

Course Alterations Report for April 2001

Subject Code	Course Code	Alteration Requested	Reason for Change	Effective Date
CHE	320(new) 142(old)	<p>Reduction of one credit hour and minor revision of course description</p> <p>Old Course Description: CHE 142. ChE Thermodynamics. 4 Hr, PR: CHE 41, MATH 17 First and second laws of thermodynamics. Thermodynamic functions for real materials. Physical and chemical equilibrium concepts and applications. (3 Hr. lec. 2 Hr. calc. lab.)</p> <p>New Course Description: CHE 320. ChE Thermodynamics. 3 Hr, PR: CHE 202, MATH 251 First and second laws of thermodynamics. Thermodynamic functions for real materials. Physical equilibrium concepts and applications. (2 Hr. lec. 2 Hr. calc. lab.)</p>	A reduction of 1 credit hour is requested since the chemical reaction equilibrium component of the course will be moved to a new course.	200108
CHE	450(new) 180(old)	<p>Increase of one credit hour</p> <p>Old Course Description: CHE 180. Unit Operations Laboratory 1. 1 Hr, PR: CHE 112 and CHE 172. Operation of chemical process engineering equipment; collection, analysis, and evaluation of data; laboratory report preparation. (4 Hr. lab.)</p> <p>New Course Description: CHE 450. Unit Operations Laboratory 1. 2 Hr, PR: CHE 312 and CHE 325. Operation of chemical process engineering equipment; collection, analysis, and evaluation of data; laboratory report preparation. (4 Hr. lab.)</p>	An increase of 1 credit hour is requested reflecting an increase in emphasis in the Laboratory course and the substantial writing component.	200208
CHE	451(new) 181(old)	<p>Increase of one credit hour</p> <p>Old Course Description: CHE 181. Unit Operations Laboratory 2. 1 Hr, PR: CHE 180. Continuation of CHE 180, (4 Hr. lab.)</p> <p>New Course Description: CHE 451. Unit Operations Laboratory 2. 2 Hr, PR: CHE 450. Continuation of CHE 450, (4 Hr. lab.)</p>	An increase of 1 credit hour is requested reflecting an increase in emphasis in the Laboratory course and the substantial writing component.	200301

CHE	456(new) 183(old)	<p>Decrease of one credit hour</p> <p>Old Course Description: CHE 183. Chemical Process Design 2. 4 Hr, PR: CHE 182. Continuation of CHE 182.</p> <p>New Course Description: CHE 456. Chemical Process Design 2. 3 Hr, PR: CHE 455. Continuation of CHE 455.</p>	<p>A reduction of 1 credit hour is requested reflecting a reduced student workload for students compared with CHE 455 (CHE 182 old). This is consistent with the way that this course has been taught for the last few years.</p>	200301
MUSC	284(new) 49(old)	<p>Change in Prerequisite</p> <p>Old Course Description: MUSC 49. Vocal Pedagogy. I, II. 2 Hr. PR: Two semesters of vocal study. Techniques of voice culture; applicable to school choral activities and instruction of young singers.</p> <p>New Course Description: MUSC 284. Vocal Pedagogy. I, II. 2 Hr. PR: Music 138 or Music 138 exemption. Techniques of voice culture; applicable to school choral activities and instruction of young singers.</p>	<p>New prerequisites reflect the fact that all Music Education Majors may now take this class. While previously, this course was only open to vocal Music Education majors.</p>	200108
CS	450(new) 256(old)	<p>Change in prerequisites</p> <p>Old Course Description: CS 256 - Operating Systems Structures. 3 Hr. PR: CS 156. Support of computer components; device management and interrupts, process scheduling, file management, complete OS structure, OS development and debugging, configuration management, and performance testing. (3 hr. lecture)</p> <p>New Course Description: CS 450 - Operating Systems Structures. 3 Hr. PR: CS 250 or CS 350. Support of computer components; device management and interrupts, process scheduling, file management, complete OS structure, OS development and debugging, configuration management, and performance testing. (3 hr. lecture)</p>	<p>Change in prerequisites allows both CS and computer engineering majors to take this course.</p>	200108
CS	453(new) 268(old)	<p>Change in prerequisites</p> <p>Old Course Description: CS 268. Data and Computer Communications. 3 Hr. PR: CS 156. Introduction to fundamental concepts and</p>	<p>Change in prerequisites allows both CS and computer engineering majors to take this course.</p>	200108

		<p>principles of data and computer communications; digital data communication techniques, multiplexing, switching, LANs and WANs, and protocols and architecture.</p> <p>New Course Description: CS 453. Data and Computer Communications. 3 Hr. PR: CS 250 or CS 350. Introduction to fundamental concepts and principles of data and computer communications; digital data communication techniques, multiplexing, switching, LANs and WANs, and protocols and architecture. (3 hr. lecture)</p>		
CS	455(new) 266(old)	<p>Change in number of credit hours</p> <p>Old Course Description: CS 266. Computer Organization and Architecture. 3 Hr. PR: CS 156. Computer structure; emphasis on implications for software design; evolution of computers; elementary digital logic; CPU structures; memory and I/O structures; pipelining and memory management; introduction to parallel and high-level architectures. (3 hr. lecture)</p> <p>New Course Description: CS 455. Computer Organization and Architecture. 3 Hr. PR: CS 250 or CS 350. Computer structure; emphasis on implications for software design; evolution of computers; elementary digital logic; CPU structures; memory and I/O structures; pipelining and memory management; introduction to parallel and high-level architectures. (3 hr. lecture)</p>	Change in prerequisites allows both CS and computer engineering majors to take this course.	200108
CS	481(new) 272(old)	<p>Change in prerequisites</p> <p>Old Course Description: CS 272. Senior Project. I, II. 1-6 Hr. PR: CS 176. Design and implementation of a software development project under the supervision of a computer science faculty member. Emphasis will be on requirements, specification, analysis, testing and maintenance.</p> <p>New Course Description: CS 481. Senior Project. I, II. 1-6 Hr. PR: CS 330. Design and implementation of a software development project under the</p>	Change to a fixed number of credit hours will insure more uniform level of performance.	200108

		supervision of a computer science faculty member. Emphasis will be on requirements, specification, analysis, testing and maintenance. (1 hr. lecture, 1 hr. conf., 4 hr. lab)		
EE	355(NEW) 158(OLD)	<p>Change in prerequisites</p> <p>Old Course Description: EE 158. Analog Electronics. 3 Hr. PR: EE 124 and EE 127 and EE 151 or EE 56. Electronic devices in analog circuits. Small-signal and graphical analysis of BJT and FET circuits; frequency response, feedback, and stability. Linear and nonlinear operational amplifier circuits. Power amplifiers and power control by electronic devices. (3 hr. lecture)</p> <p>New Course Description: EE 355. Analog Electronics. 3 Hr. PR: EE 223 and EE 251. Electronic devices in analog circuits. Small-signal and graphical analysis of BJT and FET circuits; frequency response, feedback, and stability. Linear and nonlinear operational amplifier circuits. Power amplifiers and power control by electronic devices. (3 hr. lecture)</p>	Change in prerequisites consistent with recent changes in EE curriculum.	200108
EE	411(new) 216(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 216. Fundamentals of Control Systems. 3 Hr. PR: EE 124. Introduction to classical and modern control; signal flow graphs; state-variable characterization; time-domain, root-locus, and frequency techniques; stability criteria. (3 hr. lecture)</p> <p>New Course Description: EE 411. Fundamentals of Control Systems. 3 Hr. PR: EE 327. Introduction to classical and modern control; signal flow graphs; state-variable characterization; time-domain, root-locus, and frequency techniques; stability criteria. (3 hr. lecture)</p>	Change in prerequisite consistent with recent changes in EE curriculum.	200108
EE	413(new) 217(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 217. Intro to Digital Control. I (Alt. years) 3 Hr. PR: EE 124. Sampling of</p>	Change in prerequisite consistent with recent changes in EE curriculum.	

		<p>continuous-time signals and transform analysis. State-variable analysis for linear discrete-time systems and design of digital controller.</p> <p>New Course Description: EE 413. Intro to Digital Control. 3 Hr. PR: EE 327. Sampling of continuous-time signals and transform analysis. State-variable analysis for linear discrete-time systems and design of digital controller. (3 hr. lecture)</p>		
EE	431(new) 230(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 230. Electrical Power Distribution Systems. 3 Hr. PR: EE 131 and EE 136 or consent. General considerations; load characteristics; subtransmission and distribution substations; primary and secondary distribution, secondary network systems; distribution transformers; voltage regulation and application of capacitors; voltage fluctuations; protective device coordination. (3 hr. lecture)</p> <p>New Course Description: EE 431. Electrical Power Distribution Systems. 3 Hr. PR: EE 335 and EE 336 or consent. General considerations; load characteristics; subtransmission and distribution substations; primary and secondary distribution, secondary network systems; distribution transformers; voltage regulation and application of capacitors; voltage fluctuations; protective device coordination. (3 hr. lecture)</p>	Change in prerequisites consistent with recent changes in EE curriculum.	200108
EE	435(new) 236(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 236. Introduction to Power Electronics. 3 Hr. PR: EE 130 and EE 158 and EE 159 (concurrently) or consent. Application of power semiconductor components and devices to power system problems; power control; conditioning processing, and switching. Course supplemented by laboratory problems. (3 hr. lecture)</p> <p>New Course Description: EE 435. Introduction to Power</p>	Change in prerequisites consistent with recent changes in EE curriculum.	200108

		Electronics. 3 Hr. PR: EE 335, EE 355 and EE 356 or consent. Application of power semiconductor components and devices to power system problems; power control; conditioning processing, and switching. Course supplemented by laboratory problems. (3 hr. lecture)		
EE	436(new) 231(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 231. Power Systems Analysis. 3 Hr. PR: EE 131 and EE 136 or consent. Incidence and network matrices, Y-bus symmetrical and unsymmetrical faults, load-flow and economic dispatch, MW-frequency and MVAR-voltage control. The power system simulator will be used for demonstrations. (3 hr. lecture)</p> <p>New Course Description: EE 436. Power Systems Analysis. 3 Hr. PR: EE 335 and EE 336. Incidence and network matrices, Y-bus symmetrical and unsymmetrical faults, load-flow and economic dispatch, MW-frequency and MVAR-voltage control. The power system simulator will be used for demonstrations. (3 hr. lecture)</p>	Change in prerequisites consistent with recent changes in EE curriculum.	200108
EE	437(new) 248(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 248. Fiber Optics Communications. 3 Hr. PR: EE 126 and EE 141 and EE 151. Fundamentals of optics and light wave propagation, guided wave propagation and optical wave guides, light sources and light detectors, couplers, connections, and fiber networks, modulation noise and detection in communication systems. (3 hr. lecture)</p> <p>New Course Description: EE 437. Fiber Optics Communications. 3 Hr. PR: EE 329 and EE 345. Fundamentals of optics and light wave propagation, guided wave propagation and optical wave guides, light sources and light detectors, couplers, connections, and fiber networks, modulation noise and detection in communication systems. (3 hr. lecture)</p>	Change in prerequisites consistent with recent changes in EE curriculum.	200108
EE	457(new) 255(old)	Change in prerequisites	Change in prerequisites consistent with recent	200108

		<p>Old Course Description: EE 255. Fundamentals of Photonics. I, II. 3 Hr. PR: EE 141 and EE 151 or consent. Introduction to the physical models and mechanisms through which generation, characterization, and control of light is achieved. Applications including optical information processing, holographic storage, and photonic switching provide the framework for photonic concept presentation.</p> <p>New Course Description: EE 457. Fundamentals of Photonics. I, II. 3 Hr. PR: EE 353 and EE 345 or consent. Introduction to the physical models and mechanisms through which generation, characterization, and control of light is achieved. Applications including optical information processing, holographic storage, and photonic switching provide the framework for photonic concept presentation. (3 hr. lecture)</p>	changes in EE curriculum.	
EE	461(new) 264(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 264. Intro Communications Systems. 3 Hr. PR: EE 126. Application of linear system theory and probability to the design and analysis of modern communication systems. Power spectral density, bandwidth, noise, AM, FM, analog-to-digital conversion, digital modulation, equalization, and multiple-access. (3 hr. lecture)</p> <p>New Course Description: EE 461. Intro Communications Systems. 3 Hr. PR: EE 329. Application of linear system theory and probability to the design and analysis of modern communication systems. Power spectral density, bandwidth, noise, AM, FM, analog-to-digital conversion, digital modulation, equalization, and multiple-access. (3 hr. lecture)</p>	Change in prerequisites consistent with recent changes in EE curriculum.	200108
EE	463(new) 268(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 268. Digital Signal Processing Fundamentals. 3 Hr. PR: EE 126 and EE 127 and EE 156 and EE 157. Theories, techniques, and procedure used in analysis, design, and implementation of</p>	Change in prerequisites consistent with recent changes in EE curriculum.	

		<p>digital and sampled data filters. Algorithms and computer programming for software realization. Digital and sampled data realizations, switched capacitor and charge-coupled device IC's. (3 hr. lecture)</p> <p>New Course Description: EE 463. Digital Signal Processing Fundamentals. 3 Hr. PR: EE 251 and EE 252 and EE 328 and EE 329. Theories, techniques, and procedure used in analysis, design, and implementation of digital and sampled data filters. Algorithms and computer programming for software realization. Digital and sampled data realizations, switched capacitor and charge-coupled device IC's. (3 hr. lecture)</p>		
EE	465(new) 269(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 269. Intro to Digital Image Process. I. 3 Hr. PR: EE 124 and EE 127. Introduction to the vision process and fundamental mathematical characterization of digitized images, 2-dimensional transform methods used in image processing, histogram analysis and manipulation, image filtering techniques, image segmentation and morphology.</p> <p>New Course Description: EE 465. Intro to Digital Image Process. I. 3 Hr. PR: EE 327 and EE 329. Introduction to the vision process and fundamental mathematical characterization of digitized images, 2-dimensional transform methods used in image processing, histogram analysis and manipulation, image filtering techniques, image segmentation and morphology. (3 hr. lecture)</p>	Change in prerequisites consistent with recent changes in EE curriculum.	200108
EE	481(new) 181(old)	<p>Change in prerequisites</p> <p>Old Course Description: EE 181. Senior Design Project. 3 Hr. PR: EE 130, EE 156, EE 158, and EE 180 or consent. Detailed design and execution of an electrical engineering project. Emphasis is placed on the professional approach to the analysis and solution of an engineering problem. Other topics include professional development, legal</p>	Change in prerequisites ensures that students have adequate system level design to complete project.	

		<p>and ethical aspects of engineering.</p> <p>New Course Description: EE 481. Senior Design Project. 3 Hr. PR: EE 251, EE 335, EE 355, and EE 480 or consent. Detailed design and execution of an electrical engineering project. Emphasis is placed on the professional approach to the analysis and solution of an engineering problem. Other topics include professional development, legal and ethical aspects of engineering. (1 hr. lecture, 1 hr. conf., 4 hr. lab)</p>		
EE	487(new) 287(old)	<p>Change in prerequisites and increase in credit hours.</p> <p>Old Course Description: EE 287. Electronic Vehicle Design. II. 2 Hr. PR: EE 21 or EE 103. Safety, energy storage, motor and instrumentation for battery electric and hybrid electric vehicles. Writing of simulation software for energy efficiency and participation in design, construction, and testing of an EV required.</p> <p>New Course Description: EE 487. Electronic Vehicle Design. II. 3 Hr. PR: EE 221 or EE 306. Safety, energy storage, motor and instrumentation for battery electric and hybrid electric vehicles. Writing of simulation software for energy efficiency and participation in design, construction, and testing of an EV required.</p>	<p>Change in prerequisites consistent with recent changes in EE curriculum. Increase of 1 credit hour consistent with additional course content.</p>	200108