802*. Clinical Surgical Anatomy
Spring. 6(4-3). May reenroll for a maximum of 6 credits.
Interdepartmental with the Department(s) of Anatomy.
P: MD or DO degree and acceptance into Master's in Surgery program R: MD/DO accepted into MS in Surgery Program.
Review of surgical anatomy; the opportunity to obtain detailed anatomical information through lecture and discussion sessions; and the clinical interpretation of anatomy and surgical approaches.
QA: SUR 802

803*. Enteral and Parenteral Nutrition
Fall, Summer. 4(2-4). P: M.D. or D.O. degree and acceptance into Master's in Surgery program R: M.D.'s/D.O.'s accepted into M.S. in Surgery Program.
The identification of individuals requiring nutritional support; nutritional requirements in disease; delivery of total parenteral and enteral nutrition; special problems in nutrition.
QA: SUR 803

804*. Research Design and Statistics
Spring. 4(4). Students will recognize/differentiate between experimental designs; recognize/define statistical terms; determine appropriate statistical tests; determine strengths/weaknesses of a manuscript.

809*. Seminars in Research
Fall, Summer. 1 1 to 7 credits. May reenroll for a maximum of 7 credits.
P: M.D. or D.O. degree and acceptance into M.S. in Surgery program R: M.D.'s/D.O.'s accepted into M.S. in Surgery Program.
Preparation and presentation of research data, philosophy and methods of research, thesis and other research reports, literature review, illustration of research data, practical assignments.
QA: SUR 889

809*. Master's Thesis Research
Fall, Spring, Summer. 3 to 4 credits. May reenroll for a maximum of 15 credits.
P: Satisfactory completion of SUR 801, 802, 803, 804 and approval of dept R: M.D.'s/D.O.'s accepted into M.S. in Surgery Program.
QA: SUR 889

SYSTEMS SCIENCE

110. Systems Methodology
Spring. 2(1-3). P: CS 370. R: Open only to Engineering Arts seniors. Systems analysis and design. Needs analysis, system identification, graphical models. Team project required.
QA: CS 370

810*. Systems I
Fall. 3(3-0). P: MTH 234, CPS 120 or CPS 131 R: NONE. Not eligible to students with EE undergraduate background.
Introduction to systems methodology and analysis. Mathematical representations of systems, transform and state space analysis, feedback control, system simulation. Practical applications and problems in a range of disciplines.
P: MTH 214
QA: SYS 810 SYS 811

811*. Systems II
Spring. 3(3-0) P: SYS 810, STT 551 R: NONE. System modeling methodology and techniques, continuous and discrete system simulation, simulation model optimization with applications to optimal control, parameter estimation, applications and problems in a range of decision support contexts.
QA: SYS 811 STT 441 QA: SYS 811 SYS 814

TEACHER EDUCATION

150. Reflections on Learning
Fall, Spring, Summer. 3(3-0). Interdepartmental with the Department(s) of 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.

250. Human Diversity, Power, and Opportunity in Social Institutions
Fall, Spring, Summer. 3(3-0).
Comparative study of schools and other social institutions. Sociology, psychology, and social science and historical contexts to address contemporary issues.
QA: TE316

301*. Learners, Learning, and Teaching in Context
Fall. 4(3-3).
P: TE150 and TE225 or CSP 240 R: Education.
QA: TE101 TE200

309*. Learner Diversity and the Teaching of Subject Matter
Spring. 3(3-6).
P: TE301 R: Education. Inquiry into teaching and learning of subject matter in context, with an examination of learners, communities, and pedagogy.

305*. Curriculum Methods and Materials: Elementary Education
Fall, Spring. 1 1 to 3 credits. May reenroll for a maximum of 3 credits.
P: Elementary certification candidates.
Curriculum in K-8 grades. Methods and materials of teaching elementary and middle school.
QA: TE306 TE306A TE307A TE308A

306*. Interdisciplinary Elementary Curriculum
Fall. 3(1-3). R: Elementary certification candidates.
Integrating reading and writing across the curriculum.
QA: TE306C TE307A TE308A

310*. Methods of Teaching Reading in the Elementary School
Fall, Spring.
P: Elementary certification candidates.
Methods and materials for teaching reading at elementary level. Analysis of learning and teaching problems, study of concrete materials and instructional strategies.
QA: TE310 TE310A TE310B TE310C TE310D

312*. Literacy Instruction in the Elementary Grades
Fall. 2(1-3). R: Elementary certification candidates.
Application of instructional principles introduced in TE310. Emphasis on nature of literacy, its cultural context, and re-contextualizing instruction.
QA: TE312 TE312D TE311C TE312A

313*. Critical Reading and Children's Literature
Fall, Spring. 2(2-0). R: Elementary certification candidates.
Development of skills for helping children to develop critical reading skills through literary experience.
QA: TE313 TE313B TE313D

315*. Teaching Mathematics in the Elementary Grades
Fall, Spring. 1 1 to 2 credits.
P: Elementary certification candidates.
Methods and materials for teaching mathematics in the elementary school. Emphasis on problem-solving and meaningful presentation of mathematical content.
QA: TE315B TE315C TE315A

316*. Teaching Social Studies in the Elementary Grades
Fall, Spring. 2(2-0).
P: Elementary certification candidates.
Methods and materials for teaching social studies in the elementary grades. Emphasis on interrelationships of science, social science and historical context to address contemporary issues.
QA: TE316B TE316C TE316D

317*. Teaching Language Arts in the Elementary School
Fall, Spring. 2(2-0).
P: Elementary certification candidates.
Methods and materials for teaching language arts in elementary grades. Emphasis on interrelationships of listening, viewing, speaking, reading, and writing.
QA: TE317 TE317C

318*. Teaching Science in the Elementary and Middle School
Fall. 2(2-0).
P: Elementary certification candidates.
Methods and materials for teaching science at elementary and middle school grades. Emphasis on teaching science for conceptual understanding.
QA: TE318 TE318B TE318C TE318D

322*. Methods of Teaching--Secondary Common Elements
Fall. 1(1-0).
P: Secondary certification candidates.
Instructional issues common to all subject areas. Selection of instructional techniques based on teacher values and belief systems, learner needs and characteristics, and sound education principles and policies.
QA: TE322