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:  __X__ NEW  ___ MODIFY  ___ DELETE

Local Unit:  SCS  
Graduate Council Approval Date:

Course Designation:  NANO  
Course Number:  540

Full Course Title: Nanotechnology in Commerce and Government

Abbreviated Course Title (24 characters max.): Nanotechnology & Commerce

Credit hours:  3  
Program of Record: Graduate Certificate in Nanotechnology and Nanoscience

Repeatable for Credit?  ___ D=Yes, not within same term  Up to __ hours maximum
___ T=Yes, within the same term  Up to __ hours maximum
__ X _ N=Cannot be repeated for credit

Activity Code (please indicate):  _ X __ 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:  30  
For NEW courses, first term to be offered:  S06

Prerequisites: NANO 500 and admission into the Graduate Certificate in Nanotechnology and Nanoscience.

Catalog Description (35 words or less): Discusses competitive position of the United States and other countries in nanoscience and nanotechnology. Covers business strategies, environmental, and public health aspects of nanotechnology applications. Also introduces students to issues involving legal, economic, social, and political controls over nanotechnology and nanoscience research.

APPROVAL SIGNATURES:
Submitted by:  ________________________________ email: ________________

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.

<table>
<thead>
<tr>
<th>Unit:</th>
<th>Head of Unit’s Signature:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graduate Council approval: __________________________________________ Date: __________

Graduate Council representative: __________________________________________ Date: __________

Provost Office representative: ________________________________ Date: __________
Course proposal to the Graduate Council
by
The School of Computational Sciences

1. COURSE DESIGNATION:

NANO 540 Nanotechnology in Commerce and Government (3: 0: 0)

Prerequisites: NANO 500 and admission into the Graduate Certificate in Nanotechnology and Nanoscience.

Catalog description: Discusses competitive position of the United States and other countries in nanoscience and nanotechnology. Business strategies. Environmental and public health aspects of nanotechnology applications. Legal, economic, social and political controls over nanoscience research and nanotechnologies.

Course Grading: Standard grading options for a graduate course.

2. COURSE JUSTIFICATION:

Course objectives: Exposes students to the public policy and legal issues that arise in the field of nanotechnology.

Course necessity: This course is needed in order to provide students with focused material on the unique policy and legal questions that arise in the nanotechnology field.

Relationship to existing programs: The proposed course serves as part of the sequence of classes applicable to the Graduate Certificate in Nanotechnology and Nanoscience. It offers specialized knowledge and training on public policy and legal issues.

Relationship to existing courses: No other similar course is currently offered at GMU.

3. APPROVAL HISTORY NA

4. SCHEDULING AND PROPOSED INSTRUCTORS

Time of initial offering: Spring 06

Proposed instructors: Member of the Nanotechnology faculty.
5. SAMPLE STUDENT SYLLABUS:

NANO 540 Nanotechnology in Commerce and Government


Tentative Course Content:

- Week 1: Introduction to Nanotechnology
- Week 2: Societal and ethical implication
- Week 3: Environmental regulations
- Week 4: Patent and Trademark office
- Week 5: FDA regulations
- Week 6: National Security and Export control
- Week 7: Federal Funding
- Week 8: Starting a nano business
- Week 9: Intellectual property
- Week 10: Business planning strategy
- Week 11: Early stage financing
- Week 12: Corporate Partnerships and Globalization
- Week 13: Nanotechnology and professional ethics
- Week 14: Case studies

Grading: Assignments: 30%; Quizzes 30%; Final: 40%