ADDENDUM I
Graduate Studies Committee
October 20, 2009

Biol/ES/RP 569	**Ecosystem Ecology and Global Change** [change parent department for crosslisting] 3 Prereq graduate standing. Same as ES/RP 569.
BSysE 550	**Soil and Water Conversion Engineering** [new course] 3 Prereq graduate standing. Fundamentals of land, water and air conservation, with an emphasis on soil and water engineering concepts, state of the science solution techniques for solving contemporary soil and water problems and engineering design.
BSysE 554/ C E 585	**Aquatic Ecosystem Restoration** [crosslisting] 3 (2-3) Prereq Chem 345, C E 583; MBioS 101 C E 581. Study of natural and damaged water systems with emphasis on water quality protection and restoration of lakes, rivers, streams and wetlands.
BSysE 557	**Nutrient Cycling and Transport** [new course] 3 Graduate standing. Cycling of carbon, nitrogen, and phosphorus at global and watershed scales. Modeling of transformation and transport in agricultural systems. Strategies for pollution mitigation.
BSysE 558	**Groundwater Flow and Contaminant Transport** [change course number – former 595] 3 Prereq Math 315; BsysE 351 or C E 351 or Geol 475. Physics of flow and contaminant transport in saturated porous media including governing equations, well hydraulics and computer modeling.
BSysE 560/C E 583	**Aquatic Chemistry** [crosslisting] 3 C E 518 orinstructor permission. Chemical principles as applied to natural environmental systems, water supply and pollution control.
BSysE 564	**Agricultural Waste & Air Quality Management** [new course] 3 Graduate standing. This course introduces student to detailed analyses of agricultural wastes, their potential adverse impacts on the environment, current management systems to mitigate adverse impacts, and their reuse and recycle.
BSysE 584	**Thermal and Nonthermal Processing of Foods** [new course] 3 Graduate standing. Principles and practices of food preservation methods based on application of thermal and nonthermal processes.
BSysE 585	**Food Packaging** [new course] 3 graduate standing. The topics covered are packaging materials, properties of packaging materials, manufacturing of packages, shelf life testing, and food packaging interaction.

BSysE 595	**Biosystems Engineering for Fuel and Chemicals** [new course] 3 Graduate standing. Design and optimization of biological systems for industrial functions, modeling and simulation of cell processes, bioreactors, and system integration.
BSysE 596	**Biomass Thermo-Chemical Conversion** [new course] 3 Graduate standing. Introduction to biomass chemistry, analytical thermo-chemistry, torrefaction, pyrolysis, gasification and combustion (design, modeling and scale up). Characterization of uses of thermochemical products.
CS 552	**Database Systems** [new course] 3 Graduate standing. Concepts of modern database systems and theory.
EconS 534	**Production Economics** [former number 540] 3 Prereq EconS 526. Production economics theory and methods applied to problems of production response, economic optimization, technology, policy, risk and dynamics.
Engl/AmSt 515	**Contemporary Theories of Rhetoric** [Crosslisting] 3 Graduate Standing. Contemporary critical theory and cultural studies and reconsiderations of suasive discursive practices.
I D 700	**Master's Research, Thesis, and/or Examination** [restore dropped course] V 1-18 May be repeated for credit. S, F grading.
Math 533	**Teaching College Mathematics** [new course – decrease credit from on 3-credit course to a repeatable 1-credit course & title change] 1 Graduate standing. The theory and practice of mathematics instruction at the collegiate level. May be repeated for credit.
Nurs 529	**Analytical Seminar for Health Sciences** [new course – variable credit 1-3] V 1-3. Admission to graduate program, completion of Nurs 527 and Nurs 528 or permission of instructor. Seminar guided research techniques and to explore in-depth research methods used for health science research.
Nurs 532	**Resource Stewardship in Health Care** [new course] Admission to graduate program or permission of instructor. Theory, research and practice dimensions of resource stewardship to effectively manage human and material resources in the practice setting.
Nurs 576	**Organizational Leadership** [new course] Admission to graduate program or permission of instructor. Integration of leadership competencies and nursing practice for nurse leaders in a constantly changing health care environment.

SoilS/Stat/
ES/RP/Geol 508 **Environmental Spatial Statistics** [new course – crosslisting – course fee]
Theoretical introduction and practical training in spatial data analysis for graduate students in the environmental sciences.