Educational Administration—Descriptions of Courses

582A. Elementary and Middle School Administration
Fall, Summer. 3(3-0)
QA: EAD 852A

582B. Secondary School Administration
Fall, Summer. 3(3-0)
QA: EAD 852B

583A. Legal, Fiscal, and Policy Environment of Schools
Fall, Summer. 3(3-0)
QA: EAD 852G, EAD 852D

583B. Schools, Families, and Communities
Fall, Summer. Odd-numbered years.
Comparative and historical analysis of education within the broader social context. Families, communities, and the private sector. Social problems, social policies, and school practice.

585C. Instructional Supervision
Spring, Summer. 3(3-0)

585. Research in Educational Administration
Fall, Spring, Summer. 3(3-0)
P: CPE 822, EAD 800.
Applications of research techniques to educational organizations. Developing research proposals, conducting research, and writing formal papers.
QP: EAD 851A, EAD 851B, CPE 803 QA: EAD 855

590. The Concept of the Learning Society
Fall, Summer. 3(3-0)
Lifelong education in the United States and other countries. Origins, forms, purposes, sponsors, content, and theories.
QA: EAD 860

586. Educational Administration—Descriptions of Courses

581. Student Leadership Training
Fall, Spring. 3(3-0)
Student leadership role, skills, and technique, consistent with the principles and demands of a democratic multicultural society.
QA: EAD 415A, EAD 415B

800. Organization Theory in Education
Fall, Spring, Summer. 3(3-0)
Organization theory and research applied to educational administration. Topics include comparative organization settings, external environments, organizational effectiveness, and ethics.

801. Leadership and Organizational Development
Spring, Summer. 3(3-0)
Interaction of leadership with organizational culture and development within a variety of educational organizations.
QA: EAD 862, EAD 961F

802. Staff and Professional Development
Spring, Summer. 3(3-0)
Staff and professional development interventions in educational organizations.
QA: EAD 874A, EAD 874B

803. Planning, Budgeting, and Evaluation
Spring, Summer. Even-numbered years. 3(3-0)
Planning, budgeting, and evaluation in educational organizations. Topics include needs assessment, funding sources, and processes for estimating costs and revenues.
QA: EAD 8510, EAD 971B

894. Administration of Human Resources in Education
Fall, Summer. 3(3-0)
Tasks of personnel management in schools, colleges, and other educational organizations, including recruitment, selection, orientation, development, compensation, and evaluation processes. Focus on attracting and retaining a quality workforce in education.
QA: EAD 851E

813. Education, Development and Social Change
Spring, Summer. Even-numbered years. 3(3-0)
Interdepartmental with Teacher Education. Rise of modern systems of education in developed and developing countries. Education, the state, and national development. Colonial heritage, linkages, and globalization of educational development.
QA: EAD 805A, EAD 805B, EAD 805C

822. Adult Career Development
Spring, 3(3-0)
Personal, social, and economic aspects of careers. Theories, practices and systems available to professionals in assisting client groups.
QA: EAD 869A, EAD 869B

861A. Adult Learning
Fall, Summer. 3(3-0)

EAD 861. Strategies for Teaching Adults
Spring, 3(3-0)
P: EAD 861A.
Assessing program goals, setting expectations, developing resources, choosing strategies, and evaluating outcomes.
QA: EAD 864, EAD 964, EAD 872A

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

862B. Adult Career Development
Spring, 3(3-0)

870. Foundations of Postsecondary Education
Fall, 3(3-0)
Historical, philosophical and social forces that shaped development of colleges and universities. Emphasis on higher education in the United States.
QA: EAD 870B

871A. Academic Programs and Instruction in Higher Education
Spring of odd-numbered years, 3(3-0)
Curricular trends, teaching processes, and faculty roles in higher education.

871B. Collegiate Contexts for Teaching and Learning
Fall of even-numbered years, 3(3-0)
P: EAD 800.
Individual, institutional, cultural, professional, and external environmental forces that shape teaching and learning at the college level. Strategies for improving learning.
QP: EAD 861 QA: EAD 872A

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

873. The College Student Experience
Fall, Summer, 3(3-0)
Activities and environmental variables that can improve the college experience.
QA: EAD 870B

874A. Student Affairs in Collegiate Settings I
Fall, 3(3-0)
History, development, philosophy, organization and administration of student personnel as a profession. Needed services, programs and skills.
QA: EAD 873A, EAD 873B

874B. Student Affairs in Collegiate Settings II
Spring, 3(3-0)
P: EAD 874A.
College students as members of groups. Peer and group influence. Impact of diversity on behavior. Student disciplinary philosophy and practice. Professional staff development and professional development.
QP: EAD 873A QA: EAD 873B

881. Workshops in Educational Administration
Fall, Spring, Summer. 1 to 3 credits
A student may earn a maximum of 9 credits in all enrollments for this course. Laboratory experiences focused on common supervisory and administrative problems.
QA: EAD 861

882. Seminars in Educational Administration (MTC)
Fall, Spring, Summer, 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. Seminar in educational administration and in higher, adult, and lifelong education.

890. Independent Study
Fall, Spring, Summer. 1 to 3 credits
A student may earn a maximum of 9 credits in all enrollments for this course. Approval of department.
Individual study in an area of K-12 administration or higher, adult, and lifelong education.

894. Laboratory and Field Experiences
Fall, Spring, Summer. 1 to 6 credits
A student may earn a maximum of 9 credits in all enrollments for this course. Supervised graduate practice, observations, internships, or externships in K-12 administration and in higher, adult, and lifelong education.
QA: EAD 884, EAD 884

894A. Practicum in Student Affairs
Fall, Spring, Summer. 2(1-0) A student may earn a maximum of 4 credits in all enrollments for this course. P: EAD 874B. R: Open only to master's students in Student Affairs Administration. Approval of department. Supervised work experience in student affairs.
QA: EAD 876A

899. Master's Thesis Research
Fall, Spring, Summer. 1 to 9 credits
A student may earn a maximum of 15 credits in all enrollments for this course.

940. Organizational Analysis of K-12 Schools
Fall, Spring, Summer. 3(3-0)
P: EAD 860.
Theoretical perspectives on schools as organizations. Relationship of organization theory to administrative practice.

941. Administrative Behavior in Educational Organizations
Spring, 3(3-0)
P: EAD 860.
Concepts and models of leadership, management, and organization as they apply to the administration of educational institutions.
QP: EAD 851A QA: EAD 851C

942. Economic Analysis in Educational Policy Making
Spring of odd-numbered years, 3(3-0)
Interdisciplinary framework with Teacher Education. Economic analysis of policy issues in education. Alternative theoretical perspectives. Applications to the United States and other countries.
QA: TE 937

945. Politics of Education
Fall of odd-numbered years, 3(3-0)
Education as a political enterprise. Interplay of legal and political forces, democratic principles, and social welfare and anti-discrimination. Education and the American polity.

946. Policy and Practice in Education
Fall of odd-numbered years, 3(3-0)
Multiple conceptions of the relationship between policy and practice in K-12 education.

945A. Comparative Analysis of School Effectiveness and Quality
Spring of even-numbered years, 3(3-0)
Alternative conceptual and methodological approaches to the assessment of school effectiveness, with an emphasis on cross-national comparisons.
QA: EAD 911

951A. Educational Finance
Spring, Summer of odd-numbered years, 3(3-0)
Political and economic contexts of educational finance. Role of government and policy criteria. Acquisition and distribution of public resources. Funding and student social policies.

951B. Planning and Change in K-12 Education
Fall, Summer of even-numbered years, 3(3-0)
Behavioral change processes in educational institutions. Concepts and methods that have been tested by laboratory and field experiences.
QA: EAD 951B

951C. Educational Law
Spring, Summer, 3(3-0)
Legal aspects of school administration. Governance, legal and policy frameworks, due process, freedom, speech rights of students and teachers, church and state, and discrimination law.
QA: EAD 851C, EAD 852D

952A. Internship in Educational Administration
Fall, Spring, 3(0) Given at various off-campus sites. A student may earn a maximum of 21 credits in all enrollments for this course. Current administrative problems and solution strategies in education.
QA: EAD 852A, EAD 852B

955A. Clinical Inquiry in Educational Administration
Spring, 3(3-0)
R: Open only to graduate students in Department of Educational Administration. Clinical approach to problems of educational administration with emphasis on the development of multiple analytic perspectives.

955B. Field Research Methods in Educational Administration
Fall, 3(3-0)
Methods used in conducting field studies in educational organizations, with emphasis on interviews, observation, and participant observation.
QA: EAD 851H

960. Proseminar in Higher, Adult, and Lifelong Education
Fall, 3(3-0)
R: Open only to graduate students in Higher, Adult, and Lifelong Education. Academic development and leadership. Adult learning. Central concepts and methods in the field of higher, adult, and lifelong education.

961. Seminar in Adult Learning
Fall, 3(3-0)
P: EAD 881A R: Open only to doctoral students. Dimensions of cognitive style and their application to various learning contexts. Personal theories of adult learning.

962. Education and Work
Spring, 3(3-0)
Trends shaping the relationship between education and work in the United States and other countries.
QA: EAD 860D

963. Leadership in Postsecondary Education
Spring of odd-numbered years, 3(3-0)
P: EAD 860.
Leadership as a complex social phenomenon in higher education. Analysis of theories and leadership as applied to education. Enhancing leadership diversity.

964. Women's Education and Professional Development
Fall of even-numbered years, 3(3-0)
Gateways and barriers to women's achievement in education and their careers.

965. Diversity and Equity in Postsecondary Education
Fall of even-numbered years, 3(3-0)
Promise, challenge, and management of diversity and equity in higher education. Analysis of data and policy. Management responses and strategies.

967. Policy Challenges in Postsecondary Education
Spring of odd-numbered years, 3(3-0)
P: EAD 851A.
Classic and contemporary policy issues such as access, finance, excellence, and purpose. Structures for policy-making. Agencies at federal, state, and local levels.

970A. Administration and Governance of Higher Education
Spring of even-numbered years, 3(3-0)
P: EAD 880.
Principles and patterns of organization and governance characteristic of colleges and universities. Administrative, trustee, faculty, and student roles.

970B. The Community College
Spring of even-numbered years, 3(3-0)
History, philosophy, organization, and role of the community college in higher education. Emphasis on programs and services in comprehensive public community colleges.
QA: EAD 971D

971A. Institutional Research and Improvement
Fall of odd-numbered years, 3(3-0)
P: Open only to graduate students in College of Education. Tools and methods used to conduct analyses of institutional management and policy issues.
ELECTRICAL ENGINEERING
EE
Department of Electrical Engineering
College of Engineering

202. Electric Circuits
Fall, Spring, 4(4-0)
P: CPS 130 or CPS 131 or CPS 230; MTH 133. R: Open only to Engineering students.
QF: MTH 113 QA: EE 300, EE 301

302. Electronic Circuits
Fall, Spring, 4(3-0)
P: EE 200. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.
V-I characteristics of diodes and transistors. SPICE modeling. Differential, multistage and integrated circuit amplifiers. High frequency effects. Electronic test equipment and verification of principles.
QF: EE 301, MTH 215 QA: EE 302, EE 303, EE 304

305. Electromagnetic Fields and Waves I
Fall, Spring, 3(3-0)
P: MTH 235, PHY 184. R: Open only to Electrical Engineering, and Computer Engineering majors.
QF: MTH 310, PHY 298 QA: EE 305, EE 306

306. Electromagnetic Fields and Waves II
Spring, Summer, 3(3-0)
P: EE 305. R: Open only to Electrical Engineering and Computer Engineering majors.
QF: EE 305, EE 306 QA: EE 307, EE 308

320. Energy Conversion and Power Electronics
Fall, Spring, 3(0-0)
P: EE 302, EE 305. R: Open only to Electrical Engineering and Computer Engineering majors.
QF: EE 301, EE 306 QA: EE 320

330. Digital Logic Fundamentals
Fall, Spring, 3(3-0)
P: CPS 130 or CPS 131 or CPS 230. R: Open only to College of Engineering majors.
QF: CPS 251 QA: EE 330

351. Microprocessors and Digital Systems
Fall, Spring, 4(3-0)
P: CPS 230, EE 330. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.
QF: E E 330 QA: EE 351

345. Electronic Instrumentation and Systems
Fall, Spring, Summer, 3(3-0)
P: MTH 235, PHY 184. R: Open only to College of Engineering majors except Electrical Engineering and Computer Engineering.
Electrical and electronic components, circuits and instruments. Circuits, laws and applications, frequency response, operational amplifiers, semiconductor devices, digital logic, counting circuits.
QF: PHY 298 QA: EE 345

360. Signals and Linear Systems
Fall, Spring, 4(4-0)
P: EC 200, MTH 235. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.
QF: MTH 310 QA: EE 315, EE 417, EE 355

410. Digital Electronics
Fall, Spring, 3(3-0)
P: EE 360, EE 330. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.
Transistor switch models. Device simulation models. Logic gate characteristics. Latches, flip-flops, timers, memory circuits, standard cells. Gate arrays, programmable logic devices.
QF: EE 390, EE 392 QA: EE 410

411. Electronic Design Automation
Spring, 3(3-0)
P: CPS 320 or EE 351; EE 410. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.
QF: CPS 311, EE 410 QA: EE 411

413. Control Systems
Fall, Spring, 3(3-0)
P: EE 360. R: Open only to Electrical Engineering, Computer Engineering, and Computer Science majors.
QF: EE 352 QA: EE 418

421. Power System Analysis
Spring, 4(0-0)
P: EE 340. R: Open only to Electrical Engineering and Computer Engineering majors.
QF: EE 340 QA: EE 421, EE 423

435. Electromagnetic Waves and Applications
Fall, Spring, 4(3-0)
P: EE 360. R: Open only to Electrical Engineering and Computer Engineering majors.
QF: EE 307, EE 308 QA: EE 435, EE 436, EE 498

457. Statistical Communication Systems
Spring, 4(3-0)
P: EE 360, STT 351. R: Open only to Electrical Engineering and Computer Engineering majors.
Representation, processing, filtering of random signals. System behavior with noise. Optimal digital communication systems. Modulation, detection, coding, and decoding. System design applications in telecommunications, radio, signal processing.
QF: EE 355, EE 346 or STT 441 or STT 351 QA: EE 457, EE 497

466. Digital Signal Processing and Filter Design
Fall, Spring, 3(3-0)
P: EE 360. R: Open only to seniors and graduate students in Electrical Engineering and Computer Engineering.
QF: EE 365, EE 315 QA: EE 466

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