

Chapter XV: CAPSTONE EXPERIENCES

Who takes it?

All seniors take a capstone course in their major.

When is it administered?

During the senior year.

What office administers it?

The faculty of the discipline.

Who originates the capstone course and review?

The faculty of the discipline.

When are results typically available?

The fall following the year in which the capstone courses are given.

From whom are the results available?

The faculty of the discipline or the department office.

What type of information is sought?

Each discipline establishes specific outcomes for that discipline.

Are the results available by department or discipline?

Yes—by discipline only.

Are the results comparable to data of other universities?

No.

Over the last two decades, capstone courses have seen improvement. Faculty have developed many approaches to capstones and have discovered numerous benefits beyond the initial expectations. Capstone courses help students to integrate the subfields, skills, and perspectives of the major. They prompt faculty discussion, which contributes to increased coherence of a major's course of study. The courses create opportunities for multiple assessments to be made of the major and liberal arts and sciences objectives by the faculty themselves. It is the faculty's direct analysis of the students' cumulative learning that makes this method of assessment so beneficial.

GOALS FOR STUDENT LEARNING

Truman seeks that its students graduate with in-depth knowledge in the major comparable to knowledge received from the best universities in the country and the world. Thus, the university emphasizes that a student's learning should be cumulative and should cover the breadth of the discipline. The graduating student is also expected to demonstrate the ability to integrate knowledge and to make interdisciplinary connections.

Skills that have been identified as critical objectives for the university include the ability to write various types of papers, to speak comfortably both in formal and impromptu presentations, to work collaboratively with fellow students, and to think critically. Assessment of the third goal, attitudes, has included varied levels of attention, but many of the majors have developed several of the following four foci:

1. Does the student demonstrate openness to more than one position and make fact/value distinctions?
2. Does the student possess positive self-esteem and practice self-evaluation?
3. What are the students' attitudes toward the university and the major?
4. Does the student demonstrate ethical and social responsibility?

SELECTED ASSIGNMENTS FROM CAPSTONE COURSES: KNOWLEDGE, SKILLS AND ATTITUDES

Strategies for senior experiences to demonstrate and build on student knowledge of the discipline range from presenting an article review to writing a formal thesis or paper, or from designing a research project to sitting for a locally-developed comprehensive exam. Independent of the capstone course, the university requires each graduating student to sit for a nationally standardized exam. Furthermore, interdisciplinary connections are encouraged through such mechanisms as selected case studies, required interdisciplinary portfolio entries, and exit interview questions that ask the students to identify connections between their major and the LSP. The university's portfolio assessment of the liberal arts and sciences is implemented through capstone courses. Faculty in the major are asked to collect the portfolio and are encouraged to add specific portfolio requests pertaining to objectives in the major.

To assess student skills such as communicating and collaborating, faculty might ask students to formally present their research to the class, to argue and defend an issue position, to sit for an oral examination, or to work in groups to solve a problem and/or conduct a research project. Many of the capstone courses also attempt to consciously assess various levels of critical thinking through the ability to apply concepts and theories of the discipline to new situations, and to analyze, synthesize, and evaluate. Other disciplines focus more generally on problem-solving ability. Case studies, literature reviews, argumentation papers, audience analysis, canon discussions, and student self-evaluation each prove to be popular assignments that combine knowledge objectives with skills assessment.

Objectives regarding attitudes are more difficult to specify and assess than knowledge and skills, but faculty in many majors have developed a consensus on several objectives and have developed approaches to assess them. Case studies can present students with ethical dilemmas to resolve, and role-playing can be an effective means for demonstrating multiple perspectives to an issue. Students may be asked to argue for a position other than the one they hold. Many of the capstone courses provide multiple opportunities for students to self-assess. Students might be asked to identify their strengths and weaknesses during an exit interview or to evaluate the curriculum. Every student is asked to evaluate the university and the major in the university-wide Graduating Student Questionnaire survey. Faculty in the major then receive the data on their majors as well as university averages during the summer Strategic Planning and Assessment Workshop.

CAPSTONE BENEFITS

Benefits of the capstone courses are varied, but an examination of the benefits of a specific capstone can best demonstrate some of the potential contributions capstone courses can make. Team teaching the capstone course brings opportunities several times a week for colleagues to reflect on and discuss student learning in the major. Inevitably, such discussions include references to the curriculum, specific assignments, and teaching pedagogy. Faculty have the opportunity to learn teaching strategies and discipline subfields from each other. This is a particularly good opportunity to mentor new faculty about the importance of discipline objectives, high expectations for students, and frequent faculty-student interaction. Through collegial discussions, program objectives are shared, cohesiveness increases, and improvements are planned.

VARIOUS MODELS OF CAPSTONE EXPERIENCES

Since the university granted faculty in each discipline the autonomy to interpret the capstone requirement for their major programs, a wide variety of models has evolved. Several models are presented in the following pages showing the knowledge, skills, attitudes paradigm. These various models provide a more complete description of capstone courses at Truman State University. Selected disciplines are included below. Discipline reports rotate in this *Almanac* on a yearly basis.

DISCIPLINE: **Agricultural Science**

COURSE TITLE: **AGSC 490/491 – Agriculture Practicum 1 and 2**

CREDIT HOURS: **2**

This Fall/Spring series of classes is the capstone experience. The overriding goal and purpose for this course is to provide a senior-level experiential class in which our students will be forced to utilize much of the theoretical information they have learned since beginning our curriculum as freshmen. The plan is that, each year, students in AGSC 490-491 will propose a project for their class that will focus on some production idea or problem. Not only will this allow the practical application of our students' classroom training, but it will also allow us as a faculty to instill in our students the liberal attitudes and values desired as outcomes of the Truman experience: problem-solving, management, frugality, self-reliance, teamwork, responsibility and an understanding of the democratic society in which we live, along with opportunities for enhancing development of communication skills, an understanding of the scientific method and the application of science to solve problems, and life-long learning skills.

DISCIPLINE: **Interdisciplinary Studies (BA) and (BS)**

COURSE TITLE: **IDS 475 – Interdisciplinary Studies Capstone**

CREDIT HOURS: **3**

This course brings together students pursuing a wide range of self-designed majors. Students will review their experiences in terms of their initial stated expectations, and will pursue individual capstone projects in cross-disciplinary, critical collaboration with other students and the instructor of record, with input where appropriate from the student's program mentor.

Knowledge:

1. Understand advance concepts, terminology, methodology, subject matter, problems, and issues from multiple academic disciplines.
2. Be aware of the strengths and limitations of individual academic disciplines.
3. Develop and increase the precision and depth of one's understanding of issues and academic disciplines by employing multiple perspectives, experiences and approaches.

Skills:

1. Develop the writing, speaking, analyzing and computing abilities expected of all Truman students.
2. Recognize connections between traditional academic disciplines and integrate knowledge from multiple disciplines to develop a better understanding of a single issue.
3. Communicate knowledge using the conventions of multiple academic disciplines.

4. Develop a versatility of thought that allows one to apply knowledge learned to issues and problems associated with varied subject areas.

Attitudes

1. Recognize the importance of individual disciplines as a means to address problems and to generate knowledge.
2. Understand the interconnectedness of knowledge and academic disciplines.
3. Appreciate the value of a liberal education.
4. Value “life-long learning.”

DISCIPLINE: Political Science

COURSE TITLE: POL 460 – Senior Seminar in Political Science

CREDIT HOURS: 3

Overview of the most significant concepts, models and methods used throughout the discipline. Designed as a capstone experience with some focus on readiness for the job market, professional training, or graduate school, as well as on preparation for the senior exam.

KNOWLEDGE ASSESSMENT

- Papers tied to Weekly Reading Assignments
- Class Discussion
- Comprehensive Exam
- Research Design

SKILLS ASSESSMENT

- **WRITING**
Papers on Weekly Writing Assignments
Literature Review Paper
Research Design
Portfolio
- **SPEAKING – Extemporaneous**
Class Discussion
Q/A Session following Presentation of Research Design – as Discussant and Presenter
Exit Interview
- **SPEAKING – Formal**
Discussant Presentation
Presentation of Research Design

- **COLLABORATIVE SKILLS**
Classroom Group Work
Peer Review of Research Design

CRITICAL THINKING SKILLS (Higher order thinking – various exercises in analysis, Synthesis and argumentation)

- Hypothesis Development Assignment
- Literature Review
- Papers on Weekly Reading Assignments
- Argumentation Proposition Papers

EXAMPLES OF CURRICULAR OR PEDAGOGICAL IMPROVEMENT FOR ENHANCING STUDENT LEARNING – SKILL MATRIX FOR REQUIRED COURSES IN THE MAJOR

- Political Science Methodology – Quantitative Research Project
- Comparative Politics – Research Project Beginning with Research Design
- Political Thought – Government Document Research
- Political Thought – Proposition Papers

STRATEGIES FOR USING PERFORMANCE IN THE CAPSTONE FOR ASSESSING PROGRAM QUALITY

- Team Teaching
- Cross-Grading
- Program Review
- Program Indicators Reviewed Annually

DISCIPLINE: Spanish

COURSE TITLE: SPAN 473 – Spanish Capstone Experience

CREDIT HOURS: 3

This course is designed to be a culminating experience in which the student will demonstrate skills and knowledge garnered from their experience within the Spanish program. The Spanish major will research, write and revise an extensive research paper directly under the supervision of a Spanish faculty member. The capstone topic selected will directly relate to the language, literature, culture, history and/or civilization of the Spanish-speaking peoples of the world. The student will present the results of their research in a public forum at the end of the semester. In addition, the student will assemble their University portfolio and submit it to the instructor in appropriate format.

COURSE OBJECTIVES/OUTCOMES

The student will undertake a project that will meet the following outcomes:

- Demonstrate further development of their linguistic, cultural and/or literary understanding.
- Demonstrate a capacity for in-depth research.
- Demonstrate correct usage of MLA style.
- Demonstrate appropriate mastery of the target language in written form.
- Demonstrate the ability to present research findings orally in a public forum.

FACULTY MENTORS

Any full-time permanent faculty member who regularly teaches 400-level courses may serve as a faculty mentor. It is understood that a professor will work with no more than two students in any given semester and that the research projects will fall within the scope of their expertise. The responsibilities of the mentor will be:

- To assist the student in the selection of an appropriate topic
- To oversee and direct the student's research
- To assure that the student adheres to the deadlines established for each phase of the project
- To read and critique each draft
- To grade the final draft, student performance throughout the project, and the presentation of the paper at the end of the project
- To discuss, as necessary, the assembly of the University Portfolio

DISCIPLINE: Art

COURSE TITLE: ART 488 – Capstone Experience/Visual Communication
 ART 489 – Capstone Experience/Fibers
 ART 496 – Capstone Experience/Ceramics
 ART 497 – Capstone Experience/Print Making
 ART 498 – Capstone Experience/Sculpture
 ART 499 – Capstone Experience/Painting

CREDIT HOURS: 6

These courses are a studio component of the Capstone Experience. Individual thematic development to culminate in a senior exhibition.

SENIOR SEMINAR AND SENIOR PROJECT

- Team taught
- Communication evaluated (senior project – by faculty committee)
- Project design
- Oral presentation

KNOWLEDGE

- DISCIPLINE CONTENT AREA

Comprehensive exam-written
Area written exam
Thesis/position paper
Portfolio-Exhibition-Special project (BA students may work with Dr. Shoaff to develop lesson plans or write papers as a capstone project as pre-MAE students)
Senior project oral defense
Formal oral presentation

- INTERDISCIPLINARY CONNECTIONS
Portfolio
Issues Project

SKILLS

- WRITING
Issues project
Thesis/Position paper
Portfolio
- SPEAKING – Extemporaneous
Discussion
Issues project
Senior project oral defense
- SPEAKING – Prepared
Formal oral presentation
- COLLABORATIVE SKILLS
Issues project
- CRITICAL THINKING SKILLS
-Comprehension and Application
Comprehensive exam
Area Exam
Thesis/Position paper
-Analysis
Thesis/Position paper
Issues Project
Exhibition/Portfolio
-Synthesis
Thesis/Position paper
Exhibition/Portfolio/Special Projects
-Evaluation
Thesis/Position paper
Discussion
Oral presentation

ATTITUDES ASSESSMENT

- Openness to more than one position and recognition of fact/value distinction
 - Issues paper
 - Discussion
 - Reflective Evaluation of Self
 - Senior project oral defense
 - Portfolio
 - Videotape record returned to the students
 - Evaluation of University and Major
 - Examination/Analysis of Discipline Assessment (graduating senior interview)
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DISCIPLINE: **Philosophy and Religion**

COURSE TITLE: **PHRE 475 – Senior Seminar in Philosophy and Religion**

CREDIT HOURS: **3**

SENIOR SEMINAR

- Team taught
- Students write and publicly defend a senior thesis

KNOWLEDGE ASSESSMENT

- Disciplinary and Interdisciplinary Content, Integration and Assessment
 - Thesis development over stages
 - Graded class participation
 - Graded short written assignments
 - Public oral examination with qualified external examiner and thesis committee

SKILLS ASSESSMENT

- Writing
 - Senior thesis developed over stages
 1. Prospectus and annotated bibliography
 2. Conspectus and selected passages
 3. Full draft (25-60 pages)
 4. 10 page abstract
 5. Final draft after oral defense
- Speaking
 - Discussion
 - Presentation of prospectus
 - Presentation of conspectus
 - Oral defense with external examiner
- Collaboration
 - Written questions and comments on other students' projects
 - Discussion of other students' projects

CRITICAL THINKING SKILLS

- Comprehension and application
 - Research for writing thesis
 - Comprehensive oral examination
- Analysis
 - Analyzing key primary and secondary sources for thesis research
 - Analyzing counterarguments to the student's own arguments
- Evaluation
 - Evaluation of sources for thesis
 - Written critiques of other students' work
 - Evaluation of merit of other students' critiques of own work
- Synthesis
 - Writing of thesis
 - "Debriefing"

ATTITUDES ASSESSMENT

- Informed openness to more than one position
 - Nature of research in the discipline
 - Collegial discussion in the seminar
 - Thoughtfulness in written critiques
- Reflective evaluation of self
 - Discussions with thesis advisor
 - Consideration of external examiners report
 - Final round-"debriefing"
- Evaluation of university and major
 - Final round of presentations
 - Course evaluation
 - Written reports of the external examiners

DISCIPLINE: **English**

COURSE TITLE: **ENG 498 – Senior English Seminar**

CREDIT HOURS: **4**

The purpose of the course is to offer a forum for senior English majors to examine their progress toward an English major, determine directions for future studies in the major and share new studies.

TYPES OF EXPERIENCES

One example of an English capstone experience for four semesters of seniors required student self-assessment through reflective journal entries and through design and submission of the LAS portfolio, collaborative seminar presentations of research, and individual "personal best" projects

presented in public forums beyond the seminar. Knowledge and skills assessment are reflected in the seminar activities.

METHODS OF CONDUCTING SEMINAR

Seniors reviewed and strengthened their knowledge of disciplinary content areas in discussion of language, literature, and literacy issues, through the discussion of the formation of literary canons and application of critical perspectives to canonical works, and by writing two “meditations” on languages and a self-portrait as an “English major”.

They demonstrated their abilities in making interdisciplinary connections through their research and presentations and through their review and selection of material for the portfolio.

They demonstrated writing skills in the production and revision of statements of personal philosophy for graduate school applications, letters of application to graduate study or employers, resumes and curriculum vitae. They demonstrated speaking skills in extemporaneous seminar discussions, in formal, collaborative seminar presentations and in public presentations in forums outside the seminar setting. Self-assessment protocols assisted the students in evaluating their performance in the formal speaking activities. They also reflected on their collaborative skills through the self-assessment protocols.

CONCLUSION

The English faculty are redesigning the capstone course so that it provides seniors with more opportunities for integrating their studies in five strands of the major and for interdisciplinary and collaborative capstone projects.