

**Descriptions — Surgery
of
Courses**

804. Research Design and Quantitative Techniques for Surgical Residents
Spring, 3(3-0)

R: Open only to students in master's degree program in Surgery.

Recognition and differentiation between experimental designs. Identification of strengths and weaknesses of a manuscript. Recognition and definition of statistical terms and common inferential techniques used in surgical research. Use of computer software in research.

890. Seminars in Research

Fall, Spring, Summer. 1 credit. A student may

earn a maximum of 5 credits in all enrollments for this course.

R: Open only to M.S. students in Surgery.

Philosophy and methods of research. Preparation and presentation of research data in research reports. Practical applications.

899. Master's Thesis Research

Fall, Spring, Summer. 3 to 4 credits. A student

may earn a maximum of 10 credits in all enrollments for this course.

P: SUR 801, SUR 802, SUR 803, SUR 804. R: Open only to M.S. students in Surgery. Approval of department.

SYSTEMS SCIENCE SYS

**Department of Electrical
Engineering
College of Engineering**

410. Systems Methodology
Spring, 2(1-3)

P: CE 370. R: Open only to Engineering Arts seniors. Completion of Tier I writing requirement.

Systems analysis and design. Needs analysis, system identification, graphical models. Team project required.

TEACHER EDUCATION TE

**Department of Teacher Education
College of Education**

150. Reflections on Learning

Fall, Spring, Summer. 3(3-0) Interdepartmental

with Counseling, Educational Psychology and Special Education.

Students' experiences as learners in comparison to psychological, sociological, and anthropological theories and assumptions about learning and teaching in and out of school.

240. Diverse Learners in Multicultural Perspective

Fall, Spring, Summer. 3(2-2) Interdepartmental

with Counseling, Educational Psychology and Special Education. Administered by Counseling, Educational Psychology and Special Education.

R: Not open to students with credit in TE 250. Communicative, linguistic, physical, sensory, behavioral, affective, and cognitive differences in learning in multicultural classrooms. Factors that mediate access to knowledge.

250. Human Diversity, Power, and Opportunity in Social Institutions
Fall, Spring, Summer. 3(3-0)

Comparative study of schools and other social institutions. Social construction and maintenance of diversity and inequality. Political, social and economic consequences for individuals and groups.

301. Learners and Learning in Context (W)
Spring, 4(3-4)

P: TE 150; TE 250 or CEP 240. R: Not open to freshmen and sophomores. Open only to Education majors and to students in Education specialization. Completion of Tier I writing requirement.

Role of social context and sociocultural background in learning. Natural and socially constructed differences among learners. Relationship among subject-specific knowledge, teaching and learning that subject, and the institutional and communal context. Multiple literacies.

401. Teaching of Subject Matter to Diverse Learners (W)

Fall, 5(3-8)

P: TE 301. R: Not open to freshmen and sophomores. Open only to Education majors and to students in Education specialization. Completion of Tier I writing requirement.

Examining teaching as enabling diverse learners to inquire into and construct subject-specific meanings. Adapting subject matter to learner diversity. Exploring multiple ways diverse learners make sense of the curriculum.

402. Crafting Teaching Practice (W)
Spring, 6(4-8)

P: TE 401. R: Not open to freshmen and sophomores. Open only to Education majors and to students in Education specialization. Completion of Tier I writing requirement.

Gathering data on learners to inform content and instructional decisions. Deciding what should be taught for specific disciplines. Teachers' multiple roles and their professional, intellectual, sociopolitical, and communal responsibilities.

405. Feminist Analyses of Education in the United States

Fall of odd-numbered years. 3(3-0) Interdepartmental with Women's Studies. Administered by Women's Studies.

P: WS 201 or WS 202 or WS 203. R: Not open to freshmen or sophomores.

Feminist perspectives on the role of gender in structuring educational experiences in elementary and secondary school.

490. Independent Study in Teacher Education

Fall, Spring, Summer. 1 to 6 credits. A student

may earn a maximum of 6 credits in all enrollments for this course.

R: Not open to freshmen and sophomores. Open only to students with a teacher certification option. Approval of department.

Supervised individual or small group study of the practice of teaching.

494. Field Experience in Teacher Education

Fall, Spring. 1 to 10 credits. A student may

earn a maximum of 10 credits in all enrollments for this course.

R: Approval of Department

Supervised practica and/or observations in educational settings.

495. Directed Teaching

Fall, Spring. 9 credits. Interdepartmental

with Music. Administered by Music.

P: MUS 260, MUS 335, MUS 336, MUS 339, TE 250; MUS 457, MUS 458 or MUS 467, MUS 468. R: Open only to seniors in Instrumental Music Education, Stringed Instrument Music Education, and Vocal-General Music Education.

Supervised Music teaching experience in Schools, on-campus seminar required.

501. Internship in Teaching Diverse Learners I

Fall, 6(2-24)

P: TE 402. C: TE 801, TE 802 concurrently. R: Open only to students seeking teacher certification.

Directed and evaluated internship in heterogeneous classrooms. Teaching worthwhile content to students with varied learning needs. Theoretical and field-based explorations of common teaching dilemmas.

502. Internship in Teaching Diverse Learners II

Spring, 6(2-24)

P: TE 501. C: TE 803, TE 804 concurrently. R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 502A or CEP 502B or CEP 502C or CEP 502D.

Continuing internship in heterogeneous classrooms at selected schools. Increased emphasis on independent teaching. Maintaining classroom communities that ensure equitable access to important knowledge and skills. Assessing academic and social outcomes.

801. Professional Roles and Teaching Practice I

Fall, 3(2-3)

P: TE 402. C: TE 501, TE 802 concurrently. R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 801A.

Teachers' professional and ethical responsibilities. Connections of schools to other social agencies. Relations of teachers to colleagues, families, other social service providers, and community leaders. Roles in school governance.

802. Reflection and Inquiry in Teaching Practice I

Fall, 3(2-3)

P: TE 502. C: TE 501, TE 801 concurrently. R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 802A or CEP 802C or CEP 802D.

Qualitative and quantitative research methods on teaching and learning. Criteria for judging the validity and applicability of research-based knowledge. Framing educational problems worthy of inquiry. Designing and assessing studies of teaching practice.

803. Professional Roles and Teaching Practice II

Spring, 3(2-3)

P: TE 801. C: TE 502, TE 804 concurrently. R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 803A or CEP 803C or CEP 803D.

School-agency alliances for fostering student learning. Strategies for working with families and community groups to improve responsiveness of the school curriculum to student needs. Child advocacy in the school and community.

804. Reflection and Inquiry in Teaching Practice II

Spring, 3(2-3)

P: TE 802. C: TE 502, TE 803 concurrently. R: Open only to students admitted to the Teacher Certification Internship-Year Studies Program. Not open to students with credit in CEP 804A or CEP 804C or CEP 804D.

Collecting, analyzing, and interpreting data on teaching, learning, and educational policy. Dilemmas surrounding research on practice. Appraising and reporting results of inquiry.