852 Systems Modeling and Simulation
Fall of even years. 3(3-0) Interdepartmental with Fisheries and Wildlife; Forestry; Resource Development. Administered by Department of Fisheries and Wildlife. RB: (STT 422 or STT 442 or STT 464 or GEO 463)
General systems theory and concepts. Modeling and simulation methods. Applications of systems approach and techniques to natural resource management, and to ecological and agricultural research.

853 Applied Systems Modeling and Simulation for Natural Resource Management
Spring of odd years. 3(2-2) Interdepartmental with Fisheries and Wildlife; Forestry; Resource Development; Zoology. Administered by Department of Fisheries and Wildlife. RB: (FW 820 or BE 486 or ZOL 851) or approval of department. R: Open only to seniors and graduate students

882 Irrigation and Water Management Engineering
Spring of even years. 3(3-0) RB: (BE 481 and CE 321) SA: AE 882
Design and management of systems for supplemental irrigation. Water supply and transport. Economic and engineering optimization of irrigation design.

890 Special Problems
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Approval of department; application required. SA: AE 890
Individual study in biosystems engineering.

891 Advanced Topics in Biosystems Engineering
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students in the College of Engineering major. Approval of department. SA: AE 891
Biosystems engineering topics not covered in regular courses.

892 Biosystems Engineering Seminar
Spring. 1(1-0) R: Open only to graduate students in the College of Agriculture and Natural Resources or College of Engineering. SA: AE 892
Current topics in biosystems engineering.

899 Master's Thesis Research
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to master's students in the Biosystems Engineering major. SA: AE 899
Master's thesis research.

999 Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course. R: Open only to doctoral students in the Biosystems Engineering major. SA: AE 999
Doctoral dissertation research.

BUILDING CONSTRUCTION MANAGEMENT
Department of Agricultural Engineering
College of Agriculture and Natural Resources

810 Construction Systems
Fall, Spring. 1(0-2) R: Open only to graduate students in Building Construction Management, Civil Engineering, and Interior Design and Facilities Management majors. Not open to students with credit in BCM 124 or BCM 210. 
Construction materials and methods in the U.S. Steel and wood construction.

811 Advanced Project Scheduling
Fall. 3(2-2) R: Open only to graduate students in Building Construction Management, Civil Engineering, and Interior Design and Facilities Management majors. 
Critical path analysis for effective and logical scheduling of construction projects. Identification of project activities and their relationships. Schedule development, analysis, and updating. Relationship of project costs and resources to the schedule. Effective communication of schedule information.

817 Construction Management Information Systems
Spring. 3(2-2) R: Open only to graduate students in Building Construction Management, Civil Engineering, and Interior Design and Facilities Management majors.
Information generation and utilization for the management of construction projects. Integration of construction management software, conceptual modeling and knowledge-based models.

822 Legal Issues in Construction
Spring. 3(3-0) RB: A degree or experience in construction management, civil engineering, human environment and design, interior design, architecture, urban planning, landscape architecture or law. Application of Michigan and Federal case law to construction and development claims and litigation.

823 Advanced Construction Project Management
Fall, Spring. 3(3-0) RB: (BCM 411 and BCM 415) R: Open only to graduate students in Building Construction Management. 
Project management issues, services and documentation, bidding, cost accounting, scheduling, Project planning and controlling.

890 Special Problems
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course. R: Open only to graduate students in College of Agriculture and Natural Resources. Approval of department; application required. 
Individual study in land acquisition and development, design, construction, management, finance, marketing, and structural analysis.

CELL AND MOLECULAR BIOLOGY
College of Natural Science

800 Cell and Molecular Biology Seminar
Fall, Spring. 1(1-0) A student may earn a maximum of 5 credits in all enrollments for this course. R: Open only to students in the Cell and Molecular Biology major. 
Current literature in such areas of cell and molecular biology as gene expression, intracellular transport, cell signalling, regulation of cell growth and cell structure.

880 Laboratory Rotation
Fall, Spring. Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to students in the Cell and Molecular Biology major.
Participation in research projects in laboratories of Cell and Molecular Biology faculty.

890 Independent Study
Fall, Spring, Summer. 1 to 8 credits. A student may earn a maximum of 8 credits in all enrollments for this course.
Non-thesis research for Plan B master's students.