Chapter XII: 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 division office.

What type of information is sought?
Each discipline establishes specific outcomes for that discipline.

Are the results available by division 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.

In addition to assessing learning goals specific to the major, faculty have also been asked to integrate university-wide liberal arts and sciences objectives with the major. As Missouri’s liberal arts and sciences institution, Truman is committed to recruiting high ability students and to providing them with a quality education. In its plan submitted to the State of Missouri, Truman developed a three-part learning outcomes paradigm based on knowledge, skills, and attitudes. This paradigm provides a surprisingly common language for comparing the university’s capstone experiences that at first seem distinctly varied.

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 experience 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 Survey. Faculty in the major then receive the data on their majors as well as university averages during the summer Master Plan 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. One discipline from each division is included below. Discipline reports rotate in this Almanac on a yearly basis.

**DISCIPLINE:** Business Administration

**COURSE TITLE:** BSAD 460 Strategic Management
CREDIT HOURS:  3

METHODS OF CONDUCTING THE SEMINAR: The seminars are taught by a single faculty member. Three different professors teach sections of the course. The seminar uses a lecture format.

KNOWLEDGE:

BROADLY EDUCATED PROBLEM SOLVERS
   Comprehensive Exam
   Case studies/simulations
   Synthesis of accounting, finance, marketing, and management
   Class Discussion

INTERDISCIPLINARY CONNECTIONS
   Case Studies/Simulations
   Discussion of Current Issues
   International Strategies
   Ethics/Social Responsibility

SKILLS:

WRITING
   Writing-Enhanced Course
   Case Writing Assignments
   Writing Portfolio

SPEAKING
   Group Presentation of Strategy Research Paper; or
   Group Presentation and Discussion of Case Study (In Most Sections)

TEAMWORK
   Group Papers and Presentations (In Most Sections)
   In-Class Application/Problem-Solving Exercises

ATTITUDES:

ETHICS/SOCIAL RESPONSIBILITY
   Case Studies
   Class Discussion

SELF CONFIDENCE
   Argumentation--Ability to State and Justify Position Effectively
   Knowledge of Models Which Become Tools of Analysis

SELF ASSESSMENT
   Portfolio

TYPES OF EXPERIENCES:
Students are heavily involved in collaborative projects as they study strategic issues. All of the courses require a significant amount of writing. Most of the sections require group presentations. All of the sections require teamwork.

**ADDITIONAL INFORMATION:**

The capstone experience helps students to develop business synthesis and evaluation skills.

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**DISCIPLINE:** Art

**COURSE TITLE:** ART 425 Capstone Experience/Seminar

**CREDIT HOURS:** 1

**METHODS OF CONDUCTING THE SEMINAR:** Required for all Art and Art History Majors

**KNOWLEDGE:**

- **DISCIPLINE CONTENT**
  - Formal presentation of work in major
  - Group Project
  - Issues Project

- **INTERDISCIPLINARY CONNECTIONS**
  - Group Project
  - Issues Project
  - University Portfolio

**SKILLS:**

- **WRITING**
  - Group Project
  - Portfolio Cover Letter

- **SPEAKING- PREPARED**
  - Formal presentation of work in major
  - Issues Project

- **SPEAKING- EXTEMPORANEOUS**
  - Formal presentation of work in major Q & A
  - Issues Project Q & A
  - Issues Discussion

- **COLLABORATIVE SKILLS**
  - Group Project
  - Issues Project

**CRITICAL THINKING SKILLS**

- **COMPREHENSION AND APPLICATION**
  - Formal presentation of work in major
  - Group Project
  - Issues Project
  - University Portfolio
• ANALYSIS
  o Formal presentation of work in major
  o Group Project
  o Issues Project
  o University Portfolio

• SYNTHESIS
  o Formal presentation of work in major
  o Group Project
  o Issues Project
  o University Portfolio

• EVALUATION
  o Formal presentation of work in major
  o Group Project
  o Issues Project

ATTITUDES ASSESSMENT:

• OPENESS TO MORE THAN ONE POSITION AND RECOGNITION OF FACT/VALUE DISTINCTION
  o Issues Project
  o Discussion

• REFLECTIVE EVALUATION OF SELF
  o University Portfolio
  o Formal presentation of work in major

• EVALUATION OF UNIVERSITY AND MAJOR
  o Group Project

ART 426 CAPSTONE EXPERIENCE/ LIBERAL ARTS
Required for all students seeking B.A. Liberal Arts Degree

KNOWLEDGE:

• DISCIPLINE CONTENT
  o Thesis Paper
  o B.A. Exhibition

• INTERDISCIPLINARY CONNECTIONS
  o Formal presentation on subject of choice
  o Thesis Paper

SKILLS:

• WRITING
  o Thesis Paper

• SPEAKING- PREPARED
  o Formal presentation on subject of choice

• SPEAKING- EXTEMPORANEOUS
  o Formal presentation on subject of choice
  o Discussion
  o Group discussion at B.A. Exhibition
• COLLABORATIVE SKILLS
  o Peer reading and evaluation
  o Group discussion at B.A. Exhibition
  o Installation of group exhibit

CRITICAL THINKING SKILLS
• COMPREHENSION AND APPLICATION
  o B.A. Exhibition
  o Thesis Paper
  o Formal presentation on subject of choice
• ANALYSIS
  o Peer reading
• SYNTHESIS
  o B.A. Exhibition
• EVALUATION
  o Thesis Paper
  o Artist’s Statement
  o Group discussion at B.A. Exhibition

ATTITUDES ASSESSMENT:
• OPENESS TO MORE THAN ONE POSITION AND RECOGNITION OF FACT/VALUE DISTINCTION
  o Formal presentation on subject of choice
  o Peer reading
• REFLECTIVE EVALUATION OF SELF
  o B.A. Exhibition
  o Thesis Paper
  o Artist’s Statement
  o Discussion of Faculty Evaluation and Commentary
• EVALUATION OF UNIVERSITY AND MAJOR
  o Group discussion at B.A. Exhibition

ART 489 CAPSTONE EXPERIENCE/FIBERS
ART 496 CAPSTONE EXPERIENCE/CERAMICS
ART 497 CAPSTONE EXPERIENCE/PRINTMAKING
ART 498 CAPSTONE EXPERIENCE/SCULPTURE
ART 499 CAPSTONE EXPERIENCE/PAINTING
One of the above required for all students seeing B.F.A. Studio degree

KNOWLEDGE:
• DISCIPLINE CONTENT
  o Thesis Paper
  o Committee Meetings with Student
  o B.F.A. Exhibition
• INTERDISCIPLINARY CONNECTIONS
  o Thesis Paper
  o Committee Meetings with Student
SKILLS:

- **WRITING**
  - Thesis Paper

- **SPEAKING- PREPARED**
  - Presentation of exhibition to committee

- **SPEAKING- EXTEMPORANEOUS**
  - Committee Meetings with Student

- **COLLABORATIVE SKILLS**
  - Gallery preparation and installation of exhibition

CRITICAL THINKING SKILLS

- **COMPREHENSION AND APPLICATION**
  - Initial Committee Meeting with Student

- **ANALYSIS**
  - First Draft of Thesis Paper
  - Subsequent Committee Meetings with Student

- **SYNTHESIS**
  - Subsequent Drafts of Thesis Paper
  - Final Committee Meeting with Student

- **EVALUATION**
  - Thesis Paper
  - B.F.A. Exhibition

ATTITUDES ASSESSMENT:

- **OPENESS TO MORE THAN ONE POSITION AND RECOGNITION OF FACT/VALUE DISTINCTION**
  - Initial Committee Meeting with Student
  - Subsequent Committee Meetings with Student
  - Final Committee Meeting with Student

- **REFLECTIVE EVALUATION OF SELF**
  - Thesis Paper

- **EVALUATION OF UNIVERSITY AND MAJOR**
  - Student and Faculty Mentor Discussion and Evaluation of Capstone

ART 436 CAPSTONE EXPERIENCE/SENIOR THESIS I
ART 437 CAPSTONE EXPERIENCE/SENIOR THESIS II
Required for all students seeking B.A. Art History degree

KNOWLEDGE:

- **DISCIPLINE CONTENT**
  - Origin of topic
  - Thesis itself
• INTERDISCIPLINARY CONNECTIONS
  o Students paired with Outside Reader
  o Topics and research areas often interdisciplinary

SKILLS:

• WRITING
  o Five-chapter thesis
  o Student Research Conference abstract
  o Peer editing

• SPEAKING- PREPARED
  o Presentation at Student Research Conference (Truman)--required
  o Presentation at National Council on Undergraduate Research (strongly recommended)

• SPEAKING- EXTEMPORANEOUS
  o Seminar review of peer work

• COLLABORATIVE SKILLS
  o Seminar review of peer work

CRITICAL THINKING SKILLS

• COMPREHENSION AND APPLICATION
  o Development of topic
  o Sustain research over the course of a year
  o Substantial research

• ANALYSIS
  o Substantial research component
  o Peer review

• SYNTHESIS
  o Substantial revision throughout the semester based on faculty and peer comments
  o Through writing process of five-chapter thesis

• EVALUATION
  o Peer review and feedback from faculty

ATTITUDES ASSESSMENT:

• OPENESS TO MORE THAN ONE POSITION AND RECOGNITION OF FACT/VALUE DISTINCTION
  o Seminar discussions
  o Thesis research
  o Peer and faculty evaluations

• REFLECTIVE EVALUATION OF SELF
  o Continued revision of work throughout the year

• EVALUATION OF UNIVERSITY AND MAJOR
  o Seminar discussion
  o Peer review throughout the year

ART 488 CAPSTONE EXPERIENCE/VISUAL COMMUNICATION

SENIOR SEMINAR AND SENIOR PORTFOLIO/EXHIBITION
• COMMUNICATION EVALUATED
• PROJECT DESIGN
• ORAL PRESENTATION

**KNOWLEDGE:**

• DISCIPLINE CONTENT AREA
  ○ Thesis/Position Paper
  ○ Exhibition/Portfolio Review
  ○ Faculty/Student Committee Interaction
  ○ Nationally Normed Exit Exam
• INTERDISCIPLINARY CONNECTIONS
  ○ Faculty/Student Committee Interaction
  ○ Thesis/Position Paper
  ○ Exhibition/Portfolio Review
  ○ University Portfolio

**SKILLS:**

• WRITING
  ○ Thesis/Position Paper
• SPEAKING – Extemporaneous
  ○ Discussion
  ○ Faculty Discourse
• SPEAKING – Prepared
  ○ Mid-term Presentation of Comprehensive Layouts
  ○ Portfolio Review
• COLLABORATIVE SKILLS
  ○ Faculty/Student Committee Interaction
  ○ Portfolio Preparation
• CRITICAL THINKING
  ○ Position Paper, Review and Exhibition

**CRITICAL THINKING SKILLS**

• COMPREHENSIVE AND APPLICATION
  ○ Nationally Normed Test
  ○ Thesis/Position Paper
• ANALYSIS
  ○ Thesis/Position Paper
  ○ Exhibition/Portfolio Review
• SYNTHESIS
  ○ Thesis/Position Paper
  ○ Exhibition/Portfolio
• EVALUATION
  ○ Thesis/Position Paper
  ○ Discussion
  ○ Portfolio Review

**ATTITUDE ASSESSMENT:**
• OPENNESS TO MORE THAN ONE POSITION AND RECOGNITION OF FACT/VALUE DISTINCITON
  o Initial Committee Meeting with Student
  o Mid-term Committee Meeting with Student
  o Final Evaluation of Portfolio
• REFLECTIVE EVALUATION OF SELF
  o Position Paper
  o Portfolio
• EVALUATION OF UNIVERSITY AND MAJOR

Examination/Analysis of Discipline Assessment

DISCIPLINE: Nursing

COURSE TITLE: NU 410 Introduction to Nursing Research
CREDIT HOURS: 3

METHODS OF CONDUCTING THE SEMINAR: The seminars are taught by a single faculty member. The course has been taught by the same faculty member for the past four years.

KNOWLEDGE:

Group work with 3 students in each group. Term paper development dealing with evidence-based practice for nursing, a conceptual proposal of a research problem and a methodological proposal for investigation of a research problem.

SKILLS:

Writing

  Writing-Enhanced Course
  Research student Assignments
  Class presentation of results and finding.
  Peer Review

Speaking

  Group Presentation of Research Papers or Poster Presentation of finished work

Teamwork

  Group Papers and Presentations.
  In-class and out of class collaboration to refine work for presentation.

ATTITUDES:

ETHICS/SOCIAL RESPONSIBILITY

  Case Studies
  Class Discussion

SELF CONFIDENCE

  Argumentation--Ability to State and Justify Position Effectively
Knowledge of Models Which Become Tools of Analysis

ASSESSMENT
Portfolio

TYPES OF EXPERIENCES:

Students are heavily involved in collaborative projects as they develop the concepts to meet the three designated class assignments. This is further exemplified by the interaction that must occur to develop the presentation (oral or poster).

ADDITIONAL INFORMATION:

This class helps students develop a better understanding of the requirements imposed by the program, CCNE and ways to improve the nursing profession. The projects are truly geared to assisting the students to develop a sense of commitment to the continued improvement of the profession as outlined by the honor society Sigma Theta Tau.

DISCIPLINE: English: Linguistics

COURSE TITLE: ENG 498 Senior English Seminar

CREDIT HOURS: 4

METHODS OF CONDUCTING THE SEMINAR: A special section of ENG 498 is devoted to a linguistic topic, and enrollment is restricted by yellow card. All BS English: Linguistics students must take this section, but it is also available for BS English: Pre-Elementary Education majors and BA English students who are concentrating in linguistics, as space allows.

The purpose of the course is to offer a forum to senior linguistics majors to reflect on their progress toward the outcomes of the degree (detailed below), to learn about the history and current state of the academic discipline, to investigate a particular linguistic topic in depth, and to develop, conduct, and share new studies. The student’s research is presented informally to seminar classmates, formally to the general public at the English Senior Seminar Research Conference, and in a formal research paper.

KNOWLEDGE & SKILLS:

Senior Seminar presentations and final capstone papers are evaluated by two linguistics faculty members other than the Seminar instructor, based on the following outcome statements, which are available to students and strongly reinforced in the Senior Seminar:

1. Displays appropriate command of linguistic terminology.
2. Displays knowledge of linguistic theory.
3. Displays knowledge of previous scholarship in the area of study.
4. Displays appropriately scientific treatment of data (which may include, e.g., real instances of spoken or written language (which the student may or may not have gathered him-/herself), language judgments/attitudes/perceptions, native speaker intuitions about language…).
5. Performs original and appropriate analysis of linguistic data.
6. Demonstrates awareness of and sensitivity to linguistic diversity and variation (recognizing that there is no such thing as a homogeneous speech community, that everyone speaks an idiolect and participates in various dialect communities, that different registers of language are used in different situations and for different purposes, and that no variety of language is inherently ‘superior’ (more logical, more beautiful, etc.) or inferior).

7. Demonstrates ability to make appropriate connections between linguistic research and other academic disciplines and/or “real-life” endeavors.

8. Demonstrates command of academic discourse conventions.

**ATTITUDES & TYPES OF EXPERIENCES:**

1. Student self-assessment through the compilation of the LAS Portfolio and a separate major portfolio, which includes both the capstone paper and a reflective letter detailing the student’s progress through the major and his/her satisfaction.

2. In-class writing activities, and focus on the revision process as the student works toward the final capstone research paper.

3. Collaborative seminar presentations of research on a given linguistic topic.

4. Individual “personal best” projects presented in public fora beyond the seminar.

5. Opportunity through classroom activities and the student’s own research to make interdisciplinary connections.

**DISCIPLINE:** Mathematics

**COURSE TITLE:** Capstone Experience

**CREDIT HOURS:** 0-1

**METHODS OF CONDUCTING THE SEMINAR:** A mathematics major fulfills the capstone experience by completing a project that demonstrates his or her ability to study independently some area of mathematics, and to communicate, orally and in writing, the knowledge so obtained.

**KNOWLEDGE:**

Each student will be responsible for choosing a project and a supervisor. If the supervisor approves, the student proposes (in writing) this project to the Undergraduate Committee. The Undergraduate Committee will then decide if the project is appropriate.

At the completion of the project, the student, with the approval of the supervisor, presents the final written report to the Undergraduate Committee, which decides whether the report is adequate. If so, the supervisor makes arrangements for the public presentation. At the completion of this presentation, the student will have completed his or her capstone experience and met the graduation requirement.

Many different types of projects will be considered acceptable. They should satisfy three criteria.

(1) The student should learn some mathematics outside the classroom setting.

(2) The student should synthesize material obtained from different sources.

(3) The student should clearly communicate, orally and in writing, what he or she has learned.
ROLES OF STUDENT, SUPERVISOR, AND UNDERGRADUATE COMMITTEE

The student is responsible for finding a supervisor and a project, for getting the necessary approvals from the Undergraduate Committee, and, of course, for completing the project. The supervisor’s role is primarily to provide guidance. He or she may help in the choice of project (e.g., by suggesting articles to consider), and may need to provide encouragement or suggestions at difficult moments. It is not intended that the supervisor should actually choose the project, or ride hard on the student. The amount of assistance needed will naturally vary, but the project is the student’s, not the supervisor’s. The supervisor will, however, have to approve the student’s work before it is taken to the Undergraduate Committee. The Undergraduate Committee’s role is mainly to ensure that projects are appropriate. It is their job to disapprove of projects that do not meet the specified criteria. They should not be expected to check papers for accuracy.

DISCIPLINE: Biology

COURSE TITLE: BIOL 545 Biology Senior Seminar

CREDIT HOURS: 1

METHODS OF CONDUCTING THE SEMINAR: The course is taught by individual professors and typically has a discussion format. Several sections are offered each semester, each having a topical focus.

KNOWLEDGE:

- All sections of Biology Senior Seminar have a common general goal that students will be expected to review and integrate biological concepts at several levels of biological organization (e.g., cell/molecular level, organismal level, ecological level). Specific content requirements vary among sections, each of which has a unique topic chosen by the instructor. Most sections explore a theme that is not explicitly developed in other biology courses but that is especially relevant to modern society and requires knowledge developed in the core biology curriculum. Examples of recent sectional topics include: Human-Altered Landscape, Biotechnology, Culturing Biophilia, Vaccines and World Health, Epidemics, and Understanding Biology Through Art.

- All Biology Majors must take the nationally normed senior biology exam (Major Field Test—MFT) and must score at or above the 20th percentile. The MFT is intended to test knowledge that students derive from the biology core—those biology courses that all biology majors are asked to take. Taking the MFT is not a course requirement, but students typically take the MFT during the same semester that they take Biology Senior Seminar. In order to motivate students to review for the MFT and to perform as well as possible, one class meeting of Biology Senior Seminar is devoted to discussing relevance and importance of the MFT to students, to the biology discipline, and to the university.

SKILLS:

- Students are required to give at least one formal presentation or lead a class discussion. Through this experience all biology students will have developed some confidence in their public speaking
abilities before needing to make presentations in a professional setting after they graduate. Performance is assessed by the individual instructor.

- Thoughtful participation in class discussions is expected of students in all sections.
- Many faculty require group presentations, which encourage good communication and organizational skills.

**ATTITUDES:**

- By choosing topics that transcend traditional boundaries among specialized sub-disciplines of biology and other fields, students are encouraged to view problems from a holistic and integrative perspective.
- A premium is put on close personal interaction among students and faculty. Numerous sections of the course are offered in order to keep class sizes small (e.g., 12-18) and ensure the intellectual involvement of all students.
- Through participation in class discussion, students consider and are encouraged to respect diverse perspectives that arise during discussions.

**TYPES OF EXPERIENCES:**

- In all sections, students are required to give at least one formal presentation or lead a class discussion. These typically relate to a particular chapter in a class-specific text. Some faculty also require either a second individual or group presentation.
- Completion and submission of the university-wide Senior Portfolio is a course requirement.
- Some instructors require a formal research paper relating to their special topic.
- Some sections devote one or more class meetings to a discussion of career options and writing a résumé. These discussions are sometimes conducted at the University Career Center.

**ADDITIONAL INFORMATION:**

Individual faculty have considerable leeway in designing their courses to achieve the following general goals of Biology Senior Seminar:

(a) serve as an integrating capstone experience.
(b) provide a culminating review of the Biology program.
(c) make students content with their biology education.
(d) challenge students to use their biology knowledge after graduation.
(d) provide students with the opportunity to make a formal oral presentation.
(e) encourage students to prepare for the Biology Senior Test (MFT).

At least one period is devoted to discussing the positive aspects of Truman’s assessment program. Students are made aware of how we use the results of the Biology Senior Test (MFT), Graduating Student Questionnaire, and Senior Portfolio.
DISCIPLINE: Economics

COURSE TITLE: ECON 479 Senior Seminar in Economics

CREDIT HOURS: 3

METHODS OF CONDUCTING THE SEMINAR:

Taught by a single professor using a combination of lecture and seminar/discussion style.

KNOWLEDGE:

<table>
<thead>
<tr>
<th>Knowledge Areas</th>
<th>How Assessed</th>
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<tbody>
<tr>
<td>Bibliographic/Data Search</td>
<td>Library and Internet resource assignment</td>
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<tr>
<td>Basic Econometrics</td>
<td>Take-home test</td>
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<tr>
<td>Microeconomics</td>
<td>Take-home test and Linear programming computer assignment</td>
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<tr>
<td>Macroeconomics</td>
<td>Take-home test and Consumer Price Index computer assignment</td>
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SKILLS:

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<tr>
<th>Skills</th>
<th>How Assessed</th>
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<tbody>
<tr>
<td>Writing</td>
<td>Summary of article on graduate opportunities or careers in economics</td>
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<td></td>
<td>Three short essays on the contributions of Nobel Laureates to the discipline</td>
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<td></td>
<td>Two drafts of a literature review</td>
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<td></td>
<td>Two drafts of a formal empirical research paper</td>
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<td>Computer Skills</td>
<td>Internet/Library electronic data base assignment</td>
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<td>Linear programming computer assignment</td>
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<td></td>
<td>Consumer Price Index computer assignment</td>
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<td></td>
<td>Econometrics take-home test</td>
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<td></td>
<td>Empirical research project</td>
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<td>PowerPoint presentation of empirical research project</td>
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<td>Speaking – Extemporaneous</td>
<td>Class Discussion</td>
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<td>Class Participation at Majors and Minors Fair</td>
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<td>Question and Answer sessions following presentation of empirical model and hypotheses</td>
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<td>Speaking – Formal</td>
<td>Presentation of article on graduate opportunities or careers in economics</td>
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<td></td>
<td>Presentation of empirical model and hypotheses</td>
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<td>PowerPoint presentation of empirical research project</td>
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<td></td>
<td>Discussant on presentation of other student’s project</td>
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</table>
Collaborative Skills  Peer review of other student’s research projects
Critical Thinking Skills  Area exams
                        Computer Assignments
                        Empirical research paper
                        Peer review of other student’s projects
                        Portfolio

**ATTITUDES:**

<table>
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<tr>
<th>Attitudes</th>
<th>How Assessed</th>
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<tbody>
<tr>
<td>Self Confidence</td>
<td>Review and application of tools of analysis in the discipline</td>
</tr>
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<td></td>
<td>Practice in giving presentations</td>
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<tr>
<td>Self-Assessment</td>
<td>Portfolio</td>
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</tbody>
</table>

**TYPES OF EXPERIENCES:**

Early in the semester in Senior Seminar in Economics the students are taken to the library for an extensive two-day workshop conducted by the reference librarian who serves as our discipline liaison. This workshop covers library and electronic information retrieval. Students are also taken to the Career Center for a day so that they can sign up for e-recruiting and learn about how to look for information about career opportunities.

The portfolio packets are distributed in Senior Seminar and a day is devoted to discussing the prompts and types of submissions that might be appropriate for each category.

The students complete a multi-stage empirical research project with several of the stages entailing two drafts. There are also three take-home exams in the course, three short essays on the contributions of Nobel Laureates, and a couple computer assignments. Students also give several presentations in the course, including a formal PowerPoint presentation of their empirical research paper.

**ADDITIONAL INFORMATION:**

At present, one section of this course is offered every year during the Fall semester. Students have presented their Senior Seminar projects at such forums as the Student Research Symposium on campus, National Council on Undergraduate Research, the Jefferson City Poster Day, and regional professional association meetings.