ECON 7585
Neoclassical, neomarxist, and neomalthusian perspectives.

ECON 7480 Seminar in Industrial Organization (3)  
Earnings control, coordination, and national policy.

ECON 7610 Mathematics for Economists (3)  
Mathematical principles with frequent applications to economics; functions, derivatives, integrals, infinite series, matrix algebra, determinants, roots, quadratic forms, constrained and unconstrained optimizations, and principles of linear and nonlinear equilibria.

ECON 7615 Dynamic Analysis (3)  
ECON 7610 or calculus and linear algebra. Mathematical analysis of dynamic systems with applications to economics; integral calculus, differential equations, difference equations and optimal control theory.

ECON 7620 Econometric Methods (3)  
calculus and linear algebra, or concurrent enrollment in economics 7610. For students interested in developing research skills in econometrics. Empirical research methods in economics; statistical inference; regression techniques applied to general linear model; problems involved in regression analysis; extensions of the general linear model.

ECON 7631 Econometric Methods II (3)  
Prereq.: ECON 7630 or equivalent. Econometric techniques for heteroskedasticity, autocorrelation, simultaneous equations, pooling time series and cross-section data, time series analysis.

ECON 7632 Econometric Theory III (3)  
Prereq.: ECON 7631 and either ECON 7610 or differential calculus and linear algebra (MATH 2251 or 2250). Emphasis on the theory of the general linear model; properties of estimators, small sample properties of ordinary least squares, asymptotic distribution theory, generalized least squares estimation.

ECON 7633 Dynamic Econometric Theory (3)  
Prereq.: ECON 7631. Time-series analysis; testing and model selection; distributed lags; dynamic properties of simultaneous equation models; autoregressive and moving average processes, nonstationarity, autoregressive conditional heteroscedasticity; cointegration and error correction.

ECON 7700 Price Theory I (3)  
Development of microeconomic models of the individual firm, including a nonmathematical approach.

ECON 7710 Macroeconomics I (3)  
Basic models of income, employment, and prices. The models focus on aggregate demand and supply sectors; and an aggregate demand-supply model in which IS-LM underlies aggregate demand; an introduction to the Keynesian/new classical synthesis model, and an introduction to growth theory.

ECON 7715 Macroeconomics II (3)  
Prereq.: ECON 7710 and 7610 or equivalent. Dynamic models of the economy; includes growth models, business cycle dynamics, and wage-price dynamics.

ECON 7720 Price Theory II (1)  
Prereq.: ECON 7610 or equivalent. Theories of utility, demand, cost, production, factor pricing, and general equilibrium analysis.

ECON 7725 Advanced Microeconomic Theory (3)  
Prereq.: ECON 7610, 7700, and 7720; or equivalent. Advanced price theory; capital theory; general equilibrium, allocation, distribution theory, market structures.

ECON 7730 Macroeconomics III (3)  
Prereq.: ECON 7715 and 7610. Advanced macroeconomic model; advanced growth theories, and empirical tests of these models.

ECON 7740 History of Economic Thought: The Classical Period (3)  
Development of economic ideas as an autonomous science; Greek, Judeo-Christian, and enlightenment approaches to economic phenomena; special attention to Adam Smith.

ECON 7750 History of Economic Thought: Modern Period (3)  
Development of economic thought from 1800 to 1900; emphasis on classical followers of Smith, Marx, 19th century positivism and socialism, the marginal revolution.

ECON 7799 Seminar in Advanced Economic Problems (3)  
May be taken for a max. of 6 hrs. of credit when topics vary.

ECON 8900 Pre-dissertation Research (1-9)  
May be repeated for credit. Pass/fail grading.

EDUCATION: EDUC

EDUC 2000 Special Topics in Education (1-3)  
Prereq.: consent of instructor. May be taken for a max. of 9 sem. hrs. of credit when topics vary. Direction and assistance for the practitioner in solving special problems in school organization.

EDUC 7209 Introduction to Scholarship in Education (3)  
Restricted to PhD or EdS students in the department, or permission of instructor. Introduction to scholarship in education and to demands and expectations of doctoral study.

EDUC 7612 Student Development Theory (3)  
Explores the development of students in the higher education environment, including theories and research related to intellectual, moral, ego, psychosocial, career, and spiritual development procedures.

EDUC 7811 Seminar in Current Trends in Education (3)  
Open only to students who have completed qualifying examination for the doctoral degree. Current issues and trends; sources, bibliography, and research in the student’s major.

EDUC 7900 Independent Study (1-6)  
May be taken for a max. of 12 sem. hrs. of credit. Open to advanced graduate students. Directed individual study under the guidance of a graduate faculty member.

EDUC 8000 Thesis Research (1-2 per sem.)  
Y"S"Y" grading.

EDUC 8900 Dissertation Research (1-2 per sem.)  
S"Y"Y" grading.

COUNSELOR EDUCATION

COUN 4360 Introduction to School Counseling (3)  
Prereq.: consent of instructor. Introduction to the design, implementation, management, and evaluation of comprehensive programs.

COUN 4361 Counseling Children (3)  
Prereq.: consent of instructor. Introduction to methods and procedures.

COUN 4365 Basic Course in Interpersonal Communication (3)  
Prereq.: consent of instructor. May not be given for both this course and ELRC 7545. Introduction to basic communication skills and counseling techniques.

COUN 4600 Counseling for Disabling Conditions (3)  
Prereq.: consent of instructor. An overview of counseling techniques and interventions for conditions and disorders which result in disability and impaired functioning.

COUN 4601 Management of Counseling Services (3)  
Prereq.: consent of instructor. An overview of personnel management, organizational structure, and procedures for client rehabilitation.

COUN 5300 Special Problems in Guidance and Counseling (3)  
Prereq.: consent of instructor. 1 hr. lecture; 4 hrs. lab. May be taken for a max. of 6 hrs. of credit when topics vary.

COUN 7301 Orientation to the World of Work (3)  
Prereq.: ELRC 7332. Also offered as HRE 7301. For elementary school counselors. Basic concepts of career orientation, awareness, and exploration phases of the career development process.

COUN 7330 Group Dynamics and Techniques in the Elementary Schools (3)  
Prereq.: ELRC 4361 and 4363. For elementary school counselors. Dynamics of small group behavior; emphasis on classroom consultation and demonstration.

COUN 7330 Group Dynamics and Techniques in Counseling (3)  
Prereq.: consent of instructor. An overview of personnel management, organizational structure, and procedures for client rehabilitation.

COUN 7331 Counseling Theory and Techniques (3)  
Prereq.: consent of instructor. An overview of personnel management, organizational structure, and procedures for client rehabilitation.

COUN 7334 Vocational Counseling (3)  
Prereq.: ELRC 7312 or equivalent. Also offered as HRE 7334. Materials and techniques in vocational counseling of adolescents and adults.

COUN 7345 Counseling Skills and Interventions (3)  
Prereq.: consent of instructor. May not be given for both this course and ELRC 4365. An overview of counseling techniques and interventions to facilitate client engagement in the counseling process.

COUN 7360 Counseling Practicum in Elementary Schools (3-6)  
Prereq.: consent of instructor. 2 hrs. conf.; 6-18 hrs. lab. May be repeated for credit. Supervised experience in elementary schools.

COUN 7362 Practicum in School Counseling (3-6)  
Prereq.: ELRC 4360, 4365, 7330, 7319, 7395, and consent of instructor.; 6-18 hrs. lab in work setting. Supervised experience in elementary, middle, or high school settings.
7364 Community Agency Counseling Practicum (3-6) F, S PreReq.: ELRC 3456, 4600, 4601, 7330, 7331, 7395, and consent of instructor. 2 hrs. conf.; 1 hr. lab; 6-18 hrs. lab in a work setting. Supervised clinical experience in community agency settings (e.g., counseling center, mental health center, etc.).

7365 Seminar in Counseling (3) PreReq.: ELRC 4365 and 7331, or equivalent. May be taken for a max. of 6 hrs. of credit. Preparation and presentation in groups. Students will participate in role playing situations and prepare papers regarding problems encountered in implementing counseling services.

7390 Introduction to Counseling Theory and Techniques (3) S PreReq.: ELRC 7331 or equivalent. Theoretical approaches to individual counseling.

7391 Multicultural Counseling (3) S, Su Overview of cross-cultural counseling skills and review of factors which influence the behaviors of individuals from diverse populations.

7394 Advanced Group Counseling (3) S PreReq.: ELRC 7330 or equivalent. Small group counseling approaches.

7395 Internship in Educational Research (3) F, S PreReq.: ELRC 7332 and 7334. 1 hr. lecture; 4 hrs. lab. May be taken for a max. of 6 hrs. of credit when topics vary.

7397 Field Experiences in Vocational Counseling (3) F, S PreReq.: ELRC 7323 and 7344. 1 hr. lecture; 4 hrs. lab. May be taken for a max. of 6 hrs. of credit. Also offered as HRE 7397.

7399 Supervised Internship (3) F, S PreReq.: ELRC 7350, 7362, and 7384 and consent of instructor. 2 hrs. conf.; 20-40 hrs. per week at a clinical setting, serving children, youth, or adults of standard schools, or families. May be taken for a max. of 9 hrs. of credit.

EDUCATIONAL ADMINISTRATION

4400 Introduction to Educational Administration (3) F, S PreReq.: Organization of the American educational enterprise; economic, political, social, and cultural forces that affect the administration of American education.

4700 Problems of Educational Finance (3) F, S PreReq.: Financing public elementary and secondary schools in terms of federal, state, and local sources of revenue, tax structures, budget preparation, and financial management.

7401 Administration of School Personnel (3) S, Su Role of the school administrator in personnel planning, staff development, and labor relations.

7402 Organizational Research in Educational Administration (3) PreReq.: ELRC 4400 and consent of instructor. Primarily for doctoral students in educational administration. Research, bibliography, and source materials; critical examination of organizational research.

7403 The Principalship in Elementary and Secondary Schools (3) S, S PreReq.: ELRC 4400 or equivalent. Duties and responsibilities of the principal for organization, administration, and supervision of elementary and secondary schools.

7404 Internship in Educational Administration (3-6) F, S PreReq.: consent of instructor. May be taken for a max. of 5 sem. hrs. of credit. For advanced graduate students qualified for internship in educational administration. Pass/No Pass grading.

7406 Supervision of Child Welfare and Attendance (3) V PreReq.: ELRC 4400 and 7450; or equivalent. Role and function of the supervisor of child welfare and attendance; seminar for students preparing for individual research, legal provisions, history, and philosophy.

7407 Policies, Politics, and Administration in Education (3) PreReq.: ELRC 4400 and consent of instructor. Primarily for doctoral students in educational administration. Critical analysis of educational policy and its development.

7408 Educational Leadership (3) S, Su PreReq.: ELRC 4400. Analysis of community demands on schools; organizational response from social science perspectives.

7418 Foundations in Educational Leadership (3) PreReq.: ELRC 4400. Exploration of theories of leadership, leading and empowerment, critical thinking, reflective practice, and school transformation; restructuring, leadership in unique contexts, and directions in educational change and reform.

7410 Cultural and Political Issues in Urban School Leadership (3) S PreReq.: including the principal, in urban schools; impact of societal factors on school leaders in urban elementary and secondary schools. 7422 School Improvement/Action Research (3) S PreReq.: ELRC 7422. Students refine and administer an action research project at a selected school site. Students will assess the success of their interventions through multiple measures and write a research report that reflects their experiences throughout the semester. In class discussions focusing on methodological difficulties that students encounter and how to overcome them.

7430 Best Practices of School Leadership I (6) Knowledge and experiential base to support decision making and action at a level of whole school responsibility.

7431 Best Practices of School Leadership II (6) F S PreReq.: ELRC 7430. Second course in a two course sequence. Provides a knowledge and experiential base to support decision making and action at a level of whole school responsibility.

7450 Seminar in Instruction in Elementary and Secondary Schools (3) F, S, Su Theories, principles, and practices concerning the role of the supervisor in today's multicultural education.

7451 Supervision of Student Teaching (3) F, S PreReq.: Principles of planning, observing, and evaluating student teaching; participation in methods course.

7802 Organization and Administration of Higher Education (3) S PreReq.: Organization and administration of post-secondary education in the United States and abroad; organizational theory; organization and governance structure of American higher education; patterns of institutional administration.

7803 Economics of Education (3) PreReq.: ELRC 7400 or equivalent. Introduction to human capital theory; emphasis on costs and benefits of education, benefit-cost analysis, educational productivity; education and economic growth; and educational planning.

7804 Theory Development in Educational Administration (3) PreReq.: ELRC 7006, 7402, and 4000, or equivalent; and consent of instructor. Primarily for doctoral students in educational administration. Critical analysis of approaches to inquiry; development of theory in educational administration.

7805 Perspectives on Leadership (3) F, S PreReq.: Interview with the role of the leader in school improvement/leadership and technology. Examination of leadership theories and practices relevant to K-12 school settings.

7806 Leadership for Learning (3) PreReq.: 7805 or equivalent. Advanced study of school improvement/leadership and action research traditions and methods.


7808 Seminar: Educational Administration (1-3) PreReq.: maximum of 9 sem. hrs. of credit when topics vary. Advanced topics in educational administration.

EDUCATIONAL FOUNDATIONS

3600 Women, Gender, and Leadership (3) S Also offered as WGS 3600.

4000 History of Education (3) F, S PreReq.: Development of formal and informal education in multicultural settings from earliest time to the present.

4001 History of American Education (3) F, S PreReq.: Cultural diversity and the response of educational thought and practice in America from colonial to present.

4002 Survey of Philosophy of Education (3) S, Su PreReq.: Key theories of human nature, culture, and society and their bearings on educational thought and practice.

4003 Cultural Pluralism in American Education (3) Basic features of major cultures in American society; their impact on American education; and the cultural pluralism that challenges educators teaching persons of different cultures; changing roles of schools in responding to cultural pluralism.

7000 Seminar in Educational Administration (3) S PreReq.: ELRC 4002. Theories of education and schooling with special focus on the context of pluralistic societies.

7001 Ethics and Values in Educational Leadership (3) S S PreReq.: Study of ethical theory, judgement, and practice in educational contexts.

EDUCATIONAL RESEARCH

3200 Classroom Assessment (3) F, S PreReq.: credit or registration in a methods course appropriate to the student's teaching level or major or minor. Principles and techniques in developing, implementing, and evaluating written, performance-based, and other forms of classroom assessment; applications of technology in assessment.

4090 Introduction to Applied Statistics in Educational Research (3) S PreReq.: Basic descriptive and inferential statistics; basic research design; interpretation of statistical information in published educational research.

4200 Introduction to Educational Measurement (3) S, Su Basic theory of educational measurement; assessment in the school setting; test construction and use; evaluation and applications of standardized tests; measurement in multicultural settings.

4249 Understanding and Applying Research in Education (3) S PreReq.: For the specialist or nonthesis master's degree student. Instructing teachers and administrators to become intelligent consumers of research.

7006 Educational Statistics (4) F, S PreReq.: ELRC 4006 or equivalent. 3 hrs. lecture; 2 hrs. lab. Descriptive and inferential statistics in educational research, computerized data analysis using SPSS or SAS; correlation and regression; normal, chi-square, and t-equations. Current test- and interval estimation; analysis of variance, nonparametric chi-square test.

7010 Principles of Testing and Measurement (3) PreReq.: ELRC 7006. Construction of measurement instruments for research purposes; utilization of standardized tests and inventories in research; analysis of test and item data; analysis of test and item data; analysis of multivariate methods; multivariate and cross-cultural contexts; implications of statistical measurement and validity for research design and evaluation.

7016 Advanced Educational Statistics (4) PreReq.: ELRC 7006 or equivalent. 3 hrs. lecture; 2 hrs. lab. Advanced statistical procedures and computerized data analysis using SPSS or SAS; analysis of variance and covariance; application of multiple regression techniques in educational research.

7018 Advanced Computerized Data Analysis for Research (3) PreReq.: ELRC 7015 or equivalent. Utilization of computerized data analysis procedures, including statistical tests and forecasts, data analysis using SPSS or SAS; correlation and regression of multiple data sets; review and application of specialized data analysis programs in educational research.

7201 Theory of Educational Measurement (3) F, S PreReq.: ELRC 4200. Principles of psychometric theory as applied in the educational setting; classical measurement theory and recent psychometric techniques such as item-response theory and criterion-referenced measurement.

7202 Computer Assisted Testing (3) S PreReq.: ELRC 7004 and 7002. Basic theories and problems in educational measurement.

7205 Computer Adaptive Testing (3) PreReq.: ELRC 7006. Computer adaptive testing: computerized item and test development; continuous and intelligent measurement; applications and interpreting test results; legal issues and professional standards.

7220 Education Program Evaluation (3) F PreReq.: ELRC 4429 and either ELRC 4005 or 7006. Current models and issues in educational evaluation as a professional practice; design and development of a comprehensive evaluation plan that includes specification of theoretical framework, problem identification, data collection/analysis procedures, report writing format, and dissemination plans.

7221 Performance Evaluation in Education (3) S PreReq.: ELRC 4200 and 4206; or equivalent. Current procedures and research concerning performance evaluation of students, teachers, and administrators; methodological, professional, and ethical issues concerning performance evaluation.

7241 Educational Research Methodology (3) F PreReq.: ELRC 4006 or 7006. Completion of a research project; election to the professional track and passing of oral committee proposal; completion of a written or oral research proposal, is required. Comprehensive and general review of qualitative and quantitative research methods in education.

7242 Experimental and Quasi-Experimental Designs in Educational Research (3) F PreReq.: ELRC 7016 and 7241. Experimental and quasi-experimental designs in educational research, including research training in design and evaluation of internal/external validity; design and implementation of projects; analyzing variance data through computer programs; advanced analysis of variance and covariances; multiple regression.

7243 Qualitative Methods in Educational Research (4) S PreReq.: ELRC 4249 and 7006. Exposed to qualitative research traditions and methods.
in education, including: ethnography, grounded theory, and case study; major methods including observational techniques, document analysis; philosophical issues regarding the qualitative research approach; emphasis on qualitative data analysis, including the use of computer-aided analysis (PASW, ATLASi).

7248 Introductory Research Practicum (3) F By arrangement with a state agency, a local school system, or other education leaders, students assume a leadership role in conducting studies under the supervision of the course instructor and the professional practice supervisor at the site.

7249 Advanced Research Practicum (3) Prereq.: ELRC 7248. By arrangement with a state agency, a local school system, or other education leaders, students assume a leadership role in conducting research studies under the supervision of the course instructor and the professional practice supervisor at the site.

7251 Technology Systems in Educational Research (3) Prereq.: ELRC 4507 and 4249 or permission of instructor. 2 hrs. lecture; 2 hrs. lab. Technology innovations and models that facilitate educational research; telecommunications and technology transfer; computer-assisted assessment; technology-based data collection devices; computer analysis of text-based data; computer-aided dissemination of data.

7260 Advanced Methods in Educational Program Evaluation (3) Prereq.: ELRC 7220. Evaluation of a selected educational program or leadership role in conducting a separate research methodology under the supervision of the course instructor and the professional practice supervisor at the site.

7262 Advanced Discontinuities in Educational Leadership (3) Prereq.: ELRC 7243. Construction of a case study of an educational institution or its individual life; single- and multiple-case designs; analyzing case study evidence; report writing.

7270 Mixed Methods Research in Education (3) Prereq.: ELRC 4242 or 7241. Principles, theories, and strategies for systematically examining the content of textual and other mediated communication; data collection; and evaluation.

7290 Seminar: Educational Research Methodology (1-3) May be taken for a max. of 9 hrs. of credit when topics vary. Advanced topics in educational research methods.

EDUCATIONAL TECHNOLOGY

2507 Introduction to Classroom Technology (3) Introduction to technology tools and effective technology integration methods to enhance student learning.

3500 Utilization of Instructional Materials (3) F,S,Su Open only to candidates for teacher certification. Basic techniques for preparing effective instructional materials.

4501 Selection and Utilization of Educational Media (3) Introduction to instructional technology; characteristics of media, objectives, and evaluation of instructional modules and systems.

4507 Computer Technology in Education (3) Applications of computing technology and data processing in computer-assisted and computer-managed instruction; information storage and retrieval; use of micro/mini computers.

4512 Fundamental Computer Science for Teachers (3) Prereq.: ELRC 4507 or equivalent. 2 hrs. lecture; 2 hrs. lab. Use of telecommunication tools found in educational settings; integration of telecommunications resources into instruction; research using the World Wide Web; design, development, and evaluation of Web-based materials that include multimedia; security and legal issues; configuration of school and district networks; distance education applications; and emerging trends and research issues.

5505 Production of Instructional Materials (3) Instructional graphics production techniques; principles of visual design and production; and evaluation.

7240 Critical Analysis of Current Research in Educational Media (3) Su Prereq.: ELRC 4501, 4507, or equivalent. Analysis of the contribution and implications of current and recent studies; systems approach to solving instructional problems.

7240 Administration of Technology Programs (3) Prereq.: ELRC 4501 or 4507 or consent of instructor. Primarily for personnel responsible for planning, implementing, and evaluating instructional technology programs. Topics include applications, facilities, finances, acquisitions, and development.

7500 Technology and Leadership (3) F,S Su Overview of salient advances in theory, research, and practice in educational technology; examining leadership roles in regard to emerging trends and issues in educational technology; technology integration models.

7502 Principles of Distance Education (3) F,S,Su Prereq.: ELRC 4507 or consent of instructor. Applications of the principles of instructional design and learning in educational and training contexts.

7503 Instructional Design (3) F Prereq.: ELRC 4507 or 7501. Advanced design approaches to instructional design models and their application in solving real world instructional/learning problems.

7504 Educational Law and the Law (3) Legal issues concerning educational technology. 7505 Design and Development of Multimedia Instructional Systems (3) F Prereq.: ELRC 4507 and 7503, or equivalent. Instructional design for computer-assisted instruction; emphasis on learning theory, events of instruction, structuring instructional sequences for maximum content retention.

7509 Authoring Systems for Educators (3) Prereq.: ELRC 4507 and 7503, or equivalent. 2 hrs. lecture; 2 hrs. lab. Authoring systems, with emphasis on Super PILOT and LOGO for individualized learning; system variables, transfer and portability parameters, student involvement, alternative systems, and formative and summative evaluation procedures.

7516 Practicum in Educational Media (3-6) F,S,Su Prereq.: ELRC 7220 or equivalent. 9-18 hrs. laboratory practical experience in teaching, producing, utilizing, and administering educational media.

7517 Seminar in Educational Media (3) Prereq.: ELRC 7240 and 7241 or consent of instructor. Advanced topics in instructional technology.

7520 Educational Technology in Business, Industry, and Government Agencies (3) Prereq.: ELRC 7503 and one of the following: ELRC 5505, 7502. Techniques used to meet training and development needs in business, industry, and governmental agencies.

7525 Professional Development for K-12: Technology Integration (3) F Analyze effective professional development strategies; plan, design, and implement, and evaluate technology staff development activities.

7535 Advanced Telecommunications and Electronic Learning (3) F,S,Su Prereq.: ELRC 4507 or consent of instructor. Scope and elements of the online environment; technologies and strategies for online teaching and learning; design, development, or conversion of courses for online delivery; course management, assessment, and evaluation; policy issues.

7550 Theory and Research in Educational Technology (3) Prereq.: ELRC 7240 and 7503. For advanced graduate students. Theoretical foundations and research in educational technology; emphasis on theories of communication, learning theories, educational psychology, and behavioral sciences.

7791 Educational System Analysis (3) V Prereq.: completion of 3 sem. hrs. in educational administration or equivalent. Basic techniques for designing instructional systems; emphasis on development, design, and evaluation of instructional alternatives; and evaluation of instructional systems.

HIGHER EDUCATION

4364 Student Affairs in Higher Education (3) V Basic concepts and issues in the college student affairs field. 7600 Issues of Race and Gender in Higher Education (3) Historical and socio-political perspectives on the higher education experiences of women, African-Americans, Asian-Americans, and Hispanics, focusing primarily on the period from the 1960s to the present. 7601 Foundations of Higher Education (3) History of the sociological and philosophical foundations for higher education in the United States.

7603 Leadership in Higher Education (3) S Analysis of leadership issues and theory relating to postsecondary education, including the college presidency and academic governance; institutional culture; student diversity, curricular change, and new providers of higher education.

7604 Politics and Policy of Higher Education (3) Political and social forces and political and policy of student loans; policies toward unprepared college students; collective bargaining; state policies and the political process.

7605 Higher Education and the Law (3) Legal issues concerning higher education, including tenure, academic freedom, sexual harassment, discrimination, student discipline, and liability for accidents and injuries.

7706 Curriculum and College Teaching (3) Critical analysis of college curriculum and approaches to teaching; historical development of curricular models; introduction to teaching and learning theories.

7707 Finance in Higher Education (3) Public policy and theory of financing higher education; topics include tuition, pricing, tuition policy, financial management of budget, and strategic planning.

7609 Strategic Planning in Higher Education (3) Strategic plans for institutions of higher education; processes by which those plans are developed and implemented; techniques for evaluating and improving strategic planning within the context of the cultural and competitive environment; emphasis on current topics in organizational strategy.

7610 Research in Higher Education (3) F,S,Su Analysis of assessment and evaluation practices in higher education; role of assessment in policy development and planning.

7611 College Students in the United States (3) Critical analysis of issues related to college students in the United States, including access, choice, climate, student organizations, and development and identity.

ELECTRICAL ENGINEERING • EE

2120 Circuits I (3) Prereq.: credit or registration in MATH 2000 and PHYS 2120 required or consent of department. Time-domain analysis of electrical networks.

2130 Circuits II (3) Prereq.: EE 2120. Terminal behavior of semiconductor devices and basic circuits.

2231 Electronics Laboratory I (2) Prereq.: concurrent registration in EE 2230. 1 hr. lecture; 2 hrs. lab.

2720 Digital Logic I (2) Prereq.: permission to the College of Engineering. Boolean algebra; logic gates; minimization methods; analysis and synthesis of combinational logic networks; design examples.

2730 Digital Logic II (2) Prereq.: EE 2720. Analysis and design of sequential circuits; practical design of digital circuits.

2731 Digital Logic Laboratory (2) Prereq.: EE 2730. 1 hr. lecture; 2 hrs. lab. Familiarization with conventional logic gates and flip-flops; design and testing of various combinational and sequential circuits.

2950 Comprehensive Electrical Engineering (3) Prereq.: MATH 2802 or equivalent. Familiarization with sequence of major subjects. Elementary circuits, devices, and systems in electrical engineering.

3061 Special Projects (2.5) Prereq.: consent of department. Pass/fail grading. Individual work with instructor on special project selected by instructor and student.

3070 Engineering Practice (3) Prereq.: permission of department and either completion of one co-op session or six months of full-time employment in an appropriate area. Pass/fail grading. Written final report required. Work experience in solving electrical and computer engineering problems in an engineering environment.

3140 Probability for Electrical and Computer Engineering (3) Prereq.: MATH 2802. Basic concepts of probability theory with applications to electrical and computer engineering; probability axioms; continuous, discrete, and conditional probability density and distribution functions; expectations and characteristic functions; introduction to statistical inference and stochastic processes.

3184 Introduction to Digital Signal Processing (3) Prereq.: EE 3610 or equivalent. Digital processing of continuous-time signals; Discrete-time Fourier transform; Z-transforms, signals and systems in the transfer domains; Digital filter design techniques; Digital Fourier transform and FFT algorithm.

3220 Electronics II (3) Prereq.: EE 2130, 2240, and 2231. Analysis and design of electronic circuits; emphasis on concepts and device models.

3221 Electronics Laboratory II (3) Prereq.: EE 2231 and concurrent registration in EE 2230. 1 hr. lecture; 2 hrs. lab.

3322 Solid State Devices I (3) Prereq.: EE 2230 and 2231. Physics and analysis of basic semiconductor devices; principles of integrated circuit fabrication.

3320 Electrical and Magnetic Fields (3) Prereq.: MATH 2802 and EE 2130. Maxwells equations; wave propagation and reflection in isotropic media; static fields.

3410 Electric Power (3) Prereq.: EE 2130. Basic principles of electromechanical energy conversion and power system analysis.

3530 Introduction to Control Engineering (3) Prereq.: EE 2130. Modeling, simulation, realization, analysis, and feedback control design of dynamic systems.

3610 Signals and Systems (3) Prereq.: EE 2130. Methods of analysis of continuous time signals and systems.

3750 Microprocessor Systems (2) Prereq.: CSC 1253 and EE 2730. Theory and design of microprocessors; semiconductor technologies, architecture, assembly language, software development, input/output design, applications, and interfacing.