George Mason University
Graduate Course Approval/Inventory Form

Please complete this form and attach a copy of the syllabus for new courses. Forward it as an email attachment to the Secretary of the Graduate Council. A printed copy of the form with signatures should be brought to the Graduate Council Meeting. Complete the Coordinator Form on page 2, if changes in this course will affect other units.

Please indicate:  

[ ] NEW  
[ ] MODIFY  
[ ] DELETE

Local Unit: CSS  
Graduate Council Approval Date: ______________________

Course Abbreviation: CSS  
Number: 660

Full Course Title: COMPUTATIONAL SOCIAL SCIENCE OF SPACEFARING CIVILIZATION

Abbreviated Course Title (24 characters max.): COMPUT SOC SCI SPACE CIV

Credit hours: 3:3:0  
Program of Record: CSS

Repeatable for Credit?  
[ ] D=Yes, not within same term  
[ ] T=Yes, within the same term  
[ ] X N=Cannot be repeated for credit

Activity Code (please indicate):  
[ ] Lecture (LEC)  
[ ] Lab (LAB)  
[ ] Recitation (RCT)  
[ ] Studio (STU)  
[ ] Internship (INT)  
[ ] Independent Study (IND)  
[ ] Seminar (SEM)

Catalog Credit Format 3:3:0  
Course Level: GF(500-600) [X]  
GA(700+) [ ]

Maximum Enrollment: 20  
For NEW courses, first term to be offered: Fall 2006+

Prerequisites: CSS 600, 610 and permission of instructor

Catalog Description (35 words or less)  
Please use catalog format and attach a copy of the syllabus for new courses: Focus on goals, resources, history and modeling issues concerning human and social dimensions of the space program using CSS. Design and development of socially viable human communities in extreme environments.

For MODIFIED or DELETED courses as appropriate:
Last term offered:  
Previous Course Abbreviation:  
Previous number:

Description of modification:

APPROVAL SIGNATURES:

Submitted by: Prof. Claudio Cioffi-Revilla  
email: ccioffi@gmu.edu

Department/Program: Center for Social Complexity  
Date: 2/3/2004

College Committee: ______________________ Date: ______________________

Graduate Council Representative: ______________________ Date: ______________________
Course Name and Number: CSS 660 (3:3:0) Computational Social Science for Spacefaring Civilization

Catalog Description: Focus on goals, resources, history and modeling issues concerning human and social dimensions of the space program using CSS. Design and development of socially viable human communities in extreme environments. Prerequisite: CSS 600, 610 and permission of instructor.

Learning objectives: to understand past and current trends in human space program, including robotic support; to understand the requirements of human communities in extreme environments; to analyze energetics and economics of spacefaring human communities; to model potentially viable social organizational solutions

Syllabus Topics:
Motivation for the space program
History of space exploration
Current organization of the space program
Gantt analysis of space scheduling
Earth from space
Extreme environments
Human and social factors in space
Near-earth exploration
Space colonization
Social organization in extreme environments
Economic analysis of space resources
Energetics of colonization
Precursory exploration
Spacefaring civilization

Reading Resources:

http://www.nationalacademies.org/space/