President Scott Green called the meeting to order at 2:30pm (PT).

President Green read the names of those who died, based on information received by the Provost Office from December 2, 2020 through February 12, 2021:

James Edward Calvert Jr.
Professor Emeritus of Mathematics and Department Chair Emeritus
January 2021

Robert D Carver
Extension
Professor Emeritus of Agricultural Economics
December 2020

John Ehrenreich
Professor Emeritus of Range Resources and
Dean Emeritus of the College of Forestry, Wildlife and Range Sciences
January 2020

John Gallian
Extension Professor Emeritus of Crop Management and Sugar Beet Specialist
October 2020
• President Green requested a moment of silence in honor of the colleagues who passed away.

• Meeting Logistics – Faculty Secretary Sammarruca
  University Faculty meetings are open to anyone wishing to attend and the Zoom link has been broadly distributed. However, only eligible faculty can vote. We will be using the polling function in Zoom to conduct the votes. The first vote will be to determine a quorum. Eligibility criteria are found in FSH 1520 II.1. Quorum is determined by a one-question survey for people to identify themselves as eligible voters. Voting items will be on separate surveys. Zoom will tabulate the responses and,
after the meeting, we will verify that the votes came from eligible voters. People will be able to ask questions by using the raise-hand function in Zoom and the monitor will call on them. The chat function is on, but we ask that you wait for the Q&A period to raise your Zoom hand. Priority will be given to raised hands over questions in the chat. This meeting is being recorded and will be available to watch on the Faculty Senate website.

• Quorum count: Faculty Secretary Sammarruca
  98 voting members of the faculty were required for a quorum. 107 eligible voters were counted and thus a quorum was present.

• Approval of minutes – President Green
  President Green asked if there were any corrections to the minutes of the 2020-2021 University Faculty Meeting #2 (December 9, 2020). There were none. The minutes of Meeting #2 were approved as distributed.

• Special Orders – Faculty Senate Chair Barbara Kirchmeier
  o Proposed Changes/Additions to Faculty-Staff Handbook (vote)
    ▪ UP-21-10: Removal of FSH 1440 – Administrative Organization Policy
      This is actually just a link to organizational charts. It is being removed for cleanup.
      Vote – approved with 91% in favor.

    ▪ UP-21-12: Edits to FSH 1640.42 – Faculty Affairs Committee
      Removing one word to clarify roll of the committee.
      Vote – approved with 94% in favor.

  o Proposed Changes to the University of Idaho Catalog (vote)
    ▪ UCC-21-030: Change of CIP code for the Master’s in Architecture
      The purpose is to enable the Master’s program to be listed as a STEM program – it will be more competitive and attract more international students. Senate was satisfied that the program has a sufficient level of rigor to be a STEM program.
      Vote – approved with 89% in favor.

    ▪ UCC-21-025: Discontinuation of the B.S. in Natural Resource Conservation
      This degree is being discontinued because its content will be rolled into the B.S. in Environmental Science. Rationale: The Environmental Science B.S. degree, especially the Social Science Option, and the Natural Resources Conservation B.S. degree have considerable overlap.
      Vote – approved with 95% in favor.

    ▪ UCC-21-025: Change of emphases in the B.S. in Environmental Science
      Making these changes will result in more delineated career options and thus increased marketability. The changes to the Environmental Science curriculum are proposed concurrently with the discontinuation of the B.S. in Natural Resources Conservation presented above.
      Vote – approved with 94% in favor.
- UCC-21-025: Change of CIP code for the M.S. and the Ph.D. in Natural Resources
  Incorrect CIP codes were assigned to these degrees initially. These changes will correct the mistake.
  Vote – approved with 93% in favor.

- UCC-21-030: Move the B.S. in Ecology & Conservation Biology to the Department of Fish and Wildlife Sciences
  The College of Natural Resources requests that the B.S. in Ecology & Conservation Biology be moved to the Department of Fish and Wildlife Science, which, since a long time, has provided most of the teaching and advising efforts to support this degree. A department of Natural Resources actually does not exist – an oddity that needed to be corrected.
  Vote – approved with 94% in favor.

- UCC-21-030: New undergraduate certificate in Natural Resource Management
  Adding this new certificate will help non-degree students and address the demand for continuing education of current federal employees.
  Vote – approved with 96% in favor.

- UCC-21-030: Add an option to the Master in Natural Resources
  It is proposed to add a Fish and Wildlife Science and Management Option to the existing degree, and to change curricular requirements for the Fire Ecology and Management Option and the Integrated Natural Resources Option. This new option focuses on the online market, thus it is expected to increase enrollment in that sector.
  Vote – approved with 96% in favor.

- UCC-21-026: Change of name of the Department of Agriculture & Extension Education
  The name change is to better reflect the content of the programs and to clarify that Extension is another part of CALS.
  Vote – approved with 89% in favor.

- UCC-21-028: New minor in Human and Community Engagement
  This minor combines classroom instruction on human and community development theories and models with opportunities for engagement in the local community. It will benefit students who are interested in community-based leadership positions.
  Vote – approved with 87% in favor.

- UCC-21-028: New undergraduate certificate in Precision Agriculture
  The certificate covers the basics of precision agriculture. It is expected to be popular not only in Agriculture, but also in Engineering and Natural Resources. It will be offered both online and in person.
  Vote – approved with 94% in favor.

- UCC-21-028: New minor in Sustainable Food Systems
  This minor is being proposed together with the next item to give students the opportunity to enhance their base knowledge of agriculture and sustainability.
  Vote – approved with 94% in favor.

- UCC-21-028: New minor in Water Science and Management
A new minor in Water Science and Management is needed. Exposure to basic Water Science may be useful for other disciplines as well. 
Vote – approved with 94% in favor.

- UCC-21-029: Add an online component to the Master’s in Music
  This is to provide an online option to the in-person option for this degree. 
  Vote – approved with 90% in favor.

- UCC-21-029: Add online component to the M.S. in Movement and Leisure Science and to the B.S. in Recreation, Sports, and Tourism Management
  This is to provide online options to the in-person options for these degrees. 
  Vote – approved with 88% in favor.

- UCC-21-030: Change the name of math emphasis, Applied Quantitative Modeling
  The name change – from “Applied Quantitative Modeling” to “Applied Modeling and Data Science” – and accompanying revisions to the curriculum, intend to refocus the current Quantitative Modeling Option to include process-driven and data-driven modeling. Students will be more competitive in the data-driven world. 
  Vote – approved with 92% in favor.

- UCC-21-030: Change the name of the certificate in Data Analytics
  This is to better reflect the current content of the program. 
  Vote – approved with 90% in favor.

- UCC-21-030: New minor in Groundwater Hydrology
  The proposed program will support and align with the new Environmental Science curriculum. It could also be of interest to students in Civil Engineering who are considering a career in hydrology. There is no overlap with existing programs, such as Water and Soil. This minor is technically very narrow and specific to groundwater (traditionally under the purview of Geological Sciences), not water resources. 
  Vote – approved with 94% in favor.

- UCC-21-028: Change of name of the B.S. in Operations Management
  This is a minor name change to better reflect the degree. 
  Vote – approved with 92% in favor.

- UCC-21-028: New undergraduate certificate in Business Analytics
  This can be used by Business majors to increase their job skills. It complements, but is not in competition with, other certificates, such as the one offered by Statistics. Students majoring in Operations and Supply Chain Management can add this certificate to their degree and gain those skills in less time than it would take for the minor. 
  Vote – approved with 88% in favor.

- UCC-21-029: Move the Professional Science Master (P.S.M.) to the College of Graduate Studies and change the emphases
  The P.S.M. has not been taught in CNR for several years. It is being moved to COGS with changed emphases to encourage enrollment and interdisciplinary work. 
  Vote – Approved with 81% in favor.
Additional proposed changes to the Catalog are being distributed in a General Policy Report (GPR), available to view on the Senate website. Also, the GPR will appear on the Daily Register tomorrow.

- Administrative Procedures Manual (Informational Items – no vote)
  - APM 90.53 – UI Photo Services Communications and/or Computers
  - APM 90.54 – Printing and Design
  - APM 90.55 – Video Production
    All are being removed because they should not be in policy in the first place.

This concluded the Special Orders part of the meeting. Faculty Senate Chair Barbara Kirchmeier expressed gratitude to everyone for their support and work during a challenging semester.

- President’s Remarks and Discussion
  President Green acknowledged all the faculty and staff who have worked hard over the past year to keep us open to live instruction. It hasn’t been easy, but together we made it happen.

  Last summer, President Green asked the university community to support him through a path which, although narrow, would help us avoid substantial financial deficits and related job losses. We are now close to our goal. We should be proud of how we have overcome obstacles and helped keep the university on a sustainable financial track. We have all helped the university not just survive, but also to thrive once we are through the pandemic.

  Heroes among our colleagues helped get our lab open, executed on our testing protocols, and put themselves at personal risk to care for our students. These brave individuals remained engaged under incredible pressure and enabled us to safely open and avoid financial exigency, which would have cost us staff, as well as both tenured and untenured faculty jobs. Their work has saved lives. President Green said he looks forward to celebrating our accomplishments and many successes once this pandemic is behind us.

  Spring semester is off to a good start. We continue to see COVID test results under 2% positivity since the beginning of the year. The number of positive cases remains in the single digits on most weeks. We are aggressively working to eliminate the few clusters we have seen this week. Importantly, through the efforts of faculty and staff, Public Health reports that not a single case of COVID-19 has been traced back to a classroom. While our community is beginning to receive vaccinations, we intend to remain vigilant until Public Health tells us the risk has subsided. We will continue testing throughout the semester and we will conduct a campus-wide re-test of our students after Spring Break. The Student Recreation Center will be Gritman Medical Center’s primary site when the quantity of vaccines to administer is larger than their facility can handle. The current group includes the general population age 65 and older.

  Together with other institutions, our university is advocating for moving front-line employees into a priority list for the vaccine in Group 3 – the next group. If the proposal is successful, our faculty and staff could begin receiving vaccines in early April. Students would be part of the general population in Group 4 unless they were eligible to be in Groups 1-3.
One big change starting this weekend is the return of more in-person events. Football kicks off Saturday in the Kibbie Dome, the first of three home games over the next month. We are planning six in-person May Commencement ceremonies in Moscow. Additional in-person ceremonies will honor graduates in Boise and Idaho Falls. Each will be smaller and follow state restrictions and Healthy Vandal protocols. Final announcements will come in mid-March.

COVID protocols are having an impact on recruitment efforts. High school students filling out the Common Idaho Application are down over 20%, which is seriously impacting our four-year institutions. This is because the K-12 system is experiencing a much higher percentage of failing students due to the interruptions brought on by the pandemic. This means that those seniors who normally would qualify may be questioning whether to attend a four-year institution and may be outside of our qualified pool. The situation is even more serious for the U of I than the others as we are a destination campus and students who would normally entertain coming to Moscow may elect to stay home. Additionally, many of our students come from rural areas, which are especially hard-hit due to lack of resources. Finally, those students who do come to our campus will need additional support. Our preliminary numbers are not too bad given the environment SEM is operating in. Overall applications are down about 4% compared to last year. The good news is that, while resident admissions are down 5%, overall admissions are up 7% thanks to strong interest from out-of-state students. Strategic Enrollment Management continues to recruit students here in Idaho, as well as California and other WUE states. We’re marketing our Best Value rankings and using the “We’re Closer Than You Think” headline with WUE students. We had a 21% increase in WUE students last fall, the second year in a row of double-digit gains for that group. There are indications that this pattern may continue. Non-resident applications are up about 27% compared to last year and non-resident admissions are up 38%, indicating a higher quality pool. President Green encouraged everyone to be recruiters by showing their support for the university. Something as simple as wearing Vandal gear can send a message to potential students that we are a close-knit Vandal family and proud of our university. Let’s encourage the students in our life to visit campus, and tell them about the return on investment that comes with a Vandal degree.

Obviously, our enrollment teams have had to pivot as state restrictions continue to change. The first three UIdaho Bound recruitment events – in March, April and May – will be online. Strategic Enrollment Management will then allow prospective students on campus for 10 additional UIdaho Bound events held under Healthy Vandal protocols. We had to change the way we engage with students in high schools. Very few schools are open to recruitment, but President Green did visit with a group on Friday at Bishop Kelly High School in Boise. In-person visits are very important to support our efforts at recruiting Idaho students. It was refreshing to see the enthusiasm and excitement these students have about attending college.

The President moved on to the governor’s funding proposal in the Idaho Legislature. The governor’s budget certainly is not rich, but unlike last year, it includes a few items that will be beneficial to the university. First, it brings back the 5% we lost in FY21. That’s the 5% holdback we primarily covered through mandatory furlough. The governor also included $3M in matching funds to update the Idaho Center for Plant and Soil Health at Parma. The money will be combined with $3M from eight different commodity groups, plus $1M from CALS, to replace aging structures. The researchers at Parma do important work for the state, including identifying airborne plant pathogens, important nematode research, and plant health research that together improve yields and protect against crop loss. In addition, $700K in state money is included for industry-requested greenhouses to expand tree seedling production to about 500,000 annually at the Pitkin Forest Nursery. This expansion
allows a return of some seedling production to Idaho currently delivered from Canada. If the governor’s higher education budget is approved, we will join ISU and BSU in freezing in-state tuition for a second year in a row this spring. We should know more about our state funding in the coming weeks.

President Green spoke to both JFAC and the House and Senate committees during Higher Education Week in January. The committees did recognize and commend the university for the hard work we have done to eliminate our deficits. President Green took the opportunity to explain how our faculty and staff not only met the financial targets we put out there – but exceeded them.

The university is doing relatively well financially given the pandemic. Our expenses are down considerably, but so are our revenues. We have lost programmatic revenues in some of our colleges, including programs like MOSS in CNR and the Energy Executive Program in the College of Business that could not happen during a pandemic. We have seen decreases in our auxiliary revenues from the student rec center, housing, and dining among many other areas. On the other side of the ledger we have also seen a drop-off in F&A revenues. We will be reporting a fiscal year-to-date loss as of the end of December to the SBOE of approximately $4 million. Despite this, President Green explained that we are in better shape than that number implies. This loss is an improvement of $3 million over last year. We have also received a new round of relief funding that, unlike the previous round, can be used to offset revenue loss. Unfortunately, we cannot go back to use it to cover losses last semester, but it can be used going forward. This should help us remain on a stable financial path through the end of the fiscal year. We will have a better picture of where we will end up once we have some more clarity on how and when we can use those funds.

We continue to move forward on the recommendations coming out of the various university working groups. As a reminder, the white papers generated from these working groups are available on our website. We will begin implementing the Vandal Hybrid budget model for this coming fiscal year. We are starting modest, tying only 10% of a college’s funding to performance against metrics for the first year, and we will also keep a small amount in a fund to address any unintended consequences we encounter. As we continue to revise the model over the coming year, and our colleges and support departments adjust to it, we expect those percentages to increase over time. The outcome will be a much more stable funding model for the university that creates the right incentives, directing funds to colleges that increase enrollment, credit hours taught and efficiency, and helps prevent the huge operating deficits we have experienced in recent years.

We are also moving forward with the recommendation of the online education working group. The working group’s recommendation calls for keeping a mix of the digital and in-person elements we’ve been utilizing for the past year, improving the delivery of programs in our areas of strength and where there is demand in the marketplace. Importantly, there have been four previous online education white papers produced by our university, none of which were executed. One of the primary reasons for this was there was no senior administrator brought in to oversee the program. The working group found that this is a key success factor for the high-quality programs they studied, so we are going to hire a Vice Provost to lead this charge. By properly organizing and funding distance learning, we will attract students who cannot afford to come to Moscow for their education. Faculty will have additional opportunities to develop curriculum and, frankly, make more money by delivering courses and programs in this growing space. If we don’t make this investment we can expect the same outcome as the prior four attempts that all failed. We have already lost
valuable time and ground to our competitors. This investment is good for the university, faculty, and students and thus we intend to move quickly.

The final working group that has completed its work addresses our path to R-1 recognition. We will be investing in post-docs and graduate students to help our faculty accomplish their research objectives. Given that we are due for a review this coming year, and the reviews are on a 3-year cycle, we expect it will take four years of investment to receive this recognition. The benefit to the university will be a larger share of federal research dollars, higher quality research programs enjoyed by those universities with R-1 recognition, and a greater ability to attract quality faculty and students. All of these investments are being funded by P3 proceeds rather than Gen Ed or F&A budgets, so there is no financial downside of these investments for our colleges or departments.

The President reiterated that we can be proud of what we have accomplished together over the past year. Not only have we navigated a budget crisis and a pandemic, but we have also positioned ourselves to achieve great things once this pandemic has passed. We are a university on the rise because of everyone’s hard work and commitment to our university. Before opening the floor for questions, President Green expressed gratitude for everyone’s support and continued dedication to our university over the past year.

Discussion:
A faculty, who was on the online working group, suggested that Dean Panttaja would be the right person for the task. President Green replied that Dean Panttaja is already quite busy. Furthermore, the key factor for success is empowering someone to take leadership so that we can move quickly. The discussion moved to student evaluations of faculty. A faculty noted that we should train students to write helpful evaluations – sometimes, they are even offensive. Another faculty suggested that perhaps student evaluations should be eliminated, because they are sexist and discriminatory – we, as an institution, should lead the way with some alternative means of evaluation, which is more accurate and more equitable than the current model.Provost Lawrence responded that it is a large project, requiring a few years of trying new tools. In the meantime, we are required by SBOE to have an evaluation process. The faculty asked whether we are required to use the current evaluations in promotion and tenure. The Provost replied that the recent changes to the P&T policy have opened the door to additional evidence for the purpose of evaluating teaching – this year, we have seen some new materials in the P&T packets, a trend that is increasing. Another faculty agreed on the discriminatory nature of the current evaluation system – we must reject discrimination and refocus ourselves on diversity. There should be a way to delete offensive words from the evaluations.

A faculty expressed appreciation to President Green for his commitment to make preferred names possible in online space. The President noted that it was a team effort. Thanks to Dan Ewart, we are almost there.

Concerns were expressed about the Idaho Freedom Foundation (IFF) rhetoric targeted against Boise State and our university, and recent attacks on higher education. President Green responded that we are watching and we are prepared to respond if we have to do so. He hopes the upcoming report from people affiliated with IFF will get no traction. Yolanda Bisbee added that she appreciates the effort spent dealing with this rhetoric. It is difficult to see these attacks on all the good work we are doing.
We are getting to the point where diversity is more integrated, through the efforts of diversity teams in every college.

Referring to the President’s remarks about a loss of $4M, a faculty asked about possible consequences, such as furlough or program cuts. The President said that $4M is an interim number as of the end of December, and doesn’t fully reflect our position. We are in a better situation than last year, when that number was larger by $3M. He does not expect more cuts but he is concerned about the fall enrollment and its possible impact. We are working hard with SEM to address the problem of in-state students who are failing and don’t feel confident enough to apply for college. President Green said that, overall, he is comfortable with the way we navigated through the pandemic. We will be able to do some reinvestments and hopefully fill some vacant positions. Almost all colleges have operated below the budgets that were set last year, which is remarkable. The Provost noted that this year there will be no academic program prioritization (APP), which is required every five years. Program prioritization (PP) for non-academic units is also required and will probably be done next year – it will tie directly with the new budget model.

There was a question on diversity guidelines and training for search committees. President Green said that members of search committees are required to go through training. Resources are available on the AAEEO website on how to do fair and equitable searches and advertising. Yolanda Bisbee added that Elissa Keim, Director of the Office of Workforce Diversity, is happy to meet with individuals who want to go beyond the basic training.

There were no more questions or comments.

- Adjournments
  The agenda being completed, President Green adjourned the meeting at 3:45pm.

Respectfully Submitted
Francesca Sammarruca
Secretary of the University Faculty
University of Idaho
2020 – 2021 University Faculty Meeting Agenda
Meeting #3
Thursday, February 25, 2021, at 2:30pm (PT) / 3:30pm (MT)
ZOOM only

President Scott Green Presiding

I. Call to Order – President Green

II. In Memoriam – President Green

III. Meeting Logistics – Faculty Secretary Francesca Sammarruca

IV. Quorum count – Faculty Secretary Francesca Sammarruca

V. Approval of Minutes (vote) – President Green
   • Minutes of the 2020-2021 University Faculty Meeting #2 (December 9, 2020) Attach. #1

VI. Announcements – President Green

VII. Special Orders– Faculty Senate Chair Barbara Kirchmeier
   • Proposed Changes/Additions to Faculty-Staff Handbook (vote)
     o UP-21-10: Removal of FSH 1440 – Administrative Organization Attach. #2
     o UP-21-12: Edit to FSH 1640.42 – Faculty Affairs Committee Attach. #3
   
   • Proposed Changes to the University of Idaho Catalog (vote)
     o UCC-21-030: Change of CIP code for the Master’s in Architecture Attach. #4
     o UCC-21-025: Discontinuation of the B.S. in Natural Resource Conservation Attach. #5
     o UCC-21-025: Change of emphases in the B.S. in Environmental Science Attach. #6
     o UCC-21-025: Change of CIP code for the M.S. and the Ph.D. in Natural Resources Attach. #7
     o UCC-21-030: Move the B.S. in Ecology & Conservation Biology to the Department of Fish and Wildlife Sciences Attach. #8
     o UCC-21-030: New undergraduate certificate in Natural Resource Management Attach. #9
     o UCC-21-030: Add an option to the Master in Natural Resources Attach. #10
     o UCC-21-026: Change of name of the Department of Agriculture & Extension Education Attach. #11
     o UCC-21-028: New minor in Human and Community Engagement Attach. #12
     o UCC-21-028: New undergraduate certificate in Precision Agriculture Attach. #13
     o UCC-21-028: New minor in Sustainable Food Systems Attach. #14
     o UCC-21-028: New minor in Water Science and Management Attach. #15
     o UCC-21-029: Add online delivery to the Masters in Music Attach. #16
     o UCC-21-029: Add online component to the M.S. in Movement and Leisure Science and to the B.S. in Recreation, Sports, and Tourism Management Attach. #17
     o UCC-21-030: Change the name of math emphasis Applied Quantitative Modeling Attach. #18
     o UCC-21-030: Change the name of the certificate in Data Analytics Attach. #19
     o UCC-21-030: New minor in Groundwater Hydrology Attach. #20
o UCC-21-028: Change of name of the B.S. in Operations Management Attach. #21
o UCC-21-028: New undergraduate certificate in Business Analytics Attach. #22
o UCC-21-029: Move the P.S.M. to the College of Graduate Studies and change the emphases Attach. #23

- Administrative Procedures Manual (Informational Items – no vote)
  o APM 90.53 – UI Photo Services Attach. #24
  o APM 90.54 – Printing and Design Attach. #25
  o APM 90.55 – Video Production Attach. #26

VIII. President’s Remarks and discussion

IX. Adjournment – President Green

Attachments:
- Attach. #1 Minutes of the 2020-2021 University Faculty Meeting #2 (December 9, 2020)
- Attach. #2 FSH 1440
- Attach. #3 FSH 1640.42
- Attach. #4 Change of CIP code for the Master’s in Architecture
- Attach. #5 Discontinuation of the B.S. in Natural Resource Conservation
- Attach. #6 Change of emphases in the B.S. in Environmental Science
- Attach. #7 Change of CIP code for the M.S. and the Ph.D. in Natural Resources
- Attach. #8 Move the B.S. in Ecology & Conservation Biology to the Department of Fish and Wildlife Sciences
- Attach. #9 New undergraduate certificate in Natural Resource Management
- Attach. #10 Add an option to the Master in Natural Resources
- Attach. #11 Change of name of the Department of Agriculture & Extension Education
- Attach. #12 New minor in Human and Community Engagement
- Attach. #13 New undergraduate certificate in Precision Agriculture
- Attach. #14 New minor in Sustainable Food Systems
- Attach. #15 New minor in Water Science and Management
- Attach. #16 Add online delivery to the Masters in Music
- Attach. #17 Add online component to the M.S. in Movement and Leisure Science and to the B.S. in Recreation, Sports, and Tourism Management
- Attach. #18 Change the name of math emphasis Applied Quantitative Modeling
- Attach. #19 Change the name of the certificate in Data Analytics
- Attach. #20 New minor in Groundwater Hydrology
- Attach. #21 Change of name of the B.S. in Operations Management
- Attach. #22 New undergraduate certificate in Business Analytics
- Attach. #23 Move the P.S.M. to the College of Graduate Studies and change the emphases
- Attach. #24 APM 90.53
- Attach. #25 APM 90.54
- Attach. #26 APM 90.55
University of Idaho

2020 – 2021 University Faculty Meeting Minutes – Pending Approval

Meeting #2

Wednesday, December 9, 2020, at 2:30pm (PT) / 3:30pm (MT)

Zoom only

Provost/EVP Torrey Lawrence Presiding

- Provost Lawrence called the meeting to order at 2:32pm (PT).
- Provost Lawrence read the names of those who died between September 16 and December 1, 2020:
  
  James Bikkie  
  Professor Emeritus of Vocational Teacher Education  
  October 2020

  Edwin Arthur Dowding  
  Professor Emeritus of Agricultural Engineering  
  September 2020

  Maynard Axel Fosberg  
  Professor Emeritus of Soil Science and Soil Morphology  
  September 2020

  Donald R. Johnson  
  Professor Emeritus of Zoology  
  October 2020

  Arthur “Doc” Partridge  
  Professor Emeritus of Forest Resources  
  October 2020

  Roger Wallins  
  Professor Emeritus of English and Associate Dean Emeritus  
  August 2020

- Provost Lawrence requested a moment of silence in honor of the colleagues who passed away.

- Meeting Logistics – Faculty Secretary Sammarruca
  University Faculty meetings are open to anyone wishing to attend and the Zoom link has been distributed broadly. However, only eligible faculty can vote. We will be using the polling function in Zoom to conduct the votes. The first vote will be to determine a quorum. Eligibility criteria are found in FSH 1520 II.1. Quorum is determined by a one-question survey for people to identify themselves as eligible voters. Voting items will be on separate surveys. Zoom will tabulate the responses and,
after the meeting, we will verify that the votes came from eligible voters. People will be able to ask questions by using the raise hand function in Zoom and the monitor will call on them. The chat function is on, but we ask that you wait for the Q&A period and then raise your Zoom hand. Priority will be given to raised hands over questions in the chat. This meeting is being recorded and will be available to watch on the Faculty Senate website.

- **Quorum count:** Faculty Secretary Sammarruca
  100 voting members of the faculty were required for a quorum. 110 eligible voters were counted and thus a quorum was present.

- **Approval of minutes – Provost Lawrence**
  Provost Lawrence asked if there were any corrections to the minutes of the 2020-2021 University Faculty Meeting #2 (September 16, 2020). There were none. The minutes of Meeting #2 were approved as distributed.

- **Announcements – Provost Lawrence**
  - We will celebrate our winter graduates with a virtual Winter Commencement. The event can be viewed live Saturday, December 12, 2020 at 11:30, at [www.uidaho.edu/commencement](http://www.uidaho.edu/commencement)
  - The deadline for completing the mandatory training is December 11. The training is available in BbLearn and directions can be found in today’s Register.
  - Faculty may elect to exclude fall 2020 course evaluations through the online survey at [https://uidaho.co1.qualtrics.com/jfe/form/SV_e41KiE1Nhf661IV](https://uidaho.co1.qualtrics.com/jfe/form/SV_e41KiE1Nhf661IV) by January 5, 2021.
  - Faculty who are up for Promotion and Tenure may request a one-year delay because of the pandemic. Requests can be submitted by March 15, 2021 through this link [https://uidaho.co1.qualtrics.com/jfe/form/SV_erKM6dKzZT8i7J](https://uidaho.co1.qualtrics.com/jfe/form/SV_erKM6dKzZT8i7J)

- **Special Orders – Faculty Senate Chair Barbara Kirchmeier**
  - Items from Senate Consent Agenda
    - UCC-21-006: Final Exam Schedule for 2021-22
      Senate Chair Kirchmeier asked if there were any requests to move the item from the Consent Agenda for discussion. There were none. Absent any objections, the Final Exam Schedule for 2021-22 was approved as distributed.
  - Resolutions
    - Diversity Resolution from Ubuntu
      The Resolution came to Faculty Senate from Ubuntu. Under the leadership of Jan Johnson and Kristin Haltinner, the committee drafted a Resolution that reaffirms the U of I commitment to supporting equity, diversity, inclusion, and social justice through policy and procedures as well as campus and institutional culture. Ubuntu worked with a number of groups on campus over a year. Last October, the Resolution was brought to Senate, which adopted it. The Resolution is included in the binder for this faculty meeting. Senate Chair Kirchmeier invited everyone to
join her in thanking Jan, Kristin, and every member of Ubuntu for their excellent work with this project and with all the other issues undertaken by the committee.

- Proposed Changes/Additions to Faculty-Staff Handbook (vote)
  - UP-21-02: FSH 1590 Unit Bylaws
    This policy was revised by FAC to clarify procedures for developing and approving Unit Bylaws and to update the list of required contents, particularly to reflect the fact that, with the adoption of FSH 3500, promotion and tenure procedures should no longer be contained in Unit Bylaws. In the interest of efficiency when reviewing bylaws, the Provost will adopt a standard university template for Unit Bylaws, consistent with the revised FSH 1590.
    There were no questions or comments.
    Vote – approved with 103 votes in favor.
  
  - UP-21-22: FSH 6100 Title IX Changes
    On May 6, 2020, the US Department of Education issued new regulations amending federal policy that mandates how colleges and universities must investigate and adjudicate allegations of sexual harassment under Title IX – the federal law prohibiting discrimination on the basis of sex in education. The university must adopt a new policy to comply with the new federal regulations. The policy was approved by President Green on August 14, 2020, as a temporary emergency policy, and must now become a permanent policy.
    There were no questions or comments.
    Vote – approved with 103 votes in favor.

- Proposed Changes to the University of Idaho Catalog (vote)
  - UCC-21-015: Name Change for the Department of Accounting
    Changing the name of the Department of Accounting to Department of Accounting and Management Information Systems better reflects the composition of the department.
  
  - UCC-21-020: Department Name Change for Psychology and Communication Studies
    The new name – Department of Psychology and Communication – is more accurate and concise.
  
  - UCC-21-020: Name Change for the Diversity and Inclusion Certificate
    The new name – Equity and Justice Certificate – better reflects the curriculum, learning outcomes, and up-to-date learning on issues of equity and justice.
  
  - UCC-21-020: Discontinue Emphases in History
    This change has no student impact.
  
  - UCC-21-021: Discontinue the MAT in Art
    There has not been an MAT in Art for many years. This change will clean up the state inventory by completing the official state discontinuation.
  
  - UCC-21-022: Department Name Change for Sociology and Anthropology
    The name change to “Department of Culture, Society, and Justice” reflects the multidisciplinary scope of the programs housed in the department.
    There were no questions or comments.
    Vote on the above six items:
    - UCC-21-015: Change Department Name in Accounting – approved with 115 votes in favor
    - UCC-21-020: Department Name Change for Psychology and Communication – approved with 113 votes in favor
- UCC-21-020: Name Change for the Diversity and Inclusion Certificate – approved with 112 votes in favor
- UCC-21-020: Discontinue Emphases in History – approved with 113 votes in favor
- UCC-21-021: Discontinue the MAT in Art – approved with 115 votes in favor
- UCC-21-022: Department Name Change for Sociology and Anthropology – approved with 104 votes in favor

- Proposed Changes to the University of Idaho Catalog (vote), cont.
  - UCC-21-022: Discontinue Emphases in Music Business
    This is to reflect the rapidly evolving business climate and give students more choices and flexibility.
  - UCC-21-022: Name Change for Music and Discontinuation of Emphases
    This change will result into a single pathway for the major, which will be named “Applied Music.”
  - UCC-21-022: Discontinue Emphases in Sociology
    This change will result in there being one pathway to the Sociology degree. There will be no impact on currently enrolled students.
  - UCC-21-022: New Minor in Film & Television
    The new minor will provide focused instruction in technical video production and media communication. It will build skills in videography and media production, supporting students in a variety of career tracks.
    The new certificate is designed for the individual who wants to expand and strengthen an existing business or start/manage a business.
  - UCC-21-024: Discontinue Molecular Biology and Biotech
    This is in the effort to streamline the undergraduate degree offerings in the Biological Sciences. The degree being discontinued had significant overlap with the Microbiology and Biochemistry degrees that will continue to be offered.

- Vote on the above six items:
  - UCC-21-022: Discontinue Emphases in Music Business – approved with 111 votes in favor
  - UCC-21-022: Name Change for Music and Discontinuation of Emphases – approved with 110 votes in favor
  - UCC-21-022: Discontinue Emphases in Sociology – approved with 106 votes in favor
  - UCC-21-022: New Minor in Film & Television – approved with 109 votes in favor
  - UCC-21-023: New UG Certificate in Small Business Management – approved with 113 votes in favor
  - UCC-21-024: Discontinue Molecular Biology and Biotech – approved with 106 votes in favor

- Faculty Staff Handbook (Informational Item – no vote)
  - UP-21-03: FSH 1120 Origins and Growth of the University of Idaho
    FSH 1120 is being deleted because it is a historical description of the university rather than a policy. The deleted material will be available at the library in the “Special Collections,” under the title “Campus History.”
  - UP-21-04: FSH 1140 Mission and Scope of Higher Education in Idaho
• UP-21-05: FSH 1220 Institutions of Higher Educations in Idaho
  FSH 1140 and 1220 are being deleted because they duplicate SBOE policy. Their subject matter is within SBOE purview.
• UP-21-06: FSH 4320 Board Policy on Intercollegiate Athletics
  FSH 4320 is being deleted because it restates SBOE policy, and is outside U of I policy-making authority.
• UP-21-07: FSH 4325 UI Organization of Intercollegiate Athletics
  This is being deleted because it is mostly descriptive and does not serve any of the standard policy functions.
• UP-21-08: FSH 6925 Law Library
  This is being deleted because it is mostly descriptive and does not serve any of the standard policy functions. Also, the information is subject to frequent updates and is available on the library website. The deletion of FSH 6925 has the approval of the Dean of the College of Law.
• UP-21-09: FSH 1240 Roles and Missions of the State Institutions of Higher Education
  FSH 1240 is being deleted because it duplicates SBOE policy, and to the extent that it deals with other institutions, is outside U of I policy-making authority.

There were no questions on the informational items above.

o Administrative Procedures Manual (Informational Items – no vote)
  • APM 20.13 Communications and/or Computers
    Updated to conform with tax law changes.
  • APM 40.32 Parking and Transportation Services
    Revised to reflect more accurately the fact that university department budget numbers cannot be used to purchase parking permits or to pay for parking citations issued to U of I employees who work on the Moscow campus. They can be used to pay for permits and citations issued to Moscow campus visitors. The revisions include removal of Section A.6 “Bicycles.” Regulations on bicycle parking on campus are covered by the U of I Parking Regulations document. They are not administrative procedures and thus do not need to be included in the APM.

There were no questions on the informational items above.

This concluded the Special Orders part of the meeting. Faculty Senate Chair Barbara Kirchmeier expressed gratitude to everyone for their support and work during a challenging semester.

• Provost’s Remarks and Discussion
  Provost Lawrence thanked those who participated in the provost search. He is honored and humbled by the trust the university has placed in him. After 23 years at the U of I, through ups and downs, Provost Lawrence said he is optimistic in spite of the challenges ahead. We have bright students, dedicated staff, and our faculty are experts recognized nationally and internationally. These are times of significant changes, especially due to the pandemic, and higher education is shifting quickly. Provost Lawrence said he looks forward to working with the university community.

  At the December 12 virtual Commencement, every graduate will be recognized individually and will receive a celebratory gift box with vandal gear.

  Looking forward to the next few months: the spring semester logistics will be similar to the fall logistics. Thanks to our improved testing capabilities, we are able to test students prior to January
13. We decided it is best to encourage students to come back to campus early and be tested between January 6 and January 12. The original plan to have classes online the first week of the semester might have resulted in students coming back after the Martin Luther King Day long weekend and still needing to be tested. A negative COVID test is required to attend classes and lists of ineligible students will be provided to the instructors, as in the fall. Starting in person on January 13 will make it easier to engage students from day one. We must continue to be vigilant – wear a mask and follow the directives in the Vandal Pledge. Following safety protocol is required until all of us receive the vaccine. We continue to test wastewater and use thermo scanners. We may switch to online class delivery for a week after spring break so that returning students can be tested.

Provost Lawrence concluded by acknowledging all faculty and staff for the efforts and time they put into preparing for different class-delivery methods. On behalf of President Green, the Provost expressed gratitude to faculty and staff for the many extra hours they invested and for their willingness to be creative, innovative, and responsive to our students, and wished everyone a restful and safe holiday season.

Discussion:
There was a question about the opening date for Residence Halls, January 10. Some students, especially international students, may need earlier access to dorms. Provost Lawrence responded that students should reach out to their dorm RA to request early check-in.

After thanking the provost for his leadership, a faculty noted that the state expects an unprecedented surplus of $600 million by the end of the fiscal year in June. Some of this money will certainly be used for COVID relief. Will some of the “rainy days funds” be used to offset our COVID-related expenses and furlough? Provost Lawrence responded that universities have in fact raised similar questions with the State Board. The Provost said he is not aware of any specific plan. Spring enrollment is down by 4.4% compared to last year, but a lot can change by January 13. It seems ironic that, with such large surplus and the state doing well financially, people in higher education are facing furlough. These questions are likely to be revisited in the new year.

The same faculty, while recognizing the CETL team for their work through the pandemic, wondered about the effectiveness of the HyFlex model. Will we evaluate the effectiveness of the various class-delivery methods with hard data? The provost responded that Interim Vice Provost Diane Kelly-Riley is working with CETL to gather best practices. Course evaluations for the fall semester should be insightful. The Secretary added that a broad survey had been recently sent to collect data on faculty’s experiences with the various delivery methods.

There were no more questions or comments.

• Adjournments
The agenda being completed, Provost Lawrence adjourned the meeting at 3:20pm.

Respectfully Submitted
Francesca Sammarruca
Secretary of the University Faculty
POLICY COVER SHEET

For instructions on policy creation and change, please see https://sitecore.uidaho.edu/governance/policy.

All policies must be reviewed, approved, and returned by the policy sponsor, with a cover sheet attached, to ui-policy@uidaho.edu.

Faculty Staff Handbook (FSH)
☐ Addition ☐ Revision*  ☒ Deletion*  ☐ Emergency  ☐ Minor Amendment
Policy Number & Title: FSH 1440 ADMINISTRATIVE ORGANIZATION

Administrative Procedures Manual (APM)
☐ Addition ☐ Revision*  ☐ Deletion*  ☐ Emergency  ☐ Minor Amendment
Policy Number & Title:

*Note: If revision or deletion, request original document from ui-policy@uidaho.edu. All changes must be made using “track changes.”

Originator: Diane Whitney, University Policy and Compliance Coordinator

Policy Sponsor, if different from Originator:

Reviewed by General Counsel  x Yes ___No  Name & Date: Kent Nelson 4/27/20

1. **Policy/Procedure Statement:** Briefly explain the reason for the proposed addition, revision, and/or deletion.

   The Faculty-Staff Policy Group recommends deletion of FSH 1440 because it is not policy and simply links to a chart on the provost’s website. The chart will continue to be available after removal of this item from the FSH.

2. **Fiscal Impact:** What fiscal impact, if any, will this addition, revision, or deletion have?

   None.

3. **Related Policies/Procedures:** Describe other UI policies or procedures related or similar to this proposed change, or that will be impacted by it.

4. **Effective Date:** This policy shall be effective on July 1, or January 1, whichever arrives first after final approval (see FSH 1460 D) unless otherwise specified in the policy.
ADMINISTRATIVE ORGANIZATION

(Chart on next page)
POLICY COVER SHEET

For instructions on policy creation and change, please see https://sitecore.uidaho.edu/governance/policy.

All policies must be reviewed, approved, and returned by the policy sponsor, with a cover sheet attached, to ui-policy@uidaho.edu.

Faculty Staff Handbook (FSH)
☐ Addition x Revision* ☐ Deletion* ☐ Emergency ☐ Minor Amendment
Policy Number & Title: FSH 1640.42 FACULTY AFFAIRS COMMITTEE

Administrative Procedures Manual (APM)
☐ Addition ☐ Revision* ☐ Deletion* ☐ Emergency ☐ Minor Amendment
Policy Number & Title:

*Note: If revision or deletion, request original document from ui-policy@uidaho.edu. All changes must be made using “track changes.”

Originator: Rich Seamon, Faculty Affairs Committee Chair

Policy Sponsor, if different from Originator:

Reviewed by General Counsel     Yes  x  No     Name & Date:

1. Policy/Procedure Statement: Briefly explain the reason for the proposed addition, revision, and/or deletion.

   FSH 1640.02 is revised for clarity: FAC is one of many possible points of contact for questions of policy interpretation, and need not be the first point of contact.

2. Fiscal Impact: What fiscal impact, if any, will this addition, revision, or deletion have?

   None.

3. Related Policies/Procedures: Describe other UI policies or procedures related or similar to this proposed change, or that will be impacted by it.

4. Effective Date: This policy shall be effective on July 1, or January 1, whichever arrives first after final approval (see FSH 1460 D) unless otherwise specified in the policy.
A. FUNCTION.

A-1. To conduct a continuing study of salaries, professional problems, welfare, retirement options and benefits (including 403b plans), and working conditions of faculty members.

A-2. To call the attention of the Faculty Senate or the president, as appropriate, to matters concerning faculty affairs in any college or other unit that the committee believes should be of concern. [ed. 7-09]

A-3. To serve as a point of first contact involving questions of interpretation and application of policies affecting the welfare of faculty members such as promotion and tenure. [rev. 7-17]

B. STRUCTURE. Nine faculty members, not more than two of whom are departmental administrators (administrators above the departmental level are not eligible for membership on this committee). The Vice Provost for Faculty and the Faculty Secretary serve as ex officio members without vote. [rev. 7-08, 1-19, 7-19]
Program Change Request

Date Submitted: 10/21/20 2:01 pm

Viewing: **35 : Architecture (MARCH)**

Last edit: 12/09/20 11:44 pm

Catalog Pages Using this Program
- Architecture (M.Arch.)

Faculty Contact

In Workflow
1. 235 Chair
2. 09 Curriculum Committee Chair
3. Assessment
4. Curriculum Review
5. Graduate Council Chair
6. Graduate Council Chair
7. Registrar's Office
8. UCC
9. Faculty Senate Chair
10. UFM
11. President's Office
12. State Approval
13. NWCCU

Approval Path
1. 10/21/20 2:06 pm Gregory Turner-Rahman (gtrahman): Approved for 235 Chair
2. 10/21/20 2:06 pm Gregory Turner-Rahman (gtrahman): Approved for 09 Curriculum Committee Chair
3. 10/22/20 4:29 pm Sara Mahuron
(sara): Approved for Assessment
4. 10/27/20 6:09 pm
Rebecca Frost
(rfrost): Approved for Curriculum Review
5. 11/13/20 9:21 am
Lauren Perkinson
(perkinson): Approved for Graduate Council Chair
6. 12/01/20 1:47 pm
Amy Kingston
(amykingston): Approved for Graduate Council Chair
7. 12/09/20 2:34 pm
Amy Kingston
(amykingston): Rollback to Registrar's Office for UCC
8. 12/09/20 11:44 pm
Amy Kingston
(amykingston): Approved for Registrar's Office for UCC
9. 01/20/21 2:18 pm
Amy Kingston
(amykingston): Approved for Registrar's Office
10. 01/25/21 3:51 pm
Rebecca Frost
(rfrost): Approved for UCC
<table>
<thead>
<tr>
<th>Randall Teal</th>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Type</td>
<td>CIP code change</td>
<td></td>
</tr>
<tr>
<td>Description of Change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change CIP Code (Group B)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Level</td>
<td>Graduate</td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>Art &amp; Architecture</td>
<td></td>
</tr>
<tr>
<td>Department/Unit:</td>
<td>Art and Architecture</td>
<td></td>
</tr>
<tr>
<td>Effective Catalog Year</td>
<td>2021-2022</td>
<td></td>
</tr>
<tr>
<td>Program Title</td>
<td>Architecture (MARCH)</td>
<td></td>
</tr>
<tr>
<td>Program Credits</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>CIP Code</td>
<td>04.0902 04.0291 - Architectural and Building Sciences/Technology, Architecture:</td>
<td></td>
</tr>
<tr>
<td>Emphasis/Option CIP Code(s)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Curriculum:

**Master of Architecture. Major in Architecture**

Candidates must fulfill the requirements of the [College of Graduate Studies](https://nextcatalog.uidaho.edu/courseleaf/approve/) and the [Architecture](https://nextcatalog.uidaho.edu/courseleaf/approve/) program. Thirty-six of the 45 credits required for this degree must be at the 500-level, including the following courses: **ARCH 510** (2 credits), **ARCH 553** (6 credits), **ARCH 554** (6 credits), and **ARCH 556** (6 credits). The remaining courses required to complete credits for this degree may be 400- or 500-level architecture courses or 300- or 400-level courses in supporting areas.

Equivalents must be approved by the graduate program coordinator. Graduate students without an undergraduate architecture degree may also earn an accredited M.Arch. degree. Those students are placed in the program according to their academic qualifications, and depending on the background of the applicant, up to six years of study may be required to complete the degree requirements. Candidates must fulfill the requirements of the [College of Graduate Studies](https://nextcatalog.uidaho.edu/courseleaf/approve/) and the [Architecture](https://nextcatalog.uidaho.edu/courseleaf/approve/) program. Master of Architecture degree requirements are listed below.

**Required courses include:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 510</td>
<td>Graduate Project Seminar</td>
<td>3</td>
</tr>
<tr>
<td>ARCH 553</td>
<td>Integrated Architectural Design</td>
<td>6</td>
</tr>
</tbody>
</table>

https://nextcatalog.uidaho.edu/courseleaf/approve/
ARCH 554  Architectural Design: Vertical Studio  6
ARCH 556  Graduate Project  6
ARCH 568  Technical Integration in Design  3
ARCH 575  Professional Practice  3

Select Graduate Architecture Electives from the following:  6

ARCH 502  Directed Study
ARCH 504  Special Topics
ARCH 511  Native American Architecture
ARCH 512  Identity and Place in Global Space
ARCH 520  Architectural Research Methods
ARCH 521  China Program Preparation Seminar
ARCH 522  China's Urbanization Seminar
ARCH 523  Cultural & Ethical Issues in Global Architectural Practice
ARCH 552  Alternate Graduate Design Experience
ARCH 570  Natural Lighting
ARCH 571  Building Performance Evaluation
ARCH 573  Daylight Design and Simulation
ARCH 574  Building Performance Simulation for Integrated Design
ARCH 580  British Green Architecture
ARCH 585  Urban Design Seminar
ARCH 599  Non-thesis Master's Research

Total Hours  33

---

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

- Coeur d'Alene
- Boise
Moscow

**Student Learning Outcomes**

| Have learning outcomes changed? | No Change |

**Learning Objectives**

Students completing the graduate project seminar will demonstrate the ability to apply architectural theory to their design research and process and will be able clearly explain the theoretical basis or bases of their design solutions.

Students completing the graduate project studio will demonstrate advanced graphic communication skills, including architectural drawings, analytical diagrams, information graphics, and physical and digital models.

Students completing the comprehensive studio will demonstrate effective design synthesis skills, including the integration of material, structural, environmental control, and other building systems.

Students completing the professional practice course will demonstrate a thorough understanding of ethical standards, civic outreach, legal issues, and economic issues as they relate to the profession.

Students completing the Graduate Project Seminar will demonstrate advanced skills for research and critical thinking as it informs design problem analysis and definition.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Please see the 2nd attachment for rationale

**Supporting Documents**

- [Arch CIP CODE Haglund group-b-form_change-final.docx](http://example.com)
- [STEMrationale2.docx](http://example.com)

**Requires TECC Review**

No

**Reviewer Comments**

*Amy Kingston (amykingston) (12/09/20 11:44 pm):* Rollback: Holding for future agenda due to time constraints.
Program Change Request

A deleted record cannot be edited

**Program Inactivation Proposal**

Date Submitted: 10/08/20 1:14 pm

**Viewing: 223 : Natural Resource Conservation (BSNATRESCCONSV)**

Last approved: 10/07/20 11:12 am

Last edit: 10/08/20 1:14 pm

Catalog Pages Using this Program

Natural Resource Conservation (B.S.Nat.Resc.Consv.)

---

Final Catalog 2020-2021

Rationale for Inactivation

---

In Workflow

1. 153 Chair
2. 11 Curriculum Committee Chair
3. 11 Dean
4. Provost's Office
5. Assessment
6. Curriculum Review
7. Registrar's Office
8. UCC
9. Faculty Senate Chair
10. UFM
11. President's Office
12. State Approval
13. NWCCU

---

Approval Path

1. 10/08/20 1:15 pm
   Joana Espinoza (jespinoza): Approved for 153 Chair
2. 10/08/20 1:16 pm
   Joana Espinoza (jespinoza): Approved for 11 Curriculum Committee Chair
3. 10/08/20 1:17 pm
   Joana Espinoza (jespinoza): Approved for 11 Dean
4. 10/08/20 1:18 pm
   Joana Espinoza (jespinoza):
   Approved for Provost's Office
5. 10/19/20 8:33 am
   Sara Mahuron (sara): Approved for Assessment
6. 10/21/20 6:47 pm
   Rebecca Frost (rfrost): Approved for Curriculum Review
7. 11/25/20 11:23 am
   Amy Kingston (amykingston):
   Approved for Registrar's Office
8. 11/30/20 4:39 pm
   Rebecca Frost (rfrost): Approved for UCC

### History

1. Oct 6, 2020 by
   Joana Espinoza (jespinoza)
2. Oct 7, 2020 by
   Joana Espinoza (jespinoza)

The College of Natural Resources is the administrative home of the campus-wide Environmental Science Program at the University of Idaho. Over time the Environmental Science B.S. degree (in particular the Social Science Option) and the Natural Resource Conservation B.S. degree developed a significant deal of content overlap, particularly in the areas of environmental planning, policy, and natural resource management. As a result these two programs often competed for students who were seeking expertise in the environmental social sciences.
Environmental Science programs are seeing significant enrollment growth across the country. We are poised to tap into this enrollment growth at the University of Idaho given our prominence as a state that enjoys a tremendous reputation in natural resource and environmental stewardship. As a result we propose a coordinated action where we 1) redesign the Environmental Science (ENVS) B.S. degree to more formally include environmental planning, policy, and natural resource management (in addition to other emphases), while also 2) discontinuing the Natural Resource Conservation (NRC) B.S. degree. In this way, we will be able to 1) streamline undergraduate offerings by eliminating unnecessary redundancy, 2) consolidate our undergraduate programs under the popular Environmental Science degree umbrella, and 3) initiate strategic branding and marketing of the Environmental Science program at the University of Idaho.

Following this rationale, the faculty of the Department of Natural Resources and Society voted in support of this discontinuance proposal with the condition that the proposed changes to the Environmental Science curriculum be adopted concurrent with this proposal. Fifteen of sixteen faculty voted, with the final vote tally on 9/1/2020 in support of this proposal being 12 yes, 0 no, and 3 abstain.

Attach State Form

**CNR - Discont NRC w Budget.pdf**

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dennis Becker</td>
<td><a href="mailto:drbecker@uidaho.edu">drbecker@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Change Type

Description of Change

Academic Level: Undergraduate
College: Natural Resources
Department/Unit: Natural Resources & Society
Effective Catalog Year: 2020-2021
Program Title: Natural Resource Conservation (BSNATRESCCONS)
Program Credits: 120
CIP Code
Curriculum:

Required Course work includes the university requirements (see regulation J-3) and:

- **ECON 202** Principles of Microeconomics 3
- **FOR 221** Principles of Ecology 3
- **FOR 375** Introduction to Spatial Analysis for Natural Resource Management 3
- **NR 101** Exploring Natural Resources 2
- **NRS 125** Introduction to Conservation and Natural Resources 3
- **NRS 235** Society and Natural Resources 3
- **NRS 310** Social Science Methods 4
- **NRS 311** Public Involvement in Natural Resource Management 3
- **NRS 383** Natural Resource and Ecosystem Service Economics 3
- **NRS 387** Environmental Communication Skills 3
- **NRS 498** Internship 1-6
- **STAT 251** Statistical Methods 3

Select one of the following: 3-4

- **MATH 143** College Algebra
- **MATH 160** Survey of Calculus
- **MATH 170** Calculus I

Emphases

Select one of the following emphases: 50-72

- **Conservation Planning and Management**
- **Conservation Science**

Total Hours 87-115

**A. Conservation Planning and Management Emphasis**

To graduate a student must earn an average GPA of 2.30 or higher in all NRS courses.

- **COMM 101** Fundamentals of Oral Communication (or one semester of a foreign language course) 2-4
- **ENGL 207** Persuasive Writing 3
- **ENGL 208** Personal & Exploratory Writing
- **ENVS 225** International Environmental Issues Seminar 3
- **IS 322** Int'l Environmental Governance
- **NRS 364** Politics of the Environment 3
- **NRS 462** Natural Resource Policy 3
- **NRS 475** Local and Regional Environmental Planning 3

https://nextcatalog.uidaho.edu/courseleaf/approve/#
NRS 476  Env Proj Mgmt/Decision Making  4
POLS 101  American National Government  3
or  POLS 275  American State and Local Government  
PSYC 101  Introduction to Psychology  3
SOC 101  Introduction to Sociology  3
Select one of the following:  
  BIOL 102  Biology and Society  
  & 102L  and Biology and Society Lab  
  BIOL 115  Cells and the Evolution of Life  
  & 115L  and Cells and the Evolution of Life Laboratory  
Select one of the following:  
  ENGL 313  Business Writing  
  ENGL 316  Environmental Writing  
  ENGL 317  Technical Writing  
  ENGL 322  Studies in Environmental Literature and Culture  
Select one of the following:  
  AGEC 477  Law Ethics and the Environment  
  ENVS 479  Introduction to Environmental Regulations  
  NRS 386  Managing Complex Environmental Systems  
Select one of the following:  
  CHEM 101  Introduction to Chemistry  
  & 101L  and Introduction to Chemistry Laboratory  
  CHEM 111  General Chemistry I  
  & 111L  and General Chemistry I Laboratory  
  GEOL 101  Physical Geology  
  & 101L  and Physical Geology Lab  
Select one of the following:  
  NRS/FOR 472  Remote Sensing of the Environment  
  NRS/REM 440  Restoration Ecology  
  NRS 478  LIDAR and Optical Remote Sensing Analysis  
Select one of the following:  
  BIOL 314  Ecology and Population Biology  
  FOR 326  Fire Ecology  
  NRS 450  Global Environmental Change  
  REM 340  Ethnobotany  
  REM 429  Landscape Ecology  
  REM 459  Rangeland Ecology  
  & REM 460  and Integrated Field Studies in Rangelands  
  WLF 370  Management and Communication of Scientific Data  
  WLF 440  Conservation Biology  
Contract Courses  12-18
Total Hours

Courses to total 120 credits for this degree

1. Students must submit a contract for a minimum of 12 credits, completed through prior consultation and approval from the faculty advisor. Courses taken to fulfill major requirements above cannot be double counted for contract courses. All contract courses must be upper division (University of Idaho 300-, 400-, or 500-level courses). Students may fulfill their contract requirement by completing a University approved minor, certificate, or approved study abroad experience. Students are encouraged to make choices that strengthen their expertise and demonstrate proficiency in an area of professional interest.

B. Conservation Science Emphasis.

To graduate, a student must earn an average GPA of 2.00 or higher in all courses taught in the College of Natural Resources and complete an approved professional work experience in natural resources.

**NRS 364**  Politics of the Environment  3

or **NRS 462**  Natural Resource Policy

Select one writing course:  3

- **ENGL 207**  Persuasive Writing
- **ENGL 208**  Personal & Exploratory Writing
- **ENGL 313**  Business Writing
- **ENGL 316**  Environmental Writing
- **ENGL 317**  Technical Writing

Select one of the following:  3-4

- **NRS 475**  Local and Regional Environmental Planning
- **NRS 476**  Env Proj Mgmt/Decision Making
- **NRS 490**  Wilderness and Protected Area Management

Select one of the following:  4

- **CHEM 101**  Introduction to Chemistry
- **CHEM 101L**  and Introduction to Chemistry Laboratory
- **CHEM 111**  General Chemistry I
- **CHEM 111L**  and General Chemistry I Laboratory

Select one of the following:  4

- **BIOL 114**  Organisms and Environments
- **BIOL 115**  Cells and the Evolution of Life
- **BIOL 115L**  and Cells and the Evolution of Life Laboratory

Natural Resource Science Restricted Electives  33

Select 33 credits of Natural Resource Science Restricted electives from the following (at least 15 credits must be at the 400-level):

Fishery Science

Select at least 6 credits from the following:

- **FISH 314**  Fish Ecology
- **FISH 315**  Fish Ecology Field Techniques and Methods
FISH 415  Limnology
FISH 418  Fisheries Management
FISH 422  Concepts in Aquaculture
FISH 424  Fish Health Management
FISH 430  Riparian Ecology and Management

Fire Ecology and Management
Select at least 2 credits from the following:
  FOR 326  Fire Ecology
  FOR 433  Fire and Fuel Modeling
  FOR 450  Fire Behavior
  FOR 454  Air Quality, Pollution, and Smoke

Forestry and Renewable Materials
Select at least 9 credits from the following:
  FOR 220  Forest Biology & Dendrology
  FOR 275  Forestry Resource Sampling
  FOR 330  Terrestrial Ecosystem Ecology
  FOR 424  Silviculture Principles and Practices
  FOR 430  Forest Operations
  FOR 431  Low Volume Forest Roads
  FOR 436  Cable Systems
  FOR 462  Watershed Science and Management
  FOR 468  Forest and Plant Pathology
  FOR 472  Remote Sensing of the Environment
  FSP 321  Properties of Forest and Sustainable Products
  FSP 436  Biocomposites
  FSP 438  Introduction to Lignocellulosic Chemistry
  FSP 444  Primary Forest Products Manufacturing
  FSP 450  Biomatl Deterioration/Protect
  FSP 491  Biomaterial Product and Process Development Lab
  FSP/MKTG 495  Product Development and Brand Management

Rangeland Ecology and Management
Select at least 6 credits from the following:
  REM 341  Systematic Botany
  REM 410  Principles of Vegetation Monitoring and Measurement
  REM 411  Wildland Habitat Ecol & Assmnt
  REM 429  Landscape Ecology
  REM 440  Restoration Ecology
  REM 456  Integrated Rangeland Management
  REM 459  Rangeland Ecology
  REM 460  Integrated Field Studies in Rangelands

Wildlife Science
Select at least 6 credits from the following:

- **WLF 314** Ecology of Terrestrial Vertebrates
- **WLF 315** Techniques Laboratory
- **WLF 370** Management and Communication of Scientific Data
- **WLF 440** Conservation Biology
- **WLF 448** Fish and Wildlife Population Ecology
- **WLF 482** Ornithology
- **WLF 492** Wildlife Management

Total Hours: 50-51

**Courses to total 120 credits for this degree**

---

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

*Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.*

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

- Coeur d'Alene
- Moscow

**Student Learning Outcomes**

Have learning outcomes changed?

No Change

Learning Objectives

---

**Conservation Science Option**

Graduates will be able to communicate effectively. In particular, graduates will be able to create and practice effective oral, written, and graphic communication with diverse audiences, especially within interdisciplinary
teams and with stakeholders in the fields of conservation and environmental science, planning, and management. Graduates will be able to critically evaluate and integrate concepts and knowledge from ecological, social, economic and political perspectives. They will master basic concepts, apply key concepts and knowledge from social-ecological sciences, and effectively implement current research technologies (e.g., GPS, Remote Sensing, GIS, statistical packages, data collection and management, and environmental and social assessment techniques) individually and in teams to create, manage, and deliver outcomes relating to conservation and environmental science, planning, and management.

Graduates will be able to integrate and critically assess diverse viewpoints and perspectives that increase their ability to effectively manage natural resources and the environment. Graduates will also be able to demonstrate reflection and expanded levels of empathy as applied to professional goals through both independent and interdisciplinary team-based work in relation to a variety of societal activities and levels of governance. Graduates will be able to define and apply sustainable natural resource management best practices as ethical and socially responsible; they will be able to examine ethical dilemmas and make ethically informed choices. Graduates will also be able to identify and evaluate the role of natural resource policy and regulation, economics, and markets, their development, and the application of frameworks used in conservation planning and management at various scales (from landscape to regional to international levels); they will also be able to connect the historical development of conservation and environmental philosophies with modern day methods that currently drive conservation and environmental policy, management, and planning.

Graduates will be able to synthesize ideas and information to identify, analyze, and address natural resource issues. They will critically evaluate and apply planning and management principles, processes, and best practices (e.g., appropriate theoretical and applied project frameworks, philosophies, policies, decision making, and strategic planning) using appropriate technologies (e.g. geospatial and data collection/analysis/management tools), and develop planning and management skills to productively address conservation and environmental issues across scales.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Supporting Documents

Requires TECC Review No

Reviewer Comments

Key: 223
# Idaho State Board of Education

**Proposal for Discontinuation**

*Fill out if discontinuing an academic program or certificate.*

<table>
<thead>
<tr>
<th>Date of Proposal Submission:</th>
<th>September 1, 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution Submitting Proposal:</td>
<td>University of Idaho</td>
</tr>
<tr>
<td>Name of College, School, or Division:</td>
<td>College of Natural Resources</td>
</tr>
<tr>
<td>Name of Department(s) or Area(s):</td>
<td>Department of Natural Resources and Society</td>
</tr>
</tbody>
</table>

### Program Identification for Proposed Discontinued Program:

<table>
<thead>
<tr>
<th>Title:</th>
<th>Natural Resource Conservation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree/Certificate:</td>
<td>Bachelor’s of Science</td>
</tr>
<tr>
<td>Method of Delivery:</td>
<td>Face-to-Face</td>
</tr>
<tr>
<td>CIP code:</td>
<td></td>
</tr>
<tr>
<td>Proposed Discontinuation Date:</td>
<td>Fall Semester 2021</td>
</tr>
</tbody>
</table>

**Indicate whether this request is a discontinuation of either of the following:**

- [x] Undergraduate Program
- [ ] Graduate Program
- [ ] Undergraduate Certificate
- [ ] Graduate Certificate
- [ ] Other

---

**N/A**

<table>
<thead>
<tr>
<th>Graduate Dean (as applicable)</th>
<th>Date</th>
<th>State Administrator, IDCTE</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Sept 25, 2020</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>College Dean (Institution)</th>
<th>Date</th>
<th>Academic Affairs Program Manager</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>FVP/Chief Fiscal Officer (Institution)</th>
<th>Date</th>
<th>Chief Financial Officer</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Provost/VP for Instruction (Institution)</th>
<th>Date</th>
<th>Chief Academic Officer, OSBE</th>
<th>Date</th>
</tr>
</thead>
</table>

**Revised 3/28/16**
1. Provide rationale for the discontinuance.

The College of Natural Resources is the administrative home of the campus-wide Environmental Science Program at the University of Idaho. Over time the Environmental Science B.S. degree (in particular the Social Science Option) and the Natural Resource Conservation B.S. degree developed a significant deal of content overlap, particularly in the areas of environmental planning, policy, and natural resource management. As a result these two programs often competed for students who were seeking expertise in the environmental social sciences.

Environmental Science programs are seeing significant enrollment growth across the country. We are poised to tap into this enrollment growth at the University of Idaho given our prominence as a state that enjoys a tremendous reputation in natural resource and environmental stewardship. As a result we propose a coordinated action where we 1) redesign the Environmental Science (ENVS) B.S. degree to more formally include environmental planning, policy, and natural resource management (in addition to other emphases), while also 2) discontinuing the Natural Resource Conservation (NRC) B.S. degree. In this way, we will be able to 1) streamline undergraduate offerings by eliminating unnecessary redundancy, 2) consolidate our undergraduate programs under the popular Environmental Science degree umbrella, and 3) initiate strategic branding and marketing of the Environmental Science program at the University of Idaho.

Following this rationale, the faculty of the Department of Natural Resources and Society voted in support of this discontinuance proposal with the condition that the proposed changes to the Environmental Science curriculum be adopted concurrent with this proposal. Fifteen of sixteen faculty voted, with the final vote tally on 9/1/2020 in support of this proposal being 12 yes, 0 no, and 3 abstain.

2. Teach-out Plans/Options for currently enrolled students.

a. Describe teach-out plans for continuing students. Indicate the year and semester in which the last cohort of students was admitted and the final term the college will offer the program.

The last cohort of students entering the NRC program will begin their program in Fall, 2020. We will continue to support the program for six years, or until the last NRC major has graduated, whichever comes first. This is very attainable because all but one of the courses required for the current NRC program will continue to be offered under the ENVS umbrella.

b. Is there an alternative program/major or field of study? If so, please describe.

Yes, the ENVS program has been redesigned to include an emphasis in Policy, Planning and Management. This ENVS degree emphasis will contain all but one of the courses currently included in the discontinued NRC degree. As a result, students will be able to switch to this degree pathway with no disruption.

c. How will continuing students be advised of impending changes and consulted about options or alternatives for attaining their educational goals?

Faculty and Staff who currently support the NRC degree will continue to advise students in both the newly designed ENVS degree emphasis in Policy, Planning, and Management, as well as the
outgoing NRC degree during the teach-out.

3. Identify similar programs offered by other public colleges/universities (Not applicable to CTE programs).

| Similar Programs offered by other Idaho institutions and by institutions in nearby states |
|---|---|---|
| **Institution Name** | **Degree name and Level** | **Program Name and brief description if warranted** |
| Utah State University | B.S. Undergraduate | **Recreation Resource Management:** The Recreation Resource Management degree prepares students for careers in managing outdoor recreation settings. Students who pursue this degree might work in a visitor center or as an interpreter at a public forest or rangeland, state or national park, or wilderness area. Because these jobs require an understanding of both the land itself and the people who visit these areas, this degree offers a solid foundation in both the biological and social sciences. |
| Washington State University | B.S. Undergraduate | **Environmental and Ecosystems Sciences:** The Environmental and Ecosystems Sciences (EES) major at WSU features a broad interdisciplinary science and social science core coupled with a flexible advanced curriculum. This flexibility allows students to choose in-depth studies in an area of interest, minors, and hands-on research and management experience and to prepare for graduate school and management careers. |
| University of Montana | B.S. Undergraduate | **Resource Conservation:** Resource Conservation integrates classroom learning with hands-on field experiences and internships to prepare students for a range of conservation professions. Students develop a foundation in conservation science and then focus on the issues and topics they are most passionate about. Students can emphasize climate and environmental change, community conservation, ecology, environmental policy, international conservation, rangeland management and ecology, water resources, wilderness studies, or wildland fire management, or design their own emphasis working with faculty advisors. |
4. Using the chart below, provide enrollments and numbers of graduates for similar existing programs at your institution and other Idaho public institutions.

<table>
<thead>
<tr>
<th>Existing Similar Programs: Historical enrollments and graduate numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institution and Program Name</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>BSU</td>
</tr>
<tr>
<td>ISU</td>
</tr>
<tr>
<td>UI</td>
</tr>
<tr>
<td>LCSC</td>
</tr>
</tbody>
</table>

5. Describe the impact the discontinuance will have on (a) other programs and (b) the mission of the institution.

Because we are coordinating the discontinuance of this program by integrating the content into the redesigned ENVS program, we anticipate that ENVS will see increased enrollment. We anticipate that the size of ENVS will increase not only by the number of students who traditionally enrolled in the NRC degree, but by greater amounts because ENVS is a more visible degree option for high school students. We expect this change to have a long term positive impact on the land grant mission of the UI because it is likely that more students will be served, and these students will be able to more effectively interact with employers and other stakeholders due to the reconfiguration of the ENVS degree to include the NRC content.

6. Describe the potential faculty and staff reductions or reassignments that would result from the discontinuance.

Faculty and staff will be reassigned to support the newly redesigned ENVS degree. Because the content of the new degree emphasis within ENVS is very similar to the NRC degree being discontinued, we expect that the transfer of expertise to the ENVS program will be seamless.

7. Fiscal Impact. Using the budget template provided, identify amount, if any, which would become available for redirection as a result of discontinuance.

*Please see attached. Thank you.*
Program Resource Requirements.
- Indicate all resources needed including the planned FTE enrollment, projected revenues, and estimated expenditures for the first four fiscal years of the program.
- Include reallocation of existing personnel and resources and anticipated or requested new resources.
- Second and third year estimates should be in constant dollars.
- Amounts should reconcile subsequent pages where budget explanations are provided.
- If the program is contract related, explain the fiscal sources and the year-to-year commitment from the contracting agency(ies) or party(ies).
- Provide an explanation of the fiscal impact of any proposed discontinuance to include impacts to faculty (i.e., salary savings, re-assignments).

I. PLANNED STUDENT ENROLLMENT

<table>
<thead>
<tr>
<th>FY</th>
<th>FY</th>
<th>FY</th>
<th>FY</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTE</td>
<td>Headcount</td>
<td>FTE</td>
<td>Headcount</td>
</tr>
</tbody>
</table>

A. New enrollments

<table>
<thead>
<tr>
<th>FY</th>
<th>FY</th>
<th>FY</th>
<th>FY</th>
</tr>
</thead>
</table>

B. Shifting enrollments

| Total Enrollment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

II. REVENUE

<table>
<thead>
<tr>
<th>FY</th>
<th>FY</th>
<th>FY</th>
<th>FY</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-going</td>
<td>One-time</td>
<td>On-going</td>
<td>One-time</td>
</tr>
</tbody>
</table>

1. New Appropriated Funding Request

2. Institution Funds

3. Federal

4. New Tuition Revenues from Increased Enrollments

5. Student Fees

6. Other (i.e., Gifts)

| Total Revenue | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |

Ongoing is defined as ongoing operating budget for the program which will become part of the base.

One-time is defined as one-time funding in a fiscal year and not part of the base.
### III. EXPENDITURES

<table>
<thead>
<tr>
<th></th>
<th>FY ________</th>
<th>FY ________</th>
<th>FY ________</th>
<th>FY ________</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On-going</td>
<td>One-time</td>
<td>On-going</td>
<td>One-time</td>
</tr>
</tbody>
</table>

#### A. Personnel Costs

1. FTE
   
2. Faculty
   
3. Adjunct Faculty
   
4. Graduate/Undergrad Assistants
   
5. Research Personnel
   
6. Directors/Administrators
   
7. Administrative Support Personnel
   
8. Fringe Benefits
   
9. Other:
   
**Total Personnel and Costs**

$0 $0 $0 $0 $0 $0 $0 $0 $0 $0
### B. Operating Expenditures

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 2023</th>
<th>FY 2024</th>
<th>FY 2025</th>
<th>FY 2026</th>
<th>FY 2027</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Travel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Professional Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Other Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Communications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Materials and Supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Rentals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Materials &amp; Goods for Manufacture &amp; Resale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Miscellaneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Operating Expenditures</strong></td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

### C. Capital Outlay

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 2023</th>
<th>FY 2024</th>
<th>FY 2025</th>
<th>FY 2026</th>
<th>FY 2027</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Library Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Capital Outlay</strong></td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>FY _____</td>
<td>FY _____</td>
<td>FY _____</td>
<td>FY _____</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td><strong>D. Capital Facilities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction or Major Renovation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E. Other Costs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance &amp; Repairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Other Costs</strong></td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURES:</strong></td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td><strong>Net Income (Deficit)</strong></td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td></td>
</tr>
</tbody>
</table>

Budget Notes (specify row and add explanation where needed; e.g., "I.A., B. FTE is calculated using..."): All courses in the discontinued Natural Resources Conservation (NRC) degree will be offered in the newly redesigned Environmental Science (ENVS) degree that will now include an NRC-type emphasis area. As a result, all faculty teaching these courses will continue to teach and advise students in the redesigned ENVS degree. We expect enrollment in these courses to grow due to the popularity of ENVS degrees that have relatively higher visibility to high school students.”
Program Change Request

Date Submitted: 10/21/20 3:05 pm

Viewing: **105 : Environmental Science (BSENV)**

Last edit: 11/30/20 4:04 pm

Catalog Pages Using this Program

[Environmental Science (B.S.Env.S.)](https://nextcatalog.uidaho.edu/courseleaf/approve/)

Faculty Contact

In Workflow

1. 257 Chair
2. 11 Curriculum Committee Chair
3. Registrar's Office
4. Assessment
5. Curriculum Review
6. Registrar's Office
7. Registrar's Office
8. UCC
9. Faculty Senate Chair
10. UFM
11. President's Office
12. State Approval
13. NWCCU

Approval Path

1. 10/21/20 3:50 pm
   Joana Espinoza (jespinoza):
   Approved for 257 Chair
2. 10/21/20 3:53 pm
   Joana Espinoza (jespinoza):
   Approved for 11 Curriculum Committee Chair
3. 11/04/20 5:39 pm
   Amy Kingston (amykingston):
   Approved for Registrar's Office
4. 11/09/20 8:11 am
   Sara Mahuron
<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lee Vierling</td>
<td><a href="mailto:leev@uidaho.edu">leev@uidaho.edu</a></td>
</tr>
</tbody>
</table>

**Change Type**

- Change academic component name (degree, major, option, emphasis, minor, concentration, or specialization)
- Discontinue Option, Emphasis, Concentration, or Specialization within a major

**Description of Change**

Overhauling emphases - see rationale

**Academic Level**
- Undergraduate

**College**
- Natural Resources

**Department/Unit:**
- Environmental Science

**Effective Catalog Year**
- 2021-2022

(sara): Approved for Assessment

5. 11/13/20 1:24 pm
- Rebecca Frost
- (rfrost): Approved for Curriculum Review

6. 11/25/20 10:54 am
- Amy Kingston
- (amykingston): Approved for Registrar's Office

7. 11/25/20 11:19 am
- Amy Kingston
- (amykingston): Approved for Registrar's Office

8. 11/30/20 4:12 pm
- Rebecca Frost
- (rfrost): Approved for UCC
<table>
<thead>
<tr>
<th>Program Title</th>
<th>Environmental Science (BSENV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Credits</td>
<td><strong>120</strong></td>
</tr>
<tr>
<td>CIP Code</td>
<td>03.0104 - Environmental Science.</td>
</tr>
<tr>
<td>Emphasis/Option</td>
<td>CIP Code(s)</td>
</tr>
</tbody>
</table>

Curriculum:

Required course work includes the university requirements (see regulation J-3), the general requirements for the B.S. degree, and:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 114</td>
<td>Organisms and Environments</td>
<td>4</td>
</tr>
<tr>
<td>COMM 101</td>
<td>Fundamentals of Oral Communication (OR one semester of a foreign language course)</td>
<td>2-3</td>
</tr>
<tr>
<td>or COMM 233</td>
<td>Interpersonal Communication</td>
<td></td>
</tr>
<tr>
<td>ENVS 101</td>
<td>Introduction to Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ENVS 102</td>
<td>Field Activities in Environmental Sciences</td>
<td>1</td>
</tr>
<tr>
<td>ENVS 201</td>
<td>Careers in the Env Sciences</td>
<td>3</td>
</tr>
<tr>
<td>ENVS 300</td>
<td>(s) Environmental Sci Seminar</td>
<td>1-16</td>
</tr>
<tr>
<td>ENVS 498</td>
<td>Internship</td>
<td>1</td>
</tr>
<tr>
<td>FOR/NRS 375</td>
<td>Introduction to Spatial Analysis for Natural Resource Management</td>
<td></td>
</tr>
<tr>
<td>or GEOG 385</td>
<td>GIS Primer</td>
<td></td>
</tr>
<tr>
<td>FOR/NRS 472</td>
<td>Remote Sensing of the Environment</td>
<td></td>
</tr>
<tr>
<td>GEOG 301</td>
<td>Meteorology</td>
<td></td>
</tr>
<tr>
<td>GEOG 313</td>
<td>Global Climate Change</td>
<td></td>
</tr>
<tr>
<td>GEOG 401</td>
<td>Climatology</td>
<td></td>
</tr>
<tr>
<td>GEOG 483</td>
<td>Remote Sensing/GIS Integration</td>
<td></td>
</tr>
<tr>
<td>GEOL 361</td>
<td>Geology and the Environment</td>
<td></td>
</tr>
<tr>
<td>MATH 175</td>
<td>Calculus II</td>
<td></td>
</tr>
<tr>
<td>PHYS 111</td>
<td>General Physics I</td>
<td></td>
</tr>
<tr>
<td>&amp; 111L</td>
<td>and General Physics I Lab</td>
<td></td>
</tr>
<tr>
<td>PHYS 112</td>
<td>General Physics II</td>
<td></td>
</tr>
<tr>
<td>&amp; 112L</td>
<td>and General Physics II Lab</td>
<td></td>
</tr>
<tr>
<td>PHYS 211</td>
<td>Engineering Physics I</td>
<td></td>
</tr>
<tr>
<td>&amp; 211L</td>
<td>and Laboratory Physics I</td>
<td></td>
</tr>
<tr>
<td>PHYS 212</td>
<td>Engineering Physics II</td>
<td></td>
</tr>
<tr>
<td>&amp; 212L</td>
<td>and Laboratory Physics II</td>
<td></td>
</tr>
<tr>
<td>SOIL 205</td>
<td>The Soil Ecosystem</td>
<td></td>
</tr>
<tr>
<td>WLF 482</td>
<td>Ornithology</td>
<td></td>
</tr>
<tr>
<td>STAT 251</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>
or **STAT 301**  Probability and Statistics

Choose one course from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL-314</td>
<td>Ecology and Population Biology</td>
</tr>
<tr>
<td>FOR/REM</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>221/WLF-220</td>
<td>Biogeography</td>
</tr>
<tr>
<td>GEOG-410</td>
<td>Geography</td>
</tr>
<tr>
<td>NR-321</td>
<td>Environment</td>
</tr>
<tr>
<td><strong>ENVS 225</strong></td>
<td>International Environmental Issues Seminar</td>
</tr>
<tr>
<td><strong>ENVS 400</strong></td>
<td>Course ENVS 400 Not Found</td>
</tr>
<tr>
<td>AIST 314</td>
<td>Tribal Sovereignty and Federal Policy</td>
</tr>
<tr>
<td>ENVS 479</td>
<td>Introduction to Environmental Regulations</td>
</tr>
<tr>
<td>ENVS 577</td>
<td>Law Ethics and the Environment</td>
</tr>
<tr>
<td>IS-322</td>
<td>Int’l Environmental Governance</td>
</tr>
<tr>
<td>NRS-311</td>
<td>Public Involvement in Natural Resource Management</td>
</tr>
<tr>
<td>NRS/POLS-364</td>
<td>Politics of the Environment</td>
</tr>
<tr>
<td>NRS/POLS-462</td>
<td>Natural Resource Policy</td>
</tr>
</tbody>
</table>

Choose one course from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC-451</td>
<td>Applied Environmental and Natural Resource Economics</td>
</tr>
<tr>
<td>AIST-344</td>
<td>Indigenous Ways of Knowing</td>
</tr>
<tr>
<td>ANTH/SOC-465</td>
<td>Environmental Justice</td>
</tr>
<tr>
<td>HIST-424</td>
<td>American Environmental History</td>
</tr>
<tr>
<td><strong>ECON 202</strong></td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td><strong>ECON 272</strong></td>
<td>Foundations of Economic Analysis</td>
</tr>
<tr>
<td>GEOG-345</td>
<td>Global Economic Geography</td>
</tr>
<tr>
<td>NRS/FOR-235</td>
<td>Society and Natural Resources</td>
</tr>
<tr>
<td>NRS-383</td>
<td>Natural Resource and Ecosystem Service Economics</td>
</tr>
<tr>
<td>SOC-350</td>
<td>Food, Culture, and Society</td>
</tr>
</tbody>
</table>

Water—one course from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASM-315</td>
<td>Irrigation Systems and Water Management</td>
</tr>
<tr>
<td>BE-453</td>
<td>Northwest Climate and Water Resources Change</td>
</tr>
</tbody>
</table>

Choose one course from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEOL 309</strong></td>
<td>Ground Water Hydrology</td>
</tr>
</tbody>
</table>

Sustainability and Integration—one course from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS-415</td>
<td>Environmental Lifecycle Assessment</td>
</tr>
<tr>
<td>ENVS-428</td>
<td>Pollution-Prevention</td>
</tr>
<tr>
<td>ENVS-484</td>
<td>History of Energy</td>
</tr>
<tr>
<td>ENVS-485</td>
<td>Energy Efficiency and Conservation</td>
</tr>
<tr>
<td>FS-436</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>GEOG-435</td>
<td>Climate Change Mitigation</td>
</tr>
<tr>
<td>ENVS-386</td>
<td>Managing Complex Environmental Systems</td>
</tr>
<tr>
<td>REM-456</td>
<td>Integrated-Rangeland Management</td>
</tr>
</tbody>
</table>
Technical—three courses from the following:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL-115</td>
<td>Cells and the Evolution of Life</td>
</tr>
<tr>
<td>&amp; 115L</td>
<td>and Cells and the Evolution of Life Laboratory</td>
</tr>
<tr>
<td>BIOL-250</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>BIOL-483</td>
<td>Mammalogy</td>
</tr>
<tr>
<td>BIOL-489</td>
<td>Herpetology</td>
</tr>
<tr>
<td>CHEM-253</td>
<td>Quantitative Analysis</td>
</tr>
<tr>
<td>&amp; CHEM-254</td>
<td>and Quantitative Analysis: Lab</td>
</tr>
<tr>
<td>CHEM-275</td>
<td>Carbon Compounds</td>
</tr>
<tr>
<td>CHEM-277</td>
<td>Organic Chemistry</td>
</tr>
<tr>
<td>ENVS 450</td>
<td>Environmental Hydrology</td>
</tr>
<tr>
<td>FISH 415</td>
<td>Limnology</td>
</tr>
<tr>
<td>FOR 462</td>
<td>Watershed Science and Management</td>
</tr>
</tbody>
</table>

Choose one course from the following:  

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG-100</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>&amp; 100L</td>
<td>and Physical Geography Lab</td>
</tr>
<tr>
<td>GEOL-101</td>
<td>Physical Geology</td>
</tr>
<tr>
<td>&amp; 101L</td>
<td>and Physical Geology Lab</td>
</tr>
<tr>
<td>GEOL-111</td>
<td>Physical Geology for Science Majors</td>
</tr>
<tr>
<td>&amp; 111L</td>
<td>and Physical Geology for Science Majors Lab</td>
</tr>
<tr>
<td>SOIL-205</td>
<td>The Soil Ecosystem</td>
</tr>
<tr>
<td>&amp; SOIL-206</td>
<td>and The Soil Ecosystem Lab</td>
</tr>
<tr>
<td>ENVS 497</td>
<td>Senior Research</td>
</tr>
<tr>
<td>ENGL 316</td>
<td>Environmental Writing</td>
</tr>
<tr>
<td>or ENGL 317</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>or ENGL 318</td>
<td>Science Writing</td>
</tr>
<tr>
<td>PHIL 452</td>
<td>Environmental Philosophy</td>
</tr>
<tr>
<td>NRS 476</td>
<td>Env Proj Mgmt/Decision Making</td>
</tr>
</tbody>
</table>

Emphasis

Select one of the following options:  

<table>
<thead>
<tr>
<th>Option</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select one of the following emphases:</td>
<td>53-68</td>
</tr>
</tbody>
</table>

Ecological Restoration

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 428</td>
<td>Pollution Prevention</td>
</tr>
<tr>
<td>ENV5-429</td>
<td>Environmental Audit</td>
</tr>
<tr>
<td>GEOL-375</td>
<td>Geology of National Parks</td>
</tr>
<tr>
<td>REM 407</td>
<td>GIS Application in Fire Ecology and Management</td>
</tr>
<tr>
<td>REM 459</td>
<td>Rangeland Ecology</td>
</tr>
</tbody>
</table>

Policy, Planning, and Management

Culture and Communication

Integrated Sciences

Sustainability Sciences (Online only)
A. Biological Science Option
This option is suitable for students wishing to pursue technically oriented careers in environmental professions such as natural resource management, bioremediation, and environmental impact analysis.

**Ecological Restoration Emphasis**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 250</td>
<td>General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 115</td>
<td>Cells and the Evolution of Life</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 115L</td>
<td>Cells and the Evolution of Life Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 111</td>
<td>General Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 111L</td>
<td>General Chemistry I Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>CHEM 112</td>
<td>General Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 112L</td>
<td>General Chemistry II Lab</td>
<td>2</td>
</tr>
<tr>
<td>NRS 310</td>
<td>Social Science Methods</td>
<td>4</td>
</tr>
<tr>
<td>PHIL 452</td>
<td>Environmental Philosophy</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Choose one course from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>ENGL 316</td>
<td>Environmental Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 317</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>ENGL 318/JAMM 328</td>
<td>Science Writing</td>
<td></td>
</tr>
<tr>
<td>NRS 387</td>
<td>Environmental Communication Skills</td>
<td>3</td>
</tr>
<tr>
<td>WLF 370</td>
<td>Management and Communication of Scientific Data</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Choose one course from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>ENGL 322</td>
<td>Studies in Environmental Literature and Culture</td>
<td>3</td>
</tr>
<tr>
<td>HIST 424</td>
<td>American Environmental History</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Choose one course from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>GEOG 313</td>
<td>Global Climate Change</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 410</td>
<td>Biogeography</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 435</td>
<td>Climate Change Mitigation</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 455</td>
<td>Societal Resilience and Adaptation to Climate Change</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Choose one course from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>ENVS/NRS 386</td>
<td>Managing Complex Environmental Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 420</td>
<td>Land, Resources, and Environment</td>
<td>3</td>
</tr>
<tr>
<td>NRS 235</td>
<td>Society and Natural Resources</td>
<td>3</td>
</tr>
<tr>
<td>NRS 311</td>
<td>Public Involvement in Natural Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>SOC 466</td>
<td>Climate Change and Society</td>
<td>3</td>
</tr>
<tr>
<td>SOC 340</td>
<td>Environmental Sociology and Globalization</td>
<td>3</td>
</tr>
</tbody>
</table>
Choose one course from the following:  

ENVS 479  
Introduction to Environmental Regulations  

GEOG 488  
Geography of Energy Systems  

NRS/POLS 364  
Politics of the Environment  

NRS/POLS 462  
Natural Resource Policy  

NRS 488  
NEPA in Policy and Practice  

Choose one course from the following:  

MATH 160  
Survey of Calculus  

Select 4 electives from at least two of the following areas:  

Plant Protection:  

ENT-322  
General and Applied Entomology  

PLSC-338  
Weed Control  

PLSC-410  
Invasive Plant Biology  

PLP-415  
Plant Pathology  

SOIL-446  
Soil Fertility  

Animal Ecology:  

WLF-314  
Ecology of Terrestrial Vertebrates  

WLF-315  
Techniques Laboratory  

WLF-440  
Conservation Biology I  

WLF-448  
Fish and Wildlife Population Ecology I  

Aquatic Ecology (Take all three courses):  

FISH-314  
Fish Ecology  

FISH-415  
Limnology  

FISH-430  
Riparian Ecology and Management  

Forest and Range Systems:  

FOR-330  
Terrestrial Ecosystem Ecology  

FOR-426  
Global Fire Ecology and Management  

REM-411  
Wildland Habitat EcoL & Assmnt  

REM-429  
Landscape Ecology  

MATH 170  
Calculus I  

Choose one sequence from the following:  

GEOG 100  
Physical Geography  

& 100L  
and Physical Geography Lab  

GEOL 111  
Physical Geology for Science Majors  

& GEOL 101L  
and Physical Geology Lab  

SOIL 205  
The Soil Ecosystem  

& SOIL 206  
and The Soil Ecosystem Lab  

Choose one course from the following:  

FOR/REM 221  
Principles of Ecology  

WLF 220  
Principles of Ecology  

Choose one course from the following:  


ENVS 428  Pollution Prevention
ENVS 429  Environmental Audit
FS 409  Princ Environmental Toxicology
SOIL-425  Microbial-Ecology
SOIL-438  Pesticides in the Environment
SOIL-454  Pedology

Water:
ENVS-450  Environmental Hydrology
FOR-462  Watershed Science and Management
GEOL-309  Ground-Water Hydrology
GEOL-410  Groundwater Field Methods
HYDR 412  Environmental Hydrogeology

Geospatial Tools (take at least 3 of the 6 courses listed below):
FOR-472  Remote Sensing of the Environment
GEOG-385  GIS-Primer
GEOG-424  Hydro-Apps/GIS&Remote Sensing
GEOG-475  Intermediate-GIS
GEOG-483  Remote Sensing/GIS-Integration
LARC-495  GIS-Applications in Land-Planning-2

Climate Change and Ecosystems (Take all three courses):
GEOL 361  Geology and the Environment
INDT 364  Hazardous Materials

Choose one course from the following: 3

BE 433  Bioremediation
SOIL 422  Environmental Soil Chemistry
SOIL 452  Environmental Water Quality

Choose 3 credits from the following: 3

FISH 496  Intro to Aquatic Restoration
PLSC 419  Plant Community Restoration Methods
REM 280  Introduction to Wildland Restoration
REM/NRS 440  Restoration Ecology
REM 459  Rangeland-Ecology

Choose one course from the following: 3

AGEC 477  Law Ethics and the Environment
NRS 311  Public Involvement in Natural Resource Management
NRS 383  Natural Resource and Ecosystem Service Economics

Total Hours 58-59

Courses to total 120 credits for this degree

1 Either WLF 440%7C or WLF 448%7C may be used as a depth elective.
B. Physical Science Option

This option is suitable for students wishing to pursue technical careers in environmental professions such as air, soil, and water pollution abatement, hazardous waste management, waste minimization, and ecological restoration:

Policy Planning and Management

Select 4 electives from at least two of the following areas:

Water:
- ENVS 450 Environmental Hydrology
- FOR 462 Watershed Science and Management
- GEOL 309 Ground-Water Hydrology
- GEOL 410 Groundwater Field Methods
- HYDR 412 Environmental Hydrogeology

Hazardous Waste:
- BE 433 Bioremediation
- BE 452 Environmental Water Quality
- BIOL 380 Biochemistry†
- CHEM 418 Environmental Chemistry
- ENVS 479 Introduction to Environmental Regulations
- FS 409 Princ Environmental Toxicology

Geology:
- GEOL 335 Geomorphology
- GEOL 361 Geology and the Environment
- GEOL 422 Principles of Geophysics
- GEOL 423 Principles of Geochemistry

Mathematics and Statistics:
- MATH 175 Calculus II
- MATH 275 Calculus III
- MATH 310 Ordinary Differential Equations
- STAT 431 Statistical Analysis

Soils:
- CHEM 418 Environmental Chemistry
- SOIL 415 Soil and Environmental Physics
- SOIL 422 Environmental Soil Chemistry
- SOIL 454 Pedology

Economics and Management (take both courses):
- OM 378 Project Management
- ENVS 428 Pollution Prevention
Geospatial Tools (take at least 3 of the 4 courses):

- FOR 472 Remote Sensing of the Environment
- GEOG 385 GIS Primer
- GEOG 424 Hydro-Apps/GIS&Remote Sensing
- GEOG 483 Remote Sensing/GIS Integration

Climate Change and Emissions Reduction:

- ENVS 485 Energy Efficiency and Conservation

ENVS/NRS 475 Local & Regional Env Planning 3
NRS 235 Society and Natural Resources 3
NRS 310 Social Science Methods 4
NRS 311 Public Involvement in Natural Resource Management 3
NRS/POLS 364 Politics of the Environment 3
NRS 383 Natural Resource and Ecosystem Service Economics 3
NRS 387 Environmental Communication Skills 3
NRS/POLS 462 Natural Resource Policy 3
NRS 476 Env Proj Mgmt/Decision Making 4

Choose one course sequence from the following: 4

- CHEM 101 Introduction to Chemistry
  & 101L and Introduction to Chemistry Laboratory
- CHEM 111 General Chemistry I
  & 111L and General Chemistry I Laboratory
- BIOL 114 Organisms and Environments

Choose one course sequence from the following: 4-5

- GEOG 100 Physical Geography
  & 100L and Physical Geography Lab
- GEOL 101 Physical Geology
  & 101L and Physical Geology Lab
- GEOL 111 Physical Geology for Science Majors
  & GEOL 101L and Physical Geology Lab
- SOIL 205 The Soil Ecosystem
  & SOIL 206 and The Soil Ecosystem Lab

Choose one course from the following: 3-4

- MATH 143 College Algebra
- MATH 160 Survey of Calculus
- MATH 170 Calculus I

Choose one course from the following: 3

- GEOG 313 Global Climate Change
- GEOG 401 Climatology
- GEOG 435 Climate Change Mitigation
- FOR/REM 221 Principles of Ecology
- WLF 220 Principles of Ecology
Choose one course from the following: 3

ENGL 316  Environmental Writing
ENGL 317  Technical Writing
ENGL 318/JAMM 328  Science Writing
WLF 370  Management and Communication of Scientific Data

Choose one course from the following: 3-4

BIOL 314  Ecology and Population Biology
FOR 326  Fire Ecology
NRS/REM 440  Restoration Ecology
REM 429  Landscape Ecology
REM 459  Rangeland Ecology
REM 460  Integrated Field Studies in Rangelands
WLF 440  Conservation Biology

Choose one course from the following: 3

AGEC 477  Law Ethics and the Environment
ENV 386 & NRS 386  Managing Complex Environmental Systems
& Managing Complex Environmental Systems
IS 322  Int’l Environmental Governance

Choose one course from the following: 3-4

NRS 472  Remote Sensing of the Environment
NRS 478  LIDAR and Optical Remote Sensing Analysis

Total Hours 55-59

Courses to total 120 credits for this degree

C. Physical Science - Option This option is only available to students in Coeur d’Alene and Idaho Falls: Culture and Communication

Select 4 electives from at least two of the following areas: 20

Water:

CE 433  Water Quality Management
ENVS 450  Environmental Hydrology
FISH 540  Wetland Restoration
GEOG 309  Ground Water Hydrology

Mathematics and Statistics:

MATH 175  Calculus II
MATH 275  Calculus III
MATH 310  Ordinary Differential Equations
STAT 431  Statistical Analysis

Management Tools (take three of the following):

ENVS 415  Environmental Lifecycle Assessment
ENVS 428  Pollution Prevention
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 385</td>
<td>GIS Primer</td>
</tr>
<tr>
<td>GEOG 475</td>
<td>Intermediate-GIS</td>
</tr>
<tr>
<td>GEOG 424</td>
<td>Hydro-Apps/GIS &amp; Remote Sensing</td>
</tr>
<tr>
<td>INDT 364</td>
<td>Hazardous Materials</td>
</tr>
<tr>
<td>INDT 448</td>
<td>Project and Program Management</td>
</tr>
<tr>
<td></td>
<td>Environmental Policy and Regulations (Take three of the following):</td>
</tr>
<tr>
<td>NRS 572</td>
<td>Human Dimensions of Restoration Ecology</td>
</tr>
<tr>
<td>ENVS 429</td>
<td>Environmental Audit</td>
</tr>
<tr>
<td>ENVS 436</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>ENVS 479</td>
<td>Introduction to Environmental Regulations</td>
</tr>
<tr>
<td>ENVS 482</td>
<td>Natural Resource Policy and Law</td>
</tr>
<tr>
<td></td>
<td>Energy Systems:</td>
</tr>
<tr>
<td>GEOG 453</td>
<td>Water and Energy Systems</td>
</tr>
<tr>
<td>ENVS 484</td>
<td>History of Energy</td>
</tr>
<tr>
<td>ENVS 485</td>
<td>Energy Efficiency and Conservation</td>
</tr>
<tr>
<td>INDT 415</td>
<td>Impact of Technology on Society</td>
</tr>
<tr>
<td>INDT 434</td>
<td>Power Generation and Distribution</td>
</tr>
<tr>
<td></td>
<td>Sustainability Science:</td>
</tr>
<tr>
<td>ENVS 415</td>
<td>Environmental Lifecycle Assessment</td>
</tr>
<tr>
<td>ENVS 428</td>
<td>Pollution Prevention</td>
</tr>
<tr>
<td>ENVS 436</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>FS 409</td>
<td>Princ Environmental Toxicology</td>
</tr>
<tr>
<td>INDT 457</td>
<td>Lean to Green Sustainable-Technology</td>
</tr>
<tr>
<td>ENGL 322</td>
<td>Studies in Environmental Literature and Culture</td>
</tr>
<tr>
<td>ENVS/NRS 386</td>
<td>Managing Complex Environmental Systems</td>
</tr>
<tr>
<td>NRS 235</td>
<td>Society and Natural Resources</td>
</tr>
<tr>
<td>PHIL 352</td>
<td>Philosophy, Politics, and Economics</td>
</tr>
<tr>
<td>HIST 424</td>
<td>American Environmental History</td>
</tr>
<tr>
<td>PHIL 452</td>
<td>Environmental Philosophy</td>
</tr>
</tbody>
</table>

Choose one course sequence from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>Introduction to Chemistry</td>
</tr>
<tr>
<td>&amp; 101L</td>
<td>and Introduction to Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 111</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>&amp; 111L</td>
<td>and General Chemistry I Laboratory</td>
</tr>
<tr>
<td>BIOL 114</td>
<td>Organisms and Environments</td>
</tr>
</tbody>
</table>

Choose one course sequence from the following:  

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 100</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>&amp; 100L</td>
<td>and Physical Geography Lab</td>
</tr>
<tr>
<td>GEOL 101</td>
<td>Physical Geology</td>
</tr>
<tr>
<td>&amp; 101L</td>
<td>and Physical Geology Lab</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>GEOL 111 &amp; GEOL 101L</td>
<td>Physical Geology for Science Majors and Physical Geology Lab</td>
</tr>
<tr>
<td>SOIL 205 &amp; SOIL 206</td>
<td>The Soil Ecosystem and The Soil Ecosystem Lab</td>
</tr>
<tr>
<td>MATH 143</td>
<td>College Algebra</td>
</tr>
<tr>
<td>MATH 160</td>
<td>Survey of Calculus</td>
</tr>
<tr>
<td>MATH 170</td>
<td>Calculus I</td>
</tr>
<tr>
<td>GEOG 313</td>
<td>Global Climate Change</td>
</tr>
<tr>
<td>FOR/REM 221</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>WLF 220</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>ENGL 316</td>
<td>Environmental Writing</td>
</tr>
<tr>
<td>ENGL 317</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>ENGL 318/JAMM 328</td>
<td>Science Writing</td>
</tr>
<tr>
<td>GEOG 420</td>
<td>Land, Resources, and Environment</td>
</tr>
<tr>
<td>SOC 340</td>
<td>Environmental Sociology and Globalization</td>
</tr>
<tr>
<td>SOC 341</td>
<td>Science, Technology, and Society</td>
</tr>
<tr>
<td>SOC/ANTH 350</td>
<td>Food, Culture, and Society</td>
</tr>
<tr>
<td>PHIL 351</td>
<td>Philosophy of Science</td>
</tr>
<tr>
<td>PHIL 417</td>
<td>Philosophy of Biology</td>
</tr>
<tr>
<td>PHIL 450</td>
<td>Ethics in Science</td>
</tr>
<tr>
<td>NRS/POLS 462</td>
<td>Natural Resource Policy</td>
</tr>
<tr>
<td>POLS/NRS 364</td>
<td>Politics of the Environment</td>
</tr>
<tr>
<td>COMM 410</td>
<td>Conflict Management</td>
</tr>
<tr>
<td>NRS 387</td>
<td>Environmental Communication Skills</td>
</tr>
<tr>
<td>GEOG 435</td>
<td>Climate Change Mitigation</td>
</tr>
<tr>
<td>GEOG 455</td>
<td>Societal Resilience and Adaptation to Climate Change</td>
</tr>
<tr>
<td>SOC 342</td>
<td>Gender and Science</td>
</tr>
<tr>
<td>SOC 346</td>
<td>Responding to Risk</td>
</tr>
<tr>
<td>SOC 465</td>
<td>Environmental Justice</td>
</tr>
<tr>
<td>SOC 466</td>
<td>Climate Change and Society</td>
</tr>
</tbody>
</table>

Total Hours: 53-55

Courses to total 120 credits for this degree
D. Social Science Option

This option is suitable for students wishing to pursue careers in environmental professions such as environmental regulation, land use planning, environmental administration, and as a pre-law program for environmental law: Integrated Sciences

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 309</td>
<td>Rhetorical Style</td>
<td>3</td>
</tr>
<tr>
<td>or ENGL 202</td>
<td>Intro to Professional Writing</td>
<td></td>
</tr>
<tr>
<td>or PHIL 201</td>
<td>Critical Thinking</td>
<td></td>
</tr>
<tr>
<td>SOC 309</td>
<td>Social Science Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>or NRS 310</td>
<td>Social Science Methods</td>
<td></td>
</tr>
<tr>
<td>NRS 310</td>
<td>Social Science Methods</td>
<td>4</td>
</tr>
<tr>
<td>PHIL 452</td>
<td>Environmental Philosophy</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one course sequence from the following: 3-4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 101</td>
<td>Introduction to Chemistry</td>
</tr>
<tr>
<td>&amp; 101L</td>
<td>and Introduction to Chemistry Laboratory</td>
</tr>
<tr>
<td>CHEM 111</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>&amp; 111L</td>
<td>and General Chemistry I Laboratory</td>
</tr>
<tr>
<td>BIOL 114</td>
<td>Organisms and Environments</td>
</tr>
</tbody>
</table>

Choose one course sequence form the following: 4-5

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 100</td>
<td>Physical Geography</td>
</tr>
<tr>
<td>&amp; 100L</td>
<td>and Physical Geography Lab</td>
</tr>
<tr>
<td>GEOL 101</td>
<td>Physical Geology</td>
</tr>
<tr>
<td>&amp; 101L</td>
<td>and Physical Geology Lab</td>
</tr>
<tr>
<td>GEOL 111</td>
<td>Physical Geology for Science Majors</td>
</tr>
<tr>
<td>&amp; 111L</td>
<td>and Physical Geology for Science Majors Lab</td>
</tr>
<tr>
<td>SOIL 205</td>
<td>The Soil Ecosystem</td>
</tr>
<tr>
<td>&amp; 206</td>
<td>and The Soil Ecosystem Lab</td>
</tr>
</tbody>
</table>

Choose one course from the following: 3-4

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 143</td>
<td>College Algebra</td>
</tr>
</tbody>
</table>

Select 5 depth electives from one of the following areas: 15

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 160</td>
<td>Survey of Calculus</td>
</tr>
<tr>
<td>MATH 170</td>
<td>Calculus I</td>
</tr>
</tbody>
</table>

Choose one course from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOR/REM 221</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>WLF 220</td>
<td>Principles of Ecology</td>
</tr>
</tbody>
</table>

Choose one course from the following: 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL 316</td>
<td>Environmental Writing</td>
</tr>
<tr>
<td>ENGL 317</td>
<td>Technical Writing</td>
</tr>
<tr>
<td>ENGL 318/JAMM 328</td>
<td>Science Writing</td>
</tr>
</tbody>
</table>
NRS 387  Environmental Communication Skills
FOR 484  Forest Policy and Administration
GEOG 330  Urban Geography
POL 364  Politics of the Environment
POL 451  Public Administration
POL 454  Public Organization Theory
POL 462  Natural Resource Policy
PSYC 416  Industrial/Organizational Psychology
WLF 370  Management and Communication of Scientific Data

Choose one course from the following: 3
GEOG 313  Global Climate Change
GEOG 411  Natural Hazards and Society
GEOG 435  Climate Change Mitigation
GEOG 435  Climate Change Mitigation
LARC 380  Water Conservation Technologies
LARC 480  The Resilient Landscape
GEOG 455  Societal Resilience and Adaptation to Climate Change
NRS 383  Natural Resource and Ecosystem Service Economics

Choose one course from the following: 3
ENVS/NRS 386  Managing Complex Environmental Systems
ENVS 420  Intro to Bioregional Planning
ENVS 423  Planning Sustainable Places
GEOG 420  Land, Resources, and Environment
NRS 235  Society and Natural Resources
NRS 311  Public Involvement in Natural Resource Management
SOC 466  Climate Change and Society
SOC 465  Environmental Justice

Choose one course from the following: 3
AGEC 477  Law Ethics and the Environment
NRS/POLS 364  Politics of the Environment
NRS/POLS 462  Natural Resource Policy
ENVS 479  Introduction to Environmental Regulations
PHIL 470  Philosophy of Law
POL 364  Politics of the Environment
POL 467  Constitutional Law
POL 468  Civil Liberties
GEOG 488  Geography of Energy Systems
NRS 488  NEPA in Policy and Practice

Students must also take one additional upper division course across five different topic area bins 1 15
- Advanced Technical
- Climate Change

https://nextcatalog.uidaho.edu/courseleaf/approve/#
### ACEF 482
Enterprise Accounting

### COMM 410
Conflict Management

### NRS 386
Managing Complex Environmental Systems

#### Communication

**ARCH 151**
Introduction to the Built Environment

**ARCH 266**
Materials and Methods

**ARCH 463**
Environmental Control Systems I

**ARCH 464**
Environmental Control Systems II

#### Contaminants

**ENVS 479**
Introduction to Environmental Regulations

**ENVS 484**
History of Energy

**ENVS 485**
Energy Efficiency and Conservation

#### Earth Science

Ecology

Economics

Energy

Geospatial

Human Dimensions

Planning

Policy

Sustainability

Water

### Students must also complete one minor, certificate, or accredited semester long academic program. 2 12-18

### Total Hours 59-68

1 Please contact the department to see a "Class list by Topic" spreadsheet of available courses.

2 Please contact the department for approved minors, certificates and academic programs.

Courses to total 120 credits for this degree

---

**-E. Sustainability Sciences (Online only) Biophysical Science Option**

This option is intended for students at a distance wishing to pursue technically oriented careers in environmental professions such as natural resource management, bioremediation, and environmental impact analysis. Students need to work closely with an academic advisor to plan the courses needed to fulfill degree requirements which are not available through distance delivery.

**BIOL 115**
Cells and the Evolution of Life 3

**BIOL 115L**
Cells and the Evolution of Life Laboratory 1

**BIOL 250**
GeneralMicrobiology 3

or **PHYS 111**
General Physics I

**CHEM 111**
General Chemistry I 3

**CHEM 111L**
General Chemistry I Laboratory 1
CHEM 112  General Chemistry II  
CHEM 112L General Chemistry II Lab  

Select one course sequence from the following:  

PHYS 111  General Physics I  
& 111L  and General Physics I Lab  

PHYS 211  Engineering Physics I  
& 211L  and Laboratory Physics I  

Choose one course from the following:  

MATH 160  Survey of Calculus  
MATH 170  Calculus I  

Earth Science - Choose one course sequence from the following:  

GEOG 100  Physical Geography  
& 100L  and Physical Geography Lab  

GEOG 101  Physical Geology  
& 101L  and Physical Geology Lab  

Select 48 credits of electives, including at least one course from each of the following areas (all are available online):  

GEOL 111  Physical Geology for Science Majors  
& GEOL 101L  and Physical Geology Lab  

SOIL 205  The Soil Ecosystem  
& SOIL 206  and The Soil Ecosystem Lab  

Ecology - Choose one course from the following:  

FOR/REM 221  Principles of Ecology  
WLF 220  Principles of Ecology  
BIOL 314  Ecology and Population Biology  

Writing and Communication - Choose one course from the following:  

ENGL 316  Environmental Writing  
ENGL 317  Technical Writing  
ENGL 318/JAMM 328  Science Writing  
NRS 387  Environmental Communication Skills  
WLF 370  Management and Communication of Scientific Data  

Environmental Ethics and Philosophy:  

PHIL 452  Environmental Philosophy  

Select five of the following depth areas, and take at least 6 advisor-approved credits within each of the selected depth areas.  

a. Mathematics, Physics, and Statistics  

BE 452  Environmental Water Quality  
MATH 175  Calculus II  
MATH 275  Calculus III  
MATH 310  Ordinary Differential Equations  
PHYS 112  General Physics II
or PHYS 212  Engineering Physics II
PHYS 112L  General Physics II Lab
or PHYS 212L  Laboratory Physics II
STAT 301  Probability and Statistics
STAT 431  Statistical Analysis
b. Social Dimensions:
ENVS 423  Planning Sustainable Places
ENVS 428  Pollution Prevention
ENVS 484  History of Energy
FCS 411  Global Nutrition
INDT 415  Impact of Technology on Society
IS 322  Int'l Environmental Governance
NRS 235  Society and Natural Resources
c. Management Tools
ENVS 415  Environmental Lifecycle Assessment
ENVS 420  Intro to Bioregional Planning
ENVS 428  Pollution Prevention
ENVS 430  Planning Theory and Process
INDT 364  Hazardous Materials
INDT 448  Project and Program Management
d. Geospatial Tools:
GEOG 385  GIS Primer
GEOG 424  Hydro Apps/GIS&Remote Sensing
GEOG 475  Intermediate GIS
NRS/FOR 472  Remote Sensing of the Environment
NRS 478  LIDAR and Optical Remote Sensing Analysis
REM 407  GIS Application in Fire Ecology and Management
e. Environmental Policy and Regulations:
AGEC 477  Law Ethics and the Environment
ENVS 429  Environmental Audit
ENVS/FSP 436  Principles of Sustainability
ENVS 479  Introduction to Environmental Regulations
ENVS 482  Natural Resource Policy and Law
NRS 488  NEPA in Policy and Practice
POLS/NRS 462  Natural Resource Policy
f. Energy Systems:
GEOG 453  Water and Energy Systems
ENVS 484  History of Energy
FCS-411  Global Nutrition
ENVS 485  Energy Efficiency and Conservation
INDT 415  Impact of Technology on Society
INDT 434  Power Generation and Distribution

  g. Sustainability Science:

  ENVS 420  Intro to Bioregional Planning
  ENVS 415  Environmental Lifecycle Assessment
  ENVS 423  Planning Sustainable Places
  ENVS 428  Pollution Prevention
  ENVS/FS 436  Principles of Sustainability
  FS 409  Princ Environmental Toxicology
  FS 436  Principles of Sustainability
  GEOG 313  Global Climate Change
  INDT 457  Lean to Green Sustainable Technology

  h. Water and Soils:

  SOIL 452  Environmental Water Quality
  ENVS 450  Environmental Hydrology
  SOIL 205  The Soil Ecosystem
  SOIL 438  Pesticides in the Environment
  SOIL 446  Soil Fertility

  i. Restoration and Remediation:

  BE 433  Bioremediation
  FISH 496  Intro to Aquatic Restoration
  FOR 426  Global Fire Ecology and Management
  REM 221  Principles of Ecology
  PLSC 419  Plant Community Restoration Methods
  REM 280  Introduction to Wildland Restoration
  REM 410  Principles of Vegetation Monitoring and Measurement
  REM/NRS 440  Restoration Ecology
  REM 459  Rangeland Ecology
  SOIL 422  Environmental Soil Chemistry
  SOIL 452  Environmental Water Quality
  WLF 440  Conservation Biology

Total Hours 67-68

1 Courses listed more than once cannot double count across depth areas.
Courses to total 120 credits for this degree.

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

https://nextcatalog.uidaho.edu/courseleaf/approve/
Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes No

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

Yes

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:
- Coeur d'Alene
- Moscow

Student Learning Outcomes

Have learning outcomes changed?

Yes, more than 25%

Learning Objectives

Sustainability Sciences Emphasis

Biological Science Option Students will be able to apply environmental science principles in biophysical within biological, physical, and social science contexts breadth areas, with a specialization to address societally relevant issues in apply knowledge of environmental science, management, and mitigation.

mitigation in at least one area: Students will be able to communicate environmental science, management, science principles and mitigation principles and applications effectively through writing, oral, and graphical writing and oral presentations.

Students will be able to demonstrate integrative environmental research and/or problem solving expertise that applies the scientific method for design, data collection, analysis, and reporting.

Students will be able to demonstrate how integrate technical expertise with socio-cultural and why fundamentals political dimensions of biophysical and social science contribute to environmental sustainability at the local, national, and international level.

Policy, Planning, and Management Emphasis

problem-solving:

Social Science Option Students will be able to apply environmental science demonstrate the knowledge of foundational principles in biophysical and social science contexts to address societally relevant issues in environmental science, management, and mitigation.

the field of Environmental Science: Students will be able to communicate environmental science, management, and mitigation principles and applications effectively through writing, oral, and graphical presentations.
Students will be able to demonstrate integrative environmental research and/or problem solving expertise that applies the scientific method for design, data collection, analysis, and reporting.

Students will be able to demonstrate how core principles of policy and planning work within societal frameworks to complement and advance management decisions in the field of environmental science.

Ecological Restoration Emphasis
Students will be able to apply environmental science principles in biophysical and social science contexts to address societally relevant issues in environmental science, management, and mitigation.

Students will be able to communicate environmental science, management, and mitigation principles and applications effectively through writing, oral, and graphical presentations.

Students will be able to demonstrate integrative environmental research and/or problem solving expertise that applies the scientific method for design, data collection, analysis, and reporting.

Students will be able to demonstrate how core ecological principles are used to implement effective scientific approaches to environmental restoration and remediation.

Culture and Communication Emphasis
Students will be able to apply environmental science principles in biophysical and social science contexts to address societally relevant issues in environmental science, management, and mitigation.

Students will be able to communicate environmental science, management, and mitigation principles and applications effectively through writing, oral, and graphical presentations.

Students will be able to demonstrate integrative environmental research and/or problem solving expertise that applies the scientific method for design, data collection, analysis, and reporting.

Students will be able to demonstrate how and why cultural influences can affect societal decisions regarding key issues of environmental science.

Integrated Sciences Emphasis
Students will be able to apply environmental science principles in biophysical and social science contexts to address societally relevant issues in environmental science, management, and mitigation.

Students will be able to communicate environmental science, management, and mitigation principles and applications effectively through writing, oral, and graphical presentations.

Students will be able to demonstrate integrative environmental research and/or problem solving expertise that applies the scientific method for design, data collection, analysis, and reporting.

Students will be able to integrate biophysical expertise with socio-cultural dimensions of environmental problem-solving.

Students will be able to demonstrate integrative research expertise that applies the scientific method for design, data collection, analysis, and reporting. Students will be able to integrate technical expertise with socio-cultural and political dimensions of environmental problem-solving.

Summarize how the learning outcomes will be assessed for the proposed curriculum.

See attachment
Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Change the name of the emphasis in Biophysical Sciences to Sustainability Sciences.
Remove the remaining emphases: Biological Sciences, Social Sciences, Physical Sciences, and Physical Sciences 2.
Add new emphases: Ecological Restoration; Policy, Planning, and Management; Culture and Communication; Integrated Sciences. Note these new emphases will have similar learning outcomes and needed resources as the old ones, but the names will better represent the overall program and career paths available to students.

Supporting Documents
- [CNRENVS 201(1).docx](#)
- [ENV-S-CurricChange(25-Sep-20)_LV.docx](#)
- [CNRENVS-ChangeNameEmphasisAreas_UPDATED.docx](#)
- [Environmental Science-Ecological Restoration_BSEnvS.xlsx](#)

Requires TECC Review
- **No**

Reviewer

**Comments**

**Joana Espinoza (jespinoza) (10/21/20 3:53 pm):** Amy see my email before approving.

**Sara Mahuron (sara) (11/05/20 2:46 pm):** sent email to Lee Vierling. Need the outcomes for all the new emphases being created. I only see outcomes (I checked the attachments) for Sustainability Sciences, which will need to be renamed in the outcomes box. The other proposed new emphasis areas still need outcomes.

**Sara Mahuron (sara) (11/09/20 8:09 am):** Updated the learning outcomes for all emphases per Lee Vierling (received requested changes and additions from Lee via email). All changes pasted from his email.

**Rebecca Frost (rfrost) (11/09/20 12:31 pm):** Some issues with the curriculum with courses missing or having been deleted previously. The following curriculum problems exist: ENVS 300 - no record of this course exist. ENVS 446 - this course was discontinued and has been removed from this curriculum. ENVS 476 - no record of this course exists, and the listed cross-list NRS 476 has been put in its place. ENVS 420, ENVS 423, and ENVS 430 - no record of this course exists but it appears to be using a BIOP course title. ENVS 477 - no record of this course exists, but it is using the title of AGEC 477 and this has been used in its place. Most of these courses are in a choice list and will be removed if not remedied.

**Amy Kingston (amykingston) (11/30/20 2:09 pm):** The course issues mentioned by Rebecca were resolved in cooperation with the department.
Program Change Request

Date Submitted: 10/07/20 10:16 am

Viewing: 258 : Natural Resources (MS)

Last edit: 10/07/20 10:16 am

Catalog Pages Using this Program

Natural Resources (M.S.)

Faculty Contact

In Workflow
1. 151 Chair
2. 11 Curriculum Committee Chair
3. Assessment
4. Graduate Council Chair
5. Curriculum Review
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 10/07/20 12:46 pm
   Joana Espinoza (jespinoza):
   Approved for 151 Chair
2. 10/07/20 12:47 pm
   Joana Espinoza (jespinoza):
   Approved for 11 Curriculum Committee Chair
3. 10/19/20 9:03 am
   Sara Mahuron (sara): Approved for Assessment
4. 10/28/20 8:53 am
   Lauren Perkinson (perkinson):

https://nextcatalog.uidaho.edu/courseleaf/approve/
Approved for Graduate Council Chair
5. 11/16/20 10:40 am Rebecca Frost (rfrost): Approved for Curriculum Review
6. 11/25/20 11:24 am Amy Kingston (amykingston): Approved for Registrar's Office
7. 12/07/20 3:57 pm Rebecca Frost (rfrost): Approved for UCC

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dennis Becker</td>
<td><a href="mailto:drbecker@uidaho.edu">drbecker@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Change Type

Description of Change

Academic Level: Graduate
College: Natural Resources
Department/Unit: Natural Resources
Effective Catalog Year: 2021-2022
Program Title: Natural Resources (MS)
Program Credits: 30
CIP Code: 03.0199 03-0201 - Natural Resources Conservation Management and Research, Other. Policy.
Master of Science. Major in Natural Resources.

Thesis and non-thesis options are offered with a major in natural resources. See the respective departmental sections for details.

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

*Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.*

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

- Coeur d'Alene
- Moscow

**Student Learning Outcomes**

Have learning outcomes changed?

No Change

Learning Objectives

Demonstrate understanding of the scientific method and qualitative/quantitative analysis methods.

Critically synthesize existing knowledge in science and their natural resource discipline and describe how their research represents a step forward towards the generation of new knowledge.

Critically apply theories, methodologies, and knowledge to address important questions in natural resources.

Conduct research of significance in a natural resource discipline or as part of a disciplinary or an interdisciplinary or creative project.
Plan and conduct this research or implement this project under the guidance of an advisor and/or committee while developing intellectual independence.

Develop potential ability in disseminating oral communication to peers in disciplinary research areas.

Develop potential ability in disseminating written communication to peers in disciplinary and/or interdisciplinary research areas.

Develop potential ability in disseminating and presenting complex information to non-science groups.

Develop potential expertise in a specialized research area in natural resources.

Demonstrate self-defined pathway for career following defense.

Develop potential ability for leadership in natural resource discipline.

Interact productively with people from diverse backgrounds and team members with integrity and professionalism.

Develop potential ability, through service, for the value of their discipline to the academy and community at large. Follow the principles of ethics in their field and in academia.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

The U.S. Citizenship and Immigration Services (USCIS) provides an Optional Practical Training (OPT) program for graduate students on F-1 visas after completion of their graduate degree; this allows individuals from outside the United States to obtain additional practical training in the United States to complement their graduate degree. CNR’s current CIP code (03.0201) for its Masters (M.S.), Masters of Natural Resources (M.N.R.), and Doctor of Philosophy in Natural Resources (Ph.D.) is categorized by USCIS as a non-STEM CIP code. Hence, individuals obtaining a CNR graduate degree requesting an OPT can receive six months of OPT. CIP codes identified as STEM-oriented, however, allow individuals to receive up to three years of OPT. A change to CIP code 03.0199 converts CNR’s graduate degrees to be recognized as STEM degrees and, resultingy, allow for three years of OPT instead of six. This change is particularly important for individuals that are pursuing National Science Foundation’s Graduate Research Fellowship Program awards.

Supporting Documents

| Requires TECC Review | No |

Reviewer Comments

---

Key: 258

https://nextcatalog.uidaho.edu/courseleaf/approve/
Program Change Request

Date Submitted: 10/07/20 10:23 am

Viewing: 261: Natural Resources (PHD)

Last edit: 10/07/20 10:23 am

Catalog Pages Using this Program

Natural Resources (Ph.D.)

Faculty Contact

In Workflow
1. 151 Chair
2. 11 Curriculum Committee Chair
3. Assessment
4. Graduate Council Chair
5. Curriculum Review
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 10/07/20 12:46 pm
   Joana Espinoza (jespinoza):
   Approved for 151 Chair
2. 10/07/20 12:47 pm
   Joana Espinoza (jespinoza):
   Approved for 11 Curriculum Committee Chair
3. 10/19/20 9:06 am
   Sara Mahuron (sara): Approved for Assessment
4. 10/28/20 8:51 am
   Lauren Perkinson (perkinson):

https://nextcatalog.uidaho.edu/courseleaf/approve/
Faculty Name | Faculty Email
---|---
Dennis Becker | drbecker@uidaho.edu

Change Type

Description of Change

Academic Level | Graduate
College | Natural Resources
Department/Unit: | Natural Resources
Effective Catalog Year | 2021-2022
Program Title | Natural Resources (PHD)
Program Credits | 78
CIP Code | 03.0199 03.0201 - Natural Resources Conservation Management and Research, Other. Policy: 

Approved for Graduate Council Chair
5. 11/16/20 10:40 am Rebecca Frost (rfrost): Approved for Curriculum Review
6. 11/25/20 11:25 am Amy Kingston (amykingston): Approved for Registrar's Office
7. 12/07/20 3:57 pm Rebecca Frost (rfrost): Approved for UCC
Curriculum:

Doctor of Philosophy. Major in Natural Resources.

General Ph.D. requirements apply. Doctoral candidates are required to have an understanding of the principles of resource management in areas other than that chosen as a specialization. There is no general college requirement of proficiency in a foreign language for the doctorate, but one may be required by an individual student's committee where this seems desirable.

There is only one major for the Ph.D. degree in Natural Resources. However, dissertation topics are selected from disciplinary areas within each department. The single designation for the major is in keeping with the college's philosophy of integrated resource management.

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

- Coeur d'Alene
- Moscow

Student Learning Outcomes

Have learning outcomes changed?

No Change

Learning Objectives
Students plan and conduct research or implement a project under the guidance of an advisor and/or committee while demonstrating intellectual independence.
Demonstrate original thought and insights to advance their discipline.
Develop skills in disseminating oral communication to peers in disciplinary research areas.
Demonstrate skills in disseminating written communication to peers in disciplinary and/or interdisciplinary research areas.
Demonstrate skills in disseminating and presenting complex information to non-science groups.
Demonstrate skills in synthesizing need of research focus to potential sponsors.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

The U.S. Citizenship and Immigration Services (USCIS) provides an Optional Practical Training (OPT) program for graduate students on F-1 visas after completion of their graduate degree; this allows individuals from outside the United States to obtain additional practical training in the United States to complement their graduate degree. CNR’s current CIP code (03.0201) for its Masters (M.S.), Masters of Natural Resources (M.N.R.), and Doctor of Philosophy in Natural Resources (Ph.D.) is categorized by USCIS as a non-STEM CIP code. Hence, individuals obtaining a CNR graduate degree requesting an OPT can receive six months of OPT. CIP codes identified as STEM-oriented, however, allow individuals to receive up to three years of OPT. A change to CIP code 03.0199 converts CNR’s graduate degrees to be recognized as STEM degrees and, resultingy, allow for three years of OPT instead of six. This change is particularly important for individuals that are pursuing National Science Foundation’s Graduate Research Fellowship Program awards.

Supporting Documents

CNRChangeCIPShortForm.docx

Requires TECC Review

No

Reviewer Comments

Key: 261
Program Change Request

Date Submitted: 10/08/20 2:58 pm

Viewing: 84 : Ecology and Conservation Biology (BSECOLCONSBIOI)

Last edit: 12/10/20 4:10 pm

Catalog Pages Using this Program


Faculty Contact

In Workflow
1. 150 Chair
2. 151 Chair
3. 11 Curriculum Committee Chair
4. Assessment
5. Curriculum Review
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 10/08/20 3:12 pm Joana Espinoza (jespinoza):
   Approved for 150 Chair
2. 10/08/20 3:13 pm Joana Espinoza (jespinoza):
   Approved for 151 Chair
3. 10/08/20 3:16 pm Joana Espinoza (jespinoza):
   Approved for 11 Curriculum Committee Chair
4. 10/20/20 10:59 am Sara Mahuron (sara): Rollback to

https://nextcatalog.uidaho.edu/courseleaf/approve/
5. 10/23/20 3:14 pm
Lisette Waits
(lwaits): Approved for 150 Chair

6. 10/26/20 1:17 pm
Steven Shook
(shook): Approved for 151 Chair

7. 10/26/20 1:17 pm
Steven Shook
(shook): Approved for 11 Curriculum Committee Chair

8. 11/09/20 4:02 pm
Sara Mahuron
(sara): Approved for Assessment

9. 11/16/20 11:38 am
Rebecca Frost
(rfrost): Approved for Curriculum Review

10. 12/09/20 11:38 pm
Amy Kingston
(amykingston): Approved for Registrar's Office

11. 12/10/20 4:10 pm
Amy Kingston
(amykingston): Rollback to Registrar's Office for UCC

12. 01/20/21 2:16 pm
Amy Kingston
(amykingston): Approved for Registrar's Office


<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dennis Becker</td>
<td><a href="mailto:drbecker@uidaho.edu">drbecker@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Change Type: Change curriculum requirements

Description of Change:

Move program from Natural Resources to Fish and Wildlife Sciences and update learning outcomes.

Academic Level: Undergraduate

College: Natural Resources

Department/Unit: Fish & Wildlife Sciences

Effective Catalog Year: 2021-2022

Program Title:
Ecology and Conservation Biology (BSECOLCONSBIO)

Program Credits: 120


Emphasis/Option CIP Code(s): 

Curriculum:

Improving global environmental conditions requires researchers and other citizens who can understand ecological principles, who can analyze and interpret ecological conditions, and who can predict the consequences of alternative natural resource management decisions. Understanding the importance of social values and policy for ecology and management of rare, threatened, and endangered species and their habitat is necessary to reverse the order of their decline. In the ecology and conservation biology program, students learn to apply biological, ecological, social, and political understanding to solve problems related to long-term conservation of biological diversity and to sustainable management of ecosystems. This degree combines the biological, ecological, and social sciences to provide an interdisciplinary understanding of the composition, structure, and processes of ecosystems, and The skills necessary to provide long-term planning for the conservation and sustainable management of populations, species, and ecosystems.
Students will examine topics from molecular to landscape scales and integrate the social and biophysical worlds. Graduates will be equipped to address the issues and problems of sustainable resource use, conservation of rare, threatened, or endangered biota, management of ecosystems, and long-term conservation of biological diversity. This program is flexible enough to adapt to the interests of individual students, while remaining firmly grounded in ecological principles applicable to species, populations, communities, landscapes, and ecosystems. It is distinctly different from the emphasis on management in the other forestry, wildlife, fisheries, range, and conservation social sciences programs, or the more general environmental science programs. Graduates of the program often continue advanced studies at national and international universities. This natural resources "liberal science" degree can also serve as pre-professional training for law school, or for professional positions in federal, state, and private environmental organizations including local and regional planning groups and consulting firms.

The program requires 120 credits, and students must choose either the Natural Resources Ecology or Conservation Biology option. Students pursuing a B.S. Ecol. Cons. Biol. must receive a grade of 'C' or better in each of the following 4 indicator courses to register in upper division courses in NRS/FISH/FOR/REM/WLF and to graduate with either option: BIOL 114, BIOL 213, FOR 221, NR 321, STAT 251, or WLF 220. Before students are allowed to begin their senior thesis or project (NRS 485 or NRS 497), they must attend two evening thesis/project sessions and one senior poster presentation.

Required course work includes the university requirements (see regulation J-3) and:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 114</td>
<td>Organisms and Environments</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 115</td>
<td>Cells and the Evolution of Life</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 115L</td>
<td>Cells and the Evolution of Life Laboratory</td>
<td>1</td>
</tr>
<tr>
<td>BIOL 213</td>
<td>Struct/Functn Tree of Life</td>
<td>4</td>
</tr>
<tr>
<td>COMM 101</td>
<td>Fundamentals of Oral Communication</td>
<td>2</td>
</tr>
<tr>
<td>ECON 202</td>
<td>Principles of Microeconomics</td>
<td>3-4</td>
</tr>
<tr>
<td>or ECON 272</td>
<td>Foundatns of Economic Analysis</td>
<td></td>
</tr>
<tr>
<td>ENGL 317</td>
<td>Technical Writing</td>
<td>3</td>
</tr>
<tr>
<td>or WLF 370</td>
<td>Management and Communication of Scientific Data</td>
<td></td>
</tr>
<tr>
<td>FOR 220</td>
<td>Forest Biology &amp; Dendrology</td>
<td>3</td>
</tr>
<tr>
<td>or REM 341</td>
<td>Systematic Botany</td>
<td></td>
</tr>
<tr>
<td>FOR 235</td>
<td>Society and Natural Resources</td>
<td>3</td>
</tr>
<tr>
<td>FOR 375</td>
<td>Introduction to Spatial Analysis for Natural Resource Management</td>
<td>3</td>
</tr>
<tr>
<td>MATH 160</td>
<td>Survey of Calculus</td>
<td>4</td>
</tr>
<tr>
<td>or MATH 170</td>
<td>Calculus I</td>
<td></td>
</tr>
<tr>
<td>NR 101</td>
<td>Exploring Natural Resources</td>
<td>2</td>
</tr>
<tr>
<td>NR 200</td>
<td>Seminar</td>
<td>1-16</td>
</tr>
<tr>
<td>NR 300</td>
<td>Ecology and Conservation Biology Thesis Seminar</td>
<td>1</td>
</tr>
<tr>
<td>NRS 383</td>
<td>Natural Resource and Ecosystem Service Economics</td>
<td>3</td>
</tr>
<tr>
<td>STAT 251</td>
<td>Statistical Methods</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 314</td>
<td>Ecology and Population Biology</td>
</tr>
<tr>
<td>FOR/REM 221/WLF 220</td>
<td>Principles of Ecology</td>
</tr>
<tr>
<td>NR 321</td>
<td>Ecology</td>
</tr>
</tbody>
</table>
Select one of the following:  

**CHEM 101**  
Introduction to Chemistry  
& **101L**  
and Introduction to Chemistry Laboratory

**CHEM 111**  
General Chemistry I  
& **111L**  
and General Chemistry I Laboratory

Select one of the following:  

**FISH 473**  
ECB Senior Presentation

**FOR 473**  
ECB Senior Presentation

**FSP 473**  
Ecology and Conservation Biology Senior Thesis

**NRS 473**  
ECB Senior Presentation

**REM 473**  
ECB Senior Presentation

**WLF 473**  
ECB Senior Presentation

Select one of the following:  

**FISH 497**  
Senior Thesis (Max 6 credits)

**FOR 497**  
Senior Thesis (Max 98 credits)

**NR 497**  
Senior Thesis (Max 3 credits)

**REM 497**  
Senior Research and Thesis

**WLF 497**  
Senior Thesis (Max 6 credits)

Options

Select one of the following options:  

Natural Resources Ecology

Conservation Biology

Total Hours  
90-114

**A. Natural Resources Ecology Option**

The Natural Resources Ecology option combines ecological theory, field experience, and quantitative tools to gain an interdisciplinary understanding of the structure and function of ecosystems. This field covers ecological topics from local, regional, and landscape scales while integrating the social and biophysical worlds.

To graduate in this option, students must achieve a ‘C’ or better in the following six core courses: **FOR 330, NR 200, REM 429, SOIL 205/206**, and **WLF 448**.

**FOR 330**  
Terrestrial Ecosystem Ecology  
4

**REM 429**  
Landscape Ecology  
3

**SOIL 205**  
The Soil Ecosystem  
3

**SOIL 206**  
The Soil Ecosystem Lab  
1

**WLF 448**  
Fish and Wildlife Population Ecology  
4

Select one of the following:  

**PHYS 100**  
Fundamentals of Physics  
& **100L**  
and Fundamentals of Physics Lab

**PHYS 111**  
General Physics I  
& **111L**  
and General Physics I Lab
Select one Quantitative Resource Analysis Restricted elective from the following: 2-4

FOR 472 Remote Sensing of the Environment
GEOG 385 GIS Primer
NRS 310 Social Science Methods
REM 410 Principles of Vegetation Monitoring and Measurement 1
REM 411 Wildland Habitat Ecol & Assmnt 1
STAT 422 Survey Sampling
STAT 431 Statistical Analysis
WLF 411 Wildland Habitat Ecol & Assmnt

Select one Resource Management Restricted elective from the following: 3-4

FISH 418 Fisheries Management
FOR 424 Silviculture Principles and Practices
FOR 462 Watershed Science and Management
NRS 386 Managing Complex Environmental Systems
NRS 490 Wilderness and Protected Area Management
NRS 496 Monitoring Impacts in Protected Areas and Wilderness
REM 456 Integrated Rangeland Management
WLF 492 Wildlife Management

Select 10 credits of Ecology Restricted electives from the following: 2-10

BIOL 421 Advanced Evolution/Population Dynamics
BIOL 478 Animal Behavior
ENT 469 Introduction to Forest Insects
FISH 314 Fish Ecology
FISH 315 Fish Ecology Field Techniques and Methods
FISH 415 Limnology
FISH 430 Riparian Ecology and Management
FOR 326 Fire Ecology
FOR 468 Forest and Plant Pathology
GEOG 410 Biogeography
PLSC 410 Invasive Plant Biology
REM 440 Restoration Ecology
REM 459 Rangeland Ecology
REM 460 Integrated Field Studies in Rangelands
WLF 314 Ecology of Terrestrial Vertebrates
WLF 315 Techniques Laboratory
WLF 440 Conservation Biology

Select one Social/Political Restricted elective from the following: 2-3

COMM 410 Conflict Management
FOR 484 Forest Policy and Administration
GEOG 420 Land, Resources, and Environment
HIST 424 American Environmental History
B. Conservation Biology Option

The Conservation Biology option is centered around a multidisciplinary curriculum that provides students with training to work in jobs aimed at conserving the earth’s biodiversity. This option provides a broad-based education that covers biological diversity from the genetic level to the landscape level, and it provides additional training in social sciences and management. In the words of Hunter (1996), "Conservation biology is cross-disciplinary, reaching far beyond biology into subjects such as philosophy, economics, and sociology; disciplines that are concerned with the social environment in which we practice conservation--as well as into subjects such as law and education that determine the ways we implement conservation."

To graduate in this option, students must achieve a 'C' or better in the following seven core courses: BIOL 421, NR 200, PHIL 452, REM 429, WLF 440, and WLF 448.

BIOL 310    Genetics 3
or GENE 314  General Genetics

BIOL 421    Advanced Evolution/Population Dynamics 3
PHIL 452    Environmental Philosophy 3
REM 429     Landscape Ecology 3
WLF 440     Conservation Biology 3
WLF 448     Fish and Wildlife Population Ecology 4

Select one Quantitative Resource Analysis Restricted elective from the following: 2-4

FOR 472     Remote Sensing of the Environment
GEOG 385    GIS Primer
NRS 310     Social Science Methods
REM 410     Principles of Vegetation Monitoring and Measurement 1
REM 411     Wildland Habitat Ecol & Assmnt 1
STAT 422    Survey Sampling
STAT 431    Statistical Analysis

Select one Resource Management Restricted elective from the following: 3-4

FISH 418    Fisheries Management
FOR 424     Silviculture Principles and Practices
FOR 462    Watershed Science and Management
NRS 386    Managing Complex Environmental Systems
NRS 490    Wilderness and Protected Area Management
NRS 496    Monitoring Impacts in Protected Areas and Wilderness
REM 456    Integrated Rangeland Management
WLF 492    Wildlife Management

Select 6 credits of Ecology Restricted electives from the following: 2

BIOL 478    Animal Behavior
ENT 469    Introduction to Forest Insects
FISH 314    Fish Ecology
FISH 315    Fish Ecology Field Techniques and Methods
FISH 415    Limnology
FISH 430    Riparian Ecology and Management
FOR 330    Terrestrial Ecosystem Ecology
FOR 326    Fire Ecology
FOR 468    Forest and Plant Pathology
GEOG 410    Biogeography
PLSC 410    Invasive Plant Biology
REM 440    Restoration Ecology
REM 459    Rangeland Ecology
REM 460    Integrated Field Studies in Rangelands
WLF 314    Ecology of Terrestrial Vertebrates
WLF 315    Techniques Laboratory

Select one Organismal Biology Restricted elective from the following: 3-4

BIOL 483    Mammalogy
BIOL 489    Herpetology
FISH 481    Ichthyology
WLF 482    Ornithology

Select two Social/Political Restricted electives from the following: 4-6

COMM 410    Conflict Management
ENVS 225    International Environmental Issues Seminar
FOR 484    Forest Policy and Administration
GEOG 420    Land, Resources, and Environment
HIST 424    American Environmental History
NRS 386    Managing Complex Environmental Systems
NRS 387    Environmental Communication Skills
NRS 462    Natural Resource Policy
NRS 311    Public Involvement in Natural Resource Management
POLS 364    Politics of the Environment

Total Hours 37-43

1 Both REM 410 and REM 411 must be completed to satisfy Quantitative Resource Analysis Restricted Elective
requirement.

At least 2 credits from FISH 315, FISH 415, FISH 430, REM 460, and/or WLF 315

Courses to total 120 credits for this degree

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

Coeur d'Alene
Moscow

Student Learning Outcomes

Have learning outcomes changed?

Yes, more than 25%

Learning Objectives

Natural Resources Ecology Option

1. Articulate disciplinary identity:

Students will convey an accurate and nuanced understanding of the unique history and character of the discipline of Ecology and its distinctiveness from related disciplines, as well as their own personal rationale for matriculating within the discipline.

2. 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 in Conservation Biology Option. Locate, organize, analyze, and critically evaluate information. Students will demonstrate the ability to locate pertinent ecological, social, economic, and political information. Students will organize, analyze, and critically evaluate information using professional, discipline-appropriate standards. 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).

3. Locate, organize, analyze, and critically evaluate information. 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.

4. Effectively communicate ideas and technical knowledge: 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.

5. 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.

6. 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.

**Conservation Biology Option**

1. Articulate disciplinary identity: Students will convey an accurate and nuanced understanding of the unique history and character of the discipline of Conservation Biology and its distinctiveness from related disciplines, as well as their own personal rationale for matriculating within the discipline.

2. 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).

3. 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.

4. 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.

5. 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.
6. 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.

Summarize how the learning outcomes will be assessed for the proposed curriculum.

changed to more than 25%

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Effective July 1, 2005, the University of Idaho began offering the B.S. Ecology and Conservation Biology (ECB) degree, which has been continuously managed under the Department of Natural Resources. This department houses the Forest, Wildlife and Range Experiment Station, the Idaho Cooperative Fish and Wildlife Research Unit, and all the college’s graduate programs. The B.S. ECB degree is the only undergraduate degree offered by this department, which is inconsistent with the purpose and operation of the department (i.e., manage Experiment Station, Coop, and graduate studies).

Thus, the College of Natural Resources is requesting that the B.S. ECB be moved to the Department of Fish and Wildlife Sciences; this department has long provided the bulk of teaching effort and nearly all advising effort to support this undergraduate degree program.

Supporting Documents

- CNR Move ECB to FWS.docx
- Revised Outcomes 2020 Nat Rec (002).docx
- Revised Outcomes 2020 Cons Bio (002).docx
- Ecology and Conservation Biology - Conservation Biology_BSECOLCONSBIOL.xlsx
- Ecology and Conservation Biology-Natural Resource Ecology_BSECOLCONSBIOL.xlsx

Requires TECC Review

No

Reviewer

Comments

Sara Mahuron (sara) (10/20/20 10:59 am): Rollback: The Natural Resources Ecology degree option should have a minimum of 3 learning outcomes for a bachelors degree that articulates the depth and breadth of the program. Please add at least 2 more outcomes for this major/option. The Conservation Biology Option is a good example -- it has 4 comprehensive and robust outcomes. Please send questions to sara@uidaho.edu, thanks!!!
Sara Mahuron (sara) (11/09/20 4:02 pm): added the learning outcomes received via email; changed to more than 25%, approved to move forward

Rebecca Frost (rfrost) (12/10/20 10:55 am): 4 year plan added by Rebecca Frost.

Amy Kingston (amykingston) (12/10/20 4:10 pm): Rollback: Due to time constraints, saving for a future meeting.

Key: 84
Program Change Request

New Program Proposal

Date Submitted: 10/08/20 2:52 pm

Viewing: 426: Natural Resource Management Academic Certificate

Last edit: 12/09/20 11:45 pm

Faculty Contact

In Workflow
1. 161 Chair
2. 11 Curriculum Committee Chair
3. 11 Dean
4. Provost's Office
5. Assessment
6. Curriculum Review
7. Registrar's Office
8. UCC
9. Faculty Senate Chair
10. UFM
11. President's Office
12. State Approval
13. NWCCU

Approval Path
1. 10/08/20 3:13 pm
   Joana Espinoza (jespinoza):
   Approved for 161 Chair
2. 10/08/20 3:16 pm
   Joana Espinoza (jespinoza):
   Approved for 11 Curriculum Committee Chair
3. 10/08/20 3:17 pm
   Joana Espinoza (jespinoza):
   Approved for 11 Dean
4. 10/08/20 3:17 pm
   Joana Espinoza

https://nextcatalog.uidaho.edu/courseleaf/approve/
(jespinoza):
Approved for Provost's Office
5. 10/20/20 8:39 am
Sara Mahuron
(sara): Rollback to 161 Chair for Assessment
6. 11/11/20 9:43 am
Joana Espinoza
(jespinoza):
Approved for 161 Chair
7. 11/11/20 9:44 am
Joana Espinoza
(jespinoza):
Approved for 11 Curriculum Committee Chair
8. 11/11/20 9:44 am
Joana Espinoza
(jespinoza):
Approved for 11 Dean
9. 11/11/20 9:44 am
Joana Espinoza
(jespinoza):
Approved for Provost's Office
10. 11/11/20 9:48 am
Sara Mahuron
(sara): Approved for Assessment
11. 11/16/20 10:46 am
Rebecca Frost
(rfrost): Approved for Curriculum Review
12. 11/25/20 11:21 am
Amy Kingston
(amykingston):
<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Goebel</td>
<td><a href="mailto:cgoebel@uidaho.edu">cgoebel@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Academic Level: Undergraduate

College: Natural Resources

Department/Unit: Forest, Rangeland & Fire Sci

Effective Catalog Year: 2021-2022

Program Title: Natural Resource Management Academic Certificate

Degree Type: Certificate

Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.

Program Credits: 24

CIP Code: 03.0199 - Natural Resources Conservation and Research, Other.
Will the program be Self-Support?
   No

Will the program have a Professional Fee?
   No

Will the program have an Online Program Fee?
   No

Will program be Regional or Statewide Responsibility?
   Statewide

**Financial Information**

What is the financial impact of the request?
   Less than $250,000 per FY

Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form

Describe the financial impact
   All courses are already offered so no financial impact related to course development and delivery. Only costs associated with marketing and recruitment of students into the program.

Curriculum:

To complete the certificate, students must take a total of 24 credits from the courses listed in the program of study. All coursework must be completed with a grade of “C” or better. With CNR certificate committee approval, students may transfer up to six credits of course work from another institution to count towards their certificate program.

Select 24 credits from the following courses:

- **REM 151** Rangeland Principles
- **FOR 221** Principles of Ecology
- **REM 252** Wildland Plant Identification
- **REM 253** Wildland Field Plant Ident
- **REM 280** Introduction to Wildland Restoration
- **GEOG 385** GIS Primer
- **REM 341** Systematic Botany
- **ENVS 450** Environmental Hydrology
- **ENVS 485** Energy Efficiency and Conservation
- **FISH 415** Limnology
- **FOR 451** Fuels Inventory and Management
- **FOR 454** Air Quality, Pollution, and Smoke
Courses to total 24 credits for this certificate.

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

Yes

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

Moscow
Other

Where? 100% online

Student Learning Outcomes
List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

Students that complete the Natural Resource Management certificate should be able to integrate technical “field” knowledge with analytical skills to solve important natural resource management problems.

Specifically, students should be able to:

1. Describe ecological processes, including human impacts that influence ecosystem change, and the future sustainability of natural resources.

2. Characterize natural resources and be familiar with methods to quantify at least one of these resources.

3. Identify desired future conditions to achieve natural resource-related objectives, prescribe management actions needed to achieve those objectives, and evaluate success of prescribed actions.

Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

We will evaluate how well students are achieving the intended learning outcomes by:

1. Requiring all students achieve a letter grade of at least a letter grade of a “C” in all certificate courses.

2. Tracking performance in biology- and ecology-oriented courses completed as part of the certificate.

3. Tracking performance in methods-oriented courses completed as part of the certificate.

4. Tracking performance of management-oriented courses completed as part of the certificate.

5. Upon completion of coursework and after applying for certificate, successfully passing a comprehensive, online exam that addresses key aspects of the three learning outcomes.
How will you ensure that the assessment findings will be used to improve the program?

Performance metrics will be collected at the end of each academic year of all students in the certificate program and reviewed by faculty in the Department of Forest, Rangeland and Fire Sciences. Depending on performance metrics, we will adjust course content and/or the course list associated with the certificate to ensure students are meeting the three learning objectives.

What direct and indirect measures will be used to assess student learning?

Measures of student performance will be related directly to the three learning objectives of the certificate. These include:

1. Tracking performance in biology- and ecology-oriented courses completed as part of the certificate. Target: 80% of all students completing certificate will receive a letter grade of at least a “B” for courses that are biology- and ecology-oriented.

2. Tracking performance in methods-oriented courses completed as part of the certificate. Target: 80% of all students completing certificate will receive a letter grade of at least a “B” for courses that are methods-oriented.

3. Tracking performance of management-oriented courses completed as part of the certificate. Target: 80% of all students completing certificate will receive a letter grade of at least a “B” for courses that are management-oriented.

4. Tracking performance on a comprehensive exam that examines competencies associated with the three learning objectives following the completion of coursework for the certificate. Target: 80% of all students pass the comprehensive exam.

When will assessment activities occur and at what frequency?

Assessment will occur each annually, with performance data collected for all certificate students at the end of each academic year. Performance data will be reviewed with Department faculty and adjustments to the certificate structure and assessment made as need each fall.

---

**Student Learning Outcomes**

**Learning Objectives**

Students that complete the Natural Resource Management certificate should be able to integrate technical “field” knowledge with analytical skills to solve important natural resource management problems. Specifically, students should be able to:

https://nextcatalog.uidaho.edu/courseleaf/approve/
Describe ecological processes, including human impacts that influence ecosystem change, and the future sustainability of natural resources.
Characterize natural resources and be familiar with methods to quantify at least one of these resources. Identify desired future conditions to achieve natural resource-related objectives, prescribe management actions needed to achieve those objectives, and evaluate success of prescribed actions.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Requested CIP code: 03.0199
Describe the proposed new program component or certificate to include overview of program:
This 24-credit certificate program is designed for individuals currently employed seeking career advancement or individuals considering employment with a federal land management organization (e.g., U.S. Forest Service, Bureau of Land Management, National Park Service). The certificate is designed to meet the GS-401 Natural Resource Management and Biological Sciences (0401) series and will prepare students for federal positions that manage, supervise, lead, or perform professional research, or scientific work in biology, agriculture, or natural resources management that is not classifiable to another more specific professional series in the Natural Resources Management and Biological Sciences Group, 0400. After completing this certificate program students will have the ability to apply sound science to solve complex natural resource natural resource management issues.

The GS-0401 OPM Qualification Standards are defined as:

Courses equivalent to a major course of study in biological sciences, agriculture or natural resources management, chemistry or at least 24 credit hours in biological sciences, natural resources, wildland fire management, forestry, or agriculture equivalent to a major field of study, plus appropriate experience of additional education that is comparable to that normally acquired through the successful completion of a full four-year course of study in the biological sciences, agriculture, or natural resources.

To complete the certificate, students must take a total of 24 credits from the courses listed in the program of study. All coursework must be completed with a grade of "C" or better. With CNR certificate committee approval, students may transfer up to six credits of course work from another institution to count towards their certificate program.

Select from the following courses; all coursework must be completed with a grade of 'C' or better.

REM 151 Rangeland Principles (3 credits)
FOR 221 Principles of Ecology (3 credits)

https://nextcatalog.uidaho.edu/courseleaf/approve/
KEM 252 Wildland Plant Identification (2 credits)
REM 253 Wildland Plant Identification Field Studies (1 credit)
REM 280 Introduction to Wildland Restoration (2 credits)
GEOG 385 GIS Primer (3 credits)
REM 341 Systematic Botany (3 credits)
ENVS 450 Environmental Hydrology (3 credits)
ENVS 485 Energy Efficiency and Conservation (3 credits)
FISH 415 Limnology (4 credits)

FOR 451 Fuels Inventory and Management (2 credits)
FOR 454 Air Quality, Pollution, and Smoke (3 credits)
FOR 484 Forest Policy and Administration (2 credits)
REM 407 GIS Application in Fire Ecology and Management (2 credits)
REM 410 Principles of Vegetation Measurement (2 credits)
REM 411 Wildland Habitat Ecology and Assessment (2 credits)
REM 429 Landscape Ecology (3 credits)
REM 440 Wildland Restoration Ecology (3 credits)
REM 456 Integrated Rangeland Management (3 credits)
REM 459 Rangeland Ecology (2 credits)
WLF 440 Conservation Biology (3 credits)

Courses to total at least 24 credits to complete this certificate.

Rationale:

There is strong demand for continuing education of current federal employees and those seeking positions with federal land management organizations. Many of these individuals are currently employed in seasonal and temporary positions with the federal government and have completed some coursework at two-year or four-year colleges and universities. Others have completed four-year degrees; however, these degrees are in programs unrelated to natural resources (e.g., from liberal arts programs) making these individuals ineligible for advancement in natural resource management positions with the federal land management agency. The GS-0401 series is the entry point for advancement in the federal land management agencies.

Currently, the Department of Forest, Rangeland and Fire Sciences and College of Natural Resources is supporting students in meeting these standards. As these students participating are doing so as non-degree seeking students, they are limited in the number of courses they can enroll in each semester (seven credit hours) which delays coursework and completing the requirements to qualify for the GS-0401 credentials. The proposed certificate will allow these students the flexibility of enrolling as full-time students at the University of Idaho and complete the 24-credit requirement in one semester assuming the students transfer six credits from
As we currently offer many of these courses online, there is little to no cost in developing and delivering this certificate. We also anticipate strong demand for this certificate from these non-traditional students, helping to increase enrollment in the Department and College as certificate-seeking students. We also believe that this certificate has the potential to increase enrollment in our B.S. and M.N.R programs as students complete the certificate and consider investing additional time and resources in their federal careers as future advancement above the GS-0401 level that will require additional study and coursework.

Supporting Documents

CNR new UG cert in FRFS.docx

Reviewer Comments

Sara Mahuron [sara] (10/20/20 8:39 am): Rollback: Please identify at least one direct measure per outcome statement or include descriptions of direct measures when describing the process that will be used to evaluate students. Currently, these appear to all be indirect measures that look at performance in courses, but not at the student's ability to perform individual outcome statement(s). For example, where/how will the program evaluate how well students "describe ecological processes?" Will there be an exam that asks students to do this, or a student presentation evaluated with a rubric for this outcome, etc... The plan must include direct measures for each or all outcomes. Please reach out to sara@uidaho.edu with questions, for help revising this, or to discuss further. Thanks!

Program Change Request

Date Submitted: 10/08/20 3:22 pm

Viewing: 226: Natural Resources (MNR)

Last edit: 02/03/21 2:24 pm

Catalog Pages Using this Program
Natural Resources (M.N.R.)

Faculty Contact

In Workflow
1. 151 Chair
2. 11 Curriculum Committee Chair
3. Assessment
4. Graduate Council Chair
5. Curriculum Review
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 10/07/20 12:46 pm
Joana Espinoza (jespinoza):
Approved for 151 Chair
2. 10/07/20 12:47 pm
Joana Espinoza (jespinoza):
Approved for 11 Curriculum Committee Chair
3. 10/08/20 3:17 pm
Amy Kingston (amykingston):
Rollback to Initiator
4. 10/08/20 3:23 pm
Joana Espinoza (jespinoza):
Approved for 151 Chair
5. 10/08/20 3:23 pm Joana Espinoza (jespinoza): Approved for 11 Curriculum Committee Chair
6. 10/19/20 8:47 am Sara Mahuron (sara): Approved for Assessment
7. 10/28/20 8:53 am Lauren Perkinson (perkinson): Approved for Graduate Council Chair
8. 11/16/20 10:40 am Rebecca Frost (rfrost): Approved for Curriculum Review
9. 11/25/20 10:47 am Amy Kingston (amykingston): Rollback to Graduate Council Chair for Registrar's Office
10. 12/21/20 4:11 pm Lauren Perkinson (perkinson): Approved for Graduate Council Chair
11. 01/04/21 4:10 pm Rebecca Frost (rfrost): Approved for Curriculum Review
12. 01/20/21 2:14 pm
Amy Kingston (amykingston): Approved for Registrar's Office

13. 01/25/21 4:11 pm
Rebecca Frost (rfrost): Approved for UCC

14. 01/27/21 3:06 pm
Joana Espinoza (jespinoza): Approved for Faculty Senate Chair

15. 02/03/21 2:20 pm
Joana Espinoza (jespinoza): Rollback to Faculty Senate Chair for UFM

### Faculty Name

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leda Kobziar</td>
<td><a href="mailto:lkobziar@uidaho.edu">lkobziar@uidaho.edu</a></td>
</tr>
<tr>
<td>Kerri Vierling (Grad Council Rep)</td>
<td><a href="mailto:kerriv@uidaho.edu">kerriv@uidaho.edu</a></td>
</tr>
</tbody>
</table>

**Change Type**
- Change academic component name (degree, major, option, emphasis, minor, concentration, or specialization)
- Change curriculum requirements
- CIP code change

**Description of Change**


**Academic Level**
- Graduate

**College**
- Natural Resources

**Department/Unit:**
- Natural Resources

**Effective Catalog Year**
- 2021-2022
Master of Natural Resources. Major in Natural Resources. Integrated Natural Resources Option.

The Master of Natural Resources (MNR) is an interdisciplinary course-based graduate program designed for current and aspiring professionals who wish to enhance their educational credentials for a career in natural resources. The fundamental objective of the MNR graduate program is to integrate and scale various perspectives – ecology; planning, policy and society; and tools and technology – into a systems view of natural resources. This unique professional degree is accessible to students of diverse academic backgrounds and will help graduates develop credentials and skills for the effective management of natural resources. The degree program can be completed entirely online or through a combination of online and on-campus courses. The MNR program can be combined with the certificate program specializing in fire management, ecology, management, and technology.

The Integrated Natural Resources Option of the MNR covers a breadth of natural resource science and management subjects. The program provides knowledge and skills to support holistic, integrated approaches to careers in natural resources. The Integrated Natural Resources Option of the MNR consists of 30 semester credits (at least 7 credits from each of three MNR program categories - Ecology and Management; Policy, Planning, and Society; and Tools and Technology - plus 0-7 elective courses and 2 credits for a final project/portfolio) to total 30 credits. Up to 12 semester credits can be transferred into the program from other institutions.

Coursework must include a minimum of 18 credits numbered 500 or above.

Admission to the College of Graduate Studies requires a minimum 3.0 GPA, three letters of reference, and a statement of purpose.

Complete admission and degree information is available online at: http://www.uidaho.edu/cnr/grad-programs/online-degrees/master-of-natural-resources.

Select a minimum of 7 credits from each of the categories below:

Ecology and Management:
- **BE 450**
- **ENVS 501**
- **FISH 415**
- **FISH 515**
- Environmental Hydrology
- Seminar
- Limnology
- Large River Fisheries
FISH 525 Aquaculture in Relation to Wild Fish Populations
FISH 526 Climate Effects & Cons Manage
FISH 540 Wetland Restoration
FOR 501 Seminar
FOR/ENVS/REM/WLF 504 Special Topics
FOR 526 Fire Ecology
REM 440 Restoration Ecology
REM 456 Integrated Rangeland Management
REM 459 Rangeland Ecology
REM 507 Landscape and Habitat Dynamics 1
REM 560 Ecophysiology
WLF 440 Conservation Biology
WLF 506 External Speakers

Policy, Planning, and Society:
NRS 572 Human Dimensions of Restoration Ecology
ENVS 520 Course ENVS 520 Not Found
ENVS 523 Course ENVS 523 Not Found
ENVS 530 Course ENVS 530 Not Found
ENVS/FS 536 Principles of Sustainability
ENVS 544 Water Quality in the PNW
ENVS 551 Enviro Social Science Methods
ENVS 552 Environmental Philosophy
ENVS 577 Law Ethics and the Environment
ENVS 579 Introduction to Environmental Regulations
FOR 546 Science Synthesis and Communication
FOR 554 Air Quality, Pollution, and Smoke 2
FOR 584 Natural Resource Policy Development
FOR 587 Wildland Fire Policy
NR 507 Moral Reasoning in Natural Resources
NRS 501 (s) Seminar
NRS 504 Special Topics
NRS 555 Human Dimensions of Nat Res
NRS 574 Environmental Politics and Policy
NRS 576 Environmental Project Management and Decision Making

Tools and Technology:
ENVS 544 Water Quality in the PNW
FOR 451 Fuels Inventory and Management
FOR 554 Air Quality, Pollution, and Smoke
GEOG 524 Hydro Apps/GIS&Remote Sensing
NR 525 Scientific Graphics Design
NRS 580 Restoration-Ecology-Practicum
NRS 578  LIDAR and Optical Remote Sensing Analysis
NRS 580  Restoration Ecology Practicum
NRS 592  Emerging Media Outreach in Natural Resources
REM 407/510  GIS Application in Fire Ecology and Management
REM 410  Principles of Vegetation Monitoring and Measurement
REM 507  Landscape and Habitat Dynamics
REM 520  Advanced Vegetation Measurement and Monitoring
WLF 540  Conservation Genetics
WLF 561  Landscape Genetics

<table>
<thead>
<tr>
<th>Elective Courses:</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS/FOR/NRS/WLF 504  Special Topics</td>
<td></td>
</tr>
<tr>
<td>-OR- any additional courses listed above -OR- advisor-approved electives to bring total to 30 credits</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Final Project/Portfolio:</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR 599  Non-thesis Master's Research</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours 30

Courses to total 30 credits for this degree

1. REM 507  Landscape and Habitat Dynamics can be used to contribute to either the Ecology and Management requirement -OR- the Tools and Technology requirement (but not both).
2. FOR 554  Air Quality, Pollution, and Smoke can be used to contribute to either the Policy, Planning, and Society requirement -OR- the Tools and Technology requirement (but not both).

Master of Natural Resources. Major in Natural Resources.

Environmental Education and Science Communication Option

<table>
<thead>
<tr>
<th>NRS 501</th>
<th>(s) Seminar 2</th>
</tr>
</thead>
</table>

Ecology and Management 8

<table>
<thead>
<tr>
<th>NRS 560</th>
<th>Place-based Ecology I</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRS 566</td>
<td>Place-based Ecology II</td>
</tr>
</tbody>
</table>

Human Dimensions 6

<table>
<thead>
<tr>
<th>NRS 565</th>
<th>Science Communication and the Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRS 575</td>
<td>Leadership for the Environmental Educator</td>
</tr>
</tbody>
</table>

Policy Planning and Law 6

<table>
<thead>
<tr>
<th>NRS 563</th>
<th>Place Based Env. Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRS 568</td>
<td>Environmental Education Teaching Practicum II</td>
</tr>
</tbody>
</table>

Tools and Technology 6

<table>
<thead>
<tr>
<th>NRS 562</th>
<th>Field Science Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>NRS 564</td>
<td>Teaching Environmental Education in a Winter Environment</td>
</tr>
<tr>
<td>NRS 567</td>
<td>Environmental Education Teaching Practicum I</td>
</tr>
</tbody>
</table>

Case Study Project 3

<table>
<thead>
<tr>
<th>NRS 502</th>
<th>Directed Study</th>
</tr>
</thead>
</table>
Non-thesis Master’s Research

Select 3 credits from the following:

NRS 599 Non-thesis Master’s Research

NRS 504 Special Topics

NRS 569 Environmental Education Teaching Practicum III

Total Hours

Courses to total 34 credits for this degree

Master of Natural Resources. Major in Natural Resources. Fire Ecology and Management Option.

The Master of Natural Resources (MNR) is an interdisciplinary course-based graduate program designed for current and aspiring professionals who wish to enhance their educational credentials for a career in natural resources. The fundamental objective of the MNR graduate program is to integrate and scale various perspectives – ecology; planning, policy and society; and tools and technology – into a systems view of natural resources. This unique professional degree is accessible to students of diverse academic backgrounds and will help graduates develop credentials and skills for the effective management of natural resources. The degree program can be completed entirely online or through a combination of online and on-campus courses. The MNR program can be combined with the certificate program specializing in fire management and technology. The Fire Ecology and Management Option provides depth to address wildfire management challenges facing society. Completing this option will help students advance their professional careers in wildland fire management, fuels management, and restoration by advancing knowledge of fire science, ecology, fire-related policy and social issues, and the latest tools and technology. The Option also reinforces fundamentals in applied ecology, natural resources management, communications, an other career-advancing knowledge and skills.

The Fire Ecology and Management Option of the MNR consists of 30 semester credits (14 credits of Core Courses; 2-3 credits of Ecology; 4 credits of Tools and Technology; 6 credits of Policy, Planning, and Society; with 2 credits of electives; and 2 credits of non-thesis research for a final project or portfolio). Up to 12 semester credits can be transferred into the program from other institutions. Admission to the College of Graduate Studies requires a minimum 3.0 GPA, three letters of reference, and a statement of purpose. Coursework must include a minimum of 18 credits numbered 500 or above.

Complete admissions and degree information is available online at: http://www.uidaho.edu/cnr/grad-programs/online-degrees/master-of-natural-resources.

Fire Science and Management Core

FOR 451 Fuels Inventory and Management

FOR 526 Fire Ecology

FOR 546 Science Synthesis and Communication

FOR 557 Advanced Fire Behavior

FOR 587 Wildland Fire Policy

FOR 599 Non-thesis Master's Research

Ecology and Management

FISH 526 Climate Effects & Cons Manage
Tools and Technology

ENVS 551  Enviro Social Science Methods
FOR 454/554  Air Quality, Pollution, and Smoke 2
FOR 554  Air Quality, Pollution, and Smoke 2
NRS 578  LIDAR and Optical Remote Sensing Analysis
NRS 580  Restoration Ecology Practicum
REM 407/510  GIS Application in Fire Ecology and Management
REM 410  Principles of Vegetation Monitoring and Measurement
REM 411  Wildland Habitat Ecol & Assmnt
REM 510  GIS Application in Fire Ecology and Management
REM 507  Landscape and Habitat Dynamics 1
REM 520  Advanced Vegetation Measurement and Monitoring

Policy, Planning, and Society

NRS 573  Planning & Decision Making for Watershed Management
ENVS 523  Course ENVS 523 Not Found
ENVS 530  Course ENVS 530 Not Found
ENVS 577  Law Ethics and the Environment
FOR 454/554  Air Quality, Pollution, and Smoke 2
FOR 584  Natural Resource Policy Development
ENVS 536  Principles of Sustainability
FS 536  Principles of Sustainability
or ENVS 536  Principles of Sustainability
NR 507  Moral Reasoning in Natural Resources
NRS 501  (s) Seminar
NRS 504  Special Topics
NRS 555  Human Dimensions of Nat Res
NRS 574  Environmental Politics and Policy
NRS 576  Environmental Project Management and Decision Making
NRS 588  NEPA in Policy and Practice

Final Project

NR 599  Non-thesis Master’s Research

Additional elective graduate courses to total a minimum of 30 credits

Elective Courses:
ENVS/FOR/NRS 501 Seminar
ENVS/FOR/NRS/REM/WLF 504 Special Topics
WLF 506 External Speakers

-OR- any additional courses listed above -OR- advisor-approved electives to bring total to 30 credits

Total Hours 30

Courses to total 30 credits for this degree
1. REM 507 Landscape and Habitat Dynamics can be used for either the Ecology and Management requirement -OR- the Tools and Technology requirement (but not both).
2. FOR 454 or FOR 554 Air Quality, Pollution, and Smoke can be used to contribute to either the Policy, Planning and Society requirement -OR- the Tools and Technology requirement (but not both).

Master of Natural Resources. Major in Natural Resources. Restoration Ecology and Habitat Management Option.

Complete admissions and degree information is available online at: http://www.uidaho.edu/cnr/grad-programs/online-degrees/master-of-natural-resources.

Restoration Ecology and Habitat Management Core:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 579</td>
<td>Introduction to Environmental Regulations</td>
<td>3</td>
</tr>
<tr>
<td>or NRS 588</td>
<td>NEPA in Policy and Practice</td>
<td>3</td>
</tr>
<tr>
<td>FISH 540</td>
<td>Wetland Restoration</td>
<td>3</td>
</tr>
<tr>
<td>NR 599</td>
<td>Non-thesis Master's Research</td>
<td>2</td>
</tr>
<tr>
<td>NRS 580</td>
<td>Restoration Ecology Practicum</td>
<td>2</td>
</tr>
<tr>
<td>REM 440</td>
<td>Restoration Ecology</td>
<td>3</td>
</tr>
<tr>
<td>REM 507</td>
<td>Landscape and Habitat Dynamics</td>
<td>3</td>
</tr>
</tbody>
</table>

Ecology and Management (choose two courses): 5-6

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 544</td>
<td>Water Quality in the PNW</td>
</tr>
<tr>
<td>FISH 515</td>
<td>Large River Fisheries</td>
</tr>
<tr>
<td>FISH 525</td>
<td>Aquaculture in Relation to Wild Fish Populations</td>
</tr>
<tr>
<td>FOR 526</td>
<td>Fire Ecology</td>
</tr>
<tr>
<td>REM 429</td>
<td>Landscape Ecology</td>
</tr>
<tr>
<td>REM 456</td>
<td>Integrated Rangeland Management</td>
</tr>
<tr>
<td>REM 459</td>
<td>Rangeland Ecology</td>
</tr>
<tr>
<td>SOIL 422</td>
<td>Environmental Soil Chemistry</td>
</tr>
<tr>
<td>SOIL 446</td>
<td>Soil Fertility</td>
</tr>
<tr>
<td>WLF 440</td>
<td>Conservation Biology</td>
</tr>
</tbody>
</table>

Tools and Technology (choose 3 credits): 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 450</td>
<td>Environmental Hydrology</td>
</tr>
<tr>
<td>FOR 451</td>
<td>Fuels Inventory and Management</td>
</tr>
<tr>
<td>GEOG 524</td>
<td>Hydro Apps/GIS&amp;Remote Sensing</td>
</tr>
</tbody>
</table>
NRS 578  LIDAR and Optical Remote Sensing Analysis
PLSC 419  Plant Community Restoration Methods
REM 407  GIS Application in Fire Ecology and Management
REM 410  Principles of Vegetation Monitoring and Measurement
or REM 520  Advanced Vegetation Measurement and Monitoring
WLF 540  Conservation Genetics
WLF 561  Landscape Genetics

Policy, Planning, and Society (choose two courses): 5-6
BIOP 523  Planning Sustainable Places
ENVS 548  Drinking Water and Human Health
ENVS 579  Introduction to Environmental Regulations
FOR 584  Natural Resource Policy Development
FS 536  Principles of Sustainability
NR 507  Moral Reasoning in Natural Resources
NRS 576  Environmental Project Management and Decision Making
NRS 588  NEPA in Policy and Practice

Additional elective graduate credits to total a minimum of 30 credits

Total Hours 29-31

Courses to total 30 credits for this degree

Master of Natural Resources. Major in Natural Resources.  
Fish and Wildlife Science and Management Option.

All listed courses are available online. Additional courses are available for on-campus students and could be substituted for some of the courses below with advisor permission.

18 credits must be from 500 level courses.
Complete admissions and degree information is available online at: http://www.uidaho.edu/cnr/grad-programs/online-degrees/master-of-natural-resources.

FISH 510  Advanced Fish and Wildlife Management 3
or NRS 555  Human Dimensions of Nat Res
FISH 598  Internship 4
& NR 599  and Non-thesis Master's Research
or FISH 502  Directed Study
FOR 546  Science Synthesis and Communication 3
WLF 506  External Speakers 1

Select 8 credits of Fish & Wildlife Science Courses:
FISH 411  Fish Physiology
FISH 415  Limnology
FISH 516  Animal Movement, Dispersal and Migration
FISH 521  Community Ecology

https://nextcatalog.uidaho.edu/courseleaf/approve/
FISH 525  Aquaculture in Relation to Wild Fish Populations
FISH 526  Climate Effects & Cons Manage
FISH 515  Large River Fisheries
FISH 511  Fish Physiology
FISH 540  Wetland Restoration
FISH 550  Ecology & Conservation of Freshwater Invertebrates
FISH 551  Freshwater Invertebrate Field Methods
REM 411  Wildland Habitat Ecol & Assmnt
WLF 440  Conservation Biology
WLF 530  Riparian Ecology
WLF 540  Conservation Genetics
WLF 545  Wildlife Habitat Ecology
WLF 561  Landscape Genetics
WLF 562  Landscape Genetics Lab
WLF 575  Behavioral Ecology

Select 3 credits in Quantitative & Statistical Methods:  3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAT 419</td>
<td>Introduction to SAS/R Programming</td>
</tr>
<tr>
<td>STAT 422</td>
<td>Survey Sampling</td>
</tr>
<tr>
<td>STAT 431</td>
<td>Statistical Analysis</td>
</tr>
<tr>
<td>WLF 503</td>
<td>Workshop</td>
</tr>
<tr>
<td>WLF 550</td>
<td>Quantitative Analysis of Fish and Wildlife Populations</td>
</tr>
<tr>
<td>WLF 551</td>
<td>Applied Mixed Effects Modeling</td>
</tr>
</tbody>
</table>

Select one course in Policy, Planning & Society:  2-3

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOP 523</td>
<td>Planning Sustainable Places</td>
</tr>
<tr>
<td>BIOP 520</td>
<td>Intro to Bioregional Planning</td>
</tr>
<tr>
<td>BIOP 530</td>
<td>Planning Theory and Process</td>
</tr>
<tr>
<td>ENVS 577</td>
<td>Law Ethics and the Environment</td>
</tr>
<tr>
<td>ENVS 579</td>
<td>Introduction to Environmental Regulations</td>
</tr>
<tr>
<td>FISH 510</td>
<td>Advanced Fish and Wildlife Management</td>
</tr>
<tr>
<td>FOR 584</td>
<td>Natural Resource Policy Development</td>
</tr>
<tr>
<td>FOR 587</td>
<td>Wildland Fire Policy</td>
</tr>
<tr>
<td>NRS 475</td>
<td>Local and Regional Environmental Planning</td>
</tr>
<tr>
<td>NRS 574</td>
<td>Environmental Politics and Policy</td>
</tr>
<tr>
<td>NRS 576</td>
<td>Environmental Project Management and Decision Making</td>
</tr>
<tr>
<td>NRS 588</td>
<td>NEPA in Policy and Practice</td>
</tr>
</tbody>
</table>

Electives from below -OR- any additional courses listed above to total 30 credits:  6-7

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE/ENVS 450</td>
<td>Environmental Hydrology</td>
</tr>
<tr>
<td>ENVS 544</td>
<td>Water Quality in the PNW</td>
</tr>
<tr>
<td>FOR 451</td>
<td>Fuels Inventory and Management</td>
</tr>
<tr>
<td>FOR 526</td>
<td>Fire Ecology</td>
</tr>
<tr>
<td>FOR 554</td>
<td>Air Quality, Pollution, and Smoke</td>
</tr>
</tbody>
</table>
GEOG 524 Hydro Apps/GIS & Remote Sensing
NRS/REM 440 Restoration Ecology
NRS 472 Remote Sensing of the Environment
NRS 552 Current Lit in Remote Sensing
NRS 578 LIDAR and Optical Remote Sensing Analysis
NRS 580 Restoration Ecology Practicum
REM 456 Integrated Rangeland Management
REM 459 Rangeland Ecology
REM 507 Landscape and Habitat Dynamics
REM 520 Advanced Vegetation Measurement and Monitoring
REM/WLF/FISH/NRS/FOR 504 Special Topics

Total Hours 30-32

Courses to total 30 credits for this degree

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?
Yes

If Yes, can 100% of the curricular requirements of this program be completed via distance education?
Yes

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

Coeur d'Alene
Moscow
Other

Where? McCall

Student Learning Outcomes
Have learning outcomes changed?

Learning Objectives

Integrated Natural Resources Option Students will master be able to articulate ecological, social; and integrate information practical (management/education) perspectives and knowledge from ecological, social, economic their role in natural resources management or education/communication; and political perspectives – into a systems view of natural resource issues. how these can be effectively integrated.

Students will examine the ethical issues present in prominent problems in natural resources management, science, and/or education and show how ethical principles and frameworks related to sustainable stewardship help to inform and frame decision-making with respect to such problems. Students will synthesize ideas demonstrate advanced oral, written and information visual techniques to identify, analyze articulate and problem-solve natural resource issues; demonstrate an application defend the significance and implications of this synthesis.

their ideas in terms of challenges and trends in both scientific and societal (policy, planning, law; economics; management, education and/or communication) contexts.

Students will demonstrate oral, written identify and visual techniques distinguish diverse viewpoints and perspectives; interpret these in relation to communicate complex natural resource ideas.

resources professions and practice, and examine and appraise their own professional goals in light of these perspectives. Environmental Education and Science Communication Option Students will understand diverse viewpoints illustrate and perspectives reflect on knowledge and apply these to skills gained through the natural resources professions; demonstrate reflection program by creating and expanded understanding as applied to one’s professional goals. presenting a final project or a final portfolio to demonstrate and synthesize coursework; professional, and/or research knowledge and experience.

Students will define and apply sustainable stewardship and/or management of examine the ethical issues present in prominent problems in natural resources as an ethical, socially responsible practice; understand ethical dilemmas management, science; and/or education and show how ethical principles and make ethical choices.

frameworks related to sustainable stewardship help to inform and frame decision-making with respect to such problems. Students will identify and distinguish diverse viewpoints and perspectives; interpret these in relation to natural resources professions and practice, and examine and appraise their own professional goals in light of these perspectives:

Summarize how the learning outcomes will be assessed for the proposed curriculum.

This is also to add an option of Fish and Wildlife Science and Management to the MNR. Here are the learning outcome questions and answers for the new option.

List the intended learning outcomes for the program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program:

Graduates from the MNR- Fish and Wildlife Science and Management program will:

1. Master and integrate information and knowledge from ecological, social, economic and
1) Master and integrate information and knowledge from ecological, social, economic and political perspectives – into a systems view of natural resource issues.
2) Synthesize ideas and information to identify, analyze and problem-solve natural resource issues; demonstrate an application of this synthesis.
3) Demonstrate oral, written and visual techniques to communicate complex natural resource ideas.
4) Understand diverse viewpoints and perspectives and apply these to the natural resources professions; demonstrate reflection and expanded understanding as applied to one’s professional goals.

Define and apply sustainable stewardship and/or management of natural resources as an ethical, socially responsible practice; understand ethical dilemmas and make ethical choices.

Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component:
Graduating students will illustrate and reflect on knowledge and skills gained through the program by creating and presenting a final project or a final portfolio to demonstrate and synthesize coursework, professional, and/or research knowledge and experience. This final project or portfolio, in which each student demonstrates and reflects on how they achieved the SLOS, will be evaluated by the MNR Faculty. Each SLO is scored by the faculty group to evaluate how well the program fulfills each of its objectives, and to identify areas where program improvements are needed. This feedback is discussed by the Core Faculty committee annually and strategies are identified for improvements, including but not limited to changes in course offerings (i.e. curricula), assignments, and content, and improved guidance and advising for the final project and/or portfolio.

How will you ensure that the assessment findings will be used to improve the program? Each semester we have graduating students whose performance in the final project/portfolio and presentation will provide direct evidence of whether we have achieved our goals. Where any deficiencies are evidenced, we discuss these at the start of the next semester with the core faculty group, which is largely responsible for teaching the majority of the courses in the program. We will discuss how course assignments and content can best be improved to remedy any identified deficiencies. We also pay close attention to student evaluations and feedback on the courses in the program and look for ways we can augment our materials and approaches to better ensure SLOs are achieved.

What direct and indirect measures will be used to assess student learning? Direct measures include satisfactory demonstration of achieved SLOs, broadly characterized by integrated and holistic thinking about wildlife and fisheries science and management during the NR 599 MNR final oral presentation or final portfolio, and measured using a minimum score requirement on an objective scoring form by at least three MNR faculty.

Courses in the program with assignments that directly address multiple SLOs include the Core Courses for the new curriculum. Specific faculty will be called upon to reflect on student SLO achievement in their courses as an indirect measure. In addition, indirect measures include assessment through our MNR program exit survey and interview. We expect that students use their projects or portfolios for employment applications to share with their employers or
For the new option:
The new Option in Fish and Wildlife Science and Management will generally follow the existing curricular structure of the MNR program. This structure includes a set of subject-specific Core Courses, plus three categories requiring a minimum number of credits in each category. Students select from approved courses in each group. A final, comprehensive project or portfolio is required for 2 credits.

For the changes to the Integrated Natural Resources Option:
These minor changes reflect a realignment of the number of credits per category to reduce the need for substitution/waiver forms. As 504 Special Topics courses are created and offered anew, they can now be taken as electives if they fall under the ENVS, FOR, NRS, or WLF prefixes. With the previous curriculum revision which added courses to each category, and this year’s addition of the seminars for students who can only take 1 credit in a given semester, the number of electives required could be as low as one credit and as high as seven credits. These revisions should reduce the number of substitutions required while preserving the flexibility of the program.
The final project capstone experience (NR 599) includes explicit student reflection and faculty
assessment of how the program has fulfilled each of the overall MNR SLOS below, as well as discussion about these SLOs. Faculty evaluate each student’s final project or portfolio using a grading scale for each Objective, and providing feedback to the students for the SLOs below.

- Learn and Integrate: Students will master and integrate information and knowledge from ecological, social, economic and political perspectives – into a systems view of natural resource issues.
- Think and Create: Students will learn how to synthesize ideas and information to identify, analyze and problem-solve natural resource issues; and demonstrate an application of this synthesis.
- Communicate: Students will demonstrate oral, written and visual techniques to communicate complex natural resource ideas.
- Clarify purpose and perspective: Students will understand diverse viewpoints and perspectives, and apply these to the natural resources professions; and demonstrate reflection and expanded understanding as applied to one’s professional goals.

Practice Citizenship: Students will define and apply sustainable stewardship and/or management of natural resources as an ethical, socially responsible practice; and understand ethical dilemmas and how to make ethical choices.

For the changes to the Fire Ecology and Management Option:
These minor changes reflect minor corrections and reductions of redundancy in the current catalog listing. For example, including the undergraduate version of a course is not necessary for this graduate program. As 504 Special Topics courses are created and offered anew, they can now be taken as electives if they fall under the ENVS, FOR, NRS, or WLF prefixes, along with 501 Seminar courses under the same prefixes. These revisions should reduce the number of substitutions required while preserving the flexibility and meeting the intent of the program. The student learning outcomes specific to the Fire Ecology and Management Option of the MNR are assessed qualitatively (via instructor feedback) and quantitatively (via grading) across the required Core Courses, qualitatively through face-to-face interactions during final project presentations and exit interviews with the Program Director, and quantitatively in exit surveys of graduating students.

The final project capstone experience includes explicit student reflection and faculty assessment of how the program has fulfilled each of the overall MNR SLOS below, as well as discussion about these SLOs. Faculty evaluate each student’s final project using a grading scale for each Objective, and providing feedback to the students for the SLOs below. Exit interviews and the exit survey provide additional qualitative and quantitative assessments of student achievement of learning objectives.

- Learn and Integrate: Students will master and integrate information and knowledge from ecological, social, economic and political perspectives – into a systems view of natural resource
issues.
• Think and Create: Students will learn how to synthesize ideas and information to identify, analyze and problem-solve natural resource issues; and demonstrate an application of this synthesis.
• Communicate: Students will demonstrate oral, written and visual techniques to communicate complex natural resource ideas.
• Clarify purpose and perspective: Students will understand diverse viewpoints and perspectives, and apply these to the natural resources professions; and demonstrate reflection and expanded understanding as applied to one’s professional goals.
• Practice Citizenship: Students will define and apply sustainable stewardship and/or management of natural resources as an ethical, socially responsible practice; and understand ethical dilemmas and how to make ethical choices.

Supporting Documents

CNRChangeCIshortForm.docx

CNR Add option to MNR.docx

Requires TECC Review
No

Reviewer Comments

Amy Kingston (amykingston) (10/08/20 3:17 pm): Rollback: Per your request :)
Sara Mahuron (sara) (10/19/20 8:46 am): Copied the learning outcomes for the fish and wildlife science and management option from the "summarize how the learning outcomes will be assessed" to the "learning outcomes" box. Standardized the formatting for the catalog to match the first 2 options.
Rebecca Frost (rfrost) (11/16/20 10:39 am): NRS 5XX "Human Dimensions of Natural Resources" has not been proposed. It was removed from the curriculum as it was an option. ENVS 5XX "Research Methods in Environmental Social Sciences" has not been proposed. It was removed as it was an option. FOR 544, NRS 507, and WLF 520 do not exist, or are not active. They have been removed from the curriculum as they were options. BIOP/ENVS 520, 523, 530 cross-lists do not exist. Currently BIOP courses exist in those numbers, but it should be explored as to if those will continue with the discontinuance of the BIOP degrees.
Amy Kingston (amykingston) (11/25/20 10:47 am): Rollback: I'm returning this to Grad Council because I've just added some requested curriculum changes to the Integrated Natural Resources Option and the Fire Ecology and Management Option. So those two things need Grad Council review. Thanks! Amy K

Amy Kingston (amykingston) (11/25/20 10:49 am): ENVS 520, 523, and 530 are showing as "Course Not Found" but that will be corrected once they are approved. They are courses being switched from BIOP to ENVS since the BIOP program has dissolved and faculty member Yaap
Vos is now part of the Environmental Science program. They were previously BIOP 520, BIOP 523, and BIOP 530.

**Joana Espinoza (jespinoza) (02/03/21 2:20 pm):** Rollback: Need option approved.
Miscellaneous Change Request

**New Proposal**

Date Submitted: 11/16/20 12:00 pm

**Viewing: Change Dept of Ag and Extension Education Name**

Last edit: 11/16/20 12:00 pm

---

Faculty Contact

---

**In Workflow**

1. Registrar's Office
2. UCC
3. Faculty Senate Chair
4. UFM
5. President's Office
6. State Approval
7. NWCCU

**Approval Path**

1. 12/08/20 3:57 pm
   Amy Kingston
   (amykingston): Approved for Registrar's Office
2. 12/14/20 4:04 pm
   Rebecca Frost
   (rfrost): Approved for UCC

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Connors</td>
<td><a href="mailto:jconnors@uidaho.edu">jconnors@uidaho.edu</a></td>
</tr>
</tbody>
</table>

**Request Type**  Change the name of an administrative unit

**Effective Catalog Year**  2021-2022

**Title**  Change Dept of Ag and Extension Education Name

**Request Details**

The Department of Agricultural and Extension Education would like to change their department name to the Department of Agricultural Education, Leadership and Communications. The department does not offer any degree or major courses in extension education. Past changes in curriculum, courses, and faculty have resulted in increased offerings in agricultural leadership and communications. The proposed new name better reflects the programs and
degrees within the department.
Most similar departments at other land-grant universities have changed from Agricultural and Extension Education to some other name that includes references to Agricultural Education, Agricultural Communications, and Agricultural Leadership. This change will not only better reflect department offerings but it will keep the department in line with nationwide trends in the three disciplines.

Attach State Form  

**CALS - Change Dept Name in AEE.pdf**

Supporting Documents

Reviewer Comments

Key: 15
Program Change Request

New Program Proposal

Date Submitted: 10/15/20 3:41 pm

Viewing: **427: Human and Community Engagement Minor**

Last edit: 12/09/20 11:18 pm

Faculty Contact

In Workflow

1. 063 Chair
2. 07 Curriculum Committee Chair
3. 07 Dean
4. Provost's Office
5. Assessment
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path

1. 10/13/20 4:11 pm
   Michelle McGuire (smcguire):
   Approved for 063 Chair
2. 10/15/20 3:09 pm
   Brenda Schroeder (bschroeder):
   Rollback to Initiator
3. 10/15/20 6:13 pm
   Michelle McGuire (smcguire):
   Approved for 063 Chair
4. 10/15/20 7:41 pm
   Brenda Schroeder (bschroeder):
   Approved for 07
Curriculum Committee Chair
5. 10/18/20 10:50 pm
   Matthew Doumit
   (mdoumit):
   Approved for 07 Dean
6. 11/16/20 11:55 am
   Joana Espinoza
   (jespinoza):
   Approved for Provost's Office
7. 11/16/20 12:03 pm
   Sara Mahuron
   (sara): Approved for Assessment
8. 12/09/20 11:19 pm
   Amy Kingston
   (amykingston):
   Approved for Registrar's Office
9. 12/14/20 4:27 pm
   Rebecca Frost
   (rfrost): Approved for UCC

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erin Chapman</td>
<td><a href="mailto:chapman@uidaho.edu">chapman@uidaho.edu</a></td>
</tr>
<tr>
<td>Sarah Bush</td>
<td><a href="mailto:sabush@uidaho.edu">sabush@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Academic Level  Undergraduate
College          Agricultural & Life Sciences
Department/Unit: Family and Consumer Sciences
Effective Catalog 2021-2022
Year
Program Title
   Human and Community Engagement Minor
Degree Type    Minor
Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.

<table>
<thead>
<tr>
<th>Program Credits</th>
<th>21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attach Program Change</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CIP Code</th>
<th>44.0201 - Community Organization and Advocacy</th>
</tr>
</thead>
</table>

Will the program be Self-Support?
Yes

Will the program have a Professional Fee?
No

Will the program have an Online Program Fee?
No

Will program be Regional or Statewide Responsibility?
Regional

---

**Financial Information**

What is the financial impact of the request?
Less than $250,000 per FY

Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form

Describe the financial impact
No negative fiscal impact is anticipated. This minor is a collaboration within the College of Agricultural and Life Sciences—the Margaret Ritchie School of Family and Consumer Sciences and the Department of Agricultural and Extension Education. Courses currently exist primarily within these two program areas and are covered by faculty teaching loads within the two departments.

Curriculum:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLDR/FCS 220</td>
<td>Intro Human &amp; Comm Engagement</td>
<td>1</td>
</tr>
<tr>
<td>CLDR 360</td>
<td>Ldrship and Comm Dynamics</td>
<td>3</td>
</tr>
<tr>
<td>CLDR/FCS 420</td>
<td>Adv Human &amp; Comm Engage Exp</td>
<td>2</td>
</tr>
<tr>
<td>FCS 105</td>
<td>Individual and Family Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Human Engagement: (Choose 6 credits from these courses, 3 of which must be from FCS.) 6
COMM 233  Interpersonal Communication  
COMM 335  Intercultural Communication  
COMM 340  Family Communication  
COMM 410  Conflict Management  
FCS 240  Intimate Relationships  
FCS 254  Middle Childhood Development  
FCS 334  Adolescence & Emerging Adult  
FCS 340  Parent-Child Relationships in Family and Community  
FCS 360  Sexuality Across the Lifespan  
FCS 434  Adulthood and Aging within the Context of Family  
FCS 436  Thry Child & Family Dev  
FCS 440  Contemporary Family Relationships  
FCS 445  Issues in Work and Family Life  

Community Engagement: (Choose 6 credits from these courses, 3 of which must be from CLDR.)  
AGED 359  Developing 4-H Youth Programs  
CLDR 450  Leading People and Teams  
CLDR 480  Change & Power in Society  
ORGS 305  Nonprofit Organizations  
SOC 201  Intro to Inequity and Justice  

Total Hours 21  

Courses to total 21 credits for this minor

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

Yes

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

**Geographical Area Availability**
Identify the geographical area(s) this program can be completed in:

Moscow

**Student Learning Outcomes**

List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

Student completing this minor will be able to:

1. Apply human and community engagement theories, models, and concepts to a range of real-world issues and settings.
2. Promote and engage in volunteer, advocacy, and social change opportunities.
3. Collaborate with others of diverse backgrounds and understand the importance of differing perspectives within a group or community.
4. Develop effective communication and leadership-based skills.
5. Develop strategies for addressing personal, organizational, and community issues.
6. Identify opportunities for increased success of a community-based organization.
7. Create a development plan for lifelong citizenship.

Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

Assessment for the overall minor will be occur through multiple mechanisms. Course evaluations for the required courses; an exit survey for graduating minors; final report and reflection assignments from the service learning course, FCS/CLDR 420. Additionally, coordinating faculty in FCS and CLDR will meet with prospective minors regarding their minor goals and plans.

How will you ensure that the assessment findings will be used to improve the program?

Collaborating faculty will meet each semester to review minor programmatic components and students progress and productivity within the required courses (FCS/CLDR 220; FCS 105; CDLR 360; and FCS/CLDR 440). Additionally, university and community partners will provide feedback in refining the minor components, including the required FCS/CLDR 420 service learning course, in which students are required to engage in direct engagement with individual, family and community development.
What direct and indirect measures will be used to assess student learning?

Learning outcomes will be assessed using both formative and summative assessment. Formative assessment will occur through class discussion, learning activities, and self-reflection. Summative assessment will occur through individual projects (i.e., FCS/CLDR 220), and a final report and presentation (i.e., FCS/CLDR 420).

When will assessment activities occur and at what frequency?

For each of the required courses for this minor:

FCS/CLDR 220 (1 credit): Formative assessment will occur through class discussions and learning activities throughout the semester. Summative assessment will occur through individual projects, primarily at the conclusion of the semester course. Projects will include human and community engagement theory and model application-based assessments, a community leader interview, and reflection summaries and a final application paper.

FCS 105 (3 credits): Formative assessment will occur through class discussions and learning activities (approximately 13-15) throughout the semester. Summative assessment will occur through chapter quizzes (10 per semester), unit exams (3 per semester), and a comprehensive final lifespan project at the end of the semester.

CLDR 360 (3 credits): Formative assessment will occur through class discussions and learning activities throughout the semester. Summative assessment will occur through individual and group projects throughout the semester and at the conclusion of the course. Projects will include critical learning reflections, case studies, and a personal reflection on the learner’s role as a change agent and a citizen leader. The final project will include an organizational profile of a local organization and the development of a case study around the organization.

FCS/CLDR 420 (2 credits): Formative assessment will occur through self-reflection throughout the semester as students are completing required service learning hours. Summative assessment will occur through a proposal, final report and presentation at the conclusion of the semester.

---

**Student Learning Outcomes**

Learning Objectives
Student completing this minor will be able to:
1. Apply human and community engagement theories, models, and concepts to a range of real-world issues and settings.
2. Promote and engage in volunteer, advocacy, and social change opportunities.
3. Collaborate with others of diverse backgrounds and understand the importance of differing perspectives.
within a group or community.
4. Develop effective communication and leadership-based skills.
5. Develop strategies for addressing personal, organizational, and community issues.
6. Identify opportunities for increased success of a community-based organization.
7. Create a development plan for lifelong citizenship.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

A core theme of the University of Idaho’s mission is to challenge students to learn and integrate, think and create, communicate, clarify purpose and perspective, and practice citizenship. Additionally, UI service-learning places high importance on courses that integrate course content and community service. However, formal coursework does not exist to help students recognize their talents and strengths for serving their local communities, including individuals and families, personally and professionally in their future careers. This minor combines classroom instruction on human and community development theories and models with opportunities for application through engagement in the local community. Upon completion of this minor, graduates will be prepared to analyze community and societal-based issues and create collaborative social change and community development issues that are designed for the communities and the individuals across the lifespan they are working with. These graduates will be prepared to serve their communities as leaders and change agents.

As a collaborative effort between FCS and AEE, this minor will be supported and staffed by both departments. Additional course workload is minimal (a 1-credit introductory course and a 2-credit service learning course) and will be shared between coordinating faculty within FCS and AEE. Local and University partners are supportive regarding the service learning component of the minor (i.e., supervised service-learning experience placements in the community).

Supporting Documents

- CLDR-FCS 220- Course Approval Form.docx
- CLDR-FCS420- Course Outline.docx
- CLDR-FCS220- Course Outline.docx
- CLDR-FCS 420- Course Approval Form.docx

Requires TECC Review

- No

Reviewer

Comments

Brenda Schroeder (bschroeder) (10/15/20 3:09 pm): Rollback: The two courses mentioned in description as to be developed have been approved by UCC. Please remove from description. Thanks! -Brenda
Joana Espinoza (jespinoza) (10/19/20 3:54 pm): Made change to delivery. F2F in Moscow and 100% online.
Program Change Request

New Program Proposal

Date Submitted: 11/09/20 8:55 am

Viewing: 437: Precision Agriculture Academic Certificate

Last edit: 12/14/20 4:41 pm

Faculty Contact

In Workflow
1. 084 Chair
2. 07 Curriculum Committee Chair
3. 07 Dean
4. Provost's Office
5. Curriculum Review
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 11/09/20 9:45 am
   Joana Espinoza (jespinoza):
   Approved for 084 Chair
2. 11/09/20 9:45 am
   Joana Espinoza (jespinoza):
   Approved for 07 Curriculum Committee Chair
3. 11/09/20 9:47 am
   Joana Espinoza (jespinoza):
   Approved for 07 Dean
4. 11/09/20 9:48 am
   Joana Espinoza (jespinoza):
   Approved for 07 Dean
Approved for Provost’s Office
5. 11/17/20 12:18 pm
   Rebecca Frost (rfrost): Approved for Curriculum Review
6. 12/09/20 11:29 pm
   Amy Kingston (amykingston): Approved for Registrar's Office
7. 12/14/20 4:42 pm
   Rebecca Frost (rfrost): Approved for UCC

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jodi Johnson-Maynard</td>
<td><a href="mailto:jmaynard@uidaho.edu">jmaynard@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Academic Level: Undergraduate

College: Agricultural & Life Sciences

Department/Unit: Soil & Water Systems

Effective Catalog Year: 2021-2022

Program Title:
Precision Agriculture Academic Certificate

Degree Type: Certificate

Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.

Program Credits: 16

Attach Program Change:
Precision Ag Cert Short Form - Signed.pdf

CIP Code: 01.0299 - Agricultural Mechanization, Other.

Will the program be Self-Support?
No
Will the program have a Professional Fee?
   No

Will the program have an Online Program Fee?
   No

Will program be Regional or Statewide Responsibility?
   Regional

Financial Information

What is the financial impact of the request?
   Less than $250,000 per FY

Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form

Describe the financial impact
   The certificate should not have a financial impact. All faculty positions required are in place and modest student laboratory fees will be assessed to cover the cost of maintaining equipment that receives additional use due to the new program.

Curriculum:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASM 240</td>
<td>Comp Apps in Bio Systems</td>
<td>3</td>
</tr>
<tr>
<td>ASM 305</td>
<td>GPS and Precision Agriculture</td>
<td>3</td>
</tr>
<tr>
<td>ASM/REM 475</td>
<td>Course ASM 475 Not Found</td>
<td>3</td>
</tr>
<tr>
<td>ASM 409</td>
<td>Agricultural Tractors, Power Units and Machinery Management</td>
<td>3-4</td>
</tr>
<tr>
<td>or ASM 405</td>
<td>Precision Ag Science &amp; Tech</td>
<td></td>
</tr>
<tr>
<td>ASM 498/499</td>
<td>Internship</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Total Hours 13-16

Courses to total 13 credits for this certificate.

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes
If Yes, can 100% of the curricular requirements of this program be completed via distance education?

Yes

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

Moscow

**Student Learning Outcomes**

List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

1. Students familiar with methods of precision agriculture as applied to cropping systems, nutrient management, and water management/irrigation.
2. Students able to assess new technologies and objectively evaluate feasibility and benefits of precision agriculture technologies.
3. Students familiar with precision application implements, remote sensing, drones, and farm-data management software.
4. Students understand the social, economic, regulatory, and environmental context of agriculture, and identify the role of precision agriculture in addressing related challenges.

Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

Learning outcomes will be assessed each year according to the existing University/College/Departmental process. This process includes data gathering according to identified metrics and benchmarks, reporting and discussion of findings at the departmental level.

How will you ensure that the assessment findings will be used to improve the program?

Data gathered and findings generated during the assessment cycle will be discussed at a special faculty meeting focused on curriculum. Actions to improve identified weaknesses will be determined and implemented following the meeting.
What direct and indirect measures will be used to assess student learning?

i) Students familiar with methods of precision agriculture ...
Direct: Final paper or oral report in directed student or internship demonstrates proficiency regarding knowledge of the methods utilized in precision agriculture.
Indirect: Site supervisor assessment of learning and knowledge gained during student's internship.
Indirect: Grades received by enrolled students in each required course
Indirect: Student's self-assessment of knowledge on the exit survey
ii) Students able to assess and evaluate technologies ...
Direct: Quality of assignment in ASM 305 that focuses on limitations of precision ag data sets
Direct: Students' assessment of technology utilized in directed study project or internship within their final written/oral report.
Indirect: Student grades in ASM 305 assignments related to identification of challenges and benefits of precision agriculture technologies utilized in class.
Indirect: Students' self-assessment of their ability to assess precision agricultural technologies on exit survey

3) Students familiar with precision agriculture implements ...
Direct: Students' demonstration of familiarity with precision ag implements on final project for ASM 405 or 409
Indirect: Students' grades in ASM 405 or 409
Indirect: Site supervisor assessment of student's abilities to use implements and tools during internship
Indirect: Students' self-assessment of knowledge of precision ag implements, tools and software on exit survey

4) Students understand the social, economic, regulatory and environmental context of precision agriculture
Direct: Demonstration of understanding of the complex social, economic, regulatory and environmental issues in relation to precision ag on final project for ASM 305, 405, 498 and 499
Indirect: Students' grades in ASM 305, 405, 498 and 499

When will assessment activities occur and at what frequency?

Assessment will occur throughout the year and reporting takes place annually.

**Student Learning Outcomes**

**Learning Objectives**
Students familiar with methods of precision agriculture as applied to cropping systems, nutrient management, and water management/irrigation.
Students able to assess new technologies and objectively evaluate feasibility and benefits of precision agriculture technologies.

https://nextcatalog.uidaho.edu/courseleaf/approve/
Students familiar with precision application implements, remote sensing, drones, and farm-data management software.
Students understand the social, economic, regulatory, and environmental context of agriculture, and identify the role of precision agriculture in addressing related challenges.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

The certificate will be offered both on line and in-person and will cover the basics of precision agriculture including foundational concepts, equipment, drones/remote sensing and data management/analysis.

Supporting Documents

Requires TECC No
Review

Reviewer Comments

Rebecca Frost (rfrost) (11/16/20 11:27 am): ASM 405 does not exist. ASM 240 is showing deleted.

Amy Kingston (amykingston) (12/09/20 11:29 pm): There was a discrepancy with the number of required credit hours. Need to verify if it is 12 or 16.
Program Change Request

New Program Proposal

Date Submitted: 11/09/20 9:01 am

Viewing: 438: Sustainable Food Systems Minor

Last edit: 12/09/20 11:33 pm

Faculty Contact

In Workflow
1. 084 Chair
2. 07 Curriculum Committee Chair
3. 07 Dean
4. Provost's Office
5. Curriculum Review
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 11/09/20 9:45 am Joana Espinoza (jespinoza): Approved for 084 Chair
2. 11/09/20 9:46 am Joana Espinoza (jespinoza): Approved for 07 Curriculum Committee Chair
3. 11/09/20 9:47 am Joana Espinoza (jespinoza): Approved for 07 Dean
4. 11/09/20 9:48 am Joana Espinoza (jespinoza):
Faculty Name | Faculty Email
---|---
Jodi Johnson-Maynard | jmaynard@uidaho.edu

Academic Level | Undergraduate
College | Agricultural & Life Sciences
Department/Unit: | Soil & Water Systems
Effective Catalog Year | 2021-2022
Program Title | Sustainable Food Systems Minor
Degree Type | Minor

Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.

Program Credits | 20
Attach Program Change | CALS - new minor in Sustainable Foods.pdf
CIP Code | 01.0308 - Agroecology and Sustainable Agriculture.

Will the program be Self-Support?
No

Will the program have a Professional Fee?
No

Will the program have an Online Program Fee?
No

Will program be Regional or Statewide Responsibility?
Regional

Financial Information

What is the financial impact of the request?
Less than $250,000 per FY

Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form

Describe the financial impact
None. We will use existing courses to create this minor.

Curriculum:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOIL 205</td>
<td>The Soil Ecosystem</td>
<td>3</td>
</tr>
<tr>
<td>SOIL 206</td>
<td>The Soil Ecosystem Lab</td>
<td>1</td>
</tr>
<tr>
<td>SOIL 210</td>
<td>Introduction to Food Systems</td>
<td>3</td>
</tr>
<tr>
<td>SOIL 417</td>
<td>Market Garden Practicum</td>
<td>4</td>
</tr>
<tr>
<td>SOIL 427</td>
<td>Sustainable Food Systems</td>
<td>3</td>
</tr>
<tr>
<td>AGED 451</td>
<td>Communicating in Agriculture</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOC 350</td>
<td>Food, Culture, and Society</td>
</tr>
<tr>
<td>SOIL 446</td>
<td>Soil Fertility</td>
</tr>
<tr>
<td>FS 436</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>PLSC 451</td>
<td>Vegetable Crops</td>
</tr>
<tr>
<td>MVSC 486</td>
<td>Healthy Active Lifestyle Assessment and Intervention</td>
</tr>
</tbody>
</table>

Total Hours: 20

Courses to total 20 credits for this minor

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program...
which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

Moscow

Student Learning Outcomes

List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

- Be able to apply scientific principles and systems thinking to the development and management of sustainable agricultural and food systems.
- Understand how agronomic management practices relate to soil conservation and water quality.
- Demonstrate the ability to assess the sustainability of agricultural and food systems using a systems-based approach applying economic, social and natural-resource related criteria.
- Understand the roles and responsibilities of food systems professionals in society.
- Demonstrate the ability to effectively communicate science-based data to a variety of audiences and be able to convey the importance of a healthy, functioning, and robust food system.
Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

Assessment of students will occur primarily in the required courses:
Soil 210 - Initial introduction to systems thinking and application of whole systems analysis through project and presentation
  • Soil 417 - Projects, weekly labs, and demonstration of learned farm management skills
  • Soil 427 - Individual research papers, presentations and demonstrated knowledge of food systems
  • AgEd 451 - Projects and presentations focused on various communication methods
  • Soil 205/206- exams and quizzes and weekly labs focused on understanding soil properties and suitability of different land uses.

The minor will be assessed through student evaluations of instructors and student exit interviews with SFS advisor.

How will you ensure that the assessment findings will be used to improve the program?

Examination of student projects and presentations in the above mentioned courses will be used to help evaluate how well the program learning goals and university learning outcomes are met. Every year the instructor will use feedback from student survey's, one-on-one de-briefs of projects and group feedback to dictate necessary changes to instruction. Feedback from students will be used to improve learning outcomes, final project objectives and course content.

What direct and indirect measures will be used to assess student learning?

Direct assessment of student learning: Student work including presentations, projects, research papers, etc.
Indirect assessment of student learning: One-on-one meetings with SFS advisor at least once a year to discuss student learning and career goals and other formative assessments in various forms by the instructor.

When will assessment activities occur and at what frequency?

Direct and indirect assessment will occur while taking the core courses and throughout each semester. Indirect assessment will occur at least once a year and primarily upon completion of the minor.
Be able to apply scientific principles and systems thinking to the development and management of sustainable agricultural and food systems.

Understand how agronomic management practices relate to soil conservation and water quality.

Demonstrate the ability to assess the sustainability of agricultural and food systems using a systems-based approach applying economic, social and natural-resource related criteria.

Understand the roles and responsibilities of food systems professionals in society.

Demonstrate the ability to effectively communicate science-based data to a variety of audiences and be able to convey the importance of a healthy, functioning, and robust food system.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

This will be a new minor in the department of Soil and Water Systems. This new minor will give students the opportunity to enhance their base knowledge of agriculture and sustainability. Students will learn how to examine the food system using a systems perspective that will add depth to other majors. Students will learn principles of sustainability, organic agriculture, systems thinking and how to effectively communicate these concepts to a wide audience.

Supporting Documents

Requires TECC Review
No

Reviewer Comments

Key: 4.38
Program Change Request

New Program Proposal

Date Submitted: 11/13/20 3:36 pm

Viewing: 440 : Water Science and Management Minor

Last edit: 12/09/20 11:35 pm

Faculty Contact

In Workflow
1. 084 Chair
2. 07 Curriculum Committee Chair
3. 07 Dean
4. Provost's Office
5. Curriculum Review
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 11/13/20 5:56 pm Jodi Johnson-Maynard (jmaynard): Approved for 084 Chair
2. 11/16/20 11:23 am Joana Espinoza (jespinoza): Approved for 07 Curriculum Committee Chair
3. 11/16/20 11:24 am Joana Espinoza (jespinoza): Approved for 07 Dean
4. 11/16/20 11:24 am Joana Espinoza

https://nextcatalog.uidaho.edu/courseleaf/approve/
Faculty Name | Faculty Email
--- | ---
Jodi Johnson-Maynard | jmaynard@uidaho.edu

Academic Level | Undergraduate
College | Agricultural & Life Sciences
Department/Unit: | Soil & Water Systems
Effective Catalog Year | 2021-2022

Program Title
Water Science and Management Minor

Degree Type | Minor

Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.

Program Credits | 19

Attach Program Change | CALS - new minor in Water Science.pdf
Will the program be Self-Support?
No

Will the program have a Professional Fee?
No

Will the program have an Online Program Fee?
No

Will program be Regional or Statewide Responsibility?
Regional

### Financial Information

What is the financial impact of the request?
Less than $250,000 per FY

Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form

Describe the financial impact
There will be no new classes developed specifically for this minor. The classes have the capacity to increase student numbers and therefore there will only be an indirect benefit from increased student credit hours for professors teaching these courses

### Curriculum:

Choose one of the following: 4

- **SOIL 205**
  - The Soil Ecosystem

- **SOIL 206**
  - and The Soil Ecosystem Lab

- **GEOL 111**
  - Physical Geology for Science Majors

- **111L**
  - and Physical Geology for Science Majors Lab

- **ASM 315**
  - Irrigation Systems and Water Management 3

- **SOIL 448**
  - Drinking Water and Human Health 3

- **SOIL/ENVS 450**
  - Environmental Hydrology 3

- **SOIL 415**
  - Soil and Environmental Physics 3

- **SOIL 452**
  - Environmental Water Quality 3

- **SOIL 444**
  - Water Quality in the Pacific Northwest 3

Select 6 credits from the following: 6

- **GEOL 309**
  - Ground Water Hydrology

- **GEOG 424**
  - Hydro Apps/GIS&Remote Sensing

- **FISH 415**
  - Limnology

- **FOR 462**
  - Watershed Science and Management
Total Hours

Courses to total 19 credits for this minor

---

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

No

*Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.*

---

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

Moscow

---

**Student Learning Outcomes**

List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

Students will learn fundamentals of the water balance and impacts of management on the transport and storage of water through a landscape as well as the impacts of management on water quality. Students will be develop the quantitative and communication skills necessary to work in careers where the availability, timing, and delivery of water impacts decisions on profitability and sustainability. Students will learn the fundamental physical, chemical and biological properties of soils. Students will be exposed to new digital technologies to track and manage water movement and storage across a landscape.
Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

Each course was selected to develop and assess the ability of each student to achieve the basic learning outcomes of the minor. Most of the classes in the curriculum include applied water resources projects and written or oral presentation of their hydrologic assessment. We will communicate with instructors to determine if students in this minor are adequately meeting class goals. We will also reach out to graduates of the program and interview them to determine whether specific coursework was beneficial and instructive.

How will you ensure that the assessment findings will be used to improve the program?

The feedback from instructors and graduates will be used to evaluate and potentially modify the required coursework in the minor. We will also evaluate as new technology and tools become available whether new courses should be included in the minor. The minor includes 3 credits in water resource quality and provides options to direct interest in either agricultural and natural resources water management. The minor includes coursework that will build and assess the ability of students to master both quantitative hydrologic assessment skills as well as policy and oral/written communication skills.

What direct and indirect measures will be used to assess student learning?

We will use student class evaluations and interviews of recent graduates as well as communication with instructors.

When will assessment activities occur and at what frequency?

Assessments will occur annually at the end of spring semester.

**Student Learning Outcomes**

Learning Objectives
Students will learn fundamentals of the water balance and impacts of management on the transport and storage of water through a landscape as well as the impacts of management on water quality.

Students will develop the quantitative and communication skills necessary to work in careers where the availability, timing, and delivery of water impacts decisions on profitability and sustainability.

Students will learn the fundamental physical, chemical and biological properties of soils.

Students will be exposed to new digital technologies to track and manage water movement and storage across a landscape.
Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Need for a new minor in Water Science and Management.

Supporting Documents

<table>
<thead>
<tr>
<th>Requires TECC</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review</td>
<td></td>
</tr>
</tbody>
</table>

Reviewer

Comments

Key: 440
Program Change Request

Date Submitted: 11/09/20 9:31 am

Viewing: **196 : Music (MMUS)**

Last edit: 12/09/20 11:43 pm

Catalog Pages Using this Program

*Music (M.Mus.)*

Faculty Contact

---

In Workflow

1. 022 Chair
2. CLASS Review
3. 18 Curriculum Committee Chair
4. 18 Dean
5. Provost's Office
6. Curriculum Review
7. Graduate Council Chair
8. Registrar's Office
9. UCC
10. Faculty Senate Chair
11. UFM
12. President's Office
13. State Approval
14. NWCCU

Approval Path

1. 11/09/20 9:45 am
   Joana Espinoza (jespinoza):
   Approved for 022 Chair
2. 11/09/20 9:47 am
   Joana Espinoza (jespinoza):
   Approved for CLASS Review
3. 11/09/20 9:48 am
   Joana Espinoza (jespinoza):
   Approved for 18 Curriculum Committee Chair

https://nextcatalog.uidaho.edu/courseleaf/approve/
4. 11/09/20 9:48 am
    Joana Espinoza
    (jespinoza):
    Approved for 18
    Dean
5. 11/09/20 9:48 am
    Joana Espinoza
    (jespinoza):
    Approved for
    Provost's Office
6. 11/10/20 4:22 pm
    Rebecca Frost
    (rfrost): Approved
    for Curriculum
    Review
7. 11/13/20 9:20 am
    Lauren Perkinson
    (perkinson):
    Approved for
    Graduate Council
    Chair
8. 12/09/20 2:06 pm
    Amy Kingston
    (amykingston):
    Approved for
    Registrar's Office
9. 12/09/20 11:43 pm
    Amy Kingston
    (amykingston):
    Rollback to
    Registrar's Office for
    UCC
10. 01/07/21 11:18 am
    Amy Kingston
    (amykingston):
    Approved for
    Registrar's Office
11. 01/11/21 4:11 pm
    Rebecca Frost
    (rfrost): Approved
    for UCC
1/20/2021

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vanessa Sielert</td>
<td><a href="mailto:vanessas@uidaho.edu">vanessas@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Change Type: Change academic component name (degree, major, option, emphasis, minor, concentration, or specialization)

Description of Change:
Switching from in person only to 100% online availability

Academic Level: Graduate
College: Letters Arts & Social Sciences
Department/Unit: Music
Effective Catalog Year: 2021-2022
Program Title: Music (MMUS)
Program Credits: 30
CIP Code: 50.0901 - Music, General

Curriculum:

**Master of Music. Major in Music.**

Applicants for the M.Mus. degree may concentrate in music education; performance (with degree patterns in brass, choral conducting, keyboard, percussion, strings, voice and woodwinds); composition; piano pedagogy and performance studies; or collaborative piano. Admission to the Master of Music program varies by the area of concentration. Please see the [Lionel Hampton School of Music website](https://nextcatalog.uidaho.edu/courseleaf/approve/) for the requisite application materials listed by concentration. Except for students enrolled in the Master of Music with a concentration in Music Education, all graduate music students must complete at least 18 semester hours of credit towards the Master of Music degree in residence on the University of Idaho Moscow campus.

**Distance Education Availability**
To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes  No

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

Yes

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

Coeur d'Alene
Moscow

Student Learning Outcomes

Have learning outcomes changed?

No Change

Learning Objectives
The student will be able to interpret and present musical ideas through performance.
The student will be able to demonstrate expertise in major performing medium.
The student will be able to demonstrate proficiency in reading music.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Through the past eight months we have successfully transitioned into the ability to offer classes in a hyflex manner. Because of this transition, we now see the capability to offer our MMus at a distance as well as face-to-face without adding courses to our existing program, therefore increasing our student population to include those professionals who may not be able to move to Moscow for a variety of reasons including ties to their community, family and/or employment. This degree will be able to be completed synchronously remotely or in person.
Supporting Documents

Requires TECC Review

No

Reviewer Comments

Program Change Request

Date Submitted: 10/21/20 2:16 pm

Viewing: 266: Movement and Leisure Sciences (MS)

Last edit: 12/10/20 4:09 pm

Catalog Pages Using this Program

Movement and Leisure Sciences (M.S.)

Faculty Contact

In Workflow

1. 105 Chair
2. 15 Curriculum Committee Chair
3. Curriculum Review
4. Graduate Council Chair
5. Registrar's Office
6. Graduate Council Chair
7. Registrar's Office
8. UCC
9. Faculty Senate Chair
10. UFM
11. President's Office
12. State Approval
13. NWCCU

Approval Path

1. 10/21/20 3:35 pm Joana Espinoza (jespinoza): Approved for 105 Chair
2. 10/21/20 3:46 pm Joana Espinoza (jespinoza): Approved for 15 Curriculum Committee Chair
3. 10/22/20 11:31 am Rebecca Frost (rfrost): Approved for Curriculum Review

https://nextcatalog.uidaho.edu/courseleaf/approve/
4. 11/13/20 9:20 am
   Lauren Perkinson
   (perkinson):
   Approved for
   Graduate Council
   Chair
5. 12/09/20 2:15 pm
   Amy Kingston
   (amykingston):
   Approved for
   Registrar's Office
6. 12/09/20 2:19 pm
   Amy Kingston
   (amykingston):
   Approved for
   Graduate Council
   Chair
7. 12/09/20 2:19 pm
   Amy Kingston
   (amykingston):
   Approved for
   Registrar's Office
8. 12/10/20 4:09 pm
   Amy Kingston
   (amykingston):
   Rollback to
   Registrar's Office for
   UCC
9. 01/07/21 11:17 am
   Amy Kingston
   (amykingston):
   Approved for
   Registrar's Office
10. 01/11/21 3:53 pm
    Rebecca Frost
    (rfrost): Approved
    for UCC

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruce Saxman</td>
<td><a href="mailto:bsaxman@uidaho.edu">bsaxman@uidaho.edu</a></td>
</tr>
<tr>
<td>Change Type</td>
<td>Change academic component name (degree, major, option, emphasis, minor, concentration, or specialization) CIP code change</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Description of Change</td>
<td>providing this degree online as well as face to face (please note, the CIP code was entered incorrectly initially so there is no request from the college for a CIP code change, just change the administrative error)</td>
</tr>
<tr>
<td>Academic Level</td>
<td>Graduate</td>
</tr>
<tr>
<td>College</td>
<td>Education, Health &amp; Human Sci</td>
</tr>
<tr>
<td>Department/Unit:</td>
<td>Movement Sciences</td>
</tr>
<tr>
<td>Effective Catalog Year</td>
<td>2021-2022</td>
</tr>
<tr>
<td>Program Title</td>
<td>Movement and Leisure Sciences (MS)</td>
</tr>
<tr>
<td>Program Credits</td>
<td>30</td>
</tr>
</tbody>
</table>

Curriculum:

**Master of Science. Major in Movement and Leisure Sciences.**

This program provides students the skills, tools, and philosophy necessary to be servant leaders in organizations related to physical activity, sport and recreation.

The department also participates in the interdisciplinary M.S. and Ph.D. in Neuroscience and the M.S. in Bioregional Planning and Community Development. Persons interested in doctoral study should visit the College of Education and departmental web page for more information about admission requirements and application procedures.

**Distance Education Availability**

https://nextcatalog.uidaho.edu/courseleaf/approve/
To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

**Yes  No**

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

**No**

*Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.*

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

- Coeur d'Alene
- Moscow

**Student Learning Outcomes**

Have learning outcomes changed?  **No Change**

**Learning Objectives**

- Students are able to use inquiry (analytical/critical thinking) skills and techniques to effectively investigate problems and communicate knowledge related to leading healthy active lifestyles.
- Students will understand the key components of wellness through a holistic perspective in relation to healthy active lifestyles.
- Students understand the value of effective leadership, marketing, and/or ethics in working with individuals and/or groups to lead healthy active lifestyle experiences.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Students will be able to complete the MS more than 50% face to face or hybrid and they can complete the RSTM specialization in the MS 100% online.

**Supporting Documents**

[**RSTM Online Curriculum Change 9-11-2020 Signed.pdf**](https://nextcatalog.uidaho.edu/courseleaf/approve/)

Rational for the proposed change. Include an explanation of how the department will manage the added workload, if any.
Requires TECC: No

Reviewer

Comments

Amy Kingston (amykingston) (12/10/20 4:09 pm): Rollback: Due to time constraints, saving for a future meeting.
Program Change Request

Date Submitted: 10/21/20 2:14 pm

Viewing: 280 : Recreation, Sport, and Tourism Management (BSREC)

Last edit: 12/10/20 4:09 pm

Catalog Pages Using this Program

Recreation, Sport, and Tourism Management (B.S.Rec.)

Faculty Contact

In Workflow
1. 105 Chair
2. 15 Curriculum Committee Chair
3. Curriculum Review
4. Registrar's Office
5. Registrar's Office
6. UCC
7. Faculty Senate Chair
8. UFM
9. President's Office
10. State Approval
11. NWCCU

Approval Path
1. 10/21/20 3:35 pm
   Joana Espinoza (jespinoza):
   Approved for 105 Chair
2. 10/21/20 3:46 pm
   Joana Espinoza (jespinoza):
   Approved for 15 Curriculum Committee Chair
3. 10/22/20 11:31 am
   Rebecca Frost (rfrost): Approved for Curriculum Review
4. 12/09/20 2:17 pm
   Amy Kingston (amykingston):

https://nextcatalog.uidaho.edu/courseleaf/approve/
<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruce Saxman</td>
<td><a href="mailto:bsaxman@uidaho.edu">bsaxman@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Change Type: Change curriculum requirements

Description of Change:

Add online options to the B.S. Rec and M.S. MLS RSTM (specialization) degree program offerings to be taught alongside our existing face-to-face programs.

Academic Level: Undergraduate
College: Education, Health & Human Sci
Department/Unit: Movement Sciences
Effective Catalog Year: 2021-2022
Program Title: Recreation, Sport, and Tourism Management (BSREC)
A minimum cumulative university GPA of 2.25 is required of all recreation majors who seek to take upper-division courses. Recreation, Sport, and Tourism majors must also achieve a minimum cumulative university GPA of 2.25 to graduate with a B.S. Rec. degree.

Required course work includes the university requirements (see regulation J-3) and the following coursework:

**Core Course Requirements**

**MVSC 201** Physical Activity, Wellness & Behavior Change for Healthy Active Lifestyles 3

**RSTM 104** Recreation, Sport, and Tourism in Healthy Communities 3

**RSTM 280** Practicum in Recreation, Sport, and Tourism 1

**RSTM 498** Internship in Recreation, Sport, and Tourism 9

Select 9 credits from the following: 9

- **RSTM 107** Outdoor Recreation and Adventure Sports
- **RSTM 424** Inclusive Physical Education and Recreation
- **RSTM 425** Programming and Marketing in Movement and Leisure Sciences
- **RSTM/PEP 430** Activity and Health in MLS
- **RSTM 485** Trends and Policies in Recreation, Sport and Tourism

Select 5 credits from the following: 5

- **MVSC 486** Healthy Active Lifestyle Assessment and Intervention
- **PEP 275/475** Moral Reasoning in Sport
- **RSTM 310** Outdoor and Adventure Leadership
- **RSTM 380** Principles of Travel and Tourism
- **RSTM 408** Experiential Education and Adventure Recreation
- **RSTM 490** Experience and Event Management

Select one of the following: 3

- **ENGL 207** Persuasive Writing
- **ENGL 313** Business Writing
- **ENGL 317** Technical Writing

Select one of the following: 3

- **COMM 233** Interpersonal Communication
- **COMM 335** Intercultural Communication
- **COMM 347** Persuasion
- **COMM 355** Organizational Communication

**Total Hours** 36

**Courses to total 120 credits for this degree**
Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes  No

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

Yes

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal form work before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

Coeur d'Alene
Moscow

Student Learning Outcomes

Have learning outcomes changed?

No Change

Learning Objectives

Students shall demonstrate the following entry-level knowledge:

the nature and scope of the relevant park, recreation, tourism or related professions and their associated industries;
techniques and processes used by professionals and workers in these industries; and
the foundation of the profession in history, science and philosophy.

Students shall demonstrate the ability to design, implement, and evaluate services that facilitate targeted human experiences and that embrace personal and cultural dimensions of diversity.

Students shall demonstrate entry-level knowledge about operations and strategic management/administration in parks, recreation, tourism, and/or related professions.

Students shall demonstrate, through a comprehensive internship of not less than 400 clock hours and no fewer than 10 weeks, the potential to succeed as professionals at supervisory or higher levels in parks, recreation, tourism, or related organizations.
Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Adding an option to complete the B.S.Rec 100% online. Students will now have the option to take the entire program either online and still have the option to complete the program greater than 50% face to face and greater than 50% hybrid.

Supporting Documents
- RSTM Online Curriculum Change 9-11-2020 Signed.pdf
- Recreation Sport and Tourism Management BSRec.xlsx

Requires TECC Review: No

Reviewer Comments
- Rebecca Frost (rfrost) (12/10/20 10:38 am): 4 year plan added by Rebecca Frost.
- Amy Kingston (amykingston) (12/10/20 4:09 pm): Rollback: Due to time constraints, saving for a future meeting.
Program Change Request

Date Submitted: 10/08/20 3:05 pm

Viewing: **253 : Mathematics (BS)**

Last edit: 01/25/21 10:08 am

Catalog Pages Using this Program

- Mathematics (B.S.)

Faculty Contact

In Workflow
1. 024 Chair
2. 19 Curriculum Committee Chair
3. Assessment
4. Curriculum Review
5. Registrar's Office
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 10/08/20 3:12 pm
   Joana Espinoza (jespinoza): Approved for 024 Chair
2. 10/08/20 3:15 pm
   Joana Espinoza (jespinoza): Approved for 19 Curriculum Committee Chair
3. 10/19/20 9:01 am
   Sara Mahuron (sara): Rollback to 19 Curriculum Committee Chair for Assessment
4. 10/21/20 3:49 pm
   Mark Nielsen
(markn): Approved for 19 Curriculum Committee Chair
5. 10/22/20 4:29 pm
   Sara Mahuron 
   (sara): Rollback to 024 Chair for Assessment 
6. 11/06/20 8:08 pm
   Hirotachi Abo (abo): Approved for 024 Chair 
7. 11/11/20 11:46 am
   Mark Nielsen 
   (markn): Approved for 19 Curriculum Committee Chair 
8. 11/11/20 11:47 am
   Sara Mahuron 
   (sara): Approved for Assessment 
9. 11/16/20 9:57 am
   Rebecca Frost 
   (rfrost): Approved for Curriculum Review 
10. 12/09/20 2:14 pm
    Amy Kingston 
    (amykingston): Approved for Registrar's Office 
11. 12/09/20 2:15 pm
    Amy Kingston 
    (amykingston): Approved for Registrar's Office 
12. 12/09/20 11:44 pm
    Amy Kingston 
    (amykingston): Rollback to
### Curriculum:

**Faculty Name**  |  **Faculty Email**  
--- | ---  
Hirotachi Abo  | abo@uidaho.edu  

**Change Type**  
Change academic component name (degree, major, option, emphasis, minor, concentration, or specialization)

**Description of Change**  
Change the title of the option from "Applied - Quantitative Modeling" to "Applied - Modeling and Data Science" and the course requirements.

**Academic Level**  
Undergraduate  

**College**  
Science  

**Department/Unit:**  
Mathematics & Statistical Science  

**Effective Catalog Year**  
2021-2022

**Program Title**  
Mathematics (BS)

**Program Credits**  
120

**CIP Code**  
27.0101 - Mathematics, General.

**Emphasis/Option CIP Code(s)**

<table>
<thead>
<tr>
<th>Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.0301</td>
</tr>
<tr>
<td>27.0306</td>
</tr>
</tbody>
</table>
Required course work includes the university requirements (see regulation J-3) and:

**MATH 170**  Calculus I  
**MATH 175**  Calculus II  
**MATH 275**  Calculus III  
**MATH 330**  Linear Algebra

Options

Select one of the following options:  

- **General**  
- **Applied - Computation**  
- **Applied - Modeling and Data Science**  
- **Applied - Mathematical Biology**

Total Hours  

50-68

**A. General Option**

This is the traditional curriculum in Mathematics. It is more mathematically rigorous than the other options. It is especially good for secondary education majors and students intending to go to graduate school in Mathematics or other sciences.

Math Courses

- **MATH 176**  Discrete Mathematics  
- **MATH 215**  Proof via Number Theory  
- **MATH 310**  Ordinary Differential Equations  
- **MATH 461**  Abstract Algebra I  
- **MATH 471**  Introduction to Analysis I

Select one of the following:

- **MATH 430**  Advanced Linear Algebra  
- **MATH 452**  Mathematical Statistics  
- **MATH 453**  Stochastic Models  
- **MATH 462**  Abstract Algebra II  
- **MATH 472**  Introduction to Analysis II  
- **MATH 476**  Combinatorics

Select four math courses above 310  

12

Supporting Courses

- **STAT 301**  Probability and Statistics  
- **CS 112**  Computational Thinking and Problem Solving  

or **CS 120**  Computer Science I

Total Hours  

36

**Courses to total 120 credits for this degree**

**B. Applied - Computation Option**
The emphasis is on the mathematics related to computer science and technology. With a major or minor in computer sciences this is a good preparation for work in the computer industry.

Math Courses

**MATH 176**  Discrete Mathematics  3
**MATH 215**  Proof via Number Theory  3
**MATH 310**  Ordinary Differential Equations  3
**MATH 385**  Theory of Computation  3
**MATH 395**  Analysis of Algorithms  3
**MATH 415**  Cryptography  3
**MATH 428**  Numerical Methods  3

or **MATH 432**  Numerical Linear Algebra

**MATH 452**  Mathematical Statistics  3

or **STAT 301**  Probability and Statistics

Select two additional courses from the following:  6

**MATH 376**  Discrete Mathematics II
**MATH 426**  Discrete Optimization
**MATH 430**  Advanced Linear Algebra
**MATH 432**  Numerical Linear Algebra
**MATH 451**  Probability Theory
**MATH 452**  Mathematical Statistics
**MATH 461**  Abstract Algebra I
**MATH 462**  Abstract Algebra II
**MATH 476**  Combinatorics

Supporting Courses

**CS 120**  Computer Science I  4
**CS 121**  Computer Science II  3

Total Hours  37

Courses to total 120 credits for this degree

**Applied - Quantitative Modeling and Data Science Option**

The emphasis is on the mathematics used to model phenomena in engineering, science, business and economics. With a second major in one of these disciplines, this provides ideal preparation for graduate school.

Math Courses

**MATH 176**  Discrete Mathematics  3
**MATH 215**  Proof via Number Theory  3
**MATH 183**  Intro Data Science in Python  3
**MATH 310**  Ordinary Differential Equations  3

or **MATH 428**  Numerical Methods  3

or **MATH 432**  Numerical Linear Algebra

**MATH 451**  Probability Theory  3

https://nextcatalog.uidaho.edu/courseleaf/approve/
MATH 483  Found of Machine Learning  3
or MATH 438  Mathematical Modeling
STAT 301  Probability and Statistics  3
or MATH 452  Mathematical Statistics

Select three additional courses from the following:  9
Select four additional courses from the following:  12

CS 360  Database Systems
CS/MATH 385  Theory of Computation
CS/MATH 395  Analysis of Algorithms
CS 411  Parallel Programming
CS 415  Computational Biology: Sequence Analysis
CS 420  Data Communication Systems
CS 470  Artificial Intelligence
CS 479  Data Science
MATH 371  Mathematical Physics
MATH 376  Discrete Mathematics II
MATH 415  Cryptography
MATH 420  Complex Variables
MATH 426  Discrete-Optimization
MATH 428  Numerical Methods
MATH 432  Numerical Linear Algebra
MATH 437  Mathematical Biology
MATH 438  Mathematical Modeling
MATH 452  Mathematical Statistics
MATH 453  Stochastic Models
MATH 471  Introduction to Analysis I
MATH 472  Introduction to Analysis II
MATH 476  Combinatorics
MATH 480  Partial Differential Equations
MATH 483  Found of Machine Learning
MIS 453  Database Design
MIS 455  Data Management for Big Data
ME 313  Dynamic Modeling of Engineering Systems
SOC 417  Social Data Analysis
STAT 431  Statistical Analysis

Quantitative Electives
Select 6 credits of advisor-approved quantitative electives in Science, Engineering, Business, Economics, etc.  6
These electives can be drawn from the above list, as long as they are not used to fulfill the elective requirement.

Supporting course
CS 120  Computer Science I  4

Total Hours  39

https://nextcatalog.uidaho.edu/courseleaf/approve/
Courses to total 120 credits for this degree

D. Applied - Mathematical Biology Option

This option offers training across Mathematics and Biology and provides the background to pursue a career in technical industries and to obtain graduate degrees in Biomathematics, Biostatistics, and Bioinformatics.

Math and Statistics Courses

- **MATH 437**  Mathematical Biology  3
- **MATH 451**  Probability Theory  3
- **MATH 452**  Mathematical Statistics  3
- **STAT 251**  Statistical Methods  3
  or **STAT 301**  Probability and Statistics

Select two courses from the following:  6

- **MATH 310**  Ordinary Differential Equations
- **MATH 453**  Stochastic Models
- **STAT 431**  Statistical Analysis

Select two courses from the following:  6

- **MATH 428**  Numerical Methods
- **MATH 430**  Advanced Linear Algebra
- **MATH 480**  Partial Differential Equations

Biology Courses

- **BIOL 114**  Organisms and Environments  4
- **BIOL 115**  Cells and the Evolution of Life  3
- **BIOL 115L**  Cells and the Evolution of Life Laboratory  1
- **BIOL 310**  Genetics  3
- **BIOL 456**  Computer Skills for Biologists  3

Select 12 Credits Upper Division Biology courses  12

Supporting Courses

- **CHEM 111**  General Chemistry I  3
- **CHEM 111L**  General Chemistry I Laboratory  1

Total Hours  54

Courses to total 120 credits for this degree

---

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

https://nextcatalog.uidaho.edu/courseleaf/approve/
Yes **No**

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

**No**

*Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.*

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:
- Coeur-d'Alene
- Moscow

**Student Learning Outcomes**

Have learning outcomes changed? **Yes, less than 25%**

**Learning Objectives**

Students should be able to think critically, apply problem solving strategies, and be able to construct and defend mathematical proofs.

Students should be able to use mathematical structures and the language of mathematics to formulate models for real-world problems.

Students should be able to effectively communicate their work and should gain experience working in collaborative settings.

**Students should be able to interpret and extract relevant information from data using appropriate modeling techniques.**

Summarize how the learning outcomes will be assessed for the proposed curriculum.

*Direct assessment such as students' exam performance, presentations, and projects will be administered to students enrolled in designated courses. Indirect assessment takes form of exit interview and/or survey, which takes place towards the end of every academic year.*
Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

There are fundamentally two kinds of modeling: the process-driven modeling that uses physical rules and mathematical formulas and the data-driven modeling that focuses more on the relationships between input and output data. With the advancement of computational powers and data availability, data-driven approaches are gaining immensely in importance. This name change and accompanying adjustment in curriculum seeks to refocus the current Quantitative Modeling Option to feature both of these aspects to modeling. Students in the program will thus gain skills critical to both fundamental approaches.

Supporting Documents
- short-form-Math-QuantModOption.docx
- curriculum-change-form-Math-QuantModelingOption.docx
- Mathematics-Applied Modeling and Data Science_BS.xlsx

Requires TECC Review
- No

Reviewer Comments
- **Sara Mahuron (sara) (10/19/20 9:01 am):** Rollback: Please review the learning outcomes to ensure that they reflect the refocus in program name, as well as the rationale that explains the adjustment to curriculum and the refocus to include data-driven modeling (and the relevant critical skills students will gain). The option should include outcome(s) that capture what is/are unique. It is not currently clear that the outcomes listed are specific to this option. The value gained from this specific option, should be evident to students and the public when they view the list of outcomes and should be appropriately differentiated. This can often be accomplished by adding 1-2 unique outcome statements that are option specific. Please reach out to sara@uidaho.edu if you have questions about the outcomes (or believe I have misunderstood something), and/or want to discuss.

- **Sara Mahuron (sara) (10/22/20 4:29 pm):** Rollback: Please review the learning outcomes to ensure that they reflect the refocus in program name, as well as the rationale that explains the adjustment to curriculum and the refocus to include data-driven modeling (and the relevant critical skills students will gain). The option should include outcome(s) that capture what is/are unique. It is not currently clear that the outcomes listed are specific to this option. The value gained from this specific option, should be evident to students and the public when they view the list of outcomes and should be appropriately differentiated. This can often be accomplished by adding 1-2 unique outcome statements that are option specific. Please reach out to sara@uidaho.edu if you have questions about the outcomes (or believe I have misunderstood something), and/or want to discuss.

Rebecca Frost (rfrost) (01/25/21 10:08 am): 4 Year plan added by Rebecca Frost.
Program Change Request

Date Submitted: 10/09/20 10:44 am

Viewing: **210 : Data Science Analytics Academic Certificate**

Last edit: 12/09/20 11:44 pm

Catalog Pages Using this Program

- Data Analytics Graduate Academic Certificate

In Workflow
1. 024 Chair
2. 19 Curriculum Committee Chair
3. Curriculum Review
4. Registrar's Office
5. Graduate Council Chair
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 10/09/20 10:44 am
   Joana Espinoza (jespinoza):
   Approved for 024 Chair
2. 10/09/20 10:45 am
   Joana Espinoza (jespinoza):
   Approved for 19 Curriculum Committee Chair
3. 10/21/20 6:45 pm
   Rebecca Frost (rfrost): Approved for Curriculum Review
4. 11/10/20 8:23 pm
   Amy Kingston
(amykingston):
Approved for Registrar's Office
5. 11/13/20 9:20 am
Lauren Perkinson
(perkinson):
Approved for Graduate Council Chair
6. 12/09/20 2:07 pm
Amy Kingston
(amykingston):
Approved for Registrar's Office
7. 12/09/20 11:44 pm
Amy Kingston
(amykingston):
Rollback to Registrar's Office for UCC
8. 01/20/21 2:17 pm
Amy Kingston
(amykingston):
Approved for Registrar's Office
9. 01/25/21 4:33 pm
Rebecca Frost
(rfrost): Approved for UCC

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hirotachi</td>
<td>Abo</td>
</tr>
</tbody>
</table>

Change Type

Description of Change

Academic Level  Graduate
College          Science

https://nextcatalog.uidaho.edu/courseleaf/approve/
Department/Unit: Mathematics & Statistical Science
Effective Catalog Year: 2021-2022
Program Title: Data Science Analytics Academic Certificate
Program Credits: 12
CIP Code: 45.0102 - Research Methodology and Quantitative Methods.

Curriculum:

All required coursework must be completed with a grade of 'B' or better (O-10-b).
Select one of the following:

- CS 472 Evolutionary Computation
- CS 475 Machine Learning
- OM 439 Systems and Simulation
- OM 456 Enterprise Quality Management
- MKTG 431 Marketing Analytics
- STAT 507 Experimental Design
- STAT 519 Multivariate Analysis
- STAT 565 Computer Intensive Statistics
- CS 479 Data Science
- MIS 455 Data Management for Big Data
- STAT 517 Statistical Learning and Predictive Modeling

Total Hours: 12

Courses to total 12 credits for this certificate.

Distance Education Availability

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.
**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

- Coeur d'Alene
- Moscow

**Student Learning Outcomes**

Have learning outcomes changed?  **No Change**

Learning Objectives

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

The name change merely reflects the more current terminology for the subject matter. The content of the certificate has not changed.

JEE – confirmed with the college that they discussed this with the Data Science workgroup and the group supported this. They consider this a name change and the existing certificate already works interdisciplinary with other COS departments, Engineering and College of Business. The working group is working on an online certificate (this is not) that will likely be undergraduate. This is a grad certificate so there is not concern of overlap.

Supporting Documents

- short-form-AnalyticsCertificate.docx

Requires TECC Review  **No**

Reviewer

Comments

*Amy Kingston (amykingston) (12/09/20 11:44 pm):* Rollback: Holding for future agenda due to time constraints.

Key: 210
Program Change Request

New Program Proposal

Date Submitted: 10/21/20 3:22 pm

Viewing: 428 : Groundwater Hydrology Minor

Last edit: 12/10/20 3:58 pm

Faculty Contact

In Workflow
1. 225 Chair
2. 19 Curriculum Committee Chair
3. 19 Dean
4. Provost's Office
5. Assessment
6. Curriculum Review
7. Registrar's Office
8. UCC
9. Faculty Senate Chair
10. UFM
11. President's Office
12. State Approval
13. NWCCU

Approval Path
1. 10/21/20 3:48 pm
   Joana Espinoza (jespinoza):
   Approved for 225 Chair
2. 10/21/20 3:49 pm
   Mark Nielsen (markn): Approved for 19 Curriculum Committee Chair
3. 10/21/20 3:54 pm
   Joana Espinoza (jespinoza):
   Approved for 19 Dean
4. 10/21/20 3:59 pm
   Joana Espinoza (jespinoza):
Approved for Provost's Office
5. 10/22/20 4:31 pm  
   Sara Mahuron  
   (sara): Approved for Assessment
6. 11/16/20 11:06 am  
   Rebecca Frost  
   (rfrost): Approved for Curriculum Review
7. 12/09/20 11:32 pm  
   Amy Kingston  
   (amykington): Approved for Registrar's Office
8. 12/10/20 3:58 pm  
   Amy Kingston  
   (amykington): Rollback to Registrar's Office for UCC
9. 01/20/21 2:17 pm  
   Amy Kingston  
   (amykington): Approved for Registrar's Office
10. 01/25/21 4:14 pm  
    Rebecca Frost  
    (rfrost): Approved for UCC

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leslie Baker</td>
<td><a href="mailto:lbaker@uidaho.edu">lbaker@uidaho.edu</a></td>
</tr>
</tbody>
</table>

**Academic Level**: Undergraduate

**College**: Science

**Department/Unit**: Geography & Geological Sciences
Effective Catalog 2021-2022

Program Title
Groundwater Hydrology Minor

Degree Type Minor

Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.

Program Credits 20

Attatch Program Change


Will the program be Self-Support?
No

Will the program have a Professional Fee?
No

Will the program have an Online Program Fee?
No

Will program be Regional or Statewide Responsibility?
Regional

**Financial Information**

What is the financial impact of the request?
Less than $250,000 per FY

Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form

Describe the financial impact

Curriculum:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOL 101</td>
<td>Physical Geology</td>
<td>3</td>
</tr>
<tr>
<td>or GEOL 111</td>
<td>Physical Geology for Science Majors</td>
<td></td>
</tr>
<tr>
<td>GEOL 101L</td>
<td>Physical Geology Lab</td>
<td>1</td>
</tr>
</tbody>
</table>
or **GEOL 111L**  
**MATH 175**  
**GEOL 309**  
**GEOL 410**  
**HYDR 409**  
Physical Geology for Science Majors Lab  
Calculus II  
Ground Water Hydrology  
Groundwater Field Methods  
Quantitative Hydrogeology  
One of the following:  
**GEOL 431**  
**HYDR 412**  
**BE 450**  
Chemical Hydrogeology  
Environmental Hydrogeology  
Environmental Hydrology  
Total Hours  
20

**Courses to total 20 credits for this minor.**

---

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

*Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.*

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

Moscow

---

**Student Learning Outcomes**
List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

The objective of this minor is to introduce students to concepts and professional practices used in the environmental and groundwater industries. After completing the required coursework, students will be able to:
- Understand the fundamental concepts of groundwater hydrology (e.g., hydraulic conductivity, porosity, hydraulic head, Darcy's law), and apply these concepts to the solution of groundwater problems;
- Make and understand common measurements use in groundwater investigations, such as depth to water in wells, water pH and temperature, and well discharge;
- Plan, execute, and interpret data from aquifer slug and pumping tests;
- Understand the basics of groundwater quality and the fate and transport of groundwater constituents (contaminants and naturally-occurring substances);
- Write consulting-style reports, keep legal-standard field notes, and gain exposure to aspects of fieldwork such as logistics, budgeting, and the development of safety plans.

Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

Program assessment will be carried out primarily using student work products from GEOL 409 (Quantitative Hydrogeology) and GEOL 410 (Techniques of Groundwater Study), the two most advanced required courses in the minor.

How will you ensure that the assessment findings will be used to improve the program?

Students that have taken the courses listed in previous years are routinely employed in the groundwater sector (public and private). Many of these students remain in contact with the Geological Sciences faculty long after graduation. They continue to offer suggestions for improving the coursework, and improve the educational experience. Continuous reassessment and revision has been a hallmark of the geology/groundwater program.

What direct and indirect measures will be used to assess student learning?

Direct assessment measures include performance on field and laboratory exercises, completion of problem sets outside of class, evaluation of written and oral communication skills, and the capacity to successfully field hydrologic tests such as aquifer slug and pumping tests. In addition, students are assessed on their ability to keep legal standard field notes, prepare a (rudimentary) safety plan, understand the basics of project budgeting, and anticipate logistical problems that arise in fieldwork. Indirectly, student learning is assessed by the frequency with which students graduating from the program are hired by industry, and their success in those positions.
When will assessment activities occur and at what frequency?

Departmental program assessment occurs on an annual basis. Assessment activities within classes are on-going during the semester, as well as at the conclusion of the course.

### Student Learning Outcomes

**Learning Objectives**
The objective of this minor is to introduce students to concepts and professional practices used in the environmental and groundwater industries. After completing the required coursework, students will be able to:
- Understand the fundamental concepts of groundwater hydrology (e.g., hydraulic conductivity, porosity, hydraulic head, Darcy's law), and apply these concepts to the solution of groundwater problems;
- Make and understand common measurements use in groundwater investigations, such as depth to water in wells, water pH and temperature, and well discharge;
- Plan, execute, and interpret data from aquifer slug and pumping tests;
- Understand the basics of groundwater quality and the fate and transport of groundwater constituents (contaminants and naturally-occurring substances);
- Write consulting-style reports, keep legal-standard field notes, and gain exposure to aspects of fieldwork such as logistics, budgeting, and the development of safety plans.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

The proposed program would support and align with the new Environmental Science curriculum. Students in the Integrated Sciences track of that curriculum will be able to select a minor of their choice. They are currently able to select the Geology minor, but with the importance of groundwater resources in Idaho, we believe there will be interest in this specific topic. It is expected that this minor may also be of interest to students majoring in Civil Engineering who wish to pursue careers in hydrology or geotechnical engineering. The minor provides tangible evidence of training in groundwater resources as a pathway to careers in industry and the public sector.

**Supporting Documents**
- [ShortForm_GroundwaterHydrologyMinor.docx](https://nextcatalog.uidaho.edu/courseleaf/approve/ShortForm_GroundwaterHydrologyMinor.docx)
- [CurriculumChangeForm_GroundwaterHydrologyMinor.doc](https://nextcatalog.uidaho.edu/courseleaf/approve/CurriculumChangeForm_GroundwaterHydrologyMinor.doc)

**Requires TECC Review**
No

**Reviewer**

**Comments**

Rebecca Frost (rfrost) (10/27/20 6:17 pm): GEOL 409 needs to be reactivated in order to be included in this curriculum.
Rebecca Frost (rfrost) (11/16/20 11:05 am): Changed GEOL 409 to HYDR 409. Same title, GEOL course does not exist, and the HYDR is being proposed.

Amy Kingston (amykingston) (12/10/20 3:58 pm): Rollback: Due to time constraints, holding for future meeting.
Program Change Request

Program Reactivation Proposal

Date Submitted: 10/07/20 11:05 am

Viewing: 301 : Operations and Supply Chain Management (B.S.)

Last approved: 10/07/20 9:27 am
Last edit: 12/10/20 10:50 am

Catalog Pages Using this Program
Operations Management (B.S.Bus.)

Faculty Contact

In Workflow
1. 079 Chair
2. 13 Curriculum Committee Chair
3. 13 Dean
4. Provost's Office
5. Assessment
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path
1. 10/07/20 12:45 pm
   Joana Espinoza (jespinoza):
   Approved for 079 Chair

2. 10/07/20 12:48 pm
   Joana Espinoza (jespinoza):
   Approved for 13 Curriculum Committee Chair

3. 10/07/20 12:48 pm
   Joana Espinoza (jespinoza):
   Approved for 13 Dean

4. 10/07/20 12:49 pm
   Joana Espinoza (jespinoza):

https://nextcatalog.uidaho.edu/courseleaf/approve/
Approved for Provost’s Office
5. 10/19/20 9:16 am
   Sara Mahuron
   (sara): Rollback to 079 Chair for Assessment
6. 11/20/20 11:39 am
   Scott Metlen
   (metlen): Approved for 079 Chair
7. 11/20/20 11:45 am
   Scott Metlen
   (metlen): Approved for 13 Curriculum Committee Chair
8. 11/20/20 12:04 pm
   Marc Chopin
   (mchopin): Approved for 13 Dean
9. 11/20/20 12:51 pm
   Joana Espinoza
   (jespinoza): Approved for Provost’s Office
10. 11/20/20 3:03 pm
    Sara Mahuron
    (sara): Approved for Assessment
11. 12/09/20 2:31 pm
    Amy Kingston
    (amykingston): Approved for Registrar’s Office
12. 01/25/21 3:43 pm
    Rebecca Frost
    (rfrost): Approved for UCC
Faculty Name | Faculty Email
--- | ---
Scott | Metlen

Change Type: Change academic component name (degree, major, option, emphasis, minor, concentration, or specialization)

Description of Change:

Change the program name from Operations Management to Operations and Supply Chain Management.

Academic Level: Undergraduate

College: Business & Economics

Department/Unit: Business

Effective Catalog Year: 2021-2022

Program Title: Operations and Supply Chain Management (B.S.)

Program Credits: 120

CIP Code: 52.0205 - Operations Management and Supervision.

Emphasis/Option CIP Code(s)

Curriculum:

Required course work includes the university requirements (see regulation J-3), the college requirements, and:

Colleges of Business & Economics Requirements: 54-57

Major Requirements: 25

Total Hours: 79-82
# Major Requirements

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM 378</td>
<td>Project Management</td>
<td>3</td>
</tr>
<tr>
<td>OM 439</td>
<td>Systems and Simulation</td>
<td>4</td>
</tr>
<tr>
<td>OM 456</td>
<td>Enterprise Quality Management</td>
<td>3</td>
</tr>
<tr>
<td>OM 470</td>
<td>Supply Chain Management</td>
<td>3</td>
</tr>
<tr>
<td>OM 472</td>
<td>Enterprise Planning &amp; Sched</td>
<td>3</td>
</tr>
</tbody>
</table>

Select at least three courses from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENVS 428</td>
<td>Pollution Prevention</td>
</tr>
<tr>
<td>ME 410</td>
<td>Principles of Lean Manufacturing</td>
</tr>
<tr>
<td>STAT 431</td>
<td>Statistical Analysis</td>
</tr>
</tbody>
</table>

One 300-400 level CBE course 1

One Business, Culture, Economics or Language class 2

Total Hours: 25

1300-400 level CBE: Excluding **MHR 311** and courses taken to complete the CBE Common Requirements.

Business, Culture, Economics, Language class must include a significant international experience component.

Courses to total 120 credits for this degree

## A. PGA Golf Management Option

Required course work includes all Operations Management requirements and:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGA 103</td>
<td>Introduction to PGA Golf Management</td>
<td>2</td>
</tr>
<tr>
<td>PGA 150</td>
<td>PGA Golf Management I</td>
<td>3</td>
</tr>
<tr>
<td>PGA 251</td>
<td>PGA Golf Management II</td>
<td>3</td>
</tr>
<tr>
<td>PGA 298</td>
<td>Internship (Max 6 credits)</td>
<td>4</td>
</tr>
<tr>
<td>PGA 385</td>
<td>PGA Golf Management III</td>
<td>3</td>
</tr>
<tr>
<td>PGA 398</td>
<td>Internship (Max 6 credits) 1</td>
<td>6</td>
</tr>
<tr>
<td>RSTM 105</td>
<td>Teaching Golf I</td>
<td>2</td>
</tr>
<tr>
<td>RSTM 205</td>
<td>Teaching Golf II</td>
<td>2</td>
</tr>
<tr>
<td>RSTM 305</td>
<td>Teaching Golf III</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Hours: 27

1 **PGA 385** or **PGA 398** can be used to cover the (nine credits) of OM electives.

Students must have a 12.0 handicap or better to enter this program. International students can complete the degree requirements, but membership to the PGA of America requires US Citizenship or Resident Alien status.

Courses to total 129 credits for this degree

---

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.
Can 50% or more of the curricular requirements of this program be completed via distance education?

No

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

Geographical Area Availability

Identify the geographical area(s) this program can be completed in:

Moscow

Student Learning Outcomes

Have learning outcomes changed?

Yes, less than 25% No-Change

Learning Objectives

Students will develop and implement a program to improve the quality of organizational processes. Students will demonstrate an understanding of the use of both “soft” project management skills (e.g., stakeholder management, conflict management, project leadership) and “hard” project management skills (e.g., budgeting, scheduling, risk management) to successfully manage a project through its life cycle (i.e., initiation, planning, execution, and closing).

Students will recommend process improvements for a process based on computer models of business processes that they created for the business process in question.

Students will be able to Ninety percent of graduating students develop solutions and are expected to develop solutions to common supply chain problems.

Students will develop, manage, and improve production planning and control and inventory management systems.

Summarize how the learning outcomes will be assessed for the proposed curriculum.

The five required classes for the major all have evaluating mechanisms built in to assess the degree of success in achieving the major's objectives.
Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Changing the name of the Operations Management Major to Operations and Supply Chain Management.

Rationale from college/department:
Operations management and supply chain management are closely aligned disciplines with overlap between the two. Some universities offer an operations management major, others a supply chain management major, and many a combined operations and supply chain management majors. Our current operations management major has as much or more supply chain management content that some regional competitors offering combined operations and supply chain management degrees. The jobs that we are preparing our students for are in both operations and supply chain, but our current name works against students pursuing the supply chain management type of jobs, especially when the employer is not familiar with our major and doesn't understand that it covers both. The name change is to simply better communicate the true content of the degree and align with the language that the marketplace is looking for when recruiting our students.

Supporting Documents
- [OM name change.pdf](OM_name_change.pdf)
- [Operations and Supply Chain Management_BS.xlsx](Operations_and_Supply_Chain_Management_BS.xlsx)
- [Operations and Supply Chain Management-PGA Golf Management_BSBus.xlsx](Operations_and_Supply_Chain_Management-PGA_Golf_Management_BSBus.xlsx)

Requires TECC Review
No

Reviewer
Comments
Sara Mahuron (sara) (10/19/20 9:16 am): Rollback: Please review learning outcomes: For #3, should it be "computer's model" or "computers model?" For #4, please review the outcome statement for consistency in formatting. Something like, "Students will develop solutions to common supply chain problems." 90% could be the internal benchmark the program uses to determine how well it is doing in meeting this outcome. However, the outcome statement itself should apply to all students. These are simple fixes, but need to be fixed to move forward so that the outcomes are correct in the catalog. Please email any questions to sara@uidaho.edu or to discuss.

Rebecca Frost (rfrost) (12/10/20 10:50 am): 4 year plans added by Rebecca Frost.
Program Change Request

New Program Proposal

Date Submitted: 10/07/20 12:37 pm

Viewing: 425 : Business Analytics Academic Certificate

Last edit: 12/09/20 4:31 pm

Faculty Contact

In Workflow

1. 078 Chair
2. 13 Curriculum Committee Chair
3. 13 Dean
4. Provost's Office
5. Assessment
6. Registrar's Office
7. UCC
8. Faculty Senate Chair
9. UFM
10. President's Office
11. State Approval
12. NWCCU

Approval Path

1. 10/07/20 12:44 pm
   Joana Espinoza (jespinoza):
   Approved for 078 Chair
2. 10/07/20 12:48 pm
   Joana Espinoza (jespinoza):
   Approved for 13 Curriculum Committee Chair
3. 10/07/20 12:49 pm
   Joana Espinoza (jespinoza):
   Approved for 13 Dean
4. 10/07/20 12:49 pm
   Joana Espinoza (jespinoza):

https://nextcatalog.uidaho.edu/courseleaf/approve/
Approved for Provost's Office
5. 10/20/20 8:32 am
Sara Mahuron
(sara): Rollback to 078 Chair for Assessment
6. 10/21/20 3:45 pm
Darryl Woolley
(dwoolley): Approved for 078 Chair
7. 11/20/20 12:50 pm
Joana Espinoza
(jespinoza): Approved for 13 Curriculum Committee Chair
8. 11/20/20 12:50 pm
Joana Espinoza
(jespinoza): Approved for 13 Dean
9. 11/20/20 12:51 pm
Joana Espinoza
(jespinoza): Approved for Provost's Office
10. 11/20/20 3:02 pm
Sara Mahuron
(sara): Approved for Assessment
11. 12/09/20 4:31 pm
Amy Kingston
(amykingston): Approved for Registrar's Office
12. 01/25/21 3:45 pm
Rebecca Frost
(rfrost): Approved for UCC
<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Darryl</td>
<td>Woolley</td>
</tr>
</tbody>
</table>

**Academic Level**
Undergraduate

**College**
Business & Economics

**Department/Unit:**
Accounting

**Effective Catalog Year**
2021-2022

**Program Title**
Business Analytics Academic Certificate

**Degree Type**
Certificate

*Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.*

**Program Credits**
12

**Attach Program Change**

**CIP Code**
52.0301 - Accounting.

**Will the program be Self-Support?**
No

**Will the program have a Professional Fee?**
No

**Will the program have an Online Program Fee?**
No

**Will program be Regional or Statewide Responsibility?**
Regional

---

**Financial Information**

*What is the financial impact of the request?*
Less than $250,000 per FY

*Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form*
Describe the
financial impact
no financial impact

Curriculum:

**BUS 354**  Business Analytics  3
or **STAT 431**  Statistical Analysis
**MIS 440**  Data Visualization  3

Select two additional courses from the following:  6

- **ACCT 421**  Accounting Data Analytics
- **BUS 354**  Business Analytics
- **ECON 453**  Econometrics
- **FIN 463**  Portfolio Management
- **MHR 417**  Deploying and Developing Human Capital
- **MIS 453**  Database Design
- **MIS 455**  Data Management for Big Data
- **MKTG 431**  Marketing Analytics
- **OM 439**  Systems and Simulation (prerequisite of **OM 370**)
  or **OM 470**  Supply Chain Management
- **STAT 419**  Introduction to SAS/R Programming 1
  or **STAT 422**  Survey Sampling
  or **STAT 426**  SAS Programming
  or **STAT 427**  R Programming

1 May not choose these courses if STAT 431 is taken in lieu of BUS 354.

Courses to total 12 credits for this certificate

---

**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOD) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

No

Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.

**Geographical Area Availability**
Identify the geographical area(s) this program can be completed in:

Moscow

Student Learning Outcomes

List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

Students will use inference, regression, times series, decision analysis, and optimization to analyze business problems.

Students will demonstrate basic programming and SQL skills as relating to data acquisition and access.

Students will analyze and assess data quality and use appropriate tools to clean the data.

Students will demonstrate use of a variety of data management tools and software for analysis.

Students will present information as visualizations for management decision making.

Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

Students will demonstrate learning in tests and projects administered in MIS 440, Data Visualization.

How will you ensure that the assessment findings will be used to improve the program?

Two faculty will be overseeing the certificate and will analyze the data from the assessments for the two required courses. Additionally, alumni and advisory board members will provide an external review of the assessment with suggestions and changes as is appropriate.

What direct and indirect measures will be used to assess student learning?

Direct measures of knowledge will be completed by quizzes, exams, and assignments. Students will also have present analysis and findings to peers and faculty. This will provide direct measure of knowledge and indirect measure by receiving student feedback on presentations.

When will assessment activities occur and at what frequency?

For elective courses, an end of course summary of outcomes will be submitted to the associate dean at the end of the year. For the two required courses, formative assessment activities will occur at least twice during the course and added to the end of year summary which will also be submitted to the associate dean.

Student Learning Outcomes
Learning Objectives
Students will use inference, regression, times series, decision analysis, and optimization to analyze business problems.
Students will demonstrate basic programming and SQL skills as relating to data acquisition and access.
Students will analyze and assess data quality and use appropriate tools to clean the data.
Students will demonstrate use of a variety of data management tools and software for analysis.
Students will present information as visualizations for management decision making.

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

Analytics in business is the fastest growing component of the workforce. A certificate would attract UI students to the topic because of the workforce trends and would also be open to community members seeking additional knowledge of the topic for their job positions. The certificate has two required courses providing an overview of all stages of data analytics and allows students to select two courses that would provide specific knowledge on an analytics area (e.g., data management).

Supporting Documents

19_ACCT_Data_Analytics_Certificate.docx
18_ACCT_course-add-form-MIS4xx_DataVisualization_RD.docx

Requires TECC Review No

Reviewer Comments

Sara Mahuron (sara) (10/20/20 8:32 am): Rollback: Please review the learning outcomes -- specifically the verbs -- and revise to actionable verbs that articulate the student can do or show they did "learn" what is expected. The section that asks to "describe the assessment process" actually contains two measurable outcome statements (1.) the student will display how to access and clean data prior to analysis, and 2.) Students will perform analyses and display the information in appropriate format for decision-making). You may be able to swap out those outcome statements with the corresponding learning objectives above. Additionally, one of the "learning outcomes" (#4 in the list) states what students will experience (variety of data management tools). Please revise this to articulate what students will know or be able to do as a result of this "experience." Some examples of how these could be revised to be measurable outcomes: Students will demonstrate proficiency in basic programming and SQL skills as it related to data acquisition and data access. Or, Students can use a variety of data management tools and software for analysis. Or, Students will be able to present information as visualizations for managerial decision making. Please reach out to sara@uidaho.edu with questions or to discuss further.
New Program Proposal

Date Submitted: 11/24/20 12:09 pm

Viewing: 441: Interdisciplinary Science and Technology (PSM)

Last edit: 01/11/21 4:13 pm

Faculty Contact

In Workflow
1. 276 Chair
2. 20 Curriculum Committee Chair
3. 20 Dean
4. Provost's Office
5. Assessment
6. Curriculum Review
7. Graduate Council Chair
8. Registrar's Office
9. UCC
10. Faculty Senate Chair
11. UFM
12. President's Office
13. State Approval
14. NWCCU

Approval Path
1. 11/24/20 12:16 pm
   Jerry McMurtry (mcmurtry):
   Approved for 276 Chair
2. 11/24/20 2:28 pm
   Amy Kingston (amykingston):
   Approved for 20 Curriculum Committee Chair
3. 11/24/20 2:29 pm
   Amy Kingston (amykingston):
   Approved for 20 Dean
4. 12/01/20 1:14 pm  
Joana Espinoza  
(jespinoza):  
Approved for  
Provost's Office  
5. 12/02/20 9:02 am  
Sara Mahuron  
(sara): Approved for  
Assessment  
6. 12/02/20 9:12 am  
Rebecca Frost  
(rfrost): Approved for Curriculum Review  
7. 12/18/20 11:26 am  
Lauren Perkinson  
(perkinson):  
Approved for Graduate Council Chair  
8. 01/07/21 11:21 am  
Amy Kingston  
(amykingston):  
Approved for Registrar's Office  
9. 01/11/21 4:14 pm  
Rebecca Frost  
(rfrost): Approved for UCC  

<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Faculty Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jerry McMurtry</td>
<td><a href="mailto:mcmurtry@uidaho.edu">mcmurtry@uidaho.edu</a></td>
</tr>
</tbody>
</table>

Academic Level: Graduate  
College: Graduate Studies  
Department/Unit: Graduate Studies  
Effective Catalog Year: 2021-2022  
Program Title
Interdisciplinary Science and Technology (PSM)

Degree Type
Major

Please note: Majors and Certificates over 30 credits need to have a state form approved before the program can be created in Curriculum.

Program Credits
30

Attach Program Change

CIP Code
52.0216 - 52.0216

Emphasis/Option

CIP Code(s)

Will the program be Self-Support?

Will the program have a Professional Fee?

Will the program have an Online Program Fee?

Will program be Regional or Statewide Responsibility?

Statewide

Financial Information

What is the financial impact of the request?
Less than $250,000 per FY

Note: If financial impact is greater than $250,000, you must complete a Program Proposal Form

Describe the financial impact

Curriculum:

Note: This program is under review by the State Board of Education and is not accepting new students at this time.

Professional Science Master. Major in Interdisciplinary Science and Technology.
The Professional Science Master (P.S.M.) degree is a partnership of the University of Idaho and regional employers, where graduates are immersed in enhanced learning and are faced with real-world learning scenarios. The P.S.M. is a national program with over 165 partner institutions participating in coordination with the National Professional Science Masters Association (NPSMA).

There are 3 requirements for the P.S.M. degree in Interdisciplinary Science and Technology:

12 credits of professional skills courses,
15 credits in the student's emphasis area, and
3 credits of elective skills courses.

Professional Skills Courses (12 credits)

At least three of the four skills courses must be taken at the 500 level. Joint-listed courses must be taken at the graduate level. At least two of the skills courses must be designated PSM core courses, which include ENGL 522.

Scientific Communication

- **AOLL 528** Program Planning, Development, and Evaluation
- **ENGL 522** Communication for Science Professionals
- **FOR 546** Science Synthesis and Communication

Scientific Ethics

- **PHIL 450** Ethics in Science
- **PHIL 552** Environmental Philosophy

Leadership and Innovation

- **AOLL 583** Organizational Leadership
- **BUS 552** Management of Scientific Innovation
- **EDAD 530** Ethical Leadership and Law in Education
- **MHR 513** Leadership and Organizational Behavior

Managing Projects and Budgets

- **ACCT 582** Enterprise Accounting
- **COMM 410** Conflict Management

Emphasis Area Courses (15 credits)

The following scientific tracks serve as emphasis areas. Students must select 15 credits of electives from one of these tracks:

Environmental Contamination

- **ENVS 428** Pollution Prevention
- **ENVS 450** Environmental Hydrology
- **ENVS 541** Sampling and Analysis of Environmental Contaminants
- **ENVS 579** Introduction to Environmental Regulations
- **FOR 554** Air Quality, Pollution, and Smoke
- **FS 509** Princ Environmental Toxicology
- **FS 564** Food Toxicology
- **SOIL 438** Pesticides in the Environment

Sustainable Soil and Land Systems

- **AGEC/ENVS 577** Law Ethics and the Environment
- **ENVS 428** Pollution Prevention
ENVS 485  Energy Efficiency and Conservation
ENVS 536  Principles of Sustainability
FISH 540  Wetland Restoration
FS 509  Princ Environmental Toxicology
GEOG 455  Societal Resilience and Adaptation to Climate Change
GEOG 513  Global Climate Change
REM 440  Restoration Ecology
WR 506  Interdisciplinary Methods in Water Resources

Climate Change
BE 553  Northwest Climate and Water Resources Change
BIOP 520  Intro to Bioregional Planning
FOR 462  Watershed Science and Management
GEOG 401  Climatology
GEOG 410  Biogeography
GEOG 420  Land, Resources, and Environment
GEOG 455  Societal Resilience and Adaptation to Climate Change
GEOG 513  Global Climate Change
NRS 510  Applications of Communication Theory in Natural Resource Management

Water Resources
BE 552  Environmental Water Quality
ENVS 450  Environmental Hydrology
FISH 540  Wetland Restoration
FOR 462  Watershed Science and Management
GEOG 524  Hydro Apps/GIS&Remote Sensing
HYDR 512  Environmental Hydrogeology
NRS 510  Applications of Communication Theory in Natural Resource Management
NRS 573  Planning & Decision Making for Watershed Management
WR 506  Interdisciplinary Methods in Water Resources

Management of Regulated River Systems
CE 421  Engineering Hydrology
CE 428  Open Channel Hydraulics
CE/ME 520  Fluid Dynamics
CE 535  Fluvial Geomorphology and River Mechanics
FISH 430  Riparian Ecology and Management
FISH 515  Large River Fisheries
NRS 510  Applications of Communication Theory in Natural Resource Management
NRS 573  Planning & Decision Making for Watershed Management

Ecological and Hydrological Science and Management
BE 552  Environmental Water Quality
ENVS 450  Environmental Hydrology
FISH 415  Limnology
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>FISH 430</td>
<td>Riparian Ecology and Management</td>
</tr>
<tr>
<td>FISH 515</td>
<td>Large River Fisheries</td>
</tr>
<tr>
<td>FISH 540</td>
<td>Wetland Restoration</td>
</tr>
<tr>
<td>FOR 462</td>
<td>Watershed Science and Management</td>
</tr>
<tr>
<td>GEOG 524</td>
<td>Hydro Apps/GIS&amp;Remote Sensing</td>
</tr>
<tr>
<td>HYDR 512</td>
<td>Environmental Hydrogeology</td>
</tr>
<tr>
<td>NRS 510</td>
<td>Applications of Communication Theory in Natural Resource Management</td>
</tr>
<tr>
<td>NRS 573</td>
<td>Planning &amp; Decision Making for Watershed Management</td>
</tr>
<tr>
<td>REM 440</td>
<td>Restoration Ecology</td>
</tr>
</tbody>
</table>

Precision Nutrition for Animal and Human Health

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGEC 451</td>
<td>Applied Environmental and Natural Resource Economics</td>
</tr>
<tr>
<td>BE 585</td>
<td>Fundamentals of Bioenergy and Bioproducts</td>
</tr>
<tr>
<td>BE 592</td>
<td>Biofuels</td>
</tr>
<tr>
<td>BE 594</td>
<td>Thermochemical Technologies for Biomass Conversion</td>
</tr>
<tr>
<td>ENVS/FS 536</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>FS 538</td>
<td>Introduction to Physical Properties of Food</td>
</tr>
<tr>
<td>FS 570</td>
<td>Advanced Food Technology</td>
</tr>
<tr>
<td>FSP 438</td>
<td>Introduction to Lignocellulosic Chemistry</td>
</tr>
<tr>
<td>FSP 536</td>
<td>Biocomposites</td>
</tr>
<tr>
<td>FSP 538</td>
<td>Lignocellulosic Biomass Chemistry</td>
</tr>
<tr>
<td>PLSC 407</td>
<td>Field Crop Production</td>
</tr>
<tr>
<td>PLSC 546</td>
<td>Plant Breeding</td>
</tr>
</tbody>
</table>

Sustainable Food and Fiber

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGED 406</td>
<td>Exploring International Agriculture</td>
</tr>
<tr>
<td>AGED 548</td>
<td>Foundations of Extension Education</td>
</tr>
<tr>
<td>ENVS/FS 536</td>
<td>Principles of Sustainability</td>
</tr>
<tr>
<td>FS 510</td>
<td>Functional Foods and Health</td>
</tr>
<tr>
<td>FS 516</td>
<td>Food Laws</td>
</tr>
<tr>
<td>FS 564</td>
<td>Food Toxicology</td>
</tr>
<tr>
<td>PLSC 407</td>
<td>Field Crop Production</td>
</tr>
<tr>
<td>PLSC 546</td>
<td>Plant Breeding</td>
</tr>
<tr>
<td>PLSC 551</td>
<td>Vegetable Crops</td>
</tr>
<tr>
<td>SOIL 417</td>
<td>Market Garden Practicum</td>
</tr>
<tr>
<td>SOIL 438</td>
<td>Pesticides in the Environment</td>
</tr>
<tr>
<td>SOIL 446</td>
<td>Soil Fertility</td>
</tr>
<tr>
<td>SOIL 527</td>
<td>Sustainable Food Systems</td>
</tr>
</tbody>
</table>

Geographic Information Skills, Mapping, and Monitoring

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE 516</td>
<td>Image Sensors and Systems</td>
</tr>
<tr>
<td>FOR 554</td>
<td>Air Quality, Pollution, and Smoke</td>
</tr>
<tr>
<td>GEOG 524</td>
<td>Hydro Apps/GIS&amp;Remote Sensing</td>
</tr>
<tr>
<td>REM 507</td>
<td>Landscape and Habitat Dynamics</td>
</tr>
</tbody>
</table>
**Distance Education Availability**

To comply with the requirements of the Idaho State Board of Education (SBOE) and the Northwest Commission on Colleges and Universities (NWCCU) the University of Idaho must declare whether 50% or more of the curricular requirements of a program which may be completed via distance education.

Can 50% or more of the curricular requirements of this program be completed via distance education?

Yes

If Yes, can 100% of the curricular requirements of this program be completed via distance education?

Yes

*Note: Existing programs transitioning from less than 50% of its curricular requirements to 50% or more of its requirements being available via distance education is considered a Group C change and must complete the program proposal formwork before these changes will be processed.*

**Geographical Area Availability**

Identify the geographical area(s) this program can be completed in:

- Boise
- Coeur d'Alene
- Idaho Falls
- Moscow

**Student Learning Outcomes**

List the intended learning outcomes for program component. Use learner centered statements that indicate what will students know, be able to do, and value or appreciate as a result of completing the program.

No Change
Describe the assessment process that will be used to evaluate how well students are achieving the intended learning outcomes of the program component.

No Change

How will you ensure that the assessment findings will be used to improve the program?

No Change

What direct and indirect measures will be used to assess student learning?

No Change

When will assessment activities occur and at what frequency?

No Change

**Student Learning Outcomes**

<table>
<thead>
<tr>
<th>Learning Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate an understanding of integrated environmental problem-solving based on a sound foundation in the principles of science.</td>
</tr>
<tr>
<td>Demonstrate mastery in financial and organizational management of scientific projects.</td>
</tr>
<tr>
<td>Communicate effectively, at a professional level through written work and oral presentations.</td>
</tr>
<tr>
<td>Demonstrate an understanding of ethical reasoning in scientific research and practice.</td>
</tr>
<tr>
<td>Demonstrate the ability to develop an innovation within an organization and drive adoption of the innovation by external stakeholders.</td>
</tr>
</tbody>
</table>

Rationale for the proposed change. Include an explanation of how the department will manage the added workload, if any.

This proposal would move the P.S.M. to the College of Graduate Studies and change the name of three of the emphasis areas (which are not full, transcripted emphases). Bioenergy and Bioproducts becomes Precision Nutrition for Animal and Human Health. Water Resources Management becomes Water Resources. Sustainability Science becomes Sustainable Soil and Land Systems.

Supporting Documents

<table>
<thead>
<tr>
<th>Requires TECC</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review</td>
<td></td>
</tr>
</tbody>
</table>
Reviewer

Comments

Amy Kingston (amykingston) (11/24/20 2:28 pm): Note: This is not a fully new program - it currently exists under the College of Natural Resources. In order to move it to the College of Graduate Studies, I've inactivate the existing program and rebuilt it here.
POLICY COVER SHEET
For instructions on policy creation and change, please see https://sitecore.uidaho.edu/governance/policy.

All policies must be reviewed, approved, and returned by the policy sponsor, with a cover sheet attached, to ui-policy@uidaho.edu.

**Faculty Staff Handbook (FSH)**
- □ Addition  □ Revision*  □ Deletion*  □ Emergency  □ Minor Amendment

Policy Number & Title:

**Administrative Procedures Manual (APM)**
- □ Addition  □ Revision*  □ Deletion*  □ Emergency  □ Minor Amendment

Policy Number & Title: **APM 90.53 UI PHOTOGRAPHIC SERVICES**

*Note: If revision or deletion, request original document from ui-policy@uidaho.edu. All changes must be made using “track changes.”

Originator: Diane Whitney, University Policy and Compliance Coordinator

Policy Sponsor, if different from Originator: 

Reviewed by General Counsel  Yes x No  Name & Date:

1. **Policy/Procedure Statement:** Briefly explain the reason for the proposed addition, revision, and/or deletion.

   APM 90.53 UI Photographic Services merely describes unit operations and is not appropriate for placement in the APM. Current information is available on the Creative Services website.

2. **Fiscal Impact:** What fiscal impact, if any, will this addition, revision, or deletion have?

   None

3. **Related Policies/Procedures:** Describe other UI policies or procedures related or similar to this proposed change, or that will be impacted by it.

   None.

4. **Effective Date:** This policy shall be effective on July 1, or January 1, whichever arrives first after final approval (see FSH 1460 D) unless otherwise specified in the policy.
A. General. UI Photo Services is a service branch of the University of Idaho operating within Information Technology Services (ITS). Photo Services provides a variety of quality and convenient services for the faculty, staff, and students of the University of Idaho.

A-1. Services Provided. Staff photographers and processing technicians are available for the production of slides, copy work, thesis and dissertation material, scientific and industrial photos, news and public relations photos, individual and group portraits, graphics and more.

A-2. Labor Fees. UI Photo Services' photographers' time is billed at a rate of $40/hour, plus cost of materials. Higher billing is in effect for occasional non-university related work which meets certain qualifications at a rate of $60/hour, plus cost of materials. Minimum 24 hours advanced notice is required for studio or location work. Weekend appointments must be confirmed by closing time Thursday.

B. Procedures. All orders that are to be charged to a university department or agency must be accompanied by a signed ID-G form [See 75.31]. Hours of operation are 8:00am-5:00pm, M-F, in UCC 105. IDGs, checks, cash, and Banner journal vouchers are accepted for payments. [ed. 7-09]

B-1. Non-University Orders. All services that are unrelated to the direct support of university departments, agencies or personnel are charged at a rate of 30% above those listed herein. [Note: This does not include the sale of materials alone, such as film, paper, and chemicals.]

C. Information. Any questions regarding UI Photographic Services should be addressed to Photo Service operations, at (208) 885-6342.
All policies must be reviewed, approved, and returned by the policy sponsor, with a cover sheet attached, to ui-policy@uidaho.edu.

Faculty Staff Handbook (FSH)
- Addition
- Revision*
- Deletion*
- Emergency
- Minor Amendment

Policy Number & Title:

Administrative Procedures Manual (APM)
- Addition
- Revision* x Deletion*
- Emergency
- Minor Amendment

Policy Number & Title: APM 90.54 PRINTING AND DESIGN SERVICES

*Note: If revision or deletion, request original document from ui-policy@uidaho.edu. All changes must be made using “track changes.”

Originator: Diane Whitney, University Policy and Compliance Coordinator

Policy Sponsor, if different from Originator:

Reviewed by General Counsel

Yes x No Name & Date:

1. **Policy/Procedure Statement**: Briefly explain the reason for the proposed addition, revision, and/or deletion.

   APM 90.53 Printing and Design Services merely describes unit operations and is not appropriate for placement in the APM. Current information is available on the Creative Services website.

2. **Fiscal Impact**: What fiscal impact, if any, will this addition, revision, or deletion have?

   None

3. **Related Policies/Procedures**: Describe other UI policies or procedures related or similar to this proposed change, or that will be impacted by it.

   None.

4. **Effective Date**: This policy shall be effective on July 1, or January 1, whichever arrives first after final approval (see FSH 1460 D) unless otherwise specified in the policy.
A. **General.** Printing and Design Services is a service branch of the University of Idaho operating within the Division of Educational Technologies and Services. The department provides printing services, publication design services, and campus copier services.

A-1. **Printing Services.** Printing Services provides a full range of professional printing services. Examples of services and publications include booklets and brochures, posters, folders and newsletters, catalogs, invitations, programs, flyers, and black-and-white to full-color printing. Hours of operation are 8:00 am-5:00 pm, in the Alumni Center. IDDs, checks, cash, and Banner journal vouchers are accepted for payments.

A-2. **Publication Design Services.** Publication Design Services provides consultation and products such as layouts, artwork, desktop publishing, illustrations, displays, designs, and printing consultation. Hours of operation are 8:00am-5:00pm, in the Alumni Center. IDDs, checks, cash, and Banner journal vouchers are accepted for payments.

A-3. **Campus Copier Services.** State-of-the-art copy equipment is located in the UCC 222, (208) 885-7377, and the Student Union Building, (208) 885-7811. Free pickup and delivery service is available. Services include high-volume copying, oversized copies, lamination, theses, bindings, fax services, color copies, and coin and card-operated photocopiers. Hours of operation are 8:00am-8:00pm, M-Th, and 10:00am-5:00pm Friday, Saturday, and Sunday. IDDs, checks, cash, and Banner journal vouchers are accepted for payments.

C. **Information.** Any questions regarding UI Printing and Design Services' technologies or capabilities should be addressed to Printing Services, at (208) 885-6293.
All policies must be reviewed, approved, and returned by the policy sponsor, with a cover sheet attached, to ui-policy@uidaho.edu.

Faculty Staff Handbook (FSH)
- Addition
- Revision*
- Deletion*
- Emergency
- Minor Amendment
Policy Number & Title:

Administrative Procedures Manual (APM)
- Addition
- Revision*
- Deletion*
- Emergency
- Minor Amendment
Policy Number & Title: APM 90.55 VIDEO PRODUCTION CENTER SERVICES
*Note: If revision or deletion, request original document from ui-policy@uidaho.edu. All changes must be made using “track changes.”

Originator: Diane Whitney, University Policy and Compliance Coordinator
Policy Sponsor, if different from Originator:
Reviewed by General Counsel: Yes x No   Name & Date:

1. **Policy/Procedure Statement**: Briefly explain the reason for the proposed addition, revision, and/or deletion.

   APM 90.55 Video Production Center Services merely describes unit operations and is not appropriate for placement in the APM. Current information is available on the Creative Services website.

2. **Fiscal Impact**: What fiscal impact, if any, will this addition, revision, or deletion have?

   None

3. **Related Policies/Procedures**: Describe other UI policies or procedures related or similar to this proposed change, or that will be impacted by it.

   None.

4. **Effective Date**: This policy shall be effective on July 1, or January 1, whichever arrives first after final approval (see FSH 1460 D) unless otherwise specified in the policy.
Preamble: The UI Video Production Center (VPC) is a service unit of Creative Services and Print Management, within University Communications and Marketing. The unit provides services for digital media production, event video services, web media, disc duplication, UITV-8 programming and more.

A. Digital Media Production Services. The VPC provides a wide range of media development services utilized by faculty and departments across campus. Normal business hours are 8:00am-5:00pm, M-F, closed during lunch hour. IDGs, checks, cash, and Banner journal vouchers are accepted for payments.

A-1. Basic Services. Basic services include on-location event and lecture taping, CD and DVD disc creation and duplication, and media conversions/encoding to electronic media file types.

A-2. Advanced Services. Advanced production services include digital recording and editing of video and audio, single and multi-camera production in the studio and on-location, live event video production for large-screen projection, recording, and distribution on the internet.

A-3. Program Development Services. Program development services include scripting, program design, and production of projects for marketing, presentations, recruitment, training, instruction, and documentaries.

A-4. UITV-8 Cable TV. The Video Production Center schedules University of Idaho programming on UITV-8, a cable television channel available in Moscow. Through a cooperative operations agreement with KUID-TV/Idaho Public Television, UI programming is scheduled for weekdays between 4 and 10 pm, with the remainder of the schedule determined by KUID-TV/IPTV. UI departments interested in sponsoring programs and/or productions for UITV-8 should contact the VPC Manager for more information. UI programming schedules are posted at the VPC website.

A-5. Other Video Services. Coordination of complementary video services is facilitated through collaborative arrangements with University Support Services, University Communications and Marketing, University Outreach and Video Networking Services, KUID-TV, Engineering Video Outreach, CALS Educational Communications, and other university video-capable service units.
B. Service Facilities. Primary studio and production facilities are located in the SUB Room 030. The VPC offers video-audio links to the Idaho Commons, the Borah Theatre, SUB Conference rooms, and to KUID-TV for connections to the Kibbie Activity Center.

The VPC control room serves the VPC production studio in the SUB basement and the SUB Ballroom. A VPC video control room in the Kibbie Activity Center serves live events in that facility.

C. Contact Information. Any questions regarding UI Video Production Center technologies or capabilities should be addressed to UI Video Production Center, at (208) 885-0569, email videoctr@uidaho.edu, or visit www.its2.uidaho.edu/video.