

## **GNA Class Use, Student Activities, and Outreach Activities 2017**

### **Classes Utilizing the GNA**

Based on a survey conducted by Dr. Jessica Schedlbauer, the GNA is utilized for 31 courses (64 sections), led by 18 faculty members. Approximately eighteen hundred (1,839) students were enrolled in these courses. Appendix I presents a summary of the courses utilizing the Gordon. Tours given to classes by GNA staff are included in the Appendix. Note that this list of courses is somewhat incomplete, and that actual student use of the GNA exceeds this estimate.

### **Tours of the GNA**

In addition to the tours that were associated with some of the classes listed in Appendix I, a tour was given as part of the President's Staff Retreat. Eight staff members participated in this tour.

### **Volunteers**

Thus far, approximately 25 students have volunteered at the Gordon in 2017. The greatest portion of this work involved tree planting and maintenance.

### **Outreach**

#### **— WCU Homecoming**

The GNA participated in 2017's Homecoming activities. We prepared an exhibit and contracted with the Brandywine Zoo to have their 'travelling zoo' to be a part of the GNA exhibit.

#### **— Scent Dog Training**

Beginning in the summer of 2016, the GNA has been used for scent dog training by the K9 Detection and Search Foundation (a local non-profit organization). Thus far in 2017, they've conducted training on four occasions. The fourth training was held in conjunction with WCU's Animal Behavior Club.

**Appendix I: Classes utilizing the Gordon Natural Area.** Compiled November 2017 by J. Schedlbauer.

Faculty Member	Course #	Course	# of Students/Year	
			# of Sections/Year	
<b>Anthropology &amp; Sociology</b>				
Heather Wholey	ANT 364	Archaeology of Ancient North America	1	15
	ANT 368	Archaeology Field School	1	10
	ANT 405	Seminar: Archaeology and the Environment	1	8
<b>Art + Design</b>				
Kate Stewart	ART 208	Drawing II	2	40
	ART 217	Painting II	1	15
	ART 317/18/19	Painting III/IV/V (combined sections)	2	30
<b>Biology</b>				
Anne Boettger	BIO 377	Entomology	.5	20
Greg Turner	BIO 435	Course Topics in Biology: Forest Biology	1	18
	BIO 454	Mycology	1	24
	BIO 475	Plant Communities	1	24
Harry Tiebout	BIO 270	General Ecology	2	130
	BIO 277	Vertebrate Ecology	1	14
Jessica Schedlbauer	BIO 315	Terrestrial Ecosystem Ecology	1	14
Sharon Began	BIO 485	Systematic Botany	.5	20
<b>Earth &amp; Space Sciences</b>				
Cynthia Hall	ESS 102	Humans & the Environment	1	10
	SCI 101	The Carbon Cycle	4	140
Hal Bosbyshell	ESS 101	Introduction to Geology Lab	5	160
	ESS 422	Geophysics	.5	12
Jamie Vann	ESS 102	Humans & the Environment	1	20
LeeAnn Srogi	ESS 101	Introduction to Geology	2	192
	ESS 405/505	Petrology	1	34
Russel Losco	ESS 480/580	Special Problems: Urban Soils Classification	1	25
	ESS 480/580	Special Problems: Applied Soil Classification	1	12

Faculty Member	Course #	Course	# of Students/Year	
			# of Sections/Year	
	ESS 490/590	Fundamentals of Soils	.5	28
Tim Lutz	ESS 102	Humans & the Environment	6	192
Victoria Helmke	ESS 101	Introduction to Geology Lab	8	260
<b>English</b>				
Mary Buckelew	ENG 391	Teaching Writing in the Middle School	1	7
	ENG 392	Writing and Teaching Writing Secondary English	1	16
	LIT 165	Topics in Literature	2	50
	WRT 120	Effective Writing I	2	50
<b>Geography and Planning</b>				
Joan Welch	HON 314	Science, Technology & Environmental Systems	6	120
Joy Fritschle	GEO 402/585	Field Methods	1	9
<b>Health</b>				
Chuck Shorten	ENV 102	Humans & the Environment	2	70
	ENV 435	Environmental Health Workshop	1	25
	ENV 462/533	Water Quality and Health	1	25
<b>Totals:</b>			<b>64</b>	<b>1,839</b>

**From:** [Delshad, Ashlie B.](#)  
**To:** [Welch, Joan](#); [Hendel, William S.](#)  
**Cc:** [Flamm, Bradley](#)  
**Subject:** RE: Office of Sustainability: AASHE STARS Reporting  
**Date:** Wednesday, November 1, 2017 1:47:36 PM

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Hi all,

I have two courses that make use of the garden, primarily on South Campus.

### **PSC – 354 Environmental Politics and Policy**

Students from this course built the south campus garden in the Spring 2015 semester. They assisted with all aspects of the project from planting seedlings, to building the raised beds, and publicizing the garden. In subsequent semesters, students in the course have helped with ongoing tasks including: planting seedlings, weeding, mulching, etc. I also use the composting space to discuss sustainable practice of framing and food waste management.

### **PSC – 399 Food Politics**

Students from this course assisted with building the cold frames and new composting system in the garden during the Fall 2017 semester. We also visited the north campus garden and used both gardens as spaces to discuss sustainable farming, local food, and composting.

Aside from my courses Cheryl Wanko in the English department has worked with her students in the garden, Kate Stewart and her students painted the mural on our shed, Joan Welch and her students have completed several projects in the garden (as detailed below in her response) and Nutrition faculty have used the garden as part of a special program with 2<sup>nd</sup> graders.

Our garden interns are also visiting classes in various departments to make both students and faculty aware of opportunities to use the garden for teaching and learning in the hopes of expanding use of the space.

We also have many students, faculty, staff, and community members who regularly volunteer in the garden and we are working to digitize our written log of those volunteer hours. Likewise, we are working to digitize our records of produce donations both to the resource pantry on campus and the West Chester Food Cupboard. If these records are of use to you, we will happily send them along

Last, we have a few student groups who use the garden as a space for their club meetings and celebrations, most notably the Slow Foods club.

If there is anything else specific that it would be useful for me to provide, please let me know.

Best,  
Ashlie

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**From:** Welch, Joan

**Sent:** Wednesday, November 01, 2017 1:25 PM  
**To:** Hendel, William S.  
**Cc:** Flamm, Bradley; Delshad, Ashlie B.  
**Subject:** RE: Office of Sustainability: AASHE STARS Reporting

Hi Will,

Here are descriptions of activities related to the outdoor living laboratory that will work in STARS. I have also copied Nur Ritter in case you have not been in touch with him about the request. Nur has documented significant use of the Gordon Woods as an outdoor learning space. Dr. Delshad also has many courses that engage in these activities, and may want to fill in a few more places below that I may have overlooked, and certainly add her own course data.

Please let me know if you have questions or need more data.

Regards,

**Joan M. Welch, Ph.D.**

Professor

Past President, Middle States Division of the AAG

Department of Geography and Planning

Business and Public Management Center Room 527

West Chester University

West Chester, PA 19383

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Dept. Website: <http://www.wcupa.edu/business-publicManagement/geographyPlanning/>

Facebook: <https://www.facebook.com/WCU.GEOGRAPHYandPLANNING>

Outdoor living classrooms/laboratories

Campus Urban Forest

FLD337 Outdoor Classroom of Native Plants with water feature, certified as Audubon backyard habitat

FLD339 Organic Demonstration Garden north campus

South Campus organic garden

Tanglewood organic garden

Robert E. Gordon Natural Area for Environmental Studies, aka, the Gordon Woods

Activities

Campus Urban Forest: Since 2009, students from Geography and Planning, Ecology, and Public Health Departments have collected data on trees on north campus to create a Geographic Information System (GIS) database. The data are used with the U.S. Forest Service software iTrees to evaluate the ecosystem benefits the urban forest provides to the University.

Students continue to work with, maintain, and update the Green Legacy GIS database, as it is called. There have been at least 5 graduate students who have utilized the Green Legacy database to conduct research that was then presented at professional conferences. Maintenance of the database includes field work on campus to collect or update data on tree species, height, diameter

at breast height, canopy size, and location attributes where the tree is found. The Green Legacy database provides students with instruction about ecosystem benefits provided by the urban campus forest including air pollution uptake, carbon sequestration, storm water management, energy savings, aesthetics, and habitat.

HON314 (Science, Technology and Environmental Systems) holds labs in the Gordon Woods to learn about the Eastern Deciduous Forest, function of forests to handle storm water and improve water quality, and conducted in-stream water quality sampling for invertebrates.

HON314 (Science, Technology and Environmental Systems) holds labs in the north campus and Tanglewood organic gardens to learn about sustainable agricultural landscapes, heirloom versus hybrid versus GMO seeds. Students assist with planning the design and construction and/or maintenance of garden beds, plans what to plant, starts seeds, and then plants seedlings into the organic gardens.

HON314, GEO205 and GEO230: classes are held in the Outdoor Classroom (FLD337) to learn about native landscaping that reduces water use, water pollution (through avoided use of fertilizers and pesticides on turf grass), and provides habitat for native animals such as threatened native pollinators.

I know that the elementary education science general education class uses the Outdoor Classroom for observation of bird feeders and investigations of native plants and the animals they attract/support (Instructor is Jamie Vann).

GEO205 (Geography of Agriculture, Food and Sustainability) holds class sessions in the south and north campus organic gardens to assist with compost bin and cold frame construction, harvesting, and maintenance of gardens. Students learn about local, seasonal and plant-based foods and learn to prepare foods harvested from the gardens.

GEO230 (Environmental Conservation and Sustainability) holds class sessions in the south and north campus organic gardens to assist with establishing native wildflower communities around the south campus garden to aid in attracting and supporting native pollinators. Students also planned and planted permaculture (permanent agriculture) plots in the north campus garden with native fruit trees and herbaceous plants.

FLD339: Organic Garden north campus is a resource that is available to campus volunteers (students, staff and faculty) to learn about organic gardening. Volunteers participate in growing, maintaining, and harvesting seasonal, nutritious fresh vegetables, fruits and herbs from the north campus garden.

All organic gardens on campus, FLD339, Tanglewood, and south campus, provide fresh, seasonal produce to the Resource Pantry for food-insecure students at West Chester University.

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**From:** Hendel, William S.

**Sent:** Tuesday, October 24, 2017 2:32 PM

**To:** Welch, Joan; Delshad, Ashlie B.  
**Cc:** Flamm, Bradley  
**Subject:** Office of Sustainability: AASHE STARS Reporting

Dear Joan and Ashlie,

My name is Will Hendel and I am the graduate assistant in charge of data monitoring and analysis for the Office of Sustainability. We are currently in the process of collecting sustainability-related data for our annual report to the AASHE STARS platform (STARS, as you know, stands for “Sustainability Tracking, Assessment, and Reporting System” – see <https://stars.aashe.org/> for more information).

Attached is an Excel spreadsheet summarizing data and indicators that we believe you can help us obtain in order to complete the report. We have attached PDF copies of detailed descriptions of the specific STARS credits these indicators will help us qualify for.

As an overview, we are searching for:

- Your knowledge of areas of campus that are explicitly used as a living laboratory for research related to sustainability
- Any resources or contacts that may assist us further

We hope you will be able to assist us in gathering these data (please let us know if you would recommend we contact someone else on campus for them) and that Bradley Flamm (the Director of the Office of Sustainability) and I will be able to meet with you soon to discuss this data request.

Sincerely,

Will Hendel  
Graduate Assistant  
Office of Sustainability

# RE: Office of Sustainability: AASHE STARS Reporting

Flamm, Bradley

Fri 11/3/2017 9:19 AM

To: Ritter, Nur P <NRITTER@wcupa.edu>;

Cc: Hendel, William S. <WH811146@wcupa.edu>;

Thanks, Nur. We'll look forward to seeing it.

Brad

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Bradley J. Flamm, Ph.D.  
Director of Sustainability  
West Chester University  
628 South High Street, Room 201  
West Chester, PA 19383  
Phone – 610-436-2053  
E-mail – [bflamm@wcupa.edu](mailto:bflamm@wcupa.edu)  
Website: <http://www.wcupa.edu/sustainability>

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**From:** Ritter, Nur P  
**Sent:** Friday, November 3, 2017 8:04 AM  
**To:** Flamm, Bradley  
**Cc:** Hendel, William S.  
**Subject:** Re: Office of Sustainability: AASHE STARS Reporting

Hi Brad,

Yes, I'm glad Joan looped me in, as well. I'll put together a summary next week.

Best,  
Nur

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**From:** Flamm, Bradley  
**Sent:** Thursday, November 2, 2017 8:11:50 AM  
**To:** Ritter, Nur P  
**Cc:** Hendel, William S.  
**Subject:** RE: Office of Sustainability: AASHE STARS Reporting

Hello Nur,

I'm glad Joan looped you into this email conversation.



Yes, it would be helpful for Will and me, as we work on the STARS reporting, to have a summary of learning-related uses of the GNA (and green roofs too, if you have any info in addition to the green roofs' inclusion in the October 25<sup>th</sup> campus sustainability tour).

Thanks, Brad

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Bradley J. Flamm, Ph.D.  
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E-mail – [bflamm@wcupa.edu](mailto:bflamm@wcupa.edu)  
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**From:** Welch, Joan  
**Sent:** Wednesday, November 1, 2017 1:26 PM  
**To:** Hendel, William S.  
**Cc:** Flamm, Bradley; Ritter, Nur P  
**Subject:** RE: Office of Sustainability: AASHE STARS Reporting

Hi: forgot to add Nur to distribution list.

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**From:** Welch, Joan  
**Sent:** Wednesday, November 01, 2017 1:25 PM  
**To:** Hendel, William S.  
**Cc:** Flamm, Bradley; Delshad, Ashlie B.  
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