WLF. Overall we conclude that we are close to the UI average in Freshman retention. For transfer students the 1 year retention trends were positive before COVID. 2016 69%, 2017 78%, 2018 85%, 2019 87%, 2020 67%. The Fisheries retention rates were the lower in every cohort except 2017.

Student Persistence:
We use the dashboard data. Departmental averages are similar to UI averages.

Student Completion:
We use the dashboard data. We see a positive graduation rate trend among transfer students. 2016 59%, 2017 65%, 2018 75%. For new freshman, we evaluated 4 year graduation rates 2012-2017. They ranged from 22% to 54% over time with a general upward trend. Six year graduation rates were very similar to the UI average 2012 57% FWS, 57% UI, 2013 43% FWS, 48% UI, 2014 63% FWS, 63% UI.

Student Postgraduate Success:
As part of our senior assessment process, we ask how many have summer jobs after graduation. For 2021, 77% of fisheries students had jobs and 48% of wildlife students. We suspect most of these are seasonal jobs and we do not have data on job placement 1 year or later.

Identify Equity Gaps:
This section of the APR dashboard does not seem to be functional so I will not be fully reporting on that this year.

I can report that the percentage of minority students has increased over the Fall 2012 - 2021 period that I reviewed. In 2012, 87.7% of our students self identified as White while this percentage dropped to 80.8% in 2021.

Gender diversity has increased in the department over the past 10 years from 31.6% in 2012 from to 44.4% in 2021. Currently (2021), ECB is skewed towards female (62%), WLF is approximately even (52.7% female) and Fisheries is strongly male skewed (12.6% female).

This indicates we are making good progress towards one of our main program goals to increase the diversity of students.

Attached Files
FWS Diversity Data 2012.docx

Effective Learning Environment and Closing Equity Gaps:

Our program has been making concerted efforts to create an effective learning environment and close equity gaps. In 2020, we developed and posted a departmental DEI statement and created a diversity section on our website. https://www.uidaho.edu/cnr/departments/fish-and-wildlife-sciences/supporting-and-enhancing-diversity

This diversity statement was created by faculty with feedback from graduate and undergraduate students. Our faculty lead the Doris Duke Conservation Scholars program for undergraduates which as the goal of increasing diversity in the field of conservation. This scholars program is a two-year experiential training and mentoring program that empowers the next generation of conservation leaders to make a difference. We are also participants in the NSF Louis Stokes Bridge to Doctorate for Native American students and are currently training 4 Native American PhD programs. Both programs have intensive faculty training and mentoring for the minority students. Details on both of these programs can be viewed on the website listed above.

CNR advising and faculty advisors are dedicated to supporting first generation and under represented students to be successful in our curriculum. Our department has also been working to decolonize the curriculum and expand our class case studies, readings, guest speakers and examples to be more inclusive.

Demand and Productivity

New Demand and Productivity Item FWS

External Demand:

External demand is strong. Comparing primary major enrollment to Fall 2018 to Fall 2021, enrollment has increased by 10 students in Ecology and Conservation Biology and by 14 students in Fisheries. Given the recent COVID impacts this is impressive. We are down 30 students in Wildlife (115) but 2018 was unusually high (145). The 5 year average excluding 2018 was 127 students. So there has been a recent decline but the WLF major is still the 2nd largest major in the college. 43% of current students are from out of state which is well above the UI average.

Internal Demand:

The demand for our courses is increasing based on dashboard data showing an increase in credit hour production over the last 5 years. Our annual production in 2014 was 2415 and 2019 is 3730 which is a 55% increase. We teach one general education CORE SCI course which has average enrollments of 50 students. The dashboard does not have data on 2020 but I also think there was a continued increase.

Credit Productivity:

Our annual production in 2014 was 2415 and 2019 is 3730 which is a 55% increase. We teach one general education CORE SCI course which has average enrollments of 50 students. The dashboard does not have data on 2020 but I also think there was a continued increase. We saw the greatest increase in spring and summer credits.

Financial Health and Resources

New Financial Health and Resources Item FWS

Financial Health:

We have 13 tenure track faculty in our department. Seven have Fisheries Expertise and six have WLF expertise. We receive a ~ $23,000 base general education budget for annual expenditures. Our financial resources are sufficient. We lost 0.5 FTE in the last 2 years due to retirement. We have more fisheries faculty but 2-2.5 the number of wildlife undergraduate students so there is an imbalance of resources and much heavier advising load on the wildlife faculty. Two of our Fisheries Faculty (Kolok and Small) have primarily research and administration appointments so contribute much less to teaching mission and do not advise undergraduates.

Efficient Use of Resources:

Many of our faculty teach courses that service multiple degree programs to maximize credit hour production per faculty member. Also our faculty contribute advising and courses to multiple undergraduate degree programs (ie. Env Sci, Range, Ecology and Conservation Biology).