911* Strategic Behavior in Economic Environments
Fall, 3(0-0)
P: EC 812B R: Graduate
Topics in cooperative and non-cooperative games, analysis of the effects of risk in economic environments. Topics include: oligopoly and bargaining theories; strategic voting and principal agents models; endogenous coalition formation; signaling; strategic trade and taxation theories.
QP: EC 812C QA: EC 900

912* Risk, Uncertainty and Information
Spring, 3(3-0)
P: EC 812A R: Graduate
Analysis of the theories of utility, risk aversion; stochastic dominance; mean-variance models; state preference models; general equilibrium models with risk; information theory.
QP: EC 812A QA: EC 900

999* Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. May renoul for a maximum of 99 cr.
R: Doctoral Economics
QA: EC 999

EDUCATIONAL ADMINISTRATION EAD

315* Student Leadership Training
Fall, Spring, 3(2-2)
R: Undergraduate; general education, organizational theory and research applied to educational administration.

800* Organization Theory
Fall, Summer, 3(0-0)
R: Graduate status
Organizational theory and research applied to educational administration.
QA: EAD 415A EAD 415B

801* Leadership and Organizational Development
Spring, 3(3-0)
R: Graduate students
Interaction of leadership with organizational culture and development.
QA: EAD 862 EAD 851F

802* Staff and Professional Development
Spring, 3(3-0)
R: Graduate students
Staff and professional development interventions within the context of educationally oriented organizations.
QA: EAD 874A EAD 874B

803* Planning, Budgeting, and Evaluation
Spring, 3(3-0)
R: Graduate students
Major functions performed by administrators in educational organizations; planning, budgeting, and evaluation.
QA: EAD 851D EAD 971B

804* Human Resources Management in Education
Fall, Summer, 3(3-0)
R: Graduate students
Recruitment, selection, orientation, training, salary and fringe benefits, morale, negotiations, and quality of work life in educational organizations.
QA: EAD 851E

805* Education, Development, and Social Change
Spring of odd-numbered years. 3(3-0)
R: Graduate students
Interdepartmental with the Department(s) of Teacher Education. Rise of modern systems of education in developing and developed countries. Education, the state, and national and international linkages, colonial heritage, and globalization of educational development.
QA: EAD 806A EAD 856B EAD 860C

852A* Elementary and Middle School Administration
Fall, Summer, 3(3-0)
R: Graduate student
Administration and supervision of elementary and middle schools. Alternative organizational arrangements, curricula, practices, problems and strategies for improving K-8 schools.
QA: EAD 852A

852B* Secondary School Administration
Fall, Summer, 3(3-0)
R: Graduate student
QA: EAD 852B

853B* Schools, Families, and Communities
Fall, Summer, 3(3-0)
R: Graduate student
Comparative and historical analyses of education in and of schools and within the broader social context. Families, communities, and the private sector. Relationships among social problems, social policies, and school practice.

853C* Instructional Supervision
Spring, Summer, 3(3-0)
R: Graduate students
QA: EAD 852C

860* Introduction to the Learning Society
Fall, Summer, 3(3-0)
R: Graduate students
Lifelong education in the United States and other countries: history, research, content, and theory.
QA: EAD 860

861A* Adult Learning
Fall, Summer, 3(3-0)
R: Graduate students
Conceptions of adult development and life transitions. Adulit motivation and barriers to participation. Theories of adult learning.
QA: EAD 861

861B* Strategies for Teaching Adults
Spring, 3(3-0)
R: Graduate students
Strategies for teaching adults including assessing program goals, setting expectations, developing resources, choosing strategies, and evaluating outcomes.
QA: EAD 864 EAD 964 EAD 872A

861C* Basic Skills in the Community and Workplace
Spring of odd-numbered years. 3(3-0)
R: Graduate students
Psychological, sociological, economic and political implications of illiteracy. Literacy campaigns and specific approaches to reducing illiteracy. Workplace literacy programs and techniques in schools, businesses, industry, and labor.
QA: EAD 866A EAD 866B

862A* Training in Industry
Fall, 3(3-0)
R: Graduate students
Factors influencing the development and training in business and industry. Relevance of training and development models to adult educators.
QA: EAD 869C

863B* Adult Career Development
Spring, 3(3-0)
R: Graduate students
Personal, social, and economic impact of careers. Theories, practices and systems available to professionals in assisting client groups in the career development of higher education in the United States.
QA: EAD 869A EAD 889B

870* Foundations of Postsecondary Education
Fall, 3(0-0)
R: Graduate students
Growth and development of colleges and universities. Major historical, philosophical and social forces that shaped their development. Emphasis on the development of higher education in the United States.
QA: EAD 870B

871B* Collegiate Contexts for Teaching and Learning
Spring of odd-numbered years, 3(3-0)
R: Graduate students
Individual, institutional, cultural, professional, and external environmental factors that shape collegiate teaching and learning. Administrative and organizational strategies for improving learning.
QA: EAD 851A QA: EAD 572A

872* Legal Issues in Higher Education
Spring, 3(0-0)
R: Graduate students
Legal aspects of administrative practice in institutions of higher education including governance, academic freedom, due process, and anti-discrimination.
QA: EAD 870A

873* The College Student Experience
Fall, 3(0-0)
R: Graduate students
Impact of higher education on college students. Activities and environmental variables which can improve the collegiate experience.
QA: EAD 870B

874A* Student Affairs in Collegiate Settings
Fall, 3(3-0)
R: Graduate students
Student development, philosophy, organization and administration of college student personnel as a profession. The college student as an individual. Services, programs and skills needed in the profession.
QA: EAD 873A EAD 873B

874B* Student Affairs in Collegiate Settings II
Spring, 3(3-0)
R: Graduate students
College students as members of groups. Peer and group influence, including the impact of diversity on behavior. Student disciplinary philosophy, and practice. Professional development of student affairs staff.
QA: EAD 873A QA: EAD 873B EAD 875C

894A* Practicum in Student Affairs
Fall, Spring, 2(1-3) May renew for a maximum of 4 credits.
R: MA program Education Student Affairs Supervised field experience in student affairs.
QA: EAD 876A
Courses are subject to revision and final approval.

EDUCATIONAL ADMINISTRATION

**340. Organizational Analysis of K-12 Schooling**
Fall: 3(3-0)
P: EE, R: Graduate student

Theoretical perspectives on schools as organizations. Relationship of organization theory to administrative practice in K-12 schooling.

**343. Politics of Education**
Fall: odd-numbered years. 3(3-0)
R: Graduate

Education as a political enterprise. Interplay of federal relations, democratic principles, and contending sources of authority in shaping educational policy and practice.

**351B. Educational Finance**
Spring. 3(3-0)
P: Graduate

Political and economic contexts of educational finance. Role of government and policy criteria. Acquisition and distribution of public resources. Emerging issues in elementary and secondary education. Comparative and international analyses.

**360. Electromagnetic Fields and Waves II**
Spring. 4(3-3)
P: EE 330, R: Open only to Electrical Engineering and Computer Engineering majors.


**320. Energy Conversion and Power Electronics**
Spring. 3(3-0)
P: EE 302, EE 305. R: Open only to Electrical Engineering and Computer Engineering majors.


**330. Digital Logic Fundamentals**
Fall. 3(3-0)
P: CPS 130 or CPS 131 or CPS 230. R: Open only to College of Engineering majors.


**331. Microprocessors and Digital Systems**
Fall. 4(3-3)

**345. Electronic Instrumentation and Systems**
Fall, Spring. 3(3-2)
P: MTH 215, PHY 184. R: Open only to Electrical Engineering and Computer Engineering majors except Electrical Engineering and Computer Engineering majors.

Electrical and electronic components, circuits and instrumentation. Operations and analysis of steady-state response, operational amplifiers, semi-conductor devices, digital logic, counting circuits.

**360. Signals and Linear Systems**
Fall, Spring. 4(3-3)
P: MTH 215. R: Open only to Electrical Engineering and Computer Engineering majors.


**410. Digital Electronics**
Fall. 3(3-0)
P: EE 300, EE 330. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.

Transistor switch models. Device simulation models. Logic family characteristics. Latches, flip-flops, timers, memory circuits, standard cells. Gate arrays, programmable logic devices.

**411. Electronic Design Automation**
Spring. 3(3-0)
P: CPS 230 or EE 331. EE 410. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.


**413. Control Systems**
Spring. 3(3-0)
P: EE 300. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.

Analysis and design of control systems using transfer functions and state variable methods. Design of digital controllers. Application specific processor implementation.

**414. Algorithms of Circuit Design**
Fall. 3(3-0)
P: EE 302. R: Open only to Electrical Engineering and Computer Engineering majors.


**437. Power System Analysis**
Spring. 4(3-3)
P: EE 320. R: Open only to Electrical Engineering majors.

Synchronous machines: models and measurements of power components. Symmetrical components. Short circuit analysis and equipment protection. Load flow, Voltage and frequency control. Operation and planning of power systems.

**435. Electromagnetic Waves and Applications**
Fall. 4(3-3)
P: EE 306. R: Open only to Electrical Engineering majors.


**457. Statistical Communication Systems**
Fall. 4(3-3)
P: EE 360, STT 351. R: Open only to Electrical Engineering and Computer Engineering majors.


**466. Digital Signal Processing and Filter Design**
Spring. 3(3-0)
P: EE 302, EE 330. R: Open only to seniors and graduate students in Electrical Engineering and Computer Engineering.