



# **MODELS FOR INTERDISCIPLINARY TEACHING AND LEARNING**

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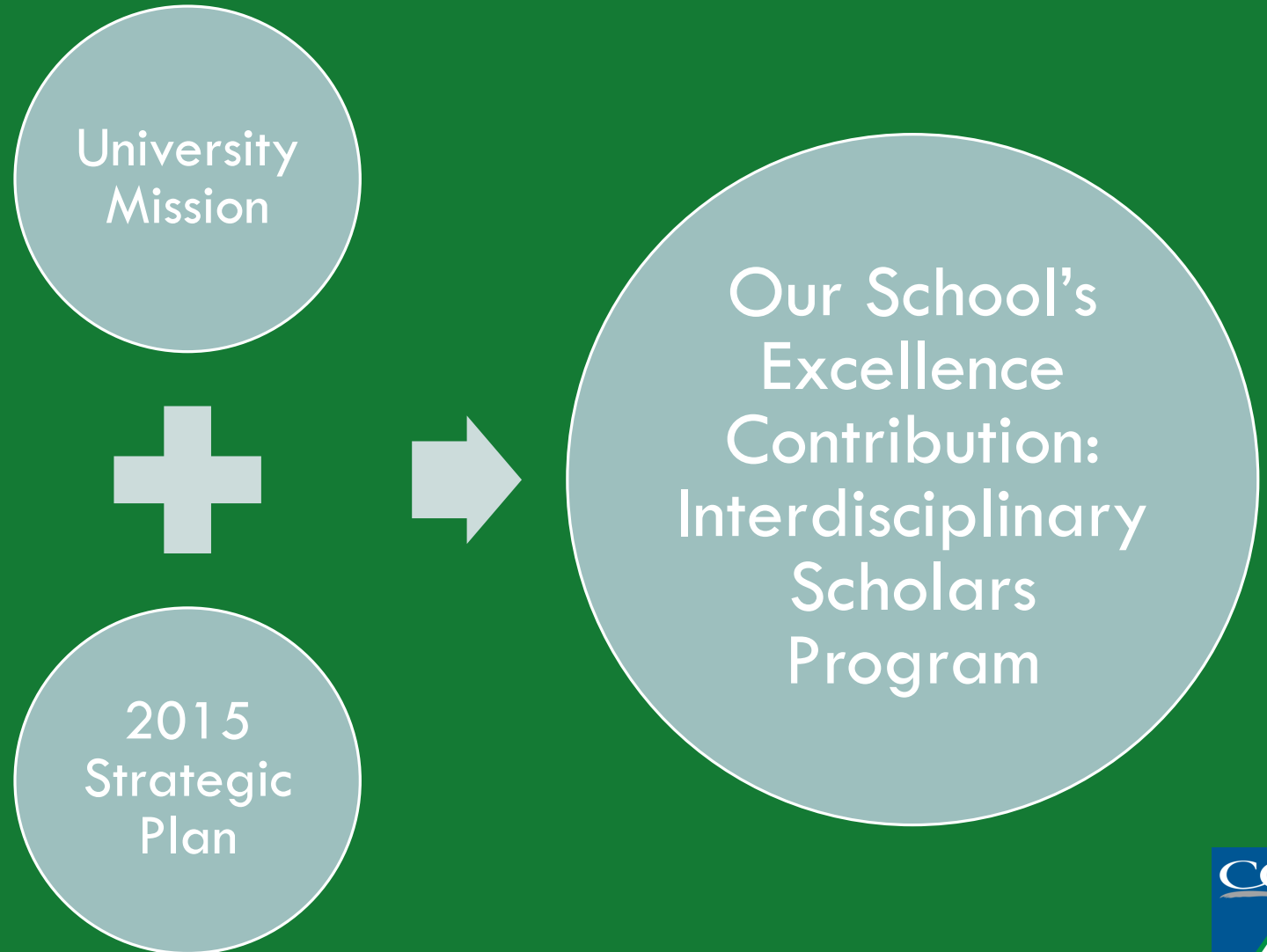
R. Bruce Mattingly, SUNY Cortland



# **THE INTERDISCIPLINARY SCHOLARS PROGRAM**

Brenda J. Vallance, St. Edward's University

# WHY DESIGN A SEPARATE 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

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## ***Gen. Ed and “Professional Education”***

Models for Interdisciplinary  
Teaching and Learning  
CCAS Annual Meeting  
November 4, 2017

# The Institution



Husson is a University of choice for premier *professional programs* where students succeed, experiential learning is championed and global engagement is emphasized.



# The Numbers

<b>Undergraduates</b>	<b>2,800</b>
<b>Graduates</b>	<b>700</b>
<b>Average class size</b>	<b>21</b>
<b>Faculty</b>	<b>144 (full time)</b>
<b>Undergraduate majors</b>	<b>32</b>

# The Numbers, contd.

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

[https://cihe.neasc.org/downloads/Standards/Standards\\_for\\_Accreditation.pdf](https://cihe.neasc.org/downloads/Standards/Standards_for_Accreditation.pdf)



## **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?

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# 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





SHOW ALL CAMPUSES

- University Centers and Doctoral Degree Granting Institutions
- University Colleges
- Technology Colleges
- Community Colleges

\* Empire State College has 35 locations throughout New York State.

ATLANTIC OCEAN

# 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.



# KEY DATES

<b>February 2015</b>	Liszka shares concept with provosts at other SUNY comprehensive colleges
<b>May 2015</b>	Teagle Foundation awards \$25K planning grant
<b>September 2015</b>	First pilot projects begin at Oswego and Oneonta
<b>January 2016</b>	First pilot projects at Plattsburgh SUNY Investment and Performance Fund Awards \$250K grant
<b>September 2016</b>	First pilot projects begin at Cortland
<b>July 2017</b>	National Science Foundation awards \$293K grant

# 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

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# THANK YOU

