



Course Approval Form

For instructions see:
<http://registrar.gmu.edu/facultystaff/catalog-revisions/course/>

Action Requested:

☒ Create new course ☐ Inactivate existing course
☐ Modify existing course (check all that apply)
☐ Title ☐ Credits ☐ Repeat Status ☐ Grade Type
☐ Prereq/coreq ☐ Schedule Type ☐ Restrictions
Other: _____

Course Level:

☐ Undergraduate
☒ Graduate

College/School: Science Department: GGS
Submitted by: Tim Leslie Ext: 3-4336 Email: tlelie@gmu.edu

Subject Code: GGS Number: 507
(Do not list multiple codes or numbers. Each course proposal must have a separate form.)

Effective Term: ☒ Fall ☐ Spring ☐ Summer
Year 2016

Title: Current _____
Banner (30 characters max w/ spaces) Sustainable Development
New Sustainable Development

Fulfills Mason Core Req? (undergrad only)

☐ Currently fulfills requirement
☐ Submission in progress

Credits: ☒ Fixed 3
(check one) ☐ Variable to

Repeat Status: ☒ Not Repeatable (NR)
(check one) ☐ Repeatable within degree (RD) Maximum credits allowed:
☐ Repeatable within term (RT)

Grade Mode: ☒ Regular (A, B, C, etc.)
(check one) ☐ Satisfactory/No Credit
☐ Special (A, B, C, etc. +IP)

Schedule Type: ☒ Lecture (LEC)
(check one) ☐ Lab (LAB)
LEC can include ☐ Recitation (RCT)
LAB or RCT ☐ Internship (INT)
☐ Independent Study (IND)
☐ Seminar (SEM)
☐ Studio (STU)

Prerequisite(s): _____
Corequisite(s): _____

Instructional Mode:

☒ 100% face-to-face
☐ Hybrid: ≤ 50% electronically delivered
☐ 100% electronically delivered

Restrictions Enforced by System: Major, College, Degree, Program, etc. (include code)

Equivalencies: (check only as applicable)

☐ YES, course is 100% equivalent to: _____
☐ YES, course is being renumbered
☐ to/will replace the following: _____

Catalog Copy for NEW Courses Only (Consult University Catalog for models)

Description (No more than 60 words, use verb phrases and present tense)	Notes (List additional information for the course)
Sustainability lies at the intersection of the environment, society and economics. This course explores the concepts, applications, and tools for analysis and decision making in support of environmentally sustainable, socially responsible and economically prosperous development. Case studies and problem-solving exercises will stimulate learning and provide practical experience in addressing sustainable development issues.	

Indicate number of contact hours: _____ Hours of Lecture or Seminar per week: 3 Hours of Lab or Studio: _____
When Offered: (check all that apply) ☐ Fall ☐ Summer ☒ Spring

Approval Signatures

College/School Approval Date _____
If any other units, the originating department must circulate this proposal for review by _____
Failure to do so will delay action on this proposal.

Unit Name	Unit Approval Name	Unit Approver's Signature	Date

For Graduate Courses Only

Graduate Council Member

Provost Office

Graduate Council Approval Date

Course Proposal Submitted to the College of Science Curriculum Committee (COSCC)

The form above is processed by the Office of the University Registrar. This second page is for the COSCC's reference. Please complete the applicable portions of this page to clearly communicate what the form above is requesting.

FOR ALL COURSES (required)

Course Number and Title: GGS 507: Sustainable Development

FOR NEW COURSES (required if creating a new course)

- Reason for the New Course: There exists substantive demand for additional environmental geography courses in our graduate program.
- Relationship to Existing Programs: Will serve as an elective course for GGS graduate programs. May potentially be usable in MAIS programs – requested creation as part of COS effort by Dann Sklarew.
- Relationship to Existing Courses: Graduate version of Existing Course
- Semester of Initial Offering: Spring 2017
- Proposed Instructors: Maction Komwa
- Insert Tentative Syllabus Below

APPROVALS:

GGS Curriculum Committee – Nov 10, 2015

GGS Departmental Vote – Nov 11, 2015

GGS 307/590 Sustainable Development [DRAFT]
Spring 2015
Department of Geography & GeoInformation Science

Contact details:

Instructor : Maction Komwa, PhD
Office : Exploratory Hall, Room 2210
Office hours : TBA
Tel : 703-993-5646
Email : mkomwa@gmu.edu

Class details

Day/Time : TBA
Location : TBA
Credits : 3 hours

Catalog description:

Sustainability lies at the intersection of the environment, society and economics. A sustainable future requires professionals who are able to integrate sustainability into existing programs. A particular knowledge base and skill set is required to drive this kind of transformational change. This course will explore the concepts, applications, and tools for analysis and decision making in support of environmentally sustainable, socially responsible and economically prosperous development. Case studies and problem-solving exercises will be used to stimulate learning and provide practical experience in addressing sustainable development issues.

Student Learning Objectives (SLOs):

The course objectives and learning goals for this course include:

- Understanding of the historical evolution, key theories and concepts of sustainable development.
- Articulate the major issues affecting sustainable development and how sustainable development can be achieved in practice.
- Identify and apply methods for assessing the achievement of sustainable development
- Discover the science, technology, economics and politics underlying the concepts of sustainability.
- Understand the implications of overuse of resources, population growth and economic growth and sustainability.
- Explore the challenges the society faces in making transition to renewable resource use.
- Think critically and analytically to enhance research and writing skills.
- Communicate effectively through oral presentation.

Teaching and Assessment

The course is comprised of lectures, discussions, city/campus visits, Guest Lecturers, class videos, students' presentations, and individual assignments/papers. Active participation is required in all sessions for students to pass this course.

Required Course Materials

The instructor has selected required readings that are placed under "Content" through the Blackboard [<https://mymasonportal.gmu.edu>]. No textbook is required. It is your responsibility to check the blackboard from time to time. You will use your GMU ID to access the reading materials through the Blackboard.

Student Requirements:

To successfully complete this course, students must complete all assigned readings as well as attend class; neither the text book nor lecture notes alone will suffice. Please take note that this course will challenge you intellectually and that missing 60% or more of the classes will result in a failing grade,

Grading Policy

The following grading criteria will be used to determine your final grade:

Assignment		Weighted %
Discussion Leader	x1	5%
Short Writing Assignments	X4	20%
Midterm	x1	15%

Oral Presentations	x1	10%
Analysis Paper/Strategic Action Plan	x1	25%
Final Exam	x1	20%
Class Participation	x1	5%

A+ 9 -100	B+ 86 – 89	C+ 76 – 79	D 68 – 60
A 93 -97	B 83 – 85	C 70 – 75	F < 60
A 90 -92	B- 80 – 82		

I will use the Blackboard gradebook to keep track of your grades.

Short Writing Assignments

There will be 4 short writing assignments worth 20 points each during the semester designed for students to apply the concepts and skills introduced in our class sessions. Topics such as energy resources, sustainability assessment of an anthropogenic system among many other topics. Most of these assignments will come from the series of case studies, lectures, articles etc., which will be presented in class. These assignments should be submitted on line through the course Blackboard.

Forum Discussion Leader

Additionally, there will be reading assignments from time to time derived from assigned articles that will be posted through the Blackboard. Each student will serve as a Forum Discussion Leader of any article that might be assigned by the Instructor. Students will identify key issues and subjects which they believe should be considered by the class in a conversation about sustainability and society. The Forum Discussion Leader will be required to:

- Succinctly synthesize the material with a brief opening oral presentation (including a set of slides highlighting the most important points from the article.
- Develop two or three questions intended to stimulate class discussion.

Final Project

Student ideas and projects are important to further and enrich sustainability efforts that will be discussed in the course. Therefore, during the course of the semester, students will develop an academic research project that will address at least a concept of sustainability and society. The student will then present their final project and write Analysis Paper and come up with a Strategic Action Plan for a sustainability challenge or opportunity. For the Analysis Paper, both graduate and undergraduate students will give a detailed critical analysis of a sustainability challenge or innovation. They will give a clear recommendations for what requires to be done to bring positive change for sustainability.

The Strategic Action Plan will build on the Analysis Paper and this will be additional work for ONLY graduate students. Details of both assignments will be discussed in class and guidelines will be uploaded through the Blackboard in the Assignment folder.

Format Requirements for Written Assignment:

Use this as a checklist before submitting all assignments.

- Must be typed using MICROSOFT WORD and be saved and uploaded as a MICROSOFT WORD document NOT pdf file.
- Be properly named to avoid any confusion. For example use your first initial dot LASTNAME1 [M.Komwal...] In this case I represent Assignment # 1 etc.
- 1.5-inch spacing (NOT double-spaced) with 1-inch margins (“normal” setting in MS Word).
- Use 12-point font. Acceptable choices include Times New Roman, Arial, Calibri, or Cambria.
- Include page numbers at the bottom of the page.
- Be well written – punctuation, spelling, composition, syntax, and grammar will be graded.
- Be submitted before the stated time on the due date (5 Points will be deducted for not following the above instruction).
- Late Assignments will result in a lower grade. When your assignment is late, 5-points will be deducted for the first 3 days (5 x 3=15 points) depending on the assignment thereafter the assignment will get a Zero grade!

Classroom Expectations:

Students are expected to be on time for class. Regular attendance is strongly recommended.

1. Should circumstances arise that make you late, do not disrupt the class as you enter, take the first available seat and do not walk across the room.
2. Do not eat or drink in the class, unless you bring enough for everyone,
3. Clean up after yourself. If you pack it in, pack it out; leave your seat better than you found it. Remember, take only notes, and leave only a warm seat.
4. In the event of any class cancellation, including inclement weather (e.g. snow), the class will resume where we left off. Adjustments, if necessary, will be made later.

Academic Integrity:

George Mason University operates under an honor system, which is published in the University Catalog and deals specifically with cheating, attempted cheating, plagiarism, lying, and stealing. Please familiarize yourself with the honor code, especially the statement on plagiarism (<http://www.gmu.edu/org/honorcouncil/guidelines.htm>).

Email Policy

GMU faculty and staff may only correspond with students through the students' GMU assigned email accounts. Emails sent from other accounts will not necessarily be answered. Course information will be shared via email. Please notify me if you would like your email to remain private and not shared with your classmates. Gmail or Yahoo accounts etc. will not be acknowledged.

University Services

George Mason University has a number of academic support and other resources to facilitate your success. Some of these resources are presented below:

- i. Counseling and Psychological Services [<http://caps.gmu.edu/>]
- ii. Learning Services, University Career Services [<http://careers.gmu.edu/>]
- iii. The Writing Center [<http://writingcenter.gmu.edu/>] and other Learning Services within GMU.
- iv. University Catalog: <http://catalog.gmu.edu/>
- v. University Policies: <http://universitypolicy.gmu.edu/>

Absences & Accommodations

Students are expected to attend all classes and to complete all assignments on time. Absences may have an adverse effect on grades in a course including failure.

Excused absences: In certain circumstances, absences may be excused. These include:

- **Absence for religious observances:** Students must notify their professors in writing at the beginning of the semester of religious observances that conflict with classes. Students who cannot be accommodated should discuss the matter with a dean.
- **Absence for athletic travel:** Student-athletes must provide their professors with a travel letter at the beginning of the semester which highlights potential absences. Students who cannot be accommodated for some or all absences should discuss the matter with the relevant Academic Coordinator for Student-Athletes.
- **Absence for documented illness:** Students who miss multiple classes due to prolonged illness should seek medical care and provide documentation of such to the Dean's Office, which will communicate with the student's professors. A prolonged absence may necessitate the student's withdrawal from the course or from the University for the semester.
- **At the discretion of the professor:** There may be cases where an absence is undocumented but is, nevertheless, excused by the professor (e.g., absence due to a death in the family). Students should initiate a conversation with their professors about the nature and duration of the absence, in advance of the absence whenever possible.

When absences are excused, students remain responsible for all assigned work, and shall be provided with the opportunity to make up, without penalty, any work that they have missed.

Accommodating Disabilities

George Mason welcomes students with disabilities into the University's educational programs. If you are a student with a disability and you need academic accommodations, please contact the Office of Disability Services (ODS) at 703-993-2474. All academic accommodations must be arranged through the ODS. All students with questions or concerns about this class are encouraged to set up a time to meet with the professor, preferably during the first two weeks of the semester.

Cell phone/social media policy:

Cell phones are to be switched off or in silent mode ONLY if urgent messages are expected from family members; no cell phones shall be answered or calls made, nor text messages sent or received or postings made or read on social media sites. If the student expects/needs to respond to a family emergency or situation, he/she can excuse him/herself from class to respond. This policy is for professional courtesy and respect to the lecturer and fellow students.

Use of Laptops/Tablets:

Laptops/tablets may be used for note taking. Use of laptops/tablets for any purposes other than note taking or class research purposes will not be permitted. Twitter, Skype, Facebook and other digital/social media auto-notifications and all other instant messaging notifications that would be disruptive to the lecturer, student or fellow classmates are to be switched off.

Tentative Schedule & Readings

The schedule presented below is subject to change at the discretion of the instructor. Every effort will be made to announce changes in advance, however, students are responsible for changes. Students should regularly check the course Blackboard account as information related to the class including schedule and assignment changes will be communicated there or through the GMU email.

Week	Topic description	Assignment & Due Date
1 -2	Sustainability and the Human Future	--
	<ul style="list-style-type: none"> Overview of the course What is Sustainability? The debate over Sustainable Futures, and the Earth Summits & Agreements The Sustainable Development (SD) timeline 	--
3	Foundational concepts important to SD	--
	<ul style="list-style-type: none"> Neoclassical and Ecological Economic approaches to Sustainable development <ul style="list-style-type: none"> Integrating industry with nature Sustainable social-ecological systems Conservation and Sustainable Development 	
4	Traditional Ecological Knowledge (TEK) & Sustainability	Writing Assignment I
	<ul style="list-style-type: none"> The nomenclature of traditional ecological knowledge and its application to sustainable development Indigenous rights. Factual knowledge regarding past and current uses of the environment Guest Lecturer from Fairfax City or GMU Office of Sustainability 	--
5	Urban sustainability in the twenty-first century	--
	<ul style="list-style-type: none"> Pathways to Urban Systems & Sustainability Campus Sustainability Outreach A visit to some Green Buildings within GMU campus or Fairfax City Mid-Term Exam	--
6-7	Renewable and sustainable energy pathways	Writing Assignment II
	<ul style="list-style-type: none"> The science of energy and change Renewable/ sustainable energy technologies Energy resource, its efficiency and environmental impacts 	--
8	Planetary boundaries & the theory of geography and ecology	Project Proposal
	<ul style="list-style-type: none"> Global and regional changes of environment and climate Sustainable regional development Population dynamics & sustainable development The case of sustainable food supply 	--
9-10	Tools, Systems and Innovation for Sustainability	Writing Assignment III
	<ul style="list-style-type: none"> Life cycle analysis; sustainability indices and rating systems Carbon, water and ecological foot printing Environmental Management Systems Green House Gas Inventory Environmental Performance indicators The UN Sustainable Development Goals The Millennium Villages and agro-ecological zones 	--
11-12	Major challenges and the future of sustainable development	Writing Assignment IV
	<ul style="list-style-type: none"> Climate and Global Change Energy demand & Water Resources Economic Development & Growth Dynamics 	--

	• Rethinking sustainable development after Rio+20 world	
13-14	Course Review Final Presentation	Final Paper
15	Final Exam [Date TBA]	

Specific readings for the above suggested topics will be placed in the "Content >>>Reading" Folder through the Blackboard
