Chapter XVII: 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.

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 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

TEACHING METHODS AND LEARNING EXPERIENCES: Strategic management is taught by a single faculty member. Three different professors teach sections of this course. All sections are writing-enhanced and use a range of teaching methods including lecture, small and large group discussions, case study analysis and simulations.

Students are heavily involved in collaborative projects as they study strategic issues. All of the courses require a significant amount of writing, peer editing and evaluation and teamwork. Most of the sections require group presentations.

COURSE OBJECTIVES:
Students are expected to:

1. Demonstrate an understanding of the integration of the functional areas of business and the issues and concepts used in strategic management.
2. Demonstrate an understanding of the basics of strategic thinking in settings involving rivalry.
3. Demonstrate an ability to use writing as a way of learning, as well as a way of communicating what was learned within the business environment.

OUTCOMES:
Knowledge: Students are expected to learn about the current issues facing business organizations and to understand various strategic theories, models, and frameworks that can be used to analyze business situations. Students must synthesize and apply previous coursework in accounting, finance, marketing and management through assignments such as case study analyses and simulations.

Skills: The course emphasizes three major skill areas: written communication, oral presentation and teamwork skills. The course incorporates the learning outcomes of the writing enhanced program. Students become adept in business case writing skills. They write several individual case analyses using a standard framework and then work on a team case assignment that involves researching and analyzing a current company's business situation and effectiveness. Teams identify a current strategic issue or problem facing the organization, analyze multiple alternative solutions, and develop an argument for the solution they recommend. Most of the sections require an oral presentation of the analysis. The course serves as a division collection point for the written communication rubric. The teamwork rubric is often used to allow team members to evaluate the other group members' teamwork skills. Students submit their University and Business Portfolio entries as part of the course requirements.

Attitudes: Through participation in class discussion and selected case studies, students will develop an awareness of ethical situations in business organizations and the concept of corporate social responsibility. They will discuss proactive strategies that management can use to model appropriate behavior, to develop ethical guidelines for its employees, and to determine how the organization's approach to corporate social responsibility is built into its strategic position, policies and culture. Students will develop self confidence by learning how to apply course models in case studies and current business settings and how to state and justify their positions effectively.

DISCIPLINE: Art

COURSE TITLE: ART 425 Capstone Experience Seminar

CREDIT HOURS: 1

This Capstone Seminar course is designed to be part of the Capstone Experience for all Art majors. Students will have the opportunity to demonstrate their knowledge and understanding of issues in art incorporating their liberal studies. The course also serves as the culmination of both the Art and University Assessment Programs.

Outcomes:

Outcomes for this course include the student's ability to:

- demonstrate knowledge and skills acquired in the Art degree program

- make connections between their major and the Liberal Studies Program
- demonstrate an understanding of group learning skills
- demonstrate an understanding of a variety of critical positions and aesthetic philosophies as applied to the arts.

Outcomes Assessment:

Assessment of the stated outcomes for this course is accomplished primarily through assignments that allow the student to demonstrate hi/her breath of knowledge, skills, and attitudes acquired in courses making up the degree program. The assignments include making an oral presentation of their respective work in a public forum wherein the student explains: the conceptual basis of the work; the importance of the media and or process to the work; the major artist/art historical influences on the concept underlying the work; and make assumptions regarding their work's place within the contemporary world.

Students are also asked to write a critical analysis paper of a contemporary art issue. This assignment allows the student an opportunity to apply knowledge and skills acquired in Writing Enhanced courses and within the Art major.

Students are also assigned to work within a group to develop a strategy that will result in a group presentation of a current art issue.

Assessment of these assignments can point to strengths and perhaps weaknesses in the preparation of the student through the required curriculum for the Art degree. Any area of concern noted through this assessment process that appears to be related to the curriculum is referred to the appropriate Art Curriculum Committee for discussion and/or action as needed.

DISCIPLINE: Art: Studio Art

COURSE TITLE: ART 489 Capstone Experience/Fibers

CREDIT HOURS: 6

This is the Studio component of the BFA Capstone Experience and involves individual thematic development to culminate in senior exhibition and written paper. The objective of the studio Art 489 BFA Capstone Fibers is to provide the student the opportunity to demonstrate the qualifications for the degree Bachelor of Fine Arts through discussion, critique, exhibition, public presentation, thesis paper, and oral defense.

Outcomes for this course include the student's ability to:

1. Demonstrate the capacity to work independently on the research paper and the exhibition with the support of the BFA committee.
2. Complete a twenty to thirty page research paper that focuses on the process and development of work for the final studio exhibition.
3. Develop a professional, cohesive, body of work that demonstrates advanced technical and conceptual studio abilities.

Outcomes Assessment

Students are expected to work independently on the studio and written work with the continuous mentoring of the BFA committee. Students meet formally with a three-member studio faculty committee at least five times in the course of the semester. Each meeting consists of discussion of the current draft of the paper and the studio work.

The formal research paper focuses on the process and development of work for the final studio exhibition as it relates to a review of current professional literature and within the context of conceptual and technical concerns of fiber and other art media. Additionally, the paper includes information concerning influences by other artists or types of art.

Included in the paper is a comprehensive discussion of working process, selection, and handling of materials, and development of the work over time. The final chapter of the paper concerns self-evaluation and reflection and asks the student to specifically address the issues of how well the final body of work meets the goals and objectives the student sets for the exhibition. Finally, the student is asked to determine what new creative problems the completed body of work suggests.

Development of a professional, cohesive, body of work demonstrating advanced technical and conceptual studio abilities is revealed at the final exhibition of the artwork. During the exhibition, the committee meets with the student for the final defense of the paper and the work. In addition, all students completing the Fibers BFA are required to introduce their work and paper in a formal presentation to peers during the exhibition.

DISCIPLINE: Nursing

COURSE TITLE: NU 410 Introduction to Nursing Research

CREDIT HOURS: 3

The Nursing Capstone Project is housed in NU 410, Introduction to Nursing Research, and is a culminating and integrative experience utilizing the components of the research process. Students are grouped into writing communities to develop and peer-review papers based upon the categories of 1) evidence-based practice for a nursing intervention, 2) a conceptual proposal of a research problem, and 3) a methodological proposal for investigation of a research problem. Each student is responsible for both authoring and reviewing papers. At the end of the semester, each student presents, either orally or by poster, the Capstone Project based on the papers authored by the student group. During the spring semester the presentation is incorporated into the Capstones of Nursing conference sponsored by Rho Omega Chapter of Sigma Theta Tau International Honor Society of Nursing. The last week of class is dedicated to discussions about professional presentation formats and expectations. The students' work is evaluated by nursing faculty and outside reviewers. Categories for evaluation include 1) critical thinking, 2) communication, and 3) therapeutic nursing intervention. Faculty members summarize, review, and discuss the students' evaluations annually as part of the Program's evaluation plan.

The Capstones Experience in the Nursing Program is designed to promote the culmination of the liberal education of the senior nursing students. During NU 410, nursing students, through the writing communities, are encouraged to refine three outcomes of their liberal education. They manifest their critical thinking abilities in how they analyze and organize research literature from nursing and related disciplines into major term papers. They develop communication skills in manuscripts with scholarly standards and dissemination of a polished scholarly product during the actual Capstones Experience. In nursing therapeutics, nursing students become more adept at interpreting the level of research evidence to support nursing interventions than to accept interventions with only face validity.

On May 5, 2005, senior nursing students from the Class of 2005 presented their Capstone Projects on nursing interventions. For the past several semesters, senior nursing students have worked in writing

communities to develop three term papers and presentations pertaining to a nursing intervention in the Nursing Interventions Classification (NIC). The first assignment was to develop a summary of evidence from 10 research articles about the selected nursing intervention (an evidence-based term paper). The second assignment was to develop a conceptual framework for a research proposal. The third assignment was to propose a methodological study to investigate the research problem introduced in the conceptual framework. Their Capstones included some of the following presentations: Evidence-Based Practice for Smoking Cessation Assistance; The Effects of Smoking Cessation Assistance Among Pregnant Women; Conceptual Framework for Identifying Populations at Risk for Postpartum Depression; Identifying Populations at Risk for Postpartum Depression; Evidence-Based Practice for Family Nutritional Counseling; The Effect of Family Nutritional Counseling on the Obesity Rates of Children; Evidence-Based Practice: A Review of Research Related to Staff Development; and The Effect of a Staff Development Educational Intervention on Infant Sleep Position.

DISCIPLINE: Classics

COURSE TITLE: CLAS 461 Capstone Experience

CREDIT HOURS: 3

COURSE DESCRIPTION: An intensive study of advanced topics in Classical and Medieval Studies. Students will develop an original research project on a topic determined by the student and professor.

COURSE OBJECTIVES: To provide students an opportunity to develop their abilities to perform sustained independent scholarly investigation of topics related to classical antiquity and to communicate the results of their investigations clearly in oral and written form. In addition, the Capstone Experience brings to an effective and meaningful close students' careers as undergraduate Classics majors and engages students in a process of self-conscious preparation for what lies ahead.

COURSE ACTIVITIES: The primary component of this course is an independent research project to be carried out by each student. Students will complete a series of writing assignments throughout the semester related to the project, involving the following products and steps:

(1) topic statement;
(2) prospectus;
(3) review of a scholarly article;
(4) review of a scholarly monograph;
(5) survey of scholarly literature related to the topic; and
(6) preliminary draft of the project;
(7) peer editing sessions;
(8) thoughtful revision of the work;
(9) abstract of the project for submission to Truman's Student Research Conference; and
(10) oral presentation of the project to the University community.

Project papers typically run 20 to 25 pages and are also given in a 15-minute oral presentation at the Capstone Symposium. Among recent project titles are the following:

o£ Polu¢fhmoV oi£ Ku¢klwpe¢V te: Evolution and Innovation in the Portrayal of the Cyclopes in Greek Literature (c. 725 BC to c. AD 150), by Melissa Clark (2003)

Suspicious Minds: Ovid Reshapes Penelope in Heroides I, by Lisa Feldkamp (2003)

The Mad Worlds of Aristophanes, by John Sherwood (2003)

Modern Eye on the Classical Guy: The Problem of Reconciling Roman Views on Homosexuality in Invective and Lyric Poetry, by Jason Kemps (2003)

Turning the Tables: The Callidus Servus in the Comedies of Plautus and Terence, by Keith Christensen (2004)

The Monster in the Bedroom: Xenophobia and Manipulation of Myth in Euripides' Medea, by Courtney Wilson (2004)

Cicero, Master of the Negative Campaign, by Christopher Steffe (2004)

Sophocles: Champion of the Physically Disabled, By Jason Evans (2004)

KNOWLEDGE AND SKILLS: Students develop research skills, skills in synthesizing information and drawing conclusions, writing skills, and language skills to a high degree and demonstrate an ability to communicate these skills to others. The also deepen their knowledge of a particular area of Classical studies.

ATTITUDES: Students deepen their appreciation for the interconnectedness of human knowledge, their willingness to confront questions of oral transmission, and their understanding of the liberal arts. They also learn to demonstrate these attitudes and to value them.

CHANGES AS A RESULT OF ASSESSMENT: The Classics Senior Questionnaire, administered in the *Capstone Experience* course since 1998, has led to new courses in the Classics program: LATN 450, *Latin Prose Composition*; GREK 302, *Greek Prose*; and GREK 303, *Hellenistic Greek Literature*; these courses were added as a result of feedback from students desiring more in-depth preparation for graduate school. The Capstone Questionnaire (another assessment administered in the course) led to the *Capstone Experience* itself being moved from the Spring to the Fall semester in order to allow more time for faculty to address issues related to graduate study and career planning and also for students to be able to develop their projects for submission to the University's Student Research Conference; in addition, feedback resulted in changing the *Capstone Experience* from theme-based to student choice on topics. Also as a result of student feedback, the faculty are considering doing a 4th hour of credit as a research mentorship.

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.

Assessment:
Assessment of the capstone experience has been embedded in a more general assessment of the major that has not focused on the achievement of the desired outcomes of the capstone. Seniors in mathematics participate in an "exit interview" near the end of their undergraduate program of study. The purpose of this interview is to seek information from our graduating students regarding their views of their overall experiences in the major. Some of them have provided feedback about the capstone experience that has led to at least one curricular change and one procedural change. First, we now offer an elective, one-semester-hour Capstone Course, for students who want to have credit associated with their capstone project. Some find the information and structure provided by a course helpful in fulfilling the requirements. The procedural change was made to encourage students to avoid procrastination and the negative impacts it entails. To this end we have set earlier and less flexible deadlines for students to complete the various requirements of the capstone projects so they and faculty aren't placed in a crisis mode at the end of the semester in which the student expects to graduate. The results of both these changes seem to be positive.

DISCIPLINE: Physics, B.A.

COURSE TITLE: PHYS 445: Advanced Physics Seminar

CREDIT HOURS: 1

COURSE DESCRIPTION: Students carry out an independent and in-depth investigation of a specific topic in physics or related to physics, culminating in both written and oral presentations.

COURSE OBJECTIVES: Students investigate a topic in physics of their own choosing and make connections between that topic and the role of that issue within and its impact on the discipline of physics, science as a whole, and the world we live in. In order to demonstrate integration of knowledge, the student must create new meaning from a variety of sources and not merely summarize the work of others in their own words.

COURSE ACTIVITIES: The course begins with the selection of a topic related to physics tailored to the student's personal interests. Students then conduct a thorough review of the primary literature on that topic, assembling the information they need to see the topic in its broadest context. Over the semester, students complete a significant written paper and make an oral presentation of their work in public forum. Throughout this process they receive guidance from both the instructor and their peers on selecting and narrowing their topic, instruction in techniques for literature research and evaluation, and improvements to the written and oral presentations of their work.

Recent topics selected by students include:
Realism and Constructive Empiricism: A Physicist's Perspective, Jason Stanghelle
The Physics of the Golf Shot, Nathaniel Gonner
The Physics of the Violin: On the Analysis and Dynamics of the Bowed String, Ikechukwu Okonkwo
Sonoluminescence in Various Media Using Different Gases, Casey Carroll

KNOWLEDGE AND SKILLS: Through this capstone course, students integrate the knowledge they have developed in their physics major with their broader education and synthesize new knowledge by applying their academic learning to real-world situations.

To demonstrate the integration of knowledge and to make meaning of information from a variety of sources, students carry out some or all of the following activities:

- perform original calculations;
- analyze data for trends in support of or in contradiction to a given theory or model;
- recast equations in different notation and/or units;
- create tables and graphs that incorporate data from more than one source;
- develop original drawings or graphic representations of an apparatus or data.

ATTITUDES: Through this course, students become deeply involved in the process of developing, researching, and understanding a selected topic in physics. In doing so, they have the opportunity to approach problems from a physicist's perspective by applying their deep knowledge in physics together with the skills they have developed in their major, integrating the knowledge they have developed in their major with their broader liberal arts education, and synthesizing new knowledge by applying their academic learning to real-world situations.

CHANGES AS A RESULT OF ASSESSMENT: Advanced Physics Seminar was offered for the first time in the 2004-2005 academic year. One of the conclusions of the Physics Discipline five-year review in 2001-2002 was that students in the Physics B.A. program did not have the opportunity to bring together their liberal arts learning with their knowledge from their major. This course was developed in an effort to remedy that omission. The Physics Discipline plans to evaluate the outcomes of this course as one element of a comprehensive discipline assessment plan.

DISCIPLINE: Physics, B.S.

COURSE TITLE: PHYS 490 & 491: Senior Research I & II

CREDIT HOURS: 4

COURSE DESCRIPTION: Students work closely with a faculty member on an independent research project, culminating in an external oral presentation and a final paper in which results are presented.

COURSE OBJECTIVES: The goals of this course are to expose physics majors to the process of planning, designing, and carrying out an independent research project, and to provide practice in sharing results of their project among colleagues. Students engage in a year-long quality research experience under the supervision a faculty member and present the results of their research in both a written report and an oral presentation.

COURSE ACTIVITIES: Students select a research project from among those proposed by physics faculty. Throughout the academic year, students work independently on their projects, including planning the project, developing theoretical or experimental tools to address the research problem, and conducting experiments or carrying out calculations in support of their research goals.

To develop and enhance their oral communication skills, students make a total of four oral presentations to each other on the progress of their work throughout the year. In addition, each student presents the results of their research project in a public forum at some time during the spring semester. Suitable events for presentation include the Truman Student Research Conference, the Missouri Academy of Sciences, the National Conference on Undergraduate Research, or any other national or regional conference.

A separate but equally important element of the course focuses on the students' ability to communicate their findings in writing. Several written assignments are prepared throughout the course, culminating in a single research report that in its final form would be suitable for submission to a scientific journal.

Research projects in progress during the 2005-2006 academic year include:
Examination, Reproduction, and Improvement of Joule's Free-Expansion Experiment, David Shane
Band Gap Structure in a Periodic, One-dimensional Acoustic Filter, Brock Schmutzler
Modified Cosmology Equations and Dark Energy, Sucheta Jawalkar
Determining Asteroid Lightcurves Using Differential Photometry, Travis Monk
Construction of a Microwave Spectrometer for the Study of Pressure Broadening, Rebecca Hanania
Measurement and Analysis of Power Distribution in Diffraction Gratings as a Function of Incidence Angle, Raghav Chhetri

KNOWLEDGE AND SKILLS: Students develop the skill to carry out an independent research project from inception to conclusion. They make use of all of the physics knowledge that they have accumulated through their coursework, bringing that experience to bear on a research question that is of interest to the broader physics community. They develop expertise in communicating their results to a scientific audience, including the mechanics of scientific writing and oral presentations.

ATTITUDES: The success of the individual research project depends critically on the student's self-motivation, ability to work independently, and creativity to come up with solutions to the problems they encounter. Students gain an appreciation for the practice of physics as a profession and develop the skills and confidence to tackle research problems in graduate school or in their careers.

CHANGES AS A RESULT OF ASSESSMENT: Senior Research I & II is being offered for the first time in the 2005-2006 academic year. The idea for this course came out of the Physics Discipline five-year review in 2001-2002, where our discipline made a commitment to providing physics majors with an authentic research experience that is carried out in a structured environment, with expectations and deadlines clearly defined in advance. The Physics Discipline plans to evaluate the outcomes of this course as one element of a comprehensive discipline assessment plan.

DISCIPLINE: Justice Systems

COURSE TITLE: JUST 430 Senior Seminar

CREDIT HOURS: 2

METHODS OF CONDUCTING THE COURSE: Individual professor in medium size class (15-18 students per section) using discussion with significant student reporting, interaction and student presentations.

KNOWLEDGE:
- To understand the American system of civil and criminal justice including both juvenile and adults. *How Assessed*: Senior examination results, class discussion and presentation (depending on presentation topic).
- To understand the creation, enforcement, and adjudication of the law. *How Assessed*: Senior examination results, class discussion and presentation (depending on presentation topic).
- To understand the origin, correction, and control of crime and deviance. *How Assessed*: Senior examination results, class discussion and presentation (depending on presentation topic).
- To know the relevant research and key resources for the study of criminal justice. *How Assessed*: Senior examination results and presentation.

SKILLS:
- To recognize, retrieve, and evaluate scholarly materials. *How Assessed*: Class discussion and presentation.
- Communicate orally through individual and group presentations. *How Assessed*: Class discussion and presentation.
- Demonstrate higher order thinking skills. *How Assessed*: Class discussion and presentation.

ATTITUDES:
- To regard learning as a vital, life-long process. *How Assessed*: We may get glimpses of this from class discussion and presentation. It's best assessed from alumni information.
- To enhance learning through integration of the perspectives of various academic disciplines and paradigms. *How Assessed*: Class discussion and presentation.
- To appreciate and respect differing perspectives. *How Assessed*: Class discussion and presentation.

TYPES OF EXPERIENCES:
Approximately one third of the time is spent with four review tests to prepare for the senior examination, which is required of all graduating seniors. The examinations are set up on Blackboard with questions randomly selected from a test pool. Students may repeat the practice examinations as many times as they wish. The four examinations pick questions from a pool which cover law, criminology, law enforcement,

courts, juvenile law and corrections. Students are required to achieve a minimum of 75% on each examination. Approximately two thirds of the time is spent on a research project which results in a presentation by each student. Students present several ideas for a research topic and a final selection is made by the instructor. Students do research on the topic and prepare a presentation. Prior to a final presentation each student does a practice presentation which is video taped. The students review the video tape to do a self critique of their presentation prior to presenting to the group. Recent changes have included adding sessions on resume preparation, mock interviewing, preparing a personal statement and financial planning.

ADDITIONAL INFORMATION:
Until spring 2002, the capstone experience consisted of an internship with a justice systems agency. However, not all students participated in this opportunity, even though the internship experience integrates and synthesizes theoretical ideas and principles learned in the classroom with actual field experience. Many students continue to do internships, and evaluations of the experience are always extremely positive. Written comments typically mention it being the "best learning experience of their education." It does not appear that the creation of a senior seminar has adversely affected the participation of students in internships. Thus, the major has retained the benefits of such experiences, while enhancing the learning of students.

Many of the knowledge-based learning outcomes are assessed through the required senior examination, which is a nationally normed examination. Thus, the senior seminar provides an opportunity for students to better prepare for that experience. To enhance student motivation, the percentile score on this examination determines 20% of the final grade. This seems to have provided an incentive for taking the senior examination more seriously than perhaps it was prior to having this incentive. For example, during the spring 2002 semester (the first semester of the senior seminar), standardized scores increased on average 54 points, which translates to an increase of just over 10%. The number scoring over the 50^{th} percentile also increased from 80% to 94%.

Overall, the senior seminar has proven to be a positive change in the curriculum. The assessment data from senior test scores supports the value of this change. Furthermore, the implementation of a senior seminar has enabled the faculty to provide a more standardized capstone experience for all students. Finally, it allows students the opportunity to reflect upon the entire major and the learning that has occurred in a more holistic, connected manner.