GUIDELINES FOR COMPLETING A SENIOR INDIVIDUALIZED PROJECT IN ENVIRONMENTAL STUDIES

Note: All College-wide SIP policies apply to ENVS SIPs, in additions to the policies laid out in this document; please refer to the **Academic Catalog** for detailed requirements and deadlines.

Contact one of the Directors of the Environmental Studies Program with any questions you may have: Binney Girdler (Biology) and Ahmed Hussen (Economics)

Range of acceptable projects; choosing a SIP supervisor

Many projects that fall under the subject of Environmental Studies may well be accommodated within students' major departments (e.g., Biology, English, or Political Science); however, some projects that are truly interdisciplinary in nature may not fit into any one department. A faculty member from any department may supervise a SIP in Environmental Studies. Keep in mind that potential SIP supervisors are not obliged to approve every SIP proposal that is presented to them. You may have to meet certain prerequisites, or you may have to adjust your ideas or modify your proposal, before it gains the approval of a SIP supervisor. Enlist a SIP supervisor early in the process (most typically early in the Spring term of your junior year) and then work with that person to develop a project that will be interesting, significant, and meaningful to you.

Required background of students doing projects

Although not required, most students completing ENVS SIPs will be ENVS concentrators, and will likely have the course experience necessary to complete advance scholarship in the discipline. Non-ENVS concentrators will still be expected to have completed advanced coursework in those disciplines pertinent to the scholarship that is proposed.

Expected scope and depth of projects

The amount of SIP credit (one or two units) is determined by the student and the faculty SIP supervisor as the project is being developed, prior to registration of the SIP. In consultation with the SIP supervisor, you will determine your project's form and the environment in which it is to be pursued. Several typical SIP structures in Environmental Studies are outlined below.

Two-unit Option:

A research-based, empirical SIP is conducted during the summer prior to and Fall quarter of the senior year. A major component of a research-based SIP is collection or compilation of *original* data, quantitative or qualitative (scientific, observational, or experimental study; interview based; case study analysis). The research is often accomplished during an interdisciplinary internship at an external organization in the summer, but can also be completed while under the mentorship of the faculty supervisor. The written SIP will typically be 40 to 50 pages, with 25 or more sources. A research SIP that fails to meet the stated quality standards or that fail to meet deadlines may be reduced to a one-credit library research SIP (or result in a failed SIP).

One-unit Option:

A one credit experiential-based research SIP is written during the Fall of the senior year, and is based on research related to a student's career-development internship experience, usually the summer before. It is important to note that in doing this kind of SIP the emphasis is not on the internship experience *per se*, but rather on how this real word experience is used to solidify the student's understanding on the practical value of the theories and concepts learned from

previous courses. Understood this way, the internship experience could provide students with possible sources of data (in the form of graphs, charts, tables, etc. and case studies). Furthermore, the research question (i.e., the hypothesis) for the SIP that a student would like to investigate may emanate from the observations a student has done during her/his internship experience. The written SIP will typically be 35 to 40 pages, with 10 - 15 sources.

<u>A one-credit library-based review SIP</u> takes place during Fall quarter of the senior year, and relies heavily on library research that involves extensive reading and integration of intertwined concepts. The research topic should be initiated by a student who is interested in a particular topic in environmental studies that she/he wishes to explore further. In general, this kind of research requires a summary and analysis of the appropriate literature and includes an in-depth exploration of a research question, its background, and its policy or other applied implications. However, unlike a two-unit SIP, the analysis of one-credit inquiry-based research SIP may be entirely conceptual or theoretical, supplemented by some discussion of implications for environmental policy or practice. In other words, empirical analysis is not a requirement for this kind of SIP. Originality, to the extent it exists, may be found in the synthesis of divergent theoretical ideas and concepts. The written SIP will typically be 30 to 40 pages, with 20 or more sources.

Format
The format of the SIP will depend on the nature of the project; a general rubric for the evaluation of the written ENVS SIP is provided in a table at the end of this document. Unless otherwise specified by agreement with the SIP supervisor, the written document shall be double-sided, double-spaced, 12-point serif font, with title page (see specifications in box, below), table of contents, abstract, body (sections therein depending on primary discipline and discussed with supervisor), and references (citation format to be specified by the SIP supervisor).

The title page must contain the following:
- Complete title of the Senior Individualized Project
- Author's name
- The SIP title and author's name should be visible through the "window" of the black binder
- The name of SIP supervisor, and in addition to his/her department, "Environmental Studies Program"
- The legend "A paper submitted in partial fulfillment of the requirements for the degree of Bachelor of Arts at Kalamazoo College."
- Year

The written SIP should be submitted in hard copy, bound in the traditional black binders available at the College Bookstore, to the SIP supervisor no later than the Friday of first week of the quarter following the SIP quarter. The SIP should also be submitted electronically at this time, as a PDF file, to the College's CACHE system, so that it may be archived and readily available to future scholars. Submission of SIPs in unusual formats (*e.g.*, videos or other artwork) should be arranged individually with the SIP supervisor.

Registering for your ENVS SIP

As per College policy, the SIP registration form should be submitted to the Registrar's Office during registration or the drop/add period for the quarter. For a Summer or Extended Fall SIP that involves work during the summer, all units must be registered before the end of the previous Spring term. The student and supervisor will develop a SIP contract, to be signed by both, as part of the registration process. The contract will delineate the topic and scope of the project and outline any interim deadlines that the supervisor deems prudent.

> **Note:** It is the responsibility of the student to submit any project subject to the approval of the Institutional Review Board, *i.e.*, if the project will involve human subjects (*e.g.*, if data will involve interviews). The IRB meets infrequently, so it is essential that students submit proposals in a timely manner, preferably by 5th week of the quarter before the SIP is to be conducted.

Conducting the ENVS SIP

Student and faculty supervisor are encouraged to meet regularly throughout the SIP quarter. During the registration process and as part of the SIP contract, student and supervisor should establish interim deadlines for progress reports, feedback, etc.

Presentation of the ENVS SIP

All students who conduct ENVS SIPs are required to present their work at the Sustainability SIP Symposium, held in April each year. Students may submit an abstract and outline to be considered for an oral presentation time slot, or may present their research in a poster format.

Grading of the ENVS SIP

Senior Individualized Projects at Kalamazoo College are Credit/No Credit. An exemplary two-unit SIP will be considered for Honors in the Program. If the SIP supervisor is considering an Honors designation, he or she will request a second reader, typically one of the Program directors, for confirmation. The same confirmation applies for a No Credit SIP. Please see the Table "Rubric for Evaluating the Written SIP Thesis in Environmental Studies" for the qualities that elevate a passing SIP to an Honors SIP, and, similarly, would cause a SIP to earn No Credit. In addition to the written paper, in deciding the final grade, the SIP Supervisor may also take into account the student's conduct during the completion of the SIP, such as attending to deadlines and responding to feedback.

RUBRIC FOR EVALUATING THE WRITTEN SIP THESIS
IN ENVIRONMENTAL STUDIES

Feature	An Honors SIP has…	A Credit SIP has…	A No-Credit SIP has…
Background, context, and establishing the research question	Beautifully structured funnel from general concepts to specific questions. Perfect attention to audience. Richly referenced*.	Good structure from general concepts to specific questions. May overshoot or undershoot audience. Adequately referenced*.	No attempt to frame questions in general context. Completely misses audience. No primary references*.
Description of methodology	Clear & unambiguous description of methodology. Appropriate level of detail.	Adequate description of methodology. Some problems with level of detail—either too much or too little.	No or uninterpretable description of methodology. Grossly misses on level of detail.
Data presentation	Very clear data presentation. Figures and tables "speak for themselves." Concise, informative legends.	Good data presentation. Figures & Tables are adequate, but require work on the part of the reader to follow. Sparse legends.	Very poor, almost uninterpretable presentation of data. Legends provide no help to reader.
Data interpretation and analysis	Highly effective narrative explaining the significance of the results. Clear story emerges. Great care taken to not overstate or understate significance.	Adequate narrative; some story emerges. Some nuance taken in relation to overstating or understating significance.	No attempt at narrative. No clear story emerges. Significance of findings either overstated or understated.
Integration of results into broader literature	In depth, sophisticated integration of results into broader context. Deep, significant insights & conclusions. Richly referenced* (> 30).	Adequate integration of results into broader context. Some sustained effort at drawing insights & conclusions. Adequately referenced* (15 – 30).	No integration of results into broader context. No attempt at insights or conclusions beyond stated results. Perfunctory references* (< 10).
Writing mechanics	Excellent writing style and mechanics. Consistent voice. No errors. Beautiful flow.	Adequate style and mechanics. Few errors. Inconsistencies in voice.	Rudimentary style and mechanics. Poor flow. Erratic changes in voice. Multiple errors. Nearly unreadable.
Length	40 – 60 pages	20 to 50 pages	Less than 20 pages
	(Note: these are rough length guidelines only; quantity cannot substitute for quality)		

* To be considered "adequate," references will comprise a list of resources that comprehensively covers the topic under study. This includes the quality of the resources as well as the number of resources referenced. Most topics will require a number of peer-reviewed journal articles, and recognized books and government publications. Web-only sources should be used sparingly.