THE UNIVERSITY OF NEW MEXICO
SENATE GRADUATE COMMITTEE

DATE: **November 17, 2006**

TO: **SGC Committee**

FROM: **SGC Curriculum Sub-Committee (Grant Meyer, Chair; Ann Cunliffe, Mary Ellen Hanson)**

RE: **Curriculum Forms – New Degree Proposals, Degree Program Changes and New Course Requests**
SGC Meeting: April 6, 2006

College/School	Graduate Unit	Form	Course Title & Description/Justification/Reason	Action
A & S/ Engineering	Nanoscience and Microsystems	D	Creating new MS and PhD degrees in Nanoscience and Microsystems. This program will provide educational opportunities for students interested in interdisciplinary materials science at the nano-level. Nanoscience lies at the confluence of the traditional disciplines of solid-state physics, chemistry, biology, materials science and engineering. A significant portion of this degree program entails acquiring new knowledge about nanoscience and the application of nanoscience to Microsystems technology.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 410/510 – Chemistry and Physics at the Nanoscale (3 cr.) Students will study chemical and physical concepts necessary to understand nanoscale materials: Quantum properties, change confinement, and nanoscal thermodynamics, surface and interfacial forces, nanomachines and nanostructures, self-organization and scaling. Emphasis on problem-solving skills development. Required course, no duplication, not offered as topics**. Graduate students will be required to complete a detailed term paper on one or more aspects of the physics and chemistry that is necessary to understand the principle of operation of a nanodevice, or the underlying scientific basis for a particular phenomena that is observed only at the nanoscale**.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 512 – Characterization Methods for Nanostructures (3 cr). Nanostructure characterization methods. Examines principles underlying techniques and limitations, and how to interpret data from each method: electron beam, scanning probe, x-ray, neutron, scattering, optical and near field optical. Required, no duplication, not offered as topics.	

A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 518 – Synthesis of Nanostructures (3 cr). Underlying physical and chemical principles (optics, organic, and inorganic chemistry, colloid Chemistry, surface and materials science) for nanostructure formation using "top-down" lithography (patterned optical exposure of photo sensitive materials) and "bottom-up" self-assembly. Required course, no duplication, offered as topics Fall 2005..	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 519 – NEMS Transducer Devices & Technology (3 cr). Bridging nanostructures and Microsystems, about integrating nanostructures into systems and functioning devices. Covers silicon based MEMS, biological systems, other applications, modeling and reliability. Required, no duplication, taught as topics Fall 2004	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 530 – Surface & Interfacial Phenomena (3 cr). Introduces various intermolecular interactions in solutions and in colloidal systems, colloidal systems; surfaces; interparticle interaction polymer-coated surfaces; polymers in solution; viscosity in thin liquid films; surfactant self-assembly; and surfactants in syrfaces. Required, no duplication, not offered as topics.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 532 – Nanoscale Electronic and Photonic Devices (3 cr). Introduces devices, device physics, characteristics and possible applications specific to the nanoscale. Topics include single electron transistor, carbon nanotube electronics, quantum dot devices, spin-polarized electronic and photonic devices.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 533 - Vapor & Aerosol Phase Materials Processing (3 cr). Materials synthesis and processing by physical vapor deposition, chemical vapor disposition, and aerosol routes are explored. Underlying physicochemical fundamentals are discussed and examples from the recent lectures are used to exemplify the methods. Required, no duplication, not offered as topics.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS - 550 Social & Ethical Implications of Nanotechnology (3 cr). In this course, students will examine issues arising from this emerging technology, including those of privacy, health and safety, the environment, public perception and human enhancement. Required, no duplication, not offered as topics.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 595 – Special Topics (1-3 hours, max of 9 cr). Elective, not offered as topics.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 599 – Master's Thesis (1-6). Elective, not offered as topics.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 650 – Research (1-12, max of 24). Elective, not offered as topics.	
A & S/ Engineering	Nanoscience and Microsystems	B	NSMS 699 – Dissertation (3-12	
Fine Arts	Theatre and Dance	B	Dance 479/579 – Flamenco Choreography (3 cr). Designed for advanced students with knowledge of Flamenco structure and improvisation, cante, pamas, and three	

			levels of Flamenco technique, investigation of choreography in Flamenco movement and rhythms. **Graduate students will be given advanced choreographic assignments which they will be required to present in concert**. Elective, no duplication, offered as workshop previously.	
Health Sciences	Public Health	C	Creation of MPH/MD Dual status program. The program will require five years of integrated learning and is supported by the SOM strategic plan which has its priority to enhance opportunities for medical students to acquire public health knowledge and skills. The multi-disciplinary fields in Public Health will provide medical studens with skills in understanding the causes and distribution of disease and in creating multi-level interventions to prevent disease.	
ELECTRONICE FORMS		ELECTRONIC FORMS		ELECTRONIC FORMS
Arts & Sciences	Communication	C	Change from one concentration (intercultural communication) to three (intercultural communication, health communication, mass communication) to best serve doctoral students.	
Arts & Sciences	Communication	B	CJ 508 – Critical and Cultural Studies (3 cr). Introduces contemporary critical and cultural studies from a historical perspective. Analysis and criticism of cultural practices, including discourse, allocation of resources, political interests, and the structural organization of society. Elective, no duplication, not offered as topics.	
Arts & Sciences	Communication	B	CJ 515 – Feminist Perspectives in Communication (3 cr). Explores gender as a cultural lens through which to understand the processes, theories, and practices in the discipline of communication, including how the perspective challenges and transforms lived experience. Elective, no duplication, Not offered as topics.	
Arts & Sciences	Communication	B	CJ 553 – Health Communication Campaigns (3 cr). Focuses on the design, implementation and evaluation of communication programs for addressing health issues. Provides an overview of relevant theory and research and opportunities to study design, implement and evaluate actual health communication campaigns. Elective, no duplication, not offered as topics.	
Arts & Sciences	English	C	Revision of the PhD language and theory requirement, hours remain the same, distribution is changed to allow more breadth for students.	
Arts & Sciences	Psychology	C	Revision of existing curriculum for concentration in Cognitive psychology.	