160. Engineering Economy (2)
Prerequisite: senior standing in engineering or permission of instructor. Importance of economic analyses of problems in engineering and in management decision making; interest, depreciation, income tax, classification of costs, break-even and minimum cost points, economic comparisons of alternatives, economy of replacement.

161. Legal Aspects of Engineering (2)
Prerequisite: senior standing in engineering or permission of instructor. Development of law, canons of ethics, torts, principles of contracts, contracting procedure and specifications, property, negotiable instruments, sales, agency and patents; preparation of reports.

173. Analog Computation (2)
Prerequisite: Phys 4B, Math 77 (or concurrently). Introduction to electronic analog computer programming. (1 lecture, 3 lab hours)

182. Engineering Writing (1)
Prerequisite: senior project (concurrently). Preparation of applications, forms, letters, reports, and specifications. Substance of final report: senior project investigation.

191T. Topics in Engineering (1–4; max total 8)
Prerequisite: permission of instructor. Investigation of selected engineering subjects not in current courses.

192. E.I.T. Review (3)
Preparation for Engineer-in-Training Examination. Basic mathematics, chemistry, statics, dynamics, mechanics of materials, fluid mechanics, thermodynamics, electrical theory, materials science, economic analysis.

CIVIL ENGINEERING (C E)

1. Plane Surveying (2)
Prerequisite: Math 5. Familiarization with surveying instruments; calculations; topographic surveying.

1L. Plane Surveying Laboratory (1)
Prerequisite: C E 1 (or concurrently). Field practice in measurements of distance and use of level, transit, and plane table in solution of practical problems. (3 lab hours; field trips required)

2. Advanced Plane Surveying (2)
Prerequisite: C E 1L. Theory and computations covering land surveying; engineering astronomy; introduction to route surveying.

2L. Advanced Plane Surveying Laboratory (1)
Prerequisite: C E 2 (or concurrently). Field practice in land surveying, astronomy, triangulation, and route layout. (3 lab hours; field trips required)

3. Fundamentals of Metrical Photogrammetry (2)
Prerequisite: C E 1 or permission of instructor. Fundamental characteristics of metrical photography and photogrammetric equipment; extraction of metrical data from single and overlapping photographs; flight planning and control considerations for photogrammetric mapping; accuracy and economy. (1 lecture, 3 lab hours)

4. Machine Computing and Computer Programming (3)
Prerequisite: C E 2L, Math 76. Survey computations by use of desk calculator; electronic computer programming. (2 lecture, 3 lab hours)

5. Photogrammetric Instrumentation (3)
Prerequisite: C E 3, 4 (or concurrently). Applications of theory of optics to photogrammetric and surveying instruments. Theory of stereo-orientation; theory of optical and optical-mechanical plotting instruments; calibration and maintenance of plotting instruments; mapping with stereo-plotting instruments, orthophoto mapping. (1 lecture, 2 3-hour labs)