The University of Vermont
FACULTY SENATE

Minutes
Thursday, May 17, 2018
Memorial Lounge 3:00 – 4:30 p.m.

The meeting was called to order at 3:03 p.m.

Senators in Attendance: 50

Absent: Senators Adams (Anesthesiology), Kerr (Animal Science), Eastman (Anthropology), Mierse (Art & Art History), Ikeda (Asian Languages), Agnarsson (Biology), Smith (Education Rep 1), Lee (Engineering Mechanical), Joo Yoo (English Rep 1), Callahan (Extension), Weinstein (Family Medicine), Gove (Grossman School of Business Rep 1), Zdatny (History Rep 1), Sherriff (Libraries Rep 2), Teuscher (Medicine), Mahoney (Neuroscience Rep 2), Nelms (Orthopedic Rehabilitation), Zenali (Pathology Rep 1), Sidiropoulos (Pathology Rep 2), Cuneo (Philosophy), Lach (Radiology), Peters (Rehabilitation & Movement Science), Roberts (Romance Languages & Linguistics), D'Amato (RSENR Rep 1), Ahern (Surgery Rep 1), Moore (Surgery Rep 2)

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1. **Approval of Minutes of the April 23, 2018 meeting**
   Motion: To approve the minutes of the April 23, 2018 meeting
   Vote: 85% approve, 0% oppose, 15% abstain

2. **Resolution in Memoriam for Barbara Rouleau, CNHS**
   Rosemary Dale, Chair and Clinical Professor in the Department of Nursing, presented a Resolution in Memoriam for Dr. Barbara Rouleau, Clinical Assistant Professor of Nursing, College of Nursing and Health Sciences. The resolution is attached to these minutes.
   Motion: Rosemary Dale moved to inscribe the Resolution in Memoriam for Barbara Rouleau in the minutes of the Faculty Senate and to send a copy to the family.
   Vote: 100% approve, 0% oppose, 0% abstain

3. **Presentation of Degrees**
   It was moved, seconded and voted that the following numbers of graduates be recommended by the Senate to the President for the awarding of the appropriate degrees or certificates as authorized by the Board of Trustees. Individual names of the graduates are recorded with the Minutes of this meeting in the permanent Senate records.

Agriculture and Life Sciences (333)
Arts and Sciences (715)
Education and Social Services (169)
Engineering and Mathematical Sciences (231)
Grossman School of Business (181)
Graduate College (329)
Honors College (127)
Larner College of Medicine (112)
Nursing and Health Sciences (207)
Rubenstein School of Environment and Natural Resources (120)
University Honors (258)

Motion: To accept the degrees as presented
Vote: 100% approve, 0% oppose, 0% abstain

4. **Faculty Senate President's Remarks** – President Cathy Paris made the following remarks:
    - President Sullivan is hosting a year-end reception in for the Faculty Senate in Waterman Manor immediately after the Senate meeting.
    - Sincere thanks to the Senators for their service to the Faculty Senate, and acknowledgement of the 19 senators and 13 committee members who will be finishing their term at the end of June.
    - Election results for members at large to the Executive Council of the Faculty Senate include the re-election of Brian Beckage (CALS), and the election of Susanmarie Harrington (CAS). There is a need for one additional ballot for at-large member. The Faculty Senate received notice from one of our members at-large that he will not be representing his department as Faculty Senator next year, and therefore will be unable to complete the final year of this two-year term as member at-large. A call for nominations was sent to Senators. One email nomination was received for Timothy Stickle (CAS). Email nominations will continue to be accepted through close of business on Friday, May 18. There were no nominations made from the floor of the Senate. The electronic ballot will be distributed the week of May 20th.
    - To help increase rates of retention, faculty members are encouraged to reach out to first-year students and advisees to welcome them to campus, make appointments to meet, and let them know that someone is invested in their success.
    - The 3rd annual campus wide faculty conference has been scheduled for the morning of Monday, August 20. Planning is underway and an invitation will be sent to faculty soon.
    - A reception and orientation for new Senators has been scheduled for Monday, September 17, at 4:00 p.m.

- Translating Identity conference is scheduled for November 3rd, 2018 at UVM. This is the largest conference of its kind in New England and will feature CeCe McDonald as the 2018 Keynote Speaker.

5. **UVM President's Remarks** – President Thomas Sullivan made the following remarks:
    - An update on the legislative appropriation. Although Governor Scott has called a special session for next week, the appropriation for UVM is not anticipated to be changed. UVM received the following modest, but very important appropriations in a challenging budget environment. The UVM general fund budget remains at $42.5 million. UVM also received an additional one-time $550K appropriation to support scholarships and financial aid for low and lower-middle income Vermont students, and an appropriation for an additional $250k for capital projects.
    - United Academics and the University announced settlement and agreement on a new contract.
    - The search for both Chief Information Officer and Dean of College of Engineering and Mathematical Sciences have concluded. T. Simeon Ananou will join UVM as CIO on July 1, and Linda Schadler has been appointed as Dean of CEMS. The announcement of the new Dean of the College of Medicine is anticipated in the next week.
    - The first graduate of the University of Vermont-Vermont Law School 3+2 Program, Rachel Heath, has earned a BA from UVM and a JD from VT Law School. The 3+2 program has expanded the great relationship between UVM and VLS.
    - A review of the recent national publicity regarding UVM, shows that since February, over 35 national publications have had terrific headlining stories about our University. Congratulations to all for the creative activities, scholarship, and research that you are doing for our University.

6. **UVM Provost's Remarks** – Provost David Rosowsky highlighted some of the challenges faced and opportunities realized during the 2017-2018 academic year in his April 2018 issue of *Across the Green* available at www.uvm.edu/provost. The highlighted topics include:
    - Residential learning communities. Three new RLCs were launched this year, and three more will be launched in fall 2018,
    - Gund Institute for Environment had a very successful first year. The Gund Institute has more than doubled its ranks of Gund Fellows and Affiliates and awarded nearly $250K in Catalyst Awards.
    - The Office of Institutional Research (OIR) launched the Catamount Data Center, which has made information easily accessible to constituents. The OIR and the Educational Stewardship Committee (ESC) developed an interactive report around student credit hours, course enrollments, section sizes, and general education courses, as a tool to help units monitor progress and use accurate data in decision making.

- Budget model has completed third year, and the assessment process is underway to determine how the model is functioning. The Steering Committee is reviewing campus feedback, and will make recommendations in the Fall 2018. All reports, data and communications are available on the IBB website.
- Two apps will be launched this summer, *Guide* and *Campus*, and will work together to enhance faculty advising and support timely, two-way communication with students.
- Innovation and Entrepreneurship ecosystem has enabled UVM to become a connector, an integrator, and key player in the many city, state, and local initiatives in Vermont.

7. **Curricular Affairs Committee Report** – Laura Almstead, Chair of the CAC, brought the following proposal to the Senate for consideration:

    - **New PhD in Physics, CAS** – At its May 3, 2018 meeting, the Curricular Affairs Committee approved a proposal for a new PhD in Physics submitted by the College of Arts and Sciences (CAS) in conjunction with the Graduate College. A report from the CAC is attached to these minutes.
      Motion: Laura Almstead moved to approve the request for a new PhD in Physics in the College of Arts and Sciences in conjunction with the Graduate College.
      Vote: 97% approve, 0% oppose, 3% abstain

8. **Report of the Ad-Hoc Committee** – Thomas Borchert provided an interim report on the work of the ad-hoc committee charged in Fall 2017 with examining the processes of the Senate. Members of the ad-hoc committee include: Chris Callahan (CALS), Julie Roberts (CAS), Eyal Amiel (CNHS), and Tom Borchert (CAS). Terence Cuneo (CAS) withdrew from the committee because of other commitments. Activities of the ad-hoc committee to date have included conversations with some members of the Faculty Senate Executive Council, and Professor Emeritus David Dummit, author of the Senate Constitution and Bylaws. In February, a survey was distributed to Senators and Senate committee members, to gather feedback on satisfaction and effectiveness of the Senate process. The survey received a 36% completion rate; results will be analyzed by the committee. A full report of the work of the ad-hoc committee and a proposal will be presented to the Senate in the Fall 2018.

9. **Advising Initiatives** – Stacey Kostell and Sarah Warrington provided an update on advising and retention software (slides are attached to these minutes). The rollout and implementation of the advising and retention software has begun. The Education Advisory Board (EAB) is the vendor, and Student Success Collaborative (SSC) is the software platform. The software has two components: *Campus* is the advisor-facing web application that faculty, advisors, and student services staff will use, and *Guide* is the student-facing mobile app. Implementation will be in a phased approach. In Fall 2018, four student services teams will begin using Campus, and the remaining

colleges/schools will begin in the Spring 2019. First-Time, first-year students will begin using Guide at June 2018 Orientation. Upper level students will begin using Guide in the Fall 2018. During the summer of 2018 there will more training opportunities as well as a new website.

10. **Conversation with Board of Trustees Chair David Daigle**. Chair Daigle made initial remarks before opening the floor for questions. Chair Daigle spoke about the effect of recent negative publicity and its effect on prospective students, families, donors, and employees. UVM is financially healthy, but tension on campus can create questions among families and donors regarding their investment in UVM. He encouraged faculty to focus on the similarities between the goals of the University and the goals of individuals at UVM, and to engage in direct conversation to reach goals in a more productive, constructive and mutually respectful way. Discussion topics in response to comments and questions from the floor included student enrollment, positive/negative activism, IBB, and increasing diversity on the UVM Board of Trustees.

11. Adjourn. The meeting adjourned at 5:00 p.m.

Resolution in Memoriam

Barbara A. Rouleau, DNP
Clinical Assistant Professor of Nursing
2013 – 2017

Presented by Rosemary L. Dale
Chair and Clinical Professor, Department of Nursing

May 17, 2018

Dr. Barbara Rouleau, Clinical Assistant Professor of Nursing died on November 28, 2017, after a short and courageous battle with cancer. Dr. Rouleau was born in Rutland Vermont, one of 5 children and received a Bachelor's degree in Health Education in 1980 and a Bachelor's Degree in Nursing in 1990 from the University of Vermont. She went on to receive the Master's Degree in Nursing from Sage College in 1992.

Her professional experiences displayed the innovator that was part of her soul. She designed software for the Electronic record at IDX, worked as a nurse practitioner at Colchester Family practice, and designed the school nurse program at Christ the King.

Barb returned to UVM as an instructor in 2013, teaching in the Master's program to prepare nurse practitioners, and was herself one of the first graduates of the Doctor of Nursing Practice Program at UVM.

After receiving her doctorate, she resumed her teaching career as a Clinical Assistant Professor and key faculty in the DNP program. Additionally, she was a founding partner of the CNHS Faculty practice group at Appletree Bay Primary Care, where she maintained an active primary care practice until the time of her illness.

Through all her professional activities, her primary role was as a mother to her three children. Sons, Christian and Evan are at UVM and her daughter, Alli, is a junior at Rice and intends to join her brothers at UVM. She and her husband Ray were regularly seen at the Burlington Country Club where her superb golf skills were well known.

The Rouleau family has established an endowment in Barb's name. The Dr. Barbara Rouleau Student Emergency Fund will be administered by the department of nursing and will provide grants to students with unexpected personal emergencies.

Barb had the courage to lead, and the energy to succeed. She has made a tremendous impact on our department, on the students she taught, the nurses she prepared, and the colleagues she worked with.

Curricular Affairs Committee of the Faculty Senate

To: The UVM Faculty Senate
From: Curricular Affairs Committee of the Faculty Senate, Laura Almstead, Chair
Date: May 3, 2018
Re: Approval of a proposal for a new PhD in Physics submitted by the College of Arts and Sciences in conjunction with the Graduate College

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At its meeting on May 3, 2018, the Curricular Affairs Committee approved the actions recommended in the following memo.

The Curricular Affairs Committee approved a proposal for a new PhD in Physics submitted by the College of Arts and Sciences (CAS) in conjunction with the Graduate College. The program will be housed in the Department of Physics and Valeri Kotov will serve as the first Program Director. If approved by the Faculty Senate and Board of Trustees, the program will be offered beginning fall 2019. Recruitment efforts will be initiated in the 2018-2019 academic year.

Program and Rationale Description

Physics is one of the fundamental natural sciences. Principles, laws, and ideas from physics are integral to understanding concepts in the chemical and biological sciences. They also play a central role in interdisciplinary fields such as engineering, medicine, and materials science. More broadly, technological development relies on physics concepts. The proposed PhD in Physics aims to train students in the concepts and skills required to attack some of the most critical problems facing our world with an emphasis on complex and interdisciplinary challenges in technology, materials design, and renewable energy. The specific goals of the proposed PhD in Physics are:

- Provide students with a diverse and deep understanding of the core subjects underlying all research in modern physics including: classical mechanics, quantum mechanics, statistical mechanics, electrodynamics, many-body physics, and computational and experimental methods.
- Graduate exceptional students who will excel in careers in industry and the academy.
- Enhance collaborative research in the College of Arts and Sciences at UVM.
- Increase the number of under-represented minorities (URM) with a PhD in Physics.

By leveraging existing resources in the department, including courses that serve the Master of Science in Physics, faculty expertise, and access to state-of-the-art equipment, the proposed Physics PhD is well-positioned to attract high-quality graduate students to UVM.

Justification

A Physics PhD existed at UVM for a brief time (1967-1974), but was eliminated more than 40 years ago along with the Mathematics PhD (and the UVM football team) due to a period of financial difficulties at the University. Today, Vermont has the dubious distinction of being the only state in the nation without a PhD program in

Physics. Given the increased emphasis locally and nationally on STEM programs and UVM's new STEM facilities, the University is in a good position to increase our reputation as a regional leader in STEM fields. While the existing MS in Physics was ranked among the top 20 professional physics masters programs in the nation by the American Institute of Physics in 2001, fewer than 10% of students pursing graduate degrees in Physics opt for a terminal masters degree. Students seeking a PhD level degree in physics must leave Vermont, thus contributing to a "brain drain" effect that can negatively impact the economic competitiveness of the state.

The proposers indicate that the lack of a PhD program in Physics at UVM has hindered the recruitment of new faculty. Additionally, current faculty are limited in their opportunities for external funding because some grants are explicitly or implicitly limited to institutions with PhD level degrees in physics. Faculty in the Physics Department have therefore been forced to fund students through other departments or other institutions to be eligible for such grants.

Evidence of Demand and Need

Demand for Physics PhD programs exists nationally, regionally, and at UVM. According to data collected by the American Institute of Physics (AIP), the number of undergraduate physics majors has increased 12% over the past 15 years. Over the last 5 years the Physics Department at UVM has seen a 50% increase in majors with indications that this trend will continue. Additionally, both current UVM students and students from other programs frequently inquire about the possibility of a PhD program in Physics. AIP data indicates that the national average acceptance rate for Physics PhD programs is below 25%. Focusing on UVM's peer institutions in New England (University of Maine, University of Massachusetts Amherst, University of Connecticut and University of New Hampshire), 120 of 328 applicants were accepted and 42 students enrolled in PhD level physics programs in 2016.

Demand exists for employees in the private, public, and academic sector with PhDs in physics. Data from the AIP indicates that more than 95% of students who graduate with a Physics PhD are employed within six months of completing their degree. Locally, employers such as IBM and GlobalFoundries have hired numerous graduates of UVM's Physics MS program and their employees have benefited from graduate level classes taught in the department.

In line with the University's commitment to STEM education, the proposed Physics PhD seeks to build capacity and strength in the fundamental sciences at UVM. In particular, the proposers point to data from the AIP that shows a strong positive correlation between the number of undergraduates majoring in Physics and the highest degree offered by the department. Therefore, the presence of a Physics PhD at UVM could aid in the mission of the Physics Department to increase the number of graduating majors by 50% in the next five years. Additionally, as part of a concerted effort to decrease attrition and increase retention in undergraduate STEM majors, the Physics Department is transitioning to Active Learning pedagogy in many of their service courses. Active Learning requires significant involvement of graduate teaching assistants, and thus students enrolled in the proposed Physics PhD will play an important role in supporting the undergraduate teaching mission of the department. The presence of PhD students will also provide faculty a greater ability to engage undergraduate students in cutting edge research.

Relationship to Existing Programs

The most closely related program is the MS in Physics offered by the department. With the inauguration of the proposed PhD in Physics, the MS in Physics will be recast as a terminal option for self-supported professional students or students admitted to the PhD program that fail to demonstrate suitable progress towards the degree within the first three years.

UVM offers several PhD programs in STEM disciplines, including Bioengineering, Chemistry, Civil and Environmental Engineering, Complex Systems and Data Science, Computer Science, Electrical and Biomedical Engineering, Mathematics, Mechanical Engineering, and Materials Science. Of these, the most closely related is Materials Science, an interdisciplinary program that includes elements of Chemistry, Physics, and multiple branches of Engineering, allowing for course and research flexibility tailored to student interests and backgrounds. The proposers indicate that a PhD program focused in Physics will appeal to students with different interests and backgrounds than those seeking a PhD in Materials Science, and thus the programs will complement each other rather than compete. Inauguration of a Physics PhD program at UVM will balance the strength of the pillar disciplines of Materials Science, allowing the program to more truly reflect its interdisciplinary nature.

Nationally, there are a number of PhD physics programs that vary in size and research focus. Of the six New England State Universities, UVM is the only one without a PhD in Physics; twelve of the fourteen identified peer institutions offer a PhD in Physics. Institutions with physics departments comparable to the size of the department at UVM focus on specific areas. Research interests of faculty in the UVM Department of Physics are currently in the areas of theoretical and experimental condensed matter physics, astronomy and astrophysics, and soft condensed matter physics and biophysics. The proposers note that these areas, particularly condensed matter and materials physics, are distinct from peer institutions in the Northeast and underrepresented in physics PhD programs overall. Through targeted growth in these areas, the proposers indicate that they expect to be competitive in attracting the best students.

Curriculum

A central aim of the proposed program is to prepare students to independently conduct state-of-the-art research, which requires deep knowledge of core physics concepts and discipline-specific topics. Given the high level of mathematical sophistication required for graduate-level physics, which is not found in most undergraduates, physics PhD programs traditionally consist of core courses that provide an essential foundation followed by specialty courses focused on specific topics in physics. The curriculum of the proposed PhD program follows this structure. Students will spend the first two years engaged in extensive coursework, and will then take a qualifying examination that assess their mastery of core physics concepts. Following successful completion of the qualifying exam, students will select a research advisor and spend the remainder of their PhD focused on developing their research skills.

In total, seventy-five credits are required for successful completion of the proposed PhD. This includes six core courses and three elective courses (see table below; all courses are 3 credits). A minimum of 20 doctoral research credits (PHYS 491) and at least three credits of Teaching College Physics (PHYS 305) are also required. Students must pass all courses with a grade B or better; core courses must be completed within the first two years of graduate study and elective courses within the first three years.

REQUIRED CORE COURSES (18 credits)	
PHYS 301	Mathematical Physics
PHYS 311	Advanced Dynamics
PHYS 313	Electromagnetic Theory
PHYS 323	Contemporary Physics
PHYS 362	Quantum Mechanics II
PHYS 365*	Statistical Mechanics
ELECTIVE COURSES (3 courses; 9 credits)	
PHYS 222	Biological Physics
PHYS 242	Intro to Solid State Physics
PHYS 256	Computational Physics
PHYS 257	Modern Astrophysics
PHYS 258	Relativity
PHYS 264	Nuclear and Elementary Particle Physics
PHYS 321	Theoretical Physics
PHYS 331	Biological Physics
PHYS 341	Solid State Physics
PHYS 351	Physics of Materials
PHYS 356*	Computational Physics II
ME 336	Continuum Mechanics
ME 350	Multiscale Modeling
MPBP 323	Biophysical Techniques
CHEM 260	Advanced Physical Chemistry
BIOC 301	General Biochemistry I
BIOC 302	General Biochemistry II

*New course developed and approved in fall 2017.

Additionally, students will be expected to contribute to publications in high-profile journals and present their research at conferences.

Admission Requirements and Process

All students are expected to have a BS in physics or a related field. Applicants will be evaluated by the Admissions Committee which has a strong record of success with their acceptances into the Physics MS program. Criteria for evaluation include GPAs, GRE (general) scores, and potential fit of candidate's research interests with faculty research. Strong candidates will be invited for a campus visit if possible; Skype interviews will be conducted if necessary.

Anticipated Enrollment and Impact on Current Programs

Initially, the proposers indicate that the program will admit a cohort of approximately four students every other year. After the third cohort is accepted and the PhD in Physics firmly established, they will accept approximately three students yearly. This ramp-up schedule is based on knowledge gained from similarly-sized departments that have recently implemented PhD programs in physics and the Materials Science PhD at UVM. Although the percentages of students obtaining PhD vs. MS degrees in Physics (93% vs. 7%) and the fact that the existing MS in Physics graduates one to two students per year suggest the program could expect

to attract significantly more than five students, the proposers indicate that they do not wish to over project the growth potential of the proposed program.

The proposers expect the new program to attract an international and diverse pool of students that is considerably larger than those interested in the existing MS program due to the additional opportunities the higher degree provides. The proposed admittance numbers are based on the current inquiry rate combined with domain-specific knowledge in the New England region. As part of their recruitment efforts, and, importantly, an important step in achieving their stated goal of increasing the number of under-represented minorities (URM) with a PhD in Physics, the Department is in the process of becoming an affiliated member of the Bridge program of the American Physics Society (APS). This program seeks to increase the number of Physics PhDs awarded to URM) students by matching students with prospective institutions using a more holistic approach to admissions (i.e. not simply cutting off candidates on the basis of GRE scores). There are currently six bridge sites in Indiana, Ohio, Florida, and California that provide coursework, research experiences, and substantial mentoring for students who either did not apply to graduate school, or were not admitted through traditional graduate school admissions.

As noted above, the Materials Science PhD is the most closely related existing program. Both the proposers and the Director of the Materials Science PhD feel that the reinstatement of the Physics PhD will have a positive impact on the Materials Science program by increasing the diversity of courses offered for students in both programs. A strong letter of support was included from the Materials Science PhD Director, who stated "*Strong Physics research and graduate education sit at the foundation of all successful STEM programs across the country. The research accomplishments of Physics PhD students and their advisers are instrumental in solving some of the grand challenges facing society today from sustainable energy to understanding biosystems at the molecular level*." The Physics PhD program is expected to assist in faculty recruitment for both programs, thus increasing grant funding for faculty in the programs which will only enhance UVM's ability to recruit the best students to the programs. Additionally, the Physics Department indicates that they will continue to support the Materials Science PhD program by committing at least three graduate teaching assistant fellowships to Materials Science, and they anticipate that faculty in the Physics Department will continue to advise Materials Science PhD students.

Advising

The Physics Graduate Committee will work directly with each student over their first two years to develop their individual learning plans. Upon successful completion of the written comprehensive exam and identification of a research mentor, the student will assemble a Dissertation Committee made up of at least four members of the Graduate College faculty, with at least two from Physics. Consistent with Graduate College policy, the Chairperson of the Dissertation Committee will be a graduate faculty member outside the Physics Department. The Dissertation Committee will interact with the student at least once per year through an evaluation process that will require the student to prepare a short summary of accomplishments in the previous year and plans for the following one. All members will be required to sign off on this yearly status report which the student will then submit to the Chair of the Physics Graduate Committee.

Assessment Plan

The program will be reviewed under the standard Academic Program Review process. Discipline specific learning outcomes and relevant evaluation metrics include:

- Demonstrate mastery of the core physics disciplines.
  Student Evaluation: Passing core courses with a grade of B or better. Passing of the comprehensive exam.
  Departmental Evaluation: Maintain an average of 75% or greater of the PhD students achieving this learning outcome.
- Train successful and independent researchers.
  Student Evaluation: First and contributing authorship on peer-reviewed publications; poster and oral presentations at scientific conferences and meetings.
  Departmental Evaluation: Aggregate totals of publications and presentations featuring UVM Physics Ph.D. students as authors, and the related citation bibliometrics will be used to measure the research output of our students.
- Career preparation for diverse opportunities.
  Departmental Evaluation: Track placement of students upon completion of the program, and throughout their careers through alumni surveys at 5-year intervals.

Staffing Plan, Resource Requirements, and Budget

With the exception of two new courses, the proposed PhD in Physics is designed to leverage existing resources with the expectation that growth will be based on enhanced ability to compete for extramural resources to support graduate students and a growing undergraduate population in Physics and other STEM disciplines that require Physics coursework, thus providing the resources to support additional GTA positions in the future. Students entering the program will initially be supported through graduate teaching fellowships, allowing them to focus on coursework in the first two years. Like most graduate programs in the physical sciences, students will then be expected to transition to graduate research assistantships provided funding is available. Additionally, the proposers indicate a commitment to support minority and underrepresented Physics students through the aforementioned Bridge program and seeking corresponding funding opportunities.

Although the CAS five-year strategic plan includes a tenure track hire in Physics, there are no faculty or staff positions tied to implementation of 1the proposed PhD. By having an initial “start-up” phase in which students are accepted every other year, the budget submitted with the proposal indicates the program will be revenue neutral or generating upon inauguration.

Evidence of Support

There is substantial support for the Ph.D. in Physics from across campus. The Vice President for Research, the Director of the Vermont Advanced Computing Center, and the Deans of the Larner College of Medicine and Rubenstein School of Environment and Natural Resources join CAS Dean William Falls in support of this proposal. Strong letters of support were also included from the Chairs of Biology, Chemistry, Mechanical Engineering, Molecular Physiology and Biophysics, and Physics. Importantly, as noted previously, the Director of the Materials Science PhD program expressed significant support. The Director of the American Physical Society also provided a letter in support stressing the positive effect the program will have on all science disciplines at UVM as well as developing a work force for the state. A letter from the Dean of the College of Engineering and Mathematical Sciences expressed reservations regarding the CAS five-year strategic plan (specifically the addition of a Physics tenure-track line), but did not comment on the proposed Physics PhD program. As noted above, the planned tenure-track hire is not tied to implementation of a Physics PhD program.

Summary

Physics is one of the fundamental natural sciences, and the proposal demonstrates demand from students, faculty, and potential employers for a PhD program in Physics at UVM. In addition to improving the ability of the Physics Department to attract and retain high-quality, faculty, obtain external funding, and support their transition to an Active Learning model in the introductory physics courses, the program will also enhance the institution's reputation by strengthening research and teaching at the University. It is evident that those involved in the proposed program are committed to achieving their stated goals and put considerable effort into designing a high-quality program using existing resources that has potential for growth. The proposed Physics PhD will be an excellent addition to UVM's graduate offerings and allow Vermont to lose its dubious distinction of being the only state in the nation without a PhD-level program in Physics.

The University of Vermont's

Advising & Retention Tool:

Education Advisory Board Student Success Collaborative

Faculty Senate

May 17, 2018

Stacey Kostell

Vice President for Enrollment Management

Sarah Warrington

Coordinator of Strategic Retention

ACADEMIC EXCELLENCE:
Goals for the University of Vermont

Supporting the President's Strategic Action Plan

These goals are established to animate President Sullivan's *Strategic Action Plan* and facilitate University-wide discussions, engagement, and initiatives around Academic Excellence.

Success in these areas will lead, authentically and in a sustainable way, to increased selectivity, improved student quality, and improvements in national rankings and other reputational indicators.

These goals also serve as drivers to the University-wide IBB development process initiated in fall 2013.

1. Increase the percentage of undergraduate students graduating in four years
2. Improve undergraduate student retention, Years 1-4
3. Improve student advising, both academic and pre-professional/career
4. Increase interdisciplinary teaching, research, and scholarship
5. Expand programmatic offerings to include distance and hybrid modes of instructional delivery
6. Increase research and scholarship in areas that generate high impact, recognition, and visibility
7. Increase domestic diversity and grow international student enrollments across the University
8. Increase enrollments in graduate and professional programs

D. Rosowsky, Provost and Senior Vice President
October 24, 2013

Academic Excellence Goal 1:

Increase the percentage of undergraduate students graduating in four years

Academic Excellence Goal 2:

Improve undergraduate student retention, years 1-4

"The lack of enterprise-wide **advising and retention software** is the single greatest obstacle to improved retention and four-year graduation rates."

January 2017 College/School Retention Plan Update

Timeline of Events

Summer 2016 – **Functional requirements identified**

Fall 2016-Spring 2017 – **Presentation of software options** to Council of Dean's, Associate Deans, Faculty Senate and Student Services Collaborative

March 2017 – Advising/retention **software RFP issued**

April 2017 – **Proposal review**; three vendors selected for on-campus demonstrations

May 2017 – **On-campus demonstrations**; EAB identified as strongest, most cost-effective system

June 2017 – **Second EAB on-campus demonstration held**

guide

Timeline of Events

June 2017 – **Provost's Academic Leadership Council (PALC) endorses continued progress** on potential purchase

Fall 2017 – **Campus project presentations**: PALC, Faculty Senate (Exec Council, FPPC, SAC), Student Government Association

October 2017 – **Board of Trustees, Education Policy and Institutional Resources Committee –** Provost Rosowsky and VP for Enrollment Management, Stacey Kostell

March 2018 – Provost's Academic Leadership Council monthly updates. **RPT Week participation.**

Spring 2018 – **Project sharing/updates:** College/school faculty meetings, Faculty Senate committees, Student Affairs leadership, President's Senior Leadership, etc.

UVM SSC LEADERSHIP TEAM

PROGRAM SPONSOR
David Rosowsky,
Office of the Provost and Senior Vice President

PROGRAM OWNERS
Stacey Kostell & Sarah Warrington,
Enrollment Management

ENGAGEMENT TEAM LEADS

TECHNICAL LEADER
Rachel Seremeth,
Enterprise Technology Services

APPLICATION ADMINISTRATOR
Veronika Carter,
Registrar's Office

CONTENT ADMINISTRATOR
Kate Strotmeyer,
Vice Provost and Dean of Students Office

WORKFLOW & TRAINING
Sarah Helmer,
College of Arts and Sciences Dean's Office
Sarah Warrington,
Enrollment Management

ANALYTICS
Alex Yin,
Office of Institutional Research

CONTENT DEVELOPMENT
Stacey Kostell,
Enrollment Management
Dani Comey,
Center for Academic Success

PROMOTIONS & COMMUNICATION
Kate Strotmeyer,
Vice Provost and Dean of Students Office

Why UVM Chose EAB

College is complicated.
The Student Success Collaborative (SSC) helps students and advisors navigate the many available resources that promote student success, during their UVM years and beyond.

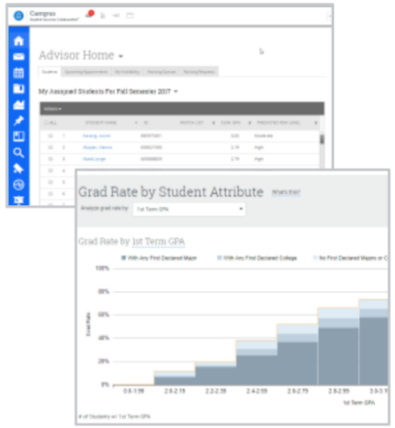
We joined the EAB SSC because we want to:

- Enhance the student experience
- Support integrated and effective practices in advising
- Increase retention and graduation rates

Campus and Guide Platform Overview

EAB Campus

Student Support Services, Academic Leaders, Administration



Tools in Campus facilitate the work and collaboration of advisors and support providers behind-the-scenes of the student experience.

Campus

- Advanced Search
- Referrals and case management
- Appointment reports and shared notes
- Early alerts
- Intervention campaigns
- Front desk management

Desktop and App driven **appointment scheduling** by students

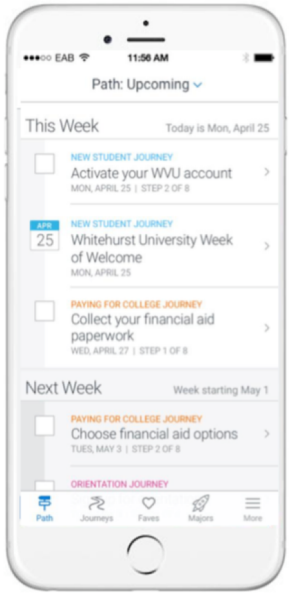
Connect Network links students to their support team

Guide

- Personalized student path
- Intake survey
- Quick polls
- Push Notifications
- Student calendar
- Holds Center
- Major Explorer
- Campus Resources

EAB Guide

Students



Guide empowers students to take ownership of their journey through customized mobile interventions and ability to reach out for support.

CAMPUS APP

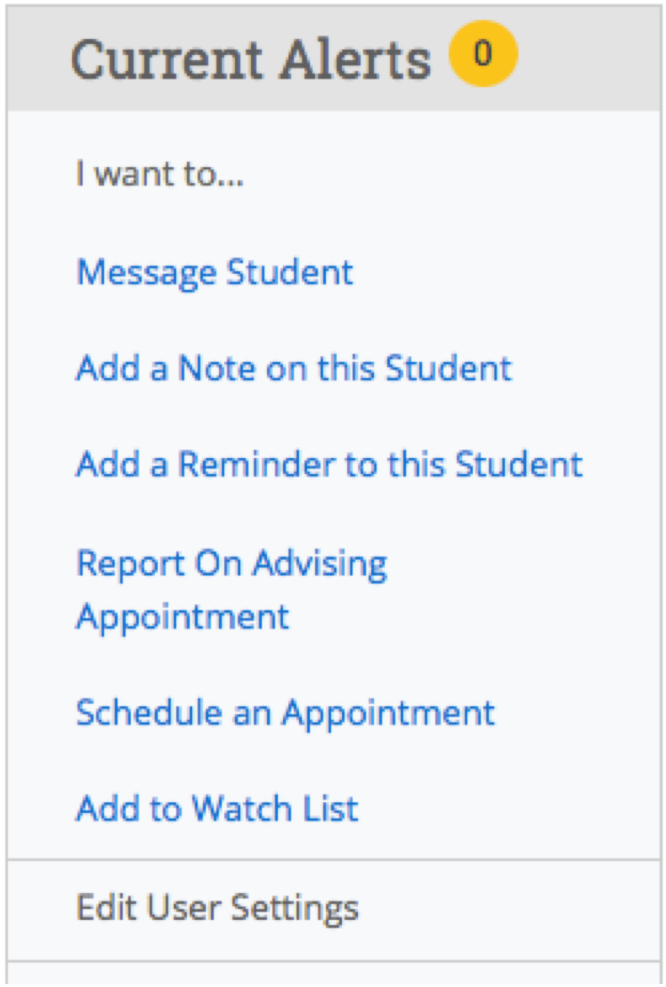
Quickly review student information

Initiate early interventions

Proactively refer to support services

Utilize multi-modal communication

Access data and analytics



GUIDE APP

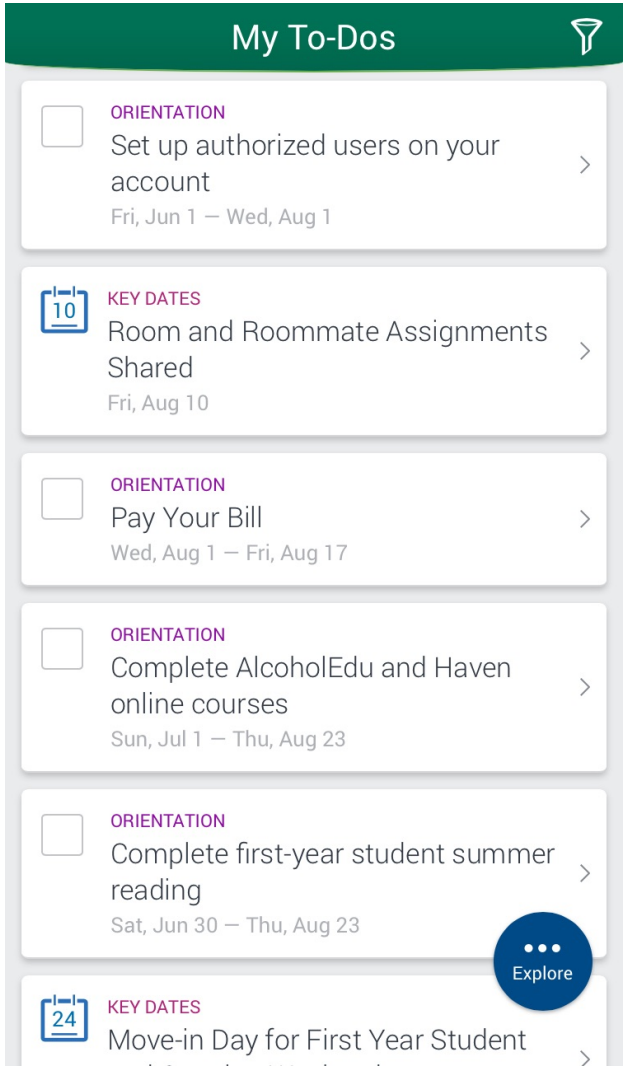
View course schedule

Get timely notifications/reminders

See the academic calendar

Explore majors and careers

Access resources



IMPLEMENTATION PHASED APPROACH

CAMPUS

4 Student Services Teams in Fall 2018:

- CEMS – Engineering
- CNHS
- GSB
- Honors College

Remaining colleges/schools - spring 2019

GUIDE

First-Time, First-Years at June Orientation

Upper level students in Fall 2018

IMPLEMENTATION NEXT STEPS

May 23 Onsite with EAB Team

Website Go-Live

June Orientation

Governance Formation

Summer Phase I User Training

Early Fall 2018 Presence