

4. Writing Plan Narrative

Department of Ecology, Evolution and Behavior

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When Claudia Neuhauser, the former Head of the Department of Ecology, Evolution, and Behavior (EEB), raised the possibility of EEB's participating in the WEC pilot program, the department was enthusiastic. This enthusiasm arose from the value that EEB faculty members place on writing in the discipline, apparent in the survey of faculty conducted by WEC staff: 85% of EEB faculty rated writing as very or extremely important to the scholarly and professional work done in the EEB major's disciplines. Nevertheless, the department recognized then, and recognizes now, that writing instruction for EEB majors could be improved. Nearly half of surveyed faculty rated student writing as "weak" in terms of using the field's terminology; analyzing or evaluating ideas, texts, or events; using writing to develop and deepen thinking; and reporting complex data or findings. An even larger number of faculty members rated student writing as "weak" in terms of arguing a position using a central thesis, explaining the meaning of complex numerical or statistical information, and integrating and citing information from sources.

The WEC survey revealed that writing instruction is a part of many EEB courses, reflecting the importance of writing in the discipline to EEB faculty. In addition, despite belonging to three related but distinct disciplines (ecology, evolution, and behavior), EEB faculty members learned through WEC faculty meeting discussions that they share key expectations of what undergraduate writing should be. These discussions also indicated that faculty members have little specific information about where writing instruction occurs in the curriculum, or about the nature of writing instruction in courses taught by our colleagues in the department and related majors. Thus EEB faculty members recognized that the WEC process has been important for educating each other about the status of writing instruction in our department and constructive in making discussion of writing instruction more deliberately focused around EEB's shared values.

A number of themes emerged from the WEC discussions with EEB faculty regarding the writing characteristics and abilities valued in our unit, and among them some were particularly prominent. First, as might be expected, much writing in EEB uses traditional scientific formats with language that allows methods to be replicated. Such language is precise in its description, but also concise. This writing characteristic is valued in all sciences, and EEB majors likely encounter emphasis on it in their early coursework. Second, writing in EEB interrogates the scientific literature and synthesizes multiple sources to construct logical arguments and reach conclusions that build upon the ideas of others. Such syntheses may be aimed at scientists, policy makers, managers, or other lay audiences. Writing to diverse audiences is important preparation for professional writing, because EEB majors graduate to pursue a variety of careers and will be required to communicate effectively to a wide variety of audiences, with a range of purposes, and through varied writing formats. Yet, regardless of format or audience, such communication must reflect thinking that is evidence-based. Third, writing in EEB acknowledges the role of

natural or human-caused variability in biological systems, recognizing that scientific results are context-dependent, an outcome of the system studied and its unique characteristics. Such variability must be considered in drawing synthetic conclusions and in making generalizations beyond the study system. This third characteristic sets EEB apart somewhat from many other disciplines within the biological sciences, because EEB scientists often work in systems they cannot fully control. Finally, writing in EEB emphasizes the science (i.e., the experiments and the results), rather than the scientist (i.e., who conducted the study).

Section 1: Discipline-Specific Writing Characteristics in EEB

Writing in EEB can be characterized in the following ways:

- **Cohesive:** Arguments are conceptually logical, building from one point to the next.
- **Replicable:** Procedures and findings are presented concisely, but completely and concretely, to allow others to replicate them.
- **Internally consistent and adequately evidenced:** Arguments and conclusions are based on data, either one's own or from the body of relevant scientific literature.
- **Framed in terms of foundational concepts and ideas:** Arguments acknowledge and build on the conceptual contributions of others.
- **Evidence-centered:** The writer emphasizes the research, its results, and its analysis, rather than the scientists as actors in producing that research.
- **Organized using typical scientific protocols:** For example, research reporting is organized in terms of an Introduction, Methods, Results, and Discussion, and incorporates graphics and tables with appropriate and informative captioning, thus indicating that the illumination of truth depends on evidence.
- **Synthetic:** Conclusions are based on the analysis and synthesis of the scientific literature, pulling together results and ideas from multiple sources.
- **Underscores the idea that knowledge is conditional and nature is variable:** The writer recognizes and appreciates that research findings depend on the unique characteristics of the system being studied. Variability is inherent in natural systems and must be considered and acknowledged when generalizing or applying results to other systems.
- **Narrative:** Writing may be descriptive, but is evidence-based and rigorous, not simply story-telling.
- **Persuasive to specific audiences:** Writing is persuasive to targeted audience, be it lay, political, or scientific.
- **Accurate in the description of biological processes:** Writing avoids teleology and anthropomorphism.

Section 2: Desired Writing Abilities in EEB

By the time they graduate, EEB majors will have had opportunities to become proficient in the following writing abilities:

Novice (developed throughout the undergraduate curriculum, beginning in 1XXX and 2XXX courses)

- **Write concisely, avoiding unnecessary language or information**
- **Use grammar and tone that are appropriate for the intended audience**
- **Describe observations and procedures concretely (avoiding abstract language or subjective characterizations)**
- **Write with biological accuracy (i.e., without teleology or anthropomorphosis)**
- **Use the appropriate scientific template when necessary to structure assignments (e.g., scientific papers, diagnostic keys)**
- **Interpret, construct, integrate, and properly caption and format figures and tables**
- **Create cohesive narratives that are structured to flow logically from one point to the next**

Intermediate (developed in core 3XXX courses and upper-division electives)

- **Formulate research or thesis questions that are appropriate in scope and topic**
- **Describe quantitative analyses accurately (e.g., statistical results and mathematical solutions)**
- **Argue logically and persuasively, using appropriate evidence**
- **Analyze for cause and effect**
- **Use writing to develop and deepen thinking**
- **Work and write collaboratively**
- **Write in a style that focuses on results (rather than on those who obtained the results)**

Advanced (developed primarily in upper-division electives)

- **Select appropriate (i.e., peer-reviewed) sources from the primary and secondary literature; interrogate those sources by evaluating them for logic, consistency, and soundness; and acknowledge those sources appropriately**
- **Develop independent, logical conclusions by synthesizing information from disparate sources, including original data and published studies**
- **Recognize the importance of variability in biological systems in the design and interpretation of research and in the synthesis of findings across studies**
- **Write credibly and persuasively to a variety of assigned audiences**

Section 3: Integration of Writing into EEB's Undergraduate Curriculum

Current state of writing and writing instruction in EEB curriculum

Writing instruction in EEB currently has several unique characteristics. First, much of the writing instruction that our majors receive occurs outside of EEB for several reasons. Our majors do not start taking EEB courses until their sophomore or even junior years. Writing instruction that majors receive begins with the first-year *University Writing* course (WRIT 1301), and with prerequisites that all majors must take, including BIOL, CHEM, MATH, and PHYS courses, as well as CLE electives (Fig. 1). Of these courses (possibly aside from some CLE electives), only PHYS 1201W/1301W, PHYS 1202W/1302W, and BIOL 3809W are currently writing-intensive (WI). In addition, about one-third of EEB majors are transfer students, mostly from outside of the University of Minnesota system, and thus receive their early writing instruction not just outside of EEB, but outside of the University. Second, much of the writing instruction that EEB majors receive occurs in non-WI courses. As indicated by the WEC survey of faculty, 50% of the survey respondents who teach 1XXX- or 4XXX-level classes, 43% of those teaching 3XXX-level classes, and 60% of those teaching 5XXX-level classes report assigning 11-20 pages or more of finished writing (no respondents taught 2XXX-level classes). Yet, of the 3XXX-, 4XXX-, and 5XXX-level EEB classes, only EEB 4609W and the Directed Research courses are WI courses, indicating that many of the classes with significant writing instruction are not WI. Indeed, 20% of faculty WEC survey respondents agreed that majors are assigned at least ten pages of finished writing in most courses, regardless of whether they are WI. Additionally, in the WEC EEB faculty meetings, faculty members expressed dissatisfaction with their own writing instruction in Directed Research courses (a sentiment expressed in the College of Biological Sciences as a whole that will be addressed in the CBS Writing Plan).

As a result of the distributed nature of writing instruction in EEB, we have had a poor sense of where in the curriculum students receive writing instruction and exposure to the EEB desired writing characteristics and abilities. We also have had little knowledge of the nature of the writing assignments in EEB courses, although faculty comments on the WEC survey indicated that these assignments vary widely, from laboratory write-ups in the form of a scientific paper, to journal entries, summaries or analyses of published articles, briefs, term papers, and essays. Such lack of knowledge has made it difficult for instructors of both the core 3XXX-level courses and the upper-level elective courses to know whether they are *reinforcing* writing characteristics and abilities that were introduced in earlier courses at the University of Minnesota or elsewhere, or whether they are *introducing* these ideas for the very first time. That the entire College of Biological Sciences has now engaged as a WEC pilot unit will result in our having a clearer idea of the writing instruction that EEB majors will have had prior to our courses.

Regardless of where writing instruction occurs in our curricula, the writing instruction that EEB majors receive currently has resulted in a significant disconnect between student and faculty perceptions of writing characteristics and abilities, as revealed in the initial surveys of faculty and students conducted by the WEC staff. Notably, students at all levels emphasized the ability to appropriately use scientific terms and create precise descriptions as the most important writing abilities, while faculty members emphasized the use of writing to deepen thinking and the reporting of complex data or findings using logical organization. “Persuasively arguing a position using a central thesis and evidence” and “analyzing or evaluating ideas, texts, and

events” also scored relatively highly with faculty, but not with students. Students emphasized scientific/technical characteristics of writing as important, while faculty members emphasized such characteristics equally with analytical ones. In addition to faculty-student differences in the importance placed on writing characteristics and abilities, students and faculty differed in how they rated students’ current writing abilities. For example, students rated their abilities to argue a position, summarize ideas, integrate and cite information from sources, use writing to deepen thinking, and use correct grammar, spelling, and mechanics more positively than did faculty members and TAs.

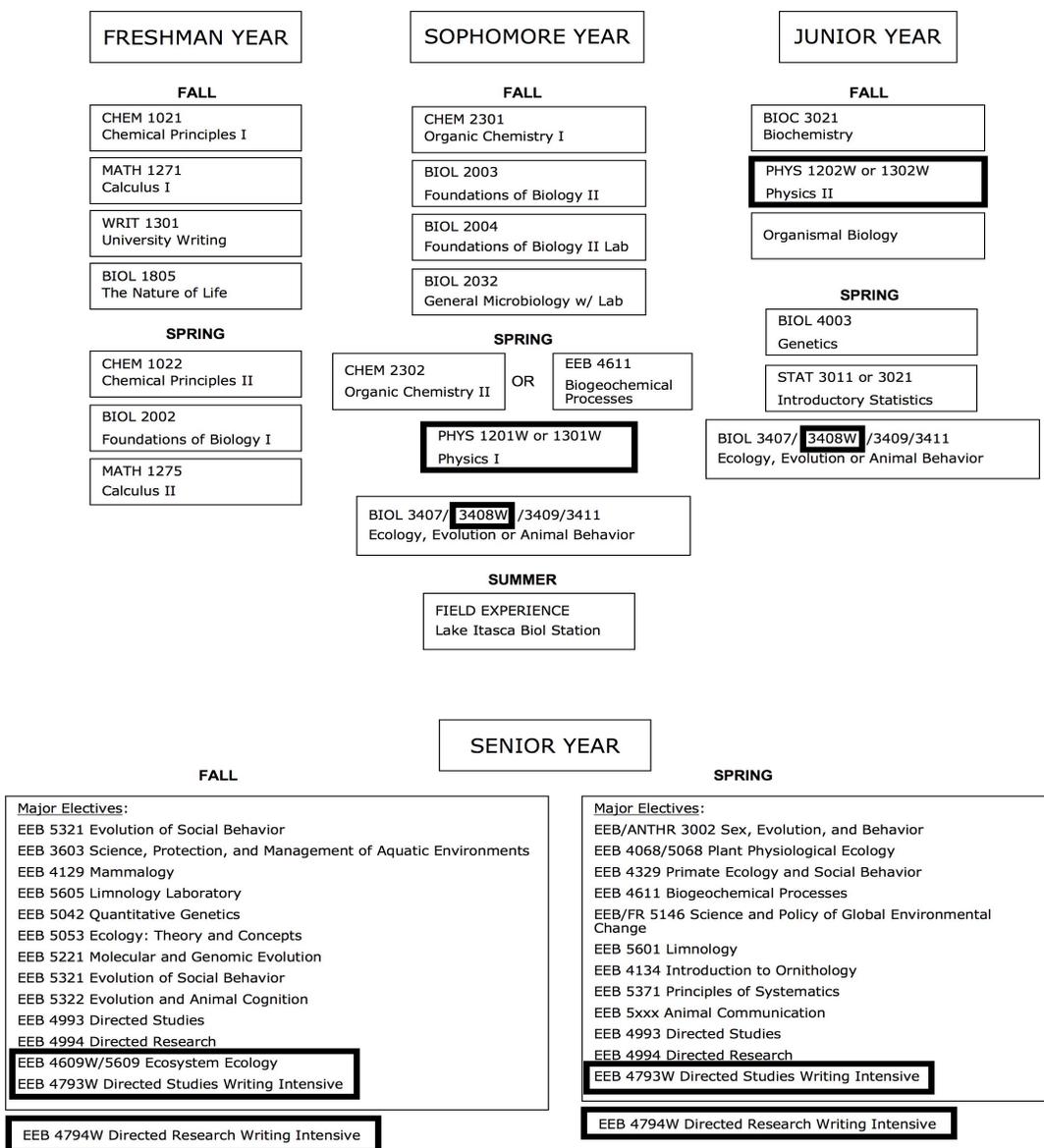


Figure 1. A sample four-year program for an EEB major. Current Writing-Intensive course offerings are indicated by bold borders. CLE electives are not shown.

Several factors could contribute to the mismatch between student and faculty perceptions of writing. First, students may focus on characteristics of writing that are concrete and can be assessed as “right” or “wrong”, rather than on more nuanced characteristics that are assessed more subjectively. Second, instructors may spend more “red ink” correcting terms and descriptions when they comment on student writing than on the use of evidence or analysis, even if they value the latter more. Hence, student perceptions of their own writing simply may reflect the characteristics about which they receive the most instructor comments. Third, syllabi, assignments, and grading rubrics/criteria may not emphasize adequately the writing characteristics and abilities that EEB faculty feel are most important.

Proposed changes to enrich writing in EEB curriculum

The initial aim of the implementation phase of the EEB writing plan was to infuse our stated writing abilities and characteristics into the EEB curriculum. Ultimately we hope to improve the design of syllabi, writing assignments, and grading rubrics/criteria by ensuring that they better reflect EEB’s stated writing characteristics and abilities. We believe that doing so will allow for better communication of faculty expectations to students, both before students write and when their writing is assessed. As a first step towards realizing this aim, we proposed two specific aims in the first version of the EEB Writing Plan:

Specific Aim 1: To review the EEB curriculum to determine the nature and occurrence of writing instruction

Specific Aim 2: To provide departmental opportunities for professional development related to writing instruction

Towards achieving **Aim 1**, we undertook a *Curriculum Mapping Project* to determine the nature of the writing instruction that occurs in EEB. The goals of the review were to elucidate (1) where (in terms of courses) writing instruction occurs, (2) the nature (in terms of assignments) of the writing instruction that occurs, (3) what (in terms of writing characteristics and abilities) is being communicated to students, and (4) how (syllabi, assignments, grading rubrics/criteria, etc.) that communication occurs. We felt that this *Curriculum Mapping Project* was a necessary first step towards reconciling faculty and student perceptions of writing. Towards achieving **Aim 2**, we provided faculty and graduate student TAs with convenient and targeted opportunities for professional development related to writing instruction. Below we describe these activities in greater detail.

Results of *Curriculum Mapping Project*

During AY 2009-2010, the WEC program funded a Teaching Assistant, Harriet Van Vleck, to assist with mapping the writing instruction that occurs in the EEB curriculum. In spring 2010, Van Vleck was joined by an EEB-funded Teaching Assistant, Lisa O’Bryan. The mapping project was designed by me, WEC staff Pamela Flash and Audrey Applesies, and the two TAs. To achieve the goals of the mapping project (see above), we gathered course materials (syllabi, assignments, exams, and any other writing instructional materials) for all of the EEB designator courses. The TA support provided by EEB allowed us to include the BIOL 3XXX courses taught by EEB faculty members in the project. These courses are important prerequisites taken by EEB majors before they take EEB electives. In total, 19 courses were included in the mapping project

(7 at 3XXX, 6 at 4XXX, 6 at 5XXX). Instructional materials were scored for the presence of each EEB writing ability and whether abilities were stated as goals, assigned, or assessed. In addition, Van Vleck and O'Bryan interviewed all instructors to further elucidate which abilities were emphasized in courses. A presentation of the results is included as an Appendix to this Writing Plan. Here we review the key findings.

Key findings of the Curriculum Mapping Project were:

- 1) Substantial writing was assigned in EEB courses, with an overall average of 12 pages/course (SE=3). More writing was assigned in 3XXX and 4XXX level courses than in 5XXX level courses.
- 2) The types of writing assignments varied considerably, including worksheets or problem sets, informal (low-stakes) short and long papers, formal (high-stakes) short and long papers, individual and group presentations, and responses to readings.
- 3) By assignment type, assignments were focused on critical response and synthesis in 3XXX classes, on synthesis and summary in 4XXX classes, and on synthesis in 5XXX classes.
- 4) Peer review occurred in 25% of courses overall.
- 5) The five most frequently assigned writing abilities were selecting and interrogating sources; synthesizing disparate sources to draw conclusions; constructing logical narratives; writing clearly and concisely; and interpreting, constructing, and integrating figures and tables.
- 6) Writing abilities emphasized by instructors were communicated to students more often implicitly (when it was not stated explicitly that in order to complete an assignment or assessment a student would need to use a particular writing ability), than explicitly (when it was) in both assignments and assessments.
- 7) Writing abilities that were assigned and assessed by instructors were rarely stated as goals in course syllabi or assignments ($\leq 20\%$ of the time). Interestingly, appropriate usage (grammar) was the third most frequently assessed ability, but was never stated as an ability goal, and was rarely assigned.
- 8) Focusing on explicitly stated abilities, two writing abilities, creating logical narratives and appropriate grammar, were assessed more often than they were explicitly assigned, while three abilities, synthesizing disparate sources, interpreting figures and tables, and writing clearly and concisely, were assigned more often than they were assessed. Abilities that were explicitly assigned were assessed the majority of the time.
- 9) In courses with laboratory or discussion sections, the majority of writing instruction occurred in section, as opposed to in lecture; as laboratory/discussion sections were very often taught by Teaching Assistants, this implied that the majority of writing instruction was being done by TAs in such courses.
- 10) The following abilities articulated by EEB faculty were under-represented in the curriculum: results-centered writing, use of scientific templates, biologically accurate writing, formulating good questions, clear and concise description of methods and observations, writing and working collaboratively, and grammatically appropriate writing.

The *Curriculum Mapping Project* helped us identify several gaps in writing instruction. First, instructors seldom communicated the purpose of writing in their courses, either in terms of addressing the broader question, “Why is writing important in the sciences?”, or by articulating which specific writing abilities would be developed in a course or assignment. Second, instructors often communicated their expectations regarding writing abilities implicitly rather than explicitly. Third, instructors clearly valued the ability to synthesize, but didn’t think that students were very good at it. This sentiment was supported by preliminary results of the ongoing WEC *Rating Student Writing* project, which found that the writing abilities that were rated lowest on samples of EEB course assignments included “synthesizes information from sources”, along with “evaluates and interrogates sources”, “cites sources in a consistent manner”, “demonstrates an awareness of audience”, “analyzes for cause and effect”, and “develops a logical, cohesive narrative”. Fourth, TAs were obviously important in EEB writing instruction, yet it was unclear how much communication existed between TAs and faculty about writing abilities, nor how much responsibility TAs had for developing assignments and assessments. Finally, many of the abilities valued by EEB instructors were underrepresented in the curriculum.

Opportunities for Professional Development Related to Writing Instruction

To achieve our second specific aim of providing convenient, targeted opportunities for professional development, we offered four workshops in AY2009-2010, with the help of Pamela Flash (two more than originally proposed). These workshops were open to graduate students and faculty and focused on (1) the design of writing assignments, (2) grading and commenting on student writing, (3) designing effective peer review activities, and (4) designing short writing assignments. These topics were chosen based on instructor surveys and workshop discussions. To maximize faculty participation, workshops were offered during the normal EEB faculty meeting time slot and lasted 1.5 hours each. Each workshop was attended by 10-12 faculty members (about 40-50% of the faculty) and the same number of graduate students (about 25% of the EEB graduate students). The strong attendance by faculty likely indicates the importance that faculty place on writing in the discipline; the strong attendance by graduate students likely indicates in part the significant responsibilities that TAs are given for writing instruction in EEB courses.

As proposed in the first version of the EEB Writing Plan, we will institute requirements for formal training in writing instruction for TAs who instruct WI courses this fall (see below for related plans). Requirements will consist of participating in at least three Teaching with Writing (TWW) workshops (documentation is provided by the TWW staff). Although requirements will not apply to TAs for non-WI courses, we will encourage all TAs to meet these requirements. The annual 2-day fall TA workshop offered by TWW, *Commenting on and Grading Student Writing*, would count towards two of the three workshop requirements.

Plans for the Next Three Years (2010-2013)

Our plans after the first year of implementation are aimed at filling the gaps in writing instruction identified through the *Curriculum Mapping Project*. The timeline for these plans is shown in Section 5.

1. To facilitate instructor communication of the purpose of writing in EEB courses, we plan the following:

- (a) Develop and distribute a questionnaire that asks faculty members which writing abilities they emphasize and in what kinds of assignments, as well as whether they would consider increased emphasis in the future. The aim of this questionnaire is to increase instructor awareness of EEB writing abilities and consideration of those abilities in their own writing instruction, and ultimately to build collaboration among faculty within EEB and across CBS towards providing students with writing instruction that builds logically throughout their major(s). To achieve college-wide integration, we will modify a form already used by other CBS units in their Phase I, so that we can add information gathered in EEB to a WEC-assisted project that maps abilities emphasized onto the CBS curriculum.
- (b) Develop online resources related to EEB writing abilities. For example, we will post online (i) a list of the EEB writing abilities as well as information gained in part 1a regarding where abilities emphasized in the curriculum, (ii) suggestions for assignment types particularly suited for developing each ability, (iii) writing samples that may be useful for illustrating writing abilities, (iv) a checklist for creating assignments, modified from one developed by Pamela Flash that is tailored to EEB instruction. The aim of these online resources is to increase instructor awareness of and communication about writing abilities in syllabi and assignments, and to help instructors see where their courses fit within the curriculum in terms of abilities that are emphasized.

2. To increase the effectiveness of instruction of two highly valued but under-developed writing abilities, “interrogating sources” and “synthesizing disparate sources,” we will develop curricular tools (in collaboration with WEC staff) for formal and informal writing assignments that emphasize these writing abilities. These tools will provide examples of articulating how these abilities relate to broader course goals, and of ways to assign and assess these abilities. These tools will be communicated to faculty and TAs through two workshops.

3. To facilitate communication between TAs and faculty members and to further ensure adequate training of TAs in writing instruction, we will survey EEB graduate students regarding their needs for and interest level in such training. Depending on survey responses, we will either develop EEB-specific workshops or incentivize participation by EEB students in existing TWW workshops, such as the 2-day or 5-day workshops for graduate instructors. One aim of such training will be to develop a common language among faculty and graduate student TAs related to EEB writing abilities, which should increase consistency for students and facilitate TA-faculty communication.

Section 4: Assessment of Undergraduate Writing

Based on anecdotal evidence, EEB’s participation in the WEC pilot process has already had a significant impact on writing instruction in EEB. For example, as a direct result of exposure to WEC, four EEB faculty members and one TA have participated in or plan to participate in Pamela Flash’s *Teaching with Writing 5-Day Workshop* and two TAs have participated or will participate in the 2-day fall TWW TA workshop, *Commenting on and Grading Student Writing*.

In addition, at least three faculty members have made extensive changes to writing instruction in their courses because of WEC (there may be others). Discussion of writing instruction among faculty and graduate students has increased in both formal and informal settings.

Nevertheless, as is evident from the *Curriculum Mapping Project*, significant gaps exist in the EEB curriculum, in terms of the inclusion and communication of writing abilities in course materials and assessment. All of the proposed activities for the next three years are aimed at improving how writing abilities are communicated to students. The faculty survey proposed here will provide baseline data that can be compared with identical surveys given at future dates, allowing longitudinal assessment of EEB's writing plan.

Under the direction of WEC's Assessment Coordinator, Audrey Appelsies, student writing in the Department of Ecology, Evolution, and Behavior is being assessed through the *WEC Rating Student Writing* project. In June 2010, writing samples from upper-division EEB courses were collected and rated against EEB's writing abilities by three raters – one EEB faculty member and two 'outside' raters. The results of the rating provide the baseline data for a longitudinal study of undergraduate writing that will be used to determine the extent to which writing in EEB courses sufficiently reflects the stated EEB writing abilities.

Section 5: Requested Support

Timeline and Support (Personnel and Financial) Required[#]

Semester	Activities	Personnel	Requested Support
<i>Fall 2010</i>	<ol style="list-style-type: none"> 1. Faculty survey 2. TA survey of needs 3. Develop and post online resources related to writing abilities 4. Report EEB <i>Curriculum Mapping Project</i> results to CBS EPC 5. Introduce resources to EEB faculty 	<p>A 25% TA (supervised by WEC Liaison) will be responsible for activities #1, #2, #3 (with assistance from EEB staff member Lisa Wiggins), and #4.</p> <p>The WEC Liaison will be responsible for #5^B</p>	<p>†25% TA (OVPR)</p> <p>Staff time (EEB)</p> <p>Staff time (WEC)</p>
<i>Spring 2011</i>	<ol style="list-style-type: none"> 1. Develop curricular tool “Interrogating sources” 2. Develop curricular tool “Synthesis” 3. Develop TA training 4. Communicate curricular tools to EEB faculty through 	<p>A 25% TA (supervised by WEC liaison) in collaboration with TWW staff will be responsible for #1, #2, and #3.</p> <p>The WEC liaison and TWW staff will co-</p>	<p>25% TA (OVPR)</p> <p>Staff time (TWW)</p>

	workshops	facilitate workshops (#4)	
<i>Fall 2011</i>	1. Implement TA training*	An EEB faculty member will implement and conduct the TA training as part of his/her regular seminar teaching duties	Seminar teaching credit for faculty member (EEB)
<i>Spring 2012</i>			
<i>Fall 2012</i>	1. Conduct TA training*	An EEB faculty member	Seminar teaching credit for faculty member (EEB)
<i>Spring 2013</i>			

[#]EEB faculty and graduate students will become involved in CBS-wide implementation activities from Fall 2011 on, including changes to the Writing-Intensive Directed Research courses.

[†]The EEB department has agreed to cover the costs of this TA position until the revised writing plan is approved and the department can be reimbursed.

^BThe WEC Liaison will keep EEB faculty and graduate students informed of TWW training opportunities, including one-on-one consultations, through the three-year period.

*The exact nature of the TA training will depend on the response to the TA survey.

Instructional Support Overview

To carry out our future plans we will require the following instructional support:

- 1) A 25% TA in each of two semesters (fall 2010, spring 2011) to develop online resources, conduct surveys of faculty and graduate student TAs, develop curricular materials, and develop TA training.
- 2) Modest support from EEB Executive Secretary Lisa Wiggins to design an EEB WEC webpage as part of the EEB website and to post EEB WEC materials online.
- 3) Assistance from WEC staff to critique online resources.
- 4) Assistance from TWW staff to develop curricular tools and TA writing instruction workshops.
- 5) Annual seminar teaching credit for EEB faculty member who will lead TA writing instruction workshop.

Assessment Support

We will rely on WEC to continue to assess the extent to which writing in EEB courses sufficiently reflects the stated EEB writing abilities.

Role of the WEC Faculty Liaison

During 2010-2013, the WEC Liaison will oversee the implementation of EEB's revised Writing Plan. Duties will include supervising a TA who will implement the survey of faculty and TAs, develop online resources, develop curricular tools, and develop a TA writing instruction workshop; coordinate with the ongoing CBS WEC process; and ensure that a faculty member is identified to teach the TA workshops once they are developed. The WEC Liaison will convene a small committee of EEB faculty to serve as a 'sounding board' to help develop and review online instructional resources. Ideally this committee will be made up of faculty who have taken Flash's *Teaching with Writing 5-Day Workshop* and will require only modest effort.

Once the EEB writing plan is through the implementation and assessment phases, the WEC Liaison position will become one of the regular permanent service positions in the EEB department, with responsibilities for communicating the writing plan and EEB writing abilities and introducing online resources to new faculty members; updating EEB WEC resources; coordinating and updating the TA training; and ensuring that the writing plan is considered as new courses are developed. In addition, an EEB faculty member will get seminar teaching credit each year to implement the TA training.

Section 6: Process Used to Create this Writing Plan

EEB's involvement in the WEC pilot program began when its former Department Head, Dr. Claudia Neuhauser, raised the possibility at an EEB faculty meeting in fall 2007. The EEB faculty agreed that participation in the pilot program represented an excellent opportunity to analyze writing in the EEB major. Furthermore, EEB would benefit from ample interaction with WEC staff. Dr. Neuhauser asked for volunteers to serve at the WEC liaison, and Dr. Sarah Hobbie agreed to do so.

The WEC staff met with the EEB faculty during regularly scheduled EEB faculty meetings four times during AY2008-2009 to develop the content that went into the first version of the EEB Writing Plan. The content for the revised EEB Writing Plan came primarily from the EEB Curriculum Mapping Project, which was presented to and discussed by EEB faculty in a meeting on April 28, 2010. Additional content came from discussions that occurred as part of the EEB WEC workshops held during AY2009-2010 by Pamela Flash. Hobbie circulated drafts of the plan to the EEB faculty, WEC staff, and TAs Van Vleck and O'Bryan, incorporated feedback, and the faculty voted to approve the plan on Sept. 15, 2010.

Section 7: Relationship to Student Learning Outcomes

This Writing Plan outlines a process for increasing instruction around Student Learning Outcomes (SLOs) 1, 2, 3, 5, 6, and 7. Each of these SLOs is explicitly reflected in one or more of the writing characteristics and/or abilities that EEB has recognized as defining writing in its discipline. Through implementation of this Writing Plan, these characteristics and abilities (and thus the SLOs) should be better integrated across the EEB curriculum.