EGRS 480 - Sustainable Solutions

STARS Assessment, Lafayette College

Final Report - May 2015

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1. Executive Summary

The Sustainability Tracking, Assessment & Rating System™ (STARS®) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. It is a program under the Association for the Advancement of Sustainability in Higher Education (AASHE®). STARS is divided into four categories for the comprehensive assessment of an institution. The first category, academics, rated curriculum and research sustainability at Lafayette. The second category rated Lafayette's sustainability as it pertains to campus as well as public engagement. The third category assessed operations sustainability such as Air & Climate, Buildings, Dining Services, Energy, Grounds, Purchasing, Transportation, Waste, and Water. Finally, Lafayette's Planning and Administration were assessed through sustainability in Governance, Diversity and Affordability, Health and Wellbeing, Investment. From here, the sections were broken down into individual credits which have point values assigned to each. Led by Professor Nicodemus in Engineering Studies, we, the students of EGRS 480 Sustainable Solutions, spent the Spring semester of 2015 conducting research within the administrative realm of Lafayette College in order to fulfill the credit criteria set forth by the STARS Assessment to the best of our ability. We sent emails, met face-to-face with administrators, and conducted both a student- and faculty-wide survey to attain the information necessary to fulfill our credits.

Once completed, the assessment is submitted to AASHE for review and each credit is given a score on a credit-by-credit basis. The points are then totaled, earning Lafayette a final score of either Participating, Bronze, Silver, Gold, or Platinum. Our projections suggest that Lafayette will achieve a Silver sustainability status from this assessment. This metric is used to compare Lafayette to other schools. For example, if we do receive a rating of Silver, we will have the same standing as Villanova University, Haverford College, and Princeton. We would top the Bronze scores that Muhlenberg and Lehigh received.

Our aim in this project was to establish a comprehensive baseline sustainability level for Lafayette as well as lend recommendations to the school administrators for ways to increase Lafayette's sustainability. In order to gather possible recommendations for administrators, each group member suggested certain credits or areas where they believed Lafayette could do better. From here, we established qualitative evaluative criteria which we ranked on a scale of 1-3 under the categories of economic feasibility, administrative feasibility, social feasibility, Climate Action Plan progress, Campus Master Plan progress, educational opportunity, and campus life experience. The quantitative data we received from this allowed us to prioritize our suggestions or "action items" into the denominations of "feasible" or "not likely." The action items we chose were as follows: create new sustainability course offerings, more frequent assessments and transparent progress reports, create and implement a comprehensive waste management plan, engage in investment strategies with companies that follow sustainable practices, create more staff professional development opportunities, hire a full-time sustainability officer & establish a sustainability office. Overall, however, we believe the most important item for the school to act on is hiring a full-time sustainability officer and establish a sustainability office. This would streamline administrative processes and consolidate direction for sustainable initiatives. A full-time sustainability officer & sustainability office could help our other suggestions become reality.

We would like to thank the administrators for their patience with our inquiring emails and face-to-face meetings, as well as everyone who filled out our surveys. We hope our report can be used to progress Lafayette sustainably into the future.

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2. Introduction

EGRS 480, Sustainable Solutions, taught by Professor Julia Nicodemus, is an Engineering Studies class that looks at a topic or issue concerning sustainability and uses a project in order to apply this topic or issue to the Lafayette campus, or the community at large. The class was developed as a way for small groups of multidisciplinary students to apply a real-world project in the classroom to learn more about sustainability outside of the classroom. The Brundtland Report, from the United Nations World Commission on Environment and Development, defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[1] This report stresses that sustainability is not solely an environmental issue. Instead, in order for a system to truly be sustainable, it must be environmentally, socially and economically sustainable. This year, a group of six students studying Engineering Studies, Civil Engineering, Math, Economics, and Asian Studies performed a sustainability assessment of Lafayette campus through an online reporting tool called STARS. In this way, the multidisciplinary nature of sustainability was reflected in the students who were performing the assessment. The STARS reporting tool rewarded an institution's initiatives towards environmental, social and economic sustainability. In this way, the EGRS 480 students were able to perform a comprehensive, well-rounded assessment of Lafayette's campus.

[1]World Commission on Environment and Development (1987). *Our Common Future*. Oxford: Oxford University Press. p. 27.

3. STARS Background

The STARS reporting tool is a program of the Association for the Advancement of Sustainability in Higher Education, AASHE. As a 501c3 Non-Profit, it "defines sustainability in an inclusive way, encompassing human and ecological health, social justice, secure livelihoods, and a better world for all generations."[2] Officially established in 2006, but with roots back to the Education for Sustainability Western Network (EFS West) in 2001, AASHE tries to create a brighter future for all by advancing sustainability in higher education. The Sustainability Tracking, Assessment & Rating System, STARS, is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. There are 369 Participating and/or Rated institutions throughout the US, Canada, and internationally. Established in 2010, STARS is currently on its second version.

Approach and Methodology

STARS divided into four main categories, Academics, Engagement, Operations, and Planning & Administration. These categories are further divided into subcategories and finally into individual credits. Points are awarded to an institution based on these credits. Our STARS team divided up the categories in order to be able to complete the assessment and to be able to evaluate Lafayette's score in the limited time available. The next step was for the individual responsible for that specific category to set up meetings or over email in order to gain the required information to complete the credits. In order to choose the appropriate administrators/responsible parties to ask in order to gain the needed information our STARS team went through each of the STARS categories, subcategories, and credits and while reading the description of the categories and subcategories and previewing the credit questions we were able to discuss who would be the most appropriate administrator/responsible party for that credit. Through this discussion we were able to make an appropriate and educated assumption on who on Lafayette College's campus would be the most appropriate responsible party for that specific credit.

After having these discussion for each category, subcategory and credit our STARS team sent out initial emails to these potential responsible parties explaining to them what the STARS assessment was, and what their role will be in the upcoming weeks of the semester would be in order help us achieve our goal of completing the STARS survey and getting an accurate evaluation of Lafayette College's sustainability performance. An example of this initial email can be found in Appendix A (pg. 43).

[2]Association for the Advancement of Sustainability in Higher Education (2015). *About AASHE*. <http://www.aashe.org/about>

4. Academics

Description

Academics is the first of the four categories that STARS defines. This category of STARS attempts to gauge how an institution incorporates sustainability into its curriculum and research. This includes initiatives such as offering courses with sustainability content, conducting campus-wide sustainability literacy assessments and performing sustainability related research. The category goes further than this, however, to ask about aspects of academia outside of the traditional learning environment, such as opportunities for sustainability learning experiences abroad and the college's use of the campus itself as a medium for learning about sustainability. Taken together, these aspects of Lafayette's sustainability initiatives are important, because they allow for learning inside and outside the classroom, both through a textbook and through the world around them.

Much like the other STARS credits, Academics required reaching out to many people around campus, either through email or meetings, in order to gather the information that was needed. A meeting with John Meier, the Dean of Curriculum and Resources, was essential to answer questions about sustainability research support. He was able to lead us to a very useful database that outlined, by department, the qualifications for tenure. In this way, we were able to identify which departments have policies that give positive recognition to interdisciplinary research during tenure decisions. Though John told us that many of the other programs we asked about, such as institutional and library support programs for sustainability research, did not exist, this meeting was still important. Creating programs that offer support for sustainability research, of obvious importance at an academic institution, highlights steps Lafayette can take to create a more sustainable campus in the future.

Faculty Survey

Many of these credits required information that could not be easily found through any office or database. For this reason, a faculty survey was created in order to identify the college's sustainability courses, learning outcomes, programs and faculty research. In this way, we were able to ask each individual faculty member the information that we needed for these credits. The specific questions asked in the faculty survey can be found in Appendix C. Specifically, the survey asked faculty whether they taught any courses that were either focused on or included sustainability, whether they taught in a department that had a sustainability departmental learning outcome, and whether they taught in a department that had a minor/concentration in sustainability related topics. Also, the survey asked

professors if they have conducted research in the past three years and if so, whether this research was sustainability related or not. About 80% of faculty responded to this survey.

This survey was extremely successful in giving us a sense of the sustainability courses taught in many different departments. This information was for credit AC-1, Academic Courses. This credit looked for the percentage of courses that both focus on and include sustainability, as well as the percentage of departments that offer sustainability courses. We performed a cursory inspection of the course catalog, prior to the survey, including courses we thought focused on or included sustainability based on course titles and descriptions. Through the survey, faculty members were able to confirm that many of these courses were indeed sustainability-focused. A full list of the sustainability focused and inclusive courses, which we included based both on our own inspection and on the faculty survey, can be found in Appendix D (pg. 120). The survey also told us about many more sustainability courses that we would have never guessed from the title or description. The fact that many sustainability courses came from departments such as civil engineering, environmental science and chemical engineering was not surprising. What was surprising, however, was the fact that many sustainability courses also came from departments such as Art, Spanish, English and Philosophy. In this way, the survey was able to show us about the sustainability courses which may be "hidden," or less advertised as including sustainability topics. The faculty survey resulted in 13% of faculty responding that they teach a course focusing on sustainability and 32% of faculty responding that they taught a course including sustainability. This is a very good start for sustainability courses at Lafayette. The student survey that was sent out, talked about more in depth later, indicated that a high percentage of students would be interested in more sustainability courses if they were offered. Hopefully, offering more sustainability courses in the future could help to fill this desire.

The faculty survey was also able to tell us which departments have sustainability departmental learning outcomes. This information was needed for credit AC-2, Learning Outcomes. Again, we did a cursory inspection before the survey, researching learning outcomes for the available departments. The survey did not give us much further relevant information because most professors were unsure as to whether their department had a sustainability learning outcome. Departments with sustainability learning outcomes included Engineering Studies, Civil Engineering, Chemistry, and Environmental Science. Unlike with the academic courses credit, there were not many unsurprising departments in this list. The survey, as well as our own inventory, showed that about 16% of academic departments at Lafayette have sustainability learning outcomes. Hopefully, in the future, Lafayette's academic departments can alter their learning outcomes to highlight their commitment to sustainability.

The survey was also able to tell us of minor/concentration programs focused on sustainability. We again researched these ourselves before the survey and were able to identify most of the programs without the survey. The one program that we did learn about from the survey, however, was the International Affairs Global Environmental Studies Concentration. This program addresses the mechanisms of economic growth, technological innovation, and environmental sustainability in international affairs. Hopefully in the future, concentrations such as these can be added to departments to show that sustainability is a multidisciplinary topic.

Lastly, the faculty survey was able to tell us which faculty members have conducted research in the past three years. Unsurprisingly, most, but not all, faculty members have conducted research in the past three years. The survey showed that of these, about 16% of faculty conducted sustainability research. The student survey told us that over 60% of students would be interested in more sustainability related research being offered. Hopefully, further faculty performed sustainability research can increase these opportunities for students in the future.

Successes and Shortcomings

Lafayette was able to perform better in some credits than in others. Areas in which we were able to perform particularly well included credits involving learning outside of the classroom. For example, Academic Credit 5, Immersive Experiences, asked about sustainability experiences offered by the college, such as study abroad programs, that provided a way for students to learn about sustainability in a more hands-on environment than in a classroom. Lafayette provides many of these immersive experiences, and we were able to receive full points for this credit, going above and beyond the one experience asked of us. Experiences Lafayette offers include internship and externship opportunities, Alternative School Break trips, such as the sustainable agriculture trip to Costa Rica, Interim Abroad classes, such as the environmental science class taught in New Zealand, and Engineers Without Borders trips, such as the trip to La Fortuna, where Lafayette students engaged the community to help in an environmentally focused project. Projects such as these present opportunities for students to learn about sustainability off campus, showing sustainability is a real-world issue, which doesn't go away when you close a textbook or exit a classroom.

Academic Credit 8, Campus as a Living Laboratory, asked for ways in which Lafayette utilizes the campus itself for learning about sustainability. This credit asked for ten different aspects of potential campus learning, and incremental points were awarded for each. Though we did not receive full points for this credit, Lafayette was able to receive points for seven out of ten credits. Points were awarded for

opportunities for learning such as LaFarm, various past EGRS 480 projects, and the pollinator garden that is currently in the works. These projects offer amazing opportunities for students to utilize the campus for learning about sustainability. The credit does offer room for improvement, however, in using the campus for learning about Air & Climate, Buildings and Health, and Wellbeing & Work.

Lastly, we were able to receive full points in Academic Credit 3, Undergraduate Program. This credit asked for sustainability focused majors, minors, concentrations and certificate programs. Most of the programs relevant to this credit were obvious, and included Geology, Environmental Science and Environmental Studies. However, through our faculty survey, we were able to pinpoint a concentration in International Affairs that focuses on Global Environmental Studies. This is an interesting program coming through a department that isn't particularly known for its sustainability focus. More programs such as this would truly show sustainability as an interdisciplinary subject with broad reaching implications in many areas of study.

A credit that we did not perform too well in was Academic Credit 6, Sustainability Literacy Assessment. This credit awards colleges who make an effort to assess the sustainability literacy of their students, focusing on knowledge, values, behaviors and beliefs regarding sustainability topics. The College has not sent out such surveys to its student body. However, as part of a past EGRS 480 class, a student survey was created to obtain information about student attitudes, knowledge and behaviors regarding recycling in general and about recycling at Lafayette College. The project then planned to use this information to make Lafayette a more environmentally aware campus by developing an improved recycling program. The credit was scored based on a percentage of students who were surveyed. Because this survey only assessed about 40% of students, and 0% with a follow up assessment, Lafayette did not score very highly in this credit. Surveys distributed by the institution, having further reach than a single class, would hopefully be able to get a higher percentage of student response.

Lastly, Lafayette did not score very highly on Academic credit 10, Support for Research. This credit awards points to colleges for having systems in place that encourage students and faculty to conduct sustainability research. This is an important initiative for it allows students and faculty both to get a deeper understanding of sustainability topics and issues. Because Lafayette does not have such a program, we received a very low score for this credit. We were able to receive some points, however, because certain Lafayette departments have policies that give positive recognition to interdisciplinary research during faculty tenure decisions. This is a good step and should be supplemented with extra

support for faculty and students once they decide to conduct research on a sustainability related topic.

Of the eleven credits (See Appendix B), we were not eligible for one, which asked about a graduate program, and did not pursue two, which were about incentives for developing courses and access to research. Because the college gives faculty no incentives for developing sustainability courses and has no open access policy for research, these credits would have scored 0 points, and so were not pursued. Credits that were not pursued show definitive areas where Lafayette can improve its sustainability.

Summary

Academics includes eleven credits through which the institution can receive a maximum of 55 points, with a maximum of 37 points in curriculum and 18 points in research. Through our STARS assessment, we have come to the conclusion that Lafayette will receive a score of about 28 points in the Academics section, receiving about 18 points in curriculum and about 10 points in research. This is about 51% of the total available points for academics. This is a good starting point, but shows definite room for improvement for sustainability in Lafayette academics.

In conclusion, the academics credit of STARS is meant to assess how Lafayette incorporates sustainability into its curriculum and research opportunities. Because Lafayette is only receiving 28 points out of a possible 55 in the Academics category, there is clearly room for improvement. Opportunities such as the ones presented through these credits can allow students to leave Lafayette not just with the knowledge in whatever subject they are majoring in, but also with the knowledge of how that subject contributes to the multidisciplinary subject of sustainability. Hopefully, armed with this knowledge, Lafayette students and graduates can be more sustainable in their everyday lives.

5. Engagement

Description

The engagement section of the STARS sustainability performance assessment is broken down into two categories - campus engagement and public engagement. These are than broken down into their individual credits.

Campus engagement seeks to recognize institutions that provide students with sustainability learning experiences outside of the formal curriculum. This learning experience includes engaging in sustainability issues through co-curricular activities that allow students to deepen and apply their understanding of sustainability principles. This subcategory also recognizes institutions that support faculty and staff engagement, training, and development programs in sustainability. Campus engagement includes the following credits:

EN1- Student Educators Program

EN2- Student Orientation

EN3- Student Life

EN4- Outreach Materials and Publications

EN5- Outreach Campaign

EN6- Employee Educators Program

EN7- Employee Orientation

EN8- Staff Professional Development

Public engagement seeks to recognize institutions that help catalyze sustainable communities through public engagement, community partnership and service. This subcategory encourages engaging with community members and organizations in the governmental, nonprofit and for-profit sectors; therefore, institutions can help solve community sustainability challenges. Community engagement can help students develop leadership skills while deepening their understanding of practical, real-world problems and the process of creating solutions. Through this credit, institutions can contribute to their communities by harnessing their financial and academic resources to address community needs and by engaging community members in institutional decisions that affect them. This credit also helps institutions contribute toward sustainability broadly through inter-campus collaboration, engagement with external networks and organizations and public policy advocacy. Public engagement includes the credits as follows:

EN9- Community Partnerships

EN10- Inter-Campus Collaboration

EN 11- Continuing Education

EN 12- Community Service

EN 13- Community Stakeholder Engagement

EN 14- Participation in Public Policy

EN 15- Trademark Licensing

EN 16- Hospital Network

The engagement section accounts for a total of 39 available points - 20 points are for campus engagement and 19 points for public engagement.

Methods

The first meeting was with Paul McLoughlin, the Dean of Student Life. The STARS team thought that he would be the best and most knowledgeable responsible party to answer the questions regarding the credit EN-2 - Student Orientation. A preview email was sent to Dean McLoughlin which included the EN-2 Student Orientation questions for the credit and also asked Deal McLoughlin if he had the time to set up a meeting in person or if he would just want to answer the questions through email.

Dean McLoughlin was very interested in what the STARS team was collecting data for and decided to meet in person. At our meeting we gave a quick introduction of STARS and how we intended to complete the survey and his role. At this point we asked Dean McLoughlin if he agreed with being a responsible party while also explaining that a responsible party recognizes and can verify that the information we supply to AASHE is accurate to the best of their knowledge. Dean McLoughlin agreed to be being the responsible party for EN-2 Student Orientation.

After this we proceeded to ask him the corresponding questions for EN-2 Student Orientation, the questions and answers to these questions can be found in the write up for EN-2 Student Orientation (Appendix B, pg. 8). This meeting was very productive in that we were able to finish the credit EN-2 Student Orientation from this meeting and actually it was even more successful in that we got the maximum number of points from this credit.

The second meeting was with John Meier, the Dean of Curriculum and Resources. We believed that he would be the best and most knowledgeable responsible party to answer questions regarding EN-6 Employee Educators Program. Again a preview email was sent to Dean Meier which included the EN-6 Employee Educators Program questions for the credit and also asked Dean Meier if he had the time to set up a meeting in person or if he would just want to answer the questions through email.

Dean Meier was also very interested in what the STARS team was collecting data for and decided to meet in person. We gave him a quick introduction of what STARS was and what Lafayette's STARS team was doing and how we were collecting data in order to fill out a survey in order to receive a score and find out how sustainable Lafayette's Campus is and where we need to improve. At the start of the meeting we asked Dean Meier if he agreed with being a responsible party while also explaining that a responsible party recognizes and can verify that the information we supply to AASHE is accurate to the best of their knowledge. Dean Meier agreed to be being the responsible party for EN-6 Employee Educators Program.

After this we proceeded to ask him the corresponding questions for EN-6 Employee Educators Program the questions and answers to these questions can be found in the write up for EN-6 Employee Educators Program (Appendix B, pg. 65). This meeting was productive but the results were not as we expected, and we were unable to count this credit towards Lafayette's STARS credit. Lafayette had none of the required criteria to receive credit. Therefore, this credit was one of the shortcomings found in this assessment on Lafayette College's sustainability.

Successes and Shortcomings

Lafayette performed very well overall in the entire category of Engagement. Lafayette was able to perform better in some credits than in others. Areas in which Lafayette was able to perform particularly well were:

- EN-1: Student Educators Program
- EN-4: Outreach Materials and Publications
- EN-5: Outreach Campaign
- EN-7: Employee Orientation
- EN-10: Inter-Campus Collaboration
- EN-12: Community Service
- EN-13: Community Stakeholder Engagement

Engagement Credit 12 – Community Service was a notable area for Lafayette College and where it performed extremely well. This credit recognizes institutions that engage their student body in community service measured by widespread participation at the institution. Community service involvement helps develop a sense a compassion which is fundamental to achieving sustainability. In addition, community engagement can help students develop leadership skills while deepening their understanding of practical, real-world problems. Lafayette earned incremental points for a total of 3

points for part 1 of this credit based on the percentage of students that contribute through community service. Ms. Amber Zuber, the Director of the Landis Center, Lafayette's Community Outreach office, reported that Lafayette had a total number of 425 students engaged in community service out of a total number of 2,486 students. Lafayette earned the maximum of 2 points for this credit by engaging students in an average of 20 hours of community service per year. Ms. Zuber was also able to provide the data that Lafayette had a total of 8,803 total student community service hours contributed during the one-year period 2013-2014. From this credit Lafayette was able to gain the maximum of 5 STARS credit points.

Lafayette did not perform as well in all the engagement credits. Lafayette experienced some shortcomings. The credits that Lafayette experienced shortcomings were:

- EN-3: Student Life
- EN-6: Employee Educators Program
- EN-8: Staff Professional Development
- EN-9: Community Partnership
- EN-14: Participation in Public Policy
- EN-15: Trademark Licensing

A credit that Lafayette did not perform well in was Engagement Credit 6 (EN-6), Employee Educators Program. This credit recognizes institutions that coordinate programs in which faculty and staff members educate and mobilize their peers around sustainability initiatives and programs. Engaging faculty and staff in peer educator roles can spread sustainability messages more widely and encourage broader participation. Lafayette was not able to achieve any of STARS credit points from this credit out of the maximum 3 points because Lafayette has no peer-to-peer educator programs for faculty.

Another credit that Lafayette did not perform well in was Engagement Credit 8 (EN-8), Staff Professional Development. This credit recognizes institutions that offer training and other professional development opportunities in sustainability for their staff. This helps equip the staff to implement sustainable practices and systems and to model sustainable behavior for students and the rest of the campus community. Lafayette was not able to achieve any of the STARS credit points from this credit out of the maximum of 2 points because Lafayette does not have any training or other professional development opportunities focused on sustainability for its staff.

One of the 16 credits was not applicable to Lafayette. This was Engagement Credit 16 (EN-16) Hospital Network which recognizes institutions that are participating in health care networks to improve sustainability performance of hospitals. Of the remaining credits, Lafayette was not able to pursue five -

Employee Educators Program (EN-6), Staff Professional Development (EN-8), Continuing Education (EN-11), Participation in Public Policy (EN-14), and Trademark Licensing (EN-15) because the opportunity for these credits was not available on Lafayette's campus. Therefore these credits were scored 0 points. Credits that were not pursued show definitive areas where Lafayette can improve its sustainability.

Summary

Engagement includes fifteen credits through which the institution can receive a maximum 39 points, with a maximum of 20 points in campus engagement and 19 points in public engagement. Through the STARS assessment, we have calculated that Lafayette will receive a score of about 27.75 points in the Engagement section - 14.75 points in campus engagement and 13 points in public engagement. This is about 71% of the total available points for engagement. This is an amazing starting point for Lafayette but shows definite room for improvement for sustainability in Lafayette's engagement.

The engagement section of the STARS sustainability performance assessment is meant to assess how Lafayette incorporates sustainability into its campus engagement and public engagement opportunities. Lafayette received 27.75 points of the 39 points available in the Engagement category and this provides a great sense of accomplishment and success on the part of Lafayette but there is also clear room for improvement. Opportunities and programs such as the ones presented through these credits would allow not only students but also Lafayette's faculty and staff to learn outside of the classroom. These learning experiences connect sustainability issues through co-curricular activities that encourage students to deepen and apply their understanding of sustainability principles. Also these experiences help students develop leadership skills while deepening their understanding of practical, real-world problems and the process of creating solutions.

6. Operations

Description

Operations, the third category in the STARS includes many components typically included in a sustainability framework. These areas assess the institution's sustainability in terms of its built environment and operational management. It is broken into nine subcategories, which are then divided into 28 credits for a total of 70 available points. The subcategories highlight specific areas and characteristics of the college's operation, and are titled as follows: Air & Climate, Buildings, Dining Services, Energy, Grounds, Purchasing, Transportation, Waste, and Water. Air & Climate, as the name suggests, assesses the campus' effect on air quality and emission reports. The Buildings subcategory assesses both building construction and building operation. Dining Services includes food purchasing policies and percentages from local, humane, or organic sources. It also considers the provision of sustainable dining information and vegan options. Energy breaks down the campus' energy supply and efficiency in comparison to a baseline and a minimum performance threshold. The Purchasing subcategory rates the policies in place, and their efficacy, for sustainable purchasing in nearly every possible category. Transportation looks at the campus fleet of vehicles as well as the preferred methods of travel to, from, and on campus for both faculty and staff. The student and faculty surveys were very helpful for these credits (see the Student Survey section). The Waste subcategory includes construction waste, waste disposal percentages, and hazardous waste management. Finally, Water assesses campus water usage and conservation measures. Lafayette performance in this category as a whole will give insight into the impact the campus has on the environment as well as help identify areas where significant improvements can be made.

Because of the broad extents of the Operations category, many different departments and offices contributed to the data collection process. Cooperation with the Facilities and Planning Department was crucial for a number of credits involving building construction, building maintenance, and campus planning. Likewise, Plant Operations provided information concerning campus emissions, energy usage, energy generation, waste disposal, and water usage. Relevant data was also obtained from Dining Services, Purchasing, ITS, and Finance and Administration.

Many credits in Operations required comparisons of a performance year to a baseline year. Therefore, completion of these credits involved gathering, interpreting, and reporting a large amount of data over a long time frame. Many of the specific credits that STARS defines are hard to quantify or require data that are difficult to monitor. With better monitoring and tracking methods in place, it would be possible to generate a more comprehensive and thorough understanding of the operation of

our campus. In addition, many of the credits in Operations awarded points for specific policies that promote sustainable operation and maintenance. Due to the lack of written policies that meet the guidelines provided by STARS, many of the credits in this category could not be pursued.

Successes and Shortcomings

Due to the specificity of certain requirements within Operations, Lafayette did not perform as well as in other categories. However, the college did perform well in a number of credits that could be scored. For Operation Credit 1, Greenhouse Gas Emissions, Lafayette scored an estimated 5.02 points out of an available 10. Relative to other credits within Operations, this outcome is certainly a success. The credit is broken down into three parts with 2 available points for Part 1 and 4 available points for both Part 2 and Part 3. Points for Part 1 were awarded for having a publicly available GHG emissions inventory that has been validated or verified (internally or by a third party) that considers Scope 1 and Scope 2 emissions and at least 6 categories of Scope 3 GHG Emissions. The greenhouse gas inventory that Lafayette has performed since the implementation of the Climate Action Plan meets these criteria, so full points were awarded for Part 1. Part 2 and Part 3 compare Lafayette's current GHG emissions to a baseline year. For the purposes of this report, the 2007-2008 fiscal year was selected as the baseline year, and 2012-2013 was selected as the performance year. Full points for Part 2 and Part 3 would be award for achieving zero adjusted net Scope 1 and Scope 2 emissions. Incremental points for Part 2 are awarded for reduction of these emissions per weighted campus user. Lafayette's reduction from the baseline to the performance year scored 0.75 points out of 4. Incremental points for Part 3 are awarded based on an institution's performance between the minimum performance threshold of 0.02 MtCO2e per gross square foot of floor area and zero. Lafayette's performance of 0.009 MtCO2e per gross square foot scored 2.27 out of 4. The specific formulas for incremental points are available in Appendix B.

For Operation Credit 8, Building Energy Consumption, Lafayette scored 2.61 points out of an available 6. Again, while Lafayette did not achieve full points for this credit, relative to other credits within Operations, this outcome is a success. The credit is broken down into two parts for with 3 available points for each part. Points for Part 1 were awarded for reducing building energy consumption per gross square foot by 50 percent compared to a baseline. The same baseline and performance years that were used for OP 1 were used for OP 8. Lafayette's reduction earned 0.64 points out of 3. Full points for Part 2 would be award for an annual building energy consumption 90 percent or more below the minimum performance threshold of 28 Btu per gross square foot. Incremental points for Part 2 are awarded based on an institution's performance between the minimum performance threshold and zero.

Lafayette's performance of 11 Btu per gross square foot scored 1.97 out of 3. The specific formulas for incremental points are available in Appendix B.

Operations 19, Student Commute Modal Split, was another credit Lafayette performed well on. The points for the credit were directly tied to the percentage of students who get to classes sustainably. Because our student survey found that 96% of students commute sustainably, we got 1.93 out of 2 total points for this credit. It also outshined our other, relatively good transportation credits. For example, for the Employee Commute Modal Split credit (OP20), we found that 38% of faculty commute sustainably for 0.772 out of 2 points and OP21, Support for Sustainable Transport, where our campus shuttle and car share program got us 0.5 out of 2 points.

We also did well on Operations 25, Hazardous Waste Management, where we believe we qualify for the full 1 point. This credit is firstly about chemical waste disposal. Meeting with Yvonne Noonan about such policies, we found that we meet the criteria of having a sufficiently safe policy for dealing with any form of hazardous chemical waste. The second part of the credit is about E-waste disposal. ITS's polices about recycling E-waste meet the standards described in the credit (they are comparable to the E-stewards or R2 standards.)

Overall, the main shortcoming in the Operation category was the lack of sustainability-promoting policies across the board. All together 14 credits for a total of 23 points were not able to be pursued. Some of these credits allow for partial points based on sustainable action that is taken despite the lack of explicit, written policies, but there was little to no available information available concerning this activity on campus. In this way, the total score for Operations may not truly reflect the actual environmental sustainability of the campus, but it does give insight into the lack of pertinent information and policies. Most specifically, we lack sustainable purchasing policies encouraging local, inclusive, socially and environmentally sustainable purchasing practices.

Other particular places Lafayette falls short on are Operations 18, Campus Fleet, where we have only 1 hybrid vehicle out of 60 qualifying owned/leased vehicles, as well as our waste and water related credits. For a total of 9 points between Operations 22-24: Waste Minimization, Waste Diversion, and Construction Waste Diversion, we will likely receive only 1. This is because the credits call for us to reduce waste generation per campus user over time, divert as much generated waste from the landfill as possible through recycling, reselling/reuse and composting, and also minimize and divert waste from construction projects. We actually increased in waste generation per campus user in the last 7 years (from 0.29 tons per campus user to 0.32 tons per campus user), and do not divert a high percentage of our waste from landfills (~9% in 2014.) The points that we do get are for that small amount of waste

diversion that we do have and the fact that our waste generation per campus user is lower than 0.45 tons.

For the 7 points between Operations 26-28: Water Use, Rainwater Management, and Wastewater Management, we will receive no points. These credits address how much water we use per several metrics, whether we have a policy for utilizing rainwater, and if we treat wastewater sustainably. We do not have a rainwater policy, and send all our wastewater to a traditional water treatment plant. Our water use per campus user has increased in the last seven years (from 14482 gallons to 15067 gallons,) as has our water use per square foot of building space (from 23 gallons to 24 gallons,) and per acre of vegetated grounds (from 119058 gallons to 130548 gallons.) This is especially pertinent to our campus because the World Resources Institute's Aqueduct Water Risk Atlas rates the Easton area at medium to high risk of water scarcity, meaning these credits are weighted more highly and we should pay more attention to our water usage.

Summary

Out of the total 28 credits in the Operations category, 14 were not pursued for various reasons leaving 14 credits to be scored. Through our STARS assessment and estimations of expected points to be awarded, we have concluded that Lafayette will only earn 17 out of the total 70 available points. This works out to 24% points expected out of total available, and is far below the percentages in the other three categories. There is certainly a lot of room for improvement in Operations at Lafayette. Simple, written policies promoting sustainable action in many aspects of the campus' operation would more than double the expected points out of total in this category. Continued improvement in areas that Lafayette already scores well would also help the STARS assessment and the environmental sustainability of the campus.

The Operations category of STARS is the category most focused on direct environmental impact, as all of its credits deal with practices that can have a negative impact on the environment when handled incorrectly, and business practices which can encourage or discourage this type of impact. In addition, the credits concerned with business practices also cover equity and workers' rights. It can be said that this category is therefore the most about the actual practice of sustainability, while the other categories are about teaching, encouraging, and planning sustainability. This category also has the highest point total of 70, but Lafayette will likely receive no more than 17 points in it, less than for any other category. This means Operations has by far the lowest percentage, with only 24% when Lafayette

will likely receive more than half the credits in all other categories, and over half of the points Lafayette will likely miss are in this category.

The places we did well were curbing greenhouse gas emissions, dining practices, energy consumption, and student transportation practices. Lafayette lost points for lacking policies on the management of outdoor and indoor air quality, building maintenance, landscaping and biodiversity, renewable energy usage, environmentally or socially sustainable purchasing practices, waste management, and water management. In addition, Lafayette's standards and practices concerning construction, vehicle purchasing, and sustainable transportation were not strong enough to receive many points for. This means that most of where Lafayette must improve to increase its STARS rating and overall sustainability is through implementing policies and practices for decreasing direct impact on the environment and indirect impact on the environment and the community through purchasing and other business practices. This holds the potential for education, as students from environmental studies, engineering studies and other engineering disciplines, and policy studies students have the opportunity to come together to devise these policies and practices.

7. Planning and Administration

Description

Planning and Administration is covered in STARS as measuring coordination, planning, and governance of the college as well as social sustainability, which includes health, well-being, sustainable investment, as well as diversity and affordability. The Planning and Administration category of STARS is unique because it encompasses a number of non-traditional measurements of sustainability on a college campus. Even though these categories do not directly help to understand the College's sustainability in a traditional sense, high performance in these categories are crucial to the development of sustainability initiatives.

In order to gather data for the Planning and Administration credits, we had to reach out to many different authorities on campus because much of the information required for these credits was not readily available.

Through reading Lafayette's Climate Action Plan, the write-ups on the website about programs and policies supporting diverse students, Lafayette's Sustainability website, as well as numerous email conversations with Dean of Intercultural Development John McKnight, Director of Student Development Greg Meyer, Dean of Students Paul McLoughlin, Professor Julia Nicodemus, Dean of the Faculty Robin Rinehart, and Assistant Director of Facilities Planning and Construction George Xiques, we were able to compile the information necessary to complete this portion of the assessment.

Planning and Administration credits 1-8 centered around the future of sustainability at Lafayette as well as the administration's support of diversity on campus. In this section of the assessment, Lafayette will achieve most of the available points. The school is headed in the right direction with regards to planning and backing underrepresented groups on campus. That said, planning is merely planning, and this support only goes so far. It is important to applaud Lafayette's standing in these areas, but far more important to pinpoint areas where small changes could lead to large improvements in its overall sustainability as a college. The individual credits did just this.

Planning and Administration credits 9-15 focused on Health, Wellbeing and Work for employees and staff of the College, including contracted workers as well as Investment strategies of the College. Overall, Lafayette does a pretty good job in the realm of Health, Wellbeing and Work. Additionally, gathering information on Health, Wellbeing, and Work was not too difficult to acquire. Meeting with Jeff Troxell, the Associate Director and Supervisor of Environmental Health and Safety provided ample data to answer these credit questions. It was interesting to discover that Lafayette places high value on employee and staff wellbeing and safety, assessing this data quite closely. Also, meetings with Lisa Rex,

the Director of Human Resources dealing primarily with Employment answered all of my questions on the metrics of staffing numbers as well as compensation and benefits information.

Successes and Shortcomings

Lafayette addressed almost all the necessary components of Planning and Administration Credit 2: Sustainability Planning. This credit gauged the school's sustainable planning associated with Operations, Academics, Engagement, and Planning and Administration. In total, this credit was a success because Operations, Academic, and Engagement planning all were fulfilled in the eyes of this credit. Further, this credit is a success because it teaches us something. This is, for the school to become more sustainable, the Administration should plan more sustainably for itself. This is a pertinent and potent lesson this class has gleaned from this assessment. In order for Lafayette to plan sustainably, it must plan and administer sustainable practices within administrative pathways such as investment and health, wellbeing, and work. We call this a "practice what you preach" approach. If plans for sustainability are set forth from a department, shouldn't the inside of that department be held to some sort of sustainability standard? So, this credit was a success from a learning standpoint as well as a STARS point standpoint because Lafayette will most likely earn 3.5 out of 4 for this credit.

One struggle with Planning and Administration credits 1-8 was the fiscal support Lafayette offers to non-traditional students and low-income students. Namely, Planning and Administration Credit 8: Affordability and Access. Lafayette will most likely earn 2 out of 4 possible points for this credit. This score reflects the fact that Lafayette is doing a few things to enhance affordability and access for students. However, only 12.5% of incoming students are low-income[1], and merely 2% of students participate in and/or benefit from non-traditional[2] and low-income policies and programs. Numbers like this can be immensely improved upon. Lafayette should provide more financial support and more programs for low-income or non-traditional students.

In total, the projections of Planning and Administration Credits 1-8 total to 13.5 points out of 18 possible (75%). Comparing this to the overall score achieved by the school in this assessment (47%), it is a great score. However, there were many points taken off for small things like a few policies or programs

[1] STARS allows for a variety of indicators of "low income." We used percentage of students eligible for Pell Gants.
[2] Non-traditional students include those who attend part-time, students with dependents other than a spouse or partner, single parents, students who work full-time while enrolled, students who are financially independent from parents, and students who did not receive a standard secondary school diploma but who earned some type of certificate of completion.

in place for non-traditional students or non-traditional students or non-satisfactory sustainability planning for administrative pathways.

Beyond the points, this section of the sustainability assessment offers great, niche suggestions as to where Lafayette could make small tweaks to policy and potentially see large results with regards to sustainability. If what this campus is striving for is a more sustainable community, this section should be one of the first places for the administration to look for a framework of how to do so. These credits outline a system that makes decisions for the future of the students, faculty, and staff of an institution.

Planning and Administration credit 9, Employee Compensation, assesses sustainable compensation packaging for the College's employees as well as on-site contractors (those who are hired by the Institution as third-party workers).This credit provides 3 available points for full success. Sustainability in the realm of compensation requires employees, even the lowest paid workers receive compensation that is above a "living wage". Also, this credit provides full credit for Lafayette assessing whether or not on-site contractors are provided compensation above a poverty guideline for a Lafayette's success in this category came from the fact that the College pays even the lowest paid workers above the minimum wage standard. Failure to achieve full credit in this category came from the fact there is no policy in practice to assess the compensation standards of on-site contractors. Lafayette does not intervene in the practices of on-site contractors' compensation packaging, likewise as we will see from later credits, this same truth exists in looking at the safety practices of on-site contractors. Although Lafayette observes the practices of on-site contractors, they have no existing policy to ensure the employees of on-site contractors are treated as fairly as direct Lafayette employees.

Planning and Administration credit 10, Assessing Employee Satisfaction, recognizes institutions which assess and evaluate surveys on employee satisfaction. This credit provides 1 available point for success in measuring employee satisfaction. Lafayette does in fact measure employee satisfaction through online surveys. There is no proof that the College assesses employee satisfaction on a regular basis, however, this information is not crucial to full credit in this category. The category only requires an assessment has taken place in the past. A campus climate assessment took place at Lafayette in 2010 by Rankin and Associates Consulting taking a look at the social systems, including the living, working, and learning environment at Lafayette for Students, Faculty, Staff, and Administrators. This information is available on the Lafayette website and easily accessible if you are a member of the Lafayette community.

Another success of Lafayette's Planning and Administration came from credit 12, Workplace Health and Safety. This credit provides 2 possible points; the first portion of the credit provides points

for a reduction in the number of reportable workplace injuries and occupational diseases compared to a baseline year (2013). Although the number of reportable workplace injuries increased by 1 in 2014, the number of faculty and staff increased from 2013 to 2014, thus this increase is not a setback. The second part of the credit provides a score for the institution having fewer than 5 workplace reportable injuries, including contractors working onsite. Since there were 32 recordable injuries in 2014, receiving points for this portion of the credit is not possible. Although the number of recordable injuries is well above the baseline assessed by AASHE, we do believe that Lafayette has great success in the realm of Workplace Health and Safety. Jeff Troxell, the Associate Director and Supervisor of Environmental Health and Safety, did explain that although the number of recordable injuries appears high, it is below the national standard, which is positive for Lafayette Health and Safety. Also, even though the number of recordable injuries increased from 31 to 32 in 2014, the average cost per claim decreased, providing proof that Lafayette employee's injuries were less severe in 2014 than in the baseline 2013. A reduction in the severity of injuries is not noted anywhere in the credit assessment, but we believe Lafayette paying attention to severity shows great success in Workplace Health and Safety. Also important to note is that Lafayette selects its baseline year as the previous year each year in an effort to focus on injury prevention year to year, which is the goal of the Workplace Health and Safety credit.

Planning and Administration credit 14, Sustainable Investment, assesses an institution's ability to "use their investment power to promote sustainability". Sustainable investment in this regard does not deal with socially responsible investment (SRI), which was formerly thought of as sustainable investment, these investment practices focused on divesting away from investments that are thought to be morally and ethically irresponsible. Sustainable investment of today as defined by AASHE in STARS focuses on "Positive Sustainability Investment", which is currently called ESG investment (environmental, social, and governance). This type of sustainable investment focuses on an institution investing in industries that promote environmental sustainability through the use of renewable energy. In the realm of social sustainability, full credit is provided to those institutions which have socially responsible mutual funds or invest in developing communities, promoting long term sustainability for the community. Lastly, sustainability in governance is explained by investing with companies or businesses selected for "exemplary sustainability performance". Lafayette was not able to participate in this credit because Lafayette has no current policy to follow, which promotes sustainable investment in any of the ESG factors. This is not to say that Lafayette does not put their endowment money to great use. However, we fall short in this category because the College does not promote positive sustainable investment strategies. This credit is especially important not only from the fact that we lose 4 possible

points, but because positive sustainable investment advances the future of Lafayette in becoming more sustainable as a whole as well as having a positive impact on the world at large.

Summary

In the Planning and Administration section, we predict a gain of about 18.4 of the total 32 points available. This is a roughly 57.5% of points earned, which is a fairly decent gain. The majority of lost point opportunities in Planning and Administration came from the lack of positive sustainable investment strategies. Planning and Administration presents many opportunities for future success, however, overall Lafayette does a great job of planning and investing in the well-being of its employees and students. Although the Planning and Administration category holds the smallest number of available points, the impact of improving Planning and Administration strategies has the potential to benefit sustainability at Lafayette and for society long-term and in very broad ways.

8. Student Survey

Description

In order to get the information for Operations 19, Student Commute Modal Split, we needed to learn the commuting habits of a representative sample of students. The best way for us to get such information was to create and distribute a campus-wide survey through Qualtrics. Since a campus-wide survey has such potential for gauging various metrics among the student body, we took advantage of the opportunity to also try to assess students' awareness of sustainability programs at Lafayette, involvement in these programs, and interest in further sustainability programs and initiatives. A full report with all the questions and responses on the survey is available in Appendix E.

The specific questions we chose were the product of significant discussion. We needed to balance having a short survey and getting significant results, so we ultimately decided to focus on a few issues we would ask several related questions about and have a number of simple questions which still have telling results. Below is a summary of the questions and results followed by a discussion of the results and more about other potential questions we wanted to ask.

Distribution and Demographics

To incentivize students to take the survey, everyone who took the survey was entered into a raffle to win one of three $15 Cosmic Cup gift cards. We took two approaches to distribution in order to maximize the number of respondents. Firstly we brought tablets to the Marquis and Farinon dining halls during the lunch hour and to the quad on days with nice weather and asked people to take the survey in front of us. After a week of this method, we sent out the survey to all students through email. These methods garnered a representative sample of Lafayette students. Approximately one quarter of the respondents were from each class year, and there was proportional representation of academic divisions, Greek life, and athletics. We got 436 responses. At a 5% confidence level, this sample size yields a confidence interval of 4.25% or better given the student population of 2,400.

Transportation Questions

The questions about transportation determined whether students commuted or lived on campus, how the commuting students commute most often, and how the residential students get around campus most often. This was how the data was to be entered into the STARS reporting tool for Operations 19, Student Commute Modal Split. We found that 98±1% of residential students get around

campus sustainably (walking, cycling or skateboarding,) and about 70±4% of commuting students commute sustainably (by walking, cycling, carpooling, or riding public transportation.)

Awareness Questions

Several of our questions were meant to gauge awareness of programs going on in Lafayette. Specifically, we tried to determine how aware people were of the Climate Action Plan and Dining Services' various sustainable dining initiatives. While close to 90±2.5% of students are aware that Dining Services has sustainable purchasing practices and a reusable food container program, only about 30±4% of students are aware of our Climate Action Plan. Most people learned about the Climate Action Plan through word of mouth, club involvement, or class.

Involvement Questions

The questions we asked about involvement covered both everyday practices and involvement in organizations and events. The everyday practices were the use of reusable water bottles and food containers. We found that well over half of students use reusable water bottles instead of disposable water bottles, but the majority (58±4%) of students do not ever take advantage of the reusable food containers, despite 90±2.5% of students being aware of the program. In the survey, we asked students what would make them more likely to participate in the reusable food container program. Their responses are shown in Figure 1. Numbers are considerably better for use of reusable water bottles, with only 6±2% of students stating that they never use a reusable water bottle instead of a disposable one, and 59±4% stating that they always use a reusable water bottle. Additionally, 65±4% of respondents said they would be more likely to use a reusable water bottle if there were more refill

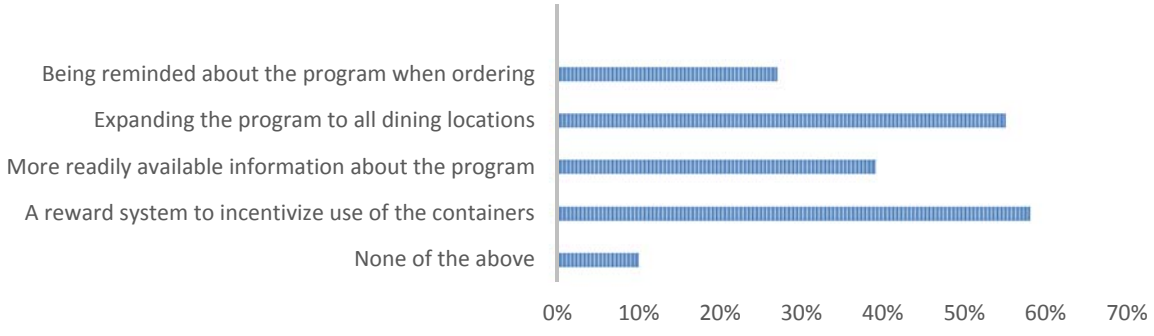


Figure 1: Responses to the question "Which of the following would make you more likely to use the reusable food containers?"

stations on campus and 53±4% said they would be more likely to use a reusable water bottle if they were offered to students at a subsidized price.

Around 17±3% of respondents say they are an active member of Lafayette Environmental Awareness and Protection (LEAP), the Society of Environmental Engineers and Scientists (SEES), Lafayette Food and Farm Cooperative (LaFFCo), Take Back the Tap (TBtT), or EcoReps, and around 30% of students participate in their events occasionally. Over half of students say they have participated in one-time events like Make a Difference Day.

We also asked students about their interest in academic and research opportunities relating to sustainability. We learned that 63±4% and 62±4% of students are interested in additional sustainability-related course options and additional sustainability-related research offerings, respectively.

Summary

Lafayette students are very aware of sustainability programs here, particularly what Dining Services is doing. It is impressive that almost a third of students are aware of the Climate Action Plan, since it is a high level policy that is not actively advertised. Furthermore, while a slim minority of students are directly involved with environmentally-focused organizations (LEAP, LaFFCo, etc.) more students follow their activities and over half of students have participated in at least one large scale event, indicating that their efforts have broader impact. Most students are interested in more academic opportunities centered on sustainability. Finally, considerable portions of the student body use reusable water bottles and our results indicate that more would do so if we expand our water bottle refill stations. This seems to indicate that Take Back the Tap—a student program that has received administrative support—has had a positive impact at Lafayette. We are not yet doing nearly as well with the reusable food containers, but the survey results indicate that increasing awareness and convenience around this program would increase student participation in that exciting program.

All confidence intervals reported are here are for a 5% confidence level. All of the survey questions and response data are presented in Appendix E (page 152).

9. Evaluation and Action Items

Criteria and Metrics

In an effort to encourage long-term sustainability progress as well as improving Lafayette's STARS score, it was necessary to provide suggestions for further sustainable growth. We developed a metric to order and assess the impact of the action items if implemented. In order to create new sustainability projects at Lafayette, eight different criteria were assessed. These included looking at feasibility or ease of accessibility for project implementation from an economic, administrative, and social standpoint. Next, it was important to look at how well the potential projects aligned with current sustainability initiatives. Since the Climate Action Plan and Campus Master Plan outline specific goals for the future of sustainability at Lafayette, it was important to look at whether or not the potential projects are mentioned in future plans the College laid out. Next, it is important to assess the impact the action item could potentially have on students directly. How will this action item improve the campus life experience for students? Will this action item provide a new educational opportunity for students? Lastly, assessing the number of STARS points that could be gained from implementing this new action item provides a well-rounded evaluation of the action items.

In each category, each action item scored 1, 2, or 3 points based on the chart below. Action items that aligned with the criteria highlighted in green gained 3 points, those in yellow gained 2 points, and those in red gained 1 point. These points were then totaled to give each action item a quantitative rank based on the subjective and qualitative criteria. It is crucial to point out this metric was simply a way to quantify qualitative data. Thus, items ranked higher as a result of high feasibility, high level of alignment with current actions already in place, and a high level of educational opportunity and high improvement to the campus life experience, are not necessarily of greater importance. Some items may have a very large impact on Lafayette's sustainability, but would be very expensive to implement. For example, action item such as an improved recycling, which would have a high benefit to Lafayette sustainability, but would be difficult to implement based on cost and social inertia. Those items may be ranked low by our metric, but have a very large impact on the Lafayette community. For those items, we also took into account to a qualitative evaluation. Ultimately, it was quite difficult to prioritize all 43 action items, but having both quantitative and qualitative measurements helped to order the various potential project items.

Action Item Evaluation Metric								
Action	Economic Feasibility*	Administrative Feasibility	Social Feasibility	Climate Action Plan Progress	Campus Master Plan Progress	Educational Opportunity	Campus Life Experience	STARS Points Opportunity
High	Effectively no cost	Little resistance, available staff and resources	Existing momentum, high interest level, and campus unity (or no behavior change necessary)	Mentioned, Significant Benefit	Mentioned, Significant Benefit	Increased opportunity for active, large scale learning about sustainability	Improves well-being of students, faculty, employees	Points Available
Medium	Minor impact	Some resistance, available staff or resources	Either some momentum or little to no required behavior change	Mentioned, marginal/no benefit	Mentioned, marginal/no benefit	Passive, small scale learning	Marginal or ambiguous benefits	Points Available
Low	Major impact	Strong resistance, no available staff or resources	No momentum or active resistance to change	Not mentioned or not related	Not mentioned or not related	None	No or adverse well-being impacts	Points Available
*According to one of the following metrics: payback period, % price increase, funding availability, salary								

Results and Rankings

The table of the action items developed as a result of this assessment can be found in Appendix F. This table lists each action item, the credit(s) relevant to that action item, and the number of potential STARS points for a full implementation. In addition, each action item is rated according to the metric above to get a total rating. While this total ranking gives each action item a semi-quantitative rank for subjective criteria, the final recommendations from this assessment do not strictly adhere to the rankings. Action items that the EGRS 480 class thought were particularly important to implement are in bold. These specific action items are outlined in more detail in this section.

Sustainability Course Offerings

The first project we are recommending is to offer more sustainability courses at Lafayette. Such an initiative would give students more opportunities to learn about sustainability topics and issues in great depth. Offering a greater number of courses across multiple departments would be preferable in order to stress the interdisciplinary nature of the topic. There are two ways in which to pursue this project. One way is to hire more faculty members to teach new sustainability courses. Another is to incentivize faculty through grants to create new sustainability courses and/or to incorporate sustainability into their pre-existing courses. This option would have the benefit of displaying how sustainability can be connected to topics within other majors, instead of simply creating more courses that focus solely on sustainability.

This project can give Lafayette a total of 8.8 STARS points. A total of 6.8 points would be awarded if 20% of courses taught at Lafayette are sustainability courses, with 90% of academic departments offering at least one sustainability course. An additional 2 points would be awarded for a program that incentivizes faculty to create new sustainability courses and/or to incorporate sustainability into their pre-existing courses.

Apart from STARS points, there are many other reasons why Lafayette should pursue this project. In our evaluation, this project received a score of 2 each for economic and administrative feasibility. It received a 2 for economic feasibility, because though offering grants for faculty who incorporate sustainability into their courses would require a payout, it would not be so significant. It received a 2 for administrative feasibility because the resources are available in order to implement this project. It received a 3 for social feasibility because, as indicated by our survey, students would be interested in an increase of sustainability courses offered at Lafayette. The project received a 3 for the Climate Action Plan because the desire to offer more sustainability courses is directly mentioned in the plan. Conversely, the project received a 1 for Campus Master Plan because nowhere in the master plan is there a discussion of academics or course offerings. This project received a 3 for educational opportunity because, by our working definition of a 3, this project would increase the opportunity for active, large-scale learning about sustainability. Lastly, the project received a 2 for campus life experience because we felt what is offered in the classroom would not have significant impacts to the well-being of students and faculty. However, an improved understanding of the issues surrounding sustainability could create marginal benefits to the campus community.

Therefore, providing a system to incentivize faculty to create new sustainability courses and/or to incorporate sustainability into their pre-existing courses has a total benefit rating of 16. This is much higher than a lot of other project ideas. Because this recommendation performed well on our evaluation metric and has the potential to award us with 8.8 points within STARS, this project should be seriously considered by the administration for implementation.

Faculty and Staff Professional Development

Another project we are recommending, based on our analysis, is to offer more staff professional development opportunities throughout the year, such as seminars and training sessions. Specifically, we would like to see a program where the sustainability focused professors teach other professors how to bring sustainability into the classroom. Similarly, staff in Dining, Operations and other departments could teach other staff in their departments how to perform their duties while upholding sustainable

practices. Other staff development days, offered once or twice a year, could cover a wide variety of sustainable topics. Topics covered at Colorado State University, an institution which received a STARS platinum rating, include how to lower staff/faculty carbon footprints, and how to "green" a staff/faculty office. Lafayette could also utilize the broader definition of sustainability in order to hold staff development sessions around diversity and wellness programs.

This project has the potential to award Lafayette a total of 5 STARS points. Three points would be awarded for specifically offering a peer to peer staff and faculty educator program where staff/faculty members educate each other on a topic of sustainability. Two points would be awarded for offering other staff professional development days.

Apart from STARS points, there are many other reasons why Lafayette should pursue this project. In our evaluation, this project received a score of 2 for economic and administrative feasibility. It received a score of 2 for economic feasibility because, though the peer to peer programs would not require much money, bringing in other speakers for professional development could be costly. It received a score of 2 for administrative feasibility because, though we have the available staff and resources for such a project, we feel like there might be some administrative resistance, especially due to the additional cost. The project received a score of 1 for social feasibility because currently there is little to no momentum or interest in a program such as this among staff and/or faculty. A program such as this is not mentioned in either the Climate Action Plan or the Campus Master Plan. For this reason, the project received a score of 1 for these two categories. Because the project would provide an opportunity for active, large scale learning for faculty and staff, the project was given a 3 for educational opportunity. Lastly, the project received a score of 2 for campus life experience because though the development sessions themselves may not have significant impacts to the well-being of students and faculty, we feel that an improved understanding of the issues surrounding sustainability could create marginal benefits to the campus community.

Therefore, offering more staff professional development opportunities throughout the year, such as seminars and training sessions, including opportunities for staff/faculty peer to peer mentorship has a total benefit rating of 12. Though this isn't as high as some other project ideas that we are not talking about, we believe that this project is very important in increasing the overall goal of sustainability at Lafayette. Educating faculty and staff will allow students to live and learn in an environment that promotes sustainable lifestyles and will in turn encourage the students to lead such lifestyles themselves. This benefit, combined with the 5 points we could earn within STARS, gives a reason why this project should be seriously considered by the administration for implementation.

Sustainable Investment

Developing an investment strategy to focus on partnerships with companies that follow sustainable practices is a crucial step for Lafayette moving forward. Although this action item is derived from the potential of earning 4 points in the STARS assessment, the benefit of taking action in sustainable investment reaches far beyond raising our STARS rating. Sustainable investment is a fairly new topic in the realm of sustainability, traditionally thought of as socially responsible investment (SRI), sustainable investment as it stands today calls for investment with companies that focus on 3 important factors, environmental, social, and governance sustainability (ESG). Investment in ESG companies, means positive sustainable investment, which is a strategy focusing on improving long-term sustainability, whereas negative investment (SRI) looks at divesting from companies that are not morally or ethically sound, for example tobacco, alcohol, or weapon companies. The Harvard Business Review supports the importance of positive sustainable investment stating companies do better financially when looking at ESG factors; "they produce higher investment returns (using less water, energy, and generate less waste, reduces expenses) companies who resource efficiently are also proven to have higher levels of innovation and entrepreneurship"[3].

This may appear to be a difficult action to take, but Lafayette does not have to be alone in the transition into sustainable investment, the United Nations already has in place an initiative called PRI (Principles for Responsible Investment), which provides an international network of investors working together to put sustainable investment into practice. The UN PRI has developed 6 principles by which member investors are encouraged to follow in their investment strategies:

> **Principle 1**: We will incorporate ESG issues into investment analysis and decision-making processes.
>
> **Principle 2**: We will be active owners and incorporate ESG issues into our ownership policies and practices.
>
> **Principle 3**: We will seek appropriate disclosure on ESG issues by the entities in which we invest.
>
> **Principle 4**: We will promote acceptance and implementation of the Principles within the investment industry.
>
> **Principle 5**: We will work together to enhance our effectiveness in implementing the Principles.
>
> **Principle 6**: We will each report on our activities and progress towards implementing the Principles.

If Lafayette were to join the 1,383 signatories in the UN PRI (only 9 of which are University Endowments), their commitment means completing an annual reporting framework, which helps assess the implementation of the six principles in guiding investment decisions for the endowment. We believe membership in the UN PRI would help advance the sustainable investment of Lafayette and provide an avenue for the Lafayette endowment to have a larger impact on the world as a whole.

Sustainability Assessments and Progress Reports

Another project that ranked highly among our criteria was for Lafayette to conduct more frequent assessments of sustainability on campus, making them transparent and viewable to students, parents, faculty, and staff. After doing some research into other schools' actions for presenting updates about sustainable initiatives, we recommend Lafayette publishes a sustainability newsletter on the school website in addition to posting the newsletter around campus on a monthly or semesterly basis. This opens up an opportunity to increase student research as well. Lafayette could design a program for students to conduct the assessments and put together the newsletters. Doing this would foster a great educational opportunity for sustainability as well as generate discussion about Lafayette's sustainability around campus. Apart from increasing awareness about sustainability at Lafayette, pursuing this project would earn the school a total of two STARS credit points from the Planning and Administration section.

This project earned a very high score across our evaluative criteria as well. Economically, we felt that achieving this would be feasible especially if unpaid students were put in charge of the newsletters, earning this project an economic feasibility score of three. Administratively, it might take some time to set up and approve this project because currently there is no form of following up on Lafayette's sustainability plans established, so we gave it a two for administrative feasibility. Socially, we understand that this initiative would create a more informed population on campus. According to our student sustainability survey, 63% of students desired more sustainability course offerings, leading us to believe they would be in favor of knowing how their school is pursuing becoming more sustainable as well, so we gave this project a social feasibility score of three. Following up with Lafayette's 2011 Climate Action Plan would be hugely beneficial because it would show how actively the school is pursuing their promised plans. For Climate Action Plan effect, we gave this project a score of three. This would be beneficial to the Campus Master Plan for the same reasons of the Climate Action Plan; this project would hold the school accountable for following through on planning, so we gave it a score of three for Campus Master Plan effect. This plan would create educational opportunity in a passive way because it does not explicitly involve class time, but it is spreading information, so we gave it an

educational opportunity rating of a two. Creating more awareness of the progress Lafayette is making with sustainability could be either beneficial or detrimental to the campus life experience. People could either feel better or worse about the school's ability to follow through on planning, so we gave this project a campus life experience score of two. Beyond all this, we believe is would be a good show of faith for Lafayette to pursue this project. Being transparent about sustainability actions is a great way to enhance desire to accomplish green things for any school, business, or institution. We know that by doing this project, Lafayette College would be held accountable for progressing sustainably into the future.

Comprehensive Waste Management Plan

A large way that Lafayette can directly mitigate its impact on the environment would be through the reduction of waste generation and increase in diversion of waste from landfills. The most feasible route to this would be a comprehensive waste management plan. The plan would detail ways to curtail unnecessary waste like campus-wide education campaigns, expansion of Green Move Out and the creation of other such programs, advertisements and competitions. Also it would include benchmark goals about our evolving recycling program, first for the full implementation of single-stream recycling with uniform bins, an education component to further increase participation and decrease contamination, and later steps for further separation of recyclables.

It would also include benchmark goals about composting, student e-waste, transparency, and construction waste. Currently we collect compostable waste from two dining locations, which diverted about 8 tons of waste from a landfill in FY2014. A campus-wide composting plan would involve composting bins near garbage and recycling bins, first in the other dining locations and hopefully later in residence halls and other places around campus. Although our current e-waste program collects several tons of waste each year, education about e-waste and year-round collection could drastically decrease the amount of this harmful waste that gets sent to landfills from Lafayette. Given ITS's rather comprehensive e-waste program for Lafayette-owned electronics, it may be possible to combine these programs.

Keeping public record of generated waste and how it is disposed of would be a necessary part of the plan for the purposes of keeping track of progress and to ensure the policies are being followed. This public record would have to include waste generated in construction and demolition projects and how that is disposed of. Construction and demolition projects can create a large deal of waste, but also a

huge amount of salvageable materials. So this plan would need to include ways to maximize the amount of salvaged materials and waste diverted from landfills in these large projects as well.

The ultimate goal of the plan would be to reduce waste generated per campus user each year below 0.045 tons. Our waste generation per campus user in FY2014 was ~0.32 tons. Although this is a large gap, it is not unfeasible. Most waste is unnecessary waste, and the expansion of reclaiming efforts like Green Move Out would drastically cut the total waste, and overhauled recycling and composting programs would divert huge amounts of waste from landfills. The implementation of a plan like this could earn Lafayette 9 points on the STARS assessment (in its weakest area) covering Operations 22-24, and this is because of the huge amount of damage unnecessary waste causes the environment and the significant potential gains for society from the reuse and recycling of such waste. This emphasizes the importance of such a plan which, given proper spacing of goals and upkeep by the administration, is entirely feasible.

Student Orientation

One credit that was weaker compared to other credits but still was able to achieve the maximum points allocated was EN-2, Student Orientation. This credit recognizes institutions that include sustainability in orientation activities and programming. Including sustainability in student orientation demonstrates that sustainability is an institutional goal and encourages students to adopt sustainable habits in their new school environments. The criteria needed to obtain the maximum points for this credit are that the institution includes sustainability prominently in its student orientation activities and programming and that sustainability activities and programming are intended to educate about the principles and practices of sustainability. The scoring for this credit is that the institution can earn the maximum of 2 points available when sustainability is included prominently in orientation activities and programming made available to all entering students.

The information and data provided for answering the question for this credit were gained in the meeting with Dean McLoughlin. The information provided to us from Dean McLoughlin was able to gain Lafayette the maximum amount of points (2) for this credit. The information provided from Dean McLoughlin in addressing student orientation was that 100% of entering students are provided an opportunity to participate in orientation activities and programming that prominently include sustainability. Also, Dean McLoughlin provided a brief description of how sustainability is included prominently in new student orientation- Lafayette offered an extended orientation meeting talking about different issues including environmental issues. These lectures are not mandatory but open to all

of the first year students. The information provided for this credit was very minimal as in it was just able to be counted towards the STARS credit. Therefore, it can be seen that Lafayette can improve in this credit in order to improve the sustainability on Lafayette's campus.

An action plan created by the STARS team in order to improve upon this credit was to offer more sustainability focused and related orientation activities including lectures, readings, and programs. This action plan scored a 16 on a total rating under the specific criteria used to evaluate the action plans that our STARS team created in order to determine the most effective action plans that Lafayette should consider in the upcoming years to improve its STARS rating and also improve the overall sustainability of the campus

- In economic feasibility it scored a 3 which means that it there is effectively no cost because Lafayette already funds a full 4 day orientation for first year students. Implementing this action plan will have no extra cost since the funds will already be in place and it would be in the means of just reallocating funds that support sustainability focused and related activities.
- In administrative feasibility it scored a 1 - there is strong resistance to instituting this action plan on Lafayette's campus due to the already packed orientation schedule.
- In social feasibility it scored a 3 which means that there is existing momentum, high interest level and campus unity in order to achieve this action plan. There is high social feasibility because there already is an action plan very similar to the action plan presented by the STARS team in the works that will be instituted in the upcoming years. Therefore, there is already existing momentum on Lafayette's campus to achieve this goal/action plan
- In the climate action plan effect it scored a 2 which means this action plan is mentioned marginally in the campus climate action plan. This shows that it is a priority of the Lafayette community and administration to achieve this action plan in the upcoming year
- In the campus master plan effect it scored a 1 which means this type of action plan is not mentioned or a related topic including this action plan is not mentioned in the campus master plan.
- In educational opportunities it scored a 3 which means this action plan increases the opportunity for active and large scale learning about sustainability on campus. This action plan will educate students from the starting gate of their college career of how to live a sustainable life-style; therefore, it will increase the ability to become educated about sustainability on Lafayette's campus

- In campus life experience it scored a 3 which means it improves the well-being of students, faculty and employees through the institution of this action plan. This action plan if instituted will demonstrate that sustainability is an institutional goal and will encourage students to adopt sustainable habits in their new school environments improving their well-being.

As mentioned earlier, when evaluating the action plan under the criteria Lafayette's community and administrators are already addressing this credit with an action plan. The action plan that is in the works is that Lafayette will create an extended orientation curriculum that will host meetings that talk about and address different issues and topics including environmental issues. As part of the environmental lecture there will be a series of activities for first year students to sign-up for including cleaning up along Bushkill and working at Lafayette's community garden - LaFarm. These lectures and sign-ups are not mandatory but open to all of the first years. Also, in the coming years there will be a 4 year curriculum called Connected Communities that would be required. Part of this 4 year curriculum would be the First Year Seminar for new students with an additional lab hour a week that would be focused on a different topic each week, one of which would include sustainability.

This action plan is in the works and will be introduced to the Lafayette community in the upcoming years. As of right now, Lafayette is granted the maximum 2 points with the 100% of students offered to participate in orientation activities and programming that includes sustainability with these programs including talks about different issues including environmental issues. In the upcoming years, as the Connected Communities program is instituted it will make this credit stronger and will also improve sustainability on the Lafayette campus. Even though this action plan does not increase Lafayette's STARS score it is still important and will still be an improvement to Lafayette's campus because it helps Lafayette achieve its ultimate goal of improving Lafayette's education about, awareness of, and overall value of sustainability on Lafayette's campus.

Outreach Material and Publications

Another credit that was weaker compared to other credits but still was able to achieve the maximum points allocated was EN-4: Outreach Materials and Publications. This credit recognizes institutions that produce outreach materials and publications that enhance student learning about sustainability outside of the formal classroom. The criteria needed to achieve the points for this credit was outreach materials and/or publications that foster sustainability learning and knowledge. The publications and outreach materials include a sustainability website, newsletter, social media platforms, vehicle to publish and disseminate student research on sustainability, building signage, food area

signage, signage on the grounds, walking map, guides for alternative methods of transportation, educational tools for bicyclists, guide for green living, and the newspaper. The scoring for this credit is that the institution earns 0.25 points for each type of publication and/or outreach material described above. Lafayette scored the maximum of 2 points from this credit from having some of the publication and/or outreach material discussed. Lafayette received credit for having a sustainability website, building signage that highlights green building features, food service area signage and/or brochures that include information about sustainable food systems, signage on the grounds about sustainable grounds keeping and/or landscaping strategies employed, a sustainability walking map or tour, a guide for commuters about how to use alternative methods of transportation, and navigation and educational tools for bicyclists and pedestrians. The information provided for this credit was very minimal, as it was just able to be counted towards the STARS credit. Therefore, Lafayette can improve in this credit in order to improve the sustainability on Lafayette's campus.

An action plan created by the STARS team in order to improve upon this credit was to create a guide for green living and incorporating sustainability into the residential experience. This action plan scored a 15 on a total rating under the specific criteria used to evaluate the action plans that our STARS team created in order to determine the most effective action plans that Lafayette should consider in the upcoming years to improve its STARS rating and also improve the overall sustainability of the campus.

- In economic feasibility it scored a 3 which means that it effectively has no cost.
- In social feasibility it scored a 3 which means that there is existing momentum, high interest level and campus unity in order to achieve this action plan
- In the climate action plan effect it scored a 1 which means this type of action plan is not mentioned or a related topic including this action plan is not mentioned in the campus master plan
- In the campus master plan effect it scored a 1 which means this type of action plan is not mentioned or a related topic including this action plan is not mentioned in the campus master plan
- In educational opportunities it scored a 2 which means there is passive small scale learning opportunities presented with the institution of this action plan. Green living guides incorporating sustainability into residential experience will create opportunities for education in that the guides would be able to educate students on how to live a more sustainable life in a residential hall and in a new college environment.

- In campus life experience it scored a 2 which means there is marginal or ambiguous benefit offered to the campus from the institution of the action plan on campus. The development of a green living guide that incorporates sustainability into the residential experience will give benefits to the campus in that it will help students become more aware of their part in making Lafayette's campus more sustainable ultimately helping Lafayette achieve its goal of being more sustainable.

Unlike the first action plan mentioned, this action plan is not under consideration by the administration but it could easily be developed. This action plan does not need to be developed by the administrators it can be the responsibility of other sustainability related student clubs like the LEAP club or ECO Reps, which are both present on Lafayette's campus, and by having these student run organizations take part in the initiation of this action plan will further increase sustainability awareness on Lafayette's campus. Even though this action plan does not increase Lafayette's STARS score it is still important and will still be an improvement to Lafayette's campus because it helps Lafayette achieve its ultimate goal of improving Lafayette's education about, awareness of, and overall value of sustainability on Lafayette's campus.

If we accumulate these action plans even though Lafayette would not increase STARS points, it will however still increase employee/staff awareness on sustainability topics ultimately achieving the STARS team's goal and Lafayette's goal to make Lafayette's community and campus more sustainable and educated about sustainability.

Office of Sustainability

The final project that has come out of this assessment is also the most highly recommended action item by our class, ignoring the quantitative ranking criteria. Establishing an Office of Sustainability and hiring a full-time Sustainability Officer should be the number one priority moving forward from this assessment. These offices have been established on college and university campuses across the nation as the trend of sustainable development grows. A sustainability office would have a massive impact on the overall sustainability of Lafayette College, and would serve three main functions: centralization, coordination, and communication.

Having an Office of Sustainability would centralize all sustainably-oriented activities and initiatives at Lafayette. Any follow-up STARS assessment of the campus would not have to look further than the Office of Sustainability for information in all four categories of the assessment. Once all of the sustainable initiatives are centralized, it will be easy to coordinate these initiatives in a cohesive and

comprehensive plan of action. Campus-wide goals will be aligned with one another. Competing strategies will be proposed, planned, and ranked according to metrics far more robust than the one provided in this report. Specific actions and broad initiatives will be able to be executed in a coordinated approach. Finally, an Office of Sustainability could serve as a hub of all campus sustainability information. This will help disseminate information throughout the campus and present a unified vision of sustainability to the public and prospective students. The importance of an Office of Sustainability cannot be overstated.

10. Conclusions

According to our calculations, Lafayette should receive 91 points, or 47% of the total 196 available points, leading to Silver as our predicted STARS rating. To look at other similar colleges, this is better than Muhlenberg (bronze), on the same level as Villanova (silver), but below Colgate (gold.) This is also comparable to Lehigh's score. By this standard, we are therefore around average in terms of sustainability among our Liberal Arts peer schools. This gives us much to celebrate but a definitive set of places to improve.

We received the highest percentage of points in the Engagement category, and over half of credits in the Academics and Planning & Administration categories, but we received less than a quarter of points in the Operations category. This means that in order to improve its sustainability, Lafayette most needs to focus on mitigating its direct impact on the environment through land, waste, and water management; energy consumption; construction and transportation as well as the impact it can encourage or discourage through purchasing practices and business partnership guidelines.

Based on all the information we gathered for each credit, we generated a list of action items; plans which, if totally implemented, could gain us 88 more STARS points. We evaluated these action items based on their cost, feasibility, how well they align with current goals, and impact on the campus life and education. A list of the full 43 action items is included in Appendix F (pg. 160), and we showcased eight in this report. We chose to include these specific action items to provide a balance of more feasible options and the most important options in terms of STARS credits and overall environmental impact. The most important of the items is the creation of a Sustainability Office and Officer. Although this is not a prerequisite for any points in the STARS assessment, having a Sustainability Office would make assessments like this easier to undergo, and would be able to manage the implementation of plans which would bring us closer to our sustainability goals, coordinating the various departments of the college and facilitating student and faculty efforts.

It is also important to celebrate the victories that Lafayette has already achieved on this front. Our performance with community and student engagement is phenomenal, and our academic offerings are impressive to say the least. Despite a current lack of coordination, there are many people here pushing for improvement of campus sustainability, and this report can serve as a resource for use to that effect. Finally and most importantly, our shortcomings are now specifically marked and they can be overcome simply and directly.

Appendix A: Introductory Email

Dear…,

We are members of the Engineering Studies 480 class, Sustainable Solutions, led by Professor Julia Nicodemus. Along with Professor Nicodemus, we are conducting an AASHE STARS sustainability assessment of Lafayette campus. STARS (Sustainability Tracking and Rating System) is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. We are asking for your cooperation in our efforts to gather information for the assessment. This is an ongoing project throughout the semester, during which we may ask to set up meetings with you or ask for information electronically. This exciting, campus-wide project has been endorsed by President Byerly and Vice President of Finance and Administration, Roger Demareski. We would like to thank you for taking the time to read this email and for any future help you may provide.

We look forward to working with you!

Sincerely,

Katie Geraghty, Chris Nelsen, Katy Rooney, Joe Ingrao, Hannah Goldstein, & Drew Beyer

The members of EGRS 480

Appendix B: Individual Credits

Academics

AC-1: Academic Courses

Total Number of courses offered by the institution:

- Undergraduate: 3,470
- Graduate: 0

Number of Sustainability Courses offered:

- Undergraduate: 144
- Graduate: 0

Number of courses offered that include sustainability

- Undergraduate: 140
- Graduate: 0

Number of academic departments (or the equivalent) that offer at least one sustainability course and/or course that includes sustainability (at any level):

- 29

Total number of academic departments (or the equivalent) that offer courses (at any level):

- 50

Number of years covered by the data:

- 3

A copy of the institution's inventory of its course offerings with sustainability content (and course descriptions)

- See attachment: Sustainability Course Inventory

The website URL where the inventory of course offerings with sustainability content is publicly available

- http://catalog.lafayette.edu/

A brief description of the methodology the institution followed to complete the course inventory

- The course inventory was completed in two ways. Firstly, members of the Lafayette STARS team looked through the course catalogs for the Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013 and Fall 2012 semesters and read course descriptions for courses. This was able to give them a good idea about some of the courses that focus on sustainability. Secondly, the team sent out a survey asking faculty to indicate if they teach courses that are sustainability focused or that include sustainability. This was able to give the team many courses that focus or include sustainability, though it may not be apparent from their titles or course descriptions. 80% of faculty completed the survey.

How did the institution count courses with multiple offerings or sections in the inventory

- Each offering or section of a course was counted as an individual course

Which of the following course types were included in the inventory

- Internships- No
- Practicums- No
- Independent study- No
- Special topics- Yes

- Thesis/dissertation- No
- Clinical-No
- Physical education-No
- Performance arts-No

Does the institution designate sustainability courses in its catalog of course offerings?

- No

Does the institution designate sustainability course on student transcripts?

- No

Notes
Classes from the Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013 and Fall 2012 semesters were added together to obtain these results.

Responsible Party

- Julia Nicodemus

Projected Points: 7.2/14

AC-2: Learning Outcome
Number of students that have graduated from a program that has adopted at least one sustainability learning outcome:

Total number of graduates from degree programs:

- 590.0

A list of degree, diploma or certificate programs that have sustainability learning outcomes:

- Chemical Engineering- department and course level (CHE 222)
- Civil Engineering- department and course level (CE 351)
- Electrical and Computer Engineering
- Engineering Studies
- Environmental Studies
- Environmental Science
- Mechanical Engineering- department and course level (ME 478)
- Spanish- course level (SPAN 211)

A list or sample of the sustainability learning outcomes associated with degree, diploma or certificate programs:

- Chemical Engineering- Students will demonstrate professional responsibility, addressing economic, sustainability, and environmental considerations in the solution of engineering problems in both local and global settings.
- CHE 222: Students will learn how to calculate how much heat is sent to the environment for every degree we cool our house with an air conditioner
- Civil Engineering- Students will demonstrate professional responsibility, addressing social, cultural, economic, sustainability, and environmental considerations in the solution of engineering

- Problems in both local and global settings.
- CE 351: Students will understand the concept of sustainability within a water resources
- engineering context
- Electrical and Computer Engineering- Students will develop an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- Engineering Studies- Students will demonstrate professional responsibility, in terms of social, cultural, economic, and environmental sustainability in the solution of engineering problems in both local and global settings;
- Environmental Studies- Students will integrate and apply perspectives from across the natural sciences, social sciences, and the humanities in the context of complex environmental problems.
- Environmental Science- Students will identify the complex relationships between scientific approaches to environmental issues and political, social, economic, and ethical perspectives on the environment.
- Mechanical Engineering-Students will have the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- ME 478: Students will learn how feedback control is used in automobile engines to reduce pollution and fuel consumption. Low power microprocessors are widely used to monitor electric power consumption. Hybrid vehicles depend upon controllers to function.
- Spanish 211- Students will focus on environmental/socio-economic sustainability of mining in Crucitas, Costa Rica and determine whether tourism is good or bad for specific Latin American countries (Cuba, Perú, Costa Rica, México).

Notes:
Data from 2013-2014 academic year

Responsible Party
- Julia Nicodemus

Projected Points: 1.83/8

AC-3: Undergraduate Program
Does the institution offer at least one sustainability focused major, degree program or the equivalent for undergraduate students:
- Yes

The name of the sustainability focused undergraduate degree program (1st program)
- Environmental Science Major

A brief description of the undergraduate degree program (1st program):
- The impact of humans on our environment is working its way to the forefront of national and international concerns. Scientists are beginning to grasp the complex interaction of natural phenomena and human activity. Lafayette takes an interdisciplinary approach to environmental concerns. Student learn environmental fundamentals in a number of departments, then progress through more intensive and specialized courses.

The website URL for the undergraduate degree program (1st program):

- http://environment.lafayette.edu/

The name of the sustainability focused undergraduate degree program (2nd program):

- Geology and Environmental Geosciences

A brief description of the undergraduate degree program (2nd program):

- Geology is the study of earth and its history. The curriculum and the interests of the faculty span a wide range of topics from sedimentology, paleobiology, climate change, and geomorphology to geophysics, geochemistry, and earth materials. Field and laboratory work are integral parts of the curriculum and many opportunities exist for cooperative student-faculty research.

The website URL for the undergraduate degree program (2nd program):

- http://geology.lafayette.edu/

Does the institution offer at least one sustainability focused minor, concentration or certificate for undergraduate students:

- Yes

The name of the sustainability focused undergraduate minor, concentration or certificate (1st program):

- Environmental Science Minor

A brief description of the undergraduate minor, concentration or certificate (1st program):

- The Environmental Science Minor is an interdisciplinary program designed to serve science and engineering majors, as well as students of other disciplines interested in environmental careers or environmental matters.

The website URL for the undergraduate minor, concentration or certificate (1st program):

- http://environment.lafayette.edu/academia/environmental-science-minor/

The name of the sustainability focused undergraduate minor, concentration or certificate (2nd program):

- Geology Minor

A brief description of the undergraduate minor, concentration or certificate (2nd program):

- Geology is the study of earth and its history. The curriculum and the interests of the faculty span a wide range of topics from sedimentology, paleobiology, climate change, and geomorphology to geophysics, geochemistry, and earth materials. Field and laboratory work are integral parts of the curriculum and many opportunities exist for cooperative student-faculty research. The minor has less requirements than the major, only 5 Geology classes.

The website URL for the undergraduate minor, concentration or certificate (2nd program):

- http://geology.lafayette.edu/

The name of the sustainability-focused undergraduate minor, concentration or certificate (3rd program):

International Affairs Global Environmental Studies Theme

A brief description of the undergraduate minor, concentration or certificate (3rd program):

Environmental Studies is one of the themes an international affairs major can take on. This program addresses the mechanisms of economic growth, technological innovation, and environmental sustainability.

The website URL for the undergraduate minor, concentration or certificate (3rd program):
https://internationalaffairs.lafayette.edu/program/

The name, brief description and URL of all other undergraduate-level sustainability-focused minors, concentrations and certificates:
Aging Studies minor: The aging studies minor provides opportunities for students to learn about the dynamic, interdisciplinary field of gerontology/aging studies and prepares them to make contributions to the improvement of the aging experience in society. This minor contributes to social sustainability.
http://www.lafayette.edu/academics/departments-and-programs/aging-studies-minor/

Notes:
This information was gathered in two ways. The first consisted of an overview of the departments and department descriptions online. The second consisted of a survey sent out to all faculty asking whether or not their department had a minor program/concentration that focused on sustainability.

Responsible Party:
Julia Nicodemus

Projected Points: 3/3

AC-4: Graduate Program

Not Applicable
Projected Points: 0/0

AC-5: Immersive Experience

Does the institution offer at least one immersive, sustainability focused education study program that meets the criteria for this credit?

- Yes

A brief description of the sustainability focused immersive experience:

1) Lafayette College Career Services offers many opportunities for learning about sustainability. They provide shadowing opportunities at places such as:
    - The Nurture Nature Center (a center for community learning about local environmental risks)
    - TRC Environmental Corporation (working on environmental remediation)
    - Natural Systems Utilities (observing the solving of the industry's environmental problems)
    - TetraTech (working for the US EPA on policy and regulatory support issues regarding nitrogen and phosphorus pollution, dissolved oxygen problems in coastal waters)

- UMASS Amherst with a PhD Candidate (NSF IGERT Fellow) whose research focuses on offshore wind energy; issues involving the foundation and support structure of offshore wind turbines
- O'Brien & Gere "environmental consulting firm, with a focus on compliance with environmental regulations and remediation
- Solar Products, Inc. (working on the manufacture of infrared heating systems)

2) Engineers Without Borders

Lafayette's chapter of Engineers Without Borders is a program where Lafayette students design and implement sustainable engineering projects abroad. Their most recent trip, in August 2012, was to La Fortuna, where Lafayette students engaged the community to help in an environmentally focused project. They took water samples in order to identify problems with water filtration, and examined the water pipeline, in order to determine where any leaks were located.

3) Interim Trips Abroad

The winter Interim 2015 trip to New Zealand explored the interdisciplinary nature of environmental science through scientific observation/data collection, discussion, and readings. The course intended to demonstrate connections between Environmental Engineering and the Natural Sciences resulting in knowledge and skills needed to better understand and communicate issues impacting our global community.

4) Alternative School Break Service Trip

In January 2013, an Alternative School Break trip went to La Finca La Gran Vista in Costa Rica where they focused on sustainable agriculture. The project's aim was to spread awareness of environmentally sustainable agricultural methods to other farmers in the region. It is intended to provide an example for other farms of how the following practices can be employed successfully:

- Organic farming;
- Soil regeneration and conservation;
- Natural herbicides;
- Natural pesticides; and
- Enhancement of the natural environment

The website URL where information about the immersive program(s) is available

- http://sites.lafayette.edu/ewb/
- http://interim.lafayette.edu/programs/new-zealand-2015/
- http://www.lagranvista.com/projectoverview.html

Responsible Party

- Julia Nicodemus

Projected Points: 2/2

AC-6: Sustainability Literacy Assessment

The percentage of students assessed for sustainability literacy (directly or by representative sample) and for whom a follow up assessment is conducted:

- 0.0

The percentage of students assessed for sustainability literacy (directly or by representative sample) without a follow up assessment

- 40.3

A copy of the questions included in the sustainability literacy assessment

- See Attachment: Recycling Student Survey

A brief description of how the assessment was developed

- The assessment was developed in order to meet the goal of making Lafayette a more environmentally aware campus by developing an improved recycling program. Therefore the assessment was developed to specifically obtain information about student attitudes, knowledge and behaviors regarding recycling in general and about recycling at Lafayette College.

A brief description of how the assessment was administered

- In order to obtain a large sample size as well as a representative population, surveys were administered by professors during the class period. This method had several advantages. Firstly, the students were more likely to take the survey since a period of time was designated to it. This encouraged most students to respond to the survey, whereas other methods might only receive responses from students with an interest in recycling, thus reaching an unbiased population. Secondly, this method allowed for a representative population of students to be targeted across a breadth of academic majors. A variety of departments were represented, including the sciences, mathematics, foreign languages, English, engineering, economics, government/law, and anthropology/sociology. Finally, because students were more likely to take the survey during class versus during their free time, a large population of students was reached. To prevent students from being surveyed multiple times through different classes, professors were instructed to ask students to take the survey only if they had not already done so. In addition to surveys distributed in classes, a small (< 5%) percentage of students were surveyed randomly on campus and through friends and organizations

A brief summary of results from the assessment

- Overall Attitudes
    - About 32% of students either agreed or strongly agreed that they were satisfied with the recycling program at Lafayette. About 28% said that they disagreed or strongly disagreed that they were satisfied with the recycling program at Lafayette. About 40% of students said they were neither satisfied nor dissatisfied with the recycling program at Lafayette.
    - About 41% of students said they found it convenient to recycle, while about 30% disagreed with this statement. About 41% said that they were dissatisfied with the amount of receptacles on campus, while about 33% said that they were satisfied. About 37% were not satisfied with the amount of information available about recycling at Lafayette, while 23% were satisfied. About 48% do not believe that the student body takes recycling seriously, while 13% of students do think that the student body take it

seriously. About 30% of students do not believe that the administration take responsibility seriously, while 19% of students do think that the administration takes recycling seriously.

- Attitudes by Building Type:
    - Responses indicated that academic buildings, residence halls, and other buildings were rated relatively similarly as neither convenient nor inconvenient.
- Analysis of Knowledge
    - About 5% of students correctly identified all of the items that could/could not be recycled. About 60% of students correctly identified 6-8 of the 11 items. Batteries, ink/toner cartridges, electronics and pizza boxes were commonly misidentified as either recyclable or non-recyclable.
- Analysis of Behaviors
    - About 85% of students said that they often or always recycle when recycling is convenient. Only 29%, however, responded that they would recycle even when recycling was inconvenient. Batteries, ink/toner and electronics had a much lower rate of recycling, with only 13% of students saying that they recycling 75-100% of these items. Students responded that they recycled mixed paper, white paper and plastics/glass/aluminum more frequently, at about 42%, 45% and 58% respectively. About 84% pf students responded that they were more likely to recycle following the implementation of single-stream recycling on campus.

Responsible Party

- Julia Nicodemus

Projected Points: .9/4

AC-7: Incentives for Developing Courses

Not Pursuing

Projected Points: 0/2

AC-8: Campus as a Living Laboratory

Is the institution utilizing the campus as a living laboratory in the following areas?

Air & Climate	No
Buildings	No
Dining Services/Food	Yes
Energy	Yes
Grounds	Yes
Purchasing	No
Transportation	Yes

Waste	Yes
Water	Yes
Coordination, Planning and Governance	Yes
Health, Well-being and Work	No
Diversity & Affordability	Yes
Investment	No
Public Engagement	Yes
Other	No

A brief description of how the institution is using the campus as a living laboratory for Dining Services/Food and the positive outcomes associated with the work:

- Lafayette College has a Sustainable Food Loop through its community garden led by Sarah Edmonds, which uses the campus as a living laboratory by providing space for the production of food which is then consumed in the dining halls, which then give waste which is composted again on campus for use on the farm. All aspects of this have provided room for student learning and research into growing food, food recovery, composting, and sustainable land management.

A brief description of how the institution is using the campus as a living laboratory for Energy and the positive outcomes associated with the work:

- As part of the EGRS 480 Sustainable Solutions class in the Spring of 2012, taught by Julia Nicodemus, a group of 4 students majoring in Mechanical Engineering, Engineering Studies and Policy Studies participated in an energy audit of an off campus student house, Reeder House. As part of the project, the students gathered data on the house and from this data created an energy model on E-Quest (an energy building modeling program). The students compared the model to existing utility data, used the model to evaluate potential energy saving techniques. They then made recommendations to the college based on data they collected and based on the costs and benefits of the alternatives.

A brief description how the institution is using the campus as a living laboratory for Grounds and the positive outcomes associated with the work

- The pollinator garden is a completely student-run project through the campus organization SEES, the Society of Environmental Engineers and Scientists, advised by Arthur Kney. It came about after a series of Earth Month programs in the spring of 2014 centered on the implications and degree of pollinator decline. The garden will be about 500 square feet and planted with 9 different types of plants native to this region including wild geranium, red columbine and orange cone flowers. The garden will better educate the community about pollinator decline and native landscaping. SEES foresees the garden as a research opportunity and a centerpiece of Lafayette's ambitious sustainability initiatives.

A brief description of how the institution is using the campus as a living laboratory for Transportation and the positive outcomes associated with the work:

- As part of the EGRS 480 Sustainable Solutions class in the Spring of 2014, taught by Julia Nicodemus, a group of 4 students evaluated the parking plan, shuttle plan and other transportation systems on campus. As part of the project, the class surveyed students on their perceptions of how the parking/shuttle system worked and what sort of policies they would/wouldn't like to see on campus. The class performed a policy analysis, through which they evaluated alternatives based on existing criteria and made recommendations to Lafayette's Sustainability Committee.

A brief description of how the institution is using the campus as a living laboratory for Waste and the positive outcomes associated with the work:

- As part of the EGRS 480 Sustainable Solutions class in the Spring of 2014, taught by Julia Nicodemus, a group of 5 students (consisting of those majoring in Engineering Studies, Mechanical Engineering, Math and Physics) evaluated the existing recycling program on campus. They monitored bins on campus to track their contamination and surveyed students for current recycling behaviors and what they did/didn't like about the system. They did this in order to assess alternatives and make recommendations to the sustainability committee about recycling, which are being implemented around campus.

A brief description of how the institution is using the campus as a living laboratory for Water and the positive outcomes associated with the work:

- In 2013, study of water use in Lafayette's residence halls was done by two students and led by David Veshosky. Through this study, a survey was conducted of student water usage habits and water flow rates were measured. Using this data, a typical student's daily water usage profile was created to show that a typical student's daily water usage is 36.7 gallons, which is less than the US national average per capita of 60 gallons per day. This suggests they Lafayette students are more conservative than the national average. This study also showed that per capita water usage decreases as the occupancy in a residence hall increases and that about 30% of water consumption is due to sink usage. Therefore, this study was able to show where there is room for improvement in water conservation.

A brief description of how the institution is using the campus as a living laboratory for Coordination, Planning and Governance and the positive outcomes associated with the work:

- In January 2008, Lafayette College set out to minimize its effect on the environment by signing the American College and University's President's Climate Commitment (ACUPCC). This is a commitment to reduce greenhouse gases emissions and protect the environment by incorporating sustainability into research, operations and the curriculum. The most significant goal of this commitment is the Lafayette College Climate Action Plan, which outlines specific strategies that the College will employ to reduce GHG emissions by 2021.

A brief description of how the institution is using the campus as a living laboratory for Diversity & Affordability and the positive outcomes associated with the work:

- Landis, Lafayette's community outreach center, led by Amber Zuber, conducted a study of participation in their volunteer programs. Participants were broken up by gender, race and student involvement on campus (athlete/non-athlete, a part of Greek Life/not a part of Greek life, etc.). This study was able to tell the Landis center which demographic groups they needed to target in order to have a more diverse volunteer workforce.

A brief description of how the institution is using the campus as a living laboratory for Public Engagement and the positive outcomes associated with the work:

- An Engineering and Public Policy course, EGRS 251, taught by Professor Nicodemus, used a policy analysis to determine how best to make a street that runs next to their campus, safer for pedestrians and drivers alike. As part of this class, students talked to members of the community and researched methods of traffic calming, in order to assess the best alternative. In this way, students were able to use their studies to suggest alternatives to make their community a safer place for all.

Responsible Party
- Julia Nicodemus

Projected Points: 3.6/4

AC-9: Academic Research

Number of the institution's faculty and/or staff engaged in sustainability research: 24

Total number of the institution's faculty/staff engaged in research: 150

Number of academic departments (or the equivalent) that include at least one faculty or staff member that conducts sustainability research: 12

Total number of academic departments (or the equivalent) that conduct research: 37

Names and department affiliations of faculty and staff engaged in sustainability research:
Wendy Wilson-Fall- Africana Studies
Curlee Holton- Art
Greta Brubaker- Art
Edward Kerns- Art
Megan Rothenberger- Biology
James Dearworth- Biology
Nancy Waters- Biology
Roxy Swails- Chemistry
Lindsay Soh- Chemical Engineering
Arthur Kney- Civil Engineering
Michael McGuire- Civil Engineering
Joshua Wyrick- Civil Engineering
David Brandes- Civil Engineering
Anu Ghai- Economics
Rexford Ahene- Economics
Kristen Bernhardt- Engineering Studies
David Veshosky- Engineering Studies
Benjamin Cohen- Engineering Studies
Julia Nicodemus- Engineering Studies
Il Hyun Cho- Government and Law
Katalin Fabian- Government and Law
Robert Root- Mathematics
Jamila Bookwala- Psychology

Camille Qualtere- Spanish

A survey was sent out to the faculty asking whether or not they conducted research between Sept 2012-Aug 2013, Sept 3012-Aug 2014, or Sept 2014-Aug 2015 and if yes, was research they conducted sustainability focused in any of these three years. 75.8% of faculty responded to this survey.

Responsible Party:
Julia Nicodemus

Projected Points:
Part 1: 6/6
Part 2: 2.6/6
Total: 8.6/12

AC-10: Support for Research

Does the institution have a program to encourage student sustainability research that meets the criteria for this credit?

- No

Does the institution have a program to encourage faculty sustainability research that meets the criteria for this credit?

- No

Has the institution formally adopted policies and procedures that give positive recognition to interdisciplinary, trans-disciplinary, and multidisciplinary research during faculty promotion and/or tenure decisions?

- Yes

A brief description or the text of the institution's policy regarding interdisciplinary research

- Each department at Lafayette has scholarship guidelines that outline procedure for tenure review. The following are departments which state in their scholarship guidelines that they give positive recognition to multidisciplinary research during faculty tenure decisions. The relevant guidelines are also listed.
- Africana Studies- In considering candidates for tenure and promotion, the Africana Studies Program recognizes the interdisciplinary nature of the field of Africana Studies. We affirm that interdisciplinary has been a foundational aspect of Africana Studies and that such scholarship contributes to the strength and vigor of Africana Studies research, scholarship and teaching.
- Anthropology and Sociology- the department values publications in refereed journals in each discipline (e.g., Cultural Anthropology, Social Problems, Symbolic Interaction) as well as in refereed multidisciplinary journals (e.g. African Identities, Journal of Mediterranean Studies, Journal of Poverty, Society and Natural Resources).
- Electrical and Computer Engineering- It is expected that the primary focus of a faculty member's research will fall within a recognized sub-discipline of ECE. However, interdisciplinary research and engineering and education research that complement this primary focus can be a valuable component of a faculty member's scholarly portfolio.

- Environmental Studies: The Program values publications related to environmental topics broadly construed (urban/rural planning, environmental law, environmental ethics, environmental health, etc.) in refereed journals reaching disciplinary and multidisciplinary audiences (e.g., Society and Natural Resources, Global Environmental Change, Journal of Environmental Planning and Management, Journal of Environmental Management, Journal of Political Ecology).
- Film and Media Studies: As an interdisciplinary field, it is common for scholarly work in FAMS to move beyond and between established disciplinary boundaries-this fact is desirable and must be taken into account when identifying peer reviewers.
- Foreign Languages and Literatures: We also recognize that interdisciplinary research contributes to the vitality of scholarship, curricular development and teaching in the discipline.
- Music: Specific examples of significant scholarship in music might include interdisciplinary and/or collaborative research.
- Women and Gender Studies: We recognize that interdisciplinary scholarship contributes substantially to the vitality of women's and gender studies scholarship and teaching.

The website URL where information about the treatment of interdisciplinary research is available

- http://provost.lafayette.edu/scholarship-guidelines/

Does the institution provide ongoing library support for sustainability research and learning meets the criteria for this credit?

- No

Responsible Party

- John Meier

Projected Points: 1/4

AC-11: Access to Research

Not Pursuing
Projected Points: 0/2

Engagement

EN-1: Student Educators Program

Does the institution coordinate one or more ongoing student, peer to peer sustainability outreach and education programs that meet the criteria for this credit:

- Yes

Number of degree seeking students enrolled at the institution:

- 2503.0

Name of the student educators program:

- Eco-Reps

Number of students served (directly targeted) by the program:

- 1514.0

A brief description of the program, including examples of peer-to-peer outreach activities:

- The Lafayette College Eco-Rep program is an attempt to provide each residence hall with a "green RA," a presence in the community who encourages the residents to lead sustainable lifestyles. An example of an activity the Eco-Reps have done is having the residents decorate a personal recycling bin and educating the students on how and why to recycle.

A brief description of how the student educators are selected:

- There is an application process in order to choose Eco Reps. Questions in this application include:

  1) Why are you interested in becoming an Eco-Rep, and what do you hope to gain from the experience?
  2) What Residence Hall will you be living in next school year? (Fall 2014 - Spring 2015)?
  3) What sustainable initiatives and green living movements have you been involved at Lafayette and through outside organizations?
  4) Why is sustainability and environmental protection important to you?
  5) Describe any leadership roles or experiences you have held both at Lafayette and in the greater community.
  6) Describe an example program you could run to increase environmental awareness and promote sustainable living choices (feel free to list more than one if you would like).

A brief description of the formal training that the student educators receive:

- There is no formal training program for Eco-Reps. There is an orientation where Eco-Reps are told of their responsibilities.

A brief description of the financial or other support the institution provides to the program:

- The school does not provide financial support to the program. It does, however, support it morally. Residence Life has brought Eco-Reps in to talk to the RAs, and has matched the Eco Reps to the RAs who work in their respective communities.

Responsible Party:
Kira Lawrence

Projected Points: 2.4/4

EN-2: Student Orientation

The percentage of entering students that are provided an opportunity to participate in orientation activities and programming that prominently include sustainability

- 100.0

A brief description of how sustainability is included prominently in new student orientation.

- Lafayette offered an extended orientation meeting talking about different issues including environmental issues. As part of the environmental lecture there will be a series of activities to sign up for if the first year students wanted to including cleaning up along Bushkill and working at Lafayette's community garden, LaFarm. These lectures are not mandatory but open to all of the first years. In the coming years there will be a 4 year curriculum called Connected Communities that would be required. Part of this 4 year curriculum would be the First Year Seminar for new students with an additional lab hour a week that would be focused on a different topic each week, one of which would include sustainability.

The website URL where information about sustainability in student orientation is available.

- http://fye.lafayette.edu/orientation/

Responsible Party

- Paul McLoughlin

Projected Points: 2/2

EN-3: Student Life

Does the institution have one or more co-curricular sustainability programs and initiatives that fall into the following categories?

Active Student Groups focused on sustainability?

- Yes

Gardens, farms, community supported agriculture (CSA) or fishery programs or urban agriculture projects where students are able to gain experience in organic agriculture and sustainable food systems:

- Yes

Student-run enterprises that include sustainability as part of their mission statements or stated purposes:

- No

Student investment funds, green revolving funds or sustainable microfinance initiatives through which students can develop socially, environmentally and fiscally responsible investment and financial skills:

- No

Conferences, speaker series, symposia or similar events related to sustainability that have students as the intended audience:

- Yes

Cultural arts events, installations or performances related to sustainability that have students as the intended audience:

- Yes

Wilderness or outdoors programs that follow Leave No Trace Principles:

- Yes

Sustainability-related themes chosen for themed semesters, years or first year experiences:

- No

Programs through which students can learn sustainable life skills:

- Yes

Sustainability-focused student employment opportunities offered by the institution:

- Yes

Graduation pledges through which students pledge to consider social and environmental responsibility in future job and other decisions

- No

Other co-curricular sustainability programs and initiatives

- No

The name and a brief description of each student group focused on sustainability

- Society of Environmental Engineers and Scientists (SEES) - SEES, advised by Arthur Kney, is an organization with three main goals. First, S.E.E.S. provides a learning experience for interested students in the related fields of environmental science and engineering. Second, S.E.E.S. conducts research to help solve current environmental science and engineering problems. Third, S.E.E.S. seeks to promote environmental sustainability through community outreach and partnerships.
- Lafayette Environmental Awareness and Protection (LEAP) - LEAP, advised by Katalin Fabian, is Lafayette College's student environmental advocacy group. We are dedicated to making Lafayette a more sustainable institution and decreasing its ecological footprint. We are composed of students from all class years and all majors, and take advantage of our variety of perspectives to address a multitude of environmental concerns at Lafayette.
- The Lafayette Food and Farm Cooperative (LAFFCO) is a student organization that works to increase involvement and knowledge of our food and agricultural system. It also serves as the student branch of LaFarm.

The website URL where information about the student group is available

- http://sites.lafayette.edu/leap/
- https://sites.lafayette.edu/sees/

A brief description of gardens, farms, community supported agriculture (CSA) or fishery programs, and urban agriculture projects where students are able to gain experience in organic agriculture and sustainable food systems

- LaFarm, run by Sarah Edmonds, is one of several sustainability initiatives at Lafayette. LaFarm Community Garden & Working Farm is a site for teaching, research, outreach, growing healthy food and building community. Our daily work and our long term goals aim to build an understanding of the critical role of food and farming in environmental stewardship.

The website URL where information about the organic agriculture and/or sustainable food systems projects and initiative is available

- http://garden.lafayette.edu/

A brief description of conferences, speaker series, symposia or similar events related to sustainability that have students as the intended audience

- Lafayette College's 2014 Roethke Festival presented a two-day symposium focused on the hot-button issue of hydraulic fracturing, more commonly referred to as fracking. The symposium, "A Place for Fracking?" was free and open to the public. The events were meant to showcase the interdisciplinary nature of the issue of fracking. They included a round table discussion with

guest speakers who were photographers, novelists, and scientists, a community forum, and a keynote address delivered by author, biologist, and environmental activist Sandra Steingraber. Alix Ohlin, a professor at Lafayette College, helped to organize the event and link the campus and the community.

The website URL where information about the events is available

- http://calendar.lafayette.edu/node/11985

A brief description of cultural arts events, installations or performances related to sustainability that have students as the intended audience

- Lafayette College's William's Center for the Arts held the multimedia concert Documerica on September 5th, 2014. A meditation on the United States' relationship with the environment, the production features commissioned work by four composers, and new music by the members of ETHEL, all set against a backdrop of photographs from the archives of the Environmental Protection Agency's "Project Documerica" of the 1970s. The Director of the Performance Series at William's Center for the Arts is Hollis Ashby.

The website URL where information about the cultural arts events is available

- http://williamscenter.lafayette.edu/performance-series-2/chamber-music/

A brief description of wilderness or outdoors programs for students that follow Leave No Trace principles

- The Lafayette Outdoors Society (LOSt) is an organization that introduces students to the great outdoor recreation activities that the Easton area has to offer. Events include hiking/Camping, rock climbing, kayaking, cycling and running. LOSt follows Leave No Trace principles. The faculty advisor for LOSt is Cliff Reiter.

The website URL where information about the wilderness or outdoors programs is available

- http://sites.lafayette.edu/outdoors/

A brief description of programs through which students can learn sustainable life skills

- The TREEHouse special interest living group is located on in an off campus house that is still college-owned. The purpose of the living group is to establish a low-impact, environmentally-conscious culture. The members of the TREEhouse all live together, trying to be models of recycling, efficiency, and conservation – employing human ingenuity, innovativeness and resourcefulness to establish a virtually waste-less and environmentally friendly community. The members of the group help to develop a campus-wide consciousness about preservation of the environment and the group serves as a pilot for new campus-wide environmental and energy policy. The TREEhouse was previously an interest floor located in a residence hall on campus. Three years ago it was disbanded for a year and has been an off campus living leaning community (LLC) for the past three years. Grace Reynolds, in Residence Life, has information regarding all of the LLC's.

The website URL where information about the sustainable life skills programs is available

- http://sites.lafayette.edu/treehouse/

A brief description of sustainability focused student employment opportunities

- Through Lafayette's community garden, LaFarm, students work under Sarah Edmonds, the Farm Manager, to grow food using organic, small scale, sustainable practices and then help in selling

that food both to our Dining Halls and at a market for students and staff on campus. This both involves hands on labor and logistical office work.

Responsible Party

- Julia Nicodemus

Projected Points: 1.75/2

EN-4: Outreach Materials and Publication

Does the institution produce the following outreach materials and/or publications that foster sustainability learning and knowledge?

A central sustainability website that consolidates information about the institution's sustainability efforts.	Yes
A sustainability newsletter	No
Social media platforms that focus specifically on campus sustainability	No
A vehicle to publish and disseminate student research on sustainability	No
Building signage that highlights green building features	Yes
Food service area signage and/or brochures that include information about sustainable food systems	Yes
Signage on the grounds about sustainable grounds keeping and/or landscaping strategies employed	Yes
A sustainability walking map or tour	Yes
A guide for commuters about how to use alternative methods of transportation	Yes
Navigation and educational tools for bicyclists and pedestrians	Yes
A guide for green living and incorporating sustainability into residential experience	No
Regular coverage of sustainability in the main student newspaper, either through a regular column or a reporter assigned to the sustainability beat	No
Other sustainability publications or outreach materials not covered above	Yes

A brief description of the central sustainability website

- The sustainability website is a newly launched website for those interested to learn about the sustainability initiatives available at Lafayette. The websites lists and briefly describes the administrative and student-run groups on campus that focus on sustainability. It provides links to guidelines and procedures that focus on sustainability, such as the American College and

University's President's Climate Commitment, the Climate Action Plan, and the Campus Energy Policy. The websites showcases student and faculty research, community engagement, and other sustainable initiatives on campus.

The website URL for the central sustainability website

- http://sustainability.lafayette.edu/

A brief description of building signage that highlights green building features

- Lafayette's Grossman House, a LEED Certified building, has a GreenTouchscreen, through which viewers can read about tips to go green in their living environment and building info that highlights what constitutes a LEED building such as Grossman House. The GreenTouchscreen will also in the future monitor the electricity, domestic water, natural gas, and steam used in the building by year, month, week and day, so residents can monitor their usage and pinpoint areas of waste.

A brief description of food service area signage and/or brochures that include information about sustainable food systems

- Bon Appetite, Lafayette's food service provider, has put papers as centerpieces on the dining hall tables which highlight how their beef is prepared (given a 100% vegetarian diet, free of artificial colors, flavors and preservatives and certified Human by Humane Farm Animal Care. They also give out fliers about Farmworker Awareness Week, which celebrate the important contributions of farmworkers in creating food services for a sustainable future. It does so by advocating for safe working conditions, fair treatment under the law and dignity for farmworkers.

A brief description of signage on the grounds about sustainable grounds keeping and/or landscaping strategies

- There is a sign at Lafayette's community garden, LaFarm, run by Sarah Edmonds that describes its sustainability practices. The sign talks about the farm's effort to uphold environmentally, socially and economically sustainable farm practices. The farm uses a gravity-powered rainwater collection system. Their shed and other infrastructure is built from recycled materials. Lastly, students and community members learn organic gardening techniques that they can use for the rest of their lives.

A brief description of the sustainability walking map or tour

- This uses the regular map of the campus, pinpointing points around the campus with a sustainability focus. Such points include the green roof next to the engineering building, and our community garden and solar array at our sports field facility, Metzger Field.

The website URL of the sustainability walking map or tour

- http://facilitiesplanning.lafayette.edu/files/2009/10/Tour.pdf

A brief description of the guide for commuters about how to use alternative methods of transportation

- There is an app to tell you where the school shuttle is located at all times. This makes it easier for students to use the shuttle, and thereby encourages them to use mass transit instead of personal means of transportation.

The website URL for the guide for commuters about how to use alternative methods of transportation

- http://shuttle.lafayette.edu/download-the-app/

A brief description of the navigation and educational tools for bicyclists and pedestrians

- There is a map of Lafayette's campus that highlights all of the locations of bike racks around campus. This is helpful for bikers because it assures that those who bike here will know where they can best keep their bikes while moving from building to building.

The website URL for navigation and education tools for bicyclists and pedestrians

- http://facilitiesplanning.lafayette.edu/files/2010/06/Bike-Racks-Map-February-2012.pdf

A brief description of another sustainability publication or outreach material not covered above (1st material)

- Lafayette has a sustainability brochure, called Sustainable Practices at Lafayette, through which readers are informed about sustainability organizations on campus, sustainability on the campus' master plan, and green strategies used around campus.

The website URL for this material (1st material)

- http://facilitiesplanning.lafayette.edu/files/2010/01/sustainability-brochure.pdf

Does the institution produce another sustainability publication or outreach material not covered above? (2nd material)

- Yes

A brief description of this material (2nd material)

- Lafayette also has a recycling brochure, called Healing the Ecosystem: A Guide to Recycling, which outlines for readers what and where to recycle on Lafayette's campus.

The website URL for this material (2nd material)

- http://facilitiesplanning.lafayette.edu/files/2014/06/RecyclingBrochure2014-FINAL.pdf

Responsible Party

- Julia Nicodemus

Projected Points: 2/2

EN-5: Outreach Campaign

Has the institution held at least one sustainability-related outreach campaign directed at students within the previous three years that has yielded measurable, positive results in advancing sustainability?

- Yes

Has the institution held at least one sustainability-related outreach campaign directed at employees within the previous three years that has yielded measurable, positive results in advancing sustainability?

- Yes

The name of the campaign (1st campaign)

- Green Move Out

A brief description of the campaign (1st campaign)

- Green Move Out, led by Sarah Yencha from Residence Life, is a campus-wide sustainability and community service effort where students recycle their unused or gently used household items by donating them to local organizations. Items are collected at the end of the year, when many students throw out things such as coats, clothing, books and school supplies.

A brief description of the measured positive impacts of the campaign (1st campaign)

- In 2014, 6048 pounds of items were collected and donated to various community organizations. The greatest percentage of items collected were cleaning and bedding supplies, at 31%.

The website URL where information about the campaign is available (1st campaign)

- http://sites.lafayette.edu/gmo/

The name of the campaign (2nd campaign)

- Earth Week

A brief description of the campaign (2nd campaign)

- Every year, Lafayette puts hosts many speakers and events with a focus on the environment and sustainability, in order to celebrate Earth Week. These events are directed at both students and employees, and meant to educate about environmental activism and to celebrate such activism. The events are sponsored by student organizations and departments including LEAP, Alternative School Break Club, Biology Department, Health and Life Sciences Program, Chemical and Biomolecular Engineering Department, and Mechanical Engineering Department.

A brief description of the measured positive impacts of the campaign (2nd campaign)

- Past Earth Week events have included talks about student trips to Costa Rica and their study of sustainable agriculture, talks about student trips to North Carolina and their study of environmental injustice, talks from the Nurture Nature Center and about environmental outreach and the inaugural Robert ’69 and Margaret Pastor Lecture in International Affairs given by Jimmy Carter. The Engineering Studies Department, headed by Dru Germanoski and Kira Lawrence, was part of Earth Week programming.

The website URL where information about the campaign is available (2nd campaign)

- http://communications.lafayette.edu/2013/04/22/lafayette-college-celebrates-earth-week/

A brief description of other outreach campaigns, including measured positive impacts

- The student group, Lafayette Environmental Awareness and Protection (LEAP), advised by Katalin Fabian, tried to encourage student to reduce energy consumption within their residence halls. They ran an outreach campaign to get students to turn out light while not in use, unplugging electronics and chargers when they aren't needed, using cold water for laundry and shortening shower times. They gave out CFL light bulbs in the residence halls, to encourage students to install them in their rooms and therefore save more energy on lighting.
- Lafayette Take Back The Tap is a student movement to reduce the bottle water consumption on campus. So far, students have been collecting pledges signatures for two semesters and are at around 500. The pledge states that the signer will work to use a reusable water bottle and work to reduce their use of plastic ones. They have also performed taste tests in which the majority have always chosen tap water as the one they prefer. Last earth month they created a water bottle structure made of plastic water bottles to educate people on the issue. They also pushed

administration to remove water bottles from the meal plan in Lower Farinon dining hall. They have submitted multiple capital requests for a water refill station within Lower Farinon that we are still waiting to hear the results on. We had a very successful brown bag presentation on the marketing of bottled water. The faculty advisor is Arthur Kney.

Responsible Party

- Julia Nicodemus

Projected Points: 4/4

EN-6: Employee Educators Program

Not Pursuing

Projected Points: 0/3

EN-7: Employee Orientation

The percentage of new employees that are offered orientation and/or outreach and guidance materials that cover sustainability topics

- 100.0

A brief description of how sustainability is included in new employee orientation

- Representatives from Public Safety Plant Ops and the Sustainability Committee, including Jeff Troxell, the Supervisor of Environmental Health and Safety and Mary Wilford-Hunt, the Director of Facilities Planning and Construction and the head of the Sustainability Committee attend employee orientation. These representatives talk about the College's master plan, operations and recycling procedures and give employees the resources that they need to find more information on these topics.

Responsible Party

- Mary Wilford-Hunt

Projected Points: 1/1

EN-8: Staff Professional Development

Not Pursuing

Projected Points: 0/2

EN-9: Community Partnerships

Does the institution have at least one formal sustainability partnership with the local community that meets the criteria as “supportive”?

- No

Does the institution have at least one formal sustainability partnership with the local community that meets the criteria as “collaborative”?

- Yes

A brief description of the institution's collaborative sustainability partnership

- Lafayette College is a member of the LVAIC consortium, Lehigh Valley Association of Independent Colleges, along with five other Lehigh Valley Institutions. Lafayette College supports the LVAIC Sustainability Director's position. It also helps organize and participates in the bi-annual sustainability conference.

Does the institution have at least one formal sustainability partnership with the local community that meets the criteria as "transformative?"

- No

Responsible Party

- Mary Wilford-Hunt

Projected Points: 2/3

EN-10: Inter-Campus Collaboration

Does the institution collaborative with other colleges and universities to support and help build the campus sustainability community?

- Yes

A brief summary of papers, guides, presentations, and other resources the institution has developed to share their sustainability experience with other institutions

- The institution collaborated with Lehigh University in an energy competition. During this energy challenge, Lafayette collected data on the energy used in many residence halls throughout campus, in order to compare this data with Lehigh. There was a baseline collected in the months preceding the competition and the winner was selected based on whichever institution was able to reduce the most from this base line during the time period of the competition. The winner of the competition was announced at that year's Laf/Lehigh football game.

The names of local, state/provincial, regional, national, or international campus sustainability organization or consortia in which the institution participates and/or is a member

- Lafayette is a member of the Association for the Advancement of Sustainability in Higher Education (AASHE).
- Lafayette is a member of the Lehigh Valley Association of Independent Colleges (LVAIC), which contains a sustainability committee.
- Lafayette participates in an Eco-Reps program through which they allow students with a love of living green to teach their peers about what it means to live green in the residence halls. Kira Lawrence is the faculty advisor of the Lafayette chapter of Eco Reps. Eco Reps is a national organization.

A brief summary of additional ways the institution collaborates with other campuses to advance sustainability

Not Applicable

Responsible Party

- Julia Nicodemus

Projected Points: 2/2

EN-11: Continuing Education
Not Pursuing
Projected Points: 0/3.25

EN-12: Community Service
Number of students engaged in community service

- 425.0

Total number of students

- 2,486.0

Does the institution wish to pursue Part 2 of this credit (community service hours)?

- Yes

Total number of student community service hours contributed during a one-year period?

- 8,803.0

Does the institution include community service achievements on student transcripts?

- No

Does the institution provide incentives for employees to participate in community service?

- Yes

A brief description of the institution's employee community service initiatives

- Alternative School Break seeks to empower the Lafayette College community to create positive change and foster passion for civic engagement through break experiences that focus on service. In consultation with their supervisors, Alternative School Break (ASB) learning partners are employees of the College who are permitted to travel without using vacation time. Additionally multiple departments have made similar arrangements for hourly employees to participate on ASB trips.

The website URL where information about the institution's community service initiative is available.

- http://landiscenter.lafayette.edu/

Notes

- The number of community service hours were logged in 2014.

Responsible Party

- Amber Zuber

Projected Points: .85/5

EN-13: Community Stakeholder Engagement
Has the institution adopted a framework for community stakeholder engagement in governance, strategy and operations?

- Yes

A brief description of the policies and procedures that ensure community stakeholder engagement is applied systematically and regularly across the institution's activities

- The Easton Committee is a subcommittee of the External Affairs Committee of the Lafayette Board of Trustees. The purpose of the subcommittee is to encourage the development and implementation of programs that will improve and strengthen relations between Lafayette and the City of Easton.

A brief description of how the institution identifies and engages community stakeholders, including any vulnerable or underrepresented groups

- Lafayette engages community stakeholders through the Easton Committee. Lafayette uses this committee to ensure community stakeholder engagement is applied wherever possible.

List of identified community stakeholders
The members in the Easton committee are:
Chair of Lafayette Board of Trustees External Affairs Committee

- Vice Chair of Lafayette Board of Trustees Grounds and Buildings Committee
- Mayor of Easton
- President of the College Hill Neighborhood Association
- College Hill representative
- Lafayette College Chief of Staff
- Lafayette student representative
- Lafayette faculty representative
- Lafayette staff representative

Responsible Party

- Mary Wilford-Hunt

Project Points: 2/2

EN-14: Participation in Public Policy
Not Pursuing
Projected Points: 0/2

EN-15: Trademark Licensing
Not Pursuing
Projected Points: 0/2

EN 16: Hospital Network
Not Applicable
Projected Points: 0/0

Operations

OP-1: Greenhouse Gas Emissions

Does the institution's GHG emissions inventory include all Scope 1 and Scope 2 GHG emissions?

- Yes

Does the institution's GHG emissions inventory include all Scope 3 GHG emissions from any of the following categories?

- Business Travel - Yes
- Commuting - Yes
- Purchased goods and services - Yes
- Capital goods - No
- Fuel- and energy-related activities not included in Scope 1 or Scope 2 - Yes
- Waste generated in operations - Yes

Does the institution's GHG emissions inventory include Scope 3 emissions from other categories?

- Yes

A brief description of the methodology and/or tool used to complete the GHG emissions inventory

- A GHG Inventory was performed by Entech Engineering as a requirement for the Climate Commitment signed in 2008. The Clean Air - Cool Planet Calculator was used to track the GHG Inventory. This information was used to develop the Climate Action Plan.

Has the GHG emissions inventory been validated internally by personnel who are independent of the GHG accounting and reporting process and/or verified by an independent, external third party?

- Yes

A brief description of the internal and/or external verification process

- George Xiques, Assistant Director of Facilities and Campus Sustainability Manager, reviewed and verified the information submitted.

Start and end dates of the performance year and baseline year (or three-year periods)

- Performance Year: July 1st, 2012 - June 30th, 2013
- Baseline Year: July 1st, 2007 - June 30th, 2008

The website URL where the GHG emissions inventory is posted

- http://rs.acupcc.org/search/?institution_name=lafayette&carnegie_class=%3F%3F&state_or_province=%3F%3F

A brief description of the institution’s GHG emissions reduction initiatives, including efforts made during the previous three years

- According to the results, the principal sources of greenhouse gases are the purchased utilities of electricity, fossil fuels utilized by the central heating plant and transportation. Lafayette’s carbon footprint can be reduced in three basic ways:

- Efficiencies: Increasing the efficiency of equipment for current operations that produce high greenhouse gases, meaning reducing the current and future consumption of fossil fuels as a whole.

a. Building and system design (new buildings all reviewed and considered candidates for LEED design and/or accreditation)
b. Building and system operation (existing buildings will receive consideration for efficient modernization as budgets allow)
c. Central system operation (chilled water and electricity will receive consideration for efficient modernization as budgets allow)
d. Equipment purchasing and operation (all upgrades and replacements shall take full advantage of latest Energy Code recommendations) by performing energy analyses of current buildings and plant operations, recommendations can be made to reduce the impact of these contributors.

- Renewables: Switching to carbon-free sources of energy or energy sources such as wind, solar, geothermal, and biomass will continue to receive the attention of the campus planners with the intent to include whenever feasible.

- Offsets: Purchasing or producing carbon offsets either through tradable RECs or through more direct projects will be considered in the future. Offsets like the wind purchase are an intermediate technique, and should only be employed after improvements through efficiencies and renewables have been fully exploited. It would also be helpful to develop real incentives for investments in these strategies. This will be especially important in both revising the current scheme of utility cost allocation through individual building metering and in developing new techniques for funding such projects. To date, the College has a standing policy to make all possible efficiency improvements to the physical plant, prior to considering “accounting measures” such as RECs.

- Mitigation strategies for Lafayette College should be focused on its major sources of GHG emissions, which are purchased off-site utilities (including T&D losses), on-site steam plant fuel consumption and emissions. These operations offer the largest potential for mitigation efforts.

OP-1: GHG Emissions		
Part 1		
Part 1 Points	2	
Part 2		
	Performance	Baseline
Residential Students	2259	2139
Residential Employees	8	10
Hospital Bedspace	0	0
Full-time Equivalent Enroll	2403	2478
Full-time Equivalent Employees	733.7	679
Full-time Equivalent Distance Students	0	0
Weighted Campus Users	2919	2905
Scope 1 Emissions [MtCO2e]	7852.2	11599.3
Scope 1 other Emissions [MtCO2e]	399.2	355.2
Scope 2 Emissions [MtCO2e]	12948.2	14008.8
Sum [MtCO2e]	21199.6	25963.3
Part 2 Points	0.75	
Part 3		
Gross Floor Area [sq ft]		2000000
Lab Space [sq ft]		115443
Healthcare Space [sq ft]		5228
Other Energy Intensive Space [sq ft]		207256
EUI-adjusted Floor Space [sq ft]		2448598
Minimum Performance Threshold [MtCO2e/sq ft]		0.02
Adjusted Net Scope 1 & 2 [MtCO2e]		21199.6
Part 3 Points	2.27	
Total Points Earned	5.02	

Responsible Party:
George Xiques

Projected Points: 5.02/10

OP-2: Outdoor Air Quality
Not Pursuing
Projected Points: 0/1

OP-3: Building Operations and Maintenance
Not Pursuing
Projected Points: 0/4

OP-4: Building Design and Construction

Does the institution have any building space certified under the following green building rating systems for new construction and major renovations?

- LEED or another 4-tier rating system - Yes
- The DGNB system, Green Star, or another 3-tier GBC rating system - No
- BREEAM, CASBEE, or another 5-tier GBC rating system - No
- The Living Building Challenge - No
- Other non-GBC rating systems (e.g. BOMA BESt, Green Globes) - No

A brief description of the green building rating system(s) used and/or a list of certified buildings and ratings

- Grossman House: LEED-CI Gold

Total floor area of eligible building space (design and construction)

- 58,605.0 square feet

Floor area of building space that is certified at each level under a 4-tier rating system for new construction and major renovations used by an Established Green Building Council:

- Minimum Level (e.g. LEED Certified) - 0 square feet
- 3rd Highest Level (e.g. LEED Silver) - 0 square feet
- 2nd Highest Level (e.g. LEED Gold) - 11,934 square feet
- Highest Achievable Level (e.g. LEED Platinum) - 0 square feet

Floor area of building space that was designed and constructed in accordance with green building policies or guidelines but NOT certified

- 42,171 square feet

A copy of the guidelines or policies

- http://facilitiesplanning.lafayette.edu/files/2011/09/LC-Energy-Policies.pdf

The date the guidelines or policies were adopted

- March 1st, 2009

A brief description of the green building guidelines or policies and/or a list or sample of buildings covered

- The College developed a Campus Energy Policy after the adoption of the “American College & University Presidents Climate Commitment”. The Energy Policy stipulates that all new construction and major renovation will be built to minimum energy efficiency guidelines provided by the ASHRAE Standard 90.1 - Energy Efficient Design of New Buildings except Low Rise Residential Buildings. Additionally, "all construction efforts should consider LEED criterion applicability and application where warranted and possible."

A brief description of how the institution ensures compliance with green building design and construction guidelines and policies

- To ensure that the College is following the guidelines set forth by the college, it retains design professionals that are proficient in sustainable design and discuss green design initiatives throughout the project development process.

Responsible Party:

- Mary Wilford-Hunt

Projected Points: 0.93/3

OP-5: Indoor Air Quality
Not Pursuing
Projected Points: 0/1

OP-6: Food and Beverage Purchasing
Percentage of dining services food and beverage expenditures that are local and community-based and/or third party verified

- 25%

An inventory, list or sample of sustainable food and beverage purchases

OP 6

	AVG Monthly	x 9 months academic operation	AVG Yearly
Total FOOD SPEND	$ 372,503.97		**$ 3,352,535.73**
Total BEVERAGE SPEND	$ 40,432.39		**$ 363,891.51**
Total F&B SPEND	$ 412,936.36		**$ 3,716,427.24**

	AVG Monthly	x 9 months academic operation	AVG Yearly
Total F2F SPEND *local produce, meat, fluid dairy, beverages, artisan*	$ 51,806.81		$ 466,261.29
Total ECO SPEND *fish, seafood, cert org, rainf alli,*	$ 7,469.53		$ 67,225.77
Total FAIR SPEND *coffee, spices, chocolate*	$ 12,555.26		$ 112,997.34
Total HUMANE SPEND *ground beef, eggs, turkey*	$ 30,219.50		$ 271,975.50
			$ 918,459.90

25%

A brief description of the sustainable food and beverage purchasing program

- Bon Appetit's commitment to purchasing sustainable food and beverage is highlighted in our Flavor First Purchasing Strategy. The three objectives outlined in this strategy are as follows; 1. 100% adherence to our Circle of Responsibility (COR) Initiatives and Food Standards - which outline our sustainability initiatives regarding chicken, turkey, ground beef, shell eggs, fish and

seafood, milk, and yogurt; 2. Buy 20% of our food from vendors enrolled in our Farm to Fork program; 3. For all other purchases, buy preferred products through preferred suppliers.

- Our kitchen principles highlight our food standards that have been created to assure the highest level of food quality for our guests:
    - Menus are written based on seasonality and availability of regional fresh products. Whenever possible, there are produced locally using sustainable and organic practices.
    - Turkey and chicken are produced without the routine use of antibiotics as a feed additive.
    - Our ground beef is Certified Humane from cattle raised on vegetarian feed with no antibiotics or added hormones.
    - Milk and yogurt are from cows not treated with artificial Bovine Growth Hormone.
    - Shell eggs are produced cage-free and are certified by Humane Farm Animal Care, Food Alliance or Animal Welfare Approved.
    - All seafood purchases, wild and farmed, follow the sustainability guidelines of the Monterey Bay Aquarium's Seafood Watch Program. Seafood should be purchased fresh when available locally or frozen at the source to ensure quality, and never air-freighted.

A brief description of the methodology used to track/inventory sustainable food and beverage purchases

- The methodology used to track/inventory expenditures on animal products is calculated on both the corporate level through electronically reported item level data and also on the unit level through invoices that are analyzed by the local team.

Does the institution wish to pursue Part 2 of this credit (food and beverage expenditures for on-site franchises, convenience stores, vending services, or concessions)?

- No

The website URL where information about the institution's sustainable food and beverage purchasing efforts is available

- http://cafebiola.cafebonappetit.com/curious/

Responsible Party

- Sarah Fried

Projected Points: 1/4

OP-7: Low Impact Dining

Percentage of total dining services food purchases comprised of conventionally produced animal products

- 14%

A brief description of the methodology used to track/inventory expenditures on animal products

- The methodology used to track/inventory expenditures on animal products is calculated on both the corporate level through electronically reported item level data and also on the unit level through invoices that are analyzed by the local team.

Does the institution offer diverse, complete-protein vegan dining options at all meals in at least one dining facility on campus?

- Yes

Does the institution provide labels and/or signage that distinguishes between vegan, vegetarian (not vegan), and other items?

- Yes

Are the vegan options accessible to all members of the campus community?

- Yes

A brief description of the vegan dining program, including availability, sample menus, signage and any promotional activities (e.g. “Meatless Mondays”)

- Vegan dining options are offered at both of the cafeteria-style venues, Upper Farinon and Marquis, for every meal. These options are clearly marked at each food station with a green circle circumscribing "VG". Fully menus and examples signage can be found on the Dining Services website.

A brief description of other efforts the institution has made to reduce the impact of its animal-derived food purchases

- Bon Appetit's efforts to reduce the impact of its animal-derived food purchases is demonstrated through our Circle of Responsibility (COR) Initiatives. COR highlights our commitment when purchasing: chicken, turkey, ground beef patties, shell eggs, fish and seafood, milk, and yogurt. Between the years of 2002-2012, our commitment include:
- All seafood purchases are made in accordance with the Monterey Bay Aquarium's guidelines
- All of our milk comes from cows not treated with artificial bovine growth hormones (rBGH)
- Chicken and turkey is raised without antibiotics as a routine food or water additive
- Ground beef is "natural", our suppliers committed to using no antibiotics, no added growth hormones, and no animal byproducts in feed
- Extending our commitment of cage-free shell eggs to liquid eggs by 2015
- All pork we serve will be produced without gestation crate confinement systems by 2015.
- In addition, since 2008, all of our cafes take part in an annual 'Low Carbon Diet Day', which is an event that showcases our effort to reduce climate change through food choices. The Low Carbon Diet is Bon Appetit's program to reduce greenhouse gas emissions from food service operations, and to educate our staff and guests about how food contributes to climate change. On this one day, our cafes undergo a menu transformation that highlights sustainable items that will help to prolong the life of our planet.

The website URL where information about where information about the vegan dining program is available

- http://lafayette.cafebonappetit.com/

Annual dining services expenditures on food

- $3,716,427.24

Annual dining services expenditures on conventionally produced animal products

- $484,590.96

Annual dining services expenditures on sustainably produced animal products

- $474,102.36

OP 7

	AVG Monthly	x 9 months academic operation	AVG Yearly
Total FOOD SPEND	$ 372,503.97		**$ 3,352,535.73**

Total MEAT/FISH/DAIRY/EGG SPEND	$ 106,521.48		$ 958,693.32
Total SUSTAINABLY PRODUCED	$ 52,678.04		$ 474,102.36
Total CONVENTIONALLY PRODUCED	$ 53,843.44		$ 484,590.96

PERCENTAGE OF CONVENTIONALLY PRODUCED	14%

Responsible Party

- Sarah Fried

Projected Points: 2.07/3

OP-8: Building Energy Consumption

OP-8: Building Energy Consumption Part 1		
	Performance	Baseline
Total Building Consumption [MMBtu]	186981	209674.9
Grid-purchased electricity [MMBtu]	86944	98491.9
Source-site ratio (electricity)	3.14	3.14
District steam/hot water [MMBtu]	100037	111183
Source-site ratio (steam)	1.2	1.2
Source Energy [MMBtu]	393049	442684
Gross Floor Area [square feet]	2000000	1769473
Part 1 Points Earned	0.64	
Part 2		
Gross Floor Area [square feet]		2000000
Lab Space [square feet]		115443
Healthcare Space [square feet]		5228
Other Energy Intensive Space [square feet]		207256
Minimum Performance Threshold [MMBtu/sq ft]		0.000028
Adjusted Net Scope 1 & 2 [MMBtu]		186981
EUI-adjusted Floor Space [square feet]		2448598
Total Degree Days		6648
Part 2 Points Earned	1.97	
Total Points Earned	2.61	

Start and end dates of the performance year and baseline year (or 3-year periods):

- Performance Year: July 1st, 2012 - June 30th, 2013
- Baseline Year: July 1st, 2007 - June 30th, 2008

A brief description of when and why the building energy consumption baseline was adopted

- The building energy consumption baseline (2007-2008) was adopted to accurately assess future improvement made by the campus after signing the ACUPCC in 2008. Data were compiled as far back as 2005-2006, but 2007-2008 was the earliest year that was accurate and comprehensive enough to provide valuable comparisons.

A brief description of any occupancy and/or vacancy sensors employed by the institution

- Many closets, storage rooms, and restrooms through campus have occupancy sensors in place to turn the lights off if the room is vacant. An exact figure for the number of these sensors could not be found.

A brief description of the institution's program to replace energy-consuming appliances, equipment and systems with high efficiency alternatives

- The Climate Action Plan was put together in 2011 as the evaluation of the ACUPCC as well as a plan for the improvement of sustainability of the campus for many years to come. In the CAP, 485 Energy Conservation Measures were identified and recommended after an audit of 51 buildings. A timeline, funding, and itemized spending plan were established to complete these projects by 2022. They can be found in the Appendices of the Climate Action Plan.

The website URL where information about the institution’s energy conservation and efficiency initiatives is available

- http://facilitiesplanning.lafayette.edu/files/2012/04/Climate-Action-Plan-Including-Appendices.pdf

Responsible Party:

- George Xiques

Projected Points: 2.61/6

OP-9: Clean and Renewable Energy
Not Pursuing
Projected Points: 0/4

OP-10: Landscape Management
Not Pursuing
Projected Points: 0/2

OP-11: Biodiversity
Not Pursuing
Projected Points: 0/2

OP-12: Electronics Purchasing
Not Pursuing
Projected Points: 0/1

OP-13: Cleaning Products Purchasing
Not Pursuing
Projected Points: 0/1

OP-14: Office Paper Purchasing
Not Pursuing
Projected Points: 0/1

OP-15: Inclusive and Local Purchasing
Not Pursuing
Projected Points: 0/1

OP-16: Life Cycle Cost Analysis
Not Pursuing
Projected points: 0/1

OP-17: Guidelines for Business Partners
How many of the institution's business partners are covered by policies, guidelines and/or agreements that require adherence to minimum environmental standards?

- Some

How many of the institution's business partners are covered by policies, guidelines and/or agreements that require adherence to minimum standards governing employee wages, benefits, working conditions and rights?

- Some

The policies, guidelines, and/or agreements with the institution's business partners:

- In dealings with contractors for certain projects like construction, Lafayette demands its partners pay minimum wage and adhere to EPA and DEP regulations concerning environmental standards

Responsible Party: Roger Demareski

Projected points: 0.5/1

OP-18: Campus Fleet
Total number of vehicles in the institution's fleet*

- 60
  *Does not include maintenance, construction, or demonstration vehicles

Number of vehicles in the institution's fleet that are:

Type of vehicle	Number of vehicles
Gasoline-electric, non-plug-in hybrid	1
Diesel-electric, non-plug-in hybrid	0
Plug-in hybrid	0
100 percent electric	0
Fueled with compressed natural gas (CNG)	0
Hydrogen fueled	0
Fueled with B20 or higher biofuel for more than 4 months of the year	0
Fueled with locally produced, low-level (e.g. B5) biofuel for more than 4 months of the year	0

Responsible Party: Rosemary Bader
I determined the numbers above using the table below, provided to me by Associate Treasurer Bader. The vehicles highlighted in yellow are conventionally fueled and count toward the credit, the vehicle highlighted in red is an alternatively fueled and counts toward the credit.

Projected Points: 0.02/1

STATUS	VEH #	YEAR	MAKE	MODEL
OWNED	MP056	2004	CHEVY	VENTURE MINI VAN]
OWNED	MP136	1995	FORD	VERSALIFT BOOM TRUCK F650 MDL: SVH36PI
OWNED	MP031	1989	STOW	TRAILER
OWNED	MP058	2004	CHEVY	VENTURE MINI VAN
OWNED	MP061	2004	CHEVY	VENTURE MINI VAN
OWNED	MP063	2004	CHEVY	VENTURE MINI VAN
OWNED	MP033	1999	GMC	16' BOX TRUCK
OWNED	MP042	1995	GMC	DUMP TRK
OWNED	MP082	2003	GMC	S3500 CTWY VAN
OWNED	MP065	2004	CHEVY	VENTURE MINI VAN
OWNED	MP066	2004	CHEVY	VENTURE MINI VAN
OWNED	MP059	2004	CHEV	P/U TRK W/ PLOW
OWNED	MP067	2004	CHEVY	PICK UP W/ PLOW
OWNED	MP076	2005	CHEVY	SILVERADO 2500 TRK
OWNED				
OWNED	MP084	2005	CHEVY	SILVERADO 1500 TRK
OWNED	MP071	2005	CHEVY	12 PASS EXPRESS VAN
OWNED	MP072	2015	GMC	SAVANA VAN
OWNED	MP073	2015	GMC	SAVANA VAN
OWNED	MP074	2005	CHEVY	12 PASS EXPRESS VAN
OWNED	MP075	2015	GMC	SAVANA VAN
OWNED	MP088	2006	GMC	SAVANA VAN
OWNED	MP089	2006	GMC	SAVANA VAN
OWNED	MP069	2005	FORD	EXPLORER 4DR
OWNED	MP014	1978	INTL	TRACTOR
OWNED	MP131	2002	DEERE	TRACTOR/LOADER
OWNED	MP054	2014	FORD	POLICE INTERCEPTOR AWD
LEASED	MPYYY	2012	MAZDA	CX9
OWNED	MP095	2000	FORD	F-650 DUMP TRUCK
OWNED	MP093	2006	GMC	TERRA 3500 DUMP
OWNED	MP097	2015	GMC	SAVANA VAN
OWNED	MP098	2006	FORD	ECONOLINE VAN
OWNED	MP053	2007	FORD	500 SEDAN
OWNED	MP087	2005	DEERE	GATOR 4X2 TS
OWNED	MP094	2006	DEERE	GATOR 4X2
OWNED	MP096	2005	DEERE	727A ZTRAK MOWER
OWNED	MP102	2007	DODGE	CARAVAN MINI VAN
OWNED	MP108	2008	FORD	E-150 CARGO VAN

OWNED	MP046	2008	INT"L	4300 CHASSIS TRUCK
OWNED	MP130	2011	POLARIS	GEM ELECTRIC UTILITY CART
OWNED	MP050	2011	POLARIS	GEM ELECTRIC UTILITY CART
OWNED	MP135	2013	POLARIS	GEM ELECTRIC UTILITY CART
OWNED	MP107	2008	FORD	E-150 CARGO VAN
OWNED	MP037	1993	HUDSON	HSE16 SP TRAILER
OWNED	MP055	2014	FORD	UTILITY POLICE INTERCEPTOR AWD
OWNED	MP112	2008	DEERE	2520 MOWER
OWNED	MP070	2005	DODGE	GR CARAVAN MINI VAN
OWNED	MP017	1991	DEERE	1450 TRACTOR / LOADER
OWNED	MP121	2011	FORD	F350 4x4
OWNED	MP122	2010	DODGE	GR CARAVAN MINI VAN
LEASED	MP077	2014	SUBARU	LEGACY SD
LEASED	MP078	2014	SUBARU	LEGACY SD
LEASED	MP079	2014	SUBARU	LEGACY SD
OWNED	MP123	2011	GMC	SAVANA CARGO VAN
LEASED	MP083	2014	SUBARU	LEGACY SD
LEASED	MP080	2014	SUBARU	LEGACY SD
LEASED	MP081	2014	SUBARU	LEGACY SD
LEASED	MP025	2014	JEEP	GRAND CHEROKEE LAREDO
LEASED	MP023	2014	CHEVY	EQUINOX
OWNED	MP127	2012	DODGE	GR CARAVAN MINI VAN
OWNED	MP126	2012	DODGE	GR CARAVAN MINI VAN
OWNED	MP125	2011	CHEVY	EXPRESS 3500
OWNED	MP101	2006	DEERE	2020 A PRO GATOR MODEL 1400TC
OWNED	MP113	2008	DEERE	2420-01 9861M GATOR
OWNED	MP129	2012	FORD	TRANSIT CONNECT VAN
OWNED	MP110	2008	DEERE	GATOR
OWNED	MP124	2011	BOBCAT	S185 SKID STEER LOADER
OWNED	MP051	2012	FORD	FUSION HYBRID 4-DR SEDAN
OWNED	MP002	2013	CHEVY	EXPRESS 2500 VAN
OWNED	MP041	2013	GMC	SAVANA CARGO VAN
OWNED	MP133	2012	GMC	SIERRA 2500 TRUCK
OWNED	MP085	2013	BMW	535XI 4-DR SEDAN
OWNED	MP057	2013	FORD	TAURUS SEDAN
OWNED	MP052	2014	FORD	UTILITY POLICE INTERCEPTOR AWD
OWNED	MP034	2013	GMC	SAVANA CARGO VAN
OWNED	MP137	2014	FORD	TRUCK
OWNED	MP138	2014	FORD	E-350 12 PASS VAN

LEASED	MP005	2014	TOYOTA	HIGHLANDER
LEASED	MP024	2014	FORD	FUSION TITANIUM AWD
LEASED	MP139	2014	NISSON	PATHFINDER SV HYBRID
OWNED	MP018	2014	DODGE	GRAND CARAVAN
OWNED	MP015	1978	CLARK	FORKLIFT
OWNED	MPZZZ	1987	SP CONST	TRAILER
OWNED	No MP #	1987	WALKER	MDDGHS MOWER
OWNED	No MP #	1989	DEERE	935 MOWER
OWNED	No MP #	1995	KUBOTA	F2400 MOWER
OWNED	MP020	1998	CUSHMN	CART
OWNED	No MP #	1998	CLUB CAR	GOLF CART
OWNED	No MP #	2000	DEERE	1145 MOWER
OWNED	No MP #	2000	STOW	STATIC ROLLER
OWNED	No MP #	2000	CLUB CAR	GOLF CART
OWNED	MP086	2005	DEERE	0901TC 1600 TURBO MOWER
OWNED	No MP #	2005	RYAN	18" SOD CUTTER
OWNED	MP092	2006	DEERE	1445 MOWER 4X4
OWNED	MP100	2006	DEERE	GATOR TS 4X2
OWNED	MP109	2006	JLG	AERIAL PLATFORM 600A
OWNED	MP103	2007	DEERE	717A Z-TRAK MOWER
OWNED	MP111	2008	CLARK	FORKLIFT
OWNED	No MP #	2008	DEERE	7810A Z-TRAK MOWER WITH BAGGER
OWNED	No MP #	2008	DEERE	7810A Z-TRAK MOWER WITH BAGGER
OWNED	No MP #	2008	DEERE	7810A Z-TRAK MOWER WITH BAGGER
OWNED	MP114	2009	DEERE	1445 MOWER
OWNED	MP115	2009	DEERE	1445 MOWER
OWNED	MP116	2009	GIANT	LEAF VAC MODEL #3800023
OWNED	MP118	2010	DEERE	1445 MOWER
OWNED	MP119	2010	DEERE	GATOR
OWNED	MP120	2010	LT RICH	MOBILE FERTILIZER
OWNED	MP128	2011	DEERE	GATOR
OWNED	MP019	2013	SCAG	WALKING MOWER
OWNED	MP140	2013	DEERE	1445 MOWER W/PLOW

OP-19: Student Commute Modal Split

Total percentage of students that use more sustainable commuting options:

- 96.39

The percentage of students that use each of the following modes as their primary means of transportation to get to and from campus:

Commute Method	Percentage
Commute with only the driver in the vehicle	3.61
Walk, bicycle, or other non-motorized means	93
Vanpool or carpool	1.81
Take a campus shuttle or public transportation	1.58
Use a motorcycle, scooter or moped	0

A brief description of the methods used to gather data about student commuting:

- We sent out a survey to our student body that asked their primary method of going to and from classes (for students who live on campus) or their primary method of going to and from campus (for students who live off campus.) We received responses from over 15% of the student body with correctly proportional representation of the campus based on class year, academic division (humanities, social sciences, engineering, etc.) and involvement (in Greek life, athletics, etc.) More information about the survey is available in the Student Survey Appendix.

Responsible Party: Julia Nicodemus

Projected Points: 1.93/2

OP-20: Employee Commute Modal Split

Total percentage of the institution’s employees that use more sustainable commuting options:

- 38.6

The percentage of the institution's employees that use each of the following modes as their primary means of transportation to and from campus:

Commute Method	Percentage
Commute with only the driver in the vehicle	61.4
Walk, bicycle, or other non-motorized means	34
Vanpool or carpool	3
Take a campus shuttle or public transportation	0

Use a motorcycle, scooter or moped	1.6
Telecommute for 50 percent or more	0

A brief description of the methods used to gather data about employee commuting:

- We sent a survey out to all faculty that included a question asking them how they commuted to campus. We were supposed to be able to survey all staff as well to get more accurate data, but we were unable to get a listing of all staff members to send the survey to, so our data covers the faculty (professors) only.
  More information about the faculty survey can be found in the Faculty Survey Appendix.

Responsible Party: Julia Nicodemus

Projected Points: 0.772/2

OP-21: Support for Sustainable Transportation

Does the institution provide secure bicycle storage (not including office space), shower facilities, and lockers for bicycle commuters?

- No

Does the institution provide short-term bicycle parking (e.g. racks) within 50 ft. (15 m) of all occupied, non-residential buildings and make long-term bicycle storage available within 330 ft. (100 m) of all residence halls (if applicable)?

- No

Does the institution have a “complete streets” or bicycle accommodation policy (or adhere to a local community policy) and/or have a continuous network of dedicated bicycle and pedestrian paths and lanes?

- No

Does the institution have a bicycle-sharing program or participate in a local bicycle-sharing program?

- No

Is the institution certified as a Bicycle Friendly University by the League of American Bicyclists (U.S.) or under a similar third party certification covering non-motorized transportation?

- No

Does the institution offer free or reduced price transit passes and/or operate a free campus shuttle for commuters?

- Yes

A brief description of the mass transit program(s), (s), including availability, participation levels, and specifics about discounts or subsidies offered (including pre-tax options):

- Every day in the afternoon, a campus shuttle goes to and from 2 points on campus as well as a local shopping center with a parking lot for students, our student farm, and our off campus athletic fields. On the weekends it runs longer and drives to second shopping center, a mall, and a local movie theater.

Does the institution offer a guaranteed return trip (GRT) program to regular users of alternative modes of transportation?

- No

Does the institution participate in a car sharing program, such as a commercial car-sharing program, one administered by the institution, or one administered by a regional organization?

- Yes

A brief description of the car sharing program:

- Students can rent one of 2 cars through an online reservation system which will keep track of when each is available. There is a 25 dollar upfront fee to register to be part of the program and daily or hourly rates are set by our business partner, UHaul CarShare.

Does the institution have one or more Level 2 or Level 3 electric vehicle recharging stations that are accessible to student and employee commuters?

- No

Does the institution offer a telecommuting program for employees as a matter of policy or as standard practice?

- No

Does the institution offer a condensed work week option for employees as a matter of policy or as standard practice?

- No

Does the institution have incentives or programs to encourage employees to live close to campus?

- No

Does the institution have other incentives or programs to encourage more sustainable modes of transportation and reduce the impact of student and employee commuting?

- No

The website URL where information about the institution's sustainable transportation program(s) is available:

- http://publicsafety.lafayette.edu/lcat/
- http://news.lafayette.edu/2011/09/12/new-car-share-program-provides-students-with-a-convenient-inexpensive-way-to-get-around/

Responsible Party: Lisa Rex
Much of this information was found on Lafayette's websites, and the remainder was gotten from Lisa Rex and Jeff Troxel.

Projected Points: 0.5/2

OP-22: Waste Minimization

Waste generated:		
	2014	2007
Materials Recycled	68 tons	23 tons
Materials Composted	8 tons	0 tons
Materials Reused, Donated or Re-sold	3.2 tons	0 tons
Materials disposed in a landfill or incinerator	822 tons	773 tons
Figures needed to determine " Weighted Campus Users”:		
	2014:	2007:
Residential Students	2289	2203
Residential Employees	7	3
In-Patient Hospital Beds	0	0
Full-time Eq. Enrollment	2503	2403
Full-time Eq. Employment	758	679
Full-time Eq. Commuting Students	214	200
Start and End dates of the performance and baseline year:		
	Start Date	End Date
Performance Year	July 1 2013	June 30 2014
Baseline Year	July 1 2007	June 30 2008

A brief description of any programs employed by the institution to reduce residence hall move-in/move-out waste:

- Our Green Move Out program organizes donations of anything that is usable that would otherwise be thrown out by people moving off of campus at the end of each academic year. All of this is then donated to local community partners.

A brief description of programs and/or practices to track and reduce post-consumer food waste:

- We employ trayless dining at Lafayette

A brief description of the institution's provision of reusable and/or third party certified compostable to-go containers for to-go food and beverage items (in conjunction with a composting program):

- Lafayette has a system where students can fill a reusable to-go container at a dining hall and then bring it back later to be cleaned and exchanged for a clean container.

A brief description of any discounts offered to customers who use reusable containers (e.g. mugs) instead of disposable or compostable containers in to-go food service operations:

- When purchasing a hot beverage at an a la carte dining hall on campus, there is a discount for students/customers with reusable mugs.

A brief description of other dining services waste minimization programs and initiatives:

- Any food left on plates in our main dining halls is composted and sent to our student farm.

Responsible Party: George Xiques

Projected Points: 0.8/5
This is the case because our waste generation per campus user increased from FY 2007 to FY 2014, but our waste per campus user is less than the threshold of 0.45 tons.

OP-23: Waste Diversion
Materials diverted from the solid waste landfill or incinerator:

- 79.2 tons

Materials disposed in a solid waste landfill or incinerator:

- 822 tons

A brief description of programs, policies, infrastructure investments, outreach efforts, and/or other factors that contributed to the diversion rate, including efforts made during the previous three years:

- More recycling bins were purchased, more clear recycling signage was installed, the college has continued its composting program

A brief description of any post-consumer food waste composting program employed by the institution:

- All post-consumer food waste from our 2 main sit down dining halls is brought to a composting area to be composted and is then used on our student farm

Does the institution include the following materials in its waste diversion efforts?

Paper, plastics, glass, metals, and other recyclable containers	Yes
Food donations	No
Food for animals	No
Food composting	Yes
Cooking oil	Unknown
Plant materials composting	Yes

Animal bedding composting	No
Batteries	Yes
Light bulbs	Yes
Toner/ink-jet cartridges	Yes
White goods	Yes
Laboratory equipment	Unknown
Furniture	Yes
Residence hall move-in/move-out waste	Yes
Scrap metal	Unknown
Pallets	Unknown
Motor oil	Unknown
Tires	Unknown

Responsible Party: George Xiques

Projected Points: 0.26/3

OP-24: Construction and Demolition Waste Diversion
Not Pursuing
Projected Points: 0/1

OP-25: Hazardous Waste Management
Does the institution have strategies in place to safely dispose of all hazardous, special (e.g. coal ash), universal, and non-regulated chemical waste and seek to minimize the presence of these materials on campus?

- Yes

A brief description of steps taken to reduce hazardous, special (e.g. coal ash), universal, and non-regulated chemical waste:

- If in experiments using chemicals, the experiment can be scaled down while maintaining the same results, many professors will scale down the experiment to reduce chemical use. In addition, Lafayette allows departments to share their excess chemicals (e.g., if the chemistry department orders 100g of perchloric acid for an experiment and uses only 50g, if biology needs perchloric acid they can get extra from chemistry instead of purchasing their own.)

A brief description of how the institution safely disposes of hazardous, universal, and non-regulated chemical waste:

- Lafayette staff tags all hazardous waste with a label detailing the waste (its chemical makeup, amount, disposal methods, etc.) and then has a third party (Clean Harbors Environmental Services) dispose of the waste in a safe manner.

A brief description of any significant hazardous material release incidents during the previous three years, including volume, impact and response/remediation:

- None have occurred in the last three years

A brief description of any inventory system employed by the institution to facilitate the reuse or redistribution of laboratory chemicals:

- All academic departments using chemicals have an inventory system which has been digitized to allow information to be shared. All purchases must go through one person (the responsible party for this credit) who can reuse excess chemicals.

Does the institution have or participate in a program to responsibly recycle, reuse, and/or refurbish all electronic waste generated by the institution?

- Yes

Does the institution have or participate in a program to responsibly recycle, reuse, and/or refurbish electronic waste generated by students?

- Yes

A brief description of the electronic waste recycling program(s):

- For electronic waste generated by the college itself, our Information Technology Services (ITS) team collects all such waste, determines if it should be reused, donated to an outside institution, or recycled. If a device is to be reused, ITS will take necessary steps to wipe the device and otherwise refurbish it. If a device is to be donated or recycled, ITS arranges to have our Plant Operations team to deliver it to whichever outside group it is going to.

A brief description of steps taken to ensure that e-waste is recycled responsibly, workers' basic safety is protected, and environmental standards are met:

- We do not go to lengths to ensure these standards are met once the e-waste is delivered.

The website URL where information about the institution's hazardous and electronic-waste recycling programs is available:

- http://its.lafayette.edu/policies/recycling/

Responsible Party: Yvonne Noonan
The information for this credit was provided by three separate parties. In person, Hazardous Materials Technician and Chemical Stores Manager Noonan and Assistant Director George Xiques provided me with information about hazardous waste and e-waste recycling respectively. For the remaining information concerning ITS's e-waste program, a ITS help ticket was created and responded to by William Yox, Jason Rubright, and Hannah Tatu.

Projected Points: 1/1

OP-26: Water Use

Level of water risk for the institution's main campus as indicated by the World Resources Institute's Aqueduct Water Risk Atlas:

- Medium to High

Total Water Use:		
	2014:	2007:
Gallons:	43,080,825	39,289,148
Total Potable Water Use:		
	2014:	2007:
Gallons:	43,080,825	39,289,148
Figures needed to determine " Weighted Campus Users":		
	2014:	2007:
Residential Students	2289	2203
Residential Employees	7	3
In-Patient Hospital Beds	0	0
Full-time Eq. Enrollment	2503	2403
Full-time Eq. Employment	758	679
Full-time Eq. Commuting Students	214	200
Gross floor Area of building Space:		
	2014:	2007:
Square Feet:	1,769,473	1,735,959
Area of Vegetated Grounds:		
	2014:	2007:

Acres:	330	330
Start and End dates of the performance and baseline year:		
	Start Date:	End Date:
Performance Year:	July 1 2013	June 30 2014
Baseline Year:	July 1 2007	June 30 2008

A brief description of any weather-informed irrigation technologies employed by the institution:

- Lafayette employees a rainwater collection system on the roof of an operations building to feed into the irrigation of our 2 acre organic farm. Unfortunately there has been no tracking of the water collected or used through this system.

Responsible Party: George Xiques

Projected Points: 0/4
This is the case because our water use per campus user increased from FY 2007 to FY 2014

OP-27: Rainwater Management
Not Pursuing
Projected Points: 0/2

OP-28: Wastewater Management
Not Pursuing
Projected Points: 0/1

Planning and Administration

PA 1: Sustainability Coordination

Does the institution have at least one sustainability committee, office, and/or officer that focuses on sustainability broadly and covers the entire institution?

- Yes

A brief description of the activities and substantive accomplishments of the committee(s), office(s), and/or officer(s) during the previous three years

- Since 2013, Lafayette's Sustainability Committee has fostered sustainable initiatives such as the revamping and launch of the college's sustainability website, participated in hosting the Lehigh Valley Association of Independent Colleges Sustainability Conference, worked with academic departments to research many areas of sustainability including alternative transportation, recycling, STARS Rating System, and Nitrogen Footprint calculations. It has worked with Plant Operations on projects such as evaluating single versus dual stream recycling programs, implemented energy audit energy conservation measures, furthered the recycling of textbooks, batteries, printer cartridges and electronics, continued to support composting efforts. Finally, the Committee has had significant input in generating documents including greenhouse gas calculation, a campus wide energy audit, our climate action plan, and the college's energy policy.

Does the institution have at least one sustainability committee?

- Yes

The charter or mission statement of the committee(s) or a brief description of each committee's purview and activities

- The Lafayette College Sustainability Committee seeks to enhance the core mission of the college while expanding to the campus community and beyond. We wish to help ourselves, and all with whom we come in contact, to become more educated regarding the choices that that will enable us to become better stewards of our planet.
- It has been a standing committee since 2013 that meets monthly throughout the academic year with representation from the faculty, communications, plant operations, senior staff, facilities planning & construction, student body (LEAP, SEES, etc.), dining services (Bon Appetit), LaFarm, Lehigh Valley Association of Independent Colleges and others.

Members of each committee, including affiliations and role (e.g. staff, student, or faculty)

- Faculty:
    - David Brandes, Ben Cohen, Dru Germanoski, Arthur Kney, Steve Mylon, Julia Nicodemus, Megan Rothenberger
- Students:
    - Emily Crossette, Alexa Gatti, Chris Nelsen, Monica Wentz
- Administration:
    - Mary Wilford-Hunt, George Xiques, Sarah Edmonds, Sarah Fried, Katie Schimpf, Bonnie Winfield, Vince Condello

The website URL where information about the sustainability committee(s) is available

- http://facilitiesplanning.lafayette.edu/sustainability/campus-sustainability-organizations/sustainability-committee/

Does the institution have at least one sustainability office that includes more than 1 full-time equivalent (FTE) employee?

- No

Does the institution have at least one sustainability officer?

- Yes

Name and title of each sustainability officer

- George Xiques, Manager of Sustainability and Environmental Planning

A brief description of each sustainability officer position

- Member of the Campus Sustainability Committee (one of three staff/admin members, along with four faculty and four student members).
- As member of committee, report to committee regarding different metrics pertaining to waste stream management by the College.
- As member of committee, assist the committee members with the evaluation/assessment of current programs and their logistics, as well as any new potential/proposed programs. (All proposals shall address the College's "three pillars of sustainability" – regulatory/legal compliance, our commitment to a clean planet, and the economic considerations that go towards making the process "sustainable.")
- Coordinate committee requests with implementation by Plant Operations.
- Coordinate the handling of recyclable waste streams from campus.
- Coordinate the operation of the College's composting facility.
- Provide students with logistical information regarding the operation of the campus as it pertains to energy/resource consumption.
- Provide report to the City of Easton regarding the annual recycling quantities processed by the College.
- Provide periodic and annual reporting associated with the College being a signatory to the American College & University Presidents Climate Commitment.
- Any and all other tasks that may be assigned by the administration regarding campus sustainability.

Responsible Party: Julia Nicodemus

Projected Points: 1/1

PA-2: Sustainability Planning

Does the institution have current and formal plans to advance sustainability in the following areas? Do the plans include measurable objectives?

Area	Current and Formal Plans	Measureable Objectives
Curriculum	Yes	No
Research	Yes	No
Campus Engagement	Yes	Yes
Public Engagement	Yes	No
Air and Climate	Yes	No
Buildings	Yes	Yes
Dining Services/Food	Yes	Yes
Energy	Yes	Yes
Grounds	Yes	No
Purchasing	Yes	Yes
Transportation	Yes	Yes
Waste	Yes	Yes
Water	Yes	Yes
Diversity and Affordability	No	No
Health, Wellbeing, and Work	No	No
Investment	No	No
Other	No	No

Does the institution's strategic plan or equivalent guiding document include sustainability at a high level?

- Yes

A brief description of how the institution's strategic plan or equivalent guiding document addresses sustainability

- The Climate Action Plan is a comprehensive plan outlining specific strategies the college will employ to reduce GHG emissions and eventually achieve climate neutrality. The plan addresses the areas of Education, Research, Operations (Athletics, Transport, Dining, and Building initiatives). The immediate goals are: Within one year of signing the CAP (2011), Implement a selected set of energy conservation measures (ECMs) as part of the Campus Emissions Reduction Plan to reduce GHG emissions 20% from 2007 levels by 2021.
- By 2012, develop a monitoring and verification program to compare the predicted GHG emissions reduction from the implementation of the ECMs with the actual results. And within two years to set:
    - A target date for achieving climate neutrality,
    - Interim target goals and actions that will lead to climate neutrality,
    - Actions to make climate neutrality and sustainability part of the curriculum,
    - Actions to expand research or other efforts to achieve climate neutrality,
    - Mechanisms for tracking progress, and
    - Making the plan publicly available.

The website URL where information about the institution's sustainability planning is available

- http://rs.acupcc.org/site_media/uploads/cap/754-cap.pdf

Responsible Party: Mary Wilford-Hunt

Projected Points: 3.5/4

PA-3: Governance

Do all enrolled students, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)?

- Yes

A brief description of the mechanisms through which students have an avenue to participate in one or more governance bodies

- Lafayette College has an online, open election every fall semester to decide who from the student body becomes president, vice president, and the 15 representatives for the upcoming year.

Is there at least one student representative on the institution's governing body who was elected by peers or appointed by a representative student body or organization?

- Yes

A brief description of student representation on the governing body, including how the representatives are selected

- Students from the general student body submit applications to serve on Faculty Committees and Trustee Committees annually. The Vice President compiles this list and gives his/her recommendations to the appropriate chairs. Regular Representatives (elected) are also appointed to a multitude of governing bodies, both faculty and trustee.

Do students have a formal role in decision-making in regard to the following?

- Establishing organizational mission, vision, and/or goals - Yes
- Establishing new policies, programs, or initiatives - Yes
- Strategic and long-term planning - Yes
- Existing or prospective physical resources - Yes
- Budgeting, staffing and financial planning - Yes
- Communications processes and transparency practices - Yes
- Prioritization of programs and projects - Yes

A brief description of the formal student role in regard to each area indicated, including examples from the previous three years

- Establishing organization mission, etc.: Students have input on the College's mission through both student representatives on both Faculty and Trustee meetings as well as Student Government's formal and informal meetings with the Trustees, Faculty, and Administration. Student Government Representatives had significant input with the recent President Task Forces examining at enrollment size, which challenged the College to examine its mission and how it'd be affected by altering enrollment.
- Establishing new policies, etc.: Students have input on the College's programs and initiatives through both student representatives on both Faculty and Trustee meetings as well as Student Government's formal and informal meetings with the Trustees, Faculty, and Administration.

Three years ago, Student Government's approval was needed to codify language in the Student Handbook that banned unrecognized Greek organizations from campus. Student Government has also had significant involvement (mainly through chairing the respective committees) in the new Greek Recognition Process, Connected Communities Initiative, and Laf360 Initiative.

- Strategic and long-term planning: The Student Government President meets regularly with the Trustees (through his/her position as Board Associate) and the President of the College, in which issues falling under this category are frequently discussed. Student Government has also had significant involvement (mainly through chairing the respective committees) in the new Greek Recognition Process, Connected Communities Initiative, and Laf360 Initiative.
- Existing or prospective physical resources: Students have input on the College's use of space through both student representatives on both Faculty and Trustee meetings as well as Student Government's formal and informal meetings with the Trustees, Faculty, and Administration. Most recently, Student Government gave feedback on the proposed renovations to a dining hall; before that, Student Government had given feedback regarding renovation of other spaces, such as the Student Center, to the appropriate governing bodies.
- Budgeting, staffing, and financial planning: The Student Government President meets regularly with the Trustees (through his/her position as Board Associate) and the President of the College, in which issues falling under this category are frequently discussed. Further, student representatives serve on the Trustee Finance Committee. E.g., students had a voice in the creation of the Capital Campaign.
- Communications processes and transparency practices: The Student Government President meets regularly with the Trustees (through his/her position as Board Associate) and the President of the College, in which issues falling under this category are frequently discussed. Title XI disclosures and Cleary Act Notices were deliberated with the input of the Student Government President.
- Prioritization of programs and projects: Student Government representatives meet with regularly with a variety of different administrators and give them a sense of what is most needed by the students at any given time. Recent examples of this are the adoption of a mobile app for campus and the Greek Recognition Process.

Do all staff, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)?

- No

Is there at least one non-supervisory staff representative on the institution’s governing body who was elected by peers or appointed by a representative staff body or organization?

- No

Do non-supervisory staff have a formal role in decision-making in regard to the following?

- Establishing organizational mission, vision, and/or goals - No
- Establishing new policies, programs, or initiatives - No
- Strategic and long-term planning - No
- Existing or prospective physical resources - No
- Budgeting, staffing and financial planning - No
- Communications processes and transparency practices - No
- Prioritization of programs and projects - No

Do all faculty, regardless of type or status, have an avenue to participate in one or more governance bodies (through direct participation or the election of representatives)?

- Yes

A brief description of the mechanisms through which all faculty (including adjunct faculty) have an avenue to participate in one or more governance bodies

- All faculty at Lafayette are invited to monthly meetings of the faculty, where business is conducted following parliamentary procedure. However, while all faculty are invited to attend, only non-visiting Instructors, Assistant Professors, Associate Professors, Professors, and Librarians with professional status may vote. Further, those faculty have the right to speak repeatedly to an issue, a right not extended to other attendees of the meetings (though in practice this right has been offered to all in attendance). So, while all faculty may attend these meetings, adjuncts and visitors may not vote at them, and in practice they rarely actually attend.

Is there at least one teaching or research faculty representative on the institution's governing body who was elected by peers or appointed by a representative faculty body or organization?

- Yes

A brief description of faculty representation on the governing body, including how the representatives are selected

- The College's governing body is the Board of Trustees. The Board meets in committees, and most committees (all except the Executive, Steering, Audit, and Compensation Committees) have faculty representatives that are elected by the restricted body of faculty mentioned above. Further, that same restricted body of faculty elects the Clerk of the Faculty, who is able to go any committee meeting s/he chooses, and sits in the meeting of the full Board at the table. (The other faculty members present, the Provost and Deans, are seated behind the table with other administrators and so are less fully incorporated in the discussion.) However no faculty, elected or non-elected, have any vote in the Board's decisions. So the faculty representation on the Board is analogous to the representation of visiting and part-time faculty in the faculty's governing body. They have the power of persuasion only. In fairness, the faculty are much more engaged in the Board's meetings, and so in practice they offer far more input than the non-tenure-track faculty do in faculty meetings.

Do faculty have a formal role in decision-making in regard to the following?

- Establishing organizational mission, vision, and/or goals - Yes
- Establishing new policies, programs, or initiatives - Yes
- Strategic and long-term planning - Yes
- Existing or prospective physical resources - Yes
- Budgeting, staffing and financial planning - Yes
- Communications processes and transparency practices - Yes
- Prioritization of programs and projects - Yes

A brief description of the formal faculty role in regard to each area indicated, including examples from the previous three years

- The faculty has a committee structure that allows it to interact with the administration on all of these fronts. For special initiatives, like the creation of strategic plans, it is typical for the faculty to be solicited to create ad hoc committees or to provide representatives to all-campus

committees. For instance, when the college did its search for a new President, an all-college committee included a couple of faculty elected (as usual by the tenure-track faculty) to represent them. Among faculty committees, the most important for these matters is the Faculty Academic Policy Committee (known as FAP) that meets twice a month (twice as often as most committees). You can learn more about its responsibilities, and those of all faculty committees in the Faculty Handbook, publicly available at

- http://provost.lafayette.edu/files/2015/02/2014-15-Faculty-Handbook.pdf
- In section 5.4.3 (starting on page 67) there is an exhaustive description of the faculty committee structure, including the responsibilities of all the committees. If you are interested in the details of the distribution of the itemized responsibilities, in addition to FAP (5.4.3.8), I suggest that you read about the Athletics Committee (5.4.3.4), Diversity Committee (5.4.3.6), Enrollment Planning Committee (5.4.3.7), Faculty Compensation Committee (5.4.3.9), Student Life Committee (5.4.3.15), and the Retirement Committee (5.4.4.1). I believe that you will find all of the items mentioned above addressed in detail with the exception of "Communications" and "transparency." In practice, these are dealt with primarily by FAP, although the Enrollment Planning Committee has worked with the administration on the representation of the college to prospective students (meaning primarily the college's web site to the extent that it is used to recruit prospective students).

The website URL where information about the institution's governance structure is available

- http://provost.lafayette.edu/files/2015/02/2014-15-Faculty-Handbook.pdf

Responsible Party: Robert Root

Projected Points: 2/3

PA-4: Diversity and Equity Coordination

Does the institution have a diversity and equity committee, office, and/or officer tasked by the administration or governing body to advise on and implement policies, programs, and trainings related to diversity and equity on campus?

- Yes

Does the committee, office and/or officer focus on one or both of the following?

- Student diversity and equity – Yes
- Employee diversity and equity – Yes

A brief description of the diversity and equity committee, office and/or officer, including purview and activities

- The Office of Intercultural Development advances Lafayette's commitment to diversity and inclusion through educational outreach, cultural programming, support and advocacy of historically marginalized groups, and community building. It is our goal that students and employees will have numerous opportunities at Lafayette to develop their multicultural competence and to commit to lifelong learning about our world and its diverse citizens.

The full-time equivalent of people employed in the diversity and equity office

- 6

The website URL where information about the diversity and equity committee, office and/or officer is available

- http://intercultural.lafayette.edu/

Does the institution make cultural competence trainings and activities available to all members of the following groups?

- Students – Yes
- Staff – No
- Faculty – No
- Administration – No

A brief description of the cultural competence trainings and activities

- The Office of Intercultural Development, along with all its affiliated departments and organizations, offers an Intercultural Competency Certificate (ICC) program for all students. Participants in the ICC program attend a number of required programs and experiences, reflect upon the knowledge, awareness and skills acquired from those experiences, and complete a capstone project to synthesize their learning.

The website URL where information about the cultural competence trainings is available

- http://intercultural.lafayette.edu/icc/

Responsible Party: John McKnight

Projected Points: 1.25/2

PA-5: Assessing Diversity and Equity

Has the institution assessed diversity and equity in terms of campus climate?

- Yes

A brief description of the campus climate assessment(s)

- Lafayette retained consultant Sue Rankin and Associates to run an exhaustive campus climate study from 2009-2011. The final report was submitted to the College in June of 2011.

Has the institution assessed student diversity and educational equity?

- Yes

A brief description of the student diversity and educational equity assessment(s)

- See above

Has the institution assessed employee diversity and employment equity?

- No

Has the institution assessed diversity and equity in terms of governance and public engagement?

- Yes

A brief description of the governance and public engagement assessment(s)

- The professional staff in Intercultural Development (which includes Gender & Sexuality Programs, International Student Advising, Landis Community Outreach and Religious & Spiritual Life) are mentors and advisors to numerous individual students and student organizations. There are also many peer groups in each of these areas which provide support to underrepresented students including, but not limited to, the following: Asian Cultural Association, Association of Black Collegians, Association of Lafayette Feminists, Freethinkers Association, Hillel Society, Hispanic Society of Lafayette, Interfaith Council, Kaleidoscope (social justice peer educators), Lafayette DiscipleMakers Christian Fellowship, Muslim Student Association, Nia (multicultural women's support group), and Quest (gay-straight alliance).

Responsible Party: John McKnight

Projected Points: 0.75/1

PA-6: Support for Underrepresented Groups

Does the institution have mentoring, counseling, peer support, academic support, or other programs to support underrepresented groups on campus?

- Yes

A brief description of the programs sponsored by the institution to support underrepresented groups

- Lafayette has an organization called Kaleidoscope. It encourages Lafayette students to take an active role in promoting intercultural exchange and exploring issues of multiculturalism, equity, and social justice. The program challenges student educators and peer participants to think critically about their communities. Kaleidoscope has open meetings on a weekly basis to discuss current events and issues related to social justice. Any student on campus can be a part of the organization by showing up regularly for conversations. Faculty and staff are also welcome to attend.
- Lafayette also has a peer adviser program: groups of peers receive specific multicultural competency training and then work with all students.

The website URL where more information about the support programs for underrepresented groups is available

- https://intercultural.lafayette.edu/kaleidoscope/

Does the institution have a discrimination response policy and/or team (or the equivalent) to respond to and support those who have experienced or witnessed a bias incident, act of discrimination or hate crime?

- Yes

A brief description of the institution's discrimination response policy, program and/or team

- In cases where a violation has been determined to have occurred and it is deemed more likely than not that the respondent's actions were based on the actual or perceived identity of another individual or group of individuals (including, but not limited to, race, color, religion, sex, sexual orientation, gender identity and expression, national or ethnic identity, age, mental or

physical disability, veteran status, or pregnancy status) this information may be used by the case administrator or committee in determining an appropriate sanction.
- In addition, there is a Bias Response Team which is chaired this year by Chaplain Alex Hendrickson. More information on this team can be found if you follow the link below.

The website URL where more information about the institution's discrimination response policy, program and/or team is available
- http://studentlife.lafayette.edu/student-health-and-safety/bias-response-team-brt/

Does the institution offer housing options to accommodate the special needs of transgender and transitioning students?
- Yes

Does the institution produce a publicly accessible inventory of gender neutral bathrooms on campus?
- No

Responsible Party: Greg Meyer

Projected Points: 2/2

PA-7: Support for Future Faculty Diversity
Does the institution administer and/or participate in a program or programs to help build a diverse faculty that meet the criteria for this credit?
- Yes

A brief description of the institution's programs that help increase the diversity of higher education faculty
- Lafayette College is a member of the Consortium for Faculty Diversity at Liberal Arts Colleges, which invites applications for dissertation fellowships and post-doctoral fellowships from those who will contribute to increasing the diversity of member colleges. Please find more information here: http://www.gettysburg.edu/about/offices/provost/cfd/

Responsible Party: Robin Rinehart

Projected Points: 1/1

PA-8: Affordability and Access
Does the institution have policies and programs in place to make it accessible and affordable to low-income students?
- Yes

A brief description of any policies and programs to minimize the cost of attendance for low-income students
- Lafayette meets ~100% of need-based financial-aid. POSSE internship program brings in 10 low-income students from New York City and Washington, D.C. covering their full-tuition.

A brief description of any programs to equip the institution's faculty and staff to better serve students from low-income backgrounds

- Teagle Foundation Grant provided support for faculty to develop curriculum around questions around diversity, power, and privilege, including economic diversity, and to improve pedagogical approaches to diversity in the classroom. While the grant has ended, the Teagle faculty group remains active, meeting in a large group of 39 focusing on broad issues that pertain to Lafayette as a whole with regards to teaching and diversity, and small groups of five work shopping syllabi and teaching approaches around diversity.

A brief description of any programs to prepare students from low-income backgrounds for higher education

- No formal programs in place

A brief description of the institution's scholarships for low-income students

- Lafayette College partners with the New York City and Washington, D.C., chapters of The Posse Foundation and selects and awards full-tuition scholarships to 10 incoming low-income students from each city. Posse Scholars are required to file the FAFSA every year and any Federal/State grant eligibility will be considered part of the scholarship value.

A brief description of any programs to guide parents of low-income students through the higher education experience

- No formal programs in place

A brief description of any targeted outreach to recruit students from low-income backgrounds

- Lafayette has established strong partnerships with community based organizations and high school guidance counselors in many large, urban areas.

A brief description of other admissions policies or programs to make the institution accessible and affordable to low-income students

- No formal programs in place

A brief description of other financial aid policies or programs to make the institution accessible and affordable to low-income students

- No formal programs in place

A brief description of other policies and programs to make the institution accessible and affordable to low-income students not covered above

- No formal programs in place

Does the institution have policies and programs in place to support non-traditional students?

- Yes

A brief description of any scholarships provided specifically for part-time students

- Our numbers of non-traditional students are minimal, but one of the benefits of being a small college is we have the ability to work with students on a case-by-case to assess and meet their needs.

A brief description of any onsite child care facilities, partnerships with local facilities, and/or subsidies or financial support to help meet the child care needs of students

- Lafayette College Early Learning Center: 5% discount rates for students, faculty, and staff.

A brief description of other policies and programs to support non-traditional students

- Case-by-case basis (above).

Does the institution wish to pursue Part 2 of this credit (accessibility and affordability indicators)?

- Yes

Indicators that the institution is accessible and affordable to low-income students:

- The percentage of entering students that are low-income – 12.5%
- The graduation/success rate for low-income students – 91%
- The percentage of student financial need met, on average – 98.4%
- The percentage of students graduating with no interest-bearing student loan debt – 63.3

The percentage of students that participate in or directly benefit from the institution's policies and programs to support low-income and non-traditional students

- 2%

The website URL where information about the institution's affordability and access programs is available

- http://www.lafayette.edu/campus-life/living-on-campus/diverse-environment/

Responsible Party: John McKnight

Projected Points: 2/4

PA-9: Employee Compensation

Number of employees:

- 758.0

Number of staff and faculty covered by sustainable compensation standards, guidelines, or policies; and/or collective bargaining agreements

- 758

Does the institution have employees of contractors working on-site as part of regular and ongoing campus operations?

- Yes

Number of employees of contractors working on campus

- 70

Number of employees of contractors covered by sustainable compensation standards, guidelines, or policies and/or collective bargaining agreements

- 0

A brief description of the sustainable compensation standards, guidelines, or policies; and/or collective agreements covering staff, faculty and/or employees of contractors

- Lafayette College offers various benefit programs as part of a full-time employee total compensation package, including: medical, dental, life insurance, retirement, flexible spending accounts, paid and unpaid time off, disability insurance, worker's compensation insurance, and travel accident insurance.

Does the institution wish to pursue Part 2 of this credit (assessing employee compensation)?

- Yes

Number of staff and faculty that receive sustainable compensation

- 758

Number of employees of contractors that receive sustainable compensation

- 0

A brief description of the standard(s) against which compensation was assessed

- All compensation is assessed based on the minimum wage standards, employees are allowed basic needs and double the minimum wage standard.

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid regular, full-time employees

- Lafayette College offers various benefit programs as part of a full-time employee total compensation package, including: medical, dental, life insurance, retirement, flexible spending accounts, paid and unpaid time off, disability insurance, worker's compensation insurance, and travel accident insurance.

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid regular, part-time employees

- All compensation is assessed based on the minimum wage standards, employees are allowed basic needs and double the minimum wage standard.

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid temporary (non-regular) staff

- All compensation is assessed based on the minimum wage standards, employees are allowed basic needs and double the minimum wage standard.

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid temporary (non-regular, adjunct or contingent) faculty

- Lafayette College offers various benefit programs as part of a full-time employee total compensation package, including: medical, dental, life insurance, retirement, flexible spending accounts, paid and unpaid time off, disability insurance, worker's compensation insurance, and travel accident insurance. (The term "full-time faculty" designates all members of the Faculty as well as persons on full-time visiting faculty appointments.)

A brief description of the compensation (wages and benefits) provided to the institution's lowest paid student employees (graduate and/or undergraduate, as applicable)

- Federal Work Study students must be paid the federally mandated minimum hourly rate as outlined above and cannot be paid a flat rate of pay/stipend.

The local legal minimum hourly wage for regular employees
- 7.25

Does the institution have an on-site child care facility, partner with a local facility, and/or provide subsidies or financial support to help meet the child care needs of faculty and staff?
- Yes

Does the institution offer a socially responsible investment option for retirement plans?
- Yes

The website URL where information about the institution's sustainable compensation policies and practices is available
- http://provost.lafayette.edu/files/2015/02/2014-15-Faculty-Handbook.pdf

Responsible Party: Youngkin Rex, Lisa

Projected Points: ⅔
As a result of Lafayette not providing any evidence of having standards for our contractor's compensation packages, we will not get maximum points for this section.

PA-10: Assessing Employee Satisfaction
Has the institution conducted an employee satisfaction and engagement survey or other evaluation that meets the criteria for this credit?
- Yes

The percentage of employees (staff and faculty) assessed, directly or by representative sample
- 63

A brief description of the institution's methodology for evaluating employee satisfaction and engagement
- To foster a caring College community that provides leadership, for constructive participation in a diverse, multicultural world.
- To open the doors wider for underrepresented groups is to create a welcoming environment create a welcoming environment.
- To improve the environment for working and learning on campus.

A brief description of the mechanism(s) by which the institution addresses issues raised by the evaluation (including examples from the previous three years)
- The institution developed an action plan to respond to the issues and challenges raised by the campus climate employee satisfaction survey. They developed plans for meetings and a drop box for addressing questions and complaints about employee satisfaction.

The year the employee satisfaction and engagement evaluation was last administered

- 2010

The website URL where information about the institution's employee satisfaction and engagement assessment is available

- https://provost-archive.lafayette.edu/lafayette_college_dec_2_3.pdf

Responsible Party: Julia Nicodemus

Expected Points: 0.63/1

PA-11: Wellness Program

Does the institution make counseling, referral, and wellbeing services available to all members of the following groups?

- Students: Yes
  Staff: Yes
  Faculty: Yes

A brief description of the institution's wellness and/or employee assistance program(s)

- The Office of Human Resources has established the Lafayette Employee Wellness Program (LeWP), and intends to continue its ongoing efforts in advancing a culture of health and wellness promotion at the College.

The website URL where information about the institution's wellness program(s) is available

- http://hr.lafayette.edu/wellness/

Responsible Party: Julia Nicodemus

Expected Points: 1/1

PA-12: Workplace Health and Safety

Fill in the data:

	Performance Year	Baseline Year
Number of reportable workplace injuries and occupational disease cases	32	31
Full-time equivalent of employees	758	679

Start and end dates of the performance year and baseline year (or three-year periods)

	Start Date	End Date
Performance Year	--- January --- 1 --- 2013	--- December --- 31 --- 2013
Baseline Year	--- January --- 1 --- 2014	--- December --- 31 --- 2014

A brief description of when and why the workplace health and safety baseline was adopted-

- The workplace health and safety baseline was adopted in order to possibly improve the premium rates for insurance purposes year to year. Also, the baseline year was adopted to improve prevention rates from year to year.

A brief description of the institution's workplace health and safety initiatives

- Lafayette College is committed to protecting the environment, health and safety of all members of the campus community in its operations and activities. We further recognize an obligation to demonstrate safety and environmental leadership by maintaining the highest standards and serving as an example to our students as well as the community at large.

The website URL where information about the institution's workplace health and safety initiatives is available

- http://publicsafety.lafayette.edu/environmental-health-and-safety/policy/

Expected Points: 0.27/2

Responsible Party: Jeff Troxell

PA-13: Committee on Investor Responsibility
Not Pursuing
Projected Points: 0/2

PA-14: Sustainable Investment
Not Pursuing
Projected Points: 0/4

PA-15: Investment Disclosure

Does the institution make a snapshot of its investment holdings available to the public?

- Yes

The percentage of the total investment pool included in the snapshot of investment holdings

- 100

A copy of the investment holdings snapshot

- secure/821/6/616/4105/FINAL-Lafayette-Fin-Sts-FY-2013-14.pdf

The website URL where the holdings snapshot is publicly available

- https://finadmin.lafayette.edu/financial-reports/

Responsible Party: Roger Demareski

Projected Points: 1/1

Appendix C: Faculty Survey

Appendix C: Faculty Survey

1. Are you a member of the college faculty or staff

#	Answer	Bar	Response	%
1	Staff		8	4%
2	Faculty		198	96%
	Total		206	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.96
Variance	0.04
Standard Deviation	0.19
Total Responses	206

2. What is your name?

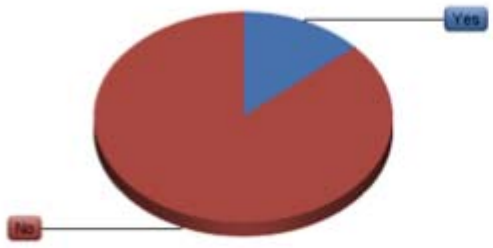
Statistic	Value
Total Responses	183

3. Choose the academic departments or programs you are a faculty member of.

#	Answer	Bar	Response	%
1	Africana Studies		2	1%
2	American Studies		1	1%
3	Anthropology and Sociology		6	3%
4	Art		9	5%
5	Asian Studies		4	2%
6	Biochemistry		0	0%
7	Biology		11	6%
8	Chemical Engineering		8	4%
9	Chemistry		10	5%
10	Civil Engineering		7	4%
11	Computer Science		6	3%
12	Economics		9	5%
13	Electrical and Computer Engineering		4	2%
14	Engineering Studies		4	2%
15	English		12	7%
16	Environmental Studies		1	1%
17	Environmental Science		0	0%
18	Film and Media Studies		1	1%
19	French		1	1%
20	Geology		4	2%
21	German		2	1%
22	Government and Law		8	4%
23	Government and Law & Foreign Language		1	1%
24	History		7	4%
25	International Affairs		2	1%
26	Mathematics		14	8%
27	Mechanical Engineering		12	7%
28	Music		4	2%
29	Neuroscience		2	1%
30	Philosophy		4	2%

31	Physics	6	3%
32	Policy Studies	0	0%
33	Psychology	8	4%
34	Religion and Politics	0	0%
35	Religious Studies	2	1%
36	Russian and East European Studies	2	1%
37	Spanish	7	4%
38	Theater	1	1%
39	Women's and Gender Studies	1	1%
	Total	183	

4. In the Fall 2012-Spring 2013, Fall 2013-Spring 2014 and Fall 2014-Spring 2015 semesters, have you taught one or more sustainability focused courses? (This may include theses, independent studies, etc.). Sustainability focused courses are courses in which the primary and explicit focus is on sustainability and/or on understanding or solving one or more major sustainability challenges. Sustainability includes environmental, social, and economic sustainability.



#	Answer	Bar	Response	%
1	Yes		24	13%
2	No		154	87%
	Total		178	

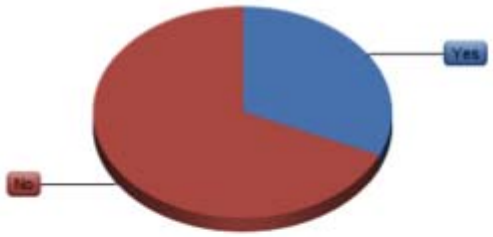
Statistic	Value
Min Value	1
Max Value	2
Mean	1.87
Variance	0.12
Standard Deviation	0.34
Total Responses	178

5. For each sustainability course that you have taught in the last three years, please list the course title(s), course number(s) and the semester(s) taught. If you teach more than one sustainability focused course, please include all that apply.

Text Response
EGRS 352: Energy Technology and the Modern World (Fall 2012, Spring 2014, Spring 2015) EGRS 482: Sustainable Solutions (Spring 2012, Spring 2014, Spring 2015)
VAST/CE 203 Sustainability of Built Systems CE 351 Water Resources Eng
Environmental Ethics, PHIL255, Spring 2012
EGRS 480, Spring 2013
Green Design Analysis, CHE 416, Fall 2014 Alternative Energy Sources, CHE 370, Spring 2015
Environmental Chemistry, CHEM 252, Fall 2014
Introduction to Aging Studies, AGS 201 (Spring 2014, Spring 2015); focus on social sustainability
Govt231: Global Environmnetal Politics, fall semesters
PHIL 155 Environmental Ethics
INDS 170 Modern Sub-Saharan Africa: Sustainable Natural Resources Management and Development ECON 354 Contemporary African Economics
FYS 141, The Mathematics of Social Justice Fall 2012 MATH 256/ECON 256 Evolutionary Game Theory Spring 2013
Ten Ways to Know Nature, FYS 18, Fall 2012, Fall 2013, Fall 2014 Technology and Nature, EGRS/EVST 373, Spring 2013, Spring 2014
REL 490 Capstone, spring 2013. This course is not necessarily about sustainability, but in this project, the student studied religious teachings and responses to GMOs.
BIOL 110 Edible Ethics - 2014, 2015 BIOL 272 Conservation - 2013, 2014 BIOL 341 Environmental Issues in Aquatic Systems - 2013
Thesis - EGRS 495-496 - Financing Strategies for Sustainable Rural Water Systems
VAST 244 - Examine current impacts of energy use/production, health care, and food production through the lens of the U.S. Tax Code ECON 303 - Income Tax Topics - study court cases pertaining to sustainability of individuals and corporations given current tax law and incentives provided to fund certain activities (i.e. energy credits provided to Oil & Gas exploration or Farm subsidies given to homeowners who purchased farm land that has now become residential property).
ChE 391, independent study on sustainability in the pharmaceutical industry
EVST 290 (former VAST 290) Climate Change: The Facts, The issues and The Long-Term View Spring 2013, Spring 2015 (a visitor taught the course Spring 2014 while I was on sabbatical using my notes). I am not sure I would say that the central theme of the course is sustainability in an explicit way. Because the course is directed at helping students understand a major global environmental problem (human induced climate change), which does involve the unsustainable use of fossil fuels for energy, I think this course could be deemed a sustainability course. But perhaps it would fit better in your next category?
VAST 203 Sustainability of Built Systems Spring 2013
Intro to the Environment EVST 100, F 2014, S 2015 Organizations and Environment EVST 230, F 2014 Food, Culture, and Sustainable Societies EVST 315, F 2014 Environmental Policy EVST 215, S 2015 Environmental Justice EGRS, S 2015
Fall 2012: INDS 332: TechClinic 1, Biol 401 Independent Research (student A), Biol 401 IndRes (Student B) Spring 2013: INDS 332: TechClinic 2, Biol 402 IndRes (Student A) (Student B), Biol 270: Special Topics in Environmental Biology. Summer 2013: Nalven Fellow Ind Res (Student C) Fall 2013: Biol 234 EnViBi, Biol 495: Honors Thesis Committee (Student D); CEE 495: Honors Thesis Committee (Student E) Spring 2014: Biol 496:Honors Thesis Committee (Student D)
Geol 110 Environmental Geology Sp 2013
AFS 330 Cowboys in Africa: Social Transformation and Environmental Justice
VAST 203 Sustainability of Built Systems (SP14)

Statistic	Value
Total Responses	24

6. In the Fall 2012-Spring 2013, Fall 2013-Spring 2014 and Fall 2014-Spring 2015 semesters, have you taught a class in which you include sustainability? Please do not include classes that you have identified as being sustainability focused above. (This may also include theses, independent studies, etc.)A course that includes sustainability is primarily focused on a topic other than sustainability, but incorporates a unit or module on sustainability or a sustainability challenge, includes one or more sustainability-focused activities, or integrates sustainability issues throughout the course. Courses can include sustainability even if sustainability is only discussed for a day.



#	Answer	Bar	Response	%
1	Yes		55	32%
2	No		118	68%
	Total		173	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.68
Variance	0.22
Standard Deviation	0.47
Total Responses	173

7. For each course you teach that includes sustainability, please list the course title(s), course number(s), the semester(s) taught and a brief description of how sustainability is included in the course. Please include all courses that apply.

Text Response
EGRS 251: Engineering and Public Policy (Spring 2012, Fall 2012, Spring 2013, Fall 2013, Fall 2014) -- 3-4 week unit on environmental and energy policy. PSTD 251: Introduction to Public Policy -- cross listed course with EGRS 251 so everything is exactly the same.
Geology 100: From Fire to Ice--an introduction to physical geology. Fall 2014 In discussions of physical geology and the natural world, we spend a fair amount of time thinking about natural resources (how we find, acquire, use and abuse them), the intimate connection between humans and our landscape, and the importance of sustainable practices in a finite world.
A&S 102 Introduction to Cultural Anthropology We discuss different ways of subsisting off the environment (foraging, extensive, intensive agriculture) and the number of people sustainable on the land with each subsistence system.
CE 451 Open Channel Hydraulics We are working on a project to improve the hydraulic and ecologic connectivity of the Musconetcong River.
Environmental Economics (Economics 202) Spring and Fall, 2014. I define sustainability, explain some of the rationales for it, present different views and models of sustainability, and explore policies for fostering it.
VAST 206 (Spring 2013): Sustainability of various HIV related interventions and support
CHE222, Thermodynamics I, Fall 2014 & Spring 2015 One of the topics classically taught in Thermodynamics is how to design a power plant and how to design an air conditioner. I place a particular focus on three elements of sustainability: (a) Power plants needs a source of heat, which is usually fossil fuels or nuclear power, that must be consumed for it to operate. (b) Power plants also require a substantial amount of *cooling water*, often taken from rivers, lakes, or oceans. The cooling water is heated by the process, and then simply sent back into the environment. We calculate the exact effect that this has on the average temperature of a fictional (but realistic) river. (c) Air conditioners remove heat from a building (like a house), and send that same amount of heat outside, PLUS some extra. I emphasize that an air conditioner is always sending MORE heat to the outside air than it is removing from the inside air. (d) I connect the two ideas: if a power plant heats up the environment to generate electricity, and an (electric) air conditioner heats up the environment to cool a house, then exactly how much heat are we constantly pumping into the atmosphere when our air conditioner is on?
EVST 254 - more focused on nature and the human relationship to nature, but of course biodiversity is an important consideration in sustainability, so to the extent that we are helping students to be more aware of nature, then there is a connection CE 421 - project-based course in which sustainability is an important constraint (e.g. we designed and built a solar-powered irrigation system at Metzgar)
In ES 101 we discuss the socio-technical practice of engineering design. The relationship between societal needs, social justice, and engineering design & products is explicitly discussed. The needs and welfare of ALL stakeholders must be acknoweldged and addressed by effective design; making life "better" for one consumer may have an adverse effect on others affected by the product (eg the iphone's different effects on, say, NYC and Beijing). Sustainability in the environmental sense is also discussed as an aspect of engineering design in ES 101: where do products go after they have served their purpose? How can an engineering designer consider this?
Biology 102 - project on invasive species
ES101: Engineering and the Global Energy Challenge, ES101 (one module of many in the engineering division), Fall 2013,2014 module on life cycle impact analysis in decision making for renewable energy comparisons
WGS 262 Women and Work in the Americas In this class we mostly address the intersectional gender-based inequalities surrounding work in the Americas. While we do not explicitly explore sustainability, we talk about different approaches (e.g. activism, court cases, policy) to ameliorate economic and social inequalities.
ME 478 Automatic Control and Mechatronics: Feedback control is used in automobile engines to reduce pollution and fuel consumption. Low power microprocessors are widely used to monitor electric power consumption. Hybrid vehicles depend upon controllers to function.
CHEM 222 Organic Chemistry
REL 224.01, Fall 2014, Religious Ethics. In this course issues of how humans use the planet is broadly discussed. Emphasis is placed on how different religious traditions affect the way in which human populations around the globe utilize the resources available to them, and how they share (and do not share them). Empahsis in this examonation is also placed on how environmental resources must be considered in deriving human ethical precepts.
IA 362 Capstone Seminar in IA (Spring 2013, 2014, 2015) The course focuses on globalization. While most people understand globalization in economic terms solely, this course also investigates the changes in politics, society, culture, and the environment. In terms of the environment we discuss transnational environmental movements, the effect of globalization on the environment, energy use, and global warming.
Adult Development and Aging; PSYC 234 (Fall 2012, 2013) - social sustainability Lifespan Development; PSYC 230 (Fall 2014) - social sustainability
HIST 105: History of the Modern World (Fall 2014) - approximately one class addresses the historical development and potential future social and economic consequences of present-day global environmental problems.
Govt231: Global Envrionmental Politics
ECON/PSTD 255 Multinational Business and Corporate Social Responsibility
Chemistry 121, 212/213 and 431 all mention sustainability at various times. The topic that comes up most often is renewable energy especially with a focus on hydrogen production from water splitting.
English 115: Science Fiction Issues of environmental sustainability arise in the assigned readings and discussions. WGS 353: Because this is a social justice WGS course with a community-based learning component, we frequently discuss how low-income individuals tend to live in areas where environmental pollution, etc. is rampant and where there is little concern for this.
ECE 492 - Senior Design Project
Spanish 102 Spring semester Two units: Unit 1 - A study of typical handicrafts that reflect the use of natural resources without wasting any components. Unit 2 - A study of the natural world with a focus on preserving and protecting it.
ChE 413: Reaction Kinetics and Reactor Design. A number of times throughout the semester, I discuss how reaction kinetics, catalysts and reactor design are crucial in helping to develop better materials and processes to help with our energy challenges and needs. I have an EXCEL scholar and an honors thesis that is focused on the cold flow properties of biofuels. Better understanding of these cold flow properties will allow for biofuels to be more integrated into colder environments such as winter in the northeastern United States.
Capstone Seminar in Engineering Studies, EGRS 451, Spring 2013, Fall 2013, Fall 2014 History of Technology, HIST 215, Spring 2014
REL102 Contemporary Religious Issues, taught frequently during this time period. We do a units that touch on religion and the environment.
ECON 252 - Intermediate Macroeconomics. We discuss the determinants of the long-term sustainable economic growth.
Spanish 211: Advanced Spanish (Fall 2013, 2014 and 2015). One of the four essays that we workshop in the course (this is a writing/composition course) focuses on environmental/socio-economic sustainability. The course studies the case of mining in Crucitas, Costa Rica. There was strong protest in the country over whether Infinito Gold, a Canadian mining company, should be allowed to mine in Costa Rica. We view a documentary on the subject and refelct on general sustainability themes. Students are then asked to write an argumentative essay on whether tourism is good or bad for specific Latin American countries (Cuba, Perú, Costa Rica, México). They are, however, asked to develop a more nuanced, complex position than simply "yes" or "no".
A&S 264 (Development, Aid & Activism) - S15 - We discuss the concept of sustainability in the context of international development projects.

Oceanography (Geology 205) Spring 2012 and a visitor taught this course using my notes in Spring 2014. The final project in this course is on human impacts on the oceans. In essence these are largely examples of how we are living in an unsustainable way when it comes to marine systems. We also do a case study and have done a field trip to the chesapeake bay, which is a estuarine system that human activities have had a major adverse impacts on.
SPAN 303, Spanish Civilization & Culture [Intro to the Cultures of the Iberian Peninsula] The course is not focused on sustainability, but exhaustion of resources (natural and human) is a recurring theme in Spain's imperial expansion and collapse.
CE472/CE3473
Twice I taught FYS 038: Animal Voices (Fall 2012 and Fall 2014). That course seeks (in part) to enlarge our thinking about sustainability beyond narrowly human interests. In 2014, we occasionally discussed extinction in connection with the first-year reading. In 2012, we talked about the resource demands entailed in "factory farms." In both 2012 and 2014, we spent one day talking about threats to nonhuman primates. We also spent a day discussing the views of various religions about human stewardship of the planet.
Govt 419 Global Governance, Spring 2014 and Spring 2015. The course has one week dedicated to the issue of the environment in global governance.
In my ENG 135 course, which I have taught both semesters of 2014 (Literature and Human Experience: Animal Stories), I have invited either an Env. Studies professor or a representative from Bon Appetit to come and teach one class meeting. I invite this person when we are reading a novel by Italo Calvino that addresses ethical and "aesthetic" frameworks relating to the use of animals as food. Questions of sustainability in relation to the meat industry/environment etc. also tend to come up regularly in discussions of our use of animals for food.
CE 321 - Introduction to Environmental Engineerring and Science
Biol 235 Evolutionary Biology. We discuss the role of genetic variation in natural populations in sustaining species and how lack of such variation can lead to extinction
Me 250
ChE 422-Design Synthesis Sustainability is incorporated in the senior design course through environmental analysis of the project being conducted, the groups aim to mitigate any waste streams and reduce environmental impacts of their processes.
Geol 210 Hydrogeology fall 2013 and Fall 2014 (some aspects of sustainable use of groundwater resources)
CE 42 CE 473 Senior Capstone Design I and II (AU14, SP15) CE 462 Slope Stability and Ground Improvement (SP15)
German 112, CRN 30310, Spring 2015 Stereotypes, cultural awarness (module) Environment, environmental protection (module)
Eng 202 Writing Seminar: Representing Animals. The focus isn't sustainability, but students spend about 3 weeks reading and writng about Jonathan Safran Foer's Eating Animals, and we do discuss environmental problems associated with factory farming.

Statistic	Value
Total Responses	55

8. In the Fall 2012-Spring 2013, Fall 2013-Spring 2014 and Fall 2014-Spring 2015 semesters, have you taught a class that has at least one sustainability learning outcome and is also a required course for a major. Sustainability learning outcomes are statements that outline the specific sustainability knowledge and skills that a student is expected to have gained and demonstrated by the successful completion of a unit, course, or program. Learning outcomes do not necessarily have to use the term “sustainability” to count as long as they collectively address sustainability as an integrated concept having social, economic, and environmental dimensions.

#	Answer	Bar	Response	%
1	Yes		18	11%
2	No		153	89%
	Total		171	

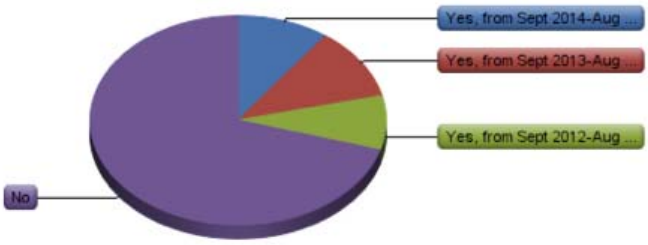
Statistic	Value
Min Value	1
Max Value	2
Mean	1.89
Variance	0.09
Standard Deviation	0.31
Total Responses	171

9. For each course you teach that has a sustainability learning outcome, please list the course title(s), course number(s), the semester(s) taught and the learning outcome(s). Please include all courses that apply.

Text Response
CHE222, Thermodynamics I, Fall 2014 & Spring 2015 - Please see previous response: one of the learning outcomes is a calculation of how much heat is sent to the environment for every degree we cool our house with an air conditioner.
VAST/CE 203 - yes CE 351 is taught each spring semester and has specific outcomes related to sustainability but I cant quote them to you
Green Design Analysis, CHE416, Fall 2014
See previous response for ME 478 Automatic Control and Mechatronics.
INDS 170 Modern Sub-Saharan Africa: Sustainable Natural Resources Management and development ECON 354 Contemporary African Economics ECON/PSTD 255 Multinational Business and Corporate social Responsibility
ECE 492 - Senior Design Project
ECON 252 - Intermediate macroeconomics. Taught in Fall 2013, Spring 2014, Fall 2014, Spring 2015. Use macroeconomic models to explain long-term growth and short term fluctuations. Use macroeconomic models to analyze the effect of macroeconomic shocks and policies on economic growth, inflation, unemployment and the business cycle.
Same course
BIOL 272 Conservation Biology - 2013, 2014 • describe the ecological principles underlying conservation biology and the interdisciplinary challenges involved in carrying out conservation in the real world, • apply knowledge of concepts and quantitative skills learned in lecture and lab to design solutions to conservation problems,
VAST 244, Sp 2013, Fall 2013 ECON 303 Fall 2014
EVST 290 - Spring 2013, 2015 (visitor 2014) One of th learning outcomes for EVST 290 is to "articulate the major challenges and some of the proposed strategies to addressing this [human induced climate change] global environmental problem." They are asked to explain how humans have disturbed the carbon cycle (an unsustainable practice) and we talk a bit about renewable energy sources as well as about living in a way that reduces ones ecological and carbon footprints.
CE472/CE473
CE 321
Me250
Geol 110 Environmental Geology Sp 2013 3. appreciate the limits of earth resources and hydrological systems to sustain life and absorb and contain the waste generated by humans,
AFS 330 Cowboys in Africa: Social Transformation and Environmental Justice LO 1) Students will be able to identify the major research questrions regarding ecological specialization in pastureland areas in Africa LO 2) Students know the major development and policy issues gvoernments in Africa engage regading nomadic and semi-sedentary communities 3) Students will understand the economic foundations of m obile herding societies in Africa
German 112, CRN 30310, Spring 2015 - ask and answer questions and participate in simple German conversations on topics beyond the most immediate needs; start, maintain and end a face-to-face conversation on topics beyond the immediate needs, e.g. express your plans, hopes and dreams for the future; identify main ideas in a limited number of topics presented on TV, radio, film and computer-generated; read consistently with full understanding longer connected texts dealing with personal and social needs ...;
Beginning Printmaking - ART 111 - 01 2013-2014 Spring, Fall 2014-2015 Spring, Fall In this class students will gain a greater understanding of traditional printmaking techniques such as monotype, intaglio and linoleum. Students will be instructed in the proper use of printmaking equipment and tools, including metal plates, acids, inks, grounds, and print papers. Class discussions throughout the semester will cover historical and contemporary artists using these mediums as well as class critiques of students' work. Students will be expected to learn basic printmaking techniques and execute them to the best of their ability. Students will be graded on technical and conceptual competence, ability to work responsibly in the print shop, class participation and attendance. Drawing I - ART 109 - 01 2013-2014 Spring, Fall 2014-2015 Spring, Fal The purpose of this course is to build students' foundation of drawing. Students will explore and examine a variety of techniques in depicting the figure, portraiture, objects in space and architectural structures. The course will examine historical examples of drawing techniques and approaches. It will include slide and media presentations, group discussions and field trips. The course will cover basic drawing techniques with a variety of drawing tools, and will enable students an opportunity to develop a personal means of expression. The first half of the semester will focus on acquisition of skills and experimentation with materials. The second half of the semester will explore subject matter, form, content and self-expression.

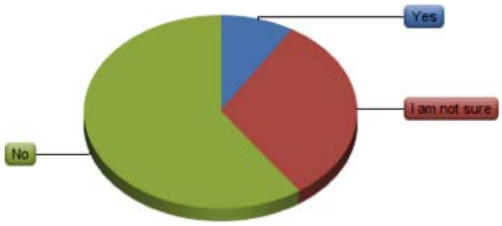
Statistic	Value
Total Responses	18

10. Was any of your research sustainability focused? (Please select all that apply)



#	Answer	Bar	Response	%
1	Yes, from Sept 2014-Aug 2015		18	12%
2	Yes, from Sept 2013-Aug 2014		20	13%
3	Yes, from Sept 2012-Aug 2013		15	10%
4	No		126	83%

11. Does your department have a departmental sustainability learning outcome?



#	Answer	Bar	Response	%
1	Yes		15	9%
2	I am not sure		54	32%
3	No		102	60%
	Total		171	

Statistic	Value
Min Value	1
Max Value	3
Mean	2.51
Variance	0.43
Standard Deviation	0.65
Total Responses	171

12. Please indicate the departmental sustainability learning outcome below.

Text Response
These are being updated now. The new outcome will be "Apply multi-discipli.nary perspectives to understand, formulate, analyze, and develop sustainable solutions for complex problems"
(c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
Students must be able to include principles of sustainability in design.
we have one program educational objective and one student outcome (IVd) see http://ce.lafayette.edu/areas-of-study/accreditation/ Note that we implemented our sustainability student outcome BEFORE is was required by ABET. They (ABET) now require it, so we were ahead of the curve
2. Demonstrate professional responsibility, addressing economic, sustainability, and environmental considerations in the solution of engineering problems in both local and global settings.
An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
"Apply multi-disciplinary perspectives to understand, formulate, analyze, and develop sustainable solutions for problems involving socio-technical issues"
Apply multi-disciplinary perspectives to understand, formulate, analyze, and develop sustainable solutions for complex problems
Demonstrate professional responsibility, addressing economic, sustainability, and environmental considerations in the solution of engineering problems in both local and global settings.
It is on the CEE website as one of the ABET outcomes
See CEE department homepage.
being rewritten currently, check with Kira Lawrence for new language
http://ce.lafayette.edu/areas-of-study/accreditation/
demonstrate professional responsibility, addressing social, cultural, economic, sustainability, and environmental considerations in the solution of engineering problems in both local and global settings

Statistic	Value
Total Responses	15

13. Does your program have a minor program/concentration that focuses on sustainability?

#	Answer	Bar	Response	%
1	Yes		8	5%
2	No		162	95%
	Total		170	

Statistic	Value
Min Value	1
Max Value	2
Mean	1.95
Variance	0.05
Standard Deviation	0.21
Total Responses	170

14. Please indicate the minor/concentration.

Text Response
View Biology is allied with Environmental Sciences/Studies
View Environmental Sustainability is a concentration in International Affairs
View IA has 6 areas of thematic concentration. One of these areas is "Global Environmental Studies".
View This is an independent interdisciplinary minor, not housed in a department : Aging Studies
View There is not an official minor; however, there is concentration in electives/research in renewable energy sources.
View The page will not let me move on if I do not answer this, and I do not know the correct answer at present. So chose the answer Yes because then I can provide you with this comment, and also if I were to guess I'd think my department (biology) might have that.
View See CEE Departmental Homepage - definintion of sustainability provided at beginning of survey is the core of what we do in civil engineering.
View Environmental Studies

15. Have you conducted research in the past 3 years?

#	Answer	Bar	Response	%
1	Yes, from Sept 2014-Aug 2015		139	82%
2	Yes, from Sept 2013-Aug 2014		142	84%
3	Yes, from Sept 2012-Aug 2013		138	82%
4	No		18	11%

Statistic	Value
Min Value	1
Max Value	4
Total Responses	169

16. Was any of this research sustainability focused?

#	Answer		Response	%
1	Yes, from Sept 2014-Aug 2015		18	12%
2	Yes, from Sept 2013-Aug 2014		20	13%
3	Yes, from Sept 2012-Aug 2013		15	10%
4	No		126	83%

17. How do you most often get to and from campus?

#	Answer	Bar	Response	%
1	Driving alone		103	59%
2	Walking		60	34%
3	Riding a bicycle		0	0%
4	Carpooling		6	3%
5	Taking public transportation		0	0%
6	Riding a motorcycle, motor scooter, moped		0	0%
7	Other (please describe)		7	4%
	Total		176	

Other (please describe)
I live 10 miles away so....
Walking when it's nice, carpool when it's not
scooter when I can (temps above 30, no rain). Otherwise I drive.
I walk when it is warmer but drive when it's slippery/icy becuse I live on a steep hill. In the past years I have also riiden my bicycle to school.
I am disabled/legs
driving alone truck or sometimes motorcycle weather permitting
I am retired and rarely come to campus.

Appendix D: Sustainability Course Inventory

Spring 2015: Sustainability Focused Courses

AGS 201: Intro to Aging Studies
Course description not offered for this course

ART 215: Land & Global Environment
In this sequel to Art 107 students explore specific frameworks and concepts. This course will explore unique and innovative approaches for using art as a catalyst to explore the interrelationships of the physical, biological, cultural, technological systems in our environment through a multidisciplinary approach. Students complete projects to reflect an understanding of these areas using a variety of materials including found objects and natural materials. Students' technical skills in the use of materials and tolls are expanded.

BIOL 110: Edible Ethics
In this Science Technology in Social Context (STSC) course, we will explore interactions between agricultural production, environmental quality, and human well-being. In addition to covering the science, technology, and ecology of food production, we will also discuss many important philosophical and ethical issues relating to food production and consumption such as pesticide usage, genetically modified food, animal welfare, and veganism. This course will enable identification of value conflicts and provide a framework for discussing them.

BIOL 238: Environmental Biology
While recognizing the interrelatedness among different areas of environmental science, this course focuses on how biological and ecological applications relate to environmental issues. Emphasis is on how the human population impacts ecosystem function, giving attention both to population regulation mechanisms and to disruption/conservation of ecosystem processes. Laboratory exercises focus on classical applied ecology as well as field excursions targeting policy and management issues

CE 203: Sustainability of Built Systems
This interdisciplinary seminar introduces students to a process for evaluating the sustainability of built systems in both the industrialized and developing worlds. The course addresses the historical, moral, and ethical foundations for the current sustainability movement as well as frameworks that can be used to determine the economic, environmental, and social-equity components of sustainability across the life-cycle of built systems. Throughout the course, we highlight large-scale examples of sustainable built systems.

CE 351: Water Resources Engineering
An introductory course in hydraulics, hydrology, and water resources engineering. Topics include groundwater and surface water supply, flow measurements, flow and pressure losses in pipe systems, probability concepts in design, open channel design including storm sewers and culverts, pump design, and detention basis design.

CE 425: Water Supply and Pollution Control
Application of basic principles to the design of water and wastewater systems. Process design and equipment selection for water and wastewater treatment facilities.

CHE 370: Alternative Energy Sources
Course description not offered for this course

EGRS 230: Environmental Justice
This interdisciplinary course explores the intersection of social justice and environmental stewardship in an attempt to understand the various dimensions of the environmental justice movement and how it affects modern society. Students will be exposed to humanities, social sciences, and environmental science/engineering aspects relevant to the topic.

EGRS 352: Energy Tech & Modern World
This course examines the role of energy and energy technologies in the United States and the world. Energy from fossil fuels, nuclear power, and renewable resources is covered. Topics include world resources and recovery of fossil fuels, energy conversion technologies and impacts, nuclear energy and waste disposal, role of energy in global climate change, and emerging renewable energy technologies. Economic and policy issues are integrated with a technical introduction to the energy field.

EGRS 480: Sustainable Solutions
Sustainable solutions developed for a complex, real-world project by small groups of multidisciplinary students directed by a faculty advisor, or team of faculty advisors. All projects include significant technical and non-technical challenges, and do not have a well-defined solution procedure.

EVST 100: Intro to the Environment
An Interdisciplinary course that introduces students to the major issues in environmental studies. We emphasize the importance of analyzing environmental issues from a comprehensive systems approach. The course focuses on the interaction of natural, socioeconomic, political, and ethical systems, using case studies to highlight the need to examine environmental issues from multiple perspectives. Case studies include: "clean" coal, ocean depletion policy, and energy and transportation systems and the environment. Case studies are likely to change from year to year.

EVST 215: Environmental Policy
This course examines the ways policy seeks to promote environmental value in our complex and changing world. Students will be introduced to the contemporary environmental policy landscape, as well as the politics of environmental decision-making. We will examine and critique policy-making processes, policy actors and influence, dominate policy strategies for environmental change, and environmental policy analysis frameworks. We will draw upon case studies from multiple environmental and political contexts to explore class concepts.

EVST 290: Climate Change
The Scientific community has explored modern climate change for decades, yet only recently has this issue emerged in the consciousness of the broader society. This writing-intensive, discussion-based seminar will consider the scientific evidence that has climate experts concerned about the future, as well as the significant economic, moral, political, and social issues that human-induced climate change raises. We will explore the challenges as well as the proposed solutions for addressing this global environmental problem.

GEOL 110: Environmental Geology
From human perspective on the earth’s surface, the planet appears almost infinite. From an Apollo spacecraft, however, earth is simply a larger spaceship with more resources, but nonetheless finite. The

course examines the interplay between land-use activity and geologic processes such as flooding, shoreline erosion, and soil erosion. Students explore groundwater resources, geological constraints on waste disposal, and impacts of resource utilization, such as acid rain and the greenhouse effect.

HIST 252: Transformation of the American Environment
This course examines the relationship of environment (and environmental change) to American history. Topics include the impact of colonial settlement and 19th century industrial expansion on the environment; the effect of transportation technologies on land use; the conflict between environmental protection and conservation as exemplified in the progressive era battle over construction of Hetch Hetchy Dam in Yosemite National Park; and the origins of environmental movement of the 1960-70's.

INDS 211: Interdisciplinary Seminar Life Sciences
Interdisciplinarity in sciences and engineering is no longer the exception as traditional divisions between disciplines erode. Some of the most exciting research in science and engineering is currently happening in the whitespace between disciplines. This course intends to introduce to students to high impact interdisciplinary topics through a combination of primary literature, discussions, and lectures from some of today's high impact academics.

INDS 222: Engineers without Borders Practicum
This 0.5 credit course is available to students actively participating in either the management of or the development of technical or socio-cultural solutions for Engineers without Borders service-learning projects. For the former, students should be members of the leadership board and participate in weekly board meetings and other EWB activities. For the latter, significant work on a technical or socio-cultural project must be completed. Grading for this course is pass-fail. This course may be repeated up to four times for credit.

INDS 322: Technology Clinic
A small group of selected students work together with faculty mentors to solve a real-world problem proposed by an industrial or government sponsor, addressing the social, technological, and economic factors relevant to a solution. Students work on campus as a team and at times independently and on-site with the sponsors.

INDS 170: Modern Sub-Saharan Africa
This course combines a firsthand look at the sociocultural environment and natural resources that shape development and change in Kenya and Tanzania. Particular attention is devoted to the rich indigenous history and traditions that provide social and economic purpose for art, the foundations for democratic institutions, support for dignity, industriousness, and accommodation for development. This course examines the degree to which Kenya and Tanzania have achieved their development objectives by managing cultural acculturation, natural resources, and modernization

PHIL 155: Environmental Ethics
This course will begin with a brief presentation of prominent ethical theories and concepts important to debates in environmental policy. We will apply these theories and concepts to a range of environmental issues, including population growth, sustainability and our responsibilities to future generations, animal rights, food ethics, and climate change. In addition to reading, discussing and writing about rigorous academic material, students will be required to engage on a practical level with some environmental cause.

WGS 262: Women and Work in the Americas
What is work? Who does it and in what capacity? And how does gender influence ideas about and practices of women's and men's labor? In this course we will analyze these questions in specific contexts across the Americas from Argentina to the United States. We will study women's productive and reproductive labor from an intersectional perspective that take into account not only gender but also class, race, ethnicity, sexuality, life stage, and migration status.

Spring 2015: Courses That Include Sustainability

A&S 264: Development, Aid and Activism
Course description not offered for this course

ART 102: Introduction to Art History II
This course is organized like Art 101, but deals with painting, sculpture, and architecture from the Renaissance to the present.

BIOL 102: Introduction to Biology
An introduction to the scientific study of life and basic biological principles. Emphasis is on the properties of living systems, their variety, their relationships in space and time to each other, evolution and the environment
CE 341: Transportation Systems
Technical and policy related aspects of transportation systems. Topics include traffic analysis and control, traffic flow theory, geometric design, capacity analysis and level of service, transportation demand analysis, and transportation planning. Computer applications. Design projects include oral presentations and written reports.

CE 451: Open Channel Hydraulics
Application of fluid mechanics principles to flow in open channels. Uniform, gradually varied, rapidly varied, and unsteady flow conditions are analyzed and applied to a variety of practical problems. Both laboratory and computer models are employed.

CE 462: Slope Stability and Ground Improvement
This course applies the basic principles of soil mechanics to the analysis of the stability of slopes, walls, dams, and levees. The use of various ground improvement technologies, including geotextile reinforcement, to improve stability and solve construction problems are considered. Includes significant use of computers for analysis. Oral presentation and written reports are required

CHE 222: Thermodynamics
Fundamental thermodynamic relationships and their application to non-reactive chemical engineering systems. Equations of state involving ideal and non-ideal behavior. Estimation and use of thermodynamic properties. Analysis of open systems.

CHE 321: Unit Operations
Course description not offered for this course

CHE 360: Drug Delivery

Mathematical analysis of transport phenomena in biological systems, including pharmacokinetic modeling, diffusion and kinetics of biochemical reactions. Analysis of current drug delivery systems through problem solving, discussion of peer-reviewed literature, and laboratory experiences.

CHEM 212: Inorganic Chemistry
Introduces the theories of atomic structure and bonding in main-group and solid-state compounds. Common techniques for characterizing inorganic compounds such as NMR, IR and Mass Spectrometry are discussed. Descriptive chemistry of main group elements is examined. Conductivity, and magnetism, superconductivity and an introduction to bio-inorganic chemistry are additional topics in the course. In lieu of the laboratory, students pick a project on a topic of their choice.

CHEM 213: Inorganic Chemistry w/ Lab
Same as Chemistry 212 plus one three-hour laboratory per week, which includes experience in the synthesis, purification, and characterization (infrared and electronic spectroscopy, magnetic susceptibility, NMR, cyclic voltammetry, and x-ray powder diffraction) and properties of inorganic compounds.

ECON 252: Intermediate Macroeconomic
An examination of aggregate economic activity focusing on the forces that determine the behavior of real GDP, interest rates, and the price level. Economic growth, fluctuations, unemployment, and inflation are analyzed along with alternative policies for dealing with them.

ECON 255: Multinational Business and Corporate Social Responsibility
Strategic corporate social responsibility (CSR) is about how a company resolves the dilemmas around its core product or service, how that product is produced, and how and to whom it is marketed. In effect, multi-national corporations which have a business model that uses profit to fuel constant innovation in new products, now have to include, for example, programs to reduce emissions, carbon trading, fair trade practices and differential pricing of general drugs in poor developing countries that demonstrate the potential for CSR; others illustrate the continuing limitations. The object of this course is to make students aware of international business situations that require moral reflection, judgment and decision, while revealing the complexities that often surround business choices and the formation of public policies. Learning through cases of irresponsible actions as well as responsible behavior, the course focuses attention on the study of International Business circumstances in which hard choices must be made under complex conditions of uncertainty and disagreement.

ECON 300: Industry, Strategy, Policy
This course serially examines the major sectors of the global economy using the tools of economic theory. For each sector, students analyze current market conditions and trends, financial performance, critical challenges, and relevant public policies.

ENG 115: Science Fiction
Science Fiction examines short stories, novels, and films by some of the leading practitioners of the genre. The course considers the genre from literary, cultural, historical, and scientific perspectives

ES 231: Nature of Materials
Nature and properties of metals, ceramics, polymers, and other materials in engineering applications. Interpretation of the mechanical, physical, and chemical properties from the viewpoint of scientific disciplines.

GERM 112: Intermediate German
Review of fundamental principles of grammar and syntax and expansion of vocabulary with short literary and cultural readings. Attention to improving reading, sharpening conversational skills, and developing a deeper understanding of the culture of Germany and other German-speaking countries.

GOVT 419: Global Governance
This seminar explores the main actors and processes of global governance. We will assess the role of power, international institutions, transnational networks, and ideas. Specific topics of inquiry include global economic governance, the environment, third-world state building, international justice, military intervention, nuclear proliferation, and global terrorism. We will apply competing analytical approaches to different issue areas, as they intersect with the nature and management of global governance in the 21st century. Satisfies exposure to international politics subfield.

IA 362: Capstone Seminar in IA
Designed as a capstone seminar to provide an opportunity for the major to bring together, through research and the completion of several papers, his or her various experiences in the discipline. Normally the seminar explores a topic or topics of current international interest through an interdisciplinary approach.

Sustainability of Water Systems
Course description not offered for this course

SPAN 102: Elementary Spanish
This sequence is for beginners, covering the fundamentals of spoken and written language through the development of reading, writing, speaking, and listening skills.

SPAN 303: Spanish Civilization & Culture
An interdisciplinary exploration of the Iberian Peninsula's civilizations and cultures as reflected in its history, literature, peoples, politics, and arts. Topics range from Spanish Unification in 1492 through the rise and fall of Spain as an imperial power.

Fall 2014: Sustainability Focused Courses

BIOL 272: Conservation
This course provides students with an introduction to the scientific basis of modern conservation biology and the application of these principles to conservations problems around the world. To understand the complexities involved in making conservation decisions, we will read from many sources, have class and small group discussions, and engage in debate. The objective of the laboratory portion of this course is to provide students with practical, problem-solving experiences in conservation biology beyond the classroom.

BIOL 332: Advanced Aquatic Ecology
Students gain familiarity with function and structure of freshwater ecosystems and ecological analysis of biota and abiotic parameters beyond the intermediate level by examining complex interrelationships and synthesizing findings according to theoretical models. Laboratory/practicum and lecture/seminar are fused by offering this course on our "floating laboratory" pontoon boat at Merrill Creek Reservoir,

NJ. Students acquire skills and master techniques by interfacing with naturalists at MCR, enabling them to design, develop, propose and execute a research project with recommendations for environmental management, culminating in presentations to an open Program at the MCR Nature Center.

CE 321: Introduction to Environmental Engineering
This course introduces the student to applications of engineering principles to a variety of environmental topics. The topics will revolve around local issues within the Bushkill Watershed, therefore we will adopt a watershed approach to better understand the various topics. Topics include environmental chemistry, hydrology, risk assessment, water supply and pollution control, solid and hazardous wastes, and environmental management. Laboratories consist of field trips, computer modeling exercises, sample collection, and chemical analysis methods.

CE 361: Geotechnical Engineering
An introductory course in soil mechanics and geotechnical engineering. Studies include the classification, permeability, consolidation, and strength of soils in lecture and laboratory settings. Written reports for laboratory and design results are required. Discussion of traditional design methods in foundation engineering is included.

CE 472: Senior Capstone
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than one possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline.

CHE 416: Green Design Analysis
Course description not offered for this course

CHEM 252: Environmental Chemistry
This course discusses the chemical principles underlying natural processes and the ways in which human activity affects those processes. Sources, sinks, and interactions of important environmental compounds are investigated.

ECON 303: Income Tax Topics
This course introduces students to the concepts and intricacies of federal income tax policies. Students learn to recognize the major transactions inherent in business and financial transactions.

ECON 354: Contemporary African Economies
Analysis of the contemporary economic environment in Africa: political sociocultural identity and economic structure, trends in public and private capital flows, African regional and international economic institutions, trade development and relations with world markets, investment concessions and risk, with case illustrations from African countries.

ENG 351: Environmental Writing
This course is designed to engage students in advanced writing about nature and the environment. A central focus of the course will be an examination of the language and rhetoric used to describe these crucial issues in various popular, government, and scholarly contexts.

EVST 100: Introduction to the Environment
An Interdisciplinary course that introduces students to the major issues in environmental studies. We emphasize the importance of analyzing environmental issues from a comprehensive systems approach. The course focuses on the interaction of natural, socioeconomic, political, and ethical systems, using case studies to highlight the need to examine environmental issues from multiple perspectives. Case studies include: "clean" coal, ocean depletion policy, and energy and transportation systems and the environment. Case studies are likely to change from year to year.

EVST 255: Rivers & Society
Course description not offered for this course

EVST 310: Organizations & Environment
As environmental concern deepens, the landscape of organizations seeking to redress environmental degradation has become more complex. Students in this course will examine and evaluate diverse organizational forms and strategies for promoting environmental value. We will cover environmental activism, governmental natural resource agencies, environmental non-governmental organizations, international environmental institutions, and discuss the emergence of “green" business. Students will ground their learning in community-based learning projects with local and regional environmental organizations.

EVST 363: Environment and Film
Course description not offered for this course

EVST 315: Food, Culture and Sustainable Societies
We ask, critically, what sustainable and just mean in relation to food and why it matters - and what "culture" has to do with it. To do so we merge well-established studies and work in the anthropology of food with (1) environmental studies of alternative food systems and urban gardening/farming. (2) Studies from political ecology engaging a range of analysis on food, (3) critical food studies, which considers race/class/gender/globalism in the context of food.

FYS 018: 10 Ways to Know Nature
This class is a study of the different ways we interact with and thus know the natural environment. These ways include, among others, the scientific, technological, artistic, experience-based (hands-on), biographical, and religious; the forms of interaction follow from our lives as consumers, as eaters, and as thinkers, while we work, live, and play. The purpose of the course is to examine how those ways of interaction with nature influence how we know and then treat those environments.

FYS 070: Oil, Politics and the Environment
Oil plays a significant part in global economy, politics, and the environment. The control of the oil market has caused wars and conflicts throughout this century. While it is hard to imagine life without petrochemicals, their increasing production has adverse effects on the environment. In addition to a brief review of the geological formation, exploration, drilling, production, and conversion of oil, this course studies the paradoxical role oil has played in shaping the economic and social structure of both exporting and industrial countries.

GOVT 231: Global Environmental Politics
Global Environmental Politics bridges international politics and environmental issues, offering an explicit focus on environmental problems and policies in the global context. Students in this course will study the development of global environmental regimes and analyze the successes and continuing deficiencies of political responses to various environmental issues, such as air pollution, water quality, and waste management, climate change, and energy use.

HIST 105: History of the Modern World
This course surveys modern world history from 1450 to the present. It focuses on global processes and regional particularities throughout the world (including the United States). Each instructor will choose several themes for students to engage with through targeted readings and class discussion in small sections. In addition, there is a weekly "lab" in which all students enrolled in the class will engage in large group activities like attending outside lectures or watching selected films

INDS 211: Interdisciplinary Seminar Life Sciences
Interdisciplinarity in sciences and engineering is no longer the exception as traditional divisions between disciplines erode. Some of the most exciting research in science and engineering is currently happening in the whitespace between disciplines. This course intends to introduce to students to high impact interdisciplinary topics through a combination of primary literature, discussions, and lectures from some of today's high impact academics.

INDS 222: Engineers without Borders Practicum
This 0.5 credit course is available to students actively participating in either the management of or the development of technical or socio-cultural solutions for Engineers without Borders service-learning projects. For the former, students should be members of the leadership board and participate in weekly board meetings and other EWB activities. For the latter, significant work on a technical or socio-cultural project must be completed. Grading for this course is pass-fail. This course may be repeated up to four times for credit.

INDS 322: Technology Clinic
A small group of selected students work together with faculty mentors to solve a real-world problem proposed by an industrial or government sponsor, addressing the social, technological, and economic factors relevant to a solution. Students work on campus as a team and at times independently and on-site with the sponsors

PSYC 230: Lifespan
This is a survey course of the area of Lifespan Development. We will explore the fundamental theories, principles and current research in the field, covering prenatal and child development through older adulthood. The topics we will cover include developmental changes in an individual’s biological, physical, cognitive, social, and emotional life over the entire lifespan. We will also explore genetic, contextual, and environmental influences on development.

WGS 204: Gender & Environmentalism
This course merges key insights of environmental studies/activism (which focus on relationships between living beings and their environment) and feminism (which focuses on systemic, hierarchical power structures organized by gender difference) and investigates questions of power and knowledge at the intersection of ideas about gender and the environment/nature. We explore forms of environmental

activism(s) relative to gender and gender difference (particularly as intersecting with race, class, and sexuality), and reflect on popular attitudes toward environmental issues.

Fall 2014: Courses That Include Sustainability

BIOL 235: Evolutionary Biology
An introduction to the principles of organic and molecular evolution. Topics include: genetic variation, natural selection, speciation, adaptation, diversification, biogeography, molecular evolution, and the mechanisms underlying each. Laboratory includes experimentation, computer simulation, and relevant reading/presentation of current primary literature in the field

CHE 222: Thermo Dynamics
Fundamental thermodynamic relationships and their application to non-reactive chemical engineering systems. Equations of state involving ideal and non-ideal behavior. Estimation and use of thermodynamic properties. Analysis of open systems.

CHE 413: Reaction Kinetics
The kinetics of reacting systems and the design of chemical reactors. Analysis of rate data; multistep reaction mechanisms, enzymatic reactions, catalysis and heterogeneous processes; design of single phase isothermal reactors, multiple-phase reactors, non-isothermal reactors, and non-ideal reactors.

CHE 415: Design Analysis
Quantitative study of current processes. Analysis and flowsheet layout of typical systems; safety, health, environmental, quality control, and ethical concerns in design; economic factors in estimation, design, construction, and operation of process equipment.

CHEM 431: Inorganic Chemistry II
This course uses molecular orbital theory to explain the electronic structure and reactivity of inorganic complexes. Topics include symmetry and its applications to bonding and spectroscopy, electronic spectroscopy of transition-metal complexes, mechanisms of substitution and redox processes, organometallic and multinuclear NMR.

ECON 202: Environmental Economic
This course is designed to give students a better understanding of how the environment and the economy interact and how public policy can be used to shape this interaction. The course begins by sketching out the flows of natural resources associated with economic activity and how the environmental effects produced by these flows are valued. The course then proceeds to show how market economies affect the environment. Particular emphasis is placed on the environmental damage generated by market economies and how public policy can best be used to address this damage.

EGRS 251: Introduction to Engineering and Public Policy
This course introduces students to the governance of science and engineering. Course topics include the overall context for science and engineering policy, the public policy process and institutions involved in that process, and several current science and engineering public policy issues. The course includes a combination of role-playing exercises, debates, and field trips, as well as traditional lectures.

EGRS 451: Engineering Studies Senior Seminar
This seminar focuses on how engineering impacts society as well as how society impacts the practice of engineering. Students apply the knowledge they have gained from both engineering and non-engineering courses to evaluate these impacts. Students play an active role in leading sessions, presenting results, organizing class participation, and discussing project results. This is the capstone seminar for the Bachelor of Arts in Engineering.

ENG 135: Literature and the Human Experience: Animal Stories
An examination of a significant social or cultural problem as reflected in literary texts. Topics vary from semester to semester and will be announced during the registration period. May be taken more than once with different content.

ES 101: Introduction to Engineering Studies
This course teaches the fundamentals of engineering design methodology. Students will use engineering design processes to aid them in: recognizing the need for an engineering solution, defining constraints, specifying requirements, and modeling an engineering solution, among other aspects of engineering design. Instructors integrate societal contexts of engineering practice into the projects and examine the implications of engineering solutions.

ES 231: Nature of Materials
Nature and properties of metals, ceramics, polymers, and other materials in engineering applications. Interpretation of the mechanical, physical, and chemical properties from the viewpoint of scientific disciplines. Offered as an elective for physics and chemistry majors.

FYS 038: Animal Voices
Are human beings the only animals capable of language? That birds and beasts can talk is usually regarded as an artifact of myths, fiction, and fantasy. However, recent findings complicate previously accepted distinctions between human and nonhuman behavior and abilities. This course will consider both scientific and imaginative perspectives on "animal voices." Our readings will come from various disciplines and genres, including animal behavior, linguistics, ethics, medieval fables, graphic novels, and film.
GEOL 100: From Ice to Fire
A broad introduction to the geological processes acting within the earth and on its surface that produce volcanoes, earthquakes, mountain belts, mineral deposits, and ocean basins. The course considers the dramatic effects of plate tectonics, as well as the enormous periods of time over which geologic processes take place, also familiar features of the landscape formed by landslides, rivers, groundwater, and glaciers. Practical aspects are learned through discovery-oriented laboratory exercises, which include several field excursions.

ME 478: Control Systems
Classical feedback control theory is applied to dynamic systems. The effect of closed-loop control on the transient response, error, stability, and frequency response of systems is investigated. Control systems are designed using computer simulation. Boolean logic and its implementation in ladder logic are applied to the control of mechanical systems. Modern control theory and digital control theory are introduced.

REL 224: Religious Ethics
A study of the bases of normative claims about behavior in various religious traditions. Materials from Christian, Jewish, Buddhist, and other religious traditions are used. Topics include freedom, responsibility, and destiny

SPAN 111: Intermediate Spanish
Review and expansion of basic grammar and vocabulary. Short literary and cultural readings. Development of reading, writing, listening, and conversational skills as well as a deeper understanding of Hispanic cultures

WGS 353: Single Motherhood
This course examines the cultural ideologies, institutions, and public policies that affect single women's experience of motherhood, with particular attention to the challenges faced by teenage and low-income single mothers. This is a community-based learning and research seminar; outside of class time, students will interact regularly with local teen moms, families living in transitional housing shelters, and/or non-profit agencies that support these women and their children-then engage in collaborative research or activist projects designed to support these members of the Easton community.

Spring 2014: Sustainability Focused Courses

AGS 101: Introduction to Aging Studies
Course description not offered for this course

BIOL 231: Ecology
A study of the relationships between organisms and their environment emphasizing basic ecological principles and methods. Laboratory and field exercises illustrate the theoretical concepts discussed in lecture and are writing-intensive.

BIOL 110: Edible Ethics
In this Science Technology in Social Context (STSC) course, we will explore interactions between agricultural production, environmental quality, and human well-being. In addition to covering the science, technology, and ecology of food production, we will also discuss many important philosophical and ethical issues relating to food production and consumption such as pesticide usage, genetically modified food, animal welfare, and veganism. This course will enable identification of value conflicts and provide a framework for discussing them.

CE 351: Water Resources Engineering
An introductory course in hydraulics, hydrology, and water resources engineering. Topics include groundwater and surface water supply, flow measurements, flow and pressure losses in pipe systems, probability concepts in design, open channel design including storm sewers and culverts, pump design, and detention basis design.

CE 422: Environmental Site Assessment
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than once

possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline.

CE 464: Environmental Geophysics
Introduction to the geophysical techniques used to study large- and small-scale features and processes of the Earth. Emphasis is placed on the fundamental principles of gravity, magnetism, seismology, heat transfer, and electrical methods as they apply to environmental problems.

CE 473: Senior Capstone II
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than once possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline.

EGRS 352: Energy Technology & the Modern World
This course examines the role of energy and energy technologies in the United States and the world. Energy from fossil fuels, nuclear power, and renewable resources is covered. Topics include world resources and recovery of fossil fuels, energy conversion technologies and impacts, nuclear energy and waste disposal, role of energy in global climate change, and emerging renewable energy technologies. Economic and policy issues are integrated with a technical introduction to the energy field.

EGRS 373: Technology & Nature
This course examines the sometimes-contentious relationship between the natural world and human attempts to understand it (science) and manage it (technology). It addresses historical, ethical, artistic, and scientific distinctions between the natural and the human-built world, with examples from food and agriculture, modes of transportation, river control, factories, and more. The purpose of the course is to help students develop a nuanced understanding of the interactions amongst and between technology and nature.

EGRS 480: Sustainable Solutions
Sustainable solutions developed for a complex, real-world project by small groups of multidisciplinary students directed by a faculty advisor, or team of faculty advisors. All projects include significant technical and non-technical challenges, and do not have a well-defined solution procedure.

EVST 100: Introduction to the Environment
An Interdisciplinary course that introduces students to the major issues in environmental studies. We emphasize the importance of analyzing environmental issues from a comprehensive systems approach. The course focuses on the interaction of natural, socioeconomic, political, and ethical systems, using case studies to highlight the need to examine environmental issues from multiple perspectives. Case studies include: "clean" coal, ocean depletion policy, and energy and transportation systems and the environment. Case studies are likely to change from year to year.

EVST 215: Environmental Policy
This course examines the ways policy seeks to promote environmental value in our complex and changing world. Students will be introduced to the contemporary environmental policy landscape, as well as the politics of environmental decision-making. We will examine and critique policy-making

processes, policy actors and influence, dominate policy strategies for environmental change, and environmental policy analysis frameworks. We will draw upon case studies from multiple environmental and political contexts to explore class concepts.

EVST 225: Rivers & Society
Course description not offered for this course

EVST 290: Climate Change
The Scientific community has explored modern climate change for decades, yet only recently has this issue emerged in the consciousness of the broader society. This writing-intensive, discussion-based seminar will consider the scientific evidence that has climate experts concerned about the future, as well as the significant economic, moral, political, and social issues that human-induced climate change raises. We will explore the challenges as well as the proposed solutions for addressing this global environmental problem.

GEOL 110: Environmental Geology
From human perspective on the earth's surface, the planet appears almost infinite. From an Apollo spacecraft, however, earth is simply a larger spaceship with more resources, but nonetheless finite. The course examines the interplay between land-use activity and geologic processes such as flooding, shoreline erosion, and soil erosion. Students explore groundwater resources, geological constraints on waste disposal, and impacts of resource utilization, such as acid rain and the greenhouse effect.

GEOL 322: Environmental Geophysics
Introduction to the geophysical techniques used to study large- and small-scale features and processes of the Earth. Emphasis placed on the fundamental principles of gravity, magnetism, seismology, heat transfer, and electrical methods as they apply to environmental problems through classroom lectures and laboratory and field exercises.

INDS 211: Interdisciplinary Seminar in Life Science
Interdisciplinarity in sciences and engineering is no longer the exception as traditional divisions between disciplines erode. Some of the most exciting research in science and engineering is currently happening in the whitespace between disciplines. This course intends to introduce to students to high impact interdisciplinary topics through a combination of primary literature, discussions, and lectures from some of today's high impact academics.

INDS 222: Engineers without Borders Practicum
This 0.5 credit course is available to students actively participating in either the management of or the development of technical or socio-cultural solutions for Engineers without Borders service-learning projects. For the former, students should be members of the leadership board and participate in weekly board meetings and other EWB activities. For the latter, significant work on a technical or socio-cultural project must be completed. Grading for this course is pass-fail. This course may be repeated up to four times for credit.

INDS 322: Technology Clinic
A small group of selected students work together with faculty mentors to solve a real-world problem proposed by an industrial or government sponsor, addressing the social, technological, and economic factors relevant to a solution. Students work on campus as a team and at times independently and on-site with the sponsors.

ME 250: Energy & Global Climate Change
This seminar will explore scientific, ethical, political, technological, and social issues regarding the global climate change, energy needs of the society, energy conversion and sustainability. Science shows that increased carbon dioxide in the atmosphere is causing the global warming. Since there is no consensus about this viewpoint in the areas of politics, economics, and policy making, the seminar will offer a rich forum of discussions of opposing views. Increased fossil energy use driven by population explosion will also be discussed.

PHIL 255: Environmental Ethics
This course will begin with a brief presentation of prominent ethical theories and concepts important to debates in environmental policy. We will apply these theories and concepts to a range of environmental issues, including population growth, sustainability and our responsibilities to future generations, animal rights, food ethics, and climate change. In addition to reading, discussing and writing about rigorous academic material, students will be required to engage on a practical level with some environmental cause.

VAST 203: Sustainability of Built Systems
This interdisciplinary seminar introduces students to a process for evaluating the sustainability of built systems in both the industrialized and developing worlds. The course addresses the historical, moral, and ethical foundations for the current sustainability movement as well as frameworks that can be used to determine the economic, environmental, and social-equity components of sustainability across the life-cycle of built systems. Throughout the course, we highlight large-scale examples of sustainable built systems.

Spring 2014: Courses that Include Sustainability

A&S 102: Cultural Anthropology
Course description not offered for this course

ART 102: Introduction to Art History II
This course is organized like Art 101, but deals with painting, sculpture, and architecture from the Renaissance to the present.

BIOL 102: General Biology
An introduction to the scientific study of life and basic biological principles. Emphasis is on the properties of living systems, their variety, their relationships in space and time to each other, evolution and the environment

BIOL 224: Plant Form and Function
This course will cover the general structure and organization of the plant body and the varied architectural alternatives that plants have evolved with respect to both form and function of growth and reproduction in each of the major terrestrial and aquatic biomes. The course is comprised of lectures, discussions, laboratories, guided and independent investigations, presentations, and field trips. Lecture and laboratory are integrated in the time allotted for this class.

CE 341: Transportation Systems
Technical and policy related aspects of transportation systems. Topics include traffic analysis and control, traffic flow theory, geometric design, capacity analysis and level of service, transportation demand analysis, and transportation planning. Computer applications. Design projects include oral presentations and written reports.

CHE 321: Unit Operations
Course description not offered for this course

CHEM 212: Inorganic Chemistry
Introduces the theories of atomic structure and bonding in main-group and solid-state compounds. Common techniques for characterizing inorganic compounds such as NMR, IR and Mass Spectrometry are discussed. Descriptive chemistry of main group elements is examined. Conductivity, and magnetism, superconductivity and an introduction to bio-inorganic chemistry are additional topics in the course. In lieu of the laboratory, students pick a project on a topic of their choice.

CHEM 213: Inorganic Chemistry w/ Lab
Same as Chemistry 212 plus one three-hour laboratory per week, which includes experience in the synthesis, purification, and characterization (infrared and electronic spectroscopy, magnetic susceptibility, NMR, cyclic voltammetry, and x-ray powder diffraction) and properties of inorganic compounds.

ECE 492: Design Lab II
In this course individual or team design projects are completed. The course includes both laboratory and library work. Initial proposals, progress reports, and final design documents are required. Projects can cover the entire spectrum of activities within electrical engineering.

ECON 202: Environmental Economics
This course is designed to give students a better understanding of how the environment and the economy interact and how public policy can be used to shape this interaction. The course begins by sketching out the flows of natural resources associated with economic activity and how the environmental effects produced by these flows are valued. The course then proceeds to show how market economies affect the environment. Particular emphasis is placed on the environmental damage generated by market economies and how public policy can best be used to address this damage.

ECON 300: Industry, Strategy, Policy
This course serially examines the major sectors of the global economy using the tools of economic theory. For each sector, students analyze current market conditions and trends, financial performance, critical challenges, and relevant public policies.

ENG 115: Science Fiction
Science Fiction examines short stories, novels, and films by some of the leading practitioners of the genre. The course considers the genre from literary, cultural, historical, and scientific perspectives

ENG 135: Literature and Human Experience: Animal Stories
An examination of a significant social or cultural problem as reflected in literary texts. Topics vary from semester to semester and will be announced during the registration period. May be taken more than once with different content.

ES 231: Nature of Materials
Nature and properties of metals, ceramics, polymers, and other materials in engineering applications. Interpretation of the mechanical, physical, and chemical properties from the viewpoint of scientific disciplines.

GEOL 205: Oceanography
Exploration of the physical, chemical, and biological systems of the oceans and human impacts on these systems. Topics include marine geology, seawater composition, waves, tides, coastal and open ocean processes, marine ecosystems, and ocean pollution. Weekend field trips explore barrier island environments and erosion along the New Jersey coast; oceanographic sampling techniques on Seneca Lake; and pollution of the New England coast

GOVT 419: Global Governance
This seminar explores the main actors and processes of global governance. We will assess the role of power, international institutions, transnational networks, and ideas. Specific topics of inquiry include global economic governance, the environment, third-world state building, international justice, military intervention, nuclear proliferation, and global terrorism. We will apply competing analytical approaches to different issue areas, as they intersect with the nature and management of global governance in the 21st century. Satisfies exposure to international politics subfield.

HIST 215: History of Technology
A study of technology from the irrigation cities of the ancient world through militarily financed systems of the late twentieth century. The course stresses the important role played by cultural influences in determining the nature, extent, and direction of technological development. Attention focuses on processes of invention and innovation and their impact on the growth of modern Western civilization.

IA 362: Capstone Seminar in IA
Designed as a capstone seminar to provide an opportunity for the major to bring together, through research and the completion of several papers, his or her various experiences in the discipline. Normally the seminar explores a topic or topics of current international interest through an interdisciplinary approach.

REL 102: Contemporary Religious Issues
An exploration of how religious people and ideas shape contemporary life. The course examines religiously-influenced issues such as the separation of church and state, the role of religion in violence and terrorism, and debates between religion and science. The course also looks at positive roles of religion and spirituality in modern culture.

REL 224: Religious Ethics
A study of the bases of normative claims about behavior in various religious traditions. Materials from Christian, Jewish, Buddhist, and other religious traditions are used. Topics include freedom, responsibility, and destiny

REL 240: Theories of Religion
What is religion? What is the nature of religious belief? What roles does religion play in society? How can we study and understand religion? There have been many attempts to answer these questions from sociology, anthropology, philosophy, psychology, comparative religion, and the feminist critique of

religion. This course examines representative theories of the nature and study of religion, paying close attention to the contexts within which these theories arise, and how effective they are in leading to an understanding of religious beliefs and practices

SPAN 102: Elementary Spanish
This sequence is for beginners, covering the fundamentals of spoken and written language through the development of reading, writing, speaking, and listening skills.

VAST 209: Indigo: A World of Blues
Dip white fabric in the muddy-colored indigo dye vat and the cloth emerges green, then slowly turns azure, cobalt or sapphire before your eyes. The chemistry behind this reaction will be revealed - and practiced - in this course. This mysterious dye has an intriguing history, and we will study its societal and environmental impact. We will learn about the equipment used in producing indigo dye, and the three sources of indigo: synthetic, natural, and biosynthetic. The course will culminate with the design of a new indigo production facility.

Fall 2013: Sustainability Focused Courses

BIOL 234: Environmental Biology
While recognizing the interrelatedness among different areas of environmental science, this course focuses on how biological and ecological applications relate to environmental issues. Emphasis is on how the human population impacts ecosystem function, giving attention both to population regulation mechanisms and to disruption/conservation of ecosystem processes. Laboratory exercises focus on classical applied ecology as well as field excursions targeting policy and management issues

BIOL 272: Conservation Biology
This course provides students with an introduction to the scientific basis of modern conservation biology and the application of these principles to conservations problems around the world. To understand the complexities involved in making conservation decisions, we will read from many sources, have class and small group discussions, and engage in debate. The objective of the laboratory portion of this course is to provide students with practical, problem-solving experiences in conservation biology beyond the classroom.

BIOL 341: Environmental Issues with Aquatic Ecosystems
In this course, students will learn about major global environmental issues in freshwater, marine, and estuarine ecosystems. Students are expected to critically read, evaluate, present, and discuss current events and primary literature. Examples of some topics include chronic effects of nutrient over-enrichment, chemical environmental contaminants, harmful algae, overfishing, and biological invaders. In the practicum, students will be introduced to laboratory and field techniques that aquatic ecologists often use to assess and find practical solutions to water quality problems.

CE 341: Environmental Engineering
This course introduces the student to applications of engineering principles to a variety of environmental topics. The topics will revolve around local issues within the Bushkill Watershed, therefore we will adopt a watershed approach to better understand the various topics. Topics include environmental chemistry, hydrology, risk assessment, water supply and pollution control, solid and hazardous wastes, and environmental management. Laboratories consist of field trips, computer modeling exercises, sample collection, and chemical analysis methods.

CE 413: Design of Concrete Structures
This course focuses on the mechanics and design of components of reinforced concrete structures and builds upon the knowledge gained in CE 311. Extensive use of the ACI 318 design code is made. Topics include concrete and reinforcement properties, slender beams, deep beams, T-beams, shear, torsion, columns, one- and two-way slabs, walls, footings, and reinforcement splicing and development lengths. Introduction to prestressed concrete structures.

CE 444: Civil Infrastructure Systems Management
This course presents an integrated approach to the management of civil infrastructure systems. Students examine the many aspects of performance and different management approaches in the context of available tools, new technologies, institutional issues, and resource constraints.

CE 472: Senior Capstone Design
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than one possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline.

CHE 370: Alternative Energy Sources
Course description not offered for this course

EGRS 352: Energy Technology & the Modern World
This course examines the role of energy and energy technologies in the United States and the world. Energy from fossil fuels, nuclear power, and renewable resources is covered. Topics include world resources and recovery of fossil fuels, energy conversion technologies and impacts, nuclear energy and waste disposal, role of energy in global climate change, and emerging renewable energy technologies. Economic and policy issues are integrated with a technical introduction to the energy field.

EVST 100: Introduction to the Environment
An Interdisciplinary course that introduces students to the major issues in environmental studies. We emphasize the importance of analyzing environmental issues from a comprehensive systems approach. The course focuses on the interaction of natural, socioeconomic, political, and ethical systems, using case studies to highlight the need to examine environmental issues from multiple perspectives. Case studies include: "clean" coal, ocean depletion policy, and energy and transportation systems and the environment. Case studies are likely to change from year to year.

EVST 310: Organizations & the Environment
As environmental concern deepens, the landscape of organizations seeking to redress environmental degradation has become more complex. Students in this course will examine and evaluate diverse organizational forms and strategies for promoting environmental value. We will cover environmental activism, governmental natural resource agencies, environmental non-governmental organizations, international environmental institutions, and discuss the emergence of “green" business. Students will ground their learning in community-based learning projects with local and regional environmental organizations.

GOVT 231: Global Environmental Politics
Global Environmental Politics bridges international politics and environmental issues, offering an explicit focus on environmental problems and policies in the global context. Students in this course will study the development of global environmental regimes and analyze the successes and continuing deficiencies of political responses to various environmental issues, such as air pollution, water quality, and waste management, climate change, and energy use.

INDS 211: Interdisciplinary Seminar in Life Science
Interdisciplinarity in sciences and engineering is no longer the exception as traditional divisions between disciplines erode. Some of the most exciting research in science and engineering is currently happening in the whitespace between disciplines. This course intends to introduce to students to high impact interdisciplinary topics through a combination of primary literature, discussions, and lectures from some of today's high impact academics.
INDS 222: Engineers without Borders Practicum
This 0.5 credit course is available to students actively participating in either the management of or the development of technical or socio-cultural solutions for Engineers without Borders service-learning projects. For the former, students should be members of the leadership board and participate in weekly board meetings and other EWB activities. For the latter, significant work on a technical or socio-cultural project must be completed. Grading for this course is pass-fail. This course may be repeated up to four times for credit.

INDS 322: Technology Clinic
A small group of selected students work together with faculty mentors to solve a real-world problem proposed by an industrial or government sponsor, addressing the social, technological, and economic factors relevant to a solution. Students work on campus as a team and at times independently and on-site with the sponsors.

PSYC 234: Adult Development and Aging
Course description not offered for this course

WGS 262: Women & Work in America
What is work? Who does it and in what capacity? And how does gender influence ideas about and practices of women's and men's labor? In this course we will analyze these questions in specific contexts across the Americas from Argentina to the United States. We will study women's productive and reproductive labor from an intersectional perspective that take into account not only gender but also class, race, ethnicity, sexuality, life stage, and migration status.

FYS 018: 10 Ways to Know Nature
This class is a study of the different ways we interact with and thus know the natural environment. These ways include, among others, the scientific, technological, artistic, experience-based (hands-on), biographical, and religious; the forms of interaction follow from our lives as consumers, as eaters, and as thinkers, while we work, live, and play. The purpose of the course is to examine how those ways of interaction with nature influence how we know and then treat those environments.

Fall 2013: Courses That Include Sustainability

BIOL 235: Evolutionary Biology
An introduction to the principles of organic and molecular evolution. Topics include: genetic variation, natural selection, speciation, adaptation, diversification, biogeography, molecular evolution, and the mechanisms underlying each. Laboratory includes experimentation, computer simulation, and relevant reading/presentation of current primary literature in the field

CE 421: Hydrology
Introduction to engineering hydrology, primarily dealing with surface waters. Topics include hydrologic cycle, frequency analysis, rainfall/runoff relationships, routing, and storm water management and design. Design problems using current hydrological computer models are assigned.

CE 444: Civil Infrastructure Systems Management
This course presents an integrated approach to the management of civil infrastructure systems. Students examine the many aspects of performance and different management approaches in the context of available tools, new technologies, institutional issues, and resource constraints.

CHE 413: Reaction Kinetics
The kinetics of reacting systems and the design of chemical reactors. Analysis of rate data; multistep reaction mechanisms, enzymatic reactions, catalysis and heterogeneous processes; design of single phase isothermal reactors, multiple-phase reactors, non-isothermal reactors, and non-ideal reactors.

CHE 360: Drug Delivery
Mathematical analysis of transport phenomena in biological systems, including pharmacokinetic modeling, diffusion and kinetics of biochemical reactions. Analysis of current drug delivery systems through problem solving, discussion of peer-reviewed literature, and laboratory experiences.

CHEM 431: Inorganic Chemistry II
This course uses molecular orbital theory to explain the electronic structure and reactivity of inorganic complexes. Topics include symmetry and its applications to bonding and spectroscopy, electronic spectroscopy of transition-metal complexes, mechanisms of substitution and redox processes, organometallic and multinuclear NMR.

EGRS 451: Engineering Studies Senior Seminar
This seminar focuses on how engineering impacts society as well as how society impacts the practice of engineering. Students apply the knowledge they have gained from both engineering and non-engineering courses to evaluate these impacts. Students play an active role in leading sessions, presenting results, organizing class participation, and discussing project results. This is the capstone seminar for the Bachelor of Arts in Engineering.

EGRS 251: Introduction to Engineering and Public Policy
This course introduces students to the governance of science and engineering. Course topics include the overall context for science and engineering policy, the public policy process and institutions involved in that process, and several current science and engineering public policy issues. The course includes a combination of role-playing exercises, debates, and field trips, as well as traditional lectures.

ES 101: Introduction to Engineering Studies
This course teaches the fundamentals of engineering design methodology. Students will use engineering design processes to aid them in: recognizing the need for an engineering solution, defining constraints, specifying requirements, and modeling an engineering solution, among other aspects of engineering design. Instructors integrate societal contexts of engineering practice into the projects and examine the implications of engineering solutions.

ES 231: Nature of Materials
Nature and properties of metals, ceramics, polymers, and other materials in engineering applications. Interpretation of the mechanical, physical, and chemical properties from the viewpoint of scientific disciplines.
REL 102: Contemporary Religious Issues
An exploration of how religious people and ideas shape contemporary life. The course examines religiously-influenced issues such as the separation of church and state, the role of religion in violence and terrorism, and debates between religion and science. The course also looks at positive roles of religion and spirituality in modern culture.

SPAN 112: Intermediate Spanish
Review and expansion of basic grammar and vocabulary. Short literary and cultural readings. Development of reading, writing, listening, and conversational skills as well as a deeper understanding of Hispanic cultures.

SPAN 303: Spanish Civilizations & Culture
An interdisciplinary exploration of the Iberian Peninsula's civilizations and cultures as reflected in its history, literature, peoples, politics, and arts. Topics range from Spanish Unification in 1492 through the rise and fall of Spain as an imperial power.

WGS 353: Single Motherhood
This course examines the cultural ideologies, institutions, and public policies that affect single women's experience of motherhood, with particular attention to the challenges faced by teenage and low-income single mothers. This is a community-based learning and research seminar; outside of class time, students will interact regularly with local teen moms, families living in transitional housing shelters, and/or non-profit agencies that support these women and their children-then engage in collaborative research or activist projects designed to support these members of the Easton community.

Spring 2013: Sustainability Focused Courses

BIOL 270: Special Topics in Environmental Biology
Depending upon student and staff interests, one or more specialized areas of biology may be offered.

CE 351: Water Resources Engineering
An introductory course in hydraulics, hydrology, and water resources engineering. Topics include groundwater and surface water supply, flow measurements, flow and pressure losses in pipe systems, probability concepts in design, open channel design including storm sewers and culverts, pump design, and detention basis design.

CE 472: Senior Capstone Design II
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than one possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline.

ECON 354: Contemporary African Economics
Analysis of the contemporary economic environment in Africa: political sociocultural identity and economic structure, trends in public and private capital flows, African regional and international economic institutions, trade development and relations with world markets, investment concessions and risk, with case illustrations from African countries.

EGRS 373: Technology and Society
This course examines the sometimes-contentious relationship between the natural world and human attempts to understand it (science) and manage it (technology). It addresses historical, ethical, artistic, and scientific distinctions between the natural and the human-built world, with examples from food and agriculture, modes of transportation, river control, factories, and more. The purpose of the course is to help students develop a nuanced understanding of the interactions amongst and between technology and nature.

EGRS 480: Sustainable Solutions
Sustainable solutions developed for a complex, real-world project by small groups of multidisciplinary students directed by a faculty advisor, or team of faculty advisors. All projects include significant technical and non-technical challenges, and do not have a well-defined solution procedure.

ENG 351: Environmental Writing
This course is designed to engage students in advanced writing about nature and the environment. A central focus of the course will be an examination of the language and rhetoric used to describe these crucial issues in various popular, government, and scholarly contexts.

EVST 100 Introduction to the Environment
An Interdisciplinary course that introduces students to the major issues in environmental studies. We emphasize the importance of analyzing environmental issues from a comprehensive systems approach. The course focuses on the interaction of natural, socioeconomic, political, and ethical systems, using case studies to highlight the need to examine environmental issues from multiple perspectives. Case studies include: "clean" coal, ocean depletion policy, and energy and transportation systems and the environment. Case studies are likely to change from year to year.

EVST 253: Gender, Race & Environmental Justice
This course explores connections between environmental issues and hierarchies of social power. The course investigates how systemic social hierarchies of dis/advantage-principally gender and racial/ethnic identity-are articulated through the environment and how the environment is shaped by dynamics of gender/race inequalities. Additional analytical lenses (sexuality, socio-economic class, and global position) are used to form conceptual frameworks that improve our understanding of the important role "environmental justice" plays in the study of systemic social inequalities.

EVST 310: Organizations & Environment
As environmental concern deepens, the landscape of organizations seeking to redress environmental degradation has become more complex. Students in this course will examine and evaluate diverse organizational forms and strategies for promoting environmental value. We will cover environmental activism, governmental natural resource agencies, environmental non-governmental organizations, international environmental institutions, and discuss the emergence of “green" business. Students will ground their learning in community-based learning projects with local and regional environmental organizations.

EVST 290: Climate Change
The Scientific community has explored modern climate change for decades, yet only recently has this issue emerged in the consciousness of the broader society. This writing-intensive, discussion-based seminar will consider the scientific evidence that has climate experts concerned about the future, as well as the significant economic, moral, political, and social issues that human-induced climate change raises. We will explore the challenges as well as the proposed solutions for addressing this global environmental problem.

GEOL 110: Environmental Geology
From human perspective on the earth’s surface, the planet appears almost infinite. From an Apollo spacecraft, however, earth is simply a larger spaceship with more resources, but nonetheless finite. The course examines the interplay between land-use activity and geologic processes such as flooding, shoreline erosion, and soil erosion. Students explore groundwater resources, geological constraints on waste disposal, and impacts of resource utilization, such as acid rain and the greenhouse effect.

HIST 252: Transforming the American Environment
This course examines the relationship of environment (and environmental change) to American history. Topics include the impact of colonial settlement and 19th century industrial expansion on the environment; the effect of transportation technologies on land use; the conflict between environmental protection and conservation as exemplified in the progressive era battle over construction of Hetch Hetchy Dam in Yosemite National Park; and the origins of environmental movement of the 1960-70's.

INDS 211: Interdisciplinary Seminar Life Sciences
Interdisciplinarity in sciences and engineering is no longer the exception as traditional divisions between disciplines erode. Some of the most exciting research in science and engineering is currently happening in the whitespace between disciplines. This course intends to introduce to students to high impact interdisciplinary topics through a combination of primary literature, discussions, and lectures from some of today's high impact academics.

INDS 222: Engineers without Borders Practicum
This 0.5 credit course is available to students actively participating in either the management of or the development of technical or socio-cultural solutions for Engineers without Borders service-learning projects. For the former, students should be members of the leadership board and participate in weekly board meetings and other EWB activities. For the latter, significant work on a technical or socio-cultural project must be completed. Grading for this course is pass-fail. This course may be repeated up to four times for credit.

INDS 322: Technology Clinic
A small group of selected students work together with faculty mentors to solve a real-world problem proposed by an industrial or government sponsor, addressing the social, technological, and economic factors relevant to a solution. Students work on campus as a team and at times independently and on-site with the sponsors.

MATH 256: Evolutionary Game Theory
An introduction to the concepts, techniques, and application of evolutionary game theory. The mathematics of game theory and natural selection offer insights valuable to the study of economics, biology, psychology, anthropology, sociology, philosophy, and political science. This course is intended to serve students with interests in any of these fields learn the approach, requiring minimal mathematical background, with special attention to apparent paradoxes, such as the evolution of altruism.

VAST 203: Sustainability of Built Systems
This interdisciplinary seminar introduces students to a process for evaluating the sustainability of built systems in both the industrialized and developing worlds. The course addresses the historical, moral, and ethical foundations for the current sustainability movement as well as frameworks that can be used to determine the economic, environmental, and social-equity components of sustainability across the life-cycle of built systems. Throughout the course, we highlight large-scale examples of sustainable built systems.

VAST 206: AIDS: A Modern Pandemic
This course examines the world AIDS epidemic, with primary emphasis on the U.S. and secondary emphasis on Africa. Scientific topics include the biology of HIV, the human immune system, HIV drugs and therapies, and the progression of an HIV infection, which is also considered from a humanistic perspective. Political, economic, historical, and cultural factors influencing the spread of the epidemic and its control are discussed, as is the tension between individual liberties and the protection of public health.

VAST 244: Comparative Tax Policy & Social Change
The effects of tax policy can be far reaching and can have a positive impact on the lives of the citizens of a country. Tax policy can be fraught with ineffectiveness, waste, and be deemed a failure. Some countries have enhanced effective policies which are favorable to specific goals established by its leaders, including energy security, health care security, and food/agriculture security, while other countries have failed in this regard. In this class we will examine the tax structures of nations in the developed world, in the developing world and in the third-world, focusing on the areas of energy, health, and food. We will discuss the basic scientific/technological issues that reasonable national policies in these areas ought to address and then investigate how tax policies can help do exactly that. What characteristics are necessary and sufficient to develop an effective tax policy? How can one fairly judge a tax policy in terms of both basic fairness and achievement of important social goals?

Spring 2013: Courses That Include Sustainability

A&S 102: Cultural Anthropology
Course description not offered for this course

ART 102: Introduction to Art History II
This course is organized like Art 101, but deals with painting, sculpture, and architecture from the Renaissance to the present.

BIOL 102: General Biology
An introduction to the scientific study of life and basic biological principles. Emphasis is on the properties of living systems, their variety, their relationships in space and time to each other, evolution and the environment

BIOL 224: Plant Form and Function
This course will cover the general structure and organization of the plant body and the varied architectural alternatives that plants have evolved with respect to both form and function of growth and reproduction in each of the major terrestrial and aquatic biomes. The course is comprised of lectures, discussions, laboratories, guided and independent investigations, presentations, and field trips. Lecture and laboratory are integrated in the time allotted for this class.

CE 421: Hydrology
Introduction to engineering hydrology, primarily dealing with surface waters. Topics include hydrologic cycle, frequency analysis, rainfall/runoff relationships, routing, and storm water management and design. Design problems using current hydrological computer models are assigned.

CE 341: Transportation Systems
Technical and policy related aspects of transportation systems. Topics include traffic analysis and control, traffic flow theory, geometric design, capacity analysis and level of service, transportation demand analysis, and transportation planning. Computer applications. Design projects include oral presentations and written reports.

CE 462: Slope Stability and Ground Improvement
This course applies the basic principles of soil mechanics to the analysis of the stability of slopes, walls, dams, and levees. The use of various ground improvement technologies, including geotextile reinforcement, to improve stability and solve construction problems are considered. Includes significant use of computers for analysis. Oral presentation and written reports are required

CHE 422: Design Synthesis
This capstone design course provides opportunities for the application of all prior course work in the resolution of an industrially realistic or derived chemical process design problem in a team format. Teams demonstrate a practical ability to define the required technical challenge, develop relevant criteria to evaluate alternatives, and present the resolution of the technical challenge in both oral and written formats

CHEM 212: Inorganic Chemistry
Introduces the theories of atomic structure and bonding in main-group and solid-state compounds. Common techniques for characterizing inorganic compounds such as NMR, IR and Mass Spectrometry are discussed. Descriptive chemistry of main group elements is examined. Conductivity, and magnetism, superconductivity and an introduction to bio-inorganic chemistry are additional topics in the course. In lieu of the laboratory students have a project on a topic of their choice?

CHEM 213: Inorganic Chemistry with Lab
Same as Chemistry 212 plus one three-hour laboratory per week, which includes experience in the synthesis, purification, and characterization (infrared and electronic spectroscopy, magnetic susceptibility, NMR, cyclic voltammetry, and x-ray powder diffraction) and properties of inorganic compounds.

ECON 202: Environmental Economics
This course is designed to give students a better understanding of how the environment and the economy interact and how public policy can be used to shape this interaction. The course begins by sketching out the flows of natural resources associated with economic activity and how the environmental effects produced by these flows are valued. The course then proceeds to show how market economies affect the environment. Particular emphasis is placed on the environmental damage generated by market economies and how public policy can best be used to address this damage.

ECON 300: Industry, Strategy, Policy
This course serially examines the major sectors of the global economy using the tools of economic theory. For each sector, students analyze current market conditions and trends, financial performance, critical challenges, and relevant public policies.

EGRS 251: Introduction to Engineering and Public Policy
This course introduces students to the governance of science and engineering. Course topics include the overall context for science and engineering policy, the public policy process and institutions involved in that process, and several current science and engineering public policy issues. The course includes a combination of role-playing exercises, debates, and field trips, as well as traditional lectures.

EGRS 451: Engineering Studies Senior Seminar
This seminar focuses on how engineering impacts society as well as how society impacts the practice of engineering. Students apply the knowledge they have gained from both engineering and non-engineering courses to evaluate these impacts. Students play an active role in leading sessions, presenting results, organizing class participation, and discussing project results. This is the capstone seminar for the Bachelor of Arts in Engineering.

ES 231: Nature of Materials
Nature and properties of metals, ceramics, polymers, and other materials in engineering applications. Interpretation of the mechanical, physical, and chemical properties from the viewpoint of scientific disciplines.

IA 362: Capstone Seminar in IA
Designed as a capstone seminar to provide an opportunity for the major to bring together, through research and the completion of several papers, his or her various experiences in the discipline. Normally the seminar explores a topic or topics of current international interest through an interdisciplinary approach.

REL 490: Religion Capstone
Students who major in religion develop a capstone project under the direction of a faculty member in the department, following the established, written guidelines available in the department. This takes place in the first semester of the senior year.

SPAN 102: Elementary Spanish
This sequence is for beginners, covering the fundamentals of spoken and written language through the development of reading, writing, speaking, and listening skills.

WGS 353: Single Motherhood
This course examines the cultural ideologies, institutions, and public policies that affect single women's experience of motherhood, with particular attention to the challenges faced by teenage and low-income single mothers. This is a community-based learning and research seminar; outside of class time, students will interact regularly with local teen moms, families living in transitional housing shelters, and/or non-profit agencies that support these women and their children-then engage in collaborative research or activist projects designed to support these members of the Easton community.

Fall 2012: Sustainability Focused Courses

BIOL 231: Ecology
A study of the relationships between organisms and their environment emphasizing basic ecological principles and methods. Laboratory and field exercises illustrate the theoretical concepts discussed in lecture and are writing-intensive.

BIOL 332: Advanced Aquatic Biology
Students gain familiarity with function and structure of freshwater ecosystems and ecological analysis of biota and abiotic parameters beyond the intermediate level by examining complex interrelationships and synthesizing findings according to theoretical models. Laboratory/practicum and lecture/seminar are fused by offering this course on our "floating laboratory" pontoon boat at Merrill Creek Reservoir, NJ. Students acquire skills and master techniques by interfacing with naturalists at MCR, enabling them to design, develop, propose and execute a research project with recommendations for environmental management, culminating in presentations to an open Program at the MCR Nature Center.

CE 321: Introduction to Environmental Engineering
This course introduces the student to applications of engineering principles to a variety of environmental topics. The topics will revolve around local issues within the Bushkill Watershed, therefore we will adopt a watershed approach to better understand the various topics. Topics include environmental chemistry, hydrology, risk assessment, water supply and pollution control, solid and hazardous wastes, and environmental management. Laboratories consist of field trips, computer modeling exercises, sample collection, and chemical analysis methods.

CE 361: Geotechnical Engineering
An introductory course in soil mechanics and geotechnical engineering. Studies include the classification, permeability, consolidation, and strength of soils in lecture and laboratory settings. Written reports for laboratory and design results are required. Discussion of traditional design methods in foundation engineering is included.

CE 472: Senior Capstone Design I
Students work in teams to complete two projects in two different areas of civil engineering and initiate a third project to be completed during the subsequent semester in Design II - CE 473. The projects are intended to provide design experience in varying areas of the civil engineering discipline. The content of this course will expose students to open-ended design problems (i.e. problems with more than one

possible "answer") and provide an opportunity for students to utilize many of the skills learned in previous courses within the civil engineering discipline.

CHE 370: Alternative Energy Sources
Course description not offered for this course

CHEM 252: Environmental Chemistry
This course discusses the chemical principles underlying natural processes and the ways in which human activity affects those processes. Sources, sinks, and interactions of important environmental compounds are investigated.

EGRS 352: Energy Technology & the Modern World
This course examines the role of energy and energy technologies in the United States and the world. Energy from fossil fuels, nuclear power, and renewable resources is covered. Topics include world resources and recovery of fossil fuels, energy conversion technologies and impacts, nuclear energy and waste disposal, role of energy in global climate change, and emerging renewable energy technologies. Economic and policy issues are integrated with a technical introduction to the energy field.

EVST 100: Intro to the Environment
An Interdisciplinary course that introduces students to the major issues in environmental studies. We emphasize the importance of analyzing environmental issues from a comprehensive systems approach. The course focuses on the interaction of natural, socioeconomic, political, and ethical systems, using case studies to highlight the need to examine environmental issues from multiple perspectives. Case studies include: "clean" coal, ocean depletion policy, and energy and transportation systems and the environment. Case studies are likely to change from year to year.

FYS 141: The Mathematics of Social Justice
Alexander Hamilton said, "The first duty of society is justice." Today there is vociferous argument about the prevalence of justice. To what degree is society just? Are there practical ways to make it more just? This course considers the importance of understanding data and applying mathematics to ask these questions and to explore meaningful answers. Using mathematics that everybody is taught, we'll try to make sense out of conflicting opinions, so as to discover the importance of quantitative literacy for all citizens in a democracy.

FYS: 018: 10 Ways to Know Nature
This class is a study of the different ways we interact with and thus know the natural environment. These ways include, among others, the scientific, technological, artistic, experience-based (hands-on), biographical, and religious; the forms of interaction follow from our lives as consumers, as eaters, and as thinkers, while we work, live, and play. The purpose of the course is to examine how those ways of interaction with nature influence how we know and then treat those environments.

GOVT 231: Global Environmental Politics
Global Environmental Politics bridges international politics and environmental issues, offering an explicit focus on environmental problems and policies in the global context. Students in this course will study the development of global environmental regimes and analyze the successes and continuing deficiencies of political responses to various environmental issues, such as air pollution, water quality, and waste management, climate change, and energy use.

INDS 211: Interdisciplinary Seminar Life Sciences
Interdisciplinarity in sciences and engineering is no longer the exception as traditional divisions between disciplines erode. Some of the most exciting research in science and engineering is currently happening in the whitespace between disciplines. This course intends to introduce to students to high impact interdisciplinary topics through a combination of primary literature, discussions, and lectures from some of today's high impact academics.

INDS 222: Engineers without Borders Practicum
This 0.5 credit course is available to students actively participating in either the management of or the development of technical or socio-cultural solutions for Engineers without Borders service-learning projects. For the former, students should be members of the leadership board and participate in weekly board meetings and other EWB activities. For the latter, significant work on a technical or socio-cultural project must be completed. Grading for this course is pass-fail. This course may be repeated up to four times for credit.

INDS 322: Technology Clinic
A small group of selected students work together with faculty mentors to solve a real-world problem proposed by an industrial or government sponsor, addressing the social, technological, and economic factors relevant to a solution. Students work on campus as a team and at times independently and on-site with the sponsors

PSYCH 234: Adult Development and Aging
Course description not offered for this course

Fall 2012: Courses That Include Sustainability

AMS 254: Cultures of Nature
This course is an interdisciplinary examination into the American relationship with nature. We will investigate how Americans have historically defined and currently conceive of concepts such as "nature," "wilderness," "environmental," and "green." The course will contrast and combine arts/humanities and scientific/technology perspectives, and it will merge active field-experience and field trips with the main topics and texts under discussion. Our texts will include diverse nature and environmental writings, films and visual culture, plus local physical landscapes and ecosystems. We will hike, paddle and camp, integrating site visits and activities in the Delaware River watershed with our critical explorations, so that the personal connection to place that is central to environmental literature, art, and science becomes an essential context for our understanding.

BIOL 235: Evolutionary Biology
An introduction to the principles of organic and molecular evolution. Topics include: genetic variation, natural selection, speciation, adaptation, diversification, biogeography, molecular evolution, and the mechanisms underlying each. Laboratory includes experimentation, computer simulation, and relevant reading/presentation of current primary literature in the field

CHE 413: Reaction Kinetics
The kinetics of reacting systems and the design of chemical reactors. Analysis of rate data; multistep reaction mechanisms, enzymatic reactions, catalysis and heterogeneous processes; design of single phase isothermal reactors, multiple-phase reactors, non-isothermal reactors, and non-ideal reactors.

CHEM 431: Inorganic Chemistry II
This course uses molecular orbital theory to explain the electronic structure and reactivity of inorganic complexes. Topics include symmetry and its applications to bonding and spectroscopy, electronic spectroscopy of transition-metal complexes, mechanisms of substitution and redox processes, organometallic and multinuclear NMR.

ECON 255: Multinational Business and Corporate Social Responsibility
Strategic corporate social responsibility (CSR) is about how a company resolves the dilemmas around its core product or service, how that product is produced, and how and to whom it is marketed. In effect, multi-national corporations which have a business model that uses profit to fuel constant innovation in new products, now have to include, for example, programs to reduce emissions, carbon trading, fair trade practices and differential pricing of general drugs in poor developing countries that demonstrate the potential for CSR; others illustrate the continuing limitations. The object of this course is to make students aware of international business situations that require moral reflection, judgment and decision, while revealing the complexities that often surround business choices and the formation of public policies. Learning through cases of irresponsible actions as well as responsible behavior, the course focuses attention on the study of International Business circumstances in which hard choices must be made under complex conditions of uncertainty and disagreement. Students who receive credit for 255 may not receive credit for 352. Similarly, students who receive credit for 352 may not receive credit for 255.

EGRS 251: Introduction to Engineering and Public Policy
This course introduces students to the governance of science and engineering. Course topics include the overall context for science and engineering policy, the public policy process and institutions involved in that process, and several current science and engineering public policy issues. The course includes a combination of role-playing exercises, debates, and field trips, as well as traditional lectures.

ES 231: Nature of Materials
Nature and properties of metals, ceramics, polymers, and other materials in engineering applications. Interpretation of the mechanical, physical, and chemical properties from the viewpoint of scientific disciplines.

FYS 038: Animal Voices
Are human beings the only animals capable of language? That birds and beasts can talk is usually regarded as an artifact of myths, fiction, and fantasy. However, recent findings complicate previously accepted distinctions between human and nonhuman behavior and abilities. This course will consider both scientific and imaginative perspectives on "animal voices." Our readings will come from various disciplines and genres, including animal behavior, linguistics, ethics, medieval fables, graphic novels, and film.

GEOL 100: From Ice to Fire
A broad introduction to the geological processes acting within the earth and on its surface that produce volcanoes, earthquakes, mountain belts, mineral deposits, and ocean basins. The course considers the dramatic effects of plate tectonics, as well as the enormous periods of time over which geologic processes take place, also familiar features of the landscape formed by landslides, rivers, groundwater, and glaciers. Practical aspects are learned through discovery-oriented laboratory exercises, which include several field excursions.

REL 102: Contemporary Religious Issues
An exploration of how religious people and ideas shape contemporary life. The course examines religiously-influenced issues such as the separation of church and state, the role of religion in violence and terrorism, and debates between religion and science. The course also looks at positive roles of religion and spirituality in modern culture.

REL 240: Theories of Religion
What is religion? What is the nature of religious belief? What roles does religion play in society? How can we study and understand religion? There have been many attempts to answer these questions from sociology, anthropology, philosophy, psychology, comparative religion, and the feminist critique of religion. This course examines representative theories of the nature and study of religion, paying close attention to the contexts within which these theories arise, and how effective they are in leading to an understanding of religious beliefs and practices

WGS 353: Single Motherhood
This course examines the cultural ideologies, institutions, and public policies that affect single women's experience of motherhood, with particular attention to the challenges faced by teenage and low-income single mothers. This is a community-based learning and research seminar; outside of class time, students will interact regularly with local teen moms, families living in transitional housing shelters, and/or non-profit agencies that support these women and their children-then engage in collaborative research or activist projects designed to support these members of the Easton community

Table of Sustainability Focused Courses (offered in the last three years)

Course #	Semesters Taught	Course Title
AGS 201	Spring 2015, Spring 2014	Introduction to Aging Studies
ART 215	Spring 2015	Land & Global Environment
BIOL 110	Spring 2015, Spring 2014	Edible Ethics
BIOL 231	Spring 2014, Fall 2012	Ecology
BIOL 238	Spring 2015, Fall 2013	Environmental Biology
BIOL 270	Spring 2013	Special Topics in Environmental Biology
BIOL 272	Fall 2014, Fall 2013	Conservation
BIOL 332	Fall 2014, Fall 2012	Advanced Aquatic Ecology
BIOL 341	Fall 2013	Environmental Issues with Aquatic Ecosystems
CE 203	Spring 2015, Spring 2014, Spring 2013	Sustainability of Built Systems
CE 321	Fall 2014, Fall 2012	Introduction to Environmental Engineering
CE 341	Fall 2013	Environmental Engineering

CE 351	Spring 2015, Spring 2013	Water Resources Engineering
CE 361	Fall 2014, Fall 2012	Geotechnical Engineering
CE 413	Fall 2013	Design of Concrete Structures
CE 422	Spring 2014	Environmental Site Assessment
CE 425	Spring 2015	Water Supply and Pollution Control
CE 444	Fall 2013	Civil Infrastructure Systems Management
CE 464	Spring 2014	Environmental Geophysics
CE 472	Fall 2014, Fall 2013, Spring 2013, Fall 2012	Senior Capstone
CE 473	Spring 2014	Senior Capstone II
CHE 370	Spring 2015, Fall 2013, Fall 2012	Alternative Energy Sources
CHE 416	Fall 2014	Environmental Chemistry
ECON 303	Fall 2014	Income Tax Topics
ECON 354	Fall 2014, Spring 2013	Contemporary African Economies
EGRS 230	Spring 2015	Environmental Justice
EGRS 352	Spring 2015, Spring 2014, Fall 2012	Energy Tech & Modern World
EGRS 373	Spring 2014, Spring 2013	Technology & Nature
EGRS 480, Spring 2014	Spring 2015, Spring 2014, Spring 2013	Sustainable Solutions
ENG 351	Fall 2014, Spring 2013	Environmental Writing
EVST 100	Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013, Fall 2012	Intro to the Environment
EVST 215	Spring 2015, Spring 2014	Environmental Policy
EVST 253	Spring 2013	Gender, Race & Environmental Justice
EVST 255	Fall 2014, Spring 2014	Rivers & Society
EVST 290	Spring 2015, Spring 2014, Spring 2013	Climate Change
EVST 310	Fall 2014, Fall 2013, Spring 2013	Organizations & Environment

EVST 315	Fall 2014	Food, Culture and Sustainable Societies
EVST 363	Fall 2014	Environment and Film
FYS 018	Fall 2014, Fall 2013, Fall 2012	10 Ways to Know Nature
FYS 070	Fall 2014	Oil, Politics and the Environment
FYS 141	Fall 2012	The Mathematics of Social Justice
GEOL 110	Spring 2015, Spring 2014, Spring 2o13	Environmental Geology
GEOL 322	Spring 2014	Environmental Geology
GOVT 231	Fall 2014, Fall 2013, Fall 2012	Global Environmental Politics
HIST 105	Fall 2014	History of the Modern World
HIST 252	Spring 2015, Spring 2013	Transformation of the American Environment
INDS 170	Spring 2015	Modern Sub-Saharan Africa
INDS 211	Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013, Fall 2012	Interdisciplinary Seminar Life Sciences
INDS 222	Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013, Fall 2012	Engineers without Borders Practicum
INDS 322	Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013, Fall 2012	Technology Clinic
MATH 256	Spring 2013	Evolutionary Game Theory
ME 250	Spring 2014	Energy & Global Climate Change
PHIL 255	Spring 2015, Spring 2014	Environmental Ethics
PSYC 230	Fall 2014	Lifespan
PSYC 234	Fall 2013, Fall 2012	Adult Development and Aging
VAST 206	Spring 2013	AIDS: A Modern Pandemic
VAST 244	Spring 2013	Comparative Tax Policy & Social Change
WGS 204	Fall 2014	Gender & Environmentalism
WGS 262	Spring 2015, Fall 2013	Women and Work in the Americas

Table of Courses that Included Sustainability (offered in the last three years)

Course #	Semesters Taught	Course Title
A&S 102	Spring 2014, Spring 2013	Cultural Anthropology
A&S 254	Fall 2012	Cultures of Nature
A&S 264	Spring 2015	Development, Aid and Activism
ART 102	Spring 2015, Spring 2014, Spring 2013	Introduction to Art History II
BIOL 102	Spring 2015, Spring 2014, Spring 2013	Introduction to Biology
BIOL 224	Spring 2014, Spring 2013	Plant Form and Function
BIOL 235	Fall 2014, Fall 2013, Fall 2012	Evolutionary Biology
CE 341	Spring 2015, Spring 2014, Spring 2013	Transportation Systems
CE 413	Fall 2013, Fall 2012	Reaction Kinetics
CE 421	Fall 2013, Spring 2013	Hydrology
CE 444	Fall 2013	Civil Infrastructure Systems Management
CE 451	Spring 2015	Open Channel Hydraulics
CE 462	Spring 2015, Spring 2013	Slope Stability and Ground Improvement
CHE 222	Spring 2015, Fall 2014	Thermodynamics
CHE 321	Sping 2015, Spring 2014	Unit Operations
CHE 360	Spring 2015, Fall 2013	Drug Delivery
CHE 413	Fall 2014, Fall 2013	Reaction Kinetics
CHE 415	Fall 2014	Design Analysis
CHE 422	Spring 2013	Design Synthesis

CHEM 212	Sping 2015, Spring 2014, Spring 2013	Inorganic Chemistry
CHEM 213	Sping 2015, Spring 2014, Spring 2013	Inorganic Chemistry w/ Lab
CHEM 431	Fall 2014, Fall 2013, Fall 2012	Inorganic Chemistry II
ECE 492	Spring 2014	Design Lab II
ECON 202	Fall 2014, Spring 2014, Spring 2013	Environmental Economic
ECON 252	Spring 2015	Intermediate Macroeconomic
ECON 255	Spring 2015, Fall 2012	Multinational Business and Corporate Social Responsibility
ECON 300	Spring 2015, Spring 2014, Spring 2013	Industry, Strategy, Policy
EGRS 251	Fall 2014, Fall 2013, Spring 2013, Fall 2012	Introduction to Engineering and Public Policy
EGRS 451	Fall 2014, Fall 2013, Spring 2013	Engineering Studies Senior Seminar
ENG 115	Spring 2015, Spring 2014	Science Fiction
ENG 135	Fall 2014, Spring 2014	Literature and the Human Experience: Animal Stories
ES 101	Fall 2014, Fall 2013	Introduction to Engineering Studies
ES 231	Spring 2015, Fall 2014, Spring 2014, Fall 2013, Spring 2013, Fall 231	Nature of Materials
FYS 038	Fall 2014, Fall 2012	Animal Voices
GEOL 100	Fall 2014, Fall 2012	From Ice to Fire

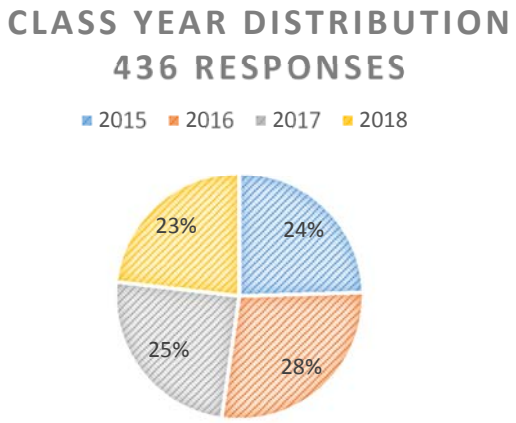
GERM 112	Spring 2015	Intermediate German
GOVT 419	Spring 2015, Spring 2014	Global Governance
HIST 215	Spring 2014	History of Technology
IA 362	Spring 2015, Spring 2014, Spring 2013	Capstone Seminar in IA
ME 478	Fall 2014	Control Systems
REL 102	Spring 2014, Fall 2013, Fall 2012	Contemporary Religious Issues
REL 224	Fall 2014, Spring 2014	Religious Ethics
REL 240	Spring 2014, Fall 2012	Theories of Religion
REL 490	Spring 2013	Religion Capstone
SPAN 102	Spring 2015, Spring 2014, Spring 2013	Elementary Spanish
SPAN 111	Fall 2014	Intermediate Spanish
SPAN 112	Fall 2013	Intermediate Spanish
SPAN 303	Spring 2015, Fall 2013	Spanish Civilization & Culture
VAST 209	Spring 2014	Indigo: A World of Blues
WGS 353	Fall 2014, Fall 2013, Spring 2013, Fall 2012	Single Motherhood
	Spring 2015	Sustainability of Water Systems

Appendix E: Student Survey

Demographic Questions

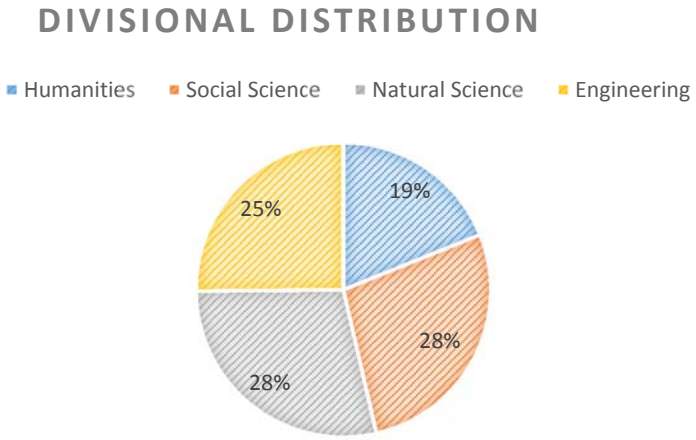
1. What is your class year?

#	Answer	Response	%
1	2015	107	25%
2	2016	121	28%
3	2017	107	25%
4	2018	101	23%
	Total	436	100%



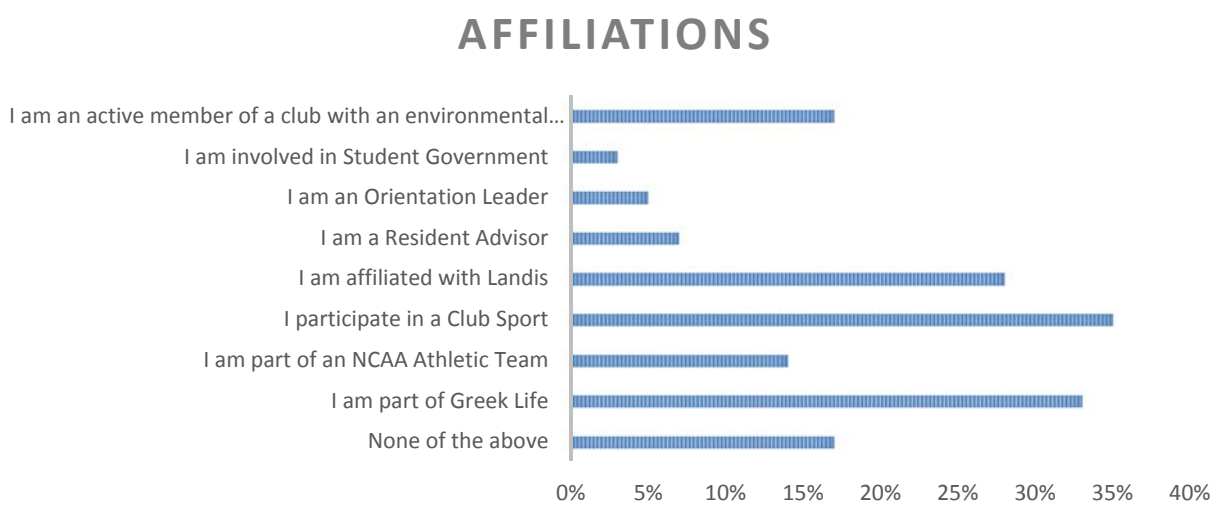
2. What division is your major in? For double majors, select all that apply.

#	Answer	Response	%
1	Humanities	97	22%
2	Social Science	141	32%
3	Natural Science	146	33%
4	Engineering	129	30%



3. Which of the following apply to you, if any? Please check all that apply.

#	Answer	Response	%
1	I am part of Greek Life	143	33%
2	I am part of an NCAA Athletic Team	61	14%
3	I participate in a Club Sport	151	35%
4	I am affiliated with Landis	122	28%
5	I am a Resident Advisor	31	7%
6	I am an Orientation Leader	23	5%
7	I am involved in Student Government	15	3%
8	I am an active member of a club with an environmental focus	72	17%
9	None of the above	75	17%



Transportation Questions

4. Do you live in college owned housing or other housing within 4 blocks of campus?

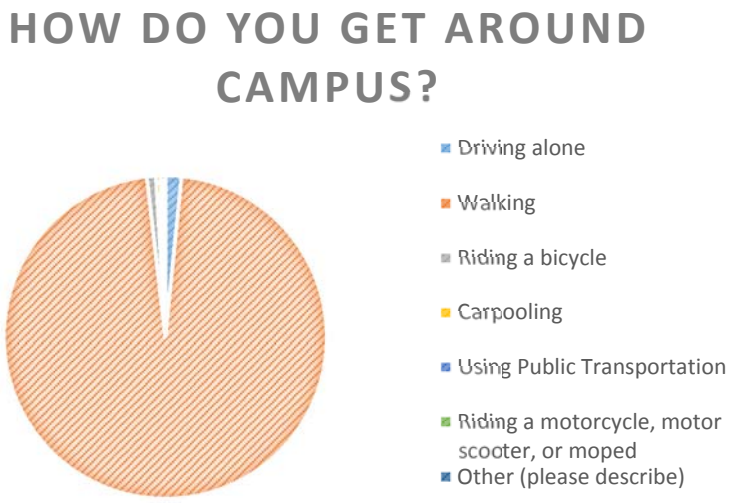
#	Answer	Response	%
1	Yes	406	93%
2	No	29	7%

5. How do you get around campus most often? (Getting to and from classes, dining halls, residence halls, etc.)

#	Answer	Response	%
1	Driving alone	7	2%
2	Walking	420	97%
3	Riding a bicycle	4	1%
4	Carpooling	2	0%
5	Using Public Transportation	0	0%
6	Riding a motorcycle, motor scooter, or moped	0	0%
7	Other (please describe)	2	0%
	Total	435	100%

Other (please describe)

Longboarding
Skateboard and walking



6. How do you get to and from campus most often?

#	Answer	Response	%
1	Driving alone	9	31%
2	Walking	6	21%
3	Riding a bicycle	0	0%
4	Carpooling	6	21%
5	Using Public Transportation	7	24%
6	Riding a motorcycle, motor scooter, or moped	0	0%
7	Other (please describe)	1	3%
	Total	29	100%

Other (please describe)
Driving alone or carpooling

Knowledge & Behavior Questions

7. Does Lafayette have a comprehensive plan detailing steps toward reducing its impact on the environment?

#	Answer	Response	%
1	Yes	127	29%
2	No	304	71%

Confidence Interval: 3.82

8. How do you know this plan exists?

Text Response
EGRS 480

I take sustainable solutions
EGRS 480 and other Engineering Studies Classes
People talk about it
EGRS 480
word of mouth
Because it's easy to see how hard Laf tries to be sustainable and environmentally friendly.
Online research, not advertised well though
I'm a reporter for the newspaper and looked into it
I was in a class that looked at the future plans of campus.
Water fountain and posters
I saw an email about it once
I've heard a few things about it here and there.
sustainability committee
SEES
I know Lafayette has a sustainability committee. I have no idea how to view any such plans Lafayette may have; I am more so assuming there is such a plan. However, I am interested in having such actions more visible on campus.
I just assume it exists since we recycle
Through the website
Flags on the quad
From my experience in LEAP, I know that there is a plan to improve sustainability (though that does not mean it is followed)
I'd assume we have one.
assumption
It is clear that Lafayette has taken initiative through clubs such as LEAP and Take Back the Tap that sustainability and reducing our carbon footprint are clear goals of not only the students but the College as a whole.
I don't know for sure- I am taking a guess! There are also green flags on the quad so I know Lafayette supports it!
EGRS 480
ecorep
Environmental sci class
They emailed us
Efforts to reach out to RAs through Eco reps
I'm an evst major.
Friends told me
Indunction
Dam Weiss did it
SEES
Not sure but I have heard about it somewhere
I have read th master plan
Friends within in the Enviormental Sciences have been discussing this with me
Club involvement
Educated guessing. The college has a bunch of comprehensive plans whether we hear about them or not.
They try to boast when they can
I'm a member of SEES.

'Climate Action Plan' was created after President Weiss signed the College Presidents Pledge. I have worked with the Sustainability Committee
Sustainable education
Working as a tour guide
EGRS
I don't care and I am reminded through email
I know somebody in on it
Sustainable courses
Clubs
ive heard about it
I've looked at the ten year master plan.
involvement with the Sustainability Committee
I don't claim to know the metaphysical reality of anything, let alone this plan.
Word of mouth
I've seen it, and it's insufficient.
Sustainability Committee, Advertised on sustainability website
i was a student representative on the board of trustees grounds and buildings committee--i'm not positive it exists though. sounds familiar
I don't I guessed
Vaguely remember hearing about it in an email or something
Through my buildings Eco rep
guess
I've read it
Sustainability Committee
Posters
This question was loaded, suggesting its own correct answer which is "yes"
Member of LEAP
LEAP
Internet
Environmental Week
I don't know if it's "comprehensive" but I'd guess we have something
I can't imagine them not having one.
Website/emails
Rings a bell
LEAP
I just assume it does.
I don't but I assume
rumors
Briefly heard about it, not sure where
I worked on the sustainability website.
Take back the tap and not having water bottles offered as part of meal this year
I was part of LEAP
marquis dining hall, organizations on campus
Friends.
Told by LEAP member
Vague references to it by groups like LEAP

I've seen messages and learned this information from first year intro to the different engineering divisions. I also remember learning a little bit about this during orientation training.
It has been discussed in LEAP.
signs
I'm not sure but I'm assuming that it does, I know that the new Oechsle building is LEAD certified
The dining halls seem to be pretty well aimed at informing us of their steps to more sustainable food options.
The quad is not car friendly anymore
Lafayette Sustainability Plan
Discussion with other students
Through my experience in LEAP and participation in Sustainability Committee meetings; though the efforts to actually implement the plan are not transparent
I am a member of LEAP and this topic is something we discuss.
There was no option for "I'm not sure"
just assuming since we are in "the green movement" era
NICODEMUS KNOWS THINGS
Intro to Architecture
Student organizations, emails, extracurricular activities, overhearing talk on the quad

9. Does Lafayette College Dining Services practice sustainable purchasing through efforts like local buying quotas, and humane/sustainable sourcing for some animal products?

#	Answer	Response	%
1	Yes	370	86%
2	No	61	14%

Confidence Interval: 2.92

10. Are you aware that Lafayette Dining Services provides reusable food containers for students?

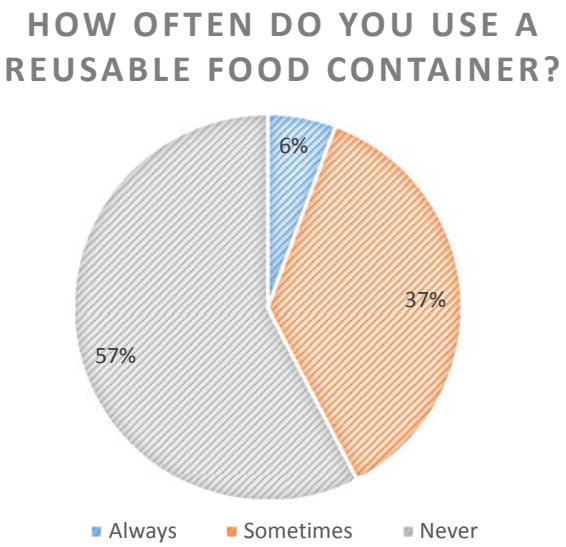
#	Answer	Response	%
1	Yes	388	90%
2	No	43	10%

Confidence Interval: 2.52

11. How often do you use a reusable food container instead of disposable containers?

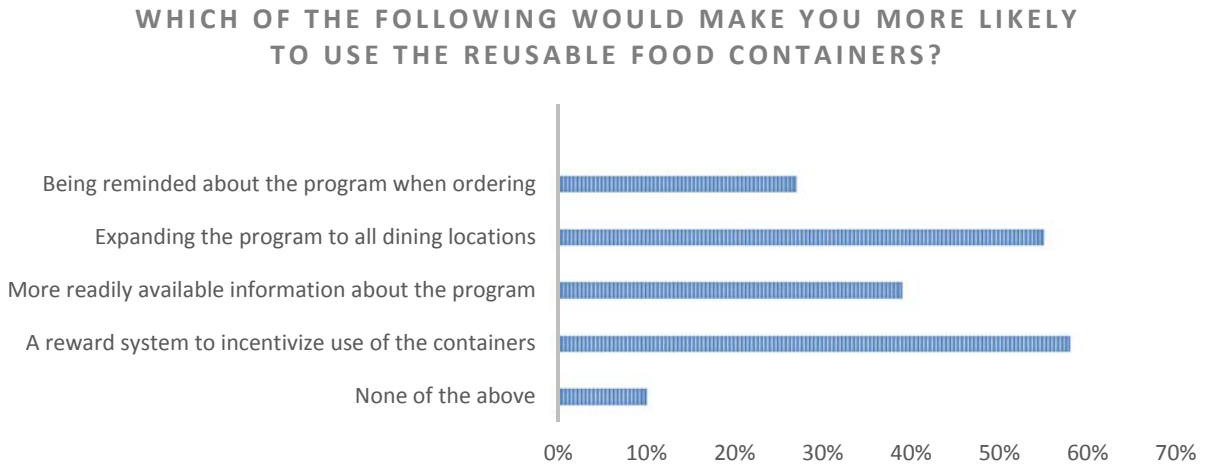
#	Answer	Response	%
1	Always	22	6%
2	Sometimes	142	37%
3	Never	223	58%

Confidence Interval (for Always option): 2



12. Lafayette has reusable food containers available to students for $5 at Upper Farinon and Marquis. After using a container, it can be exchanged for a clean container for free. Which of the following changes would make you more likely to use these reusable containers more often?

#	Answer	Response	%
1	A reward system (discount or punchcard) to incentivize use of the containers	251	58%
2	More readily available information about the program on the Dining Services website and at dining locations	166	39%
3	Expanding the program to all dining locations	236	55%
4	Being reminded about the program when ordering	116	27%
5	None of the above	42	10%



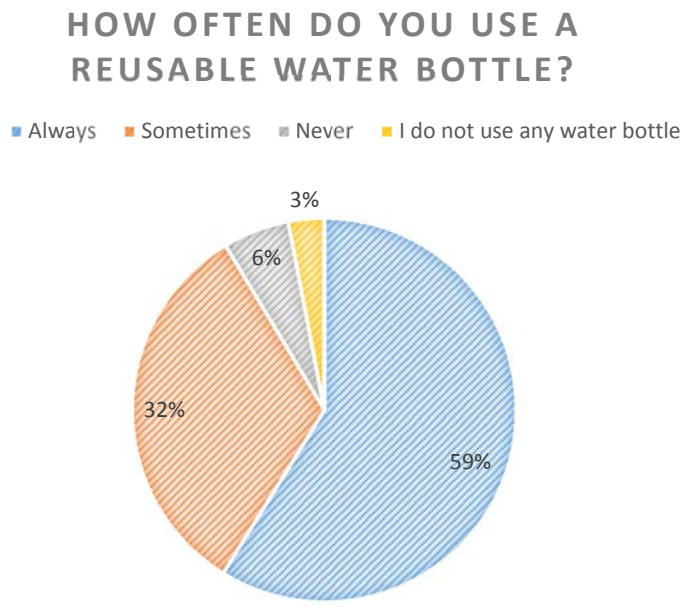
Other:
free container
More convenient times when you can exchange reusable containers. This one annoying lady at marquis said I couldn't exchange my box for a new one unless I was actually getting food at that time, which sucked because I had that gross container in my room for a week or so
Better keychains, the ones they use always break
The reusable containers need to be made available at places like gilberts or lower instead. I don't need to use the containers at Upper or Marquis, but would rather use them at lower/gilberts.
Including it as part of meal plan for free
they ran out of keychains last year and gave me a piece of paper that I lost and I don't want to buy another one since you can only use it at 3 dining halls
Being allowed to bring my own Tupperware container
no charge for container
No cost
free containers
None because I don't have a meal plan: I have all Flex.
I have never brought my food out of the dining hall so this doesn't apply to me
I like the token system other schools use. I don't usually carry my container with me. Being able to drop off said containers any time, and instead carrying a token around in my wallet would be much more convenient.
Free containers, no keychain system so that you can always get the container whether you have your key chain or not
Money back when returning the container at the end of the semester
HAVING OPTION AT LOWER, SIMONS!!!!!
I don't eat on campus
reduced cost
Free containers
I just need to remember to bring it around with me
I don't think it needs to be used more often. More of a convenience thing and not sustainability. (does not replace disposable ones)
MAKE THEM FREE---i don't understand why there is a cost attached to it...
Making the containers free. Lafayette shouldn't profit from me helping the environment.
make them free
The containers are only offered in locations where they have less use
I'm confused. Is using the reusable food containers in the dining hall better than using the dinnerware in the dining hall? Why would it need to be incentivized if I don't need to use it because I eat within the dining hall? Are you suggesting expanding that to lower/gilberts? It's not clear what you're asking.
Releasing that large athletes on sports teams do not eat the same amount as non-athletic 5ft tall 120 pound women. We need bigger containers. There is a reason we go to upper. We need our money's worth. The system doesn't work any better than going to lower right now, except that dining halls have somewhat better hours.
Introduce better containers in Lower
Free containers
I do not eat at the dining halls on campus because I do not have a meal plan.
Reduce the price of the container
Make the container larger!!For a meal, you could barely get a full salad with that tiny container. Also, the salad would be pressed and lose its shapes.

Have the packages at the entrance of the dining halls
Maybe if lower charge for the first time
Just put them out there for student use. Make simple signs that advertise their existence. I would provide a small incentive to invite use of the product but I wouldn't overdo it

13. How often do you use a reusable water bottle instead of disposable water bottles?

#	Answer	Response	%
1	Always	253	59%
2	Sometimes	140	33%
3	Never	24	6%
4	I do not use either reusable or disposable water bottles	13	3%

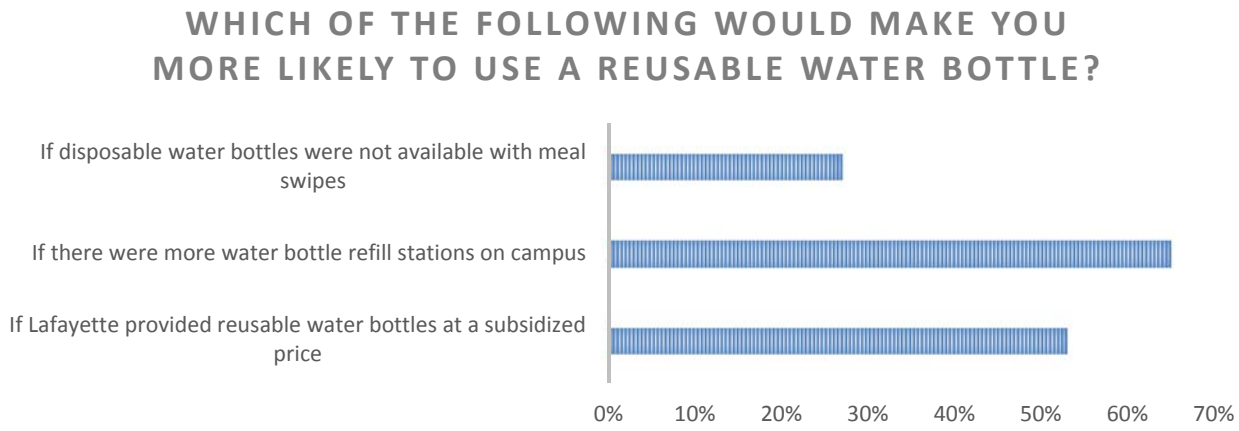
Confidence Interval (for Always option): 4.14



14. Would any of the following make you more likely to use a reusable water bottle?

#	Answer	Response	%
1	If Lafayette provided reusable water bottles at a subsidized price	92	53%
2	If there were more water bottle refill stations on campus	112	65%
3	If disposable water bottles were not available with meal swipes	46	27%

Other:
Only that last option IF there were other things involved in the meal exchange then
I would never use a reusable water bottle. Btw I'm pretty sure you can't get disposable water bottles with meal swipes
get rid of the plastic cups in lower; can those even be recycled with our current system?
If the refill stations actually were filtered like advertised :)
If the water on campus didn't taste like metal.
If the filtered water were of higher quality.
the water in water fountains were better filtered



15. Would you be interested in more sustainability related courses at Lafayette?

#	Answer	Response	%
1	Yes	270	63%
2	No	159	37%

Confidence Interval: 4.06

16. Would you be interested in more sustainability related research opportunities at Lafayette?

#	Answer	Response	%
1	Yes	266	62%
2	No	163	38%

Confidence Interval: 4.08

17. In which of the following groups or programs do you participate? Participation includes attending meetings, events, or subscribing to social media.

#	Answer	Response	%
1	LEAP	83	19%
2	LaFFCo	20	5%
3	Take back the Tap	83	19%
4	SEES	37	9%
5	EcoReps	26	6%
6	None of the above	294	69%

18. Have you participated in a community engagement program like Make a Difference Day, Vegetables in the Community, or Lafapalooza?

#	Answer	Response	%
1	Yes	249	58%
2	No	178	42%

Confidence Interval: 4.15

Appendix F: Evaluation and Action Items

Action Item	Credit	STARS Points Opportunity	Economic Feasibility	Administrative Feasibility	Social Feasibility	Climate Action Plan Effect	Campus Master Plan Effect	Educational Opportunity	Campus Life Experience	Total Rating
GHG Offset Program	OP 1	4.98	2	1	2	2	2	1	1	11
Outdoor Air Quality Improvement Policy and Inventory	OP 2	1	2	2	2	1	1	1	1	10
Operate buildings LEED O&M equivalent	OP 3	4	2	2	2	3	2	2	3	16
LEED Silver Rating for New Construction	OP 4	2.07	1	3	2	3	3	2	3	17
Indoor Air Quality Program	OP 5	1	3	2	2	1	2	1	2	13
Increase percentage of food and beverage purchases from local, community-based, or third party verified sources	OP 6	3	3	3	3	3	1	1	3	17
Decrease percentage of food purchases that are considered conventionally produced animal products	OP 7	0.93	3	3	2	3	1	2	2	16
Continue to improve individual building energy efficiency in accordance with CAP	OP 8	3.39	3	3	2	3	3	1	1	16
Develop clean/renewable energy sources	OP 9	4	2	1	2	1	3	2	1	12
Implement an Integrated Pest Management (IPM) Plan	OP 10	2	3	2	2	1	3	1	2	14
Endangered and vulnerable species assessment	OP 11	2	3	3	2	1	2	2	1	14
Electronics purchasing policy, Cleaning products purchasing policy, and Office paper purchasing policy	OP 12	3	3	2	2	1	1	1	1	11
Implement a comprehensive purchasing policy	OP 15 + 16	2	2	1	2	1	1	1	2	10
Hybrid car replacement for the Lafayette Fleet	OP 18	1	2	2	2	3	1	1	3	14
Incentivize sustainable commuting	OP 20	2	2	1	3	2	1	1	3	13
Install at least one Level 2 or Level 3 electrive vehicle recharing station on campus	OP 21	0.25	3	3	2	3	1	1	2	15
Offer telecommuting and condensed work week options for employees whose jobs are conducive to such options	OP 21	0.25	3	2	2	1	1	2	2	13
Incentivize bicycling on campus with infrastructure improvements	OP 21	0.25	2	3	3	1	2	1	3	15
Implement a waste management policy	OP 22 + 23 + 24	8.5	2	2	2	2	1	1	2	12

Offer sustainaibility related orientation activities	EN 2	0	3	1	3	2	1	3	3	**16**
Design a First Year Experience around the theme of sustainability	EN 3	0	3	3	3	3	1	3	2	**18**
Create a guide for sustainable living in residence halls	EN 4	0	3	3	3	1	1	2	2	**15**
Create building signage that highlights green features like that of Grossman	EN 4	0	1	1	2	1	1	2	2	**10**
Offer more staff professional development opportunities throughout the year	EN 6+EN 8	3+2	2	2	1	1	1	3	2	**12**
More formal partnerships with the local community (Nurture Nature Center?)	EN 9	1	2	2	3	2	2	2	3	**16**
Engagement in public policy advocating for sustainability	EN 14	2	2	1	2	1	1	1	1	**9**
Make Lafayette a member of the Fair Labor Association and the Worker Rights Consortium	EN 15	2	2	1	2	1	1	1	1	**9**
Sustainability Planning Transparency/Progress Reports	PA 2	1.5	3	2	3	3	3	2	2	**18**
Staff Participation in Governance	PA 3	1	3	1	2	1	1	1	2	**11**
Increased low-income scholarship	PA 8	1	1	2	2	1	1	3	3	**13**
Hire a full-time sustainability coordinator	-	0	2	2	3	1	1	3	2	**14**