



Graduate Course Changes effective for the 2009-2010 Academic Year

This list of course additions, changes, and deletions has been approved by the University Senate as of January 14, 2009.

This list is typically updated monthly from November through May. Last updated 1/23/09.

Graduate Course Changes effective for the 2009-2010 Academic Year

I. Courses Changed

College of Arts and Sciences

From: ANT 462/662/WSP/HTW 462 Culture and Reproductive Health and Medicine

To: ANT/HTW 462/662/WGS 462 [HTW dble # / pfx change]

From: CHE 412/612 Metals in Medicine

Bonding, stereochemistry, and properties of metallo-drugs and diagnostic agents. Topics in clued platinum compounds for treating cancer, gadolinium and technetium in biomedical imaging, and porphyrins in photo-dynamic therapy. Laboratory experiments emphasize the main topics covered in lecture. Additional work required of graduate students.

To: [descr. change only]

Delete underlined.

From: CSD 345/645 Fundamentals of Speech Science

To: [Preq. added]

Preq: CSD 315/615, CSD 316/616 or permission of instructor.

From: CSD 427/625 Articulation Disorders

Overview of normal articulation and development. Characteristics and description of articulation disorders. Incidence, etiology, related factors. Differences versus disorders. Principles of assessment, types of diagnostic instruments. Elements involved in therapy, various approaches to remediation. A course in phonetics is required.

To: [descr. change/preq. added]

[Delete underlined] Preq: CSD 316/616 or equivalent.

From: CSD 509 Neural Processes of Speech and Language

Neuroanatomical and neurophysiological aspects of speech and language. Role of central and peripheral nervous system in normal speech and language activities.

To: CSD 409/609 Cognitive Neuroscience of Speech and Language

Add to description: Additional work required of graduate students.

From: CSD 511 Cultural and Linguistic Issues in Communication Sciences and Disorders

Discussion of linguistic and cultural variation and comparisons of language acquisition and child

socialization across cultures. The assessment and treatment of communication disorders in individuals from culturally and linguistically diverse groups. Preq: CSD 316/616.

To: CSD 437/63 [#/descr/preq. change]

Add to description: Additional work required of graduate students.

From: CSD 518 Feeding and Swallowing Disorders

Review of the normal swallowing process from infancy to the elderly. Description of swallowing disorders associated with numerous medical conditions; discussion of evaluation procedures and management methods from indirect/direct therapy procedures to medical intervention.

Preq: CSD 315/615/, CSD 509 or p.o.i.

To: CSD 618 Dysphagia [#/title/descr/ change]

Anatomy and physiology of normal and disordered swallowing. Description of swallowing disorders associated with numerous medical conditions. Assessment and treatment of swallowing disorders in adults and children. Preq: CSD 315/615, CSD 409/609 or p.o.i.

From: CSD 523 Development of Speech and Language

To: CSD 422/622 [Double #/descr. change]

Add to description: Additional work required of graduate students.

From: CSD 525 Introduction to Stuttering

To: CSD 425/625 Stuttering [Double #/title/descr. change]

Add to description: Additional work required of graduate students.

From: CSD 538 Technology and Rehabilitation for Hearing Loss

Preq: CSD 325, 561.

To: CSD 439/639 [Double #/descr/preq. change]

Additional work required of graduate students. Preq: CSD 325, CSD 429/629.

From: CSD 545 Augmentative and Alternative Communication Systems

To: CSD 446/646 [Double #/descr. change]

Additional work required of graduate students.

From: CSD 551 Clinical Methods in Speech-Language Pathology

To: CSD 451/651 [Double # / descr. change]

Add to description: Additional work required of graduate students.

From: CSD 561 Basic Clinical Audiology

To: CSD 429/629 Basic Clinical Audiology [# / descr. change]

Add to description: Additional work required of graduate students.

From: CSD 562 Early Assessment and Intervention with Hearing-Impaired Children

To: CSD 449/649 Early Assessment and Intervention with Hearing-Impaired Children
[#/descr. change]

Add to description: Additional work required of graduate students.

From: CSD 565 Voice Disorder

Characteristics, assessment, remediation of voice difficulties in children and adults. Anatomy and physiology of vocal mechanism, functional dysphonias, ventricular phonation, spastic dysphonia, vocal-fold paralysis, resonance disorders, and laryngectomy. Prevention of phonation disorders.
Preq: CSD 315, CSD 345 or equivalent.

To: CSD 456/657 Voice Disorders [# / descr / preq. change]

Characteristics, assessment, remediation of voice difficulties in children and adults. Anatomy and physiology of vocal mechanism, functional dysphonias, organic dysphonias, neurological dysphonias, resonance disorders and laryngectomy. Prevention of phonation disorders. Additional work required of graduate students. Preq: CSD 315/615, CSD 345/645 or equivalent.

From: CSD 577 Speech-Language Pathology in School Settings

Preq: CSD 551 or permission of instructor.

To: CSD 477/677 Speech-Language Pathology in School Settings [# / descr / preq. change]

Add to description: Additional work required of graduate students. Preq: CSD 451/651 or p.o.i.

From: CSD 585 Auditory Anatomy and Physiology

Preq: CSD 315 or equivalent.

To: CSD 658 [# / preq. change]

Preq: CSD 315/615 or equivalent.

From: CSD 612 Cleft Palate, Craniofacial Disorders, and Genetics

Communicative disorders related to cleft palate and other craniofacial anomalies. Anatomy, physiology, craniofacial embryology. Characteristics, diagnosis, treatment of cleft palate. Genetic bases of craniofacial anomalies, cleft palate, and other disorders. Basic molecular and clinical genetics.

To: CSD 612 Genetics, Cleft Palate and Craniofacial Disorders [title/descr. change]

Genetic bases of craniofacial disorders, cleft palate and other disorders. Basic molecular and clinical genetics. Communicative disorders related to cleft palate and other craniofacial disorders. Anatomy, physiology, craniofacial embryology. Characteristics, diagnosis, treatment of cleft palate.

From: CSD 638 Introduction to Clinical Phonology

Overview of principles and concepts of phonology; applications of various theories of phonology in clinical settings. Focus on both assessment and remediation of phonological disorders. Practice with formal and informal phonological analysis procedures. *Phonetics course and some background in communication disorders or linguistics.*

To: CSD 638 Clinical Phonology [descr. change/preq. added]

Replace underlined text with:...treatment... **[Delete italicized text.]** Add Preq: CSD 316/616 or equivalent and CSD 427/627 or equivalent.

From: CSD 787 Vestibular Assessment and Management (2)

To: [credit change only] (3)

The following courses have prerequisite changes only:

Course No. & Title	Current Preq.	New Preq./Coreq.
ENG 825, 826 Adv Seminar in Critical Theory	ENG 825, 631, 641 or permission of instructor	ENG 825, 631 or permission of instructor
GOL 417/617 Geochemistry	Preq. for GOL 477 : GOL 314; CHE 107, 117. Prereq for GOL 677 : GOL 418, 517, or equivalents	Preq for GOL 417 : GOL 314; CHE 107, 117. Preq for GOL 617 GOL 418, 517, or equivalents
FSC 444/644 Forensic Chemical Analysis	CHE 113 or 116/117	CHE 116 or 119; CHE 117 or 139
LIN 591 Second Language Acquisition	None	LIN 301 or 601 or p.o.i

From: GEO/SOS 605 Theories of Development

To: GEO/SOS 705 [# change only]

From: GEO 805 Development of Geographic Thought

From pre-enlightenment conceptualization to the present. Emphasis on 20th century North American geography, regionalism, positivism, humanism, Marxism, and postmodernism.

To: GEO 603 [#/descr. change]

Historical survey of development of Geography. Emphasis on 20th century: regionalism, positivism, humanism, Marxism, feminism, post-structuralism/post-colonialism.

From: LIN 421/621 Methodology of Teaching English to Speakers of Other Languages

Topics include the grammar, sound system, lexis, and pragmatic use of English; how various skills are taught; individual differences and learning styles; history and theories of language teaching. Additional work required of graduate students. Permission of instructor.

To: LIN 421/621 Introduction to Methodology of Teaching English to Speakers of Other Languages

Topics include history and theories of language teaching; the teaching of content (grammar, sound system, lexis, and pragmatics) and skills; and assessment. Additional work required of graduate students.

Preq: LIN 301/601 or p.o.i.

From: LIN 422/622 Advanced Methods of Teaching English as a Second Language

Topics include curriculum development; computer assisted language learning; testing, materials, program administration, and evaluation; and professional development. Students observe classes and do a final project integrating various areas. Additional work required of graduate students.

To: LIN 422/622 Advanced Methods of Teaching English to Speakers of Other Languages

Topics include curriculum development, technology in language learning, global dialects, individual differences, second language acquisition, and professional development. Students complete a practicum. Additional work required of graduate students.

From: REL 691 Master's Seminar in Religion

Introduction to area studies and methodologies in the study of religion. Must be enrolled in the Religion Department M.A. program.

To: REL 691 Approaches to the Study of Religion

Introduction to classic texts, methods and approaches used in the field of religion and in this department. Must be enrolled in the Religion Department M.A. or Ph.D.

The Department of Earth Sciences' course designator changes from GOL to EAR. Below is a chart of all active GOL courses and the prerequisites that will change to EAR, effective fall 2009:

CURRENT COURSE #	COURSE TITLE	PRE-REQS
GOL 417/617	Geochemistry	Prereq for GOL 314; CHE 107, 117. Prereq for GOL 677: GOL 418, 517, GOL 478/678
GOL 430/630	Topics in Thermochronology and Tectonics	GOL 431/631, GOL 444/644
GOL 431/631	Plate Tectonics	Preq. for GOL 431: GOL333; Preq. for GOL 631: GOL 333; MAT 296; PHY 212; CIS/NAS 197
GOL 432/632	Seafloor Spreading and Oceanic Lithosphere	GOL 333, 314
GOL 435/635	Geophysics	MAT 296; PHY 212; GOL 314
GOL 444/644	Thermochronology	GOL 418 and 431/631
GOL 478/678	Isotope Geology	GOL 417, 617
GOL 600	Selected Topics	
GOL621	Seismic Stratigraphy	
GOL 624	Paleoecology	GOL 325
GOL627	Modern Sediments	
GOL659	Isotope Geochemistry	
GOL 670	Experience Credit	
GOL685	Stratigraphic Analysis	
GOL687	Chemical Sedimentology*	
GOL 690	Independent Study	
GOL860	Advanced Seminars in Geology*	
GOL 990	Independent Study	
GOL 997	Master Thesis Degree in Progress	
GOL 998	Degree in Progress	
GOL 999	Dissertation	

The Department of Women's and Genders Studies' designator changes from WSP to WGS. Below is a chart of all active WGS courses that will change to WGS, effective fall 2009:

CURRENT COURSE	CROSS LIST	COURSE TITLE
WSP 601		Feminist Theory
WSP 605	REL 605	Religion and the Body in Late Antiquity
WSP 612	FRE 612/412 WSP 412	French Women Writers
WSP 614	SOC 614, EDU 603	Introduction to Qualitative Research
WSP 615	CRS 614	Communication, Power, and Gender
WSP 625	SOC 625	Feminist Organizations
WSP 626	SWK 626	Persons in Social Contexts
WSP 627	SOC 627, AAS 627	New York City: Black Women Domestic Workers
WSP 628	SWK 628	Human Diversity in Social Contexts
WSP 635	SWK 635	Readings in Feminist Psychological Theories
WSP 640	PSY 640	Psychology of Gender
WSP 644	REL 644	Feminist Theology
WSP 645	AAS 645, SOC 645	The Caribbean: Sex Workers, Transnational Capital and Tourism
WSP 649	FIA 649	Seminar on Women in Art
WSP 653	SPA 653	Female Sinner and Saints in 19 th - and 20 th -Century Spanish Literature and film
WSP 655	ANT 655	Culture and AIDS
WSP 662	CFE 662, DSP 662	Youth, Schooling, and Popular Culture
WSP 664	SOC 664	Aging and Society
WSP 671	SPA 671	Latin American Literature and Feminist Theory
WSP 672	ANT 672, LIN 672	Language, Culture, and Society
WSP 674	ANT 674	Culture and Folklore
WSP 678	ANT 678	Language and Gender
WSP 705		Negotiating Difference: Coming of Age Narratives
WSP 740		Feminist Theories of Knowing
WSP 764	ANT 764, GEO 764	Gender and Globalization
WSP 776	CFE 776, DSP 776	Gender, Education, and Culture
WSP 795		The Practice of Transnational Feminism
WSP 812	EDO 810, SOC 811	Advanced Seminar in Qualitative Research I
WSP 821	SOC 821	Feminist Methodologies
WSP 833	SOC 833	Race, Class, and Gender
WSP 835	LAW 835	Women and the Law Seminar
WSP 876	GEO 876	Feminist Geography

College of Engineering and Computer Science

From: BEN 465/665 Skeleto-Muscular Biomechanics (4)

Integration in normal system function. Analytical and testing techniques. Prosthetic design. Ergonomic issues (lectures and laboratories). Preq: BEN 305 or equivalent; ECS 221; MAT 485 or p.o.i.

To: BEN 465/665 Biomechanics (3) [title/credit/descr/preq changes]

Functions and mechanical properties of cells and tissues, how those cells and tissues combine to form structures, the properties and behaviors of those structures, and biomechanical techniques to analyze the structures and individual components. Preq: BEN 365, ECS 221, and MAT 485.

From: BEN 601 Graduate Bioengineering Seminar (0)

To: (0-1) [credit change only]

From: BEN 641 Principles of Tissue Engineering

Cellular and biomaterials principles relevant to tissue engineering, focusing on cellular and tissue organization; regulation of cell behavior; biomaterials for tissue regeneration and material design issues; tissue engineering applications in cardiovascular, neurological, and skeletal-muscular systems. Permission of instructor.

To: BEN 541 [#/descr chngs/preq added]

Cellular and biomaterials principles relevant to tissue engineering, focusing on cellular and tissue organization; regulation of cell behavior; biomaterials for tissue regenerations; tissue engineering applications in cardiovascular, neurological, and musculoskeletal and other organ systems.

Preq: BEN 301 or equivalent.

From: CIE 642 Treatment Processes in Environmental Engineering (4)

To: (3) [credit change only]

From: CIE 443/643 Transportation Engineering

Planning and design of transportation routes and terminals. Traffic mechanics and geometric design of highway. A research project is required for students taking CIE 643. Permission of instructor.

Coreq: CIE 272 or equivalent.

To: CIE 443/643 Transportation Engineering [descr/preq change]

Transportation systems, modes and significance. Traffic engineering fundamental relationships and field studies. Intersection design and control. Geometric design of road alignments. Introduction to transportation planning. Additional work required of

graduate students. A research report is required for CIE 643. Preq: MAT 296, PHY 211.

From: CIE 653 Applied Aquatic Chemistry

Preq: CIE 551.

To: [Preq. change]

Preq: CIE 471 or CIE 671.

From: CIS 428 Introduction to Cryptography

Preq: CIS 565, MAT 534, or MAT 541.

To: [Preq. change]

Replace CIS 565 with CIS 477.

From: CIS 575 Introduction to Analysis of Algorithms

To: CIS 477 [# change only]

From: CIS 586/CSE 585 Design of Operating Systems

Design and implementation of modern operating systems. Resource management and protection of CPU, memory, and storage. File systems. Input/output. Concurrent process implementation. Process synchronization. Networking. Senior or graduate standing in computer engineering or computer science.

To: CIS/CSE 486 Design of Operating Systems [# /descr. change]

[Delete underlined]

From: CIS 657 Principles of Operating Systems

Design of operating systems; sequencing and control of concurrent processes, scheduling, processor and resource allocation among tasks, storage management, file systems. Preq: CIS 586, CSE 585, or equivalent.

To: CIS 657 Principles of Operating Systems [descr/preq. changes]

Design and implementation of operating systems. Process and memory management, resource scheduling, file system management, I/O and kernel services and structuring. Includes weekly lab using a Unix-like operating system. Preq: CIS/CSE 486 or equivalent.

From: ELE 635 Digital Electronic Circuits

Discrete and integrated digital circuit electronics. Evolution and comparison of basic logic families with emphasis on structures applicable to large arrays. Structure of bistable circuits, shift registers, counters and memories, DA and AD conversion circuits.

To: [descr. change]

Digital device and circuit technology and trends. Nanoscale semiconductor devices and memories as well as magnetic and optical memories. Semiconductor industry road map. Device fabrication techniques. DA and AD conversion circuits.

From: MAE 657 Convective Heat Transfer

Fluid properties and equations relevant to the topic. Forced and natural convection in pipes, along plates. Introduction to turbulent transport properties. Parametrization and selected applications.

To: MAE 657 Convective Heat and Mass Transfer [title/descr chng/preq. added]

Fluid properties and transport equations. Introduction to turbulent transport. Laminar and turbulent heat transfer in internal and external flows. Free convection. Heat transfer in high-speed flow. Convective mass transfer. Special topics. Preq: MAE 643 or p.o.i.

From: CIE 541 Transportation

Planning and designing of transportation routes and terminals; highway, railway, and airway. Traffic mechanics. Students are expected to complete a project. Three lectures and one laboratory a week. Permission of instructor.

To: CIE 443/643 Transportation Engineering (3)

Planning and design of transportation routes and terminals. Traffic mechanics and geometric design of highway. Additional work is required of graduate students. Permission of instructor. Coreq: CIE 272 or equivalent.

School of Public Communications

From: AJP 611 Literature of Criticism

Arts criticism in the fields of architecture, film, fine arts, music, and theater, particularly contemporary forms. Attendance at art events and critical writing required.

To: [Descr. change only]

Reading arts and cultural criticism in such fields as architecture, fashion, film, popular culture, television, theater and visual arts.

From: AJP 621 Practicum: New York City Arts
Preq: AJP 601 and AJP 611.

To: [Preq. change]

Preq: AJP 601.

From: AJP 631 Capstone: Arts Writing Workshop (3)

Capstone experience for graduate Arts Journalism majors. Students will research, write and review two substantive works of arts journalism in workshop environment.

To: AJP 631 Capstone: Arts Writing Workshop (6) [credit/descr. change]
[Delete underlined]

From: MAG 409/MNO 609 Advanced Magazine Editing

Problems and opportunities that magazine editors face each day. A variety of topics ranging from ethics to the repositioning of magazines. Additional work required of graduate students.

To: MAG 409 [descr. change/drop cross-listing]

Problems and opportunities that magazine editors face each day. A variety of topics ranging from ethics to covers, editorial mix, and positioning a magazine.

From: MAG 538 Travel Writing

Preq: NEW 305

To: [Preq. change]

NEW 305 or NEW 617.

From: NEW 630 Journalism Enterprise

To: MNO 631 [Prefix/# change]

From: PHO 405/605 Photojournalism

Principles and practices of photojournalism. Photographing news, features, portraits, and sports. Picture story and essay ideas and production and layout using digital techniques. Location lighting techniques. Marketing practices. Additional work required of graduate students.

To: PHO 405/605 Photojournalism and Multimedia

Principles and practices of photojournalism and multimedia storytelling. Photographing news, features, portraits, and sports. Picture story and essay production using digital, still, video, and sound. Location lighting techniques. Marketing practices. Additional work required of graduate students.

From: PHO 425/625 Picture Editing

Develops newspaper and magazine picture editor's management skills and electronic editing and pagination skills. Communicative qualities of photographs and word picture combinations, how they affect decisions of picture use in publications. Additional work required of graduate students.

To: PHO 425/625 Picture and Multimedia Editing

Develops newspaper and magazine picture editor's management skills for multimedia storytelling. Communicative qualities of images and sound and how they affect decisions

of picture use in publications and on the web. Additional work required of graduate students.

Whitman School of Management

From: FIN 751 Financial Controls in Business

Finance and control function within general management framework, and role of controller and treasurer in analysis, profit planning, and control activities. Goals, basic concepts and financial tools of decision-making. Preq: ECN 604, MBC 633, MBC 638 or MAS 653.

To: FIN 751 Corporate Financial Policy and Strategy

Advanced issues in corporate investment decisions, dividend and debt policy, corporate restructuring, risk management, and corporate governance. Preq: ECN 604, MBC 633 and MBC 638.

II. Courses Dropped

School of Public Communications

MNO 609 Advanced Magazine Editing

III. Courses Inactivated

College of Arts & Sciences

ANT 603	Responding to Communal Conflicts
ANT 751	Anthropological Praxis
ENG 635	Chaucer
ENG 636	The Sixteenth-Century
ENG 639	Eighteenth-Century Studies
ENG 640	Studies in American Literary Genre
ENG 643	Romanticism
ENG 656	Eighteenth-Century British Fiction
ENG 677	American Literature 1820-1870
ENG 678	American Literature 1870-1920
ENG 693	The Production of American Literature: 19th Century
ENG 694	The Production of American Literature: 20th Century
ENG 727	Studies in Old English Language and Literature
ENG 744	Studies in Narrative
ENG 747/748	Studies in British Literature 1832-1914
ENG 784	Seminar in American Poetry

ENG 786 Seminar in American Prose
ENG 827 Advanced Seminar in Literature and Cultures
ENG 838 Advanced Seminar in Literature and Cultures
ENG 885/886 Advanced Seminar in Literary Criticism
ENG 900 Graduate Readings
GOL700 Special Problems in Geology
STS/ECS 318 Technology, Past and Present

III. Courses Reactivated

School of Information Studies

IST 502 New Directions in Academic Libraries (1-3)

Present state and future prospects of academic libraries in light of changes in the technology of scholarly communications and in the nature of higher education.

IV. New Courses

College of Engineering and Computer Science

CHE 637 Chemistry at the Interface: Biomaterials, Bioorganic and Bioinorganic Chemistry (1)

Contemporary topics in chemistry as applied to life sciences, with three one-credit sections on biomaterials, bioorganic, and bioinorganic chemistry. Emphasis on recent original research journal publications, as well as on unsolved problems in chemistry and biology.

637M Biomaterials

637M Bioorganic Chemistry

637M Bioinorganic Chemistry

CIE/CEN 565 Bioremediation (3)

Uses of bioremediation in engineering applications. Role of microorganisms in degradation of pollutants and contaminants. Regulatory, societal, and legal issues of bioremediation. Preq: CIE 472 or p.o.i.

CIE/CEN 567 Biotechnology (3)

Engineering applications of biotechnology in agriculture, industry, and the environment.

Principles of molecular genetics as applied in the biotechnology industry. Hands-on exposure to laboratory recombinant DNA technology. Preq: CIE 472 or p.o.i.

CSD 659 Introduction to Research in Audiology and Speech Language Pathology (1)

Guided instruction on how to critically read a research article, how to effectively search the literature and libraries for original sources; provide a forum for peer discussion of research articles.

CSD 675 Auditory Processing Disorders (3)

Focus on the identification and diagnosis of Central auditory Processing Disorders through the use of case history/questionnaires, speech audiometric tests, non-verbal tests and electrophysiological measures.

CSD 760 Directed Research (1)

Supervised laboratory experience in conducting research in the speech and hearing sciences. May be repeated for a maximum of two credits. Permission of instructor.

CSD 788 Pharmacology in Audiology (2)

Pharmacology as it relates to the practice of Audiology. Basic concepts, biochemical basis for hearing, ototoxic and vestibulotoxic agents, patient management, FDA policies, and hair cell regeneration will be covered.

EAR 419/619 Environmental Aqueous Geochemistry (1)

Fundamentals of aqueous geochemistry in ground water and surface water in the context of carbonate and silicate dissolution, reactions governing metal oxidation and reduction, mixing of waters and isotopic characterization. One year of college chemistry required. Additional work required of graduate students.

EAR 429/629 Topics in Paleobiology (3)

Current research in paleobiology with a topical focus. Subjects might include macroevolution, evolutionary paleoecology, extinctions and radiations, stratigraphic paleontology, etc. EAR 429 by permission of instructor. Additional work required of graduate students. Preq: EAR 325.

EAR 440/640 Watershed Hydrology (3)

Focus on physical hydrology at the catchment scale, including water budgets, precipitation, evaporation, surface runoff, groundwater flow and connections to biogeochemistry. Understanding hydrologic concepts and acquiring and analyzing hydrologic data. Additional work required of graduate students.

EAR 660 Advanced Hydrologic Field Methods (3)

Hands-on experience using current instrumentation and measurement techniques in hydrology. Emphasizing fundamental theory governing application, demonstrations of application from the literature and field experiments. Preq: EAR 440 or equivalent.

EAR 455/655 Geochemical Patterns in the History of Earth and Life (3)

Insights gained from the geochemistry of fossils and sedimentary sequences into the history of the Earth's surface. Emphasis on relationships between the biological world and the physical

environment as revealed through stable and radiogenic isotopes and elemental chemistry. EAR 455 by permission of instructor. EAR 377 recommended. Additional work required of graduate students. Preq: EAR 325.

EAR 665 Groundwater Modeling (3)

Fundamentals of groundwater and solute movement in the subsurface and how these processes are simulated by numerical finite-difference models. Topics include conceptual model development, boundary conditions, calibration and sensitivity analysis. Preq: EAR 440 or equivalent.

MAE 659 Building Materials and Envelope (3)

Understanding of heat, air and moisture transfer effects on building envelope/enclosure through linking material properties, assembly design and hygrothermal performance with structural and mechanical considerations. Introduction to advanced computational tools for building enclosures.

College of Engineering & Computer Science

BEN 364/664 Quantitative Physiology (4)

Introduction to mammalian physiology from an engineering perspective. Each of the major systems of the body will be addressed, with an emphasis on electrical, mechanical, and thermodynamic principles. Lecture and laboratory. Additional work required of graduate students. Preq: BEN 301.

MFE/IST 633 Enterprise Systems (3)

Technical overview of Enterprise Systems and their impact on organizations. The concepts, fundamentals, issues and technologies in planning, implementing and operating an Enterprise System. Current trends, issues, technologies and extensions. Laboratory exercises. Preq: CSE 581 or IST 659 or equivalent.

College of Human Ecology

HTW 405/605 Cognitive Behavioral Approaches to Stress Reduction (3)

Students will learn mindfulness practices for professional self-care and as therapeutic modalities. Examining stressors “mindfully” through focused attention on the present. Separately observing the mind’s cognitive and emotive reactions to present, past and anticipated events. Additional work required of graduate students.

HTW 406/606 Clinical Evaluation and Assessment of Addictions (3)

Pre-treatment tools for engaging individuals in the evaluation and assessment of potentially problematic use of addictive and other addictive behaviors. Emphasizes the bio-psycho-social underpinnings of addictions. Role of the counselor as change agent. Additional work required of graduate students. Preq. for HTW 406: HTW 318. Preq. for HTW 606: HTW 618 or SWK 731.

HTW 407/607 Wellness Counseling and Coaching: Overcoming Resistance to Change (4)

Knowledge of the philosophies, practices, policies and outcomes of models of behavior change. Motivational interviewing and solution-focused approaches to addictions counseling. Individual counseling, goal setting and relapse prevention techniques. Includes 30 hours of practice laboratory. Additional work required of graduate students.

HTW 408/608 Addictions in Cultural Context (3-4) *variable length*

Exploration of the role played by drugs in different societies, and follows the dissemination of different substances in the process of cultural encounters. Includes an optional summer component in the Netherlands. Additional work required of graduate students.

HTW 409/609 The Impact of Addictions on Families and Relationships (3)

Knowledge of effects of chemical dependency on family, significant others and the importance of family support in recovery. Knowledge of basic family treatment approaches. Additional work required of graduate students.

HTW 410/610 Addictions Treatment Planning and Referral (3)

Treatment, planning, clinical record keeping, and discharge planning in addition to individual and group, recovery models, replacement therapy, and dual-diagnosis. Additional work required of graduate students.

Preq: HTW 405 or 606.

NSD 654 Nutrition Research Methods (3)

Integrates an understanding and application of nutrition research methods. Emphasis on evidence-based analysis.

School of Information Studies

IST 628 Organization/Management of Archival Collections (3)

Introduction to archival collections including theories and practices associated with archival work, the contexts of archival materials, the digital world, and the archival profession. Requires a collections project.

School of Public Communications

DFH 610 Documentary Production Research (1)

Analyzes the unique collaborative nature of the documentary through screenings of important work in the genre, readings and lectures by visiting professionals. Students design research strategies and write proposals for a Documentary Film and History thesis.

MNO 629 Magazine Management (3)

Creating a prototype and business plan for a start-up magazine, including reporting, writing, editing, and designing a launch issue. Class works in teams and concludes with a pitch of each idea. Preq: MNO 608 or p.o.i.

College of Visual and Performing Arts

ART 431/631 Art Nouveau Design and Architecture: Studies in Material Culture (4)

Introduction to the historical and social context that gave rise to Art Nouveau, its various manifestations, and the important practitioners and promoters of this movement in Europe and the United States. Preq: ART 111 or 113 or FIA 106.

MUI 010 Soyars Entertainment Leadership Lecture Series I (0)

Features music industry leaders from the highest levels of business. These visiting faculty members will focus, in depth, on cutting edge issues as they relate to leadership in today's industry. May be repeated 8 times.

MUE 510 Practicum in Children's Choir (1-3)

Develop understanding, expertise, and practical experience working with a children's choir through score analysis, rehearsal observations, and conducting experiences. In-depth study of choral music appropriate for children's choirs of varying levels.