

Natural Resources and Environmental Science Program 2014-2015 Implementation Plan Report

October 2015

RECOMMENDATIONS

1. **Recruitment of students into the NRES program has been an ongoing focus, and one which has become more difficult with the addition of the Environment and Sustainability major in the College of Arts and Sciences which creates direct competition with the NRES program.**

Assessment Method: We used enrollment and graduation data over the past ten years to determine trends in enrollment

NRES Enrollment and Graduation Numbers

	Enrolled	Graduated in previous 12 months
Oct 2015	76	28
Oct 2014	83	15
Oct 2013	91	27
Oct 2012	98	20
Oct 2011	85	13
Oct 2010	80	16
Oct 2009	70	13
Oct 2008	68	15
Oct 2007	57	-----
Oct 2006	64	-----

Enrollment numbers were taken from BW on Oct. 4th for fall numbers.

Graduation numbers provided by Jamie Dunn.

Results: Enrollment steadily increased from 2006 to 2013, but decreased in the last two years, despite increased effort in recruiting.

Analysis of Results: We hired an Academic Coordinator (AC) in 2011. The AC has been very pro-active in identifying and implementing approaches to recruitment and retention. For example, we now have a concrete plan in place for students to transfer from the Environmental Science Technology (EST) program at BCTC to UK.

Ongoing Improvement Actions: Beginning this year, we shifted the duties of the AC away from some of her teaching commitments to allow her more time to focus on

recruitment. Just two months into this change and we believe we are seeing some good results, although of course we will need to wait until next fall to assess enrollment data. We are working jointly with the BCTC program in EST to develop a brochure to recruit students from BCTC to NRES, a pathway that is already fairly common, and so could be fruitful for recruiting additional students.

- 2. The external program review completed in April 2014 recommended improvements to the office space used by the NRES AC, as well as additional staff support for the NRES program to accommodate various support needs currently fulfilled by the AC.**

Assessment Method: Improved office space, additional support staff

Results: We acquired new office space for the NRES AC in the Equine Suite on the second floor of the Ag North building in early summer, 2015. This space is vastly improved over the much smaller office space the NRES AC occupied in TP Cooper Building. In addition, and to accommodate the need for students to be able to meet with the NRES AC readily while passing between classes, we also have converted an inner office within a faculty member's lab space for the NRES AC to use on a periodic basis and to store equipment. This space is shared with the Urban Forest Initiative. We have not received any additional staff support for the NRES program.

Analysis of Results: The new NRES AC office space is a significant improvement, and seems to be working well for the program and our students. Emily Morgan, in Academic Programs, provides important staff support, primarily and importantly in tracking budgets and purchases. We also rely on two undergraduate students who each work approximately 10 hours/week, researching and writing the bi-annual NRES newsletter, which we believe is the only student-produced newsletter in CAFE. The students also help with other minor program needs, such as helping to staff events and put together packets of materials for recruiting or advising.

Ongoing Improvement Actions: We will reassess the workability of our current space after it has been in use for a year. For now, our need for additional staff support seems to be fulfilled by Emily Morgan's support of program needs. Envisioning of future additional staff support might be best accommodated through a shared staff person to support all CAFE ACs, or some similar shared approach.

- 3. There is a need for ongoing recruitment and retention of faculty, whose primary academic home is a CAFE department, to the NRES program. This occurs in two ways: when new faculty are hired with potential to contribute to the NRES program, making that connection explicit in the hiring process, and recruitment and retention of faculty once they arrive on campus. The first process occurs at the level of the Dean, Associate Deans, and department**

chairs. The second process is at least partially the responsibility of the NRES SC Chair and SC members.

Assessment Method: Measured by consistency and numbers of faculty who are dedicated to the NRES program in one or more of the following roles: serving on the NRES Steering Committee (NRES SC), advising students, teaching NRES courses.

Results: The membership of the NRES SC is made up of the NRES SC Chair, the DUS for the NRES program, and a group of between 6 and 8 faculty. Most of these faculty also teach one or more of the major course requirements, and advise students. Additional faculty teach key courses for the NRES program, but do not serve as SC members or academic advisors for NRES students; there are also faculty who neither teach NRES courses nor serve on the NRES SC, but advise students. The consistency and number of faculty has generally been in a relative steady-state: as members leave for one reason or another, we have been able to find new members. Recently, we lost two NRES SC members, one potentially permanently (Agouridis), and the other hopefully temporarily (Barton). With two additional faculty coming up for tenure this year, we could potentially remain at our current number of NRES SC members (8), but may not.

Analysis of Results: We are facing two challenges with regard to NRES program regarding faculty involvement: maintaining full membership on the NRES SC and bringing new faculty on board, and developing leadership among the NRES SC faculty to take over the positions of NRES SC Chair and DUS through time.

Ongoing Improvement Actions: The program relies heavily on the chairs of the affiliated departments and the Dean of CAFE to identify new faculty hires with the potential to cross over to NRES, and whose positions are then explicitly connected to the NRES program for teaching, NRES SC service, and academic advising. From the program perspective, we need to maintain strong communication with chairs of the affiliated departments and the Dean and Associate Dean of Instruction when departmental hiring decisions are being made. Developing faculty leadership within the program has, in some ways, been challenging, resulting in long terms for each of our 4-5 NRES SC Chairs over the past 23 years. Similarly, it can be difficult to identify a faculty member to serve as DUS. In addition to these two leadership positions, faculty on the NRES SC also volunteer for other roles, such as providing oversight of the Internship Program and Annual Internship Forum, leading the assessment charge, and overseeing NRES Summer Camp at Robinson Forest. Recruitment into each of these roles has been very organic, with faculty stepping up to various roles as they see a need they can fill. This has been workable throughout the history of the program. However, with increasing demands on faculty time, it may not be workable into the future. One option to help address recruitment into these leadership positions could be to develop more formal mentoring of junior faculty within the SC. We will discuss this and other issues related to faculty

leadership at an upcoming NRES SC meeting. Finally, we need to reach out more effectively to faculty who advise, but don't interact with NRES students through teaching and also don't serve on the NRES SC to keep them fully abreast of any program changes and implications for student advising. These faculty serve an essential role in the program, and we can nurture this commitment to NRES by improving communication with those faculty. Since all faculty serving NRES are essentially doing so out of their own interest and commitment, there is a constant need to find ways to nurture those interests and commitments from faculty.

- 4. Studying abroad can provide an important opportunity for growth for individual students, and can greatly enhance their understanding of the differences in the ways that other cultures manage natural resources. We encourage our students to study abroad, either as a semester abroad, or with the NRES summer camp experience to Costa Rica or other shorter-term opportunities.**

Assessment Method: Numbers of students studying abroad.

Results: We have data on students studying abroad only for the past 4 years. Starting in 2013, the NRES program offered a 15-day study abroad experience that fulfills the requirement for summer camp (the other option is a 3-week experience at the Robinson Forest). In three years, we have had 30 students go to Costa Rica, though in declining numbers since the first year (2013: 17; 2014: 12; 2015: 1 NRES student plus 4 other students). Students have also studied abroad for summer experiences (5 total in the past 4 years) or in semester or year-long study abroad experiences (7 students in the past 4 years).

Analysis of Results: Although we don't have concrete numbers for the number of students who studied abroad prior to 2012, we are confident that the number of students studying abroad has increased dramatically since 2012. There are two reasons for this. First, the creation of the Costa Rica program allows many more students to study abroad by linking it to the NRES summer camp requirement. In addition, the development of a brochure linking UK Education Abroad (EA) opportunities with the NRES program, developed by the NRES SC in collaboration with the EA office, may have helped to normalize the idea of studying abroad and encouraged more students to do it.

Ongoing Improvement Actions: There are several strategies we can use to continue to nurture NRES students going abroad. First, we need to do a better job of advertising the Costa Rica summer camp option earlier in the year, and also do a better job of extending awareness of this opportunity to students not in NRES so that there will be sufficient numbers traveling for the trip to be financially feasible. Secondly, NRES was the first program to have an EA major advising page (MAP),

and this is updated annually to provide students with information about relevant EA opportunities connected to their NRES program.

5. The NRES program could benefit from developing a fund-raising stream, which could be used to support student development, such as travel to a professional meeting.

Assessment Method: Creation of an NRES Enrichment Fund, and funds raised

Results: In 2015, the NRES program raised an initial \$500 through t-shirt sales conducted by the Environmental Science Club, which enabled the creation of the NRES Enrichment Fund. The current amount is ~\$550, with an additional \$210 in cash from t-shirt sales.

Analysis of Results: This is a good start on fund-raising in the first year. With the Enrichment Fund in place, NRES and NRCM alumni will be able to give to the program. In addition to monetary contributions, we are researching the potential to receive non-monetary donations to the program, such as equipment to support students who don't have outdoor gear for summer camp.

Ongoing Improvement Actions: To successfully raise sufficient funds to use for student support, potential donors need to be aware of this new opportunity to donate directly to the NRES program. We are working to establish improved communication with potential donors to facilitate donations to the NRES fund.