CAA Learning Goals Study Summary

Information

CAA

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2013 CAA Learning Goals Review

University-Wide Curriculum Review Related to Learning Goals

Why is CAA Doing This?

- The Higher Learning Commission (HLC) suggests that universities must set clear goals for student achievement, regularly measure and report student performance, and use the results to make changes in programs and practices to continuously improve success. The HLC also suggests universities should have evidence of levels of engagement in academically challenging work and active learning practices.
- EIU has established assessment programs for four general education/undergraduate learning goals (writing, speaking, critical thinking, and global citizenship). In 2010-2011, three of the learning goals were identified as top priorities for improvement based on student achievement and accountability data.1
- CAA discussed the need for campus-wide information gathering and discussion regarding instruction and requirements for the learning goals; thus, the Learning Goals Review Committee was formed in November 2011.2 The committee members were EIU’s required and data, best practice literature, and other universities’ practices and requirements.
- Review information from a faculty survey about how university learning goals are targeted in courses they teach.
- Obtain information from a syllabus review general education and major courses about learning objectives related to university learning goals.
- Develop recommendations in consultation with campus constituencies regarding the four learning goals.

The Measures Reported

- FACULTY SURVEY. All faculty who taught at least one undergraduate course in Spring 2012 were asked to complete an online 75-item survey about instructional practices and student expectations related to the learning goals in one specific course (randomly selected by CAA). 595 courses were sampled with a return rate of 62%. Instructors who completed the course were 63% Unit A, 22% Unit B, and 15% Adjunct. The majority of the courses (73%) were 3 SH, with 9% 1SH, 9% 2SH, and 9% 4SH. Courses were distributed across levels. The survey was conducted September 27-October 25, 2012.
- SYLLABI REVIEW. Departments were asked to submit one representative syllabus from each general education course, as well as from each of 12 department-selected courses that represent the typical curriculum of their majors from the freshman through senior years. Over 400 undergraduate course syllabi were collected. CAA analyzed the learning objectives in reference to the university-wide learning goals.
- Voluntary Student Accountability (VSA) and OTHER UNIVERSITY DATA
  - The National Survey of Student Engagement (NSSE) was administered in SP10 to freshmen (330) and seniors (590). Results were compared to other Illinois Public Universities and similar universities in the same Carnegie class (VSA measure.)
  - The Collegiate Learning Assessment (CLA) was administered to 100 freshmen in Fall 2011 and 100 seniors in Spring 2012. No transfer students were included in the sample. Students’ initial ACT were factored into the analyses and expected gains in critical thinking and writing were calculated. Comparisons to other universities’ gains were made. (VSA measure)
  - Electronic Writing Portfolio (EWP). All EIU students submit 3 papers to the Electronic Writing Portfolio. Faculty instructors give a holistic rating to each paper. 10% of completed portfolios are evaluated by trained EWP readers.
  - Speaking skills of all EIU students are rated by instructors in CMN 1310 and in Senior Seminar.
  - Global Citizenship Survey completed by all EIU students in freshman orientation and in Senior Seminar.

2013 CAA Learning Goals Review

General Rigor & Curriculum

INSTRUCTIONAL PRACTICES

Faculty Report

- Syllabi Development. Faculty reported sources used to develop their syllabi the first time they taught the course indicated that a) 50% used a syllabus a colleague previously used in the course; b) 28% used a generic syllabus housed in the department; c) 25% used the CAA course proposal for the course; d) 22% used a syllabus they had previously used at another university; e) 17% used no specific source.
- Syllabi review by CAA indicated that many standard parts of syllabi (objectives, course outline or description of content, course assignments/projects/papers, evaluation procedures, grading policy/scale, attendance policy, information for students with disabilities, office hours) were frequently missing. Instruction and evaluation described on the syllabus were often not clearly linked to learning objectives.
- Student Time Studying for One Course. 61% of faculty estimated that, for the surveyed course, students spent 2 to 3 hours or less per week outside of class preparing/doing work for the course (50% 2-3 hours, 11% 0-1 hour). 73% of faculty reported that students are expected to READ less than 20 pages per week for the course.
- Student Writing. 71% of faculty report that students are expected to WRITE fewer than 20 pages TOTAL for the course, not including writing for exams.

Student Report (NSSE)

- Student Total Time Studying for All Courses. Only 19% of EIU seniors indicated on the NSSE that they spend 21 or more hours per week outside of classes studying (reading, writing, doing homework or lab work, analyzing data, etc.). 43% of Eastern’s seniors spend 10 or fewer hours on these activities per week.
- Student Writing. When questioned about the number of papers they had written that were 20 pages or more, 60% of Eastern seniors indicated none and 34% indicated 1-4. In comparison, 52% of students at other Illinois Public Institutions reported writing no papers or no papers longer than 20 pages and 50% of students in our Carnegie class reported writing no papers longer than 20 pages.
- Critical Thinking. When asked how much in the current year they had been asked to memorize facts and then repeat them in the same form, 63% of Eastern’s seniors answered “very much” or “quite a bit”. While other university comparison groups answered similarly, these are high percentages for role memorization at the senior level and indicate that critical thinking activities, such as analysis and evaluation, may be less prevalent than desirable.
- Only 25% of Eastern seniors indicated they had or planned to work on a research project with a faculty member outside of a course. This percentage is 10% lower than other Illinois public universities; 6% lower than our Carnegie class.

NOTE: EIU’s 2010-2011 Strategic Planning process identified a theme of Academic Quality/Academic Excellence (Enhancing Scholarly and Creative Activities, Rigorous Academic Programs Complemented by Faculty-Student Scholarship, Excellence in Academic Environment, Improving Academic Rigor, Relevance and Relationships). The Goals and Actions of the Strategic Plan includes an objective to conduct a longitudinal study of critical thinking in order to provide a substantive report on the issues that contribute to the development of critical thinking among Eastern students.
Critical Thinking

STUDENT SKILLS
- VSA DATA. The Collegiate Learning Assessment uses students’ ACT scores to determine expected levels of performance. With the critique-an-argument skills our seniors were near the expected level, but with the total score, the analytical writing, and the make-an-argument tasks, our students were below the expected levels.
- VSA DATA. EIU freshmen who took the CLA in FA11 scored a bit higher on average in the make-an-argument task than their EIU senior counterparts who took the test in SP12 (46% of EIU freshmen scored a 4 or 5 on a 6-point Likert scale compared to 30% of seniors). Little difference was seen in analytic reasoning and problem-solving ability when looking at EIU freshmen to seniors. No transfer students were part of these administrations, and each cohort took the test in an EIU computer lab as part of a course.
- UNIVERSITY ASSESSMENT DATA. Trained readers of the Electronic Writing Portfolios have found that skills associated with critical thinking (e.g., making and evaluating arguments) are weaknesses.
- FACULTY SURVEY. 52% of surveyed EIU instructors reported that their students’ critical thinking skills were adequate or better at the beginning of their course while 38% of faculty reported the majority of the students were either “less than adequately prepared” or “not prepared at all” to think critically.

Faculty Perception of Barriers to Facilitating Critical Thinking
- 88% of faculty felt they are moderately or very prepared and comfortable in developing students’ critical thinking skills while 11% felt less or not prepared/comfortable.
- 47% of faculty reported “no barriers” and that critical thinking was effectively targeted in their course.
- 35% cited dense content with the majority of class time spent on dissemination and comprehension of content.
- 31% Thought difficult to assess.
- 29% Introductory course within discipline requires focus on learning basic facts.
- 18% Time consuming nature of developing and grading relevant active learning projects/papers.
- 18% Class size.
- 17% Instructor assumed/expected students to have learned critical thinking skills already.
- 6% Learning goal not related to course content.
- 4% Concerns about negative student feedback on course/instructor evaluations.
- 4% Lack of instructor knowledge/skills in teaching/facilitating critical thinking.
- 2% Instructor did not see developing critical thinking skills as important.
- 28 of the 58 open-ended comments (48%) referred to the students’ resistance, lack of preparation, and/or inability/unwillingness to engage in critical thinking.

Overall:
Faculty feel they are able to develop critical thinking skills and approximately half think that students are gaining critical thinking skills from taking their courses.

Faculty Perception of Gains in Course
- Overall 33% of course syllabi with learning objectives related to improving critical thinking skills, or indicated a requirement for students to use high level thinking skills.
- Overall 33% of course syllabi with learning objectives contained all lower level thinking skills (comprehend, describe, summarize). (42% at the 1000-level, 44% at the 2000-level, 29% at the 3000-level, and 24% at the 4000-level).
- Students’ senior NSSE responses: 88% indicated Eastern has contributed quite a bit or very much to their thinking critically and analytically. Eastern is higher by 3-6% than the other institutions’ seniors when asked how much their coursework has emphasized making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions.

Techniques
- Approximately 2/3 of instructors reported providing explicit models of thought processes, instruction, coaching, or activities to develop critical thinking skills.
- Approximately 1/3 provided handouts, resources and expectations for critical thinking in assignments.
- About 20% required self or peer evaluation of critical thinking.

Targeting Critical Thinking
- 77% of faculty reported that the critical thinking goal was either very closely related to, or strongly related to, the objectives of the course.
- The Learning Goals Committee syllabi evaluation found that 67% of the course syllabi surveyed contained at least 1 learning objective related to improving students’ critical thinking skills, or indicated a requirement for students to use high level thinking skills.
- Overall 33% of course syllabi with learning objectives contained all lower level thinking skills (comprehend, describe, summarize). (42% at the 1000-level, 44% at the 2000-level, 29% at the 3000-level, and 24% at the 4000-level).
- Students’ senior NSSE responses: 88% indicated Eastern has contributed quite a bit or very much to their thinking critically and analytically. Eastern is higher by 3-6% than the other institutions’ seniors when asked how much their coursework has emphasized making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions.

Overall:
Course objectives and faculty report indicate that critical thinking is targeted in the majority of EIU courses, however there are several indications that exams and papers often require students to use primarily lower level thinking skills such as comprehension or basic application of knowledge.
STUDENT SKILLS

- VSA DATA. The Collegiate Learning Assessment suggests that writing skills (effectiveness and mechanics) of EIU freshmen are lower than peer institutions, and the gaps widen significantly for EIU seniors compared to peers. In addition, results indicate EIU seniors are below (24%) or well below (38%) where they should be based on the freshman scores and their own ACT scores on tasks related to making an argument and critiquing an argument in writing.

- UNIVERSITY ASSESSMENT DATA. Completed Electronic Writing Portfolios (EWP) portfolios are read by trained faculty readers who assess completed portfolios for focus/purpose, organization, development, audience awareness, style, mechanics, use of sources, and overall writing ability. In recent years, 22-31% of writing in portfolios was rated as Strong, 55%-58% as Adequate, and 13-20% as Weak.

- UNIVERSITY ASSESSMENT DATA. Instructor holistic scores of student papers submitted to the EWP suggest that only 4-5% of students’ papers need improvement or were unsatisfactory (rated as 2 or less) while over 90% of papers were rated as satisfactory or superior (3-4).

- FACULTY SURVEY. 48% of surveyed faculty felt that students were at least adequately prepared to write effectively at the beginning of the course while 52% of faculty felt that students were not adequately prepared to write effectively or had no basis to judge.

Faculty Perception of Barriers to Facilitating Writing

- 75% of faculty felt they are moderately or very prepared and comfortable in developing students’ writing skills while 11% felt less or not prepared/comfortable and 12% reported that instructor’s skills for developing writing were not relevant for the course.

- 31% of faculty reported “no barriers” and that writing was effectively targeted in their course.

- 29% Instructor assumed/expected students to have learned writing skills already.

- 26% Time consuming nature of grading writing.

- 26% Learning goal not related to course objectives/content.

- 21% Class size.

- 28% Lack of instructor knowledge/skills in teaching/facilitating writing.

- 3% Concerns about negative student feedback on course/instructor evaluations.

- 2% Instructor did not see developing writing skills as important.

- Numerous open ended responses about other barriers targeting writing refer to students’ skills (28/51= 54%).

  - Students lacking a strong enough foundation and background to produce effective writing work: 15

  - Students’ lack of motivation to take feedback, revise documents, and learn as writers and thinkers: 13

  - Faculty assumption that one’s course only deals with “content”.

Faculty Perception of Gains in Course

- 21% said students’ writing skills improved substantially or quite a bit.

- 49% said slightly or somewhat while 10% said not at all and 19% had no basis to judge.
**STUDENT SKILLS**

- **VSA DATA.** Based on survey of 500 seniors who completed the NSSE in SP10); 78% of seniors report that their experiences at EIU have contributed to their knowledge, skills, and personal development in speaking clearly and effectively (compared to 68% of other IL public college/ university students, 75% of students in the same Carnegie classification, and 73% of all other NSSE students.

- **UNIVERSITY ASSESSMENT DATA.** Based on ratings of students’ speaking skills in Introductory Speech Communication course and in Senior Seminar.
  - 58% of seniors were rated as highly competent while only 28% of freshman reached this level.
  - About 19% of the freshman were minimally not competent while only 4% of the seniors were at this level.
  - The vast majority (96%-97% across the most recent 5 year period) of our students are graduating with speaking skills in the highly competent to competent range based on ratings in senior seminar.

- **FACULTY SURVEY DATA.** 45% of surveyed faculty felt that students were at least adequately prepared to speak effectively at the beginning of the course while 23% of faculty felt that students were not adequately prepared to speak effectively and 30% had no basis to judge.

- **DEPARTMENTAL ASSESSMENT OF STUDENTS’ SKILLS.** Assessment of Speaking skills within the major (and included in departmental assessment reports) is occurring for approximately 68% of programs at EIU.

**Faculty Perception of Barriers to Facilitating Speaking**

- 49% of faculty felt they are moderately or very prepared and comfortable in developing students’ speaking skills while 14% felt less or not prepared/comfortable and 27% reported that instructor’s skills for developing speaking were not relevant for the course.
- 26% of faculty reported “no barriers” and that speaking was effectively targeted in their course.
- 44% reported that speaking was not related to the course objectives.
- 18% class size.
- 15% expected students to have good speaking skills already.
- Less than 6% reported grading time, speaking not important, negative course evaluations.

**Speaking**

**Targeting Speaking**

- 56% of faculty reported that speaking was very closely or strongly related to the objectives of the course while 44% indicated that speaking skills were minimally or not related to course objectives.
- The Learning Goals Committee syllabi review found that overall 26% of courses had at least 1 learning objective related to students’ speaking skills while 74% of courses had no learning objectives related to students’ speaking skills.
- 84% of 1000 and 2000 level courses did not have learning objectives related to speaking while 65-69% of 3000 and 4000-level courses did not have learning objectives for speaking.
- In the NSSE, 78% of seniors report that their experiences at EIU have contributed to their knowledge, skills, and personal development in speaking clearly and effectively.
- In the NSSE, 70% of Eastern’s seniors indicated that they often or very often make a class presentation compared to 55% of other Illinois public universities, 64% of all schools in our Carnegie class, and 61% of all institutions that completed the NSSE.

**Techniques**

- There was limited use of explicit instruction regarding improvement of speaking skills.
- 22-26% reported providing handouts/resources about speaking/listening, explicit models of good speaking/listening, or provided information about effectively delivering oral communication.
- 19% reported conferencing with individual students about speaking skills.
- Less than 13% reported use of instructor, peer, or self-evaluation methods to improve skills in subsequent speaking.
- Speaking activities utilized.
  - 43% active listening and providing feedback on oral communication.
  - 41% informative presentation.
  - 37% leading small group discussion.
  - 35% reflecting on or responding to feedback.
  - 29% group presentation.
  - 25% preparing for a speech (research, organizing, outlining).
  - 24% delivering a speech.
  - 23% leading large group instruction.
  - 9% debates.
  - 7% panel discussions.
  - 7% interview.
  - 6% video presentation.

**Faculty Perception of Gains in Course**

- 16% said students’ skills improved substantially or quite a bit.
- 44% said slightly or somewhat or not at all and 38% had no basis to judge.

**Evaluation**

- 58% reported that they never used speaking rubrics or detailed evaluation criteria to grade and give feedback on speaking assignments for the course.
- 55% reported that a student’s speaking skills contributed to little or no weight to the final course grade while only 5% reported that speaking skills contributed a great deal of weight.

**Overall**

Speaking is targeted in approximately 1/4 to 1/3 of EIU courses. Speaking may be targeted somewhat implicitly through a wide variety of speaking activities.

Some of the types of speaking that instructors find important and report targeting are different from the formal speaking process described in the university speaking objectives.
**Global Citizenship**

**STUDENT SKILLS**

- UNIVERSITY ASSESSMENT DATA. There is no direct measure by the university to evaluate students' knowledge and skills related to global citizenship. The university's freshman and senior global citizenship survey indicated that many students' opinions become stronger at EIU about issues such as diversity, citizenship, and understanding history. However, many of the items WITHOUT measurable differences in responses from freshman to senior year required changes in actions rather than attitude. The lack of differentiation in these, along with other questions that address personal decisions related to responsible citizenship indicate that EIU students do not engage at a higher level as seniors than they did as freshmen in certain expressions of responsible citizenship.

- FACULTY SURVEY DATA. 39% of instructors reported that their students' global citizenship knowledge or skills were adequate or better at the beginning of the course while 29% felt students were less than adequately prepared and 32% reported having no basis to judge.

- DEPARTMENTAL ASSESSMENT OF STUDENTS’ SKILLS. Assessment of Global Citizenship skills within the major (and included in departmental assessment reports) is occurring for approximately 66% of programs at EIU. What ASPECT OF GLOBAL CITIZENSHIP are programs adopting/assessing? 3/33 (9%) programs have adopted “civic engagement”; 12/33 (36%) programs have adopted ethics or ethical responsibility or decision-making; 14/33 (42%) programs have adopted diverse cultures, diversity, and/or history; 8/33 (24%) have adopted our general university goal.

**Faculty Perception of Barriers to Facilitating Global Citizenship**

- 67% of faculty felt they are moderately or very prepared and comfortable in developing students' global citizenship skills while 23% felt less or not prepared/comfortable.
- 29% “No barriers”, global citizenship was effectively targeted in their course.
- 33% Difficult to assess knowledge/skills related to global citizenship.
- 30% Learning goal not related to course objectives/content.
- 17% Learning goal of global citizenship seems vague and difficult to interpret.
- 17% Not enough time (other goals took priority).
- 8% Class size.
- 6% Instructor did not consider global citizenship goal to be important.
- 5% Lack of instructor knowledge/skills in teaching/facilitating global citizenship.
- 2% Concerns about negative student feedback on course/instructor evaluations.

**Overall Measures to evaluate students’ knowledge and skills in global citizenship as a whole need further development.**

**INSTRUCTIONAL PRACTICES**

**Targeting Global Citizenship**

- 36% of faculty reported that the global citizenship goal was either very closely related to, or strongly related to, the objectives of the course.
- The Learning Goals Committee syllabi review found that overall 38% of courses had at least 1 learning objective related to students’ global citizenship skills while 62% (243/389) of courses had no learning objectives related to global citizenship.
- Trends by college emerged: 68%-70% of courses from LCBAS, COS and CEPS had no learning goal related to global citizenship while 52% of courses in A&H none.
- Courses in business that contained global citizenship objectives were often related to ethics while courses in A&H most often contained objectives related to diversity.
- Compared to other IL public universities, EIU seniors reported 11% less participation in a community-based service learning project as part of class; but 6% more service or volunteer work outside of class. Similar to other universities in being exposed to diverse perspectives and importance of contributing to community. Students report 7%-10% more than other universities that they are encouraged to interact with students from different backgrounds.

**Techniques**

Instructors reported explicitly targeting the following objectives in their courses (frequently or multiple times):

- 67% Cultivating personal and academic integrity.
- 64% Developing personal responsibility by striving for excellence.
- 53% Learning to see the world from a different vantage point.
- 51% Developing competence in moral and ethical reasoning.
- 49% Developing social responsibility by contributing to a larger community.
- 48% Understanding forces and events that shape history and culture.
- 43% Acquiring a deeper understanding of different kinds of diversity.

**Faculty Perception of Gains in Course**

- 77% said slightly or somewhat or they had no basis to judge improvement.

**How Faculty Targeted Specific Global Citizenship Components**

- **Display civic engagement**
  - 46% expected students to apply their knowledge through active engagement and leadership.
  - 14% required students to participate in community engagement activities.
  - 8% required students to participate in service learning projects.

- **Behave ethically and make ethical decisions**
  - 74% had high expectations for student honor, responsible behavior, honesty and other ethical behaviors (unclear if they adopted techniques to facilitate improvement of honorable/ethical/responsible behavior).
  - 49% activities and readings.

- **Exhibit an appreciation of diversity both at home and abroad**
  - 56% used diverse perspectives and encouraged students to include diverse perspectives.
  - 49% encouraged students to consider social and economic equality of diverse communities historically, now and in the future.
  - 62% used diverse perspectives in the course.
  - 34% created new opportunities for increasing cultural awareness and expressing diverse opinions.
  - **Understand history, including an ability to comprehend world-shaping forces and events that have affected human culture**
  - 54% Taught students about forces, events and experiences that shaped or will shape history and culture (at home or abroad).
  - 52% incorporated historic events/issues.

**Less than one-third of faculty respondents covered topics such as social justice, community or global sustainability in any way in their courses.**

**Faculty Perception of Barriers to Facilitating Global Citizenship**

- 23% said students’ skills improved substantially or quite a bit.
- **84% of faculty report that they occasionally or never use detailed grading criteria or rubrics to give feedback to students on knowledge/ skills regarding global citizenship.**

**Largest focus on ethical behavior and diverse perspectives.**

**Targeted in approximately 1/4 to 1/3 of courses and 1/4 of faculty thought students’ skills within global citizenship improved from their course.**
Mission of the General Education Program at EIU

- Enhance student literacy and oral communication;
- Encourage students to think critically and reflectively;
- Introduce students to knowledge central to responsible global citizenship.

CASL has developed a program to assess four undergraduate learning goals:

1. EIU graduates will demonstrate the ability to write effectively.
2. EIU graduates will demonstrate the ability to speak effectively.
3. EIU graduates will demonstrate the ability to think critically.
4. EIU graduates will demonstrate the ability to function as responsible global citizens.

**APPENDIX: LEARNING GOAL DESCRIPTIONS & REQUIREMENTS IN CATALOG**

EIU Mission Statement

Eastern Illinois University is a public comprehensive university that offers superior, accessible undergraduate and graduate education. Students learn the methods and results of free and rigorous inquiry in the arts, humanities, sciences, and professions, guided by a faculty devoted to teaching. The University community is committed to diversity and inclusion and fosters opportunities for student-faculty scholarship and applied learning experiences within a student-centered campus culture. Throughout their education, students refine their abilities to reason and to communicate clearly so as to become responsible citizens and leaders.

**WRITING**

Enhancing Literacy and Oral Communication in General Education (CATALOG) (See description to right under speaking heading)

EIU Writing Requirements

EIU requires a two-semester sequence of writing courses (ENG 1001/1011 & 1002/1022) like many other colleges and universities in the United States. The two-course sequence "in reading and writing" satisfies two-thirds of the three courses in the Language requirement within General Education. Under the heading of "Writing Across the General Education Curriculum" in the EIU undergraduate catalog, coursework in general education is described. All of EIU's general education courses require writing.

Four of these courses—English 1001G and 1002G, English 101G and 1012G—are writing-centered. In these courses students learn the principles and the process of writing in all of its stages, from inception to completion. The quality of students' writing is the principal determinant of the course grade. The minimum writing requirement is 20 pages (5,000 words). Other general education courses, including all senior seminars, are writing-intensive. In such courses several writing assignments and writing activities are required. These assignments and activities, which are to be spread over the course of the semester, serve the dual purpose of strengthening writing skills and deepening understanding of course content. At least one writing assignment is to be revised by the student after it has been read and commented on by the instructor. In writing-intensive courses, at least 35% of the final course grade should be based on writing activities and assignments. Remaining general education courses are designated primarily to assist students in mastering course content, secondarily to strengthen students' writing skills.

Writing Student Learning Objectives

**Skills Objectives:** EIU students will prepare written assignments that demonstrate competent writing skills including: Establishing and maintaining focus and appropriate voice; Awareness of audience (degree of knowledge and expectation); Organization that enhances presentation of materials/ideas; Development of ideas supported by details; Use of effective sentence structure, syntax, and diction; Use of correct mechanics; and Proper use and documentation of sources.

**CRITICAL THINKING**

EIU CATALOG Description and Critical Thinking Requirements

Although there is no specific course required in critical thinking/logic, the description of general education at EIU emphasizes how critical and reflective thinking should be a fact of students' lives and work. The CATALOG description follows.

Mindful scholars engage in a process of critical thinking learned through study in the traditional disciplines: physical and biological sciences, social and behavioral sciences, and humanities and fine arts.

Developing analytical thinking skills and working in the modern world require knowledge of mathematics. Additionally, study in any of the sciences prepares students to think critically. Additionally, the general education program requires one course from a select group in that discipline. In physical and biological sciences courses, students experience the rigor and practice of scientific inquiry through classroom and laboratory experiences. They learn to consider analytically the methods of describing, predicting, understanding, and explaining physical and biological events. Philosophical, sociological, economic, political, and ethical implications of science and technology as well as the dilemmas they create. The social and behavioral sciences focus more directly on understanding society and the individual. In these courses, students will have the opportunity to apply various methods of inquiry and analysis, both quantitative and qualitative, to the study of the human condition. Critical thinking is essential to the understanding of the diversity of human cultures and their socio-historical context, and one's personal responsibility for being not only a good citizen, but also a steward of the environment.

The humanities provide sources and methods for reflection upon human experience in its historical, literary, philosophical, and religious dimensions. The basis of instruction in these disciplines is primarily the interpretation and critical analysis of written texts.

Critical Thinking Learning Objectives (Students should demonstrate the ability to:)

- Sort, evaluate, and interpret information;
- Formulate hypotheses and strategies for analysis;
- Comprehend and extract significant evidence;
- Recognize and evaluate assumptions, evidence, and reasoning;
- Detect fallacious arguments;
- Reason deductively; and
- Apply techniques, rules, and models to solve problems.

**GLOBAL CITIZENSHIP**

EIU CATALOG Description and Responsible Global Citizenship Requirements

The general education curriculum is designed to develop and strengthen those attitudes and behaviors integral to responsible global citizenship—ethical behavior, civic participation, an understanding of history, and an appreciation of diversity both at home and abroad. Responsible citizens not only comprehend world-shaping forces and events and the varied experiences that have shaped human culture, but also use that understanding to make informed, objective, and ethical decisions. They understand their responsibility as educated members of society and actively participate in their communities. Finally, responsible global citizens appreciate the diversity of the world in which they work and live. The general education curriculum furthered this objective by requiring students to complete at least one course carrying the CULTURAL DIVERSITY designation.

Components of Global Citizenship are also described under the Critical and Reflective Thinking catalog heading within General Education. Students are to be introduced to the "Cultural and Community" courses. These courses help students become more mindful of the relationships among self, society, and the environment. Such preparation is vital as society becomes more complex, interdependent, and reflective of diversity.

Global Citizenship Learning Objectives (Affective objectives: Students should demonstrate the ability to:)

- Display civic engagement;
- Convey an understanding of history, including an ability to comprehend world-shaping forces and events that have affected human culture;
- Exhibit an appreciation of diversity both at home and abroad;
- Make objective decisions informed by multiple perspectives.