



FACULTY SENATE

Minutes
February 9, 2015

Senators in Attendance: 63

Absent: Adams (Surgery), Argnarsson (Biology), Hehir (Neuroscience), Schapiro (Anesthesiology), Weiner (Philosophy), Weiss (Medicine), Wilcox (Pathology), Witkin (Social Work), Wu (Rehabilitation & Movement Science),

1. **Approval of the Minutes.** The minutes of January 12, 2015 were approved.
2. **Senate President's Remarks.** President Roberts took this time to introduce the idea of creating a new standing committee of the Faculty Senate that would be responsible for taking on new curricular issues that come as a result of the transition to IBB. This could include looking at a university level of review for new courses, communicating with the Registrar regularly, and other issues or unintended negative consequences from the budget model change. Any Feedback regarding this idea is welcome.
3. **Resolution in Memoriam.** Professor Betsy Greene read a Resolution in Memoriam for Alice M. Wright, a retired Assistant State Nutritionist with UVM Extension.
4. **UVM President.** President Sullivan provided an update on the President's Commission on Wellbeing. Since the fall report from the committee, which fully identified and defined the obstacles UVM students face when it comes to wellness, the committee has presented to the Faculty Senate, and the President's Advisory Council. This week, the campus can expect a memo that outlines recommendations that create a comprehensive approach to increasing wellness on many levels. The memo provides a timeline, how progress will be measured, and an accountability and assessment plan. The result will be a substantial behavior change that will impact students throughout their time with UVM. The goal of creating a vibrant learning community for students is clear and will be achieved through the implementation of some of these recommendations.
5. **Curricular Affairs.** Chair of the Curricular Affairs Committee, Cathy Paris, brought three items of business to the Faculty Senate for their consideration.
 - a. The first proposal brought forward was to change the name and other components of the document currently known as Appendix A. The reason for the name change is straightforward, as it is no longer an Appendix to any document. The proposed name is: Guidelines for Ensuring Excellence in New Programs. The other change is to add a section that defines quality and excellence in new program proposals. It was recommended that the word "research" be changed to "scholarship" throughout the proposal to be more inclusive of

disciplines such as the humanities and creative arts. When put to a vote, this proposal was approved.

- b. The second proposal was for a M.S. degree program in Medical Science. This program is intended as a bridge program for students who would like to enter medical school but do not have the appropriate credentials. These students could either already have a B.S. in a non-science major or have a low undergraduate GPA. The program is a 1 year, 30 credit package with 7 biomedical courses. The program is different from a post baccalaureate program in that the coursework is all at the Masters level which would strengthen an application to medical school considerably. Students who do not meet the undergraduate pre-requisite science courses for this program would begin with a post baccalaureate program to meet these requirements before being admitted to the M.S. in Medical Science. Other target audiences could be students looking to apply to dental school, or an advanced nursing degree program. Continuing and Distance Education will be providing both academic and pre-professional advising for this program. The Faculty Senate approved this proposal through a majority vote.
- c. The third and final proposal brought to the Faculty Senate for consideration was for an online degree completion program in Health Sciences. This proposal comes jointly from CNHS and CDE and would serve as a degree completion program. The program is based on a foundation of liberal arts and is common at other universities in the northeast. It is constructed to provide direct entry into a professional program, such as nursing practice.

There were concerns brought up during discussion that included: the number of credits needed to complete the degree in a timely manner, who would be eligible for admission to the program, the program's viability under the new budget model, how practical/lab courses would be treated, and the volume of online courses available at UVM to complete the degree. The incoming number of credits (30), is only the minimum for entry into the program, and admissions will be closely monitoring the number of credits applicants already have. The ideal number of credits upon admission will be closer to 60. This program is being marketed to students who have left the traditional university experience prior to completing their undergraduate degree. Due to complications with how financial aid is awarded and distributed, it will not be available to matriculated students as a sort of hybrid in class-online program. The program's viability has been explored with the assistance of Alberto Citarella and has been proven to have the potential for success under the new budget model. The final question however, regarding the number of online courses available at UVM that students could use to complete this program was not answered. The Faculty Senate voted to put this vote off until the March meeting. It is hoped that this will allow time to collect more information on the number of online courses that will be available to these students. Any specific concerns about the program should be directed to Sarah Abrams, Associate Dean, College of Nursing and Health Sciences.

- 6. Standing Committee Report: Professional Standards Committee.** Robert Rodgers, Chair of the Professional Standards Committee gave an update to the Faculty Senate about work the PSC has been doing on refining the sabbatical application review process. In an effort to make the process more closely align with that for reappointment, promotion, and tenure, the committee has recommended an additional step in the review process. This would allow the applicant to be notified of and respond to any negative reviews on their sabbatical application. There was no discussion, and the committee hopes to move forward with this new process next year. The committee has been working with the Provost's Office as well as the UA to ensure that this is a smooth transition. There is also potential for a campus-

wide discussion in the future about sabbatical application requirements. In the interim, this process modification is a step in the right direction. There was a question about representation for the College of Medicine, and it was answered that there are two representatives on the Professional Standards Committee from the College of Medicine.

7. **Sustainability Curriculum Review Committee - vote.** Laura Hill began with a thorough presentation to the Faculty Senate that demonstrated capacity for students to complete the Sustainability General Education Requirement ([see presentation here](#)). One major question was if redundancy was accounted for during the capacity calculations. It was not taken into account due to time constraints based on the data's availability. Through the process for sustainability course approval, the designation will follow the instructor and course, so multiple sections have been selected out based on which instructors had submitted for approval from the Sustainability Curriculum Review Committee. Finally, there was a question about how many courses did not have any prerequisites. This is something the committee is actively working on with the Registrar. Since the meeting an update capacity worksheet has been posted to the Faculty Senate website ([click – "Sustainability Requirement Capacity"](#)).

The Faculty Senate voted to postpone the vote on the Sustainability General Education Requirement so that they may bring this information back to their departments and have a continued discussion with their colleagues before voting.

8. **New Business.** There was no new business at this time.

The meeting was adjourned at 5:36 pm.

Curricular Affairs Committee of the Faculty Senate

Memo

To: The UVM Faculty Senate
From: Curricular Affairs Committee of the Faculty Senate, Cathy Paris, Chair
Date: January 20, 2015
Re: Approval of a proposal for revisions to and a name change for Appendix A

The Curricular Affairs Committee at its meeting of January 8, 2015 unanimously approved the action recommended in the following memo.

In this document the Curricular Affairs Committee proposes a revision and renaming of Appendix A, the outline for new academic program proposals. The goal of the revision is the inclusion of some important indicators of academic excellence, such as evidence that the proposed new program is rigorous and that the curriculum is developmentally sequenced. Attached to this memo is the proposed revision to Appendix A; the new language addressing academic excellence is included in Section XI on page 3.

The Curricular Affairs Committee became aware of the need for the proposed revision because it is charged with the review of both 1) proposals for new academic programs; and 2) existing programs through the Academic Program Review process. Indicators of excellence we look for in APR are not explicitly requested in the guidelines for new program proposals in Appendix A. Hence we sought to offer a revision of Appendix A that brings the two review policies into better alignment.

At the same time, we recommend the abandonment of the anachronistic name "Appendix A," a holdout from the time when the document was an appendix to the Faculty Handbook, in favor of the more descriptive name, *Proposal for a New Academic, Research, or Service Endeavor*. It is now a stand-alone document that lives on the Faculty Senate website (<http://www.uvm.edu/~facsen/Appendix A May 2010 Revisionv2.pdf>); it is not an appendix to anything.

With this action we also propose, using the same rationale, the relinquishment of the names "Appendix B" in favor of *Proposal to Substantially Revise an Academic, Research, or Service Endeavor*, and "Appendix C" in favor of *Proposal to Terminate an Academic, Research, or Service Endeavor*.

Curricular Affairs Committee of the Faculty Senate

Memo

To: The UVM Faculty Senate
From: Curricular Affairs Committee of the Faculty Senate, Cathy Paris, Chair
Date: January 20, 2015
Re: Approval of a proposal for a new M.S degree program in Medical Science

The Curricular Affairs Committee at its meeting of January 8, 2015 unanimously approved the action recommended in the following memo.

We have reviewed and recommend for approval a proposal for a new Master of Science degree program in Medical Science (MMS) submitted by the College of Medicine (COM). Dr. Christopher Berger, Associate Professor in the Department of Molecular Physiology and Biophysics, will serve as Faculty Director.

Program Description and Rationale

The one-year, ≥30-credit Master of Science in Medical Science program is designed to provide a rigorous biomedical science curriculum for students seeking acceptance into medical school or other professional or biomedical graduate programs but who lack the appropriate background or credentials to be competitive applicants. These include students from non-science backgrounds who have the ability and motivation to excel in medical school but who need the core biomedical knowledge to do so, as well as those with a scientific background whose undergraduate grades do not reflect their true academic ability.

Evidence of Demand and Justification

In response to a national shortage of physicians, applications to medical school reached an all-time high last year according to the Association of American Medical Colleges, with 48,014 applicants, surpassing the previous record of 46,965 set in 1996. For the first time ever, the number first-year medical students surpassed 20,000 (20,055), an increase of 2.8 percent over the previous year. As the demand for physicians, and therefore for medical school seats, increases, so will the competition for those slots. Thus, it will be critical that the prospective applicant is properly prepared for the competitive application process as well as the rigors of medical school and a career in medicine. The MMS program at UVM will help to prepare students for successful admission to and completion of medical school and accomplishment in their subsequent medical careers.

Anticipated Enrollment

A cohort of 25 students per year for the first five years of the MMS program is anticipated. This estimate is based in part on the annual demand for the UVM Post-Baccalaureate Pre-Med (PBPM) program, which has enrolled over 70 students per year for the past three years. In addition, statistics from the Integrated Postsecondary Education Data System (IPEDS) database show that for the 66 programs that reported data for 2012-2013, the average conferral rate was 24 students per annum.

Admission Requirements and Process

Admission into the UVM Master of Science in Medical Science Program requires a B.S. or B.A. degree from an accredited institution of higher education, two semesters each of general biology, organic chemistry, and physics, MCAT or GRE scores taken in the previous five years, and, for international students, TOEFL scores of at least 90.

Advising

Each student in the MMS program will have a faculty advisor assigned by the program director.

Curriculum

All students in the MMS program must meet UVM Graduate College requirements for the Master's Degree, which include a minimum of 30 credits and successful completion of a written comprehensive exam. The curriculum comprises a core of seven required courses: human anatomy (ANNB 201), biochemistry (BIOC 301 and 302), cell biology (CLBI 301), human physiology and pharmacology (MPBP 301 and 302), and biostatistics (PH 303), as well as two approved electives, to be chosen from a list of approved graduate-level courses in the biomedical sciences. Students will be required to pass a written comprehensive exam based on topics covered in the core curriculum at the end of their final semester in the program.

Staffing Plan, Budget, and Resource Requirements

Twenty-six faculty, mostly from the College of Medicine, will offer the courses in this program and serve as academic advisors to students enrolled. No new positions are required or requested. Existing staff in the COM Office of Graduate Education and Office of Medical Education will help administer the program.

The MMS program will be funded by tuition dollars generated by student enrollments. All instructional expenses will be covered by the COM and will be aligned to the new tuition dollars generated by this program. Continuing and Distance Education (CDE) will serve as an enrollment/recruitment partner. Start-up costs associated with the development of a national marketing plan and website for the program are estimated to be approximately \$50,000 and will be covered by tuition generated over three years. Annual marketing

expenses are estimated to be approximately \$50,000; these will be factored into the annual program budget, which will be coordinated between the COM and CDE. CDE will coordinate with the Graduate College to assume responsibility for incorporating MMS student recruitment into the marketing strategy of the existing PBPM program. Efficiency will be gained through the combination of these two programs, with much of the technical marketing plan, including national search engine optimization techniques, already in place. Alignment with the AAMC pre-medical program directory will also be utilized as a student recruitment tactic.

Assessment Plan

The main objective of the MMS program is to prepare students with background knowledge and skills required to gain acceptance into medical school and other health-related professional programs. To evaluate this objective, data will be gathered regarding the number of students enrolled, current student progress towards the degree, and numbers of students who graduate from the MMS program. In addition, a survey will be given electronically six months after graduation to gather data regarding where students go upon graduation, including numbers who are accepted into health-related professional degree programs, numbers who complete their professional degree programs, and satisfaction with and perceived preparation for their professional degree programs. Course and faculty evaluation data will also be used. The MMS program will undergo UVM Academic Program Review on the standard eight-year cycle.

Evidence of Support

Letters of support for the MMS program have been provided by the chairs and directors of all of the participating departments (8) and programs (3), the chair of the COM Curriculum Committee, and the Deans of the College of Medicine, the College of Nursing and Health Sciences, and the Graduate College.

Strengths of the Program

The review subcommittee was impressed with the quality of the proposed MMS program. In addition to aligning well with the mission and vision of the university and the participating units, it addresses an important societal need, the demand for students well prepared to enter the medical profession. Moreover, it makes wise use of existing resources: all of the courses comprised by the program are already offered and are commonly under-enrolled. By providing additional students to these graduate-level biomedical science courses, the program is providing the means to better capitalize on resources already being expended. And, as noted already, efficiency will be gained through marketing this new program conjointly with the existing PBPM program.

Curricular Affairs Committee of the Faculty Senate

Memo

To: The UVM Faculty Senate
From: Curricular Affairs Committee of the Faculty Senate, Cathy Paris, Chair
Date: January 20, 2015
Re: Approval of a proposal for a new online major in Health Sciences from CNHS

The Curricular Affairs Committee at its meeting of December 11, 2014 unanimously approved the action recommended in the following memo.

We have reviewed and recommend for approval a proposal for a new online major in Health Sciences from the College of Nursing and Health Sciences (CNHS) and Continuing and Distance Education (CDE). Dr. Burton Wilcke will serve as the Program Director; the unit responsible for the major will be the Department of Medical Laboratory Sciences, CNHS.

Program Description and Rationale

The new major in Health Sciences is designed to be offered by distance learning to students who have previously earned some college credit but who did not complete a baccalaureate degree. It will be the first UVM undergraduate major to be offered solely through distance learning. Many institutions of higher education have experienced growth in health sciences, yet most undergraduate programs are offered as traditional on-campus majors. Graduates with a major in Health Sciences will be well positioned for admission into graduate studies in various professional health programs, including the recently approved UVM master's program in Public Health.

Evidence of Demand and Anticipated Enrollment

According to the most recently published Health Resources and Services Administration report on Vermont, our state has a per capita rate of physician assistants, dentists, and pharmacists which is below the national average. Indicators reported in several different documents (Report of the Health Workforce Partnership-Vermont 2005, Report of the New England Regional Healthcare Workforce Collaboration, 2008, and the National Center for Health Workforce Analysis, 2010) demonstrate that health workforce issues beyond the need for physicians and nurses must be addressed. Efforts have already been made to attract and retain health professionals in Vermont including primary care providers other than physicians. Scholarship programs such as the Freeman Scholars have helped to meet this need. Other higher education organizations such as the Albany College of Pharmacy and Health Sciences have expanded health professional education in Vermont. The proposed UVM Health Sciences major will further contribute to expansion of the pool of needed health professionals

in Vermont by enlarging the cohort of college-educated individuals with strong academic preparation and an understanding of health and healthcare.

An average enrollment of 25-30 students per year is anticipated, for an estimated total program enrollment of 100-120 students in all four cohort years by the end of the program's first five years of existence. Estimates are based on the interest in the Health Sciences program expressed by current and prospective students, coupled with the experiences of other universities that have begun such programs and the results of a market analysis conducted by Continuing Education in Spring 2013.

Admission Requirements and Process

Students with at least 30 credits of collegiate education and a GPA of at least 3.0 may apply for admission to the program. The 30 credits must include, at a minimum, 18 credit hours of program distribution requirements including at least one semester each of biology with lab and chemistry with lab, and a college-level course in mathematics or statistics. Although the program is designed for students who have completed a year or more of college, those with less than 15 semester credit hours and adult learners with college credits earned more than five years ago may take three credit-bearing classes as CDE students prior to application for admission to the program. Other special circumstances will be evaluated individually by the program director.

Continuing and Distance Education will assist with marketing and recruitment and will assist with pre-enrollment questions up to the point of admission. The office of undergraduate admissions will process the formal admissions for the University according to existing procedures. Preference will be given to students who have successfully completed 30 or more college credits at UVM or another accredited institution of higher education with a cumulative GPA of 3.0 or better.

Advising

Overall responsibility for the system of advising will reside with the Program Director. Upon admission, each student will be assigned an academic advisor who is a program faculty member as well as a non-academic advisor in CDE.

Curriculum

Eleven three-credit courses in Health Sciences and a three- to six-credit fieldwork experience¹ are required for the major. In addition, students complete 56-60 distribution credits (in natural and applied sciences, social sciences, modern language, mathematics and statistics, English, humanities, and diversity), 18 elective credits in fields related to their major, and six free electives.

¹Such fieldwork, incorporated into the third or fourth year, might include a service learning project or practicum or with a related professional or voluntary health organization. Faculty-Led Programs Abroad (FLPA) and overseas exchange experiences may, with faculty approval, be used to fill the requirement. Fieldwork could also involve other global health sites (e.g. medical missions, AFS programs and other volunteer experiences) particularly in developing countries. CNHS has established FLPA experiences in Bangladesh, Oaxaca, and Uganda.

Staffing Plan, Budget, and Resource Requirements

All of the current faculty within Medical Laboratory and Radiation Science have indicated interest and support for the Health Sciences program. While most will have only a modest teaching role in the program, all will potentially be involved in advising. Additional faculty from CNHS (Maltby, Abrams) and the College of Medicine (Carney) have also indicated interest in or commitment to teaching in the program. No new base-budgeted positions are requested. All faculty teaching in the program will be expected to complete the course *Teaching Effectively Online* through the Center for Teaching and Learning.

There are no anticipated adjustments to staff assignments at the present time. Because of the collaboration between CNHS and CDE in the development of this program, many activities that would otherwise have been carried out in the department will be accomplished through CDE.

The College of Nursing and Health Sciences and CDE have developed a memorandum of understanding for the Health Sciences major. The estimated start-up budget for the proposed major is \$105,190, a figure that includes instructional and marketing costs to launch the program. These start-up costs will be borne by CDE and will be reimbursed with new revenue from the enrollment in the Health Sciences degree completion program in years one through three. Total five year cost projection is \$2,212,514. The program is expected to recoup most of the initial costs by year two and to fully return the initial investment by year three. The budget projection includes an estimated 30% return to the Provost's office.

The program will be funded by tuition dollars generated by student enrollments. Program development funds and resources have been provided by CDE. CDE will pay all instructional costs based on established pay practices and will provide support for the 50% of the faculty director salary as a part of start-up and instructional costs.

Assessment Plan

Program success will be monitored by both the CNHS and CDE through existing processes. Careful ongoing monitoring of enrollments, retention, and degree completion will be a joint responsibility. Department and college evaluation tools include course and instructor evaluations, advising surveys, student exit surveys, surveys of graduates, survey of community service-learning partners, and survey of employers. CDE will evaluate for market changes, financial viability, advising needs, and faculty participation.

The Health Sciences program will of course undergo UVM Academic Program Review on the standard eight-year cycle.

Evidence of Support

Letters of support for the Health Sciences program have been provided by seven UVM deans, three department chairs, two faculty members, the Office of Health Promotion Research, and the Commissioner of the Vermont Department of Health.

PROPOSAL FOR A SUSTAINABILITY GENERAL EDUCATION REQUIREMENT

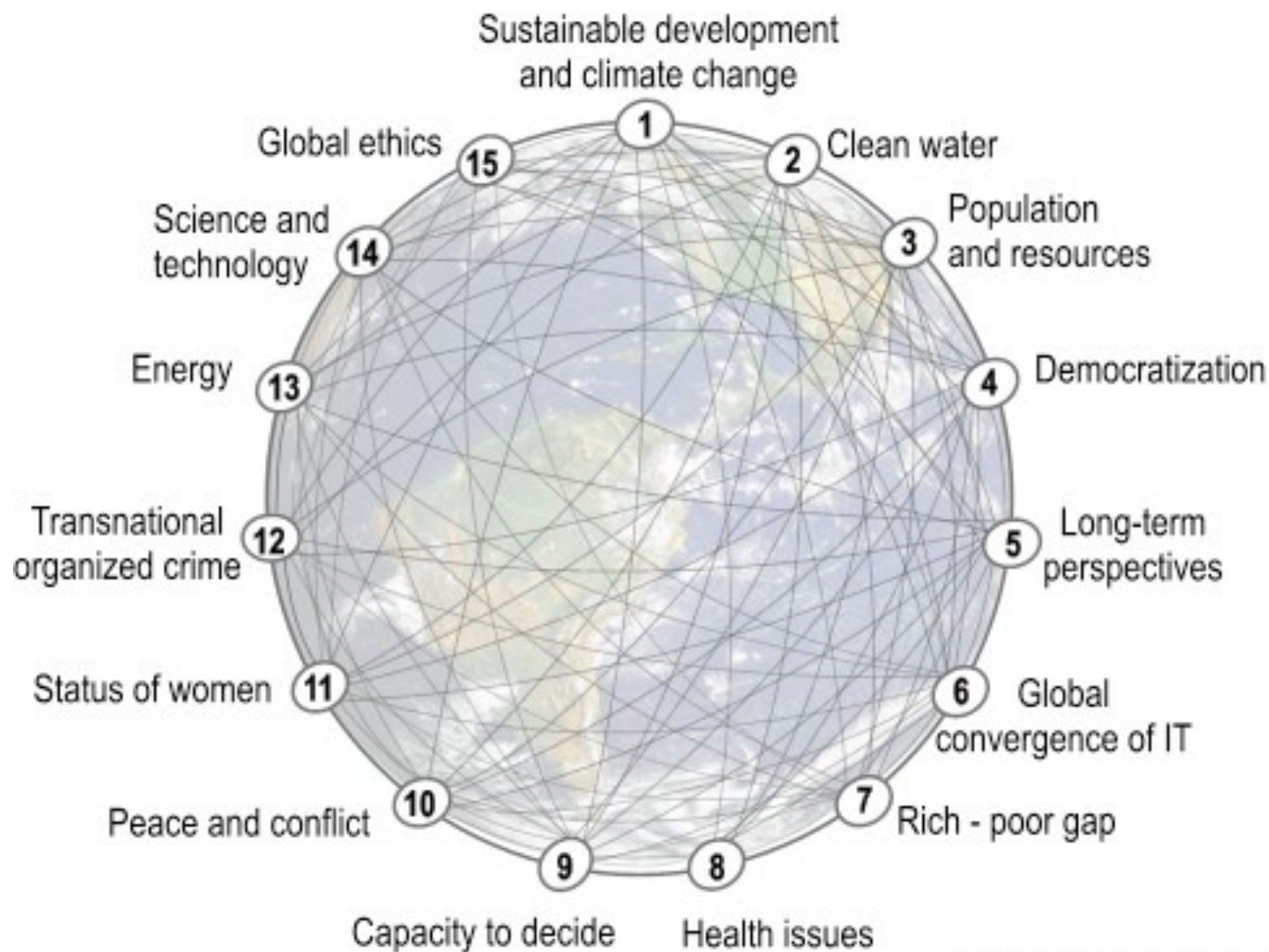
SCRC GENERAL EDUCATION COMMITTEE OF
THE FACULTY SENATE - 9 FEBRUARY 2015

2014-2016 SCRC members

Representatives from each academic unit:

- CESS - Alan Tinkler
- CEMS - Brian Lee
- RSENR - Christine Vatovec
- RSENR - Deane Wang (non-voting co-chair)
- CAS - Beverley Wemple
- CAS - Rory Waterman
- CALS - Laura Hill (co-chair)
- BSAD - Marilyn Lucas
- CNHS -
- Senate CAC - Ann Hazelrigg (ex-officio)
- Admin. assistant - Lisa Watts Natkin (Office of Sustainability)

15 Global Challenges facing humanity



Sustainability is a theme explored by a variety of disciplines

Disciplinary Associations Network for Sustainability (DANS)

- [American Academy of Religion](#)
- [American Anthropological Association](#)
- [American Association for the Advance. of Science](#)
- [American Assoc. of Colleges for Teacher Ed.](#)
- [American Association of Physics Teachers](#)
- [American Chemical Society](#)
- [American Institute of Biological Sciences](#)
- [American Marketing Association](#)
- [American Philosophical Association](#)
- [American Political Science Association](#)
- [American Psychological Association](#)
- [American Society for Engineering Education](#)
- [American Society of Civil Engineers](#)
- [American Society of Mechanical Engineers](#)
- [American Sociological Association](#)
- [American Studies Association](#)
- [Aspen Institute](#)
- [Assoc. for Environmental Studies and Sciences](#)
- [Association for the Advancement of Sustainability in Higher Education](#)
- [Assoc. Study of Literature and the Environment](#)
- [Assoc. of American Colleges and Universities](#)
- [Association of Collegiate Schools of Architecture](#)
- [Assoc. Univ. Leaders for a Sustainable Future](#)
- [Association to Advance Collegiate Schools of Business International](#)
- [Broadcast Education Association](#)
- [College Student Educators International](#)
- [Computing Research Association](#)
- [Ecological Society of America](#)
- [Intn'l Environmental Communication Assoc.](#)
- [International Society for Ecological Economics](#)
- [Mathematical Association of America](#)
- [National Association of Biology Teachers](#)
- [National Association of Geoscience Teachers](#)
- [National Council Science and the Environment](#)
- [National Humanities Alliance](#)
- [National Women's Studies Association](#)
- [Science Education Resource Center](#)
- [Society for College and University Planning](#)
- [The National Academies, Earth and Life Studies](#)
- [U.S. Partnership Educ. for Sustainable Develop.](#)
- [U.S. Society for Ecological Economics](#)

"Achieving a sustainable human future in the face of both gradual and abrupt environmental change is one of the most significant challenges facing humanity."

National Science Foundation, 2011

"The Harvard Sustainability Plan recognizes that creating a sustainable campus strengthens our core research and teaching mission, and it acknowledges that the challenges before us are complex and interconnected, demanding an ever-developing approach to sustainability."

President Drew Gilpin Faust

Higher Ed. Context

- 1369 sustainability-focused academic programs at 453 campuses in 62 states
 - AASHE (Association for the Advancement of Sustainability in Higher Education) database
- 700 participants in the American College and University Presidents' Climate Commitment (includes UVM)
 - a commitment to make “sustainability a part of the educational experience for all students”
- AASHE STARS (Sustainability Tracking, Assessment & Rating System)
 - President Sullivan approved UVM participation
 - 450+ registered colleges & universities
 - UVM received a Gold rating in 2014

ADDRESSING SENATE QUESTIONS:

SUSTAINABILITY DEFINITION

7 April 2014 Senate Report

Sustainability Learning Outcomes Preamble

As stated in Our Common Ground, “The University of Vermont is an educationally purposeful community seeking to prepare students to live in a diverse and changing world.” In the context of the emerging challenges of the 21st Century, this preparation includes envisioning and planning for a sustainable society. In addition, Our Common Ground speaks to “the transforming power of education.” Thus UVM's vision for sustainability embraces the goal of educating all of its students to understand and contribute to the sustainability of human society. **That is, we recognize that the pursuit of ecological, social, and economic vitality must come with the understanding that the needs of the present be met without compromising the ability of future generations to meet their own needs.** Through its General Education Initiative, The University of Vermont will integrate its sustainability vision across curricular and co-curricular activities. Whatever their chosen discipline, each student will demonstrate their mastery of the defined learning outcomes in the knowledge, skills and values categories, as well as the personal domain.

“Sustainability is the pursuit of ecological, social, and economic vitality with the understanding that the needs of the present must be met without compromising the ability of future generations to meet their own needs.”

University of Vermont



“Sustainability is the simultaneous pursuit of human health and happiness, environmental quality, and economic well being for current and future generations.”
Pennsylvania State University



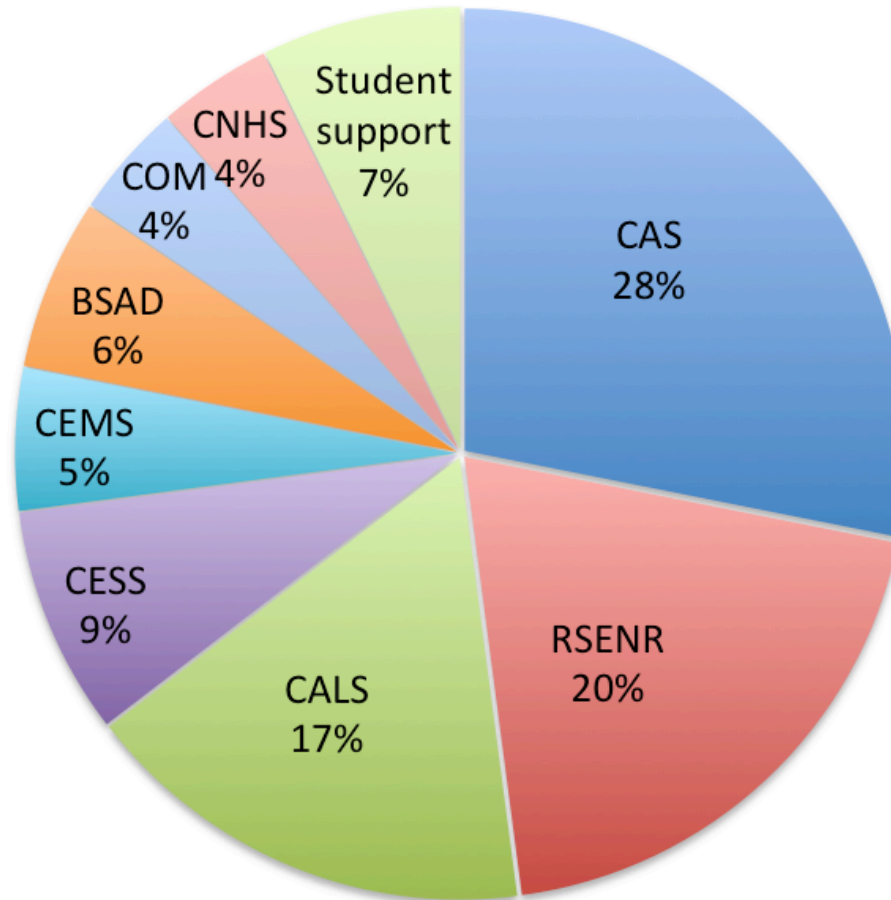
“The University of Kentucky recognizes that in its mission to improve the lives of Kentuckians, its greatest challenge in our time is to engage the University community to create policies and programs that will simultaneously advance economic vitality, ecological integrity and social equity, now and into the future.” University of Kentucky



FACULTY AND SEAT
CAPACITY TO
SUPPORT THE
SUSTAINABILITY
GENERAL EDUCATION
REQUIREMENT

Sustainability Faculty Fellows 2009-2015

Data from 6 SFF cohorts



Sustainability-trained faculty exist in ***all units*** across campus

Simple Capacity Model

% taking SU	new students	retention	transfers
0.35	yr1	0.87	400
0.35	yr2	0.77	50
0.2	yr3	0.75	
0.1	yr4		

Data from OIR sourcebooks 2013-2014

Model assumptions:

- The majority of students (70%) will complete the SU requirement in yrs 1 and 2
- 2400 enrollment (Fall 2015)
 - 2013-2014 graduates = 2319, suggesting a level enrollment by class due to transfers
 - 450 transfers over 2 years
- 1st year retention = 87%
- 2nd year retention = 77%
- 3rd year retention = 75%

Simple Capacity Model Results

STUDENT SEATS NEEDED

	AY2015/16	AY2016	AY2017	AY2018
First	840	840	840	840
Second	0	1131	1131	1131
Juniors	0	0	372	372
Seniors	0	0	0	121
Total	840	1971	2342	2463

- Includes **all** students (some will meet requirement through Major)
- Assumes a 4 year graduation

$(2400 \text{ new students Fall 16} \times 87\% \text{ retention} \times 35\% \text{ completing SU req}) + 400 \text{ trnfr} = 1131$

Registrar capacity data

Total average seats in “intend to submit” SU courses

- Fall semester = 1376 seats
- Spring semester = 1061 seats
- Total seats (2015-2016) = 2437 seats

	AY2015/16	AY2016	AY2017	AY2018
First	840	840	840	840
Second	0	1131	1131	1131
Juniors	0	0	372	372
Seniors	0	0	0	121
Total	840	1971	2342	2463

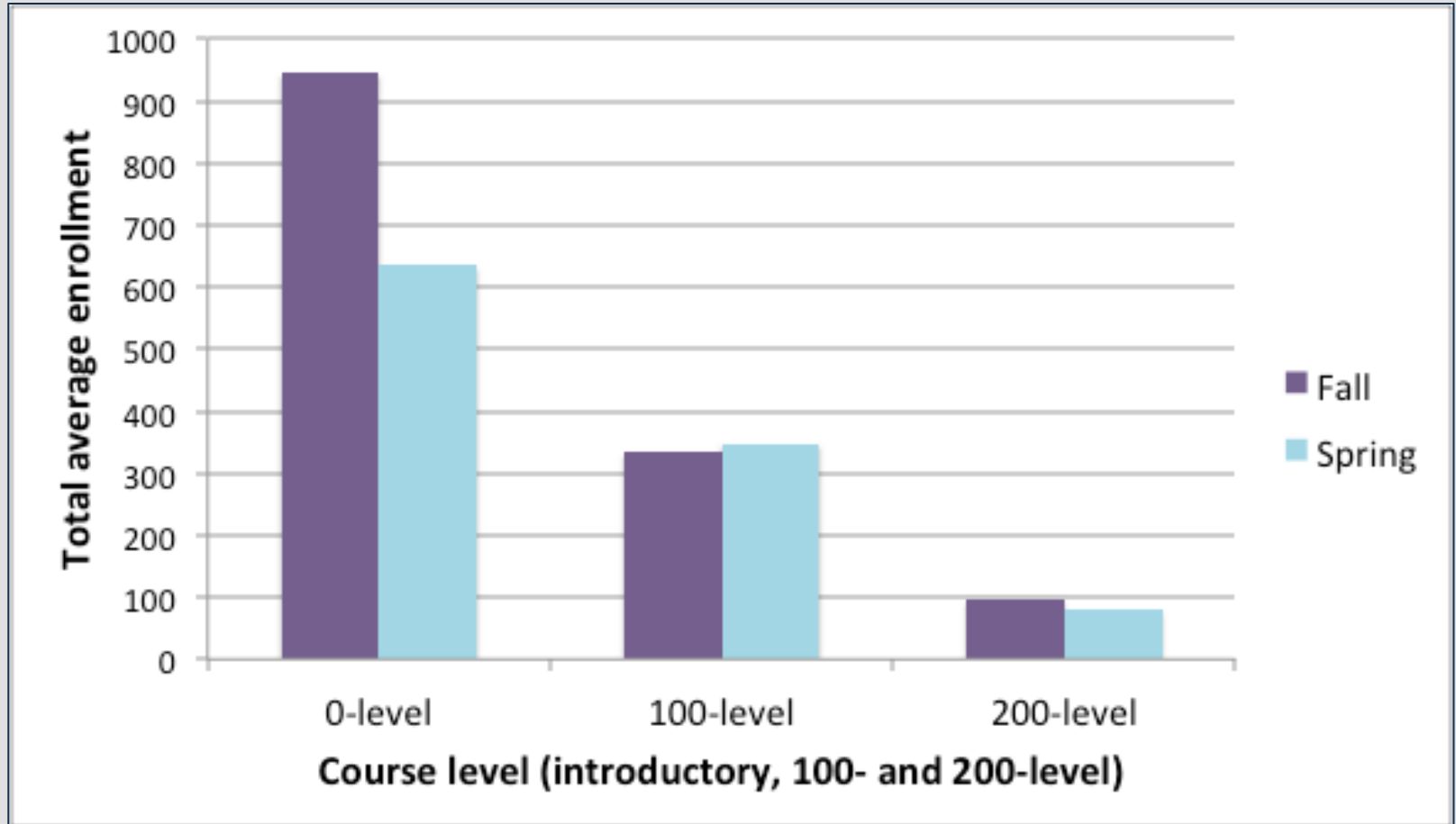
List of “intend to submit” based on actual enrollment Fall 2013 – Spring 2015 in Appendix I

How much *additional* space is needed for new students who will want to register for SU courses?

As of now, 90% of available course seats are being utilized.

Semester	Actual seats remaining
Fall 2013	45
Spring 2014	329
<i>Total 2013-2014</i>	<i>374</i>
Fall 2014	69
Spring 2015	212
<i>Total 2014-2015</i>	<i>281</i>
Annual average	328

Course level statistics



- based on Registrar analysis of “intend to submit” list from 25 Jan 2015

SCRC approved courses/curricula as of 9 Feb 2015

Instructor Name	College	Course code	Course name	Term	Enrollment
Nico Perdrial	CAS	ENSC 1	Intro to Env Science	Fall	70
Jennie Stephens	RSENR	ENSC 1	Intro to Env Science	Spring	70
Deane Wang	HCOL	HCOL 186	SL: Ecology for Sustainability	Spring	17
Jody Prescott	CAS	POLS 196	Cyber Policy and Conflict	Summer	40
Stephanie Kaza et al	RSENR/ CALS/CAS	ENVS 1, 2, 151	ENVS Core Curriculum	n/a	400
TOTAL					597

List of approved courses updated biweekly at <http://gened-sustainability.wikispaces.com/>

Meeting capacity goals

- Strategy 1 = SCRC review and approve majority of “intend to submit” proposals
- Strategy 2 to augment a successful rollout in Fall 2015 = grandfather in 46 STARS sustainability-focused courses for a 1 year provisional period
 - “Sustainability-focused courses concentrate on the concept of sustainability, including its social, economic, and environmental dimensions, or examine an issue or topic using sustainability as a lens.”
 - syllabi review of STARS courses in Spring 2014 involved the SCRC co-chairs and the Office of Sustainability

Co-curricular designations

- An additional option to taking a SU course
- Especially important for students in majors where sustainability is not embedded within the curriculum
- In collaboration with diversity to implement a common co-curricular designation framework, ongoing discussions
- Example co-curricula: *SU experiential learning semester series (variable credits)*
 - Example course assignments:
 - Meeting and Event Attendance: 40% of final grade
 - Personal structured response: 10%
 - Discussion board (4 submissions): 40%
 - Final structured response: 10%

SU course designation

- The SCRC will collaborate with the Office of Sustainability (OoS) staff and the Registrar each semester
- OoS will provide a list of which courses should receive the SU designation, based on course AND instructor
- Methodology follows the service-learning (SL) course designation process

ASSESSMENT

Main points from *An Evaluation of the SCRC Learning Outcomes and Assessment Framework* report:

- Outcomes-based approach in education
- Learning outcomes should include a mix of cognitive, skill-based, and affective outcomes
 - sustainability learning outcomes meet all these outcomes
- Methods exist for assessing knowledge, skills, and attitudes related to specific learning outcomes
 - assessment framework recommended by the SCRC (in the 7 April 2014 Senate report) includes several of these methods

Assessment of sustainability learning outcomes (SLOs)

SCRC will implement the SLO committee's *Recommendation for Assessment Processes Pilot Programs for Course, Curricula, and Co-curricula Level Assessment* with institutional support upon approval:

1. Evaluating whether students are achieving the desired outcomes (surveys to focus groups)
2. Identifying where improvements are needed on a course and instructor level (faculty surveys and workshops)
3. Developing mechanism(s) for informing curricular revisions to achieve those improvements

Assessment of sustainability learning outcomes (SLOs)

- National evaluation tools for sustainability are being pilot tested now
- SLO assessment at UVM is the subject of a CESS PhD dissertation and data is being collected on Sustainability Faculty Fellows effectiveness
- SLO assessment process for co-curricula is planned to be consistent with diversity requirement

SUMMARY

- The sustainability initiative began with undergraduates in 2001 and was revisited in 2010.
- Faculty in all units have been working towards sustainability gen ed implementation since 2012.
- Global and local issues are real. The proposition will be a central part of your children's and children's children's lives.
- Sustainability at UVM is strong and well-represented across campus.
- Sustainability Gen. Ed. at UVM is within our grasp, and there is a strong group of faculty across campus to take this on now.

THE RESOLUTION

- Be it resolved, that beginning with entering fall 2015 undergraduates, the Sustainability Learning Outcomes be made a general education requirement.
- Be it also resolved, that the following language be used in the course catalog:

"Sustainability Learning Outcome (SLO) Requirement: Beginning with the entering first-year class in fall 2015, all undergraduates must meet the Sustainability General Education Requirement for the University of Vermont. To meet this requirement, students must complete a course, curriculum, or co-curriculum prior to graduation that has been approved by the Faculty Senate's Sustainability Curriculum Review Committee.

*Footnote: "Approved courses are listed in the University of Vermont Catalogue with the letters SU in the title."

Appendix I – Intend to submit

College	Course code	Level	Course name	F 13 Enrollment	S 14 Enrollment	F 14 Enrollment	S 15 Enrollment
CALS	CDAE	0	CDAE 2 D2 : World Food, Pop & Develop	274	197	274	192
CALS	CDAE	0	CDAE 2 D2 : World Food, Pop & Develop	13	6	9	3
CALS	CDAE	0	CDAE 6 EnergyAlternatives	52		49	
CALS	CDAE	100	CDAE 102 Sustainable Community Dev	45	152	47	146
CALS	CDAE	100	CDAE 102 Sustainable Community Dev		5		2
CALS	CDAE	100	CDAE 161 - Principles of Community Developmt				
CALS	CDAE	100	CDAE 166 - Intro to Comm Entrepreneurship	124	108	107	80
CALS	CDAE	100	CDAE 166 - Intro to Comm Entrepreneurship	2		2	
CALS	CDAE	100	CDAE 186 - SL: Sustain Dev Sm Isl States	18		19	
CALS	CDAE	200	CDAE 237 - Economics of Sustainability	24		30	26
CALS	CDAE	200	CDAE 237 - Economics of Sustainability	1		0	
CALS	CDAE	200	CDAE 251 - SL : Contemp Policy Iss: Comm Dev	29		33	
CALS	CDAE	200	CDAE 273 - SL : Project Dev & Planning	29			21
CAS	EC	0	ECON 11 Principles of Macroeconomics (Sequino)	136	133	140	135
CAS	EC	0	ECON 095 Political Economy of Race				
CAS	EC	100	ECON 171 - Microeconomic Theory		42	40	
CAS	EC	100	ECON 171 - Microeconomic Theory			35	
CAS	EC	200	ECON 240 Inequality, Power and Wealth		19		16
CESS	EDTE	0	EDTE 074 Science of Sustainability		46		43
RSENR	ENSC	0	ENSC 1 - Intro Environmental Sciences	72		74	71
RSENR	ENSC	0	ENSC 1 - Intro Environmental Sciences	2		2	
RSENR	ENVS	0	ENVS 1 Intro to Environmental Studies	242		239	
RSENR	ENVS	0	ENVS 1 Intro to Environmental Studies	2		0	
RSENR	ENVS	0	ENVS 2 - D2 : International Env Studies		214		226
RSENR	ENVS	0	ENVS 2 - D2 : International Env Studies		1		2
RSENR	ENVS	100	ENVS 107 - Human Health and the Environment				
RSENR	ENVS	100	ENVS 187 Campus Sustainability		17		
RSENR	ENVS	100	ENVS 188 - Sustainability Science		48		58
RSENR	ENVS	100	ENVS 189 - Intro to Systems Thinking	24		17	
RSENR	ENVS	200	ENVS 204- Creating Environ Sustain Commun		26		25
RSENR	ENVS	200	ENVS 295 SL : Sustainability Education	24		23	0

Dataset from the Registrar analysis

Appendix I – Intend to submit

College	Course code	Level	Course name	F 13 Enrollment	S 14 Enrollment	F 14 Enrollment	S 15 Enrollment
RSENR	FOR	200	FOR 272 - Sustainable Forest Management		13		11
CAS	GEOG	0	GEOG 095 now 2015 is GEOG 145 - ISEE Water Resources			16	
CAS	GEOG	0	GEOG 095 now 2015 is GEOG 145 - ISEE Water Resources			16	
CAS	GEOG	0	GEOG 095 now 2015 is GEOG 145 - ISEE Water Resources			18	
RSENR	NR	0	NR 1 - SL : Natural Hist & Field Ecology	213		213	
RSENR	NR	0	NR 2 - Nature & Culture		233		225
RSENR	NR	0	NR 2 - Nature & Culture		0		
RSENR	NR	0	NR 6 - D1 : Race & Culture in NR	152		140	
RSENR	NR	100	NR 103 - Ecology, Ecosystems & Environ	84	83	83	97
RSENR	NR	100	NR 104 - Social Proc & the Environment	86	68	71	89
RSENR	NR	200	NR 205 - Ecosys Mgt: Integ Sci, Soc & Pol	86	78	82	23
RSENR	NR	200	NR 205 - Ecosys Mgt: Integ Sci, Soc & Pol			12	39
RSENR	NR	200	NR 206 - SL : Env Prob Sol&Impact Assess	78	76	15	70
RSENR	NR	200	NR 206 - SL : Env Prob Sol&Impact Assess		0	78	0
RSENR	NR	200	NR 207 - D1 : Power, Privilege & Envrnmt	20	24	16	28
RSENR	NR	200	NR 207 - D1 : Power, Privilege & Envrnmt	20	24	16	31
RSENR	NR	200	NR 207 - D1 : Power, Privilege & Envrnmt		16	19	
RSENR	NR	200	NR 207 - D1 : Power, Privilege & Envrnmt		16	19	
RSENR	NR	200	NR 207 - D1 : Power, Privilege & Envrnmt		7	19	
RSENR	NR	200	NR 207 - D1 : Power, Privilege & Envrnmt		7	19	
RSENR	NR	200	NR 207 - D1 : Power, Privilege & Envrnmt			14	
CALS	PSS	200	PSS 238 - Soil Ecology				
CAS	POLS	100	POLS 196 - Cyber Policy and Conflict				
CALS	PSS	0	PSS 003 - D2 : Coffee Ecol & Livelihoods	46		43	
CALS	PSS	0	PSS 021 Intro to Ecological Agr	92		74	
CALS	PSS	0	PSS 021 Intro to Ecological Agr	4		2	
CALS	PSS	100	PSS 161 - Fundamentals of Soil Science	92		91	
CALS	PSS	100	PSS 161 - Fundamentals of Soil Science	1		3	
CAS	SOC	100	SOC 121 Soc of Disaster				38
CAS	SOC	100	SOC 221 Disaster & Vulnerability				0

Green shaded courses represent the NR core curriculum – these courses were excluded from analyses on pp 15-17

Appendix II – STARS focused courses

College	Course code	Course #	Course name	Enrollment
BSAD	BSAD	263	Environmntl & Social Reporting	46
BSAD	BSAD	295	Sustainable Business	0
CALS	CDAE	2	D2: World Food,Pop & Develop	284
CALS	PSS	21	Introduction to Ecological Agr	95
CALS	CDAE	102	Sustainable Community Dev	150
CALS	PSS	156	Permaculture	22
CALS	CDAE	195	SL: Intro to Ecological Econ	60
CALS	PSS	212	Advanced Agroecology	20
CALS	CDAE	237	Economics of Sustainability	30
CALS	CDAE	251	SL:Contemp Policy Iss:Comm Dev	35
CALS	CDAE	295	Restorative Envir Dsgn Studio	0
CALS	FS	345	Food Systems, Society & Policy	18
CALS	CDAE	395	Critical Iss in Transportation	20
CALS	CDAE	395	The Econ of Food Systems	20
CAS	PHIL	10	Ethics of Eating	25
CAS	GEOG	190	Politics of Land Use: Ecuador	20
CEMS	CE	132	Environmental Systems	55
CEMS	CE	151	Water & Wastewater Engineering	54
CESS	EDTE	74	Science of Sustainability	25

0 = no historical enrollment data for Fall 2014 or Spring 2015

Appendix II – STARS focused courses

College	Course code	Course #	Course name	Enrollment
HCOL	HCOL	186	SL: Ecology for Sustainability	20
CALS	PH	312	Food Systems & Public Health	20
RSEN	ENVS	2	Internat'l Environmental Stds	270
RSEN	ENVS	95	Eco-Reps: Env Resp Behavior	40
RSEN	ENVS	95	Climate Change&the Environment	20
RSEN	ENVS	184	Sustain Transpo Planning	25
RSEN	ENVS	187	SL: Campus Sustainability	26
RSEN	PRT	188	Ecotourism in Costa Rica	18
RSEN	ENVS	195	Energy/Climate Action Seminar	75
RSEN	ENVS	195	Vermont Energy Systems	25
RSEN	ENVS	195	Soc Marketing Sustainability	25
RSEN	ENVS	195	Env Entrepreneurship	20
RSEN	ENVS	195	Climate Justice & Advocacy	25
RSEN	ENVS	195	Vermont Food Systems	30
RSEN	ENVS	188	Sustainability Science	80
RSEN	ENVS	189	SL:Systems Thinking	25
RSEN	ENVS	195	Topics in Climate Change	25
RSEN	ENVS	204	SL: Creating EnvSusCommunities	25
RSEN	PRT	230	Ecotourism	40

Appendix II – STARS focused courses

College	Course code	Course #	Course name	Enrollment
RSENR	FOR	272	Sustainable Mgmt Forest Ecosys	21
RSENR	NR	285	SL: Biomass to Biofuels	25
RSENR	ENVS	295	SL:Sustainability Education	25
RSENR	ENVS	295	SL:Community-based Nat Res Mgt	25
RSENR	ENVS	295	Circumpolar Climate	20
RSENR	ENVS	295	SL:Adaptation toClimate Change	25
RSENR	ENVS	295	Ecol Health Well-Being	25
RSENR	NR	378	SL: Place-BasedLandscapeAnyl	15