**Indiana Commission for Higher Education**

**Program Description—Bachelor of Arts in Sustainability Studies**

**To Be Offered by Indiana University as a Collaborative Program at Several Campuses**

**1. Characteristics of the Program**

* 1. Campus(es) Offering Program—Collaborative Degree Shared by

Indiana University East

IUPUI

Indiana University Kokomo

Indiana University Northwest

Indiana University South Bend

Indiana University Southeast

* 1. Scope of Delivery—Statewide
	2. Mode of Delivery—100% Online
	3. Other Delivery Aspects—Internships
	4. Academic Unit Offering Program—varies by campus:

IU East, School of Natural Science and Mathematics

IUPUI, School of Liberal Arts

IU Kokomo, School of Sciences

IU Northwest, College of Arts and Sciences

IU South Bend, College of Liberal Arts and Sciences

IU Southeast, School of Natural Sciences

**2. Rationale for the Program**

1. Institutional Rationale (Alignment with Institutional Mission and Strengths)
* Why is the institution proposing this program?

The proposed collaborative online B.A. in Sustainability Studies will attract students seeking the flexibility of the online format with an interest in the study of foundations of sustainability and a desire to learn how to apply this knowledge to the development and implementation of sustainable values, innovations, practices, and technologies in our homes, communities, businesses, as well as on IU campuses. Sustainability studies students often have an interest in applying their critical thinking and research skills in public service and in understanding connections between environment, economy, and society, and building faculty and student groups committed to tackling the complex socio-environmental problems confronting our communities, thus creating positive change in their local communities and beyond. Target audiences will include undergraduates, working adults, degree completers, transfer students, and others. Enrollment patterns and growth projections for employment in the sustainability sector of the economy indicate strong demand for the proposed B.A. in Sustainability Studies. This interest is well attested nationally, regionally, and in the state of Indiana.

* How is it consistent with the mission of the institution?

This B.A. in Sustainability Studies answers the charge of the [Indiana University Bicentennial Strategic Plan](https://strategicplan.iu.edu/plan/education.html) to provide an excellent education that promotes retention and completion through innovative online instruction that accommodates the work schedules and family demands of working Hoosiers.

The IU collaborative online B.A. in Sustainability Studies will extend the reach of the university, providing a high quality program of study that prepares students for success in a variety of occupations that are in high demand across many sectors of the economy. The B.A. in Sustainability Studies meets IU’s specific charge as a public university, which the *Bicentennial Strategic Plan* describes as follows:

IU is a public university in a deep sense; it exists to benefit all the people of the state, and the world beyond, and has a charge to continue its long tradition of engagement in the economic, social, environmental, and cultural life of all Hoosiers. This charge applies to all IU campuses, and it has special significance for the regional campuses. These campuses’ communities and regions rely on their respective campuses for undergraduate and professional education that addresses regional needs.

The B.A. in Sustainability Studies is proposed as a collaborative degree program to be delivered by six IU campuses—East, IUPUI, Kokomo, Northwest, South Bend and Southeast. By design, this collaborative program provides efficiencies of scale while respecting the unique characteristics of the participating campuses as they shape their campus-based, face-to-face programs.

* How does this program fit into the institution’s strategic and/or academic plan?
* How does this program build upon the strengths of the institution?

The December 2014, [Indiana University Bicentennial Strategic Plan](https://strategicplan.iu.edu/plan/education.html) identified the integration of new educational technologies and collaborative platforms and the development of a robust program of online education as essential tools to ensure that the university and its faculty continue to serve the citizens of the state of Indiana.

As a part of this initiative, the university developed IU Online to serve as administrative home “coordinates and catalyzes IU’s efforts in this area.” The plan summarizes the specific benefits as follows:

Online and hybrid delivery allow IU through IU Online to expand its offerings across campuses in a cost-effective way, through developing systems of shared online resources. IU will complete through IU Online a university-wide framework for online education, to enhance instructional quality and support, and create scalable economies in course and program delivery for all campuses.

*See Appendix 1 for web addresses to:*

* [Indiana University Bicentennial Strategic Plan](https://strategicplan.iu.edu/plan/education.html)
* [January 2016 IU Online: A Collaborative Model for Online Education at Indiana University](https://uaa.iu.edu/academic/ooe/docs/ooe_model.pdf).
1. State Rationale
* How does this program address state priorities as reflected in the ICHE’s 2016 strategic plan [Reaching Higher, Delivering Value](http://www.in.gov/che/files/77185_2016_RHDV_Report_Master.pdf).

The proposed collaborative B.A. in Sustainability Studies will address each one of the four goals cited in *Reaching Higher, Delivering Value*.

1. Completion—The collaborative online format of the B.A. in Sustainability Studies will reduce the barriers to graduation that impede many face-to-face students in their progress to degree, such as
	1. Conflicts between work and school schedules (addressed by asynchronous course structures);
	2. Flexibility in terms of course load across Fall, Spring, and Summer offerings, and
	3. Increased frequency of individual course-offerings (increased focus on Academic Year as 12 month cycle facilitates students who spread enrollment across all three terms);
2. Competency—Sustainability Studies is a rapidly evolving field that takes a holistic approach to address complex problems. Developing and coordinating sustainable strategies in business and the public sector with be essential to the continued health of both the national and international economy and global environment in the near- and long-term.
3. Career—The workforce demand for B.A. in Sustainability Studies graduates is expected to grow at a faster than average rate over the next 10 years with strong growth in wages
4. Delivering Value—100% online delivery mode will allow students to further their education with minimal disruption to their professional and family lives.
5. Evidence of Labor Market Need
	* 1. National, State, or Regional Need
* Is the program serving a national, state, or regional labor market need?

Employment opportunities in the fields of sustainability studies are expected to continue growing well above average for the next 10 years at the state, regional, and national level.

* + 1. Preparation for Graduate Programs or Other Benefits
* Does the program prepare students for graduate programs or provide other benefits to students besides preparation for entry into the labor market?

The IU online collaborative B.A. in Sustainability Studies prepares students for entry into the labor market; however, the solid liberal arts foundation and suited of core sustainability studies coursework will prepare students for admission to a wide variety of professional graduate programs.

* + 1. Summary of Indiana DWD and/or U.S. Department of Labor Data
* Summarize the evidence of labor market demand for graduates of the program as gleaned from employment projections made by the Indiana Department of Workforce Development and/or the U.S. Department of Labor?

The Sustainability Studies 30.3301 Classification of Instructional Program code does not align with any one of the Standard Occupation Codes used by the Bureau of Labor Statistics. Instead, it corresponds with a broad area of jobs and careers that an August 2012 B.L.S. report described as “Green: Jobs.” Both the B.L.S. “BLS Green Jobs Page” and the U.S. Department of Labor Occupational Information Network (O\*NET) “O\*Net Green Economy Page” track employment opportunities in this sector.

Sustainability Studies graduates can pursue careers in a variety of fields that the Bureau of Labor Statistics and other entities tracking employment trends refer to as “Green Jobs” or “Green Careers.” Entry-level jobs IU collaborative graduates from the B.A. in Sustainability Studies might pursue include:

* + analytic methods analyst,
	+ compliance officer,
	+ human resources specialist,
	+ occupational health and safety technician,
	+ energy analyst,
	+ auditor,
	+ environmental, health and safety specialist,
	+ account manager.

These titles were selected from a list of entry-level positions for sustainability studies majors from WayUp, a job search web service for “early-career candidates.” Some of the jobs that WayUp included in this list, such as microbiologist and chemical engineer, require specialized training in a traditional field of study, but this sector of the economy is evolving rapidly, and employers list a large number of positions for students who have the integrative, interdisciplinary training at the core of this program’s curriculum.

“Green Jobs” definitions, descriptions and titles, can be found at the following 3 locations:

* <https://www.wayup.com/guide/lockheed-martin-994063-sponsored-10-entry-level-sustainability-jobs/>. Site accesed March, 23, 2019.
* Bureau of Labor Statistics, U.S. Department of Labor, “Is a Sustainability Career on Your Green Horizon?” on the Internet at <https://www.bls.gov/green/sustainability/sustainability.pdf> (visited March 23, 2019).
* “Additional Initiatives.” *O\*NET Resource Center*, National Center for O\*NET Development, [www.onetcenter.org/initiatives.html. Accessed 23 March 2019](http://www.onetcenter.org/initiatives.html.%20Accessed%2023%20March%202019)

*See Appendix 2 for a Summary of U.S. Department of Labor Data*.

* + 1. National, State, or Regional Studies
* Summarize any national, state, or regional studies that address the labor market need for the program.

Burning Glass is a higher education consulting firm whose “Labor Insight Real-Time Labor Market Information Tool” shows that job listings and projected growth in demand for sustainability studies related occupations in the Indiana, Illinois, and Michigan region remains strong. For example, in 2017 in this region, there were:

* + 1,789 job postings for Energy and Sustainability Specialists during the twelve month span;
	+ Regional growth was projected to 10.6% in these fields.

These openings were split roughly equally between entry-level and more established positions.

Salary ranges are above average.

*Source: Burning Glass Technologies. “Labor Insight Real-Time Labor Market Information Tool.”* <https://www.burning-glass.com/> Accessed March 23, 2019

* + 1. Surveys of Employers or Students and Analyses of Job Postings
* Summarize the results of any surveys of employers or students and analyses of job postings relevant to the program.

A March 23, 2019 search of Indeed.com using the term “sustainability” produced 189 distinct listings, and the following 3 job postings list educational background requirements that align with the collaborative B.A. in Sustainability Studies:

1. **Position:** Account Manager—**Company:** Indigo—**Location:** Indianapolis, IN
2. **Position:** Environmental, Health and Safety Specialist—**Company:** Avery Dennison—**Location:** Greenfield, IN 46140
3. **Position:** Marketing Coordinator/Qualifications Writer**—Company:** KERAMIDA Inc.—**Location:** Indianapolis, IN

*See Appendix 3 for the full job-listings.*

* + 1. Letters of Support
* Summarize, by source, the letters received in support of the program.

Each participating campus has signed Memoranda of Agreements covering the curriculum, administration, and assessment of the degree and teaching commitments.

These documents are on file with the Office of Online Education.

**3. Cost and Support for Program**

1. Costs
2. Faculty and Staff
* Of the faculty and staff required to offer this program, how many are in place now and how many will need to be added?

The faculty and staff required to deliver the B.A. in Sustainability Studies are in place. No new hires required.

1. Facilities
* Summarize any impact offering this program will have on renovations of existing facilities, requests for new capital projects (including a reference to the institution’s capital plan), or the leasing of new space.

No additional facilities will be required to deliver the collaborative B.A. in Sustainability Studies.

1. Other Capital Costs (e.g. Equipment)
* Summarize any impact offering this program will have on other capital costs, including purchase of equipment needed for the program.

No additional capital costs will arise from delivering this B.A. in Sustainability Studies.

1. Support
* Nature of Support (New, Existing, or Reallocated)

The Offices of Online Education (OOE) and Collaborative Academic Programs (OCAP) coordinate and support the delivery of IU’s multi-campus online degrees. Campus-specific costs will be covered by existing resources.

* Special Fees above Baseline Tuition

OOE and OCAP are supported by a portion of the $70 per credit fee tied to students pursuing 100% online degree programs. These funds support course development and a variety of student support services including success coaching and tutoring.

**4. Similar and Related Programs**

1. List of Programs and Degrees Conferred
2. Similar Programs at Other Institutions

IU Bloomington offers 3 related face-to-face degrees including the

***B.A. in Environmental and Sustainability Studies* (BAES**). This programs serves students who are deeply interested in environmental issues but perhaps less inclined to focus on a traditional disciplinary program of study. Broader than the ‘traditional’ environmental studies field, sustainability studies focuses on systems-level thinking that spans the disciplines of art, humanities, social, economic and natural sciences.

***B.S. Environmental Science* (BSES)*.*** The BSES program is an interdisciplinary environmental science program jointly operated by the College and the O’Neill School. The BSES program is a high-level science program requiring substantial exposure to allied sciences and mathematics as well as independent undergraduate research.

***B.S.P.A. Environmental Management* (BSPA)*.*** The BSPA program, administered by the O’Neill School, is focused on applied aspects of environmental policy and management, and prepares students for professional careers in government, the non-profit sector, and private

industry.

IU South Bend offers a **B.A. in Sustainability Studies** which will align with this proposal.

IU Southeast offers both a **B.A. and B.S. in Sustainability and Regeneration**. The B.A. will align with this proposal.

* CHE staff will summarize data from the Commission’s Program Review Database on headcount, FTE, and degrees conferred for similar programs in the public sector, as well as information on programs in the non-profit and proprietary sectors, to the extent possible.

See: *CHE Appendix A: Similar Programs at Other Institutions.*

1. Related Programs at the Proposing Institution
* CHE staff will summarize data from the Commission’s Program Review Database on headcount, FTE, and degrees conferred for related programs at the proposing institution.

*See CHE Appendix B: Related Programs at the Proposing Institution,*

1. List of Similar Programs Outside Indiana
* If relevant, institutions outside Indiana (in contiguous states, MHEC states, or the nation, depending upon the nature of the proposed program) offering (on-campus or distance education) programs that are similar:

According to the College Choice website, the top 10 online Sustainability Studies programs are offered by:

1. University of Illinois at Urbana-Champaign
2. University of Massachusetts Amherst
3. Oregon State University
4. Florida International University
5. Pennsylvania State University-World Campus
6. Bellevue University
7. Liberty University
8. University of Wisconsin-Stout
9. Roosevelt University
10. Arizona State University
11. Articulation of Associate/Baccalaureate Programs

Please see *Appendix 5* for a 1+3 State General Education Core Course Articulation plan. OCAP and the University Transfer Office will solicit feedback from partner institutions such as Ivy Tech and Vincennes and post this plan online to provide potential transfer students with important degree planning information.

*Appendix 5: Articulation of Associate/Baccalaureate Programs*

1. Collaboration with Similar or Related Programs on Other Campuses
* Indicate any collaborative arrangements in place to support the program.

The collaborative online B.A. in Sustainability Studies will be listed with the other 100% online programs posted at IU Online web portal and will receive marketing and recruitment support from the Office of Online Education (OOE). OOE staff and representatives will be trained to answer initial responses regarding the program and refer prospective students to the campuses for follow-up. OOE will partner with this academic program to provide marketing and recruitment campaigns that reinforce the overall recruitment message and maximize the utilization of OOE, campus, and program resources. OOE will provide effectiveness tracking of marketing campaigns and establish Return on Investment for marketing and recruitment of IU Online students.

In addition, OOE will provide a suite of services for online students. The office provides 24/7 support for students via phone, email and chat. During the 2016-17 academic year, OOE is rolling out the following support for students pursuing an IU Online program:

* + onboarding/orientation to online education at IU,
	+ coaching and mentoring services,
	+ math and writing tutoring,
	+ career services.

OOE has entered into partnership arranges with providers on several IU campuses, and these offices will take the lead in providing services to students in 100% online collaborative degrees. In addition, these partnerships will also coordinate student conduct, ADA compliance, and student advocacy for students enrolled at multiple campuses. With regard to student conduct and student grievances, OOE will facilitate conversations among campuses, and, to the extent possible, seek to resolve the issue using existing campus processes

**5.** **Quality and Other Aspects of the Program**

1. Credit Hours Required/Time To Completion
* Credit hours required for the program and how long a full-time student will need to complete the program

Working professionals will be able to complete the 120 credit hour B.A. in Sustainability Studies 40-80 months of consecutive enrollment.

* Full-time students who take 15 credit hours per semester in the Fall and Spring and 6 credit hours over the summer will finish in 40 months.
* Part-time students who complete 18 credits per year (Fall, Spring, and Summer) will take 75 to 80 months depending upon their actual credit loads.
1. Exceeding the Standard Expectation of Credit Hours
* If the associate or baccalaureate degree program exceeds 60 or 120 semester credit hours, respectively, summarize the reason for exceeding this standard expectation.

**Not Applicable***—* B.A. in Sustainability Studies is 120 credit hours.

1. Program Competencies or Learning Outcomes
* List the significant competencies or learning outcomes that students completing this program are expected to master.

The IU collaborative online B.A. in Sustainability Studies:

1. Provides an interdisciplinary framework within which students study the foundations of sustainability and learn how to apply this knowledge to the development and implementation of sustainable values, innovations, practices, and technologies in our homes, communities, and businesses.
2. Emphasizes connections between environment, economy, and society, and builds a group of faculty and students prepared to address the complex socio-environmental issues confronting our local and global communities.
3. Prepares students to leverage sustainability, leadership and innovation to realize career opportunities presented by the green economy.
4. Fosters an ethical sensibility and capacity to deal with complex socio-environmental issues.
5. Learning Outcomes

*Upon completion of the IU collaborative B.A. in Sustainability Studies, students will be able to perform the following tasks in each of the four domains included in the program goals:*

* 1. Identify fundamental environmental, social, and economic concepts associated with sustainability.
	2. Synthesize historical and contemporary, scientific and ethical arguments to develop a systems approach to sustainable practices.
	3. Use skills of persuasion, audience analysis, and aesthetic expression to advance rhetoric and argument, media communications, public relations, political/community organizing related to sustainability.
	4. Apply quantitative and qualitative tools and metrics to design innovative sustainable practices and assess their impact.
	5. Demonstrate professional skills of leadership and collaboration through experiential learning (e.g. - civic engagement, service learning, research, or internship) in order to apply sustainable solutions in real life settings.
1. Assessment
* Summarize how the institution intends to assess students with respect to mastery of program competencies or learning outcomes.

The MOA2 Faculty Committee of the BA in Sustainability Studies will develop a primary trait rubric for learning outcomes 1, 2, 3, 4, and 5 and post copies to Canvas. Each instructor will evaluate at least one assignment using the rubric to assess how students in the course met its designated learning outcome. The steering committee will hold an annual meeting to review the course rubrics and consider how the curriculum can be improved.

1. Licensure and Certification

The program does not prepare students for a license or certification.

1. Placement of Graduates
* Please describe the principle occupations and industries, in which the majority of graduates are expected to find employment.
* If the program is primarily a feeder for graduate programs, please describe the principle kinds of graduate programs, in which the majority of graduates are expected to be admitted.
1. Accreditation

No additional accreditation will be required beyond the requirements of Indiana University as accredited by the Higher Learning Commission.

1. Pre-requisite coursework

High School diploma or equivalent.

1. Degree Requirements

To earn the B.A. in Sustainability Studies, students must complete the standard campus-and school-specific degree requirements, including general education, of their campus of enrollment, and the 42 hours B.A. in Sustainability Studies major.

The B.A. in Sustainability Studies will cover the following content areas -

1. Introduction to Sustainability
2. Scientific Foundations of Sustainability
3. Sustainability Science
4. Social and Behavioral Foundations of Sustainability
5. Arts and Humanities and Sustainability
6. Methods and Techniques for Sustainability
7. Written Communication
8. Business and Economics of Sustainability
9. Sustainability Capstone
10. Sustainability Electives

Students must complete the indicated number of credits from each requirement category (total 39 credit hours in the major).

*See Appendix 4 for a full-curriculum map with course titles and projected semester by semester degree completion map.*

**6. Projected Headcount and FTE**

NEW COLLABORATIVE ACADEMIC DEGREE PROGRAM PROPOSAL-**CAMPUS SUMMARY**

|  |  |
| --- | --- |
| **Institution/Location:** | Indiana University (enrollment at each participating campus) |
| **Program:** | Bachelor of Arts in Sustainability Studies |
| **Proposed CIP Code:** | 03.01303. |  |  |  |  |   |
| **Base Budget Year:** | 2019-20 | Year 1 | Year 2 | Year 3 | Year 4 | Year 5-8 |
|   |  |  2019-20  |  2020-21  |  2021-22  |  2022-23  |  2023-26  |
|  Enrollment Projections (Headcount)  |  |  |  |  |   |
|  Full-time Students  |  |  -  |  -  |  -  |  -  |  -  |
|  Part-time Students  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |
|  Enrollment Projections (FTE)\*  |  |  |  |  |   |
|  Full-time Students  |  |  -  |  -  |  -  |  -  |  -  |
|  Part-time Students  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |
|  \*Sum of rounded detail may not equal rounded totals.  |

NEW COLLABORATIVE ACADEMIC DEGREE PROGRAM PROPOSAL-**AGGREGATE SUMMARY**

|  |  |
| --- | --- |
| **Institution/Location:** | Indiana University-7 campuses (BL, EA, IN, KO, NW, SB, SE) |
| **Program:** | Bachelor of Arts in Sustainability Studies |
| **Proposed CIP Code:** | 30.3301 |  |  |  |  |   |
|   |  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5-8 |
| **Base Budget Year:** | 2019-20 |  2019-20  |  2020-21  |  2021-22  |  2022-23  |  2023-26  |
|  Enrollment Projections (Headcount)  |  |  |  |  |   |
|  Full-time Students  |  |  -  |  -  |  -  |  -  |  -  |
|  Part-time Students  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |
|  Enrollment Projections (FTE)\*  |  |  |  |  |  |
|  Full-time Students  |  |  |  |  |  |  |
|  Part-time Students  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |
|  \*Sum of rounded detail may not equal rounded totals.  |
|  Degree Completion Projection  |  -  |  -  | - |  |   |
|  CHE Code:  |  |  |  |  |  |   |
|  Campus Code:  |  |  |  |  |  |   |
|  County Code:  |  |  |  |  |  |   |
|  Degree Level:  |  |  |  |  |  |   |
|  CIP Code:  |   |   |   |   |   |   |

*Appendix 1*

The [Indiana University Bicentennial Strategic Plan](https://strategicplan.iu.edu/plan/education.html) can be accessed at <https://strategicplan.iu.edu/plan/education.html>

The IU policy paper on online collaborative programs, “[January 2016 IU Online: A Collaborative Model for Online Education at Indiana University](https://uaa.iu.edu/academic/ooe/docs/ooe_model.pdf)” can be viewed at <https://uaa.iu.edu/academic/ooe/docs/ooe_model.pdf>.

*Appendix 2.1 DWD Data and Demand Analysis*

In a June 18, 2012 news release, the Bureau of Labor Statistics published the results of a broad based survey tracking Green Technology and Business Practices. The survey established that three-quarters of businesses reported the use of at least one green technology or practice that “lessen the environmental impact of an establishment’s operations,” and as of August 2011, “about 854,700 jobs, representing approximately 0.7 percent of total U.S. employment, were held by workers who spent more than half of their time involved in green technologies and practices.” See USDL-12-1291 at [http://www.bls.gov/news.release/gtp.nr0.htm.](http://www.bls.gov/news.release/gtp.nr0.htm)

This was an early effort to identify the broad parameters of an employment sector that has continued to expand in the past 10 years. The B.L.S. identifies a significant number of specific job titles for the green jobs sector such as Environmental Restoration Planners, Regulatory Affairs Managers, Compliance Managers, Green Marketers, and Environmental Compliance Inspectors. However, current employment, ten-year job growth projections, and mean wages for these positions are tracked using broader employment categories such as Environmental Scientists and Specialists, Managers, all other, and Advertising and Promotion Managers.

|  |
| --- |
| **Indiana and national projected job openings and wages for representative occupations in "Green Economy" sector.** |
| **Occupation** |   | **Indiana** | **U.** | **U.S. National** |
| **2016 Jobs** | **2026 Projected Jobs** | **Growth 2016-2026** | **Annual Openings** | **Median Annual Salary-May 17** |   | **2016 Jobs** | **2026 Projected Jobs** | **Growth 2016-2026** | **Annual Openings** | **Median Annual Salary-May 17** |
| **Environmental Restoration Planners**  19-2041.02 (Tracked by BLS under “Environmental Scientists and Specialists”) | 840 | 1,000 | 19% | 100 | $58,430  | 89,500 | 99,400 | 11% | 9,500 | $69,400  |
| **Regulatory Affairs Managers** 11-9199.01 & **Compliance Managers** 11-9199.02 (Tracked by BLS under “Manager, All other”) | 13,290 | 14,260 | 7% | 1,050 | $63,630  | 992,100 | 1,071,700 | 8% | 79,200 | $105,610  |
| **Green Marketers** 11-2011.01 (Tracked by BLS under “Advertising and Promotion Managers”) | 290 | 310 | 6% | 30 | $73,140  | 31,300 | 33,000 | 6% | 3,400 | $106,130  |
| **Environmental Compliance Inspectors** 13-1041.01 | 3,830 | 4,240 | 11% | 360 | $55,800  | 288,300 | 312,000 | 8% | 25,900 | $67,870  |

Source: O\*Net Online Summary reports for four green sector jobs: “11-2011.01 - Green Marketers, 11-9199.01 - Regulatory Affairs Managers, 11-9199.02, and 13-1041.01 - Environmental Compliance Inspectors.” O\*NET OnLine, National Center for O\*NET Development, [www.onetonline.org/link/summary/13-1041.01](https://www.onetonline.org/link/summary/13-1041.01). O\*Net wage and employment projections are taken from the

Bureau of Labor Statistics [2017 wage data](https://www.bls.gov/oes/) and [2016-2026 employment projections](https://www.bls.gov/emp/). Cite visited March 24, 2019.

For additional information on specific Green Jobs and growth projections, see the BLS Green Careers Information page at [http://www.bls.gov/green/greencareers.htm.](http://www.bls.gov/green/greencareers.htm)

*Appendix 3.1 Job Listing #1*

Position: Account Manager

Company: Indigo

Location: Indianapolis, IN

Indigo is working to harness nature to sustainably feed the planet. We have discovered a transformational opportunity to improve global crop yield and reduce the use of agricultural chemicals and fertilizers by utilizing the core microbiome inside plants to confer material yield and crop protection benefits across a variety of crops, geographies and stresses. The challenge and opportunity for Indigo is to gain critical first mover advantages by scaling quickly and effectively (~$1B 2020 revenue.)

The role of the Account Manager will be to build and maintain close, emotional relationships with Indigo's grower partners. This role extends far beyond a traditional sales position and will require the candidate to demonstrate strong business acumen, deep and comprehensive understanding of ag business, and exceptional social intelligence. The Account Manager will need to intimately understand Indigo's commercial offerings, articulate the benefits of Indigo's production model and close the sale (contract) with new growers. Once the relationship has been established, Account Managers will devote their efforts to delighting their growers with deep knowledge of farm operations, exceptional customer service, highlighting Indigo value, and building a long-lasting partnership with growers. The Account Manager will work closely with an experienced Indigo agronomist to enable grower success by maximizing farm profitability.

**Outcomes:**

* Develops an aggressive, planned approach for sales process with identification and prioritization of best lead sources, qualification of leads, and systematic process for progressing leads through sales funnel.
* Aggressively qualifies leads from sourced lists, referrals, and personal network. Immediately contacts qualified, hot leads from all sources to arrange presentation of Indigo mission and production model.
* Effectively and professionally communicates the Indigo mission, technology, production model, and value proposition to growers, associates, and partners. Demonstrates skill in addressing questions/resistance and proactively closes sales.
* Achieves or exceeds target for contracted acres with an aggressive and professional sales approach while developing the grower relationship with a positive Indigo experience.
* Maintains grower account and sales process information on salesforce.com CRM tool.
* Develops a collaborative relationship with agronomist to provide an enriched sales and service experience for our contracted growers.
* Internalizes, exhibits, and communicates a passion for the Indigo mission, core values, and promises. Articulates this passion in a confident, professional, and endearing fashion.

**Attributes and Competencies:**

* Clear communication skills
* Strong persuasion and relationship building skills
* Ability to link Indigo Ag value to grower profitability and sustainability
* Strong business sense and understanding of economics especially as it relates to agriculture
* Self-starter; independent
* Collaborative, team oriented, and extremely strong people skills

**Experience:**

* 0-5 years of experience
* Bachelor Degree required
* Experience in a sales or ag finance position (i.e. Ag banks, insurance or ag retail)
* Farming background or a strong knowledge of farming

*Appendix 3.3 Job Listing* #2

Position: Environmental, Health and Safety Specialist

Company: Avery Dennison

Location: Greenfield, IN 46140

Reporting the site EH&S Manager, the EH&S Specialist will assist in enhancing the Greenfield Indiana manufacturing site's environmental, health and safety culture by performing a variety of activities across multiple shifts of a 24/7 operation. Key responsibilities include:

**EH&S Programs & Management System Responsibilities**

* Assists in the implantation of company EH&S programs and develops facility specific procedures that ensure compliance with regulatory and Company requirements.
* Participate in the development of EH&S program components: operational procedure, work instructions, training material, standards, etc.
* Assists in the integration of Company and facility level EH&S management systems to maintain compliance, environmental protection and safe operating conditions.

**Reporting & Documentation**

* Requirements include integration of environmental, health and safety management systems with engineering and program documentation and schedules to maintain regulatory compliance and safe operating conditions.
* Reduce liability within the facility and ensure all safety and environmental recommendations are completed and documented.
* Compile process safety information for each covered process and keep readily accessible to process employees and management as well as updated on an annual basis.
* Use a structured processes score card to measure and communicate Safety/Environmental performance with both leading results and indicators.
* Track and regularly report the status of regulatory compliance and improvement initiatives.
* Maintain OSHA 300 log, form 101, and all other governmental and corporate database records.

**Training, Resource & Counsel**

* Serve as a resource to the site manager in regards to EH&S matters and acts as daily point of contact for all EH&S issues. Assists line and staff management in understanding OSHA/EPA regulations and standards, including guidance on handling OSHA/EPA compliance, inspections, and citations.
* Assist in the organization and oversight of EH&S functions to ensure that an effective accident prevention program is maintained, that appropriate measures are taken to comply with Corporate, OSHA/EPA and related safety and environmental policies agencies and directives. Ensure that the company stays in compliance with company and client policies and procedures as well as federal and state laws.
* Provides advice and counsel to product and process engineers and leads to incorporate environmental health and safety principles and concepts to prevent workplace, operational hazards and environmental impacts.
* Develops, revises and conducts environmental, health and safety education and training to support regulatory and business requirements.
* Act as a resource and mentor to facility safety teams. Investigate all releases, injuries and near-misses.
* The position may also be responsible for treating minor injuries, managing workmen's comp. cases, EH&S training, record keeping, performing accident investigations, etc.

**Compliance & Safety Programs**

* Helps to manage the Job Safety Analysis, ergonomic and OSHA PPE compliance programs.
* Maintain each facility's compliance records for permits. Review Federal, State and local regulation changes that impact permits and permit compliance.
* Identifies and evaluates hazardous conditions and practices and develop hazard control practices and programs. Maintains the site’s SDS system.
* Reviews proposed MOCs and approve them from a safety/environmental perspective.
* Works closely with Engineering and Maintenance departments ensuring safety/environmental compliance of projects and equipment.
* Manage industrial hygiene program. Maintain and calibrate industrial hygiene testing equipment. Coordinate and conduct periodic industrial hygiene monitoring of noise, air quality and other IH levels.
* Investigates compliance issues in conjunction with line and staff personnel. Notify top management of pertinent details. Guides and assists plant personnel at locations with critical environmental, safety and health issues.
* Reviews plant incident statistics and makes recommendations for correction of problem areas.
* Conducts periodic inspections of plant machinery, equipment, and working conditions to ensure conformance to appropriate safety and sanitary standards and regulations.

**Enterprise Lean Sigma (ELS)**

* Use ELS methodology to drive improvements in Environmental and Safety programs. Engineer solutions to occupational exposures. Drive continuous improvement and deliver strong results from behavioral based processes.
* Evaluate new environmental, health and safety technologies and processes to develop strategies and tactics for reducing workplace and operational hazards and environmental impacts.

Qualifications

**Education and Years of Relevant Experience, Skills & Knowledge**

* Bachelor’s Degree in Occupational Health and Safety, Environmental Engineering / Science or related field preferred.
* 5+ years of EH&S experience with progressive work assignments. Advanced professional certification in safety e.g. CSP, CIH, etc. desired.
* Good knowledge of regulatory requirements (OSHA, EPA, NFPA) and EHS policies, procedures and programs.
* Experience in life safety codes: EH&S rules, training, principles of occupational safety and health, and Industrial hygiene.
* Familiarity with minimal, non-manufactured hazardous waste labeling and manifesting.
* Good Project/Problem Resolution skills.
* Understanding of applicable computer systems, such as Microsoft Office, Lotus Notes and function specific software.
* Strategic thinking with strong leadership skills and good interpersonal communications.
* Strong coaching, facilitating and training skills
* Under minimal supervision, and in accordance with established procedures, performs work that is complex and varied in nature, requiring detailed evaluation, originality, or ingenuity.
* May partner with cross-functional teams in complex programs or initiatives.
* Uses best practices and knowledge of internal or external business issues to improve products or services.
* Possesses and applies a broad knowledge of principles, practices and procedures of sales, communications and marketing to the completion of complex assignments.
* Acts as a resource for colleagues with less experience; may direct the work of other staff members.

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*Appendix 3.1 Job Listing #3*

**Position:** Marketing Coordinator/Qualifications Writer

**Company:** KERAMIDA Inc.

**Location:** Indianapolis, IN

Established in 1988, KERAMIDA has become the Environmental, Sustainability, and Health & Safety Consulting, Engineering, and Planning Advisor of Choice for private and public clients worldwide. Our professionals have a unique understanding of sustainability strategies, environmental compliance remediation technologies, health & safety requirements, EHS management systems, emergency management, industrial energy reduction, and governmental programs.

As the Employer of Choice for our people, we offer a great work culture, competitive pay, full benefits, holidays and paid vacations.

**Position Summary:**

- Responsible for issuing Proposals and Qualifications

- Coordinate all requests for Proposals and Qualifications with Senior Management

- Draft Proposals and Qualifications with input from technical senior staff

- Responsible for continuously updating current list of company’s qualifications and submitting all changes and updates to Director of Communications.

- Responsible for drafting Project Descriptions for marketing purposes, including sourcing photos from the Project Manager.

- Responsible for organizing and maintaining marketing files.

- Responsible for the management and upkeep of client database - including the initial merging of several lists (MailChimp, Salesforce, Ajera) into one master list with groups.

-Responsible for drafting and emailing announcements / invitations / etc. to clients including drafting and managing the monthly newsletter through MailChimp.

**Job Requirements/Qualifications:**

Requirements: BS in Journalism, Marketing , English or equivalent.

Understanding of environmentally related Technical Subjects. Technical writing a plus.

Organizational skills required. MailChimp experience required.

The policy of KERAMIDA, Inc. is to fully comply with applicable federal, state and local laws, rules and regulations in the area of non-discrimination in employment. Discrimination against employees and applicants due to race, color, religion, sex (including sexual harassment), national origin, disability, age, military and veteran status is prohibited.

Job Type: Full-time

Experience:

* Marketing: 4 years (Preferred)

*Appendix 4.1 Curriculum Map*

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| **Collaborative Online B.A. in Sustainability Studies** |
| Students must take the indicated number of required credits from each requirement category. |
| Students may use any listed course to satisfy this requirement.  |
| **Requirement Category** | **Req Crs** | **Course #** | **Course Title** | **Cr** |
| **1. Introduction to Sustainability: LOs 1 & 2**  | **3** | SUST-S 201 | Foundations of Sustainability | 3 |
| **2.1 Scientific Foundations of Sustainability: LOs 1&2** | **3** | GEOG-G 107 | Physical Systems of the Environment  | 3 |
| GEOG-G 108 | Physical Systems of the Environment lab | 2 |
| GEOG-G 110 | Human Geography in a Changing World | 3 |
| GEOG-G 111 | Hurricanes | 1 |
| GEOG-G 112 | Thunderstorms and Tornadoes | 1 |
| GEOG-G 113 | Ozone Hole  | 1 |
| GEOG-G 114 | Greenhouse Effect and Global Warming | 1 |
| GEOG-G 123 | Soil Survey | 3 |
| GEOG-G 208 | Environment and Society | 3 |
| GEOL-G 135 | Indiana Geology | 3 |
| GEOL-G 136 | Indiana Geology lab | 2 |
| GEOL-G 101 | Introduction to Earth Science | 3 |
| GEOL-G 107 | Earth and the Environment  | 3 |
| GEOL-G 110 | Physical Geology | 3 |
| GEOL-G 115 | Intro to Oceanography | 3 |
| GEOL-G 185 | Global Environmental Change  | 3 |
| PHYS-P 120 | Energy and Technology and Geology | 3  |
| **2.2 Sustainability Science: LOs 1&2** | **6** | AHLT-H 331 | Environmental Health  | 3 |
| GEOL-G 400 | Energy: Sources & Needs | 3 |
| GEOL-G 476 | Climate Change Science | 3 |
| GEOG-G 303 | Weather and Climate Change | 3 |
| GEOG-G 307 | Biogeography: The Distribution of Life | 3 |
| GEOG-G 404 | Elements of Soil Science | 3 |
| GEOG-G 475 | Climate Change. | 3 |
| BIOL-L 333 | Environmental Science | 3 |
| BIOL-L 350 | Environmental Biology | 3 |
| BIOL-L 325 | Ecological Principles | 3 |
| PLSC-B 364 | Summer Flowering Plants | 3 |
| SUST-C 330 | Scientific Foundations in Sustainability  | 3 |
| **3. Social & Behavioral Foundations of Sustainability: LOs 2&3** | **6** | GEOG-G 310 | Human Impact on the Environment | 3 |
| GEOG-G 315 | Environmental Conservation  | 3 |
| GEOG-G 320 | Population Geography | 3 |
| POLS-Y 377 | Globalization | 3 |
| POLS-Y 313 | Environmental Policy | 3 |
| POLS-Y 346 | Politics of the Developing World | 3 |
| PSY-P 488 | Environmental Psychology and Sustainable Living | 3 |
| SOC-S 308 | Global Society | 3 |
| SUST-B 190 | Sustainable Future  | 3 |
| SUST-C 340 | Social and Behavioral Foundations of Sustainability  | 3 |
| **4. Arts and Humanities and Sustainability: LOs 2 & 3** | **3** | SUST-C 350 | Sustainability in the Arts and Humanities  | 3 |
| GEOG-G 418 | Historical Geography | 3 |
| **5.1 Methods & Techniques for Sustainability Studies: LO 4** | **6** | SOC-S 261 | Research Methods in Sociology | 3 |
| SOC-S 262 | Statistics for Sociology | 3 |
| ECON-E 270 | Introduction to Statistical Theory of Economics | 3 |
| GEOG-G 336 | Environmental Remote Sensing | 3 |
| GEOG-G 337 | Computer Cartography and Graphics | 3 |
| GEOG-G 338 | Geographic Information Systems | 3 |
| GEOG-G 438 | Geographic Information Systems II | 3 |
| PSY-K 300 | Statistical Techniques | 3 |
| SUST-C 360 | Methods and Applications in Sustainability | 3 |
| **5.2 Written Communication: LOs 2 & 3** | **3** | ENGL-W 270  | Argumentative Writing  | 3 |
| ENG-W 231 | Professional Writing | 3 |
| ENG-W 234 | Technical Report Writing | 3 |
| ENG-W 230 | Science Writing | 3 |
| **6. Business & Economics of Sustainability: LOs 3 & 5** | **3** | BUS-B 399 | Business and Society | 3 |
| GEOG-G 314 | Urban Geography: Urbanization & Associated Land Uses in Environmental Perspective | 3 |
| GEOG-G 331 | Economic Geography: Spatial Distribution of Natural Resources | 3 |
| GEOG-G 478 | Global Change, Food, & Farming Systems | 3 |
| PHIL-P 306 | Business Ethics | 3 |
| SUST-C 370 | Business and Economics of Sustainability | 3 |
| **7. Sustainability Electives** | **6** | Please choose two courses from different learning outcomes lists. Courses uses as electives cannot double count to fulfill other major requirements2.2 Scientific Foundations of Sustainability3. Social & Behavioral Foundations of Sustainability4. Arts and Humanities and Sustainability6. Business & Economics of Sustainability8. Sustainability Capstone (in addition to required completion). |
| **8. Sustainability Capstone: LOs 1, 2, 3, 4 & 5** | **3** | SUST-C 490 | Capstone in Sustainability  | 3 |
| SUST-S 491 | Internship in Sustainability | 3 |
| **Total Credit Hours in Major =**  | **42** |  |  |  |

*Appendix 4.1 Semester-by-Semester Completion Plan*

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| **Online Collaborative B.A. in Sustainability Studies-Semester by Semester Degree Map** |
| **Freshmen Year** |
| **Fall Semester**  |   | **Spring Semester** |   |    |
| Campus GenEd English Composition  | 3 | **5.2 Written Communication:** ENG-W231 Professional Writing | 3 |
| Campus GenEd Quantitative Reasoning | 3 | **2.2 Sustainability Science:** AHLT-H 331 Environmental Health | 3 |
| Campus GenEd Information Literacy/Freshmen Seminar | 3 | **1. Introduction to Sustainability:** SUST-S 201 Foundations of Sustainability | 3 | **Fall I** | 14 |
| **2.1 Scientific Foundations of Sustainability:** GEOL-G 135 Indiana Geology | 3 | Campus GenEd Spkng Public Speaking | 3 | **Spring I** | 15 |
| **2.1 Scientific Foundations of Sustainability:** GEOL-G 136 Indiana Geology lab | 2 | Campus GenEd Diversity/Culture | 3 | **AY Credits =**  | 29 |
| **Sophomore Year** |
| **Fall Semester**  |   | **Spring Semester** |   |     |
| Campus GenEd S&H | 3 | **3. Social & Behavioral Foundations of Sustainability:** POLS-Y 313 Environmental Policy | 3 |
| Campus GenEd A&H  | 3 | **3. Social & Behavioral Foundations of Sustainability:** SUST-C 340 Social and Behavioral Foundations of Sustainability | 3 |
| Campus GenEd/Elective/Minor | 3 | **4. Arts and Humanities and Sustainability:** GEOG-G 418 Historical Geography | 3 | **Fall II** | 15 |
| **2.2 Sustainability Science:** GEOG-G 307 Biogeography: The Distribution of Life | 3 | Campus GenEd/Elective/Minor | 3 | **Spring II** | 15 |
| **5.1 Methods & Techniques for Sustainability Studies:** SOC-S 262 Statistics for Sociology | 3 | Campus GenEd/Elective/Minor | 3 | **AY Credits =**  | 30 |
| **Junior Year** |
| **Fall Semester**  |   | **Spring Semester** |   |  |
| Campus S&H  | 3 | Campus NatSci Campus NatSci | 3 |
| Campus GenEd/Elective/Minor | 3 | Campus GenEd/Elective/Minor | 3 |
| **5.1 Methods & Techniques for Sustainability Studies:** GEOG-G 338 Geographic Information Systems | 3 | **7. Sustainability Electives:** GEOG-G 438 Geographic Information Systems II | 3 | **Fall III** | 15 |
| **6. Business & Economics of Sustainability:** GEOG-G 314 Urban Geography: Urbanization & Associated Land Uses in Environmental Perspective | 3 | Campus GenEd/Elective/Minor | 3 | **Spring III** | 15 |
| Campus GenEd/Elective/Minor | 3 | Campus GenEd/Elective/Minor | 3 | **AY Credits =**  | 30 |
| **Senior Year** |
| **Fall Semester**  |   | **Spring Semester** |   |  |
| Campus GenEd/Elective/Minor | 3 | **7. Sustainability Electives:** SUST-S 491 Internship in Sustainability | 3 |
| Career Course | 3 | Campus GenEd/Elective/Minor | 3 |
| **8. Sustainability Capstone:** SUST-C 490 Capstone in Sustainability | 3 | Campus GenEd/Elective/Minor | 3 | **Fall IV** | 15 |
| Campus GenEd/Elective/Minor | 3 | Campus GenEd/Elective/Minor | 3 | **Spring IV** | 16 |
| Campus GenEd/Elective/Minor | 3 | Campus GenEd/Elective/Minor | 4 | **AY Credits =**  | 31 |
|  |  |  |  | **Total****Credits =** | **120** |

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| **APPENDIX 5:** **Course Articulation Planning for New Baccalaureate Degrees**Please map how courses are expected to transfer from the 2-year campus to the proposed degree program. |
| **Type of Articulation** (Please click the appropriate checkbox. See definitions document for additional information.):[ ]  TSAP (2+2) [ ]  Assoc Prep (2+2) [ ]  General Assoc (2+2) [x]  STGEC (1+3) [ ]  None (NA) – note below  |
| **Articulating academic program:** | **IU Online Collaborative B.A. in Sustainability Studies** |
| **Articulation Pathway from:** Indicate Ivy Tech Community College or Vincennes University | **NA This is a State General Education Core articulation plan.** |
| **Articulating academic program:** | **STGEC milestone on transcript (30 credits).** |

| **Part 2: 90 Remaining credits to be completed at IU after transfer from the 2-year college**(insert rows as necessary) |
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| **Requirement description** | **Course** | **Title** | **Cr.** |
| **1. Introduction to Sustainability** | SUST-S 201 | Foundations of Sustainability | 3 |
| **2.1 Scientific Foundations of Sustainability** | Choose 1 100/200 level Sustainability Science course from the chosen list. | 3 |
| **2.2 Sustainability Science** | Choose 1 300/400 level Sustainability Science course from the chosen list. | 6 |
| **3. Social & Behavioral Foundations of Sustainability** | Choose 2 Social & Behavioral Foundations of Sustainability courses from the chosen list. | 6 |
| **4. Arts and Humanities and Sustainability** | Choose 1 Arts and Humanities and Sustainability course from the chosen list. | 3 |
| **5.1 Methods & Techniques for Sustainability Studies** | Choose 2 Methods & Techniques for Sustainability Studies courses from the chosen list. | 6 |
| **5.2 Written Communication** | Choose 1 200 level Written Communication course from the chosen list. | 3 |
| **6. Business & Economics of Sustainability** | Choose 1 300/400 level Business and Economics of Sustainability course from the chosen list. | 3 |
| **7. Sustainability Electives** | Choose any 2 courses not already used from lists 2.2, 3, 4, or 6. Students may also add a second course from list 8. | 6 |
| **8. Sustainability Capstone: LOs 1, 2, 3, 4 & 5** | Choose 1 Sustainability Capstone from list 8. | 3 |
| **9. Additional General Education and Campus Requirements to reach 120 credits.** | 48 |
|  |  | **Total IU Credits** = | 90 |