250D Topics in National Cinemas: Russian and Soviet Cinema
Spring. 3(3-2)
Development of Russian and Soviet cinematic styles and traditions in their historical and social context. Major themes and directors. Introduction to film technique and analysis. Taught in English.

251 Intermediate Individualized Less Commonly Taught Commonly Taught Language I
Fall. 4(4-1) A student may earn a maximum of 12 credits in all enrollments for this course. RB: (LL 152) R: Approval of department.
Intermediate-level individualized work on speaking, reading, and writing a less commonly taught language. Continued development of oral proficiency skills.

252 Intermediate Individualized Less Commonly Taught Commonly Taught Language II
Spring. 4(4-0) A student may earn a maximum of 8 credits in all enrollments for this course. RB: Oral proficiency in the language learned in the home or in a bilingual school environment. R: Approval of department.
Further advanced-level individualized work on speaking, reading, and writing a less commonly taught language. Continued development of oral proficiency skills.

261 Advanced Less Commonly Taught Language I
Fall. 4(4-0) A student may earn a maximum of 6 credits in all enrollments for this course. RB: Oral proficiency in the language learned in the home or in a bilingual school environment. R: Approval of department.
Advanced-level language class specifically for the heritage language speaker who acquired oral proficiency in the language at home or in a bilingual school environment. Development of advanced level oral and aural skills, as well as academic competence in the written language and acquisition of the writing system.

262 Advanced Less Commonly Taught Language II
Spring. 4(4-0) A student may earn a maximum of 6 credits in all enrollments for this course. RB: Oral proficiency in the language learned in the home or in a bilingual school environment. R: Approval of department.
Further advanced-level language study specifically for the heritage language speaker who acquired oral proficiency in the language at home or in a bilingual school environment. Development of near-native oral and aural skills, as well as native-like mastery of the written language and writing system.

290 Independent Study
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of department.
Special projects in Linguistics and Languages arranged by an individual student and a faculty member in areas supplementing regular course offerings.

301 Third-Year Individualized Less Commonly Taught Language I
Fall. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. P:M: (LL 252)
High-intermediate level individualized work on speaking, reading, and writing a less commonly taught language. Continued development of oral proficiency skills.

302 Third-Year Individualized Less Commonly Taught Language II
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P:M: (LL 301)
Continued high-intermediate level individualized work on speaking, reading, and writing a less commonly taught language. Continued development of oral proficiency skills.

352 Asian American Writing
Spring. 3(3-0) Interdepartmental with English. Administered by Department of English. P:M: Completion of Tier I writing requirement. RB: 3 credits of literature.
Writing by Americans of Asian descent. Attention to artistic, historical, and cultural contexts.

361 Asian Literature in English or in English Translation
Spring. 3(3-0) Interdepartmental with English. Administered by Department of English. P:M: Completion of Tier I writing requirement. RB: 3 credits of literature.
Literary traditions of a major Asian civilization—Chinese, Indian or Japanese, Historical, cultural, and international contexts of Asian literature.

401 Fourth-Year Individualized Less Commonly Taught Language I
Fall. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P:M: (LL 302)
Advanced level individualized work on speaking, reading, and writing a less commonly taught language. Continued development of oral proficiency skills.

402 Fourth-Year Individualized Less Commonly Taught Language II
Spring. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P:M: (LL 401)
Continued advanced level individualized work on speaking, reading, and writing a less commonly taught language. Continued development of oral proficiency skills.

474 Aesthetic Theory and Modernism
Fall. 4(4-0) Interdepartmental with Philosophy; English; History of Art; Music; Romance Languages. Administered by Department of Philosophy. R: Not open to freshmen or sophomores.
Problems, assumptions, and arguments of modern aesthetic theory examined in the context of debates over modernity and modernist artistic practice.

490 Independent Study
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 9 credits in all enrollments for this course. R: Approval of department.
Special projects in linguistics and languages arranged by an individual student and a faculty member in areas supplementing regular course offerings.

812 Proseminar in Comparative Literature
Fall. 3(3-0) Interdepartmental with Arts and Letters, English, Romance Languages. Administered by College of Arts and Letters. Open only to graduate students in the College of Arts and Letters. History and practice of comparative literature including foundational concepts and current directions.

823 Seminar in Comparative Literary Criticism
Fall. 3(3-0) Interdepartmental with Arts and Letters, English, Romance Languages administered by College of Arts and Letters. Open only to graduate students in the College of Arts and Letters.
Theory and practice of comparative literary criticism, with attention to the development of critical approaches and to current topics in the critical literature.

825 Comparative Critical Theory
Spring. 3(3-0) A student may earn a maximum of 6 credits in all enrollments for this course. Interdepartmental with English, Arts and Letters, Romance Languages. Administered by College of Arts and Letters. Open only to graduate students in the College of Arts and Letters.
Critical theory of comparative literature, including comparative studies in rhetorical theory and discourse analysis.

863 The Literatures of Africa and the Diaspora
Spring. 3(3-0) Interdepartmental with English, Romance Languages Administered by Department of English. Open only to graduate students in College of Arts and Letters. Open only to graduate students in the College of Arts and Letters. Literatures of Africa and the Diaspora with emphasis on Third World critical approaches, non-canonical perspectives, and problems.
126 Personal Computers and Networks
Fall, Spring. 3(4-0) R: Open only to students in Lyman Briggs School. Not open to students with credit in CSE 101.

133 Introduction to Science and Technology Studies
Fall, Spring. 4(4-0) P:M: Designated score on English placement test. R: Open only to students in Lyman Briggs School. Not open to students with credit in AL 192 or AL 192H or ATL 110 or ATL 120 or ATL 125 or ATL 130 or ATL 135 or ATL 140 or ATL 145 or ATL 150 or ATL 195H or MC 111 or MC 112 or ATL 115.

138 Directed studies in expository writing. Paper and report topics drawn from readings in the history, philosophy, and other areas of science and technology.

144 Biology I: Organismal Biology
Fall, Spring. 4(3-3) R: Open only to students in Lyman Briggs School. Not open to students with credit in BS 110.

145 Biology II: Cellular and Molecular Biology
Fall, Spring. 5(3-4) P:M: (LBS 144 or BS 110 or LBS 148H) and (CEM 141 or CEM 151 or concurrently or CEM 181H or concurrently or LBS 171 or concurrently) R: Open only to students in Lyman Briggs School. Modern biology at the organismal level of integration. Principles of genetics, evolution, ecology, and organismal diversity as interactive units.

148H Honors Organismal Biology
Fall. 3(3-0) Interdepartmental with Biological Science. Administered by College of Natural Science. Not open to students with credit in BS 110 or LBS 144.

149H Honors Cell and Molecular Biology
Spring. 3(3-0) Interdepartmental with Biological Science. Administered by College of Natural Science. P:M: (CEM 141 or concurrently or CEM 151 or concurrently or CEM 181H or concurrently) R: Open only to students with credit in BS 110 or LBS 145. Exploration of the physicochemical and molecular organization of cells as the unifying framework for genetics, evolution, and the social relevance of biology.

158H Honors Organismal Biology Laboratory
Fall. 2(1-3) Interdepartmental with Biological Science. Administered by College of Natural Science. Not open to students with credit in BS 110 or LBS 144. C: BS 148H concurrently.

159H Honors Cell and Molecular Biology Laboratory
Spring. 2(1-3) Interdepartmental with Biological Science. Administered by College of Natural Science. Not open to students with credit in BS 111L or LBS 145. C: BS 149H concurrently.

171 Principles of Chemistry I - Structure
Fall. 4(4-0) P:M: (LBS 117 or concurrently or MTH 116 or concurrently or MTH 132 or concurrently or MTH 152H or concurrently or LBS 118 or concurrently or LBS 119 or concurrently) R: Open only to students in Lyman Briggs School. SA: LBS 165 Not open to students with credit in CEM 141 or CEM 151 or CEM 181H. C: LBS 171L concurrently.

171L Introductory Chemistry Laboratory I
Fall. 1(0-3) P:M: (LBS 119 or CEM 151 or concurrently or CEM 181H or concurrently) R: Open only to students in Lyman Briggs School. SA: LBS 165 Not open to students with credit in CEM 141 or concurrently.

172 Principles of Chemistry II - Reactivity
Spring. 3(4-0) P:M: (LBS 171 or CEM 141 or CEM 151 or CEM 181H or concurrently or MTH 132 or concurrently or MTH 152H or concurrently) R: Open only to students in Lyman Briggs School. SA: LBS 266 Not open to students with credit in CEM 142 or CEM 152 or CEM 182H. Spectroscopy, coordination chemistry, solubility and stability constants. Electrochemistry, main group chemistry, atmospheric chemistry, and organometallic chemistry. Polymers and biochemistry.

172L Principles of Chemistry II - Reactivity Laboratory
Spring. 1(0-3) P:M: (LBS 171 or CEM 141 or CEM 152 or CEM 182H) and (LBS 171L or CEM 161 or CEM 185H) and (LBS 172 or concurrently) R: Open only to students in Lyman Briggs School. SA: LBS 266L Not open to students with credit in CEM 162 or CEM 186H. Synthesis and characterization of chemical systems.

220 Calculus III
Fall. Spring. 5(5-0) P:M: (LBS 119 or MTH 133) R: Open only to students in Lyman Briggs School. Not open to students with credit in MTH 234 or MTH 235 or MTH 254H 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.

246 Experimental Projects in Biology
Spring. 1 to 3 credits. A student may earn a maximum of 5 credits in all enrollments for this course. P:M: (LBS 145) or (BS 111 and BS 111L) or (LBS 149H and LBS 159H) and completion of Tier I writing requirement. R: Open only to students in Lyman Briggs School. Experiments and field studies. Selected problems in biology such as cell structure and metabolism, diversity, stability, evolution of natural communities, and reproductive biology.

271 Physics I
Fall. 3(4-0) P:M: (MTH 132 or LBS 118 or MTH 152H) R: Open only to students in Lyman Briggs School. SA: LBS 164 Not open to students with credit in PHY 181B or PHY 183 or PHY 183B or PHY 193H or PHY 231 or PHY 231B or PHY 231C. Basic physics principles, problem solving techniques. Mechanical systems, elementary thermodynamics, vibrations and waves. Atoms and nuclei.

271L Physics Laboratory I
Fall. 1(0-3) P:M: (LBS 271 or concurrently) R: Open only to students in Lyman Briggs School. SA: LBS 164L Not open to students with credit in PHY 191 or PHY 251. Techniques and instruments in the physics laboratory. Selected experiments in classical and modern physics.

272 Physics II
Spring. 3(4-0) P:M: (LBS 118 or MTH 133 or MTH 153H) and (LBS 271) R: Open only to students in Lyman Briggs School. SA: LBS 267 Not open to students with credit in PHY 182B or PHY 184 or PHY 184B or PHY 232 or PHY 232B or PHY 249H or PHY 232C. Principles of electromagnetic theory, special relativity, quantum physics, optics, atomic and subatomic physics.

272L Physics Laboratory II
Spring. 1(0-3) P:M: (LBS 271L and LBS 272 or concurrently) R: Open only to students in Lyman Briggs School. SA: LBS 267L Not open to students with credit in PHY 192 or PHY 252. Selected experiments in classical and modern physics.

290A 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: 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.

290B 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: Open only to students in Lyman Briggs School.

290C Directed Study-Chemistry/Physics
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 students in Lyman Briggs School.
290D 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 students in Lyman Briggs School.
Directed studies in mathematics.

290E 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 students in Lyman Briggs School.
Directed study in science and technology studies.

290F 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 students in Lyman Briggs School.
Directed studies in computing.

330 Topics in Science and Technology Studies
Fall, Spring. 4(4-0) P:M: (LBS 133) and completion of Tier I writing requirement. R: Open only to students in Lyman Briggs School majors. SA: LBS 239 Topics in history, sociology, and philosophy of science and technology. Science policy.

331 Literature and Science
Spring. 4(4-0) P:M: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in Lyman Briggs School. Representations of science and technology in texts drawn from science fiction, Gothic, and utopian literature or mainstream writings.

332 Technology and Culture
Fall. 4(4-0) Interdepartmental with American Studies. P:M: Completion of Tier I writing requirement. R: Open only to juniors or seniors in the American Studies major in Lyman Briggs School. History of technology with special emphasis on the interaction of technical innovation and other elements of culture.

333 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. P:M: Completion of Tier I writing requirement. R: Open only to juniors or seniors in Lyman Briggs School. 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.

334 Science, Technology and Public Policy
Spring. 4(4-0) P:M: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in Lyman Briggs School. Science and technology in public policy consideration from the perspectives of the history, philosophy, and sociology of science and technology.

335 The Natural Environment: Perceptions and Practices
Spring. 4(4-0) Interdepartmental with American Studies. P:M: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in the American Studies major or in Lyman Briggs School. American attitudes toward the natural environment and related public and private institutions.

336 Gender, Science, Technology (W)
Fall. 4(4-0) P:M: Completion of Tier I writing requirement. RB: (LBS 144 and LBS 145) R: Open only to juniors or seniors in Lyman Briggs majors. Impacts of gender on the development of sciences and technologies; feminist critiques of science and technology; barriers to women’s participation in science and technology; scientific constructions of sex, gender, and sexuality.

347 Advances in Applied Biology
Fall. 3(3-0) P:M: (LBS 145) or (BS 111 or concurrently and BS 111L) or (LBS 149H or concurrently and LBS 159H) and completion of Tier I writing requirement. R: Open only to juniors or seniors in Lyman Briggs School. Advances in cell and molecular biology and application: plant and animal breeding, environment, and therapeutics.

355 Philosophy of Technology
Spring. 4(4-0) Interdepartmental with Philosophy. P:M: Completion of Tier I writing requirement. R: Open only to sophomores or juniors or seniors in Lyman Briggs School or the Department of Philosophy. Examination of the desirability of technology, its social forms, and its alternatives. Conventional productivist, ecological progressive, and radical humanist outlooks.

368 Science, Technology and Society
Fall. 3(3-0) P:M: Interdepartmental with Sociology. Administered by Department of Sociology. RB: (LBS 133) or some familiarity with basic concepts and methods in sociology. R: Not open to freshmen or sophomores. Role of science and technology in social change. Values and ethics in contemporary perspectives, controversies, and cases. Science and technology as forms of knowledge.

415 Methods of Theoretical Physics
Spring of odd years. 4(4-0) Interdepartmental with Physics. P:M: (MTM 234 or concurrently and LBS 220 or concurrently or MTH 254H or concurrently) and (LBS 271 or PHY 183 or PHY 193H) and (LBS 272 or PHY 184 or PHY 294H) RB: (MTM 235 or concurrently or MTH 255H or concurrently). Mathematical methods as applied to physical problems in mechanics, electromagnetism, and thermodynamics. Topics include multiple integration, vector calculus, Fourier series, ordinary and partial differential equations, eigenvector problems, coordinate transformations, and complex analysis. Applications include Newtonian mechanics, rigid body dynamics, heat flow, electrostatics, harmonic motion, and wave propagation.

425 American and European Health Care since 1800

483 Literature and Medicine

490A 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: Open only to juniors or seniors in Lyman Briggs School. Directed advanced studies involving at least two LBS curricular areas: biology, chemistry, physics, mathematics, science and technology studies, computing.

490B Advanced Directed Study--Biology
Fall. 4(4-0) A student may earn a maximum of 8 credits in all enrollments for this course. R: Open only to juniors or seniors in Lyman Briggs School. Directed advanced studies in biology.

490C 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: Open only to juniors or seniors in Lyman Briggs School. Directed advanced studies in chemistry or physics.

490D 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: Open only to juniors or seniors in Lyman Briggs School. Directed advanced studies in mathematics.

490E 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: Open only to juniors or seniors in Lyman Briggs School. Directed advanced studies in science and technology studies.

492 Senior Seminar
Fall, Spring. 4(4-0) RB: (LBS 239 or LBS 330 or LBS 331 or LBS 332 or LBS 333 or LBS 334 or LBS 335 or LBS 355 or LBS 490E or HST 425 or ENG 483) and completion of Tier I writing requirement. R: Open only to juniors or seniors in Lyman Briggs School. Selected problems in the study of science and technology as human activities, using philosophical, historical, literary, social science or interdisciplinary perspectives or methods. Development and defense of thesis paper.
Field Experience
Fall, Spring. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open only to juniors or seniors in Lyman Briggs School.

Experiential learning related to the public or private practice of science and technology.

MANAGEMENT MGT

Department of Management
The Eli Broad College of Business and The Eli Broad Graduate School of Management

Cooperative Education for Business Students
Fall, Spring. 1(1-0) A student may earn a maximum of 3 credits in all enrollments for this course. Interdepartmental with Marketing and Supply Chain Management; Accounting; Economics; Finance; Hospitality Business. Administered by Department of Marketing and Supply Chain Management. R: By permission of the Department only. Integration of pre-professional educational employment experiences in industry and government with knowledge and processes taught in the student's academic program. Educational employment assignment approved by the Department of Marketing and Supply Chain Management.

Managing Human Resources and Organizational Behavior
Fall, Spring, Summer. 3(3-0) R: Open only to juniors or seniors in the College of Business and to students in programs for which MGT 315 is a catalog-listed requirement. Not open to students in The School of Hospitality Business. SA: MGT 310 Formulation and administration of human resource policies in the business enterprise. Personnel planning, job analysis and evaluation, staffing, compensation and labor relations. Employee safety. Training, development, and performance appraisal. Issues of diversity and ethics.

Management Skills and Processes
Fall, Spring, Summer. 3(3-0) R: Open only to juniors and seniors in programs for which MGT 325 is a catalog-listed requirement. SA: MGT 302 Managerial skills and processes in goal-directed institutions.

Business Policy and Strategic Management
Fall, Spring, Summer. 3(3-0) R: Open only to seniors in the College of Business. Not open to students in The School of Hospitality Business. Techniques for building and maintaining consistent and effective policy and strategy. Major functions within a firm. Strategic integration, ethics, and international competition.

Organizational Staffing
Fall. 3(3-0) P:M: (MGT 315 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. Not open to students in The School of Hospitality Business. Job and organizational analysis. Personnel planning, recruitment, selection and placement. Employment interviewing and testing. Validation of selection procedures, equal opportunity employer (EEO) guidelines, and affirmative action. Issues and diversity of ethics.

Compensation and Reward Systems
Spring. 3(3-0) P:M: (MGT 315 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. Not open to students in The School of Hospitality Business. Designing compensation systems. Job evaluation, internal and external equity. Pay-for-performance plans and financial incentives. Wage and salary surveys. Benefits administration. Diversity and ethical considerations.

Personnel Training and Development
Spring. 3(3-0) P:M: (MGT 315 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. Not open to students in The School of Hospitality Business. Designing and implementing training and development programs. Career stages and career planning. Needs analysis. Experimental design and program evaluation. Learning theories. Issues and diversity of ethics.

Diversity in the Workplace
Fall. 3(3-0) P:M: (MGT 315 or concurrently) R: Open only to juniors or seniors in The Eli Broad College of Business. Not open to students in The School of Hospitality Business. Problems experienced by racial, ethnic, physically disabled, and other minorities in work organizations. Awareness training for managers. Ethical issues.

Capstone for Management Majors (W)
Fall, Spring. 3(2-2) P:M: (MGT 315 or concurrently) R: Open only to seniors in the Human Resource Management or General Management major. Topics in management and organizational behavior.

Independent Study
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 juniors or seniors. Approval of department. Supervised program of independent library research designed to supplement classroom study.

Special Topics in Human Resource Management
Spring of even years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department. Topics in human resource management such as advanced organizational behavior, managing labor relations, organizational development, and organizational theory and design.

International Management
Spring of even years. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department. Management challenges and roles in a multinational business. Strategic planning in global firms, managing people in international organizations, leadership, and the future of international management.

Special Topics in Management
Spring of even years. 3(3-0) A student may earn a maximum of 9 credits in all enrollments for this course. P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department. SA: MGT 815 Organizational behavior, organizational theory and design, human resource management, and strategic management.

Human Resource Management for General Managers
Fall. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department. Human resource management functions performed by all managers. Design, administration, and evaluation of human resource activities. Needs assessment, program implementation and evaluation, information management and decision support, and international human resource management.

Human Resource Staffing
Spring. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department. Scientific, legal, and administrative selection, placement, and promotion of individuals in organizations. Job analysis, recruitment, testing, interviewing, performance appraisal, and affirmative action.

Human Resource Training
Spring. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department. Planning, implementing, and evaluating training programs. Career stages and career planning. Matching individual and organizational development needs.

Managing Internet Commerce
Spring. 3(3-0) RB: Familiarity with a web browser. R: Open only to graduate students in the College of Business or approval of department. Not open to students with credit in MGT 820. Managing Internet access and use. Evolution, infrastructure, technology, and power of the Internet. Commercial applications of the Internet. New business opportunities. Security of transactions. Legal issues.

Human Resource Compensation
Fall. 3(3-0) P:M: (MBA 824) R: Open only to graduate students in the College of Business or approval of department. Application of compensation principles to organizational objectives. Strategic use of compensation systems for attracting, motivating, and retaining employees. Managerial aspects of paying employees at all organizational levels.