

EGR/PHY 100 Transitions

DEPARTMENT: INSTITUTE OF ENGINEERING

COURSE PREFIX: EGR/PHY

COURSE NUMBER: 100

CREDIT HOURS: 1

I. TITLE: Transitions

- II. COURSE DESCRIPTION AND PREREQUISITE(S):** Course is designed to assist students in their transition to Murray state University. Content includes orientation to the specific area or major(s) and minor(s) within the academic program; university procedures, policies, and resources; strategies for personal and academic success, and extracurricular opportunities. Only one transitions course will count toward graduation. Introduction to the EGR/PHY major, the engineering and physics professions, the department, and the university. Graded pass/fail.
Prerequisite(s): None

III. COURSE OBJECTIVES:

The student will be able to:

- A. understand university policies and procedures,
- B. understand the nature of their major and career opportunities,
- C. acquire strategies for academic success,
- D. be acquainted with extra-curricular activities associated with their field of study,
- E. develop design problem-solving skills and identify ways to optimize a solution
- F. work collaboratively in groups

IV. CONTENT OUTLINE:

- A. Orientation to university procedures
- B. Strategies for academic success
- C. Familiarization with the department and curriculum
- D. Extracurricular opportunities
- E. Career opportunities

- V. INSTRUCTIONAL ACTIVITIES:** Lecture, guest speakers, group design projects

- VI. FIELD, CLINICAL, AND/OR LABORATORY EXPERIENCES:** Anticipated laboratory activity is design and construction of a system that optimizes within realistic design constraints.

- VII. TEXT(S) AND RESOURCES:** No text.

- VIII. EVALUATION AND GRADING PROCEDURES:** Pass/Fail, dependent upon your attendance and participation. If a student fails to attend 70% of the scheduled class sessions, the student may receive a failing grade in the course.

IX. ATTENDANCE POLICY:

Students are expected to attend all class sessions. If you have more than one absence you will fail.

X. ACADEMIC HONESTY POLICY:

Murray State University takes seriously its moral and educational obligation to maintain high standards of academic honesty and ethical behavior. Instructors are expected to evaluate students' academic achievements accurately, as well as ascertain that work submitted by students is authentic and the result of their own efforts, and consistent with established academic standards. Students are obligated to respect and abide by the basic standards of personal and professional integrity.

Violations of Academic Honesty include:

Cheating - Intentionally using or attempting to use unauthorized information such as books, notes, study aids, or other electronic, online, or digital devices in any academic exercise; as well as unauthorized communication of information by any means to or from others during any academic exercise.

Fabrication and Falsification - Intentional alteration or invention of any information or citation in an academic exercise. Falsification involves changing information whereas fabrication involves inventing or counterfeiting information.

Multiple Submission - The submission of substantial portions of the same academic work, including oral reports, for credit more than once without authorization from the instructor.

Plagiarism - Intentionally or knowingly representing the words, ideas, creative work, or data of someone else as one's own in any academic exercise, without due and proper acknowledgement.

Disciplinary action may include, but is not limited to the following:

- 1) Requiring the student(s) to repeat the exercise or do additional related exercise(s).
- 2) Lowering the grade or failing the student(s) on the particular exercise(s) involved.
- 3) Lowering the grade or failing the student(s) in the course.

If the disciplinary action results in the awarding of a grade of E in the course, the student(s) may not drop the course.

Faculty reserve the right to invalidate any exercise or other evaluative measures if substantial evidence exists that the integrity of the exercise has been compromised. Faculty also reserve the right to document in the course syllabi further academic honesty policy elements related to the individual disciplines.

XI. NON-DISCRIMINATION POLICY STATEMENT:

Murray State University endorses the intent of all federal and state laws created to prohibit discrimination. Murray State University does not discriminate on the basis of race, color, national origin, gender, sexual orientation, religion, age, veteran status, or disability in employment, admissions, or the provision of services and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities equal access to participate in all programs and activities. For more information, contact the Executive Director of Institutional Diversity, Equity and Access, 103 Wells Hall, (270) 809-3155 (voice), (270) 809-3361 (TDD).

XII. Engineering Physics Program Educational Objectives and Student Outcomes

The Engineering Physics program at Murray State University produces graduates who:

- A. are equipped to function as productive, qualified engineering professionals in entry-level corporate research, development, and production positions. This includes the ability to communicate effectively, work collaboratively, and solve problems creatively.**
- B. are able to practice engineering in areas where the traditional science and engineering disciplines overlap, utilizing their ability to incorporate significant computational, analytical, and experimental skills in accomplishing the engineering task.
- C. are prepared to successfully enter and complete programs of graduate study in one of several engineering fields as well as in physics
- D. are aware of their responsibility to contribute to society as ethical, socially conscious practitioners of their profession**

Graduates of the Engineering physics program at Murray State University will demonstrate:

- a. an ability to apply knowledge of mathematics, science, and engineering
- b. an ability to design and conduct experiments, as well as to analyze and interpret data;
- c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;**
- d. an ability to function on multi-disciplinary teams;**
- e. an ability to identify, formulate, and solve engineering problems
- f. an understanding of professional and ethical responsibility**
- g. an ability to communicate effectively
- h. the broad education necessary to understand the impact of engineering solutions in a global and societal context
- i. a recognition of the need for, and an ability to engage in life-long learning;
- j. a knowledge of contemporary issues**
- k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
- l. a competence in the use of computational tools and in the use of a high-level programming language
- m. a depth of knowledge in calculus-based physics at an advanced level.

Dr. Danny Claiborne, Chair
INSTITUTE OF ENGINEERING
253 Industry and Technology Center
Murray, KY 42071
Email: dclaiborne@murraystate.edu
Phone: (270) 809-6910