MODELS FOR INTERDISCIPLINARY TEACHING AND LEARNING

PRESIDER: KIM MARTIN LONG, UNIVERSITY OF NEW ORLEANS

Brenda J. Vallance, St. Edward’s University
Patricia Bixel, Husson University
R. Bruce Mattingly, SUNY Cortland
THE INTERDISCIPLINARY SCHOLARS PROGRAM

Brenda J. Vallance, St. Edward’s University
WHY DESIGN A SEPARATE PROGRAM?

University Mission

2015 Strategic Plan

Our School’s Excellence Contribution: Interdisciplinary Scholars Program
PROGRAM DESIGN

1. Select Common Theme:
   • Critical Thinking
   • Global Understanding and Perspectives
   • Social Justice and Diversity
2. Take 5 ISP-designated courses across 3 disciplines (including student’s major and gen ed)
3. Take at least 1 course from each theme
4. Maintain 3.5 GPA across all ISP courses (min. of B in courses)
5. Complete Interdisciplinary Research Methods Course
6. Oral presentation at school’s ISP Symposium
PROGRAM ADMINISTRATION

- Associate Dean oversees program

- Advisory Board from disciplines; serve as program academic advisors; approve designation of courses for inclusion in ISP

- Student application process to enter; assigned ISP advisor

- Advising specialist certifies graduation and ISP completion for transcript
ASSESSMENT OF PROGRAM

Positives
- Exciting student research
- Broadens student perspectives on researching topics

Negatives
- Difficulty of tracking students
- Other opportunities (study abroad) and student choices
- Large general education program
- Lack of cohort experience
CHALLENGE

How can we improve it (short of killing it)?

Will something similar work at your university in order to expand interdisciplinarity?
QUESTIONS?
CONTACT US

Presenter: Brenda J. Vallance, St.Edward’s University

brendav@stedwards.edu

512-637-1955
Gen. Ed and “Professional Education”

Models for Interdisciplinary Teaching and Learning
CCAS Annual Meeting
November 4, 2017
Husson is a University of choice for premier *professional programs* where students succeed, experiential learning is championed and global engagement is emphasized.
The Numbers

Undergraduates  2,800
Graduates       700
Average class size  21
Faculty         144 (full time)
Undergraduate majors  32
Because of emphasis on professional programs, most majors are in Business, Sciences (Biology, Biochemistry, Environmental Science, Exercise Science, Health Sciences), Social Science (Psychology, Healthcare Studies) or feeders for graduate professional programs (PharmD, DPT, MSOT).

All programs require 120-125 credit hours
Where does General Education Fit (literally and figuratively)?

1. Accreditation requirement (at least 40 credit hours/NEASC)

2. What counts and who decides?
General Education at Husson University

Mission Statement:

The mission of the general education core curriculum at Husson University is three-fold:

1. to educate students in broad, foundational knowledge encompassing their larger societies and cultures;

2. to educate students in universal and multi-faceted skills including communication, problem solving, and critical thinking;

3. to open students’ minds to the life-possibilities available to them with a Husson education.
General Education at Husson University, contd.

Students build upon this core as they move through their major programs by

1. using their cultural competencies to better serve their patients, employers, peers, or customers;

2. applying their intellectual skills to discipline-specific studies or occupations;

3. taking full advantage of social, economic, and cultural opportunities to be successful, productive members of their chosen communities.
General Education Outcomes

All General Education outcomes require “adequate breadth” by showing a “balanced regard for what are traditionally referred to as the arts and humanities, the sciences including mathematics, and the social sciences.” These outcomes require “offerings that focus on the subject matter and methodologies of these three primary domains of knowledge as well as on their relationships to one another.”

NEASC Standards for Accreditation p. 8
General Education Outcomes (4)

1. Knowledge
2. Perspectives
3. Skills
4. Thinking
General Education Outcomes (4)

1. Knowledge:

Students will demonstrate basic knowledge of human cultures and how those impact the individual, and the physical and natural worlds.

Students will explore, identify, explain, and apply the ways in which knowledge is created about the individual, society and the physical and natural worlds. They will identify and apply methods of quantitative and qualitative investigative research and of presentation.
General Education Outcomes (4)

2. Perspectives:
Students will be able to identify, explain, and apply a wide variety of fundamental human perspectives—global, historical, cultural, racial, gendered, social, economic, religious, political, psychological and geographical—through studies in the humanities, social sciences, arts, math, and science. Students will integrate knowledge garnered from the course work in general education to shape their informed perspectives on global issues as well as their own lives. Such awareness will help students make intelligent assessments and choices when encountering diverse people, ideas, beliefs and cultures.
General Education Outcomes (4)

3. Thinking:
Reasoning—Students will identify, understand, and be able to use different methods of reasoning effectively.

Problem Solving—Students will rationally solve problems and make decisions through analysis and synthesis of relevant information.

Creative Thinking—Students will demonstrate capacity to analyze, synthesize, and interpret ideas and representations of human experience found in literature, philosophy, psychology and the arts in order to create and express new ideas.
General Education Outcomes (4)

4. Skills:

Students will demonstrate essential college level skills associated with reading comprehension, careful interpretation of texts, clear oral and written communication, and use of technology.

Students will demonstrate capacity to gather, analyze, interpret, and articulate quantitative and qualitative information and results.
General Education Outcomes--demonstrated

Upon completion of their general education curriculum, students will have:
Understood, interpreted, and communicated ideas and information using written, oral, and visual media.
Thought critically and creatively to solve unfamiliar problems.
Used quantitative and qualitative reasoning in a variety of general education contexts.
Demonstrated an understanding of the history, principles, economics, psychology and politics of the United States and the wider world.
Demonstrated an awareness of different social and cultural perspectives.
Demonstrated proficiency in computer and information literacy.
Demonstrated an understanding of how the social sciences describe and explain interpersonal and intrapersonal behaviors.
Demonstrated an understanding of how the biological and physical sciences, social sciences, and humanities describe and explain the natural world.
Identified and explained aesthetic and ethical dimensions of humankind.
Core Curriculum

I. Core Skills—13-14 credit hours
   English, Math 1, Philosophy, Husson Experience (FYE)

II. Natural and Social Science Core—13-14 credit hours
   Lab Science, Math 2, Psychology or Sociology, History

III. Humanities Core—9-10 credit hours
   Literature, Fine Arts, Humanities electives (Speech or Philosophy)

IV. Perspectives—6 credit hours
   Global, Historical, Cultural, Racial, Gendered, Social, Economic, Religious,
   Political, Psychological or Geographical

Total credit hours 41-43

Other Requirements:
   Foreign Culture and Conversation by proficiency or course
   Bridge course*
   Writing Intensive course*
   Sustainability course*

*Courses with these attributes meet specific criteria and may be found throughout the General Education curriculum.
Bridge Courses

• 100- or 200-level

• Connect one traditional science or humanities field with another discipline—usually professional component

• One section, team taught initially, subsequent sections taught by one of the team

This means an initial capacity of 20 students;

later 2 sections with capacity for 40 students
Bridge Courses - Examples

• New England Fisheries—History/Science
• Birds of a Feather: A Natural and Cultural History of Birds—Science/English literature
• The Business of Fitness and Wellness—Exercise Science/Sport Management
• The Psychology of Learning—Psychology and Education
• Communicating Science—Science/English-Rhetoric and Composition
• What if They’re Right?: Scientific and Philosophical Responses to Climate Change—Science/Philosophy
• The Humanity of Healthcare—English/Healthcare Studies
Why this (seems to) work

• Strong support from the administration
• Get the infrastructure in place—spend time now or spend time later
• Grant funds to support faculty development (AAC&U General Education conference), Bridge course development, Team teaching
• Open process/high bar (see “Infrastructure”)
QUESTIONS?

Patricia Bixel, Ph.D.
Dean, College of Science and Humanities
Husson University
One College Circle
Bangor, ME 04401
bixelp@husson.edu
THE COMMON PROBLEM
PEDAGOGY PROJECT

R. Bruce Mattingly
Dean, School of Arts and Sciences
SUNY Cortland
IN MEMORIAM
CHRISTOPHER P. CIRMO
1954-2017

Dean, College of Letters and Sciences
University of Wisconsin Stevens Point
2009-2017
KEY PERSONNEL

Plattsburgh

- James Liszka, Senior Scholar, Institute for Ethics in Public Life; Professor of Philosophy
- Becky Kasper, Director of Center for Teaching Excellence; Co-Director, Center for Public Service
- E. Thomas Moran, Director Institute for Ethics in Public Life; Co-Director, Center for Public Service
- Curt Gervich, Associate Professor, Earth and Environmental Sciences
- Eric Leibensperger, Associate Professor, Earth and Environmental Sciences

Oswego

- Leigh Wilson, Director of Creative Writing; Director, Interdisciplinary Programs and Activities Center
- Adrienne McCormick, Dean, College of Liberal Arts and Sciences
- Stathis Kefallonitis, Assistant Professor of Marketing and Management
- Fehmi Damkaci, Associate Professor and Chair, Chemistry
...OR, IT TAKES A VILLAGE

**Oneonta**

- Jan Bowers, Dean, School of Education and Human Ecology
- Joshua Nollenberg, Assistant Professor of Astronomy and Physics
- Cindy Lassonde, Professor and Chair, Elementary Education and Reading
- Kjersti VanSlyke-Briggs, Associate Professor of Secondary Education

**Cortland**

- R. Bruce Mattingly, Dean of Arts and Sciences
- John Suarez, Director, Institute for Civic Engagement
- Randi Storch, Chair and Professor of History
- Steven Broyles, Professor and Chair, Biological Sciences
- Mary McGuire, Associate Professor, Political Science
ELEMENTS OF COMMON PROBLEM PEDAGOGY

- **Student centered**: Problem-based learning and/or inquiry-based learning
- **Interdisciplinary** teams, focus on cross-disciplinary communication
- **Engagement** with community partner(s), service-learning
OVERVIEW OF THE METHOD

- Faculty from different disciplines work with community partner to identify problem of common interest
- Faculty (re)design classes around the common problem incorporating PBL
- Students from participating classes regularly meet together to develop solutions
- Capstone: teams present solutions to community partners
GOALS OF COMMON PROBLEM PEDAGOGY

- Appreciation of interdisciplinary perspectives
- Improved (cross-disciplinary) communication
- Improved problem solving skills
- Opportunities for applied learning in all fields

Two key learning outcomes
- Identify the critical issues and scope of an ill-structured problem, determine causes underlying the problem, and construct and assess possible solutions to the problem.
- Identify and incorporate the insights of other disciplines in the effort to construct meaningful solutions to problems and evaluate and adjust the process of problem solving.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2015</td>
<td>Liszka shares concept with provosts at other SUNY comprehensive colleges</td>
</tr>
<tr>
<td>May 2015</td>
<td>Teagle Foundation awards $25K planning grant</td>
</tr>
<tr>
<td>September 2015</td>
<td>First pilot projects begin at Oswego and Oneonta</td>
</tr>
<tr>
<td>January 2016</td>
<td>First pilot projects at Plattsburgh SUNY Investment and Performance Fund Awards $250K grant</td>
</tr>
<tr>
<td>September 2016</td>
<td>First pilot projects begin at Cortland</td>
</tr>
<tr>
<td>July 2017</td>
<td>National Science Foundation awards $293K grant</td>
</tr>
</tbody>
</table>
PROJECT START-UP

- Informational sessions at least a year in advance
- Facilitate faculty connections: “academic speed dating”
- Stipends for faculty participants
- Faculty development resources
  - Faculty Guidebook
  - Summer webinars provided by Plattsburgh CTE
  - Campus-based workshops on PBL
LOGISTICAL CONSIDERATIONS

Number of participating courses

Course level

Scheduling models

- All courses meet at the same time
- All students register for additional credit hour

Meetings with community partner(s); transportation
SAMPLE PROJECT

Oswego’s Smart Neighbors Project:
Classes in creative writing, film-making, art and marketing working with local businesses on branding and promotional materials

https://www.oswego.edu/news/story/students-form-sweet-partnership-man-moon

http://digitaloz.wpengine.com/?p=488
OTHER PROJECT EXAMPLES

**Oneonta:** YA literature, political science and astronomy classes working with local school district on issues related to atmospheric changes and impact on school composting program

**Plattsburgh:** classes in atmospheric science and environmental history addressing climate change skepticism

**Cortland:** classes in biology, composition, history and ethics working with the City of Cortland on recommendations for establishing hiking/biking trails in the city
PROJECT SUSTAINABILITY

- Initial faculty cohorts recruit and train new participants
- Stipends for faculty mentors (train the trainer model)
- Faculty buy-in critical
- Evidence of effectiveness
EVALUATION

Pre-and-post testing of key learning outcomes
- Common rubrics developed and shared

Feedback from all stakeholders
- Students
- Faculty
- Community partners

External evaluator
KEY SESSION TAKEAWAYS

1. We have presented three different models for providing students with meaningful interdisciplinary learning experiences.

2. All of our models emphasize the value of multiple perspectives in understanding and addressing complex societal issues.

3. All of our models provide opportunities to integrate the humanities with professional fields.

4. Each of our models is currently in use and can be replicated.
QUESTIONS?
CONTACT US

R. Bruce Mattingly, Dean, School of Arts and Sciences, SUNY Cortland
bruce.mattingly@cortland.edu

Brenda J. Vallance, Dean, School of Behavioral & Social Sciences, St. Edward’s University
brendav@stedwards.edu

Patricia Bixel, Dean, College of Science and Humanities, Husson University
bixelp@husson.edu
THANK YOU