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

Local Unit: CNHS  Graduate Council Approval Date:

Course Abbreviation: HSCI  Course Number: 525

Full Course Title: Risk Analysis in Health & Biosciences

Abbreviated Course Title (24 characters max.): Risk Analysis

Credit hours: 3  Program of Record: Health Science

Repeatable for Credit? N=Cannot be repeated for credit

Activity Code (please indicate): ___X_ Lecture (LEC)

Catalog Credit Format 3 : 3 : 0  Course Level: GF(500-600)
Maximum Enrollment: 20  For NEW courses, first term to be offered: Spring 2005
Prerequisites or corequisites:
None

Catalog Description (35 words or less) Please use catalog format and attach a copy of the syllabus for new courses:
Students learn to assess risk at the time of increased threats and drive the information security program of healthcare organization. The course includes qualitative and quantitative risk analysis models, risk analysis life cycle as well as methods of evaluating the validity and reliability of existing indices. Students learn about existing tools for assessment of risk as well as procedures for construction of new risk indices

APPROVAL SIGNATURES:
Submitted by: Farrokh Alemi  email: falemi@gmu.edu

Department/Program: Date:

College Committee: Date:

Graduate Council Representative: Date:
GEORGE MASON UNIVERSITY  
Course Coordination Form  

Approval from other units: 

Please list those units outside of your own who may be affected by this new, modified, or deleted course. Each of these units must approve this change prior to its being submitted to the Graduate Council for approval.

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Graduate Council approval: ______________________________ Date: ____________

Graduate Council representative: __________________________ Date: ____________

Provost Office representative: _____________________________ Date: ____________
Proposed modified course: HSCI 525 (3: 3: 0)

Proposed Title:  Risk Analysis in Health & Biosciences

Prerequisites or co-requisites:
Proposed Course Description: Students learn to assess risk at the time of increased threats and drive the information security program of healthcare organization. The course includes qualitative and quantitative risk analysis models, risk analysis life cycle as well as methods of evaluating the validity and reliability of existing indices. Students learn about existing tools for assessment of risk as well as procedures for construction of new risk indices.

Course Objectives

1. Demonstrate knowledge of history of risk analysis in various industries
2. Demonstrate understanding of uncertainty and its various definitions in decision making
3. Demonstrate knowledge of probabilistic distributions for rare events
4. Use statistical inference tools to estimate probability of rare events
5. Conduct fault tree and event tree analysis
6. Analyze data from dependent failures
7. Solicit and use expert opinions where objective data are not available
8. Quantify human reliability and relationship between failure and complexity of the system
9. Model uncertainty and measure risks in defined systems
10. Create influence diagrams and estimate expected cost of an adverse outcome
11. Demonstrate knowledge of health care risk regulations