

## The Sustainability Scholars Program: Early Successes from the Pilot Year

Hannah Scherer<sup>1</sup>, Kayla Harris<sup>1</sup>, Curtis Friedel<sup>1</sup>, Peter Ziegler<sup>2</sup>, Donna Westfall-Rudd<sup>1</sup>, Tiffany Drape<sup>1</sup>

<sup>1</sup>Department of Agricultural, Leadership, and Community Education, Virginia Tech  
<sup>2</sup>Office of Academic Programs, College of Agriculture and Life Sciences, Virginia Tech

### Introduction

Virginia Tech already has a number of existing programs practicing experiential curricula and proven track records of career placement and exciting new programs that all expose students to the interdisciplinary challenges of sustainability in the context of the Food, Agriculture, Nutrition and Human (FANH) sciences. Unfortunately, student enrollment in these programs is not reflective of the diversity of the general student population. The Sustainability Scholars program targets first-generation and underrepresented minority undergraduate students and helps to pair them with faculty who serve as mentors for these students.

Our Sustainability Scholars Program is innovative because it is meant to blend multidisciplinary academic preparation with application to current and relevant research, education, industry, community, international, non-governmental or governmental issues. It is multidisciplinary in that students may be from any major and may team with a faculty mentor from up to 12 participating departments. Students are exposed to the complexity of FANH problems such as food security but are guided by the faculty to focus on a discrete issue within the larger problem.



### Project Objectives

#### Objective 1:

Work with established and burgeoning FAHN related programs across the university to bolster experiential learning opportunities and to recruit underserved student populations.

- Build on existing relationships to establish a *Sustainability Scholars Working Group* with faculty that represent each of the targeted FAHN related programs.
- Establish the *Sustainability Scholars Program* that targets underserved undergraduate student populations and provides funding and support for experiential learning opportunities, faculty mentorship, leadership skill development, and FAHN career exploration.

#### Objective 2:

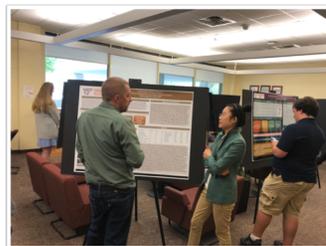
Develop new curriculum specific to the Sustainability Scholars program.

- Develop a unique section of the current course *LDRS 1015: Exploring Citizen Leadership* with a *FANH-focus* for the Sustainability Scholars.
- Develop a 1-credit *Sustainability Scholars Seminar* to foster FAHN career exploration, interdisciplinary collaboration, and understanding of interdisciplinary approaches to sustainability.

#### Objective 3:

Implement a faculty development program to enhance mentorship skills for working with a diverse group of undergraduates.

- Use the interactive model of program planning to *create a new faculty development program* that focuses on mentorship of diverse undergraduates.
- Establish a *Sustainability Scholars Community of Practice* for faculty mentors.



### Program Goals

The goal of this project is to create a Sustainability Scholars Program as a means to build institutional capacity to:

- Goal 1- Recruit and retain underserved populations into FAHN programs
- Goals 2- Support experiential learning opportunities such as internships, undergraduate research, study abroad, and community-based service learning projects for students interested in FAHN fields of study
- Goal 3- Develop training for faculty to improve advising and mentoring skills

### Year 1- 2018-2019 Cohort – 9 student scholars

#### Majors

- Environmental Science
- Geography
- Animal and Poultry Sciences
- Engineering
- Crop and Soil Sciences
- Exploring Life Sciences

#### Year

- Freshman - 0
- Sophomore – 3
- Junior – 2
- Senior - 4

#### Selected Project Topics

- Identifying Sustainability Across Beef Production Systems
- Renewable Energy Recommendations
- Quantification of Soil Aggregate Shape and Size
- Subtraction as Addition: Promoting Transdisciplinary Thinking, Sustainable Design, and Community Engagement in STEM Education
- The Concept of Farm Cooperatives in Agroecology: The Case of Cuba and Food System Sustainability in Transitions

#### Gender

- Males - 1
- Females - 8

#### Race/ Ethnicity

- White – 6
- African American - 1
- Asian - 2

### Year 1- 2018-2019 Program Elements

#### LDRS 1015: Exploring Citizen Leadership

The course explores the language, theories, ethics, and competencies of leadership as a framework for participation in the Leadership and Social Change minor at Virginia Tech. Student participants look at leadership challenges such as change, diversity, conflict, and self-awareness in the context of food health and sustainability. Student scholars participate in an online and in-person recitation where they discuss their own connections with leadership and sustainability in relation to their personal ethics and understandings as well as with their individual projects.

#### ALS 2984: Sustainability Scholars Capstone Seminar

This required course is designed to foster FAHN career exploration, interdisciplinary collaboration, and understanding of interdisciplinary approaches to sustainability. Participants will be oriented to the three missions of a land-grant university and scientific method in the context of the 5 NIFA priority areas as they develop, justify and reflect on their specific experiential learning projects. The class began with a concept formal seminar on sustainability but shifted focus towards the students projects. Student scholars are each given a class to present their project and discuss how it related to sustainability. We unpack each project as a group to collectively push our understandings about what sustainability is.

#### Faculty Mentors Community of Practice

- 8 Faculty Mentors
- Mentors participate in monthly Community of Practice meetings. Topics included:
  - Past mentoring experiences and Developing individual Mentor/Mentee agreements
  - Common best practices in mentoring
  - Being accessible and available to students, particularly underrepresented students
  - Connecting with campus initiatives with VT Engage
  - Recognizing and addressing student mental health issues
  - Proactive mentoring to support diversity and inclusion on a predominantly white campus
  - Program debrief with external evaluator

#### Recruitment Efforts

- Developed marketing materials
- Created SSP website
- Utilized SSP working group members to advertise program
- Hosted SSP promotion and informational session

#### Sustainability Scholars Project Showcase

Student Scholars all participated in a project showcase where they were able to share the project that they had been working on with the campus community highlighting leadership, sustainability and various interdisciplinary factors.

### Pilot Year Program Timeline



### Pilot Year 1 Takeaways

#### Key outcomes for participants...

- Mentors developed an understanding that mentoring relationships are unique to the students they have the relation with
- Scholars developed research and creative thinking skills

#### Feedback from student scholars and mentors...

- More outlined expectations and accountability structure for both the student scholars and mentors in order to take something away in the program
- More emphasized timeline and instructions for the use of funds given to the student scholars
- Participation agreements for both student scholars and mentors
- More opportunity for one on one interactions between student scholars

### Acknowledgements

This project was supported by the Higher Education Challenge Grants (HEC) Program of the National Institute of Food and Agriculture, USDA, Grant #2017-70003-26379.