491. Special Topics in Linguistic and Languages
Fall, Spring. Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course.
R: Approval of department. Special topics supplementing regular course offerings proposed by faculty on a group study basis.

821. Proseminar in Comparative Literature
Fall. Spring. 3(3-0) Interdepartmental with Arts and Letters, English, and Romance Languages. Administered by Arts and Letters. R: Approval of college. History and practice of comparative literature including foundational concepts and current directions.

822. Methods of Comparative Literature
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with Arts and Letters, English, and Romance Languages. Administered by Arts and Letters. P: AL 201 or approval of college. R: Open only to graduate students in College of Arts and Letters. Analysis of an area of South Asian literature written in English.

LYMAN BRIGGS SCHOOL LBS

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College of Natural Science

117. College Algebra and Trigonometry
Fall. Spring. 3(3-0) R: Open only to Lyman Briggs School majors. Designates credit on mathematics placement test. Not open to students with credit in MTH 103 or MTH 110 or MTH 116 or MTH 120. Rational and real numbers. Functions and inverses. Equations, simultaneous equations. Inequalities. Graphing. Trigonometry.

118. Calculus I
Fall. Spring. 5(5-0) P: LBS 117 or MTH 116 or MTH 160 or designated score on mathematics placement test. 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.

119. Calculus II
Fall. Spring. 4(4-0) P: LBS 118. R: Open only to Lyman Briggs School majors. Not open to students with credit in MTH 130 or MTH 150H or MTH 225. Continuation of LBS 118. Further applications of one-variable calculus. Infinite series. Ordinary differential equations.

863. The Literatures of Africa and the Diaspora
Spring. 3(3-0) Interdepartmental with English and Romance Languages. Administered by English. R: Open only to graduate students in College of Arts and Letters. Literature of Africa and the Diaspora with emphasis on Third World critical approaches, non-canonical perspectives, and problems.

991E. Topics in Anglophone South Asian Literatures
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with English. Administered by English. R: Open only to graduate students in College of Arts and Letters. Approval of department. Analysis of an area of South Asian literature written in English.
239. **Topics in Science and Technology Studies**

Fall, Spring, 4(4-0)

P: LBS 133 or another Tier 1 writing course. R: Open only to Lyman Briggs School majors.

Topics in history, sociology, and philosophy of science and technology. Science policy.

240. **Experimental Projects in Biology**

Spring, 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.

P: LBS 145 or BS 111, LBS 133 or another Tier 1 writing course. R: Open only to Lyman Briggs School majors. Experiments, field studies. Selected problems in biology such as cell structure and metabolism, diversity, stability, evolution of natural communities, and reproductive biology.

241. **Introduction to Chemistry and Physics II**

Fall, 3(4-0)

P: LBS 118 or concurrently, LBS 163. R: Open only to Lyman Briggs School majors. Not open to students with credit in CEM 142 or CEM 151 or CEM 181H. Spectroscopy and symmetry. Coordination chemistry. Solubility and stability constants. Electrochemistry, main group chemistry, atmospheric chemistry, organometallic chemistry. Polymers.

242. **Introductory Chemistry Laboratory II**

Fall, 1(0-3)

P: LBS 165L, LBS 266 or concurrently. R: Open only to Lyman Briggs School majors. Not open to students with credit in CEM 162. Synthesis and characterization of chemical systems.

243. **Introduction to Physics and Chemistry II**

Spring, 3(4-0)

P: LBS 119, LBS 164. R: Open only to Lyman Briggs School majors. Not open to students with credit in PHY 182B or PHY 184 or PHY 184B or PHY 232 or PHY 233B or PHY 234H.

Principles of electromagnetic theory, special relativity, quantum physics, optics, atomic and subatomic physics.

244. **Introductory Physics Laboratory II**

Spring, 1(0-3)

P: LBS 164L, LBS 267 or concurrently. R: Open only to Lyman Briggs School majors. Not open to students with credit in PHY 192 or PHY 252. Selected experiments in classical and modern physics.

245. **Directed Study-Multidisciplinary**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. 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.

246. **Directed Study-Biology**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Lyman Briggs School majors. Directed studies in biology.

247. **Directed Study-Chemistry or Physics**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Lyman Briggs School majors. Directed studies in chemistry or physics.

248. **Directed Study-Chemistry/Physics**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to Lyman Briggs School majors. Directed studies in chemistry and physics.

249. **Directed Study-Mathematics**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to Lyman Briggs School majors. Directed studies in mathematics.

250. **Directed Study-Science and Technology Studies**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to Lyman Briggs School majors. Directed studies in science and technology studies.

251. **Directed Study-Computing**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to Lyman Briggs School majors. Directed studies in computing.

252. **Technology and Culture**

Fall, 4(4-0) Interdepartmental with American Studies.

R: Open only to juniors and seniors in American Studies and Lyman Briggs School, and to students in American Studies. Completion of Tier I writing requirement. History of technology with special emphasis on the interaction of technical innovation and other elements of culture.

253. **Topics in History of Science**

Fall, Spring, 4(4-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to Juniors and seniors in Lyman Briggs School. Completion of Tier I writing requirement. Various themes or periods in physical/biological science. May emphasize patterns of theory development, changes in explanatory aims and standards or interaction of social and cultural factors with scientific ideas, practices, instrumentation or experimentalism.

254. **Science, Technology and Public Policy**

Spring, 4(4-0)

R: Not open to freshmen. Open only to Lyman Briggs School majors. Completion of Tier I writing requirement.

Science and technology in public policy formation considered from the perspectives of the history, philosophy, and sociology of science and technology.

255. **The Natural Environment: Perceptions and Practices**

Spring, 4(4-0) Interdepartmental with American Studies.

R: Not open to freshmen. Open only to students in American Studies and in Lyman Briggs School. Completion of Tier I writing requirement. American attitudes toward the natural environment and related public and private institutions.

256. **Advances in Applied Biology**

Fall, 3(3-0) P: ATL 110 or LBS 133; BS 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 applications: plant and animal breeding, environment, and therapeutics.

257. **Philosophy of Technology**

Spring, 4(4-0) Interdepartmental with Philosophy.

R: Not open to freshmen. Open only to students in Lyman Briggs School and the Department of Philosophy. Completion of Tier I writing requirement. Examination of the desirability of technology, its social forms, and its alternatives. Conventional positivist, ecological progressive, and radical humanist outlooks.

258. **History of American and European Medicine**

Spring, 3(3-0) Interdepartmental with History. Administered by History. R: Not open to freshmen and sophomores. Cultural and intellectual history of medicine in the United States, Britain, and Western Europe. Institutionalization of scientific medicine. Comparative health systems and policies. Social roles of medical practitioners.

259. **Clarion Science Fiction and Fantasy Writers’ Workshop**

Summer, 4 credits. 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 faculty. Competitive admission based on review of applicant manuscripts. Enrollment limited to 15-18.

260. **Literature and Medicine**


261. **Advanced Directed Study-Multidisciplinary**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Not open to freshmen and sophomores. Open only to Lyman Briggs School majors. Directed advanced studies involving at least two LBS curricular areas: biology, chemistry, physics, mathematics, science and technology studies, computing.

262. **Advanced Directed Study-Biology**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Not open to freshmen and sophomores. Open only to Lyman Briggs School majors. Directed advanced studies in biology.

263. **Advanced Directed Study-Chemistry or Physics**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Not open to freshmen and sophomores. Open only to Lyman Briggs School majors. Directed advanced studies in chemistry or physics.

264. **Advanced Directed Study-Mathematics**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Not open to freshmen and sophomores. Open only to Lyman Briggs School majors. Directed advanced studies in mathematics.

265. **Advanced Directed Study-Science and Technology Studies**

Fall, Spring, 1 to 4 credits. A student may earn a maximum of 8 credits in all enrollments for this course. R: Not open to freshmen and sophomores. Open only to Lyman Briggs School majors. Directed advanced studies in Science and Technology Studies.