FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School_____Biology_____Date_1/6/2017_____

Course No. or level_102 __Title_Biology For Early Childhood And Elementary Education Majors

Semester hours__4___Clock hours: Lecture_____3____Laboratory____3___

Prerequisites_____none_____

Enrollment expectation___50-80_____

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description_____Lisa Pike_____

Department Chairperson's/Dean's Signature_____

Provost's Signature_____

Date of Implementation_____Spring 2018_____

Date of School/Department approval_____

Catalog description:

Biol 102 Biology For Early Childhood And Elementary Education Majors

(4:3-3) (Recommended for all education majors with the exception of MLE science; does not count towards the Biology major). (Recommended for all education majors with the exception of MLE science; does not count towards the Biology major). This course is a non-majors, lab science course that provides the information needed for the Life Science part of the PRAXIS 'Elementary Education: Content Knowledge' exam. By the end of the course, students should: 1) understand the scientific method, including being proficient with science and engineering practices, 2) have an understanding of the basic science upon which biology rests, including the areas of cell biology, genetics, organ systems, energetics, evolution, and ecology, 3) develop a basic understanding of how plants and animals contribute to and function within our environment, and 4) be familiar with plant and animal diversity and physiology.

Purpose:

1. For Whom (generally?) early childhood and elementary education majors (or any other non science major)
2. What should the course do for the student? Prepare them for the life science section of the PRAXIS / elementary content as well as giving students an understanding of how science works and of general life science concepts.

Teaching method planned: Lecture and Lab

Textbook and/or materials planned (including electronic/multimedia):

1. Simon - *Biology: The Core* (plus mastering),
2. BBD,
3. Department authored lab manual

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgement. Include a syllabus for the course.)

Syllabus Attached

This course will present an overview of the major life science concepts: biologically important organic molecules, cells, cell transport (osmosis and diffusion), photosynthesis and cell respiration, genetics, inheritance, variation, natural selection and evolution, human body systems, plant and animal diversity, plant body systems, and ecology.

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School_____Biology_____Date_____1/6/2017_____

Course No. or Level__320____Title: Plant Evolution and Diversity

Semester hours_4____Clock hours: Lecture___2.5hrs_____Laboratory___2.5hrs____

Prerequisites____Bio106 or permission of the department _____

Enrollment expectation__~30-40_____

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: Jeremy D. Rentsch

Department Chairperson's/Dean's Signature_____

Provost's Signature_____

Date of Implementation_____Fall 2017_____

Date of School/Department approval_____

Catalog description:
Biol 320 Plant Evolution and Diversity (4:3-3) (Prerequisite: 106 or permission of the department). This course utilizes the framework of evolutionary processes and the analytical tools of systematic biologists to study the diversity of the plant kingdom. Students will study the patterns, processes, and mechanisms of plant evolution and speciation. The course will detail each phylum of extant plant and places a focus on flowering plants, covering such topics as: plant and pollinator coevolution, plant defenses against herbivory, and crop improvement.

Purpose: 1. For Whom (generally?)
For biology majors to satisfy their upper division plant biology requirement or for those students who would like to pursue a career in plant biology.

2. What should the course do for the student?

Goals of this course are to:

- Reinforce and expand upon the basic mechanisms of evolution learned in Biology 106.
- Learn about the data and tools necessary in order to reconstruct evolutionary relationships.
- Cultivate an appreciation for the abundance and diversity of the plant kingdom.
- Draw relationships among plant life cycles and how the alternation of generations changes across lineages.
- Understand how plants have adapted to avoid herbivory, reproduce successfully, and move (at the population level) over time.
- Garner an appreciation for the role of plants in society.

Teaching method planned: A mixture of traditional lectures and active learning exercises. Laboratory will focus on dissection and staining of plant tissues as well as authentic research.

Textbook and/or materials planned (including electronic/multimedia):
Stern's Plant Biology 13th edition and a personally prepared laboratory manual.

Course Content: This course utilizes the framework of evolutionary processes and the analytical tools of systematic biologists to study the diversity of the plant kingdom. Students will study the patterns, processes, and mechanisms of plant evolution and speciation. The course will detail each phylum of extant plant and places a focus on flowering plants, covering such topics as: plant and pollinator coevolution, plant defenses against herbivory, and crop improvement.
When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School_**Biology**_____Date_**1/6/2017**_____

Course No. or level_**412**__Title_**Behavioral Ecology**_____

Semester hours_**4**_____Clock hours: Lecture_**3**_____ Laboratory_**3**_____

Prerequisites_BIOL 106 and junior status or permission of the department_____

Enrollment expectation_**24**_____

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description_**Paul Zwiers**_____

Department Chairperson's/Dean's Signature_____

Provost's Signature_____

Date of Implementation___Fall 2017_____

Date of School/Department approval_____

Catalog description:

BIOL 412 Behavioral Ecology (4:3-3) (Prerequisites: 106 and junior status or permission of the department) Topics within ecology and evolution combine as students examine the adaptive significance of behavior. Key concepts include altruism and selfishness, evolutionary stable strategies and game theory, and co-evolution in relation to predation and predator avoidance, competition, sexual selection, parental care and conflict, communication, and human behavior. Students will explore relevant primary literature, and develop and test hypotheses in topic-specific laboratories.

Purpose: 1. For Whom (generally?)

This course is designed for upper-level (Junior and Senior) Biology majors.

2. What should the course do for the student?

This course will teach students content concerning the motivations for animal behavior. In doing so, students will learn how to critically evaluate topics, effectively communicate their thoughts, and design and perform research projects.

Teaching method planned:

Teaching methods are to include lectures on relevant topics derived mostly but not necessarily from the assigned textbook and assigned primary literature; class discussions of primary literature and assigned readings in *The Selfish Gene* by Richard Dawkins; and laboratories that ask students to design and execute research projects that test introduced principles.

Textbook and/or materials planned (including electronic/multimedia):

Davis N., Krebs J., West S. 2012. *An introduction to Behavioral Ecology*, 4th ed. Wiley-Blackwell. ISBN-10: 1405114169; ISBN-13: 9781405114165

Dawkins R. 1990. *The Selfish Gene*. Oxford University Press. ISBN: 0199291152 (any edition will suffice)

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgement. Include a syllabus for the course.)

This course examines theories and topics within behavioral ecology including natural selection and environmental pressures, decision making, when to compete and when to give up, benefits of living in groups, evolution of mating systems, sexual selection, parental care and competition among offspring and with parents, whether truly altruistic behaviors exist, formation of cooperative relationships, and human behavior.

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Department of Fine Arts **Date** 1/9/2017

Course No. or Level Art 206 **Title** Introduction to Graphic Design

Semester hours 3 Clock hours: Lecture 1 Laboratory 5

Prerequisites None

Enrollment expectation 15

Indicate any course for which this course is a (an)

modification ART 206 Introduction to Visual Communication
(**proposed change in course title**, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate _____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Gregory Fry

Department Chairperson's/Dean's Signature D. K. Best

Provost's Signature [signature]

Date of Implementation Fall 2017

Date of School/Department approval 12/6/2016

Catalog description: Foundations of technology in the arts. Emphasis on the design, reproduction, and distribution of digital images.

Purpose:
1. For Whom (generally?)
2. What should the course do for the student?

Teaching method planned:

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (This is a simple course title change. The content of ART 206 remains the same.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Department of Fine Arts **Date** 1/9/2017

Course No. or Level Art 230 **Title** Graphic Design I

Semester hours 3 Clock hours: Lecture 1 Laboratory 5

Prerequisites 204 and 206 or permission of department

Enrollment expectation 15

Indicate any course for which this course is a (an)

modification ART 230 Visual Communication I
(**proposed change in course title**, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Gregory Fry

Department Chairperson's/Dean's Signature D K. Best

Provost's Signature Peter King

Date of Implementation FALL 2017

Date of School/Department approval 12/6/2016

Catalog description: Introduction to graphic design. Emphasis is on design of effective graphics for visual communication. Studio activities include layout and design using desktop publishing and computer software.

Purpose:
1. For Whom (generally?)
2. What should the course do for the student?

Teaching method planned:

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (This is a simple course title change. The content of ART 230 remains the same.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Department of Fine Arts **Date** 1/9/2017

Course No. or Level Art 330 **Title** Graphic Design II

Semester hours 3 Clock hours: Lecture 1 Laboratory 5

Prerequisites 230 and 231 or permission of department

Enrollment expectation 15

Indicate any course for which this course is a (an)

modification ART 330 Visual Communication II
(**proposed change in course title**, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Gregory Fry

Department Chairperson's/Dean's Signature D K Best

Provost's Signature Peter Kiy

Date of Implementation FALL 2017

Date of School/Department approval 12/6/2016

Catalog description: Further development of graphic design skills and understanding. Emphasis is on design of effective graphics and imagery for print and electronic publication. Studio activities include layout and design using desktop publishing and computer graphics software.

Purpose:
1. For Whom (generally?)
2. What should the course do for the student?

Teaching method planned:

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (This is a simple course title change. The content of ART 330 remains the same.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Department of Fine Arts **Date** 1/9/2017

Course No. or Level Art 331 **Title** Interactive Design I

Semester hours 3 Clock hours: Lecture 1 Laboratory 5

Prerequisites 230 and 231 or permission of department

Enrollment expectation 15

Indicate any course for which this course is a (an)

modification ART 331 Interactive Communication I
(**proposed change in course title**, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Gregory Fry

Department Chairperson's/Dean's Signature D K Best

Provost's Signature Peter Kilgo

Date of Implementation FALL 2017

Date of School/Department approval 12/6/2016

Catalog description: Graphic design for hypertext, web, and interactive environments. Emphasis is on the thoughtful composition of the user interface and design elements within an interactive environment.

Purpose:
1. For Whom (generally?)
2. What should the course do for the student?

Teaching method planned:

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (This is a simple course title change. The content of ART 331 remains the same.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Department of Fine Arts **Date** 1/9/2017

Course No. or Level Art 430 **Title** Graphic Design III

Semester hours 3 Clock hours: Lecture 1 Laboratory 5

Prerequisites 330 and 331 or permission of department

Enrollment expectation 15

Indicate any course for which this course is a (an)

modification ART 430 Visual Communication III
(**proposed change in course title**, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Gregory Fry

Department Chairperson's/Dean's Signature D K Best

Provost's Signature Peter Kilgo

Date of Implementation FALL 2017

Date of School/Department approval 12/6/2016

Catalog description: Continuation of graphic design sequence. Emphasis is on advanced projects for multi-part design publications. Students will work as a part of a design team to participate in development of design systems, image analysis, and media production. e course will include an introduction to design for time-based media.

Purpose:
1. For Whom (generally?)
2. What should the course do for the student?

Teaching method planned:
Textbook and/or materials planned (including electronic/multimedia):

Course Content: (This is a simple course title change. The content of ART 430 remains the same.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Department of Fine Arts **Date** 1/9/2017

Course No. or Level Art 431 **Title** Interactive Design II

Semester hours 3 Clock hours: Lecture 1 Laboratory 5

Prerequisites 330 and 331 or permission of department

Enrollment expectation 15

Indicate any course for which this course is a (an)

modification ART 431 Interactive Communication II
(**proposed change in course title**, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Gregory Fry

Department Chairperson's/Dean's Signature D K Best

Provost's Signature Pete King

Date of Implementation FALL 2017

Date of School/Department approval 12/6/2016

Catalog description: Graphics and design for hypertext environments. Emphasis is on the role of images and design elements in an interactive environment.

Purpose:
1. For Whom (generally?)
2. What should the course do for the student?

Teaching method planned:

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (This is a simple course title change. The content of ART 431 remains the same.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *1 December 2016*

Course No. or Level: *HIST 101* **Title:** *United States History to 1877*
Course No. or Level: *HIST 102* **Title:** *United States History since 1877*
Course No. or Level: *HIST 103* **Title:** *European History to the French Revolution*
Course No. or Level: *HIST 104* **Title:** *European History since the French Revolution*
Course No. or Level: *HIST 105* **Title:** *Introduction to Modern World History*

Semester hour: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *None*

Enrollment expectation: *20-25*

Indicate any course for which this course is a (an)

Modification: *These courses were originally numbered HIST 201, 202, 203, 204, and 205. Renumbering them as 100-level classes will avoid confusion among freshmen who thought that they were not eligible to take courses at the 200 level.*

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Scott Kaufman*

Department Chairperson's/Dean's Signature _____

Provost's Signature _____

Date of Implementation Fall 2017

Date of School/Department approval Dec. 2, 2016

Catalog description:

Purpose:
1. *These courses are for History majors, and minors, as well as for those seeking to meet their General Education requirement for History*
2. *Students learn about the changing political, diplomatic, cultural, social, economic, and military environment in the United States (HIST 101-102), Europe (HIST 103-104), and the world since the late 1800s (HIST 105).*

Teaching method planned: *Lecture and/or discussion, depending on the lead professor*

Textbook and/or materials planned (including electronic/multimedia):
Varies, depending on the lead professor

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 210* **Title:** *Introduction to Archaeology*

Semester hour: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *None*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Louis Venters*

Department Chairperson's/Dean's Signature LV

Provost's Signature _____

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *An introduction to theory and methods in archaeological research, data collection, and analysis. Studies will learn the strategies employed in the investigation of archaeological remains as well as issues of explanation, interpretation, and public engagement. Students will also receive an introduction into historical archaeology.*

Purpose:
1. *History majors seeking a concentration in archaeology.*
2. *The student will obtain an understanding of what archaeology is and what archaeologists do. This background is vital for those students intending to take HIST 480 (Archaeology in South Carolina) and obtain History degree with a concentration in archaeology.*

Teaching method planned: *Discussion and laboratory-type activities.*

Textbook and/or materials planned (including electronic/multimedia):
- *Renfrew and Bahn,* Archaeology: Theories, Methods, and Practice *(Text)*
- *Deetz,* In Small Things Forgotten: An Archaeology of Early American Life

- *Documentary film*

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 220* **Title:** *Introduction to Public History*

Semester hour: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *None*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Louis Venters*

Department Chairperson's/Dean's Signature VJ

Provost's Signature

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *An introduction into the theory and methods in public history, including archives, historical preservation, digital history, and film. Studies will learn the state of the field, the venues in which history is practiced outside of formal educational settings, and the real-world issues of explanation, interpretation, and public engagement.*

Purpose:
1. *History majors and minors.*
2. *This new course will provide an introduction to public history, thereby benefiting those students interested in museum studies, archaeology, or preservation of historical materials.*

Teaching method planned: *Discussion and laboratory-type activities.*

Textbook and/or materials planned (including electronic/multimedia):
- Public History: Essays from the Field *(Text)*
- *Additional readings, on Blackboard*
- *Documentary film*

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *1 December 2016*

Course No. or Level: *HIST 299* **Title:** *The Historian's Craft*
Course No. or Level: *HIST 300* **Title:** *Economic History of the United States*
Course No. or Level: *HIST 305* **Title:** *Empires and Nations in Latin America*
Course No. or Level: *HIST 306* **Title:** *Latin America: Tradition and Change*
Course No. or Level: *HIST 307* **Title:** *The History of the United States in World Affairs*
Course No. or Level: *HIST 308* **Title:** *Russia and Eastern Europe*
Course No. or Level: *HIST 309* **Title:** *Europe, 1814-1914*
Course No. or Level: *HIST 311* **Title:** *History of Black Americans*
Course No. or Level: *HIST 316* **Title:** *South Carolina History*
Course No. or Level: *HIST 317* **Title:** *History of the Mass Media*
Course No. or Level: *HIST 320* **Title:** *History of Modern Germany*
Course No. or Level: *HIST 321* **Title:** *Family and Gender in World History*
Course No. or Level: *HIST 324* **Title:** *History of Traditional East Asia*
Course No. or Level: *HIST 329* **Title:** *Europe in the Era of the World Wars, 1914-1945*
Course No. or Level: *HIST 330* **Title:** *Europe and the World since 1945*
Course No. or Level: *HIST 331* **Title:** *Modern British Isles*
Course No. or Level: *HIST 332* **Title:** *British Empire*
Course No. or Level: *HIST 340* **Title:** *History of Modern Mexico*
Course No. or Level: *HIST 341* **Title:** *History of Modern China*
Course No. or Level: *HIST 342* **Title:** *History of Modern Japan*
Course No. or Level: *HIST 344* **Title:** *The Old South, 1660 to 1865*
Course No. or Level: *HIST 345* **Title:** *The New South, 1865 to the Present*
Course No. or Level: *HIST 346* **Title:** *Civil War America*
Course No. or Level: *HIST 347* **Title:** *The United States in the Era of World War II*
Course No. or Level: *HIST 351* **Title:** *Medieval Europe*
Course No. or Level: *HIST 362* **Title:** *The United States between the Wars, 1918-1941*
Course No. or Level: *HIST 370* **Title:** *African History*
Course No. or Level: *HIST 406* **Title:** *United States Military History*
Course No. or Level: *HIST 497* **Title:** *Special Studies*

Semester hour: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *At least one 100-level History class*

Enrollment expectation: *20-25*

Indicate any course for which this course is a (an)

Modification: *These prerequisite for these courses is no longer a 200-level course but a 100-level course. This reflects the renumbering of HIST 201, 202, 203, 204, and 205 to HIST 101, 102, 103, 104, and 105*

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Scott Kaufman*

Department Chairperson's/Dean's Signature _____

Provost's Signature _____

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description:

Purpose:
1. *These courses are for History majors and minors, and those seeking a History collateral*
2. *Students learn about the history of a particular nation or region, or about a particular time period in that country's past*

Teaching method planned: *Lecture and/or discussion, depending on the lead professor*

Textbook and/or materials planned (including electronic/multimedia):
Varies, depending on the lead professor

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 303* **Title:** *United States: Colonial and Revolutionary Periods, 1450-1783*

Semester hours: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course or permission of department*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

Modification: *United States: Colonial and Revolutionary Periods, 1587-1789*

(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Will Bolt*

Department Chairperson's/Dean's Signature VJ

Provost's Signature

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *Study of the settlement of North America with particular, but not exclusive, emphasis on the social, political, economic, and intellectual development of the English colonies. The stresses that led to the American Revolution are emphasized along with the campaigns and battles that culminated with the creation and ratification of the Constitution. One 100-level history course or permission of department is prerequisite to all history courses above the 299 level.*

Purpose:
1. *History majors and minors*
2. *Students will learn about America's colonial and revolutionary eras. This background is essential for those students seeking a concentration in U.S. History or in archaeology.*

Teaching method planned: *Lecture*

Textbook and/or materials planned (including electronic/multimedia):

Jill Lepore, *King Philip's War and the Origins of American Identity*
James Kirby Martin and Mark Edward Lender, *'A Respectable Army': The Military Origins of the Republic, 1763-1789* (3rd Edition)
Alan Taylor, *American Colonies*

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 318* **Title:** *The Historical Focus*

Semester hours: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course or permission of department*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

Modification: *Change in course title*
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Scott Kaufman*

Department Chairperson's/Dean's Signature JZ

Provost's Signature Peter Kiy

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *Study of the settlement of North America with particular, but not exclusive, emphasis on the social, political, economic, and intellectual development of the English colonies. The stresses that led to the American Revolution are emphasized along with the campaigns and battles that culminated with the creation and ratification of the Constitution. One 100-level history course or permission of department is prerequisite to all history courses above the 299 level.*

Purpose:
1. *History majors and minors*
2. *This course allows students to take a class that is not currently in the catalog.*

Teaching method planned: *Lecture and/or discussion, depending on the teacher of record*

Textbook and/or materials planned (including electronic/multimedia):
- *Depends on the class taught and the teacher of record.*

Course Content: *Depends on the course taught.*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 319* **Title:** *The Vietnam War*

Semester hours: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course or permission of department*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

Modification: *Change in course title and description*
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Scott Kaufman*

Department Chairperson's/Dean's Signature _____

Provost's Signature _____

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *This course is a study of the Vietnam War from its origins to its outcome, focusing predominantly on U.S. role in the conflict but including as well the war's international dimensions and its impact on the American home front. One 100-level history course or permission of department is prerequisite to all history courses above the 299 level.*

Purpose:
1. *For Students seeking a major, minor, or collateral in History as well as students interested in Military Science.*
2. *This course explores the causes, complications, and outcome of the Vietnam War. The focus will be primarily on the United States' role in the conflict, with due attention given to the war's international dimensions.*

Teaching method planned: *Lecture and discussion*

Textbook and/or materials planned (including electronic/multimedia):
Herring, America's Longest War, *4th ed.*
McMahon, Major Problems in the History of the Vietnam War, *4th ed.*

O'Brien, The Things They Carried

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 357* **Title:** *History through Fiction*

Semester hour: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course or permission of department*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Jackie Campbell*

Department Chairperson's/Dean's Signature _____

Provost's Signature _____

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *This course explores American history through novels, based on the idea that fiction offers a superb "window" through which to view the past, especially to understand the texture of American society. The main themes will be race, gender. ethnicity, power, and identity formation. One 100-level history course or permission of department is prerequisite to all history courses above the 299 level.*

Purpose:
1. *For History majors and minors.*
2. *Students will come to understand how popular culture, in this case, fiction, can provide an understanding of America's past.*

Teaching method planned: *Discussion and forum on Blackboard.*

Textbook and/or materials planned (including electronic/multimedia):
- *Brooks,* Caleb's Crossing
- *Butler,* Kindred
- *Bell,* Out of This Furnace

- *Gaines,* A Lesson before Dying
- *Okada,* No-No Boy
- *O'Brien*, The Things They Carried
- *Additional readings on Blackboard*

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 363* **Title:** *US Constitutional History to 1900*

Semester hours: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course or permission of department*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

Modification:
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Will Bolt*

Department Chairperson's/Dean's Signature VJ

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *Study of the origins and development of the Constitution from the early 1600s until 1900. Topics that will be covered will be the foundations of constitutional law, the issue of sovereignty, the Articles of Confederation and Perpetual Union, the Constitutional Convention of 1787, the emergence of different interpretations of the Constitution, states' rights, slavery, secession, Reconstruction, the rights of workers, and segregation. One 100-level history course or permission of department is prerequisite to all history courses above the 299 level.*

Purpose:
1. *History majors and minors*
2. *Adds a new course to the catalog*

Teaching method planned: *Lecture*

Textbook and/or materials planned (including electronic/multimedia):

Jackson T. Main, *The Anti-Federalists: Critics of the Constitution, 1781-1788*

Melvin Urofsky and Paul Finkelman, *A March of Liberty: A Constitutional History of the United States, Volume I to 1900*
Michael Vorenberg, *Final Freedom: The Civil War, the Abolition of Slavery, and the Thirteenth Amendment*

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 364* **Title:** *The US in the Age of Jackson, 1815-1860*

Semester hours: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course or permission of department*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

Modification:
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Will Bolt*

Department Chairperson's/Dean's Signature √

Provost's Signature Peter Kilpatrick

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *Study of the Age of Jackson from 1815 until 1860 with emphasis on the rise of Andrew Jackson, the growth of democracy, the changing economy, and the coming of the Civil War. One 100-level history course or permission of department is prerequisite to all history courses above the 299 level.*

Purpose:
1. *History Majors and Minors*
2. *Adds a new course to the catalog*

Teaching method planned: *Lecture*

Textbook and/or materials planned (including electronic/multimedia):

Charles Sellers, *The Market Revolution: Jacksonian America, 1815-1846*
John William Ward, *Andrew Jackson, Symbol for an Age*
Sean Wilentz, *The Rise of American Democracy: Jefferson to Lincoln* (Abridged College edition)

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 391* **Title:** *20th Century Communist Societies*

Semester hour: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course or permission of department*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Alena Eskridge-Kosmach and Mary Louise Nagata*

Department Chairperson's/Dean's Signature _____

Provost's Signature _____

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *An examination of 20th century communist societies beginning with the historical and ideological background, how and why these societies became communism, and how communism was practiced in the Soviet Union, Eastern Europe, China, North Korea, and Vietnam. The course includes an examination of the political and institutional frameworks, and the diverse social, economic, and cultural adaptations of these societies to communist ideology and rule. Students will learn about the decline and breakup of communist states in Europe, as well as the accommodation to capitalism and survival of communist states in Asia. It also includes as well an analysis of the experience of social-democracy in the countries of Western and Southern Europe. One 100-level history course or permission of department is prerequisite to all history courses above the 299 level.*

Purpose: 1. History Majors, Minors and Collateral

2. Adds a new comparative course to the catalog.

Teaching method planned: Interactive lectures and class discussions.

Textbook and/or materials planned (including electronic/multimedia):

- *Newman*, Socialism
- *Marples*, Russia in the Twentieth Century
- *Wegs and Ladrech*, Europe since 1945
- *Tanner*, China: A History, *vol. 2*
- *Seth,* A Concise History of Modern Korea
- *Woods*, Vietnam
- *Nagata*, How to Write a History Essay or Research Paper

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost. 9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School: *History* **Date:** *2 November 2016*

Course No. or Level: *HIST 420* **Title:** *Archaeology in South Carolina*

Semester hour: *3* Clock hours: Lecture: *3 hours* Laboratory_____

Prerequisites: *One 100-level history course as well as HIST 210 and HIST 220*

Enrollment expectation: *25*

Indicate any course for which this course is a (an)

modification_____
(proposed change in course title, course description, course content or method of instruction)

substitute_____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate_____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description: *Louis Venters*

Department Chairperson's/Dean's Signature _____

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval Dec 2, 2016

Catalog description: *Provides students an opportunity to gain practical experience in the field on archaeological sites relevant to the study of South Carolina and the Southeast United States.*

Purpose:
1. *History majors seeking a concentration in archaeology.*
2. *This course requires students to take what they learned in previous courses, including Introduction to Archaeology and Public History, and apply that knowledge in a setting that includes active research and fieldwork at an archaeological site.*

Teaching method planned:

Textbook and/or materials planned (including electronic/multimedia):
- *Renfre and Bahn*, Archaeology
- *Roskams*, Excavation

Course Content: *See attached syllabus*

When completed, forward to the Office of the Provost.

9/03

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 201 **Title** Engineering Graphics

Semester hours 3 Clock hours: Lecture 4 Laboratory ___

Prerequisites None

Enrollment expectation 30 per year

Indicate any course for which this course is a (an)

modification ENGR 201
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate _____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Rahul Renu

Department Chairperson's/Dean's Signature Derek Yokiscl

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

201 Engineering Graphics (3) S. Students are introduced to the fundamental principles of engineering graphics – sketching, line drawing, projections, and solid modeling. Students will learn how to apply engineering graphics principles to generate and interpret technical

drawings and solid models. Computer Aided Design software (such as AutoCAD and Solidworks) will be used.

Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

This course is designed to teach students the need, the methods and the principles of engineering graphics.

Teaching method planned:

Interactive lecture, demonstration, and tutoring of student work.

Textbook and/or materials planned (including electronic/multimedia):

Computers, AutoCAD and SolidWorks

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

The course introduces students to the core concepts of engineering graphics. The structure of the course allows for students to practice application of engineering graphics principles in-class. The students will learn the details of engineering graphics – including topics such as multi-view drawings of points, line segments, simple shapes, and parts; auxiliary views and section views of parts; dimensioning and tolerances of parts; and 3-D modeling of parts and assemblies. By successfully completing the course, students will be able to generate and interpret engineering drawings of parts and assemblies.

Syllabus for Proposed Course:

On next page

FMU Industrial Engineering

ENGR201 – Engineering Graphics
Course Syllabus
Spring 2017

INSTRUCTOR:	Dr. Rahul Renu
OFFICE:	MSB 101-B
OFFICE HOURS:	Monday, Wednesday: 11:30PM – 12:30PM Tuesday: 9AM – 11AM, Or by appointment
EMAIL:	rrenu@fmarion.edu

COURSE DESCRIPTION

Students are introduced to the fundamental principles of engineering graphics – sketching, line drawing, projections, and solid modeling. Students will learn how to apply engineering graphics principles to generate and interpret technical drawings and solid models.

CO/PREREQUISTES

None.

REQUIRED TEXT BOOK

None.

COURSE MEETING TIME AND LOCATION

MW	2:00PM-4:00PM	SIMT 261

COURSE OBJECTIVES

After successfully completing this course, students will be able to:

- Draw and interpret two-dimensional engineering technical drawings
- Draw and interpret three-dimensional engineering technical solid models
- Understand spatial relationships and constraints

EXPECTATIONS

I expect the same of you that you do of me. I expect you to read all the weekly readings. I expect you to be prepared so that you may engage yourself in the learning process. Take a professional approach to the materials you prepare; and above all be honest and ethical in your work.
You are expected to check your student (fmarion.edu) email and Blackboard regularly. Course updates and notifications will be communicated to you through either your student email, or Blackboard, or both.

COURSE POLICIES

- If you decide to withdraw from the course, you should do so following FMU policies, dates, and procedures
- Students may leave the classroom if the instructor is more than 15 minutes late
- Students must be on time for class.
- There will be unannounced "pop" quizzes. There are no make-up pop-quizzes

- NO TEXT MESSAGING ALLOWED
- NO CELLPHONES ALLOWED
- In-class Decorum: You are encouraged to discuss course-related topics during in-class work times, but you are expected to pay quiet attention when your instructor is speaking. No tobacco products of any kind are acceptable for use in the class room.

The schedule, policies, procedures, and assignments in this course are subject to change to improve learning outcomes or by class-instructor consensus.

GRADING

Your final grade will be determined by your performance on homework, quizzes, tests, projects, and your attendance and class participation.

Ten homework assignments	20%
Quizzes/Case Studies	25%
Two exams	30%
Final project and presentation	15%
Class participation and attendance	10%

GRADING SCALE

100 - 90	=	**A**
89 - 88	=	**B+**
87 - 80	=	**B**
79 - 78	=	**C+**
77 - 70	=	**C**
69 - 68	=	**D+**
67 - 60	=	**D**
< 60	=	**F**

ACADEMIC INTEGRITY

Plagiarism and collusion are common ways of violating FMU's honor code (please refer to FMU's Academic Integrity Policy in your student handbook). Copying assignments from any other source is strictly prohibited and is a form of Plagiarism. However, I encourage you to work with classmates topics needed for homework assignments and in---class problems. The interaction of teaching and learning within a group setting is a great way to learn the principles taught in class.

The first time a student is found responsible for academic dishonesty on an assignment or quiz, he/she will receive a zero on their assignment and must attend a workshop on Plagiarism. Further incidents will result on dropping the course with an F. If academic dishonesty occurs during a test, student will be dropped from course with an F. Further incidents may result in suspension and/or expulsion.

PROJECTED CLASS TOPICS

1. Introduction of engineering graphics
2. Multi-view drawings
3. Auxiliary views and section views
4. Dimensioning and tolerances
5. Reading and interpreting drawings
6. 3-D modeling of parts

7. 3-D modeling of assemblies
8. Conversion of 3-D models to 2-D drawings

*Topics are subject to change or may not be covered. Changes will be notified in class

RELATIONSHIP TO ABET COURSE OUTCOMES

Outcome 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

Outcome H: the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 320 **Title** Workplace Data Acquisition and Analysis

Semester hours 3 Clock hours: Lecture 3 Laboratory ___

Prerequisites 355 and Corequisite of PHYS 220

Enrollment expectation 6 to 10 per year

Indicate any course for which this course is a (an)

modification ENGR 320
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate _____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Justin Yates

Department Chairperson's/Dean's Signature Derek R Jokisch

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

320 Workplace Data Acquisition and Analysis (3) (Prerequisite: 355. Prerequisites/corequisites: Physics 220) F. This course will introduce students to the theories and applications of data collection, management, analytics and visualization. A major

objective of this course is to develop student's analytical capabilities on customized datasets, including the visualization and communication of observations in addition to the application of statistical, mathematical and probabilistic analytical methods, to contemporary workplace Industrial Engineering challenges.

Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

This course will introduce students to the theories and applications of data collection, management, analytics and visualization.

Teaching method planned:

Lecture

Textbook and/or materials planned (including electronic/multimedia):
]
rinciples of Big Data: Preparing, Sharing, and Analyzing Complex Information, Jules J Berman (2013). Elsevier / Morgan Kaufmann.

The Signal and the Noise: Why So Many Predictions Fail – But Some Don't, Nate Silver (2012). The Penguin Press.

David and Goliath: Underdogs, Misfits, and the Art of Battling Giants, Malcolm Gladwell (2013). Little, Brown.

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

The course introduces students to the fundamental concepts of engineering data anlytics through application of basic statistics, probability, computer coding and aggregation techniques. In the course, students apply these skills to large datasets with the intention of identifying 'actionable intelligence' for decision-makers in a workplace setting. Students learn how to communicate results to decision-makers through illustration, short interactions (elevator speeches), and formal presentations (both reports and verbal presentations).

Syllabus for Proposed Course:
On next page

[Location] MSB 106
[Credit] 3.0 hours
[Time] TTH 9:55am – 11:10am

[Instructor]
Justin Yates - Assistant Professor
MSB 101B
(o) 843.661.1626
(e) jyates@fmarion.edu
(w) http://people.fmarion.edu/jyates

[Office Hours]
W 9:00am – 12:00pm
Other by appointment

[Prerequisites] ENGR 101: Introduction to Industrial Engineering
ENGR 355: Production and Operations Management

[Pre/Co Requisites] MATH 202: Calculus II
PHYS 220: Computational Methods for Physics and Engineering

[Course Description] This course will introduce students to the theories and applications of data collection, management, analytics and visualization. A major objective of this course is to develop student's analytical capabilities on customized datasets, including the visualization and communication of observations in addition to the application of statistical, mathematical and spatio-temporal analytical methods, to contemporary Industrial Engineering challenges. This course is heavily project based and will use free resources (e.g., US Census Bureau, local municipalities) and open source methods (e.g., scrapping Twitter, crawling URLs) to collect custom datasets. In this way, students will learn not only how to dissect, mine and interpret datasets but also how to collect, filter and store unique data.

[Course Texts] Principles of Big Data: Preparing, Sharing, and Analyzing Complex Information, Jules J Berman (2013). Elsevier / Morgan Kaufmann.

The Signal and the Noise: Why So Many Predictions Fail – But Some Don't, Nate Silver (2012). The Penguin Press.

David and Goliath: Underdogs, Misfits, and the Art of Battling Giants, Malcolm Gladwell (2013). Little, Brown.

[Supplemental Material] Python Programming Language - Official Website (*http://www.python.org*)

Zero to One: Notes on Startups, or How to Build the Future, Peter Thiel with Blake Masters (2014). Crown Business.

[Grading Policy]

Quizzes	20%
Projects	60%
Participation	10%
Evaluations	10%

[Grades[1]]

A: ≥ 90%	D: 60% - 69%
B: 80% - 89%	F: ≤ 60%
C: 70% - 79%	

[Class Attendance] Class attendance will be taken regularly.

[Technology in Class] It is expected that each student will have access to a laptop regularly during class time. Laptops may be checked out daily through the Physics and Astronomy Department if needed.

[Topical Outline[2]]

1. Introduction to Database Processing
2. Entity-Relationship Data Modeling
3. Relational Modeling and Database Design
4. Open Source Data Collection
5. Integration, Interoperability, Immutability and Immortality
6. Big Data Techniques and Analytical Tools
7. Challenges in Big Data: Failures and Legalities
8. Data Visualization (Notational, Graphical)
9. Society, Data Ethics and the Ethics of Analysis

[Quizzes] Throughout the semester, quizzes will be assigned to test capability as well as proficiency/mastery of the covered skills. Quizzes will be short and will be administered in-class or at the instructors discretion. Quiz dates will not be announced.

Quizzes must be taken at the time they are given and no missed quizzes will be allowed to be made up or re-taken with the following exceptions: (1) a student's absence for a University Excused reason and (2) prior knowledge of an impending absence by the instructor (due to foreseen circumstances such as an upcoming interview, continuing illness, or pre-planned travel/medical needs).

[Projects - Data] There will be multiple data projects worked throughout the semester. Projects will be team based and must meet the requirements of the corresponding project release (to be distributed in advance of the provided due date). Projects will be assessed based on provided rubrics.

[Projects - Video] Accompanying each data project will be a short (2 – 3 minute) video that may be recorded through any mobile device that is accessible to students. Videos should discuss the major aspects of the project (data collection, methods used, analysis, observations and results) in a concise and succinct delivery. A clear indication of how these methods could

be translated to other applications/fields/disciplines should also be included. A specific rubric will be provided to all students in advance of each video project.

[Participation] Students are expected to attend class regularly and participate both in class discussions and within their project teams. Participation will be evaluated by the instructor throughout the course.

[Evaluations] Students will evaluate the productivity, contribution and responsibility demonstrated throughout the semester by their teammate(s). Team members will also be given the opportunity to evaluate themselves. The instructor will evaluate overall team performance, team efficacy, and professionalism as demonstrated throughout the semester. This feedback will also be considered in the final evaluation grade.

[Academic Dishonesty] Misconduct in research or scholarship includes fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting. It does not include honest error or honest differences in interpretations or judgments of data.

Academic dishonesty includes the commission of any of the following acts: cheating, fabrication, falsification, multiple submissions, plagiarism, complicity, abuse and misuse of access and unauthorized access, and violation of departmental or college rules. This listing is not exclusive. **For more information on any of these behaviors, please visit** *http://www.fmarion.edu/students/article328429.htm*.

Francis Marion University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work, should the instructor request it, is sufficient grounds to initiate an academic dishonesty case.

Violations of the Academic Conduct policy strike at the very heart of the University and the teaching and learning process. It is the responsibility of the instructor to determine the appropriate academic penalty for an act of cheating or plagiarism. Normally these penalties range from failure on the assignment to failure of the course. It is responsibility of the Provost or his/her designee to apply general University sanctions for severe or repeat offenses. The first violation of the academic integrity policy typically carries no general sanction beyond the academic penalty. A second violation will result in the academic penalty in addition to a general sanction of suspension from the University for a term of no less than one fall or spring semester. A third offense will result in the academic penalty and a general sanction of expulsion from the University.

[Americans with Disabilities Act Statement] If you have a disability requiring an accommodation, please contact Dr. Rebecca Lawson in the Division of Student Affairs to ensure that appropriate documentation and recommended accommodation actions are on file. Please see the instructor directly with questions, concerns or to provide additional information related to a disability that impacts classroom attendance or activities.

[Relationship to ABET Course Outcomes]

B. an ability to design and conduct experiments, as well as to analyze and interpret data
D. an ability to function on multidisciplinary teams
G. an ability to communicate effectively

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 330 **Title** Engineering Economy

Semester hours 3 Clock hours: Lecture 3 Laboratory ___

Prerequisites Corequisite: ENGR 355

Enrollment expectation 6 to 10 per year

Indicate any course for which this course is a (an)

modification ENGR 330
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate _____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Justin Yates

Department Chairperson's/Dean's Signature Derek R Jokisch

Provost's Signature Peter King

Date of Implementation Spring 2018

Date of School/Department approval 11/29/16

Catalog description:

330 Engineering Economy (3) (Prerequisites/corequisites: 355) S. Concepts and techniques of analysis for evaluating the value of products/services, projects, and systems in relation to their cost. A major objective of this course is to the develop the students understanding of

economic equivalence, the time value of money, financial uncertainty and financial risk, and the way that these concepts can and should be embedded within engineering decision-making.

Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

A major objective of this course is to the develop the students understanding of economic equivalence, the time value of money, financial uncertainty and financial risk, and the way that these concepts can and should be embedded within engineering decision-making.

Teaching method planned:

Lecture

Textbook and/or materials planned (including electronic/multimedia):

Engineering Economic Analysis 12th Edition, Newnan, Lavelle and Eschenbach (Oxford), IBSN: 0199339279

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Students learn how the value of money changes through time as it is influenced by the accruing of interest and inflation. This fundamental fiscal principle is then used to motivate a variety of engineering decision-making methodologies for the evaluation of engineering projects, the allocation of limited resources within a portfolio of projects, and the identification of risk and the impact of uncertainty in project selection. Simulation techniques are introduced as students build decision-support tools to communicate fiscal uncertainty and risk to decision-makers.

Syllabus for Proposed Course:

On next page.

[Location] MSB106
[Credit] 3.0 hours
[Time] TTH 8:30am – 9:45am

[Instructor]
Justin Yates - Assistant Professor
MSB 101B
(o) 843.661.1626
(e) jyates@fmarion.edu

[Office Hours]
Thursday 1:00pm – 3:00pm
Other by appointment

[Prerequisites] ENGR 101: Introduction to Industrial Engineering
ENGR 355: Production and Operations Management
MATH 201: Calculus I

[Course Description] This course will introduce students to the theories and applications implemented when evaluating the value of products/services, projects and systems with respect to cost. A major objective of this course is to the develop the students understanding of economic equivalence, the time value of money, and the way that this concept can and should be embedded within business and engineering decision-making.

[Course Text] Engineering Economic Analysis 12th Edition, Newnan, Lavelle and Eschenbach (Oxford), IBSN: 0199339279

[Supplemental Material] Python Programming Language - Official Website (*http://www.python.org*)

[Grading Policy]

Exams	40%
Project	30%
Homework	20%
Evaluation	10%

[Grades[1]]

A: ≥ 90%	D: 60% - 69%
B: 80% - 89%	F: ≤ 60%
C: 70% - 79%	

[Class Attendance] Class attendance will be taken regularly.

[Technology in Class] It is expected that each student will have access to a laptop regularly during class time. Laptops may be checked out daily through the Physics and Astronomy Department if needed.

[Topical Outline[2]]

1. Making Economic Decisions
2. Engineering Costs and Cost Estimating
3. Interest and Equivalence
4. Interest Formulas
5. Present Worth
10. Uncertainty in Future Events
11. Depreciation
12. Income Taxes
13. Replacement Analysis
14. Inflation and Price Change

6. Annual Cash Flow Analysis
7. Rate of Return Analysis
8. Choosing the Best Alternative
9. Payback Period
15. Selection of a Minimum Attractive Rate of Return
16. Economic Analysis in the Public Sector
17. Accounting and Engineering Economy

[Exams] There will be a total of three exams given during the course of the semester. The final exam is not mandatory and each student reserves the right to determine whether she/he will write the final exam. Grading is dependent upon this decision, with each student choosing one of the following two options:

Option 1: Exam 1 – 20%, Exam 2 – 20%
Option 2: Exam 1 – 10%, Exam 2 – 10%, Final – 20%

[Exam Schedule - 2016]

Exam 1	23 Feb
Exam 2	7 Apr
Final	28 Apr 8:30am – 10:30am

All written exams are graded and recorded (i.e., if you chose Option 2, your Final Exam will be graded and counted regardless of score). Exams must be written on the day indicated in this syllabus with the only exceptions being (1) a student's absence for a University Excused reason (University excused absences are determined based on Rule 07 of the Student Rules found at http://student-rules.tamu.edu/rule07) and (2) prior approval by the instructor. In the case of (2), you are encouraged to notify the instructor as soon as the conflict is realized.

[Project] There will be one project worked throughout the semester. This project will follow the topical outline of the course with grading conducted periodically throughout the 15-week semester at quarterly intervals. Projects may be worked on in groups of 1,2 or 3 students. Quarterly project agendas will be provided by the instructor at the start of each quarter (see the schedule that follows).

Quarterly Due Dates follow the same attendance rules and policies as Exams. If projects are pursued as a team, all team members must be present on the due date. Individuals and teams are responsible for presenting their own work and only their own work. Any individual, group, organization or information sources consulted that influence any facet of the project's progression must be disclosed to the instructor on the Quarterly Due Date. Failure to make appropriate disclosure will result in the assessment of significant penalties to the individual(s) and team(s) involved.

[Project Schedule - 2016]

Task	Release Date	Due Date
Team Formation	12 Jan	14 Jan
Quarter 1	26 Jan	4 Feb
Quarter 2	4 Feb	18 Feb
Quarter 3	1 Mar	24 Mar

Quarter 4 29 Mar 21 Apr

[Homework] There will be 7 - 8 homework assignments due throughout the semester. All due dates will be assigned in class and no late homework will be accepted under any circumstances with the exception of University Excused absences. At the end of the semester, the lowest homework grade will be dropped and your homework average will be calculated based on the average of the remaining grades (i.e., if seven homework assignments are given during the semester, your homework average will be calculated using your highest six homework scores).

[Evaluations] Students will evaluate the productivity, contribution and responsibility demonstrated throughout the semester by their teammates. Team members will also be given the opportunity to evaluate themselves. The instructor will evaluate overall team performance, team efficacy, and professionalism as demonstrated throughout the semester. This feedback will also be considered in the final evaluation grade.

[**Academic Dishonesty**] Misconduct in research or scholarship includes fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting. It does not include honest error or honest differences in interpretations or judgments of data.

Academic dishonesty includes the commission of any of the following acts: cheating, fabrication, falsification, multiple submissions, plagiarism, complicity, abuse and misuse of access and unauthorized access, and violation of departmental or college rules. This listing is not exclusive. **For more information on any of these behaviors, please visit** *http://www.fmarion.edu/students/article328429.htm*.

Francis Marion University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work, should the instructor request it, is sufficient grounds to initiate an academic dishonesty case.

Violations of the Academic Conduct policy strike at the very heart of the University and the teaching and learning process. It is the responsibility of the instructor to determine the appropriate academic penalty for an act of cheating or plagiarism. Normally these penalties range from failure on the assignment to failure of the course. It is responsibility of the Provost or his/her designee to apply general University sanctions for severe or repeat offenses. The first violation of the academic integrity policy typically carries no general sanction beyond the academic penalty. A second violation will result in the academic penalty in addition to a general sanction of suspension from the University for a term of no less than one fall or spring semester. A third offense will result in the academic penalty and a general sanction of expulsion from the University. Note that reference to violations is inclusive of a student's tenure at Francis Marion University and do not reset at the beginning of each semester.

[Americans with Disabilities Act Statement] If you have a disability requiring an accommodation, please contact Dr. Rebecca Lawson in the Division of Student Affairs to ensure that appropriate documentation and recommended accommodation actions are on file. Please

see the instructor directly with questions, concerns or to provide additional information related to a disability that impacts classroom attendance or activities.

[Relationship to ABET Course Outcomes]
F. Understanding of professional and ethical responsibility
H. Impact on global, economic and environmental concerns

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 355 **Title** Production and Operations Management

Semester hours 3 Clock hours: Lecture 3 Laboratory ___

Prerequisites Admission to the Industrial Engineering program or permission of department

Enrollment expectation 10 per year

Indicate any course for which this course is a (an)

modification ENGR 355
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate _____
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Lorna Cintron-Gonzalez

Department Chairperson's/Dean's Signature Derek Yokisch

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

355 Production and Operations Management (3) (Prerequisite: Admission to the Industrial Engineering program or permission of department) F, S. Introduction to production and

operations component of manufacturing and service organizations, based on the traditional and the contemporary IE standpoint. Topics include: Types of manufacturing systems, Lean Manufacturing, DMAIC, Kanban, queueing theory, and discrete event simulation.

Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

Teaching method planned:

Lecture

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Syllabus for Proposed Course:

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 356 **Title** Quality Control

Semester hours 3 Clock hours: Lecture 3 Laboratory ___

Prerequisites ENGR 320 or permission of department

Enrollment expectation 6 to 10 per year

Indicate any course for which this course is a (an)

modification ENGR 356
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate This course will no longer be identical to MGMT 356
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Lorna Cintron-Gonzalez

Department Chairperson's/Dean's Signature Derek W. Jekish

Provost's Signature Peter King

Date of Implementation Spring 2018

Date of School/Department approval 11/29/16

Catalog description:

356 Quality Control (3) (Prerequisite: 320 or permission of department) S. Study of statistical quality control and fundamentals of design of experiments. Applications in

manufacturing and service industry. Topics include: process variability, six sigma, control charts, process capability, analysis of variance, hypothesis testing, factorial designs.

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Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

Teaching method planned:

Lecture

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Syllabus for Proposed Course:

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 373 **Title** Operations Research

Semester hours 3 Clock hours: Lecture 3 Laboratory

Prerequisites ENGR 355 Corequisite: MATH 304 and PHYS 220 or permission of department

Enrollment expectation 6 to 10 per year

Indicate any course for which this course is a (an)

modification ENGR 373
(proposed change in course title, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Justin Yates

Department Chairperson's/Dean's Signature Derek W Jokisch

Provost's Signature Peter King

Date of Implementation Spring 2018

Date of School/Department approval 11/29/16

Catalog description:

373 Operations Research (3) (Prerequisite: 355. Prerequisites/Corequisites: Mathematics 304 and Physics 220 or permission of department) S. This course exposes students to linear and integer programming using optimization (e.g., Simplex, Excel Solver, CPLEX) and

heuristic techniques (e.g., Greedy, Genetic). A wide array of standard optimization problems such as Knapsack, Traveling Salesman and Cutting Plane will be discussed using applications from a variety of fields (health care, energy, logistics/transportation, social networking, etc.). Extensions to mixed integer programming and non-linear programming will be introduced in the later stages of the course.

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Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

Teaching method planned:

Lecture

Textbook and/or materials planned (including electronic/multimedia):

Introduction to Operations Research 10th Edition, Hillier and Lieberman (McGraw-Hill), IBSN: 0073523453

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Students apply principles in mathematical modeling to solve complex engineering problems including transportation, resource allocation and scheduling. Students learn how fundamental methods for solving optimization problems work and how these methods scale as problem size increases. Computer coding skills are drawn upon to create decision-support tools based on deterministic techniques employing either algorithmic or heuristic principles to motivate problem solutions to real-world engineering challenges.

Syllabus for Proposed Course:

On next page

[Location] MSB 106
[Credit] 3.0 hours
[Time] TTH 9:55am – 11:10am

[Instructor]
Justin Yates - Assistant Professor
MSB 101B
(o) 843.661.1626
(e) jyates@fmarion.edu

[Office Hours]
Thursday 1:00pm – 3:00pm
Other by appointment

[Prerequisites] ENGR 355: Production and Operations Management

[Course Description] This course will introduce students to the theories and applications of optimization. Students will learn how to read and build mathematical models that can be used to describe real-world incidents/applications and assist in analytical decision-making. A myriad of well known problems will be studied in Linear Programming and practiced using solution techniques based on graphical, mathematical and computer-generated methodologies. Extensions to Linear Programming, most notably Integer, Mixed-Integer and Non-Linear Programming, will be introduced in the later stages of this course.

[Course Text] Introduction to Operations Research 10th Edition, Hillier and Lieberman (McGraw-Hill), IBSN: 0073523453

[Grading Policy]

Quizzes	25%
Projects	30%
Portfolio	35%
Evaluations	10%

[Grades[1]]

A: ≥ 90%	D: 60% - 69%
B: 80% - 89%	F: ≤ 60%
C: 70% - 79%	

[Class Attendance] Class attendance will be taken regularly.

[Technology in Class] It is expected that each student will have access to a laptop regularly during class time. Laptops may be checked out daily through the Physics and Astronomy Department if needed.

[Topical Outline[2]]

1. Introduction to Linear Programming
2. The Simplex Method
3. Duality and Sensitivity
4. Review of Well Known LPs
6. Introduction to Integer Programming
7. Optimality versus Heuristic
8. Uncertainty in Decision-Making
9. Introduction to Non-Linear Programming

[Quizzes] Throughout the semester, quizzes will be assigned to test capability as well as proficiency/mastery of the covered concepts. Quizzes will be short and will be administered in-class or at the instructors discretion. Quiz dates will not be announced.

Quizzes must be taken at the time they are given and no missed quizzes will be allowed to be made up or re-taken with the following exceptions: (1) a student's absence for a University Excused reason and (2) prior knowledge of an impending absence by the instructor (due to foreseen circumstances such as an upcoming interview, continuing illness, or pre-planned travel/medical needs).

[Projects - Discussion] There will be multiple projects worked throughout the semester. Students will work in teams of 2 – 3 individuals to address the given scenarios or answer the problems utilizing skills, tools and techniques from class. A project rubric will be provided at the beginning of each release.

Accompanying each data project will be a short (2 – 3 minute) video that may be recorded through any mobile device that is accessible to students. Videos should discuss the major aspects of the project in a concise and succinct delivery. A clear indication of how these methods could be translated to other applications/fields/disciplines should also be included. A separate video rubric will be provided.

[Project - Schedule]

Name	Release Date	Due Date
1	28 Jan	12 Feb
2	23 Feb	10 Mar
3	7 Apr	28 Apr

[Portfolio] At the end of the semester, students will turn in a personal portfolio consisting of their notes acquired through the semester's class discussions. Portfolio's should be organized to reflect the topics covered in the course and in the order in which they were discussed. In order to be considered complete, portfolio submissions must include a cover page and must be stapled or bound in some other way (no loose pages should be included with the portfolio). Student portfolio's will be graded for accuracy based on the instructor's course notes and on professionalism, presentation and legibility. Student's may augment course content at any point in time by drawing from material outside of class and connecting to course content through the portfolio.

[Portfolio – Due Date] 28 Apr 3:00pm – 5:00pm

[Evaluations] Students will evaluate the productivity, contribution and responsibility demonstrated throughout the semester by their teammates. Team members will also be given the opportunity to evaluate themselves. The instructor will evaluate overall team performance, team efficacy, and professionalism as demonstrated throughout the semester. This feedback will also be considered in the final evaluation grade.

[Academic Dishonesty] Misconduct in research or scholarship includes fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting. It does not include honest error or honest differences in interpretations or judgments of data.

Academic dishonesty includes the commission of any of the following acts: cheating, fabrication, falsification, multiple submissions, plagiarism, complicity, abuse and misuse of access and unauthorized access, and violation of departmental or college rules. This listing is not exclusive. **For more information on any of these behaviors, please visit** *http://www.fmarion.edu/students/article328429.htm*.

Francis Marion University students are responsible for authenticating all work submitted to an instructor. If asked, students must be able to produce proof that the item submitted is indeed the work of that student. Students must keep appropriate records at all times. The inability to authenticate one's work, should the instructor request it, is sufficient grounds to initiate an academic dishonesty case.

Violations of the Academic Conduct policy strike at the very heart of the University and the teaching and learning process. It is the responsibility of the instructor to determine the appropriate academic penalty for an act of cheating or plagiarism. Normally these penalties range from failure on the assignment to failure of the course. It is responsibility of the Provost or his/her designee to apply general University sanctions for severe or repeat offenses. The first violation of the academic integrity policy typically carries no general sanction beyond the academic penalty. A second violation will result in the academic penalty in addition to a general sanction of suspension from the University for a term of no less than one fall or spring semester. A third offense will result in the academic penalty and a general sanction of expulsion from the University.

[Americans with Disabilities Act Statement] If you have a disability requiring an accommodation, please contact Dr. Rebecca Lawson in the Division of Student Affairs to ensure that appropriate documentation and recommended accommodation actions are on file. Please see the instructor directly with questions, concerns or to provide additional information related to a disability that impacts classroom attendance or activities.

[Relationship to ABET Course Outcomes]

E. Ability to identify, formulate and solve engineering problems

J. Knowledge of contemporary issues

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 420 **Title** Human Factors Engineering

Semester hours 3 Clock hours: Lecture 3 Laboratory ___

Prerequisites ENGR 355

Enrollment expectation 6 to 10 per year

Indicate any course for which this course is a (an)

modification ENGR 420
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate ___
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Lorna Cintron-Gonzalez

Department Chairperson's/Dean's Signature Derek R Gokcek

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

420 Human Factors Engineering (3) (Prerequisite: 355) F. Study of work design, human factors and ergonomics. Provides students with tools and techniques used to design, analyze and improve working stations, with the goal to improve efficiency and productivity. Topics

include: time measurement, workplace ergonomics, environmental design, introduction to cognitive ergonomics, and workplace health and occupational standards.

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Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

Teaching method planned:

Lecture

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Syllabus for Proposed Course:

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 467 **Title** Supply Chain Engineering

Semester hours 3 Clock hours: Lecture 3 Laboratory

Prerequisites ENGR 373 Corequisite: 468 or permission of department

Enrollment expectation 6 to 10 per year

Indicate any course for which this course is a (an)

modification ENGR 467
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate will no longer be the same course as MGMT 467
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Justin Yates

Department Chairperson's/Dean's Signature Derek R. Jokisch

Provost's Signature Peter King

Date of Implementation Spring 2018

Date of School/Department approval 11/29/16

Catalog description:

467 Supply Chain Engineering (3) (Prerequisite: 373. Prerequisite/Corequisite: 468 or permission of department) S. This course will introduce students to the theories and applications of supply chain engineering. Students will learn about supply chain components

and metrics as well as how to develop and solve mathematical models to obtain solutions to supply chain challenges. The course will cover supply chain engineering comprehensively and will include discussions on forecasting, transportation, supplier selection, risk and globalization. Methods in optimization and simulation will be used to implement and integrate these topics to within supply chain decision-making.

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Purpose: 1. For Whom (generally?)

For Industrial Engineering majors.

2. What should the course do for the student?

Teaching method planned:

Lecture

Textbook and/or materials planned (including electronic/multimedia):
Supply Chain Engineering: Models and Applications (CRC Press)
ISBN 978-1-4398-1198-6

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Students are exposed to fundamental supply chain concepts in forecasting, inventory management, transportation, location/allocation, supplier selection and risk. Mathematical models are created to support decision-making in each of these major areas of supply chain management, with an emphasis on student understanding of the theoretical underpinnings of these methods (why they work, what their biases are, how their derivation influences these internal biases, etc.). Students use modeling and computer coding techniques to solve supply chain engineering problems and practice how to convey these findings to decision-makers.

Syllabus for Proposed Course:
On next page

[Location] MSB 106
[Credit] 3.0 hours
[Time] TTH 8:30am – 9:45am

[Instructor]
Justin Yates - Assistant Professor
MSB 101B
(o) 843.661.1626
(e) jyates@fmarion.edu
(w) http://people.fmarion.edu/jyates

[Office Hours]
W 9:00am – 12:00pm
Other by appointment

[Prerequisites] ENGR 355: Production and Operations Management

[Course Description] This course will introduce students to the theories and applications of supply chain engineering. Students will learn about supply chain components and metrics as well as how to develop and solve mathematical models to obtain solutions to supply chain challenges. The course will cover supply chain engineering comprehensively and will include discussions on forecasting, risk, optimization and simulation and the role these skills take within supply chain decision-making.

[Course Text] Supply Chain Engineering: Models and Applications (CRC Press)
ISBN 978-1-4398-1198-6

[Grading Policy]

Class Preparation	30%	
Projects		25%
Exams	35%	
Evaluations	10%	

[Grades[1]]
A: ≥ 90%
B: 80% - 89%
C: 70% - 79%
D: 60% - 69%
F: ≤ 60%

[Class Attendance] Class attendance will be taken regularly and considered as part of a student's Evaluations grade for the semester.

[Technology in Class] It is expected that each student will have access to a laptop regularly during class time. Laptops may be checked out daily through the Physics and Astronomy Department if needed.

[Topical Outline[2]]
1. What is a Supply Chain
2. Forecasting Methods
3. Aggregate Planning
4. Inventory Management
6. Transportation Modeling and Decision-Making
7. Determining Location and Distribution
8. Risk in the Supply Chain
9. Global Supply Chain Management

[Class Preparation] Measured using quizzes and homework, class preparation assignments are the student's opportunity to demonstrate capability and effort in learning supply chain engineering

tools and techniques. Unless otherwise stated by the instructor, class preparation assignments are individual assignments and may not be worked on in groups. In the event of class preparation assignments given during class, students will only be allowed to make-up the assignment if (a) the student's absence was for a University Excused reason or (b) the instructor was made aware of the student's impending absence by the student anytime prior to the start of class.

[Projects] There will be at least three multi-week projects given throughout the course of the semester. Unless otherwise stated by the instructor, all projects are individual assignments and may not be worked on in groups. Projects will test multiple skills/concepts by asking students to apply course knowledge to a given problem or scenario. All parts of a project must be answered in order for a grade to be assigned to the project. If at least one component of an assigned project is not answered or otherwise clearly addressed by the student, the project grade will be a zero. Project submission must be made digitally by COB on the due date assigned. Projects received after the COB deadline will receive a grade of zero.

All projects must be turned in as a single PDF written in a report-style. Projects must include a title page with the assignment, student name, date of assignment, date due, course number and name, and current semester. The project report must include any references or citations consulted (including documentation of conversations or external assistance received) as an appendix. Computer code used to implement any phase of a project must be included as an appendix. Content pages in the project report (i.e., those pages outside of the title page and appendices) must be single-spaced using 11pt font. Unless explicitly stated otherwise by the instructor, a maximum of 3 pages of content will be considered per project report (content discussion beyond 3 pages will not be read or considered in grading).

[Exams] There will be two exams given during the course of the semester. Exams must be written on the date indicated unless (a) previously arranged with the instructor or (b) the date is moved by the instructor. Exams will test for comprehension of essential course content through calculation-based and open-ended questions. Exams will not be comprehensive.

[Exam Schedule]

Exam 1	6 Oct
Exam 2	8 Dec

[Evaluations] A combination of instructor and peer feedback, evaluation grades will be comprised of observed student effort, responsibility, productivity and performance. Peer feedback will be solicited for any team-based assignments undertaken during the semester.

[Academic Dishonesty] Misconduct in research or scholarship includes fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting. It does not include honest error or honest differences in interpretations or judgments of data.

Academic dishonesty includes the commission of any of the following acts: cheating, fabrication, falsification, multiple submissions, plagiarism, complicity, abuse and misuse of access and unauthorized access, and violation of departmental or college rules. This listing is

not exclusive. **For more information on any of these behaviors, please visit** *http://www.fmarion.edu/students/article328429.htm*.

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If you have a disability requiring an accommodation, please contact Dr. Rebecca Lawson in the Division of Student Affairs to ensure that appropriate documentation and recommended accommodation actions are on file. Please see the instructor directly with questions, concerns or to provide additional information related to a disability that impacts classroom attendance or activities.

[Relationship to ABET Course Outcomes]

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

H. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 397 **Title** Undergraduate Research in Industrial Engineering

Semester hours 1, 2, or 3 Clock hours: Lecture _____ Laboratory 1, 2, or 3

Prerequisites ENGR 320 and admission to the program

Enrollment expectation 1 to 2 per faculty supervisor per semester

Indicate any course for which this course is a (an)

modification _____
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate ___
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Lorna Cintron-Gonzalez, Justin Yates, Rahul Renu

Department Chairperson's/Dean's Signature Derek R. Jokisch

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

397 Undergraduate Research in Industrial Engineering (3), (2), or (1) (Prerequisites: ENGR 320 and admission to the program) F, S. This course will be open to students in their

junior or senior year. Working with a Faculty Member of the Industrial Engineering program, each student enrolled will be assigned to one or more research projects related to Industrial Engineering. The project(s) assigned will be determined based on the interest of the student. The number of hours will be based on the complexity of the project and the time required to complete the project(s). The culmination of this course will require a written report and a formal oral presentation.

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Purpose: 1. For Whom (generally?)

For junior and senior Industrial Engineering majors admitted to the program who wish to perform supervised research.

2. What should the course do for the student?

A formal course allows students to directly show research engagement on an academic transcript. For any students pursuing an advanced degree or in consideration for a competitive industry position, demonstrated success on formal research efforts can be seen as a very strong predictor of current capability and future success.

Teaching method planned:

Supervised research.

Textbook and/or materials planned (including electronic/multimedia):

None. Resources determined by project.

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

This course will provide Industrial Engineering faculty with a formal method of engagement in student research that does not currently exist within the curriculum. Under the ENGR 498 course, a single or small group of students may elect to pursue directed research projects with a single faculty member in Industrial Engineering for a 15-week semester. The advantages of a designated research course are numerous and apply to both students and faculty. From a faculty perspective, a formal course implies formality in the research effort and allows the faculty member an additional motivating factor (i.e., the students' grade) by which to directly tie their efforts and expectations. From a student perspective, a formal course allows students to directly show research engagement on an academic transcript. For any students pursuing

an advanced degree or in consideration for a competitive industry position, demonstrated success on formal research efforts can be seen as a very strong predictor of current capability and future success. The addition of ENGR 498 would also strengthen the IE curriculum overall by furthering its alignment with ABET student outcomes, specifically (b) an ability to design and conduct experiments, as well as to analyze and interpret data, and (i) a recognition of the need for, and an ability to engage in life-long learning.

Syllabus for Proposed Course:

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - ENGR **Date** November 29, 2016

Course No. or Level ENGR 497 **Title** Special Topics in Industrial Engineering

Semester hours 1, 2, or 3 Clock hours: Lecture _____ Laboratory 1, 2, or 3

Prerequisites ENGR 101 and permission of department

Enrollment expectation variable

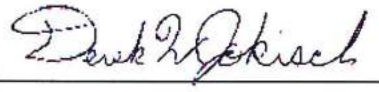
Indicate any course for which this course is a (an)

modification _____
(proposed change in course title, course description, course content or method of instruction)

substitute _____
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate ___
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Lorna Cintron-Gonzalez, Justin Yates, Rahul Renu

Department Chairperson's/Dean's Signature 

Provost's Signature 

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

497 Special Topics in Industrial Engineering (3), (2), or (1) (Prerequisites: 101 and permission of department) F, S. Study of topics not found in other courses. Open to

sophomores, juniors or seniors majoring in Industrial Engineering. A maximum of three semester hours may be earned. Academic Committee approval required for each seminar and practicum. All individual research projects are reviewed by three faculty members from two different disciplines. May be taken for credit (three hours) towards the Honors degree by special arrangement.

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Purpose: 1. For Whom (generally?)

For sophomore, junior, and senior Industrial Engineering majors.

2. What should the course do for the student?
The course will provide a detailed coverage of topics not fully covered in regular courses. Topics may vary from one offering to another.

Teaching method planned:

Supervised instruction

Textbook and/or materials planned (including electronic/multimedia):

Resources determined by project.

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

The introduction of ENGR 497 to the IE curriculum would enable faculty to pursue engaging and relevant topics in IE with the depth and focus expected in a 15-week course. The addition of ENGR 497 would also strengthen the IE curriculum overall by furthering its alignment with ABET student outcomes, specifically (j) a knowledge of contemporary issues.

This course can be taken as an elective in addition to the 122 credit-hours required to complete the major. This course will also be available to students in other disciplines upon consent from the course instructor and department chair.

Syllabus for Proposed Course:
Sample on next page

FMU Industrial Engineering

ENGR497 – Special Topics in Industrial Engineering

Engineering Informatics
Course Syllabus
Fall 2017

INSTRUCTOR:	Dr. Rahul Renu
OFFICE:	MSB 101-B
OFFICE HOURS:	TBD
EMAIL:	rrenu@fmarion.edu

COURSE DESCRIPTION

This course will introduce students to the use of advanced computing; data, information and knowledge management; and artificial intelligence in engineering. Students will gain knowledge and experience in application of informatics concepts to industrial engineering problems. Specific topics include database design and development; natural language processing; and decision support systems.

PREREQUISTES

TBD

REQUIRED TEXT BOOK

None.

COURSE MEETING TIME AND LOCATION

TBD

STUDENT LEARNING OBJECTIVES

By successfully completing this course, the students will:

- Have an understanding of how to store and retrieve data from relational databases
- Understand the need for, and tools used, to process natural language data
- Be able to develop decision support systems for industrial engineering applications

COURSE FORMAT

Class sessions will be hands-on. Students will work on their computers and learn engineering informatics concepts "by doing". The course will be divided into four modules. Students will develop informatics solutions to relevant industrial engineering problems in each module. Each of the first three modules will be focused on different aspects of engineering informatics. The fourth module will focus on the integration of the previous three modules.

EXPECTATIONS

I expect the same of you that you do of me. I expect you to read all the weekly readings. I expect you to be prepared so that you may engage yourself in the learning process. Take a professional approach to the materials you prepare; and above all be honest and ethical in your work.
You are expected to check your student (fmarion.edu) email and Blackboard regularly. Course updates and notifications will be communicated to you through either your student email, or Blackboard, or both.

COURSE POLICIES

- You must have access to a working computer every class session
- If you decide to withdraw from the course, you should do so following FMU policies, dates, and procedures
- Students may leave the classroom if the instructor is more than 15 minutes late
- Students must be on time for class.
- There will be unannounced "pop" quizzes. There are no make-up pop-quizzes
- NO TEXT MESSAGING ALLOWED
- NO CELLPHONES ALLOWED
- In-class Decorum: You are encouraged to discuss engineering informatics during in-class work times, but you are expected to pay quiet attention when your instructor is speaking. No tobacco products of any kind are acceptable for use in the class room.

The schedule, policies, procedures, and assignments in this course are subject to change to improve learning outcomes or by class-instructor consensus.

GRADING

Your final grade will be determined by your performance on homework, quizzes, tests, projects, and your attendance and class participation.

Ten homework assignments	15%
Four projects	60%
Quizzes	15%
Class participation and attendance	10%

GRADING SCALE

100 - 90	=	**A**
89 - 88	=	**B+**
87 - 80	=	**B**
79 - 78	=	**C+**
77 - 70	=	**C**
69 - 68	=	**D+**
67 - 60	=	**D**
< 60	=	**F**

ACADEMIC INTEGRITY

Plagiarism and collusion are common ways of violating FMU's honor code (please refer to FMU's Academic Integrity Policy in your student handbook). Copying assignments from any other source is strictly prohibited and is a form of Plagiarism. However, I encourage you to work with classmates topics needed for homework assignments and in---class problems. The interaction of teaching and learning within a group setting is a great way to learn the principles taught in class.

The first time a student is found responsible for academic dishonesty on an assignment or quiz, he/she will receive a zero on their assignment and must attend a workshop on Plagiarism. Further incidents will result on dropping the course with an F. If academic dishonesty occurs during a test, student will be dropped from course with an F. Further incidents may result in suspension and/or expulsion.

COURSE SCHEDULE

Module	Week	Topic
Module 1	Week 1	Course Orientation; Introduction to Engineering Informatics;
	Week 2	Basic Concepts of Relational Databases; Conceptual Design of Databases
	Week 3	Conceptual Design of Databases; Introduction to SQL
	Week 4	Implementation of Conceptual Databases
Module 2	Week 5	Implementation of Conceptual Databases; Introduction to Natural Language Processing
	Week 6	Applications of Natural Language Processing; Natural Language Processing Methods
	Week 7	Implementing Natural Language Processing Methods
Module 3	Week 8	Introduction to Decision Support Systems; First-order Logic
	Week 9	Propositional Logic
	Week 10	Fuzzy Logic
	Week 11	Design of Decision Support Systems
Module 4	Week 12	Implementation of Decision Support Systems
	Week 13	Implementation of Decision Support Systems
	Week 14	Design and Implementation of Informatics Solutions
	Week 15	Trends and Future of Engineering Informatics
	Week 16	Final Project Work Week

RELATIONSHIP TO ABET COURSE OUTCOMES

J. A knowledge of contemporary issues

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - PSCI **Date** November 29, 2016

Course No. or Level PSCI 150 **Title** Physical Science for Teachers

Semester hours 4 Clock hours: Lecture 3 Laboratory 3

Prerequisites MATH 105, 110/110L, or eligibility to take MATH 111 or 121

Enrollment expectation 24 per year

Indicate any course for which this course is a (an)

modification
(proposed change in course title, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Larry Engelhardt, Ginger Bryngelson, Joe Mehaffey

Department Chairperson's/Dean's Signature Derek R Jokisch

Provost's Signature Peter King

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

150 Physical Science for Teachers (4:3-3) (Prerequisite: Mathematics 105, 110/110L, or eligibility to take Mathematics 111 or 121) F. A course designed for middle level,

elementary and early childhood education majors which covers mechanics, electricity, magnetism, waves, light, and optics. The course focuses first on helping students understand content knowledge, but also models scientific inquiry

Purpose: 1. For Whom (generally?)

For Middle Level, Elementary, and Early Childhood Education majors

2. What should the course do for the student?

This new course, PSCI 150, will be a 4-credit course (including a lab) that will address a need for both Middle Level Education (MLE), Elementary Education (ELEM), and Early Childhood Education (ECE) majors. It will cover mechanics, electricity, magnetism, waves, light, and optics; and it will provide a learning experience targeted to future teachers, and aligned with the relevant K-8 standards.

Teaching method planned:

Lecture and Laboratory

Textbook and/or materials planned (including electronic/multimedia):

- Textbook: Conceptual Physics by Paul Hewitt
  (ISBN-13: 978-0321909107, ISBN-10: 0321909100)
- Workbook: College Physics Active Learning Guide by Etkina, Gentile, & Van Heuvelen
  (ISBN-13: 978-032186445, ISBN-10: 032186445X)
- IOLab Cart for measurements.
- IOLab Software

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Currently, MLE majors with a specialty in science are required to take both Physics 215 and 216, which is an 8-credit sequence (two 4-credit courses). The MLE curriculum is very full, and PSCI 150 will replace this 8-credit sequence for these majors, resulting in an overall reduction of 4 credits. This new course will also be designed to better target the specific needs of MLE, ELEM, and ECE majors. Physics 215 and 216 both emphasize mathematical problem solving, including mathematical methods that are more sophisticated than the middle school level — specifically trigonometry and some of the algebra. By reducing the focus on mathematical problem solving, we will be able to focus more on conceptual understanding,

strategies for addressing common student misconceptions, and working with the type of equipment that these majors are likely to use in the future in their own classrooms for scientific measurements (described below).

Currently, ELEM and ECE majors are required to take PSCI 101, which is a 4-credit course that briefly covers virtually all areas of physics. PSCI 150 will replace PSCI 101 for these students, resulting in no overall change in number of credits, but again providing an experience that will better target the needs of ELEM and ECE majors, focusing on how to address common student misconceptions and working with the type of equipment that these majors are likely to use in the future in their own classrooms for scientific measurements.

As future teachers, it will be important for the students in PSCI 150 to achieve a high level of familiarity and comfort with the type of equipment that they are likely to use in the future in their own classrooms for scientific measurements. To accomplish this, the students will be required to purchase their own basic set of equipment for computer-based measurements; and they will use this equipment throughout the semester — at home, in class, and in lab — before using it in their own classrooms in the future. (In the past, this would have been prohibitively expensive, but has been made possible by recent technological developments.)

Syllabus for Proposed Course:

Physical Science 150

Syllabus

Instructor: Dr. Ginger Bryngelson
Email: GBryngelson@fmarion.edu
Office: Leatherman Science Facility (LSF) 103H
Phone: (843) 661-1553
Office Hours: **Mondays and Wednesdays 2:00-4:00pm**

Course Description:

This course is designed for middle level, elementary, and early childhood education majors, and covers mechanics, electricity, magnetism, waves, light, and optics. This course will focus on helping you understand physics using and modeling scientific inquiry.

In this course, much of what you learn will be built up from direct observations. You will help design and carry out experiments, participate in class discussions, and also carry out your own personal observations, predictions, and reflections. Your ability to perform observations, take data, analyze results, and write reports will be enhanced by the use of computer based sensors and software. You will develop skills in graphing, fitting, and simulating physical processes. This process will provide you with more than just knowledge about the particular concept under study. The goal is for you to understand why a particular scientific definition is made and be able to better comprehend the meaning of the physical laws that unfold.

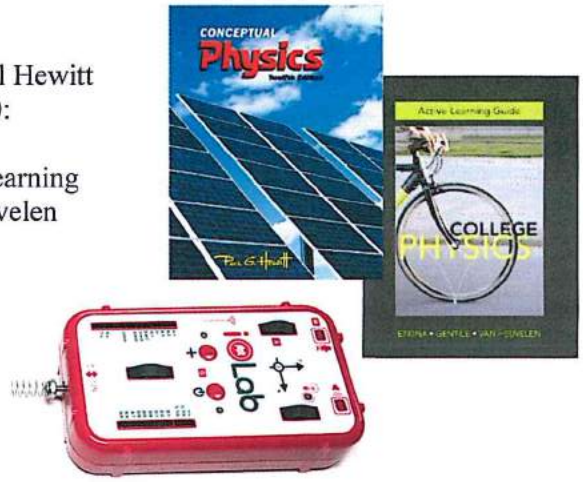
Prerequisite: Mathematics 105, 110/110L, or eligibility to take Mathematics 111 or 121

Course Objectives:

Upon successful completion of this course, students should be able to:

- Describe and explain how a scientific theory can be developed from systematic observations and experiments. Perform observations and experiments, and build a conceptual framework to explain phenomena.
- Learn to observe, classify, and describe physical phenomena using different representations including words, pictures, graphs, and mathematical equations.
- Develop computer skills needed to collect and analyze scientific data using various computer tools to identify and minimize experimental error.
- Describe strategies for teaching physics that result in student learning.

Required Material:



- Textbook: Conceptual Physics by Paul Hewitt (ISBN-13: 978-0321909107, ISBN-10: 0321909100)
- Workbook: College Physics Active Learning Guide by Etkina, Gentile, & Van Heuvelen (ISBN-13: 978-032186445, ISBN-10: 032186445X)
- IOLab Cart for measurements.
- IOLab Software

Grading:

Quizzes – 10%

Homework & Experiments – 20%

Tests – 30%

Lab Average – 20%

Capstone Final Project – 20%

Class Work

This course is comprised of experiments that require preparation, execution, reporting, and collaborative reflection. Quizzes assess your knowledge acquired in the last class. Tests will be spaced fairly evenly throughout the semester. A collaborative final project is the capstone experience of the course, which will use the cumulative skills developed by previous experiments.

Capstone Project

This course requires completion of a collaborative experimental investigation. Each student is required to submit an individual project proposal. Your group will decide what project to undertake and what you hope to learn. In addition to carrying out the necessary experimental measurements and data analysis, you will be expected to complete a concise written report of your investigation. Your project report is a group effort, with all group members expected to contribute in a substantial way.

Lab

This class requires students to be enrolled in a lab course. A failing grade in lab will result in a failing grade in this course. Lab grades will be determined by your lab instructor. Each week you will perform a lab experiment.

Class Absences

If you are absent from class, you are responsible for collecting class notes and assignment information, and learning the material. You are still expected to turn in any assignments by their due dates.

Final Grades:

Your final grade will be based on your total score as described above. If you earn one of the percentages shown below, you will receive the grade written on its right.

90%: A 85%: B+ 80%: B 75%: C+ 70%: C 65%: D+ 60%: D

To Access Blackboard:
Go to https://blackboard.fmarion.edu/
Once you've signed in, you should see the courses you're enrolled in this semester. I will post assignments, reading material, this syllabus, and grades here. Let me know **immediately** if you have any problems accessing blackboard in general, and items from this class in particular.

ADA Statement: If you have a disability that qualifies you for academic accommodations, please provide a letter of verification from the Office of Counseling and Testing. If you would like to discuss your accommodations, please contact me as soon as possible. See the Student handbook for more information.

Academic Ethics: Every member of the FMU community is expected to maintain the highest standards of academic integrity. The University may initiate disciplinary proceedings against a student accused of scholastic dishonesty. Scholastic dishonesty includes, but is not limited to, statements, acts, or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work material that is not one's own. Scholastic dishonesty may involve, but is not limited to, one or more of the following acts: cheating, plagiarism, collusion, use of annotated texts or teacher's editions, and/or falsifying academic records. While specific examples are listed below, this is not an exhaustive list and scholastic dishonesty may encompass other conduct.

Plagiarism is the use of an author's words or ideas as if they were one's own without giving credit to the source, including, failure to acknowledge a direct quotation, and paraphrasing without crediting the original source.

Cheating is the willful giving or receiving of information in an unauthorized manner during an examination, illicitly obtaining examination questions in advance, copying computer or internet files, using someone else's work for assignments as if it were one's own, or any other dishonest means of attempting to fulfill the requirements of a course.

Collusion is intentionally aiding or attempting to aid another in an act of scholastic dishonesty, including but not limited to, providing a paper or project to another student; providing an inappropriate level of assistance; communicating answers to a classmate during an examination; removing tests or answer sheets from a test site, and allowing a classmate to copy answers.

The first time a student is found responsible for scholastic dishonesty will receive a zero on their assignment and must attend a workshop on Plagiarism. Further incidents during the student's career at FMU will result in suspension and expulsion. See the student handbook for more information.

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Physics and Astronomy - PHYS **Date** November 29, 2016

Course No. or Level PHYS 410 **Title** Advanced Laboratory in Physics

Semester hours 1 Clock hours: Lecture _____ Laboratory 3

Prerequisites PHYS 314 and permission of department

Enrollment expectation 6 to 10 per offering

Indicate any course for which this course is a (an)

modification _____
(proposed change in course title, course description, course content or method of instruction)

substitute will replace PHYS 420 as a degree requirement
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate ___
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Seth Smith

Department Chairperson's/Dean's Signature Derek R Jokisch

Provost's Signature Pete King

Date of Implementation Fall 2017

Date of School/Department approval 11/29/16

Catalog description:

410 Advanced Laboratory in Physics (1:3) (Prerequisite: Physics 220, 314 and permission of department) F. Students will learn experimental skills in physics by performing advanced undergraduate physics experiments that involve laser spectroscopy, interferometry,

resonance, Fourier methods, digital oscilloscopes, and single photon tests of quantum mechanics. Students will learn methods for communicating scientific results in the form of formal laboratory reports, including the appropriate scientific content, style, format, clarity, and analysis. Students will also learn oral presentation skills by using PowerPoint to prepare and deliver an oral presentation on one of the advanced undergraduate physics experiments.

Purpose: 1. For Whom (generally?)

For juniors and seniors in the Computational Physics major

2. What should the course do for the student?

Students will learn experimental skills in physics by performing advanced undergraduate physics experiments that involve laser spectroscopy, interferometry, resonance, Fourier methods, digital oscilloscopes, and single photon tests of quantum mechanics.

Teaching method planned:

Laboratory

Textbook and/or materials planned (including electronic/multimedia):

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

Students in the computational physics option do not have a required lab experience after PHYS 314 (taken in their sophomore year). They will benefit from engagement in advanced laboratory skills.

Syllabus for Proposed Course:

Physics 410 Syllabus

TITLE:	Physics 409 – Advanced Laboratory in Physics
PREREQUISITE:	Physics 314 and permission of the department
SEMESTER:	Fall, 2017
CLASS TIMES:	W 1:30 – 4:30 (MSB 103 – FMU Laser Laboratory)
PROFESSOR:	Dr. R. Seth Smith
OFFICES:	LSF L103 (Leatherman Science Facility)
PHONE:	843-661-1453
E MAIL ADDRESS:	rsmith@fmarion.edu

OBJECTIVES:

1. Each student will learn experimental skills in physics by performing advanced undergraduate physics experiments, such as Diode Laser Spectroscopy, Michelson and Fabry-Perot Interferometry, Simple/Damped/Resonant Harmonic Motion, Fourier Methods, Digital Oscilloscopes, and Single Photon Tests of Quantum Mechanics.

2. Each student will learn oral presentation skills by using PowerPoint to prepare and deliver an oral presentation on one of the advanced undergraduate physics experiments.

3. Each student will learn methods for communicating scientific results in the form of formal laboratory reports, including the appropriate scientific content, style, format, clarity, and analysis.

COURSE SCHEDULE:

Month	Date	Day	Time	Topic
August	29	T	1:30	Digital Oscilloscopes
September	5	T	1:30	Digital Oscilloscopes
September	11	T	1:30	Diode Laser Spectroscopy
September	18	T	1:30	Diode Laser Spectroscopy
September	25	T	1:30	Michelson and FP Interferometry
October	3	T	1:30	Michelson and FP Interferometry
October	10	T	1:30	Torsional Oscillator (Harmonic Motion)
October	17	T	1:30	Torsional Oscillator (Harmonic Motion)
October	24	T	1:30	Fourier Methods
October	31	T	1:30	Fourier Methods
November	7	T	1:30	Single Photon Tests of Quantum Mechanics
November	14	T	1:30	Single Photon Tests of Quantum Mechanics
November	21	T	------	No Class - Thanksgiving
November	28	T	1:30	Power Point Presentations

EVALUATION METHODS:

The final grade in this course will be determined as follows:

1.	Formal Laboratory Reports	80%
2.	Power Point Presentation	20%
	Total	100%

The grading scale that will be used is given below:

90 – 100	A
85 – 89.9	B+
80 – 84.9	B
75 – 79.9	C+
70 – 74.9	C
65 – 69.9	D+
60 – 64.9	D
Below 60	F

NOTES AND POLICIES:

1. The university attendance policy states that a student may not miss more than twice the number of classes that a course would meet in one week. Hence, any student who misses more than 2 classes is subject to being dropped from the course with a grade of F or W. If a student wishes to withdraw from the course, it is the student's responsibility to initiate and follow the appropriate procedures.

2. The Power Point Presentation grade will be determined as follows:
   a. Understanding of the Subject 50 pts
   b. Clarity 10 pts
   c. Speaking Ability 10 pts
   d. Creativity 10 pts
   e. Practice Presentations 20 Pts

3. Students desiring assistance outside of class should see the instructor during his posted office hours or by appointment.

4. Cell phones must be turned **OFF** (not set to vibrate) during lab. It would be rude to distract your classmates and it is important to be focused in lab. Violators will be subject to disciplinary action.

5. The equipment used in Advanced Laboratory in Physics is very expensive. Consequently, there is only one setup for each experiment. This means that **it is absolutely essential that each student reads the complete write-up for each experiment prior to attending lab**

FRANCIS MARION UNIVERSITY: DESCRIPTION OF PROPOSED NEW COURSE or MODIFICATION OF AN EXISTING COURSE

Department/School Sociology **Date** 1/11/17

Course No. or Level 339 **Title** **Sociological theory**

Semester hours 3 Clock hours: Lecture 3 Laboratory 0

Prerequisites current: 12 hours of Sociology, including 302 or permission of the department;
change to: Sociology 201 or permission of the department

Enrollment expectation 20

Indicate any course for which this course is a (an)

modification soci 339
(proposed change in course title, course description, course content or method of instruction)

substitute
(The proposed new course replaces a deleted course as a General Education or program requirement.)

alternate
(The proposed new course can be taken as an alternate to an existing course.)

Name of person preparing course description Dr. Alex Lu

Department Chairperson's/Dean's Signature

Provost's Signature

Date of Implementation Fall 2017

Date of School/Department approval 1/11/17

Catalog description:

Purpose: 1. For Whom (generally?)

Sociology majors, minors or others interested in the major perspectives and explanations for how the social world is organized and operates

2. What should the course do for the student?

Help students understand the social world, expand their critical and analytical thinking skills, and digit literacy

Teaching method planned:

Lecture, panel discussions, and critiques

Textbook and/or materials planned (including electronic/multimedia):

Kivisto, P. 2013. Illuminating Social Life, 6th edition. Sage

And other documents as deemed needed, available on Blackboard

Course Content: (Please explain the content of the course in enough detail so that the Academic Affairs Committee can make an informed judgment. Include a syllabus for the course.)

1. What is sociological theory
2. Ideas of Karl Marx
3. Ideas of Max Weber
4. Ideas of Emile Durkheim
5. Ideas of Georg Simmel
6. Ideas of WEB DuBois
7. Cultural theory
8. Feminist theory
9. Symbolic interaction viewpoint
10. Ideas of Erving Goffman
11. Ideas of Pierre Bourdieu
12. Theory testing and building

When completed, forward to the Office of the Provost. 9/03

Sociological Theory

Course Number:	SOCI 339
Section Number:	6976
Days and Time:	M/W 2:30a - 3:45p
Location:	Founders Hall 251C

PERSONNEL INFORMATION

Name	E-mail and Office	Office Hours
Dr. Alexander Lu, PhD Professor	lu@fmarion.edu Office: Founders Hall 241	M/W 3:45-5:15 By appointment

COURSE DESCRIPTION

Sociological theory explains how the world operates by identifying forces that shape human experience and the nature of societies. My objectives are:

(1) To introduce you to the major theorists and perspectives in sociology
(2) To develop your ability to answer "big" questions about society
(3) To enable you to critically examine the world from several sociological perspectives

To promote your development as students, professionals, and persons, I emphasize:

(1) Interpretation and application
(2) Critical and analytical thinking
(3) Digital literacy

I designed this course to maximize our success of achieving these pedagogical goals.

COURSE REQUIREMENTS AND ASSIGNMENTS

I use Blackboard to distribute course materials and information (e.g., syllabus, handouts, readings, and grades).

Reading Materials	**Denoted**
Kivisto, Peter. 2013. *Illuminating Social Life, 6th ed.* Sage. ISBN: 1452217823	TEXTBOOK
Documents under "Content" tab of Blackboard	BLACKBOARD
Documents accessible on-line (hyperlinked in the course schedule)	URL
This syllabus	SYLLABUS

Social Media Memo *(10 points)*

Social media has transformed our interactions. The purpose of this exercise is examining the theoretical implications of social media. Of three assignments, you choose between completing a social media **OR** teaching memo, but **you must complete one of each**. See handout.

Teaching Memo *(10 points)*

I learn from teaching others. You will also learn by teaching others the sociology you have learned. The purpose of this exercise is demonstrating conceptual understanding through teaching. Of three assignments, you can choose between completing a social media **OR** teaching memo, but **you must complete one of each**. See handout.

Autoethnographic Memo *(10 points)*

Sociology is also the study of oneself in the sense that we are all social beings and cannot be understood apart from the rest of society. The purpose of this exercise is twofold: (1) for you to

articulate to me what you have learned in this class and (2) more importantly, for you to articulate your development as a sociologist to **yourself**. See handout.

Theory Panels Dates: Blackboard Wiki

Engaging in scholarly presentations and discussions allows you to demonstrate your comprehension, interpretation, application, and evaluation of abstract ideas. You will take the role of a theorist and present on a panel with other theorists about a topic. The panel exercises will consist of a presentation, two peer evaluations, and a reflective memo.

Panel	Present On	Memo Due	Evaluation Due	Theorists/Theories
1.1	Feb 13	Feb 15	Feb 15	Marx, Weber, Durkheim, Simmel, Du Bois
1.2	Feb 15	Feb 20	Feb 20	Marx, Weber, Durkheim, Simmel, Du Bois
2.1	Feb 20	Feb 22	Feb 22	Cultural, Exchange, Critical, Critical Race, Feminist
2.2	Feb 22	Feb 27	Feb 27	Cultural, Exchange, Critical, Critical Race, Feminist
3.1	Apr 17	Apr 19	Apr 19	Symbolic Interaction, Goffman, Phenomenology, Bourdieu, Globalization
3.2	Apr 19	Apr 24	Apr 24	Symbolic Interaction, Goffman, Phenomenology, Bourdieu, Globalization

Panel Presentation (10 points)

Interpreting ideas from the perspective of a theorist enables you to apply theory and understand society from multiple perspectives. The purpose of this exercise is to develop your ability to interpret, apply, and critique theory. See handout and Blackboard wiki.

Peer Evaluations (10 points each)

Evaluating the ideas of your peers is an important component of learning and understanding your own ideas. After viewing a panel, you will complete a worksheet evaluating the contributions of your peers. You must evaluate 2 panels, and they must be ones in which you did not present (e.g., you presented on Panel 1, you evaluate Panels 2 and 3). See handout and Blackboard wiki.

Self-evaluation (10 points)

You will conduct a self-evaluation of your presentation. The purpose of this exercise is to assess the effectiveness of your presentation and develop skills in critical thinking and articulating analysis. See handout.

COURSE GUIDELINES AND POLICIES

Submitting Assignments

Use Blackboard's "Assignments" tool to upload your files. Use the following format when naming your file: *lastname_assignment* (e.g., lu_teachingmemo1). Improper naming of files will result in a penalty.

Grading
I calculate your grade as follows (S=score, T=total, W=weight, G=grade):

	-- How to Calculate Your Grade --			
Assignment	**Score/Total Pts.**	**Weight**	**S/T * W = G**	**Grade**
Panel Presentation	_____/10	20.0%	_____ * 20.0	
Panel Peer Score	_____/10	10.0%	_____ * 10.0	
Panel Peer Evaluation 1	_____/10	5.0%	_____ * 5.0	
Panel Peer Evaluation 2	_____/10	5.0%	_____ * 5.0	
Panel Reflection Memo	_____/10	12.0%	_____ * 12.0	
Media/Teaching Memo 1	_____/10	12.0%	_____ * 12.0	
Media/Teaching Memo 2	_____/10	12.0%	_____ * 12.0	
Media/Teaching Memo 3	_____/10	12.0%	_____ * 12.0	
Autoethnography Memo	_____/10	12.0%	_____ * 12.0	
Total	----------	100.0%	----------	

A	90-100%	**B+**	85-89%	**C+**	75-79%	**D+**	65-69%	**F**	0-59%
		B	80-84%	**C**	70-74%	**D**	60-64%	*%'s rounded*	

Class Participation
As teaching and learning are collaborative, participation is important for your educational experience. Learning to apply, analyze, and synthesize information requires active participation in class discussions. I expect you to read the assigned material **before** class, so you are prepared to participate. Each person brings a unique background and perspective, and I encourage students to draw on that perspective when discussing the variety of sociological issues covered. Although you may disagree with the opinions of classmates, I expect everyone to be respectful. If you disagree, criticize the evidence that supports a stance, or the negative implications of a viewpoint, but do not criticize the person.

Attendance
Although I do not explicitly grade attendance, missing class negatively affects your ability to participate and learn. Attending lectures, participating in discussions, and viewing various media will help you understand theories and concepts. Additionally, we will discuss other issues not covered in the readings or lecture notes. If an assignment takes place on a day that you miss, you will neither receive credit nor be allowed to make it up (the only exceptions are university sanctioned absences provided you submit appropriate documentation). "It is the responsibility of the student to attend all scheduled meetings in the courses in which he/she is enrolled. **If a student is absent more than twice the number of required class** … per week during regular semesters or more than 15 percent of required sessions during accelerated semesters, a grade of F or W will normally be assigned, unless absences have been excused for cause by the instructor … If a student violates the stated attendance policy, the instructor will notify the Office of the Registrar to drop the student from the class with the appropriate grade." (See p. 53 of the *University Catalog*)

Late Assignments and Incompletes
Assignments are due at 11:59pm on the due date specified in the course schedule. I will accept late assignments **until I begin the grading process**. If I you do not submit your assignment before I start grading, you will receive a zero. In accordance with university policies, I will not

grant an incomplete unless extremely unusual circumstances exist and the department chair approves.

Students with Special Needs
Students are responsible for informing me and contacting the Director of Counseling and Testing (843-661-1841) about accommodations (see p. 22 of the *Student Handbook*).

Academic Integrity
I do not tolerate academic dishonesty (i.e., cheating and plagiarism). Please review p. 60-61 of the *Student Handbook* for university policies on academic misconduct.

Electronic Equipment
Do not use phones, mp3 players, or other electronic devices during class. You can use laptops. However, if you are using them for inappropriate purposes (e.g., Facebook, games, pornography) or your use distracts others, I will revoke your laptop and phone privileges. You are not high school students, and I should not have to treat you as such.

Student Responsibilities
If you are having problems with course materials or have personal issues, see me ASAP. Students should be prepared to engage in class discussions, as well as, initiate conversations with me regarding issues and questions about the course. You should also check your e-mail and Blackboard daily because I might send information about the class.

Additional Resources
Writing Center: http://www.fmarion.edu/academics/wcenter
Tutoring Center: http://www.fmarion.edu/academics/tutoring
Center for Academic Success and Advising: http://www.fmarion.edu/academics/casa

Contacting the Professor
Contact me through e-mail (lu@fmarion.edu), and write "**SOCI 339**" in the subject line. **Do not** correspond using Blackboard messages.

COURSE SCHEDULE

*This course schedule is tentative and I reserve the right to change it. I will announce all revisions prior to their effective date. You are responsible for being aware of those changes. Do the reading listed under each date **BEFORE** class.*

TEXTBOOK = Kivisto (2013) **BLACKBOARD** = *Content* tab
SYLLABUS = (...you are reading it) **URL** = hyperlinked

Week 1

Jan 09 No Class- First Day

Reading: -----

Jan 11 **Introduction to Course**
Reading: SYLLABUS

Week 2

Jan 16 **No Class- MLK Day**
Reading: URL- Le, "Dr. King, Race, Politics, and Colorblind Society"

Jan 18 **What is Sociological Theory?**
Reading: URL- Joas and Knöbl, *What is theory?*
Due: Biographical Memo

Week 3

Jan 23 **Karl Marx**
Reading: TEXTBOOK- Chapter 1

Jan 25 **Max Weber**
Reading: TEXTBOOK- Chapter 2

Week 4

Jan 30 **Émile Durkheim**
Reading: TEXTBOOK- Chapter 3

Feb 01 **Georg Simmel**
Reading: TEXTBOOK- Chapter 4

Week 5

Feb 06 **W.E.B. DuBois**
Reading: BLACKBOARD- Itzigsohn and Brown, "...Double Consciousness"
BLACKBOARD- Zuckerman, "Sociology of Religion..."

Feb 08 **Review Day**
Reading: -----
Due: Social Media/Teaching Memo 1

Week 6

Feb 13 **Panel Presentations 1.1**
Reading: -----

Feb 15 **Panel Presentations 1.2**
Reading: -----
Due: Panel Peer Evaluation 1.1
Panel Reflection Memo 1.1

Week 7

Feb 20 **Cultural Theory**
Reading: TEXTBOOK- Chapter 5
Panel Peer Evaluation 1.2
Panel Reflection Memo 1.2

Feb 22 **Exchange Theory and Rational Choice Theory**
Reading: TBA

Week 8

Feb 27 **Critical Theory**
Reading: TEXTBOOK- Chapter 7

Mar 01 **Critical Race Theory**
Reading: TEXTBOOK- Chapter 8

Week 9

Mar 06 **Feminist Theory**
Reading: TEXTBOOK- Chapter 9
Mar 08 **Review Day**
Reading: -----
Due: Social Media/Teaching Memo 2

Week 10

Mar 13 **No Class- Spring Break**
Reading: -----
Mar 15 **No Class- Spring Break**
Reading: -----

Week 11

Mar 20 **Panel Presentations 2.1**
Reading: -----
Mar 22 **Panel Presentations 2.2**
Reading: -----
Due: Panel Peer Evaluation 2.1
Panel Reflection Memo 2.1

Week 12

Mar 27 **Symbolic Interaction**
Reading: TEXTBOOK- Chapter 10
Due: Panel Peer Evaluation 2.2
Panel Reflection Memo 2.2
Mar 29 **No Class- Southern Sociological Society Conference**
Reading: -----

Week 13

Apr 03 **Erving Goffman**
Reading: TEXTBOOK- Chapter 11
Apr 05 **Phenomenology, Ethnomethodology, and Social Constructionism**
Reading: TBA

Week 14

Apr 10 **Pierre Bourdieu**
Reading: TEXTBOOK- Chapter 13
Apr 12 **Globalization**
Reading: TEXTBOOK- Chapter 14
Social Media/Teaching Memo 3

Week 15

Apr 17 **Panel Presentations 3.1**
Reading: -----
Due: Autoethnography Memo
Apr 19 **Panel Presentations 3.2**
Reading: -----
Due: Panel Peer Evaluation 3.1
Panel Reflection Memo 3.1

Week 16

Apr 24 **Theory Testing and Theory Building**
Reading: -----
Due: Panel Peer Evaluation 3.2
Panel Reflection Memo 3.2

Apr 26 **No Class- Final Exam Period**
Reading: -----

Week 17

May 02 **Final Exam Period (8:30am)**

ADDITIONAL RESOURCES

The Society Pages	https://thesocietypages.org/
Sociosite	http://www.sociosite.net/topics/theory.php

TIPS FOR ACADEMIC SUCCESS

1. *Concentrate on conceptual understanding, application, and interpretation.* Rather than rote memorization, focus on understanding concepts through application and interpretation of examples. I am not interested in your ability to recite definitions because your experience of the social world does not operate that way. I want you to demonstrate your ability to understand and apply sociological concepts to your life experience. You need to know all the concepts, but a general understanding should be adequate to accomplish this task.

2. *Practice sociology at every opportunity.* Participating in class discussion improves your understanding of sociology by making it more approachable, relatable, and interesting. Chat with your friends and family about material you learn in my class. At least, you will have a stimulating conversation. Students find this very effective (as do I). If you have questions or find a topic particularly interesting, you are welcome to chat with me as well.

3. *See sociology in everyday life.* Everything is sociological because we are social beings that interact with the world through social means. Consider the sociology of everything from the mundane to the complex—your clothes, movies, people you choose as friends, garbage, world events in the news, buildings. You will realize that sociology is ubiquitously relevant.

4. *Read strategically.* First, I recommend reading the summaries at the end of each chapter to prime yourself for the issues discussed in greater detail within each chapter. Second, skim over the section headings in each chapter to see how information is organized. This will provide you logic from which to understand the material. Third, read the chapters and think of your own examples while doing so. My lecture is meant to review and clarify the information in the reading. I recommend re-reading any information that seems confusing and come to class with questions about those topics you would like me to clarify or provide more insight.

5. *Communicate*. I cannot help you if we do not know you or your difficulties. I encourage you to ask questions. You are welcome to speak with me through e-mail, after class, or by appointment.

CLASSMATE CONTACT INFORMATION

I provided space below to record the names and e-mail addresses of a few students in this class. This will help if you have questions about assignments or miss a day and need to get notes.

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Name E-mail Name E-mail

---------- ---------- Name

E-mail Name E-mail

---------- ---------- Name

E-mail Name E-mail