Courses are subject to revision and final approval.

LINGUISTICS

850*. Advanced Studies in Child Language Acquisition
Spring of even-numbered years. 3(3-0)
May reenroll for a maximum of 6 credits.
P: LIN 450 R: For reenrollment approval of department
Selected topics on children's native language acquisition. Research methods, cross-linguistic data, exploration from linguistic theory. Representative topics: learnability, parameters, invariance, narrativeness, individual variation, bilingualism
Q: LIN 810

861*. Advanced Studies in Second Language Acquisition
Spring. 3(3-0) May reenroll for a maximum of 6 credits.
Interdepartmental with the Department(s) of English.
P: ENGLIN 461 or permission of department
Research, current issues and theories of second and foreign language acquisition. Role of aspects of language structure personality and general cognition.
Methods of research.
Q: LIN 410 Q: LIN 861

871*. Advanced Studies in Sociolinguistics
Spring. 3(3-0) May reenroll for a maximum of 6 credits.
Linguistic and social-psychological bases for language choice. Topics and approaches exemplifying modern general sociolinguistic including concerns of power, politeness and gender, quantiative microsociolinguistics and ethnolinguistics.
Q: LIN 415 Q: LIN 871

890*. Independent Study
Fall, Spring. Summer. 1 to 4 credits.
May reenroll for a maximum of 8 credits.
R: Approval of the Department
Special projects, directed teaching, and research arranged by an individual graduate student and a faculty member in areas supplementing regular course offerings.
Q: LIN 890

891*. Special Topics
Fall, Spring, Summer. 1 to 4 credits.
May reenroll for a maximum of 8 credits.
R: Approval of the Department
Special topics supplementing regular course offerings proposed by faculty on a group study basis for graduate students.
Q: LIN 891

892*. Seminar in Linguistics
Spring. 3(0-0) May reenroll for a maximum of 12 credits.
R: Linguistics approval of department
Presentation and discussion of original research by the instructor, students and others.
Q: LIN 892

898*. Master's Research-Plan B
Fall, Spring, Summer. 1 to 3 credits.
May reenroll for a maximum of 3 credits.
R: Approval of the Department
Directed research in support of plan B master's degree requirements.
Q: LIN 898

899*. Master's Thesis Research-Plan A
Fall, Spring, Summer. 1 to 6 credits.
May reenroll for a maximum of 6 credits.
R: Approval of the Department
Directed research leading to a master's thesis, used in partial fulfillment of plan A master's degree requirements.
Q: LIN 899

999*. Doctoral Dissertation Research
Fall, Spring, Summer. 1 to 6 credits.
May reenroll for a maximum of 36 credits.
R: Approval of the Department
Q: LIN 999

LYMAN BRIGGS SCHOOL LBS

117*. College Algebra and Trigonometry
Fall, Spring, Summer.
R: Open only to Lyman Briggs School majors. Designated score on mathematics placement test. Not open to students with credit in MTH 110 or MTH 110 or MTH 120. Rational and real numbers. Functions and inverses.
Equations, simultaneous equations. Inequalities.
Graphing, Trigonometry.
Q: NONE Q: LBS 111 MTH 111

118*. Calculus I
Fall, Spring. 5(5-0)
R: Open only to Lyman Briggs School majors. Not open to students with credit in MTH 120 or MTH 124 or MTH 132 or MTH 152H.
Limits, continuity, differentiation, integration, and elementary applications.
Q: LBS 111 MTH 109MTH 111 Q: LBS 112 MTH 112 LBS 113 MTH 113

119*. Calculus II
Fall, Spring. 4(4-0)
R: Open only to Lyman Briggs School majors. Not open to students with credit in MTH 133 or MTH 153H or MTH 235.
Continuation of LBS 118. Further applications of one variable calculus. Introduction to series. Ordinary differential equations.
Q: LBS 114 MTH 113 Q: LBS 111 MTH 112 LBS 117 MTH 215

125*. Introduction to C Language with Applications
Spring. 3(3-0)
R: LBS 118. R: Open only to Lyman Briggs School majors. Not open to students with credit in MTH 153H or MTH 235.
Computer programming using the C language and the UNIX operating system. Emphasis on scientific and mathematical applications.
Q: MTH 112 ORBS 112

126*. Personal Computers and Networks
Fall, Spring. 3(3-0)
R: Open only to Lyman Briggs School majors. Not open to students with credit in CPS 130 or CPS 131 or CPS 230.
Introduction to personal computing, data transfer, and modern computing environments.
Q: LBS 113 MTH 112 CPS 217 MTH 215

127*. Introduction to FORTRAN Language with Applications
Fall. 3(3-0)
R: LBS 118. R: Open only to Lyman Briggs School majors. Not open to students with credit in CPS 131.
Computer programming using the FORTRAN language and the UNIX operating system with emphasis on scientific and mathematical applications.
Q: CPS 130 MTH 231

133*. Introduction to Science and Technology Studies
Fall, Spring. 4(4-0)
R: Open only to Lyman Briggs School majors.
Instruction and practice in expository writing. Paper and report topics drawn from readings in the history, philosophy, and other areas of science and technology.
Q: LBS 111 MTH 113

144*. Biology I: Organismal Biology
Fall, Spring. 4(3-3)
R: Open only to Lyman Briggs School majors. Not open to students with credit in BI 110. Modern biology at the organismal level of integration. Principles of genetics, evolution, ecology, and organismal diversity as interactive units.
Q: LBS 140 BS 212

145*. Biology II: Cellular and Molecular Biology
Fall, Spring. 4(3-3)
R: LBS 144; MCH 151 or MCH 151H or MCH 153H or MCH 155. R: Open only to Lyman Briggs School majors. Not open to students with credit in BI 111.
Modern biology at the cellular and molecular level of integration. Principles of cell structure and function are used to explain processes of bioenergetics, protein synthesis, and development.
Q: LBS 141 LBS 242 BS 210 BS 211

164*. Introduction to Physics and Chemistry I
Fall. 3(3-0)
R: Open only to Lyman Briggs School majors. Not open to students with credit in PHY 181 or PHY 183 or PHY 185 or PHY 231 or PHY 232.
Basic physics principles, problem solution techniques. Mechanical systems, elementary thermodynamics, vibrations and waves. Atoms and nuclei.
Q: MTH 109 MTH 111LBS 111 Q: LBS 162 LBS 261 PHY 237 PHY 281

164L*. Introductory Physics Laboratory I
Fall. 1(0-3)
R: LBS 164 or concurrently. R: Open only to Lyman Briggs School majors. Not open to students with credit in PHY 192 or PHY 251.
Techniques and instruments in the physics laboratory. Selected experiments in classical and modern physics.
Q: LBS 162L LBS 261L PHY 257 PHY 259 PHY 297

165*. Introduction to Chemistry and Physics I
Spring. 3(3-0)
R: LBS 164. R: Open only to Lyman Briggs School majors. Not open to students with credit in CEM 151 or CEM 152 or CEM 185H.
Q: LBS 161 LBS 163 CEM 141 CEM 151 CEM 152

165L*. Introductory Chemistry Laboratory I
Spring. 1(0-3)
R: LBS 165 or concurrently. R: Open only to Lyman Briggs School majors. Not open to students with credit in CEM 151 or CEM 152 or CEM 185H.
Q: LBS 161L LBS 163L CEM 161

220*. Calculus III
Fall, Spring. 5(5-0)
R: LBS 119. R: Open only to Lyman Briggs School majors. Not open to students with credit in MTH 234 or MTH 235 or MTH 241H or MTH 255H.
Continuation of LBS 119. Three-dimensional vector geometry, differential calculus of functions of two or three variables. Double and triple integrals, line integrals.
Q: LBS 113 MTH 113 Q: LBS 216 LBS 217 MTH 214 MTH 215
240C. Directed Study-Chemistry/Physics
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Open only to Lyman Briggs School majors.
Directed studies in chemistry and physics.

290A*. Directed Study-Multidisciplinary
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Open only to Lyman Briggs School majors.
Directed studies involving at least two Lyman Briggs School curricular areas: biology, chemistry, physics, mathematics, science and technology, computer science.
QA: LBS 290A

290B*. Directed Study-Biology
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Open only to Lyman Briggs School majors.
Directed studies in biology.
QA: LBS 290B

233#. Technology and Culture
Fall. Interdisciplinary with the Department(s) of Philosophy.
P: LBS 133 R: Juniors and above
History of technology with special emphasis on the interaction of technical innovation and other elements of culture.
QA: LBS 290 P: LBS 261 PHY 237 PHY 238 PHY 239 PHY 259

333#. Topics in History of Science
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Open only to junior and senior Lyman Briggs School majors.
QA: LBS 232 P: LBS 262 CEM 114 CEM 115

344#. Science, Technology and Public Policy
Spring. 4(3-0)
P: LBS 133 R: Not open to freshmen.
Open only to Lyman Briggs School majors.
Directed studies in policy.
QA: LBS 232 QA: LBS 277

347#. Advances in Applied Biology
Fall, Spring. P: ATL 110 or LBS 111 or LBS 145 R: Not open to freshmen and sophomores.
Open only to Lyman Briggs School majors.
Advances in cell and molecular biology and application: plant and animal breeding, environment, and therapeutics.
QA: LBS 242 BS 210BS 211BS 212

401#. Clarion Science Fiction and Fantasy Writers' Workshop Summer. 4(0)
R: Approval of school; application required.
A six-week, intensive workshop for science fiction writers early in their careers. Taught by professional writers and directed by MSU students. Competitive admission based on review of applicant manuscript.
Enrollment limited to 18-18.
QA: LBS 470

404B*. Advanced Directed Study-Mathematics
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Not open to freshmen and sophomores.
Directed advanced studies involving at least two LBS curricular areas: biology, chemistry, physics, mathematics, science and technology studies, and science education.
QA: LBS 404A

405B*. Advanced Directed Study-Biology
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Not open to freshmen and sophomores.
Directed advanced studies in biology.
QA: LBS 490B

406B*. Advanced Directed Study-Mathematics
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Not open to freshmen and sophomores.
Directed advanced studies in mathematics.
QA: LBS 490C

409B*. Advanced Directed Study-Science and Technology Studies
Fall, Spring. 1 to 4 credits. May reenroll for a maximum of 8 credits.
R: Not open to freshmen and sophomores.
Directed advanced studies in Science and Technology Studies.
QA: LBS 232

492#. Senior Seminar
Fall, Spring. 4(4-0)
P: LBS 331 or LBS 332 or LBS 333 or LBS 334 or LBS 335 R: Not open to freshmen and sophomores.
Open only to Lyman Briggs School majors.
Directed studies in interdisciplinary perspectives on the humanities and society.
QA: LBS 491 LBS 492

Courses with an asterisk (*) have not been approved by the University Committee on Curriculum.
302. Human Resource Management
Fall, Spring, Summer. 3(3-0)
Expertise in human resource management, including recruitment, selection, training, development, pay administration, and employee relations.

310. Compensation and Reward Systems
Fall, Spring, Summer. 3(3-0)
Designing and implementing compensation systems to attract, retain, and motivate employees.

401. Procurement and Supply Management
Fall, Spring, Summer. 3(3-0)
Strategic planning and management of procurement processes.

405. Manufacturing Planning and Control
Fall, Spring, Summer. 3(3-0)
Integration of manufacturing and transportation systems.

505. Special Topics in Human Resource Management
Spring of odd-numbered years. 3(3-0)
Advanced topics in human resource management.

510. Compensation and Reward Systems
Fall, Spring, Summer. 3(3-0)
Designing and implementing compensation systems to attract, retain, and motivate employees.

515. Special Topics in Human Resource Management
Spring of even-numbered years. 3(3-0)
Advanced topics in human resource management.

520. Human Resource Management
Fall, Spring, Summer. 3(3-0)
Strategic planning and management of human resource programs.

535. Field Experience
Fall, Spring, Summer. 1 to 10 credits.
Practical experience in human resource management.

550. Field Studies
Fall, Spring, Summer. 1 to 3 credits.
Independent study in human resource management.

568. Compensation and Reward Systems
Fall, Spring, Summer. 3(3-0)
Designing and implementing compensation systems to attract, retain, and motivate employees.

600. Materials and Logistics Management
Fall, Spring. 3(3-0)
Strategic planning and management of materials and logistics systems.

615. Transportation Administration
Fall, Spring, Summer. 3(3-0)
Management of transportation systems.

680. Materials and Logistics Management
Fall, Spring. 3(3-0)
Strategic planning and management of materials and logistics systems.

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