Department of Integrated Science and Technology
Faculty Activity Report
2014-2015 Academic Year

Teaching

Courses taught Summer 2014-Spring 2015

Course #	Sec #	Sem	Cred	Students	Team
ISAT 340	1	F14	3	18	
ISAT 340	2	F14	3	18	
ISAT 340	3	F14	3	18	
ISAT 348	1	F14	3	20	
ISAT 493	2	F14	3	1	
ISAT 497E	4/201	F14	2	3	Radziwill, Conley, Handley
ISAT 499B	2	F14	2	3	
CS 330	1	S15	3	29	
ISAT 131	6	S15	3	12	McGraw*
ISAT 252	1	S15	3	28	
ISAT 252	2	S15	3	25	
ISAT 348	1	S15	3	3	
ISAT 480	7	S15	3	12	Radziwill
ISAT 492	1/9	S15	2	3	Radziwill
ISAT 493	20	S15	3	1	
ISAT 498E	2	S15	3	1	Radziwill
ISAT 499C	1	S15	3	3	Radziwill

Narrative

I have mixed feelings about my teaching performance this year. On the one hand, I built new open-source software to support ISAT 252 to experiment with the recent trend in “digital badging” (see http://en.wikipedia.org/wiki/Digital_badge), developed a new version of CS 330

(Social and Ethical Issues in Computing) which will likely result in the publication of 5-6 student-written articles in a special issue of the *Software Quality Professional* journal, co-developed a course with Dr. Radziwill on agile venture creation that may help us receive grant funding and also be part of the renewed ISAT curriculum, and wrote most of the first draft of the newly proposed ISAT 190 course syllabus. I also experimented with a new hybrid to the choose-your-own-grade approach which gives students the option to instead follow a points-accumulation system, and co-advised the team that won the "ISAT Best Honors Thesis" award, whose project will likely result in at least two refereed publications (one of the papers has already been accepted for publication in *The STEAM Journal*). Given these accomplishments, I certainly feel that I have put in honest, perhaps extraordinary, effort.

On the other hand, I'm still frustrated. Upon reflection, I believe the reason behind this feeling is best captured by the attached email exchange I had with a student this spring named Greg. In essence, Greg, a business major, said he'd signed up for my class because he heard it was an easy A. He said I was the "most interesting/intriguing professor [he'd] ever had," but that since he didn't plan to become a programmer, and since doing well in his other courses was vital to getting a job/internship upon graduation, he didn't plan to attend my class at all. I tried to persuade him that this was a bad idea. He agreed with me, but countered that since he was a "prisoner to the system" his most pragmatic course of action was to skip my class and focus on his other courses.

What frustrates me is that he is not wrong. I hold no rancor towards him for making the decision he did, and he and I agree that while his action is not admirable, it is pragmatic. Overall, I felt that attendance and participation in my programming classes this year were disappointing. The students did not have the same level of enthusiasm and energy for participation that they have had in previous years. In part, I think this reflects the same kind of pragmatic reasoning that Greg made--students are nothing if not savvy about how to tick the boxes necessary to navigate the system. I also think, though, that the students' energy level was also a reflection of my own energy level. I found it difficult to muster the same enthusiasm for teaching this year as I have in past years.

1. Satisfactory

A. Commitment

Student course evaluations for questions #3, #9,#10, and #15, showing scores ABOVE DEPARTMENT MEAN in green, BELOW DEPARTMENT MEAN in red, and AT DEPARTMENT MEAN in black are:

	Fall 2013	Spring 2014	Fall 2014	Spring 2015
#3	**4.00**	**3.79**	**4.33**	**3.55**
Dept. Mean	**4.43**	**4.38**	**4.40**	**4.36**

#9	**4.64**	**4.76**	**4.79**	**4.36**
Dept. Mean	4.39	4.32	4.37	4.34
#10	**4.27**	**4.29**	**4.52**	**3.62**
Dept. Mean	4.19	4.20	4.21	4.19
#15	**4.20**	**3.80**	**4.45**	**3.93**
Dept. Mean	4.14	4.09	4.13	4.08

- The lower than department mean on #3 is an artifact of the amount of autonomy that I give to the students. Because of the pedagogical approach that I take, it is difficult to "prepare for class" since each of the student teams in each section are working on different problems in different areas. Autonomy is one of the key ingredients in intrinsic motivation laid out in self-determination theory of Ryan and Deci (http://selfdeterminationtheory.org). I am not concerned about these numbers.
- For #15 I don't always give exams, and those that I do we grade together in class. They are predominantly a diagnosis of trouble areas for students to work on. Although I had a higher than average score in Fall 2013, I expect that was a fluke.

B. Organization

	Fall 2013	Spring 2014	Fall 2014	Spring 2015
#11	**4.42**	**4.39**	**4.76**	**3.93**
Dept. Mean	4.32	4.25	4.28	4.22
#13	**3.43**	**3.88**	**3.83**	**4.00**
Dept. Mean	3.84	3.79	3.82	3.79
#16	**4.33**	**4.23**	**4.68**	**4.06**
Dept. Mean	4.18	4.18	4.18	4.14

- For #13, I never assign textbooks although I recommend some. It's difficult if not impossible to interpret this number.
- Numbers below departmental means for Spring 2015 will probably be over them if the CS 330 evaluations are also taken into account.

C. Communication

Please see course websites at:

- Course Syllabi
  - http://f14.umatter2.us/
  - http://252s15.umatter2.us/syllabus/
- Open-source Course-support Software
  - http://exercism.umatter2.us/

D. Mastery

- My reputation score on StackOverflow, the key online resource for software developers, rose from 183 to 445 (262 points), more than doubling in the period between June 2014 and May 2015. I'm ranked in the top 42% of users this year and have an estimated reach of approximately 132,000 users.
  (see: http://stackoverflow.com/users/296725/morphatic?tab=topactivity)
- I received unsolicited job offers based on my Github profile. I contributed to several different open-source projects this year, most notably Exercism, a project designed to help create conversations around code focusing on coding style and quality.
  (see: https://github.com/morphatic)
- I learned to use two new programming languages this year: Go and Swift. Evidence of this is my accepted submissions to the Exercism project on Github.

E. Student Evaluation

- In 2014-2015, overall evaluations were **4.59** for the fall (compared to a departmental mean of 4.25) and **3.87** for the spring (compared to a departmental mean of 4.21). The spring number does NOT take into account evaluations for CS 330, which was evaluated using the CS departmental rubric.

F. Advising

N/A

G. Attitude

	Fall 2013	Spring 2014	Fall 2014	Spring 2015
#5	**4.56**	**4.83**	**4.80**	**4.18**
Dept. Mean	4.46	4.45	4.45	4.40
#6	**4.69**	**4.84**	**4.88**	**4.47**
Dept. Mean	4.46	4.39	4.44	4.42

#7	**4.58**	**4.50**	**4.75**	**3.90**
Dept. Mean	4.30	4.30	4.32	4.32
#8	**4.62**	**4.68**	**4.68**	**3.98**
Dept. Mean	4.28	4.28	4.28	4.30

- I wrote three letters of recommendation this year, two of which resulted in the acceptance of the applicants to graduate programs.

H. Leadership

- I was the primary author of the first draft of the new ISAT 190 syllabus (attached) which is to be a part of the renewed ISAT Program curriculum. Not only did I draft a syllabus, but also a detailed rationale for why each element of the course should be present. This syllabus focuses on the need to do intentional cohort development, as well as get students to be thinking about the meaning of “problem-centric” versus “discipline-centric” and also practicing their own elevator speeches on the question “What is ISAT?”

I. Teamwork

- I led a discussion section of ISAT 131
- I worked with Kathryn de Ridder-Vignone, Mike Deaton, and Paul Henriksen on the development of the ISAT 190 syllabus as part of the PCHOM renewal process.
- Team-taught ISAT 480--Agile Development for Lean Startup with Nicole Radziwill

2. Excellent

A. Student Recognition

- Student evaluations of my section of CS 330--Social and Ethical Issues in Computing were significantly above CS Departmental averages. See attached evaluations, especially written comments from students.

B. Peer Recognition

N/A

C. Vitality

- Developed and taught **ISAT 480--Agile Development for Lean Startups** with Nicole Radziwill. In the wake of 20 years of rapid and heavy innovation in the technology sector, a new paradigm for creating and growing businesses has emerged. In the past, heavy emphasis was placed on the development of detailed and lengthy business plans that were used to convince banks and other investors to finance a new venture. These plans were rarely followed, and as such, innovators now tend to follow a model called “lean startup,” which focuses on delivering value to customers as quickly as possible and evolving a product iteratively over time with short development cycles. This course

introduced students to this kind of thinking and had them develop proposals for lean businesses.

- Developed and taught **CS 330--Social and Ethical Issues in Computing**. I was approached by the CS Department about teaching this course in spring 2015. The course had nearly 100% attendance throughout the semester, and the student papers that were written in this course will likely be published in a special issue of *Software Quality Professional*. Student evaluations of this course were well above CS Department means in nearly every relevant category.
- I tried a **new approach to the choose-your-own-grade system** this year, in which I allowed students to opt instead for a **points-accumulation system** for grading (see: http://252s15.umatter2.us/syllabus/grades/the-points-accumulation-system/). This was motivated by the successes that Dr. Radziwill had in her courses with the points-accumulation system, and also by frequent requests by students in my courses for some portion of their grade to be determined by me. Despite the fact that they had asked for such a system, as it turned out none of my students chose this option. I'm going to spend time this summer coming up with a revision for Fall 2015.
- **Developed and implemented a mashup of Wordpress, Exercism, BadgeOS, and Credly** that was designed to provide motivation, structure, guidance, and recognition for students to engage in self-paced learning of programming languages. On the upside, this system appears to have been very motivating for the segment of students who are motivated by having some sort of "tangible" reward associated with their learning activities. It was a challenge to keep students supplied with enough programming problems to sate their drive. On the downside, maintaining the system proved to be too labor-intensive for the instructor. Future development of this system will focus on easing the clerical burden on the instructor. This project entailed a significant contribution on my part to the Exercism open-source project: https://github.com/exercism/exercism.io

D. Non-Traditional Leadership

- Co-Director of JMU study abroad in the Philippines. Eight student participated.
- I was advisor, co-advisor, or major contributor to 5 capstone projects:
    - Chance, D., Moellers, C., and Spinosa, R. *Zome: An Interactive Art Piece*. This project won the **Best Honors Thesis** award, and thus far has resulted in one published journal article, and will likely yield a second. Co-Advisor with Nicole Radziwill.
    - Monter, M. and Smith, K. *WanderAbroad: A Mobile App to Encourage International Travel.* In addition to a mobile application, this project collected data on the reasons why JMU students do and do not engage in study abroad, providing analysis for JMU's Office of International Programs. Advisor
    - Campbell, B., Walisko, E. *Mobile Activity Recognition System*. A machine learning project to develop mobile application to identify user activity based on accelerometer data. Co-Advisor with Nicole Radziwill.
    - Nguyen, T. *Using Case Study Methodology in Teaching Social Context.* Co-Advisor with Shannon Conley and Mary Handley.

- Bolen, R., Fencil, J., and Major, C. *ISAT Alumni Connect.* I helped this team with their database design, and app architecture.

E. Contextual Variety

- I taught in the following contexts this year:
  - Discussion--ISAT 131, CS 330
  - Self-paced lab--ISAT 252, ISAT 340, ISAT 348
  - Seminar/Project-based--ISAT 480
  - Study Abroad to the Philippines

F. Breadth

- I taught courses at all levels from 1XX to 4XX this year, as well as assisting in the Geography of the Philippines program. Course topics ranged from social and ethical impacts of computing, to new paradigms in business innovation, to programming at the beginner and advanced levels. ISAT 252, in particular, introduced students to 8 different programming languages.

G. Publication of Teaching Materials

- Developed and implemented a mashup of Wordpress, Exercism, BadgeOS, and Credly that was designed to provide motivation, structure, guidance, and recognition for students to engage in self-paced learning of programming languages. On the upside, this system appears to have been very motivating for the segment of students who are motivated by having some sort of “tangible” reward associated with their learning activities. It was a challenge to keep students supplied with enough programming problems to sate their drive. On the downside, maintaining the system proved to be too labor-intensive for the instructor. Future development of this system will focus on easing the clerical burden on the instructor. This project entailed a significant contribution on my part to the Exercism open-source project: https://github.com/exercism/exercism.io

H. Presentations and Publications on Pedagogy

- Radziwill, N. M. & Benton, M. C., 2014: The 10 Principles: A New Paradigm for Collaboration and Innovation. IAJC/ISAM International Conference, Orlando FL, September 26.
- Radziwill, N. M., Benton, M. C., & Moellers, C. 2015: From STEM to STEAM: Reframing What it Means to Learn. *The STEAM Journal* (Claremont, CA), July.
- Benton, M. and Radziwill, N. 2014 What is the Burning Mind Project? presentation at the Black Rock Educators Consortium Annual Meeting, Black Rock City, NV.
- Benton, M. C. & Radziwill, N. M., 2015: The 10 Principles in Education. IAMU Networking Executive Session, Washington DC, April 30.
- N. Radziwill and I contributed to the "Assessment" chapter of *The New Social Learning, 2nd Ed*. by Tony Bingham and Marcia Conner (http://www.thenewsociallearning.com/)
- Wrote a series of blog posts on the Choose-Your-Own-Grade pedagogy at http://www.burningmindproject.org adapted from course syllabi.

I. Workshops and Organizations

- Co-Leader of the Black Rock Educators Consortium
- Co-Chair of Black Rock Educators Consortium Annual Meeting, Black Rock City, NV, Friday, August 29, 2014.

J. Team Leadership

- I was the primary author of the first draft of the new ISAT 190 syllabus (attached) which is to be a part of the renewed ISAT Program curriculum. Not only did I draft a syllabus, but also a detailed rationale for why each element of the course should be present. This syllabus focuses on the need to do intentional cohort development, as well as get students to be thinking about the meaning of “problem-centric” versus “discipline-centric” and also practicing their own elevator speeches on the question “What is ISAT?”
- I co-wrote a proposal called “The HCO3 STEAM E-Team Experience: Course & Program Faculty Grant” which is a naturally multidisciplinary one-year experiential program for undergraduate seniors working in entrepreneurial teams (E-Teams). It is realized from the synergy created by 1) an art-infused place to work together and share experiences in, 2) a course sequence to learn about effective business processes and models (based on existing experimental courses), and 3) optional travel to San Francisco to spend time with the vibrant creative and entrepreneurial crowd there. If successful, will bring in approximately $50,000.

K. Instructional Leadership

- As chair of the JMU Faculty Senate Academic Policies Committee (APC), I initiated and led a year-long effort to develop a white paper exploring the possibility of introducing micro-courses at JMU. Micro-courses are those offered for less than one credit hour. This effort required a great deal of communication and interaction with a wide array of stakeholder groups across campus including the Registrar, Financial Aid, Business Office, Senior Leadership, and constituents of the JMU Faculty Senate. The white-paper has received a positive reception and will likely lead to a pilot study to be run in 2016.

L. Other

- Won two CIT Mini-grants (total $600) to purchase micro-controllers and programmable LED light strips which I will use in the 2015-2016 academic year to develop a new and novel approach to teaching basic programming skills, as well as developing students’ skills in soldering, and creating wearable technology as part of a STEAM learning experience.

Scholarship

Narrative

I'm quite pleased with my scholarly output this year. I wrote five funding proposals, three of which were successful (BIF Community Scholarship $1050, CISE mini-grant $737, CIT mini-grant $600), one unsuccessful (CONNECT ~$100K), and one still pending (VentureWell ~$50K). I presented two invited talks, one at the IAJC/ISAM International Conference, and one at the IAMU Networking Executive Session, both on my innovations in pedagogy related to grades and the 10 Principles of Burning Man. I published one paper in a refereed journal in conjunction with student work, and there is the potential that I will get six more papers, and one poster published as a result of collaborations with students this year. N. Radziwill and I wrote a book chapter that was published in May. Most importantly, I've found renewed energy to work on my book about grades, and I've written two and a half chapters so far, with the feeling that I may be able to complete it within the next academic year.

Nearly all of my scholarly work is beginning to coalesce around SoTL (Scholarship of Teaching and Learning) topics, and I'm beginning to feel recognized for that work. New approaches to grading and student evaluation, STEM to STEAM, and the incorporation of the 10 Principles of Burning Man into higher education all fall into this category. This expertise has served me well as I've participated in the ISAT Program curriculum renewal process, and even within the department I feel like people are slowly coming to understand and accept many of the ideas I've been talking about for years. At the university level, I've also been able to leverage this work in my role as the chair of the Faculty Senate Academic Policies Committee (APC), as I've led that group in studying potential structural reforms to creating courses university-wide.

In the upcoming year, I look forward to continuing this work, and I feel energized and grounded in a way that I haven't in many years.

1. Satisfactory

A. Professional Organizations

- IEEE Computer Society
- ACM

B. Participation in Professional Meetings, Conferences, and Gatherings

- Attended TEDxBRC in Black Rock City, NV (August 27, 2014)
- Co-chaired Black Rock Educators Consortium Annual Meeting, Black Rock City, NV, August 29, 2014
- Attended Business Innovation Factory 10 (BIF10) in Providence, RI (September 16-18, 2014)
- Attended IAJC/ISAM International Conference, Orlando FL, September 26-27, 2014.
- Black Rock Educators Consortium organizers meeting at Burning Man Headquarters, San Francisco, February 17, 2015.

C. Research Involving Independent Study or Honors Students

- Chance, D., Moellers, C., and Spinosa, R. *Zome: An Interactive Art Piece*. This project won the **Best Honors Thesis** award, and thus far has resulted in one published journal article, and will likely yield a second. Co-Advisor with Nicole Radziwill.

D. Supervising Honors Projects

- Chance, D., Moellers, C., and Spinosa, R. *Zome: An Interactive Art Piece*. This project won the **Best Honors Thesis** award, and thus far has resulted in one published journal article, and will likely yield a second. Co-Advisor with Nicole Radziwill.

E. Regional Meeting Presentations

- Benton, M. C. & Radziwill, N. M., 2015: The 10 Principles in Education. IAMU Networking Executive Session, Washington DC, April 30. **Invited speaker**.

F. Non-refereed Journal Publications

N/A

G. Development of Instructional or Educational Materials

- Developed and implemented a mashup of Wordpress, Exercism, BadgeOS, and Credly that was designed to provide motivation, structure, guidance, and recognition for students to engage in self-paced learning of programming languages. On the upside, this system appears to have been very motivating for the segment of students who are motivated by having some sort of “tangible” reward associated with their learning activities. It was a challenge to keep students supplied with enough programming problems to sate their drive. On the downside, maintaining the system proved to be too labor-intensive for the instructor. Future development of this system will focus on easing the clerical burden on the instructor. This project entailed a significant contribution on my part to the Exercism open-source project: https://github.com/exercism/exercism.io

H. Short-Courses, Workshops, Professional Development

- Charles Eisenstein Workshop, "The Space Between Stories" - March 10, 2015

I. Ongoing Unpublished Research

- Wrote two and a half chapters in my book, *Grades Suck*

J. Presentation of Faculty Seminars or Colloquia

N/A

K. Proposal Reviewer

N/A

2. Excellent

A. Focused, Goal-directed Research Contributions

- I posted 5 new articles on The Burning Mind Project website (http://www.burningmindproject.org)

B. Professional Achievement Awards and External Recognition

N/A

C. Invited Lectures at National or International Conferences

- Radziwill, N. M. & Benton, M. C., 2014: The 10 Principles: A New Paradigm for Collaboration and Innovation. IAJC/ISAM International Conference, Orlando FL, September 26.

D. Publication of Book Reviews, Discussions, or Technical Reports

N/A

E. Publication of Books

- N. Radziwill and I contributed to the "Assessment" chapter of The New Social Learning, 2nd Ed. by Tony Bingham and Marcia Conner (http://www.thenewsociallearning.com/)
- Editor of *Tabula Raisa: Destination Dhaka*, a children's book published by Eric S. Townsend

F. Service as Editor or Referee of National or International Journal

N/A

G. Recipient of Government or Foundation Grants, Awards or Contracts

- Community Scholarship ($1050) received from Business Innovation Factory in Providence, RI to attend BIF10 innovation summit
- CISE Mini-Grant to attend IAMU Executive Session ($737) - April 2015
- CIT Mini-Grant for Classroom Innovation ($600) - May 2015

H. Active Research Leading to Publication or Presentation

- N. Radziwill and I are developing a research track in the area of STEM to STEAM (adding Arts to STEM education) which, in our case, takes the form of technologically advanced art projects. This year we sponsored a senior project to build an interactive art piece called a "zome" (zonohedral dome), which resulted in one journal publication (below) so far, and will likely yield two.
    - Radziwill, N. M., Benton, M. C., & Moellers, C. 2015: From STEM to STEAM: Reframing What it Means to Learn. *The STEAM Journal* (Claremont, CA), July.

I. National/International Refereed Publications

- Radziwill, N. M., Benton, M. C., & Moellers, C. 2015: From STEM to STEAM: Reframing What it Means to Learn. *The STEAM Journal* (Claremont, CA), July.

J. Presentations at National/International Professional Meetings

- Radziwill, N. M. & Benton, M. C., 2014: The 10 Principles: A New Paradigm for Collaboration and Innovation. IAJC/ISAM International Conference, Orlando FL, September 26.

K. Initiating and/or Directing Successful External Grant Funded Project

- Radziwill, N. and Benton, M. 2015. The HCO3 STEAM E-Team Experience: Course & Program Faculty Grant, $49,916. Submitted to VentureWell. Review Pending
- Benton, M. (PI) CONNECT Open-Source VA CRCF FY2015 Solicitation. $93,535. Not funded.

L. Authoring Textbooks or Teaching Materials

N/A

M. Professional Consulting

- I am the owner of Morphatic Web Hosting, for which I regularly build and/or provide maintenance to clients' websites.

N. Other

N/A

Service

Narrative

I've been a very focused and active servant this year. I estimate that averaged out over the year, I engage in about an hour of service per day. As with scholarship, I'm focusing my efforts in areas where I have expertise, particularly with respect to educational assessment and curricular/pedagogical reform. I'm proudest of my efforts as APC Chair, and I believe that as a result of my efforts, all JMU faculty members will, within a year or two, have a new tool at their disposal with which to improve education--the micro-course. This has been a long-term project, and I look forward to having another year as APC chair to shepherd it through the approval process. It is very difficult to predict the benefits this will bring to students over time, but I think it will be very significant.

1. To University, College, and Department

A. Departmental/Program Committees

- Assessment Committee--active participant--5 hours/month. This year I worked with a team over the summer to revise the rubric for senior project presentation evaluation, and led the initiative to collect videos of all student presentations and use them to test the rubric. I also was notetaker at several Assessment Day senior exit interview sessions. I collected all of the videos at Senior Symposium.
- Member of IKM and Social Context Academic teams--2 hours/month--IKM hardly met this year, but I did serve as liaison to LabOps/TSEC to get a list of software for the 3rd floor ISAT labs in place, as well as a way to use the projectors in those labs to display anyone's screen who is in the room. I worked with the Social Context team to hammer out a definition of what "Social Context" means in ISAT.
- ISAT PAC--5 hours/month--This was my 3rd year on the PAC. I wrote the draft proposal to alter the annual evaluation categories to 5 levels instead of 3.
- ISAT 190 Syllabus Development Team--3 hours/month--I worked with Kathryn de Ridder-Vignone, Mike Deaton, and Paul Henriksen to develop a first draft and rationale for the new ISAT 190 PCHOM spine course.

B. College/University Committees

College Teams/Committees

N/A

University Teams/Committees

- ISAT Department Representative to JMU Faculty Senate--2 hours/month
- Chair, JMU Faculty Senate Academic Policies Committee (APC)--4 hours/month
  The APC was VERY active this year. The annual report that I wrote for this committee is attached, and details all of the work we did this year. In particular, we (I, mostly) wrote a

white-paper that was a SWOT analysis of offering courses at JMU for less than one credit hour. This report is also attached.

C. Participating in Public Relations Events and Student Recruiting
N/A

D. Grant Proposals for External Funding for Teaching and Equipment Support
- Radziwill, N. and Benton, M. 2015. The HCO3 STEAM E-Team Experience: Course & Program Faculty Grant, $49,916. Submitted to VentureWell. Review Pending.

E. Faculty Advisor to Student Organizations
- Japan Club Advisor
- ISAT Honor Society Advisor

F. Satisfactory Student Curriculum Advisor
N/A

G. Initiating a Program that leads to Significant Increase of Resources
N/A

H. Major Service/Office at Department, College, or University Level
- JMU Faculty Senate APC Chair (see 1B above)

I. Service Leadership
- Principal author of ISAT 190 proposed syllabus and rationale. This would be the **first** course that all incoming ISAT students would take and the base of the PCHOM spine. As such it is a critical piece of our curricular reform effort.

J. Other Professional Service
N/A

2. To the Scholarly Community

A. Referee for Articles/Books
N/A

B. Grant Reviewer
N/A

C. Officer of a Professional Organization
- Co-Organizer for the Black Rock Educators Consortium

D. Editor of a Professional Journal
N/A

E. Organized Workshops/Symposia/Conferences in one's scholarly area

- Co-chaired Black Rock Educators Consortium Annual Meeting, Black Rock City, NV, August 29, 2014

F. Other

N/A

3. To Society

A. Using University Resources for Local/Regional/State/National/Int'l Good

N/A

B. Using Personal Expertise for Local/Regional/State/National/Int'l Good

- I built a website for the Shenandoah Valley Children's Choir

C. Major Service/Office at Local/State/National Level using one's expertise

N/A

D. Other Significant Contributions

N/A

General Comments

In summary, I'm proudest of the following accomplishments this year:

- Senate APC white-paper on micro-courses
- Award-winning Honors Thesis on STEM to STEAM
- Writing multiple grant proposals
- Getting re-invigorated to write my book

In general, what makes me happy about all of these things is that I finally feel like I've been able to weave a consistent thread through all of my activities so that they support each other, and no matter what I do, I'm involved in something that plays to my talents and to my passions. Even at a university, it can be a challenge to pull off something like that. The narrative sections at the beginning of the previous three sections provide more detail.

As for the department/program, I think pushing ahead with the PCHOM-based curricular reforms was a major accomplishment this year, although it's clear that unless we pick up the pace, it is not going to be possible to get these reforms implemented in a timely fashion. Clarifying the levels of evaluation for annual evaluations was also a minor accomplishment.

For the upcoming year, the big challenge/opportunity is clearly going to be about the turnover of nearly 20% of our faculty. If we bring in 8 new people, it can't but have a very significant impact on the culture of the department. For my part, I think we should make a real effort to find creative and courageous faculty who won't have trouble breaking with convention to turn ISAT into a program that is truly free and innovative.

Faculty Anticipated Activities Plan for 2015-2016

1. Teaching (50%)

Courses: ISAT 252 (3-4 sections), ISAT 340 (1 section), ISAT 345 (1 section), ISAT 348 (1-2 sections), possibly ISAT 190 (experimental 160-1 section)

Given that we will be losing 8 people this year, I expect to have to pick up some overload sections.

2. Service (15%)

Department Committees: Assessment, ISAT 190 Development
College Committees: none
University Committees: JMU Faculty Senate APC Chair
External: Black Rock Educators Consortium Organizer

My major tasks for this year will be continuing to shepherd the micro-course proposal through APC and into the pilot test phase at the university level, setting up an infrastructure for ISAT 190 that will support intentional cohort development among ISAT students and faculty, and continuing to streamline the senior project evaluation process.

3. Scholarship (30%)

My goal is to finish and publish my book on grades. I also have a number of other papers in half-finished condition that I'd like to get done. I will be again organizing the Black Rock Educators Consortium annual meeting at Burning Man and continuing to serve as organizer for that organization throughout the year. Also, I'm hoping that our VentureWell proposal will be approved so that N. Radziwill and I can continue our work developing STEM to STEAM and a community-owned co-working space in Harrisonburg. I'd like to get enough funding to turn the zome into a life-size space for learning. I'm also going to be piloting a new approach to teaching basic programming involving micro-controllers and programmable LED strips.

4. Other (5%)

I will continue to do web development as part of Morphatic Web Hosting and for other clients.

Faculty Conflict of Interest Disclosure

1. List any companies or organizations for which you have consulted this year.
    a. Morphatic
    b. Tony Britt's Spotter Charts LLC
2. List any companies which you own or in which you have significant financial interest.
    a. Morphatic
    b. Tony Britt's Spotter Charts LLC
3. List any other areas of potential conflict of interest that you would like to discuss in our annual review meeting:
    a. none