213 Intermediate Italian (4) (2C) Prereq: 212 or 4-5 yrs h.s. Italian. (spring) Completion of 213 fulfills foreign language requirement of College of Arts and Sciences.

341 Advanced Conversation and Composition (4) Prereg: 213 or perm. (fall)

342 Advanced Conversation and Composition (4)

Prereq: 341 or perm.

396 Internship in Italian (1-5) Prereq: perm of internship director. Practice using the language in a work environment. Does not count for maior.

Japanese (Asian) (JPN)

111 Elementary Japanese (4) (fall) Beginning course of 3-qtr 1st-yr sequence.

112 Elementary Japanese (4) Prereq: 111 or equiv. (winter) Continuation of 111.

113 Elementary Japanese (4) Prereq: 112 or equiv. (spring) Continuation of 112.

211 Intermediate Japanese (4) (2C) Prereq: 113 or equiv. (fall) 1st course of 3-qtr intermediate-level sequence.

212 Intermediate Japanese (4) (2C) Prereq: 211 or equiv. (winter) Continuation of 211.

213 Intermediate Japanese (4) (2C) Prereq: 212 or equiv. (spring) Continuation of 212.

251x Japanese Language and Culture I (4) Prereq: 113. Study of Japanese culture and society through classwork and experiential activities that utilize the student's developing skills in the Japanese language. Students will be in Japan as part of the Chubu Study Abroad program.

252x Japanese Language and Culture II (4) Prereq: 113. Study of Japanese culture through readings on contemporary Japan and interviews with Japanese people. Students will be in Japan as part of the Chubu Study Abroad program.

311 Advanced Japanese (4) Prereq: 213 or equiv. (fall) Beginning of advancedlevel sequence.

312 Advanced Japanese (4) Prereq: 311 or equiv. (winter) Continuation of 311.

313 Advanced Japanese (4)

Prereq: 312 or equiv. (spring) Continuation of 312.

348 Readings in Japanese Culture I (4)

Prereq: 213x or 311 or perm. Social, political, and cultural aspects of modern Japan, through readings, discussions, class reports, and short papers. All work will be done in Japanese.

349 Readings in Japanese Culture II (4) Prereq: 348. Social, political, and cultural aspects of modern Japan, through readings, discussions, class reports, and short papers. All work will be done in Japanese.

399 Special Studies in Japanese (1–3)

Prereq: perm. Reading and discussion of arranged assignments in books, periodicals, and tapes on specific topics related to Japanese language and culture.

411 Fourth-Year Japanese (4)

Prereq: 313 or equiv. (fall) Beginning of fourthyear sequence.

412 Fourth-Year Japanese (4) Prereq: 411 or equiv. Continuation of 411.

413 Fourth-Year Japanese (4) Prereq: 412 or equiv. Continuation of 412. Japanese Culture (JPC)

250 Introduction to Japanese Culture (4) (2C)

(spring) Introduction to cultural traditions of Japan and its language. English translations are used.

310 Field Study in Japan (2) (spring) Cultural orientation designed to prepare students for study abroad in Japan. Taught in English.

450 Japan: A Sociocultural Interpretation (4)

(spring) Focused readings in English designed to broaden students' understanding of Japanese culture for personal,academic, or professional purposes.

Latin (LAT)

111 Beginning Latin (4) Grammar, vocabulary, and reading.

112 Beginning Latin (4) Prereq: 111. Continuation of 111. See 111 for description.

113 Beginning Latin (4) Prereq: 112. Continuation of 111–112. See 111 for description.

211 Intermediate Latin (4) (2H) Prereq: 113 or 2–3 yrs h.s. Latin. Review of language principles. Reading of prose and poetry.

212 Intermediate Latin (4) (2H) Prereq: 211. Continuation of 211. See 211 for description.

213 Intermediate Latin (4) (2H) Prereq: 212. Continuation of 211–212. See 211– 212 for description.

351 Latin Prose and Poetry (4) Prereq: 213 or 4 yrs h.s. Latin, or 2 yrs h.s. Latin and perm. Review of essential Latin. Reading of Cicero's essays, play of Plautus or Terence, Horace's Odes and Epodes.

352 Latin Prose and Poetry (4) Prereq: 213 or 4 yrs h.s. Latin, or 2 yrs h.s. Latin and perm. Continuation of 351. See 351 for description.

353 Latin Prose and Poetry (4) Prereq: 213 or 4 yrs h.s. Latin, or 2 yrs h.s. Latin and perm. Continuation of 351–352. See 351 for description.

364 The Teaching of High School Latin (4) Prereq: 213. (on demand) Content and methods of teaching h.s. Latin courses.

411 Latin Literature of the Republic (4) Prereq: 353. Selections from works of Plautus, Terence, Caesar, Cicero, Lucretius, Catullus, and Sallust.

412 Latin Literature of the Republic (4) Prereq: 353. Continuation of 411. See 411 for description.

413 Latin Literature of the Republic (4) Prereq: 353. Continuation of 411–412. See 411 for description.

415 Latin Literature of the Early Empire (4)

Prereq: 353. Selections from works of Vergil, Horace, Livy, Ovid, Martial, Tacitus, Juvenal, and Pliny the Younger.

416 Latin Literature of the Early Empire (4)

Prereq: 353. Continuation of 415. See 415 for description.

417 Latin Literature of the Early Empire
(4)

Prereq: 353. Continuation of 415–416. See 415 for description.

419 Readings in Latin Literature (4) Prereq: 353. Selections complement students'

other readings in Latin literature.

420 Readings in Latin Literature (4) Prereq: 353. Continuation of 419. See 419 for description.

421 Readings in Latin Literature (4) Prereq: 353. Continuation of 419–420. See 419 for description.

433 Advanced Latin Syntax (4) Prereq: 353. Writing of Latin prose.

440 Special Work in Latin (1–6, max 12) Prereq: 353. (on demand) Specialized work in selected phases of classical study.

Modern Languages (Introductory Culture and Civilization;

Professional Courses) (ML) Note: 250A–D, 410, and 445 do not count toward the major. With departmental approval 250A–D may be applied to the Arts and Sciences humanities requirement.

250A Field Studies in Austria (1–4, max 4) Prereq: perm. Designed to introduce participants in study abroad program to various aspects of life in target country.

250B Field Studies in France (1–4, max 4) Prereq: perm. Use 250A for description.

250C Field Studies in Mexico (1–4, max 4) Prereq: perm. Use 250A for description.

250D Field Studies in Spain (1–4, max 4) Prereq: perm. Use 250A for description.

250E Field Studies in Russia (1–4, max 4) Prereq: perm. Use 250A for description.

250F Field Studies in Germany (4) Prereq: GER 111 or equiv. Designed to introduce participants in study abroad program to various aspects of life in target country.

321J Writing in Two Languages (4) (1J) Prereq: jr, fr comp, FR 213 or equiv. Course designed for the English-speaking student with two or more years of French (or course-specific language) who would like to improve his or her English writing skills using a comparative language approach.

370J Translation as Writing (4) (1J) Prereq: fr comp, jr; 213 FL or Non-nat. An introduction to the practice and theory of translation into English with special emphasis on translation as a form of writing/composition. Analysis and discussion of good writing and of the students' own translations and compositions.

410 Technology in Language Teaching (4) Prereq: EDCI 203 or perm. Use of computers and associated media as correlated with modern language classroom; instruction in selection, preparation, and use of instructional materials and tests, and in successful operation of computers, lab, and classroom equipment. Required of majors who plan to teach.

435 Teaching Foreign Languages in the Elementary School (4)

in the Elementary School (4) Prereq: perm. Readings and discussions of the cognitive development of children and second language acquisition provide the basis for practical class work. Students design units and prepare learning activities to present in class. Lab experience includes 20 hours observation and participation on the elementary school level. Required of all foreign language majors who plan to teach.

445 Teaching of Modern Foreign Languages (4) Prereq: perm. Not to be counted as hours above

Prereq: perm. Not to be counted as hours above 200 for A.B. degree. Study, demonstration, and use of methods and materials for effective modern foreign language instruction. Required of majors who plan to teach.

Russian (Slavic) (RUS) 111 Elementary Russian (4)

(fall) Introduction to alphabet, reading, writing, and basic grammar, development of speaking and comprehension skills. Beginning course of 3-qtr 1st-vr sequence.

112 **Elementary Russian (4)**

Prereg: 111. (winter) Continuation of 111.

Elementary Russian (4) 113 Prereg: 112. (spring) Continuation of 112.

Intermediate Russian (4) (2C) 211

Prereq: 113 or 2-3 yrs h.s. Russian. (fall) Continued language study. Review and continuation of grammar. 1st course of 3-qtr intermediate-level sequence.

Intermediate Russian (4) (2C) 212

Prereq: 211 or perm. (winter) Continuation of 211. Extensive reading, writing, listening, and oral practice.

213 Intermediate Russian (4) (2C)

Prereq: 212 or 4-5 yrs h.s. Russian. (spring) Accelerated reading, writing, listening, and oral practice. Completion of 213 fulfills foreign language requirement of College of Arts and Sciences.

298 Independent Study in Russian (1–2, max 6)

Prereq: 213 or perm. Reading and discussion of assigned materials (books, periodicals, films, tapes) on specific topics involving Russian language. Does not count toward minor. Does not satisfy language requirement.

341 Advanced Conversation and Composition (4)

Prereq: 213 or perm. (fall) Development of conversation, reading, and writing skills. Advanced grammar.

342 **Advanced Conversation and Composition (4)**

Prereq: 341 or perm. Continuation of 341.

343 Advanced Conversation and

Composition (4) Prereq: 342 or perm. Continuation of 342.

The Cultural History of Russia (4) 348

Prereq: 213 or perm. Cultural development of Russia from the 10th to the 17th centuries. Readings and lectures in Russian.

The Cultural History of Russia (4) 349

Prereq: 213 or perm. Continuation of 348. Cultural movements in Russia from the 18th century to the present day. Readings and lectures in Russian.

355 Introduction to Russian Literature (4) Prereg: 213 or perm. Introduction to literary

terms. 19th-century literary movements and authors. Reading and lectures in Russian

356 Introduction to Russian Literature (4)

Prereq: 213 or perm. 20th- and 21st-century developments in Russian literature. Reading and lectures in Russian.

Internship in Russian (1-5) 396

Prereq: perm of internship director. Practice using the language in a work environment. Does not count for major.

412 19th-Century Russian Literature (4) Prereq: 355, 356

429 **Russian Literature in the Soviet Era** (4)

Prereq: 355, 356.

435 Proseminar (1-4, max 12)

Prereq: perm. Intensive analysis of major author, literary genre, or theme. May be repeated when subject is changed.

439 Structure of Modern Russian

Prereq: 343 or perm. Advanced grammar and sytax. Emphasis on reading and writing.

Stylistics (4) 441

Prereq: 343 or perm. Advanced writing and stylistic analysis. Practice in variety of nonfiction prose techniques.

498 Independent Study in Russian (1-2, max 4)

Prereq: 8 cr at the 300 level or perm. Directed individual readings, discussion, and reports at the advanced level. Does not count toward minor.

Spanish (Romance) (SPAN) Elementary Spanish (4) 111

Development of comprehension, speaking, and reading skills. Basic grammar. Lab required. Beginning course of 3-qtr 1st-yr sequence. No credit if 199.

112 **Elementary Spanish (4)**

Prereg: 111. Continuation of 111. No credit if 199.

113 Elementary Spanish (4) Prereq: 112. Continuation of 112. No credit if 199.

Spanish for Review (4) 199

No CR if 111 or 112 or 113. Preparation for SPAN 211 for students with some high school Spanish. Review of grammar and vocabulary with intensive practice in adaptation to collegelevel expectations and instructional techniques. Emphasis on all four skills: speaking, listening, reading, and writing. Offered fall quarter. Does not satisfy language or humanities requirements.

211 Intermediate Spanish (4) (2C)

Prereq: 113 or 2–3 yrs h.s. Spanish. Intensive review of grammar. Additional readings, writing, and discussion in Spanish. Supplemental cultural material. Lab requirements may vary. 1st course of 3-gtr intermediate-level sequence.

212 Intermediate Spanish (4) (2C)

Prereq: 211 or perm. Continued review. Additional literary readings with discussion and writing in Spanish.

Intermediate Spanish (4) (2C) 213

Prereq: 212 or 4-5 yrs h.s. Spanish. Continued review, literary readings, discussion, and writing. Selected 20th century Spanish dramatists and novelists with discussion. Completion of 213 fulfills foreign language requirement of College of Arts and Sciences.

Independent Study in Spanish (1-2, 298

max 6) Prereq: 213 or perm. Reading and discussion of assigned materials (books, periodicals, films, tapes) on specific topics involving Spanish language. Does not count toward major or minor. Does not satisfy language requirement.

Advanced Conversation and 341

Composition (4) Prereg: 213 or perm. Conversation and discussion. Emphasis on writing skills.

342 **Advanced Conversation and**

Composition (4) Prereq: 341 or perm. Equal emphasis on speaking and writing.

Advanced Conversation and Composition (4) 343

Prereq: 341 or perm. Emphasis on speaking.

345 **Business Spanish (4)**

Prereq: 343. This course, designed for intermediate and advanced students of Spanish, will enable

them to achieve a higher level of competence in oral and written communication in order to help conduct business in the Spanish-speaking world. The course is suitable for business majors interested in working with Hispanic clients; international business majors; and undergraduate liberal arts majors wishing to expand their awareness of the Spanish language or seeking positions with companies doing international business

348 Spanish Civilization and Culture (4)

Prereq: 341 and 343. Survey of Spanish civilization and culture.

349 **Spanish American Civilization** and Culture (4) (2C)

Prereq: 341 and 343. Survey of Spanish American civilization and culture.

Mexican Civilization and Culture (4) 350

Prereg: 213. Study of Mexican life, language, art, and their regional variation. Offered only in Mexico

Mayan Civilization and Culture (4) 351

Prereg: 213. Examination of Mayan civilization of yesterday and today, with emphasis on its continuing presence in Yucatan. Offered only in Mexico

Yucatecan Civilization (4) 352

Prereq: 213, perm of study abroad director. Introduces the student studying abroad with the Ohio University program in the Yucatan to the rich and diverse culture encountered there. Two sections—one theoretical and one applied—will allow the student to begin to understand the sometimes complex issues that form the Yucatecan personality and make it very different from that of other states in Mexico.

354 **Dramatizations of the Hispanic World** (4) Prereq: 343. Selected Spanish and Spanish-

American plays. Historical developments and movements in Hispanic theater. Terminology. Readings, lectures, and discussion.

Fictions of the Hispanic World (4) 355

Prereq: 343. Selected Spanish and Spanish-American novels and shorter fiction. Historical developments and movements in Hispanic narrative form. Terminology. Readings, lectures, and discussion

Poetic Images of the Hispanic World 356 (4)

Prereg: 343. Selected Spanish and Spanish-American poetry. Historical developments and tendencies in Hispanic verse. Movements and terminology. Readings, lectures, and discussion.

Internship in Spanish (1-5) 396

Prereq: perm of internship director. Practice using the language in a work environment. Does not count for major. Proposals must be submitted beginning of quarter prior to internship.

398 Internship in Mexico (1-5)

Prereq: Prior SA in Mexico and perm of director. This ten-week internship is designed to help that student who already has studied abroad and has spent one guarter in Merida with the Ohio University program, and wishes to return to Mexico to improve oral language skills within the context of an internship.

425 **19th-Century Spanish Literature** (1800–1850) (4) Prereq: 2 of 345, 354, 355, 356. Romanticism,

costumbrismo, and other movements in drama, essay, and poetry.

19th-Century Spanish Literature (1850–1900) (4) 427

Prereq: 2 of 345, 354, 355, 356. Evolution of the novel in 19th-century Spain, including novels selected from the work of the following: Valera, Pereda, Galdos, Alas, Pardo Bazan, Blasco Ibanez.

429 Generation of '98 (4)

Prereq: 2 of 345, 354, 355, 356. Representative works by early 20th-century Spanish writers, including at least some of the following: Azorin, Baroja, Valle-Inclan, A. Machado, Perez de Ayala, Ortega y Gasset, and Juan Ramon Jimenez.

432 20th Century Spanish Literature (4) Prereq: 2 of 345, 354, 355, 356. Study of Spanish literature of various genres since 1925. The course may highlight the poetic generation of 1927, contemporary poetry or theater, or the novel of the democratic period.

Proseminar (1-4, max 12) 435

Prereq: perm. Subject will vary. May be repeated when subject changes.

Applied Phonetics (4) 437

Prereq: 343 or perm. Systematic description of the sound system of Spanish.

Hispanic Dialectology and 438 Sociolinguistics (4)

Prereq: 343 or perm. Overview of major dialects of the Hispanic world and exploration of the sources of dialectal variation, e.g. age-based, gender-related and socio-cultural, among others. Readings, lectures, class presentations, and discussions.

439 Modern Spanish Usage (4) Prereq: 343 or perm. The grammatical structure of modern Spanish.

440 **Teaching Spanish: Theory and** Methodology (4)

Prereq: 343. This course provides an introduction to the philosophy and theoretical orientation of the teaching of Spanish language and cultures; an introduction to issues in second-languageacquisition research, with a focus on Spanish; and opportunities to develop professional and instructional materials. Does not count toward maior.

441 Stylistics (4)

Prereq: 343. Analysis of literary styles and study of techniques used to acquire correct style in writing Spanish.

443 **Survey of Spanish American** Literature (4) Prereq: 2 of 345, 354, 355, 356. Main movements

of Spanish American literature from colonial period through Modernismo.

444 **Survey of Spanish American** Literature (4)

Prereq: 2 of 345, 354, 355, 356. Continuation of 443. Main movements of Spanish American literature from Modernismo to contemporary period.

447 **Themes from Spanish American Prose** (4)

Prereq: 2 of 345, 354, 355, 356.

448 **Contemporary Spanish American** Literature (4)

Prereq: 2 of 345, 354, 355, 356.

453 Drama of the Golden Age (4)

Prereq: 2 of 345, 354, 355, 356. Works by Lope de Vega, Calderon de la Barca, Tirso de Molina, Juan Ruiz de Alarcon, and related dramatists.

454 Golden Age Poetry (4) Prereq: 2 of 345, 354, 355, 356. Works by Garcilaso de la Vega, San Juan de la Cruz, Luis de León, Lope de Vega, Luis de Góngora, Francisco de Quevedo, and related poets.

455 Novel of the Golden Age (4)

Prereq: 2 of 345, 354, 355, 356. Picaresque novel, Cervantes' Novelas Ejemplares, and other examples of the novel from this period. Don Quijote de la Mancha (4) 458

Prereq: 2 of 345, 354, 355, 356. Intensive study of Part One and Part Two of Spain's greatest novel.

498 Independent Study in Spanish (1-2, max 4)

Prereg: 8 credits at 300 level or perm. Directed individual readings, discussion, and reports in language at advanced level. Does not count toward 400-level hours required for major. Maximum of two credits may count toward minor.

Swahili (African) (SWAH)

Elementary Swahili (4) 111 (fall) Beginning course of 3-qtr 1st-yr sequence.

Elementary Swahili (4) 112

Prereq: 111 or equiv. (winter) Continuation of 111.

113 Elementary Swahili (4)

Prereq: 112 or equiv. (spring) Continuation of 112.

Intermediate Swahili (4) (2C) 211 Prereq: 113 or equiv. (fall) 1st course of 3-qtr

intermediate-level sequence

Intermediate Swahili (4) (2C) 212 Prereq: 211 or equiv. (winter) Continuation of 211

Intermediate Swahili (4) (2C) 213 Prereq: 212 or equiv. (spring) Continuation of 212.

Advanced Swahili (4) 311

Prereg: 213 or equiv. (fall) Beginning of advancedlevel sequence.

Advanced Swahili (4) 312

Prereq: 311 or equiv. (winter) Continuation of 311.

313 Advanced Swahili (4)

Prereq: 312 or equiv. (spring) Continuation of 312

399 Special Studies in Swahili (1-3) Prereq: perm. Reading and discussion of arranged assignments in books, periodicals, and tapes on specific topics related to Swahili language and East African culture.

French

See Foreign Languages and Literatures.

Geography (GEOG)

Physical Geography (5) (2N) 101

Systematic survey of temperature, precipitation, atmospheric and oceanic circulation, and global systems of climate, soils, natural vegetation, and landforms. 4 lec, one 2-hr lab.

121 Human Geography (4) (2S)

Examination of spatial dimensions of culture, emphasizing patterns of selected cultural elements-language, religion, population, settlement, political and economic landscapes, and human/environment interactions

Globalization and the Developing 131 World (4) (2C)

Survey of globalization and its impact on development, international relations, and culture in developing countries around the world.

World Regional Geography: 132 Industrial World (4) (25)

Survey of selected geographic themes: development; people and resources; human and physical environments; and cultural patterns in Anglo-America, Western and Eastern Europe, the former U.S.S.R., Japan, and Australia

Environmental Geography (4) (2A) 201

Geographic survey of environmental changes caused by human activities. Focus on resource availability and use, pollution of air, water, and biosphere, energy problems, interactions of humans with plant and animal communities. 3 lec, one 1-hr discussion section.

202 Introduction to Weather (5) (2N)

Students will gain experience in class and in labs in the analysis of weather maps. There will be particular emphasis on weather phenomena presented in the media (global warming, El Niño). Data will be downloaded from website sources for use in the classroom and made available to students on the course Web site for study purposes. Credit not allowed for both 202 and 302

232 Geography of Ohio (4)

Detailed regional study of physical geography of Ohio and its cultural landscapes, settlement patterns, and economic development.

234 Geography of the United States and Canada (4)

Regional survey of North America including topical treatment of physical and cultural elements and intensive study of smaller regions

241 **Global Issues in** Environmental Geography (4)

Prereq: 201. An inquiry approach to environmental issues of global scope such as human population growth, energy production and consumption, climatic change, deforestation, species depletion, disposal of wastes, Examination of the sustainability of human and natural systems.

260 Maps (4) (2A)

Introduction to map reading, interpretation, and appreciation. Examination of scale, direction, distortion, projections, and the use of maps to

show physical and cultural landscapes and as everyday means of communication. 3 lec, one 2-hr lab.

Computer Applications in Geography 268 (4)

Introduction to spatial analysis and mapping techniques applied to geographical problems. Emphasis on acquiring basic skills using geographic information systems.

271 Introduction to Statistics in Geography (4)

Prereq: major or minor and 268. Introduction to application of statistics in geography. Includes descriptive statistics, descriptive spatial statistics, normal, poisson and binomial probabilities, hypothesis testing, and inferential statistics through linear regression.

302 Meteorology (5)

Prereq: 101. General survey of meteorology with focus on physical principles explaining weather change. 4 lec; one 2-hr, Web-based lab. Credit not allowed for both 202 and 302.

303 Climatology (5)

Prereq: 302. Exchanges of energy and moisture and their significance to human utilization of the earth's surface. 4 lec; one 2-hr, Web-based lab.

Observations in Meteorology and 304

Forecasting (2, max 4) Prereq: 302. Lab experience in acquisition, measurement, and interpretation of meteorological parameters.

305 Practicum in Meteorological Forecasting (2)

Prereq: 304. Lab experience in preparation and dissemination of meteorological forecasts.

315 Landforms and Landscapes (5)

Prereq: 101 or GEOL 101. A topical approach to the study of landforms and landforming processes as fundamental elements of the physical environment. Includes landforms created by tectonism, volcanism, gravity, streams, glaciers, waves, and the wind. 4 lec, one 2-hr lab.

316 Biogeography (4)

Prereg: 101. An examination of the historical. environmental, and biotic influences that shape spatial patterns of plant and animal distributions and community structure in the contemporary landscape. (Cross-listed with BIOS.)

320 American Ethnic Geography (4)

Prereq: 121. Systematic and thematic survey of spatial and cultural patterns associated with ethnicity and ethnic groups in the United States. Emphasis on historical and spatial patterns of immigration, the experience of ethnic groups in American plural society, and ethnic contributions to American life.

321 Population Geography (4) Prereq: jr and 8 hrs GEOG. Survey of global population concerns including historic and contemporary patterns of population growth, distribution, fertility, and impact of these on the environment and economic resources. Population policies and trends in international migration examined, as well as feminist/equity critiques of population as a development problem.

322 Settlement Geography (4)

Prereq: jr and 8 hrs GEOG. Survey of American rural settlement and its European antecedents. Emphasis on the evolution and regional variation in property, field, fence, and road patterns on farmsteads and in small towns

325 Political Geography (4)

Prereq: 121 or perm. Systematic examination of basic approaches, historical development, special problems, and spatial concepts in political geography. Case studies emphasize nation-state.

326 Urban Geography (4)

Prereq: jr and 8 hrs GEOG. Geographic analysis of cities and urbanization. Examines spatial patterns of cities and factors that lead to growth, decline. and change in urban areas. Introduces models of land use, transportation, population distribution,

ethnic patterns, segregation, employment, urban economies, and housing. Studies impacts of public policy changes and shifting social attitudes on spatial structure of cities, urban life, and city management.

329 World Economic Geography (4) Prereq: 121 or ECON 103. Survey of the capitalist

world economy, the rise of core economies, (under) development in the periphery and global economic restructuring.

330 Geography of Western Europe (4) Prereq: jr and 8 hrs GEOG. Topical survey of Europe with emphasis on the geographic and cultural historical factors that influenced landscape and regional patterns in the past and today.

331 Geography of Africa (4)

Prereq: jr and 8 hrs GEOG. Systematic examination of four themes in African geography with special emphasis on problems of development.

Appalachia: Land and People (4) 333

Prereq: one course in GEOG. Topical and regional survey of Appalachia with emphasis on settlement and expansion, land ownership and speculation, society and culture, and the impacts of natural resource extraction.

334 Historical Geography of the United States (4)

Prereq: 121 or HIST 211. Systematic and regional survey of past human geographies of the United States from 1450 until the present. Focus on the development of regional identity over time and space, and manifestations of regional identity in the cultural landscape.

335 Geography of Latin America (4) Prereq: jr and 8 hrs GEOG. Regional survey of Latin America focusing on biophysical systems, rural development, population/migration, cultural geography, and economic development.

336 **Geography of Religious Space and** Place (4)

Prereq: jr. Systematic and regional survey of religious cultural landscapes of the world in comparative perspective. Emphasis on religion as a cornerstone of culture and its manifestations in the cultural landscape. Focus on sacred space and place, pilgramage, and holy sites in selected religious belief systems.

Geography of Religion in the United 337 States (4)

Prereq: jr. Regional and systematic survey of religious belief systems in the United States. Emphasis on the analysis of the development of regional religious patterns over time and space and the role played by religion in American life. Focus on selected regional and local manifestations of religious beliefs in the American cultural landscape.

338 Geography of Southeast Asia (4) Prereq: jr and 8 hrs GEOG. Survey of physical

geography, natural resources, population, food production, urbanism, and energy within selected regions.

344 Agricultural Ecosystems (4) Prereq: jr and 8 hrs GEOG. Agricultural activity. Systematic analysis of agricultural change and sustainability of agricultural systems in the industrial and developing world. A spatial perspective on the globalization of agriculture, agro-biotechnology, and the future of agriculture.

Land Use Planning (4) 350

Prereq: jr and 8 hrs GEOG. Survey of land use issues including mapping, ownership, legal issues, zoning, conservation design in zoning, subdivision regulations, "takings," and habitat-conservation planning. Many practical applications are included in the class.

353 **Environmental Planning (4)**

Prereq: jr and 8 hrs GEOG. An introduction to the development, implementation, and operation of activities to guide landscape development.

Emphasis on interaction between natural and social systems, methods of environmental analysis, and the evolution of environmental planning strategies.

357 Environmental Law (4)

Prereq: jr. Legal aspects of both individual environmental and societal environmental rights and duties with respect to constitution, private property, nusiance, negligence, statutes, regulatory agencies, and court decisions. Emphasis on case study of federal, state, and local laws which shaped existing law and those which are likely to shape future legislative and administrative action.

358 **Environmental Risk Assessment (4)**

Prereq: jr. Systematic introduction to the concepts, problems, and methods that guide the identification and assessment of environmental risk with emphasis on natural hazards and their geophysical dimensions.

360 Cartography (5)

Prereq: major or minor. Introduction to basic cartography in a contemporary computer environment. Emphasis on map design and principles of aesthetically pleasing maps that are scientifically sound. Projects range from simple compilation of spatial data to multicolor composition. 3 lec, two 2-hr labs.

361 Statistical Cartography (5)

Prereq: 360. Application of cartographic techniques to represent quantitative data on computer-generated maps. 3 lec, two 2-hr labs.

365 Air Photo Interpretation (4)

Prereq: jr, 101. Principles, techniques, and practice in visual interpretation of air photographic and remote sensing imagery. For geographers, geologists, military, community planners, resource managers, engineers. 3 lec, 2 lab.

370 **Geographic Information Systems**

Applications (4) Prereq: 268 or PBIO 415, and 1 other course in GEOG. Applications of geographic information systems (GIS) to solving spatial problems. Instruction is a problem-oriented approach using desktop GIS. Students will learn how to use vector and grid-based GIS to answer problems with a geospatial component. Course emphasizes methods for importing and integrating data sources and digital boundary files from the Internet and other sources. The purpose is to give students critical thinking skills to solve spatial problems using automated methods. No credit for both 370 and 479.

406 Introduction to Synoptic Meteorology (5)

Prereq: 305. The construction and analysis of meteorological models used in the prediction of meteorological phenomena.

407 **Advanced Synoptic Meteorology (5)**

Prereg: 406. Capstone course in meteorology. Advanced topics in synoptic meteorology. Includes lab

411 Advanced Physical Geography (4)

Prereq: 101. Application of physical geographic principles to a specific advanced research theme.

417 Landscape Ecology (4) Prereq: jr., 101 or permission. Explores the reciprocal relationship between pattern and process: how pattern is created on the landscape, and implications of spatial pattern on populations, communities, and ecosystems. Examines the role of humans in influencing landscape pattern and change.

418 **Research Methods in Plant**

Biogeography (4) Prereq: 316 or PBIO 209 or permission. Integrated, problem-oriented introduction to modern biogeographical research techniques. Emphasis on a range of problems biogeographers address, relevant literature, and traditional and contemporary approaches to particular issues. Students will learn by experience how biogeographers gather and weigh evidence about natural and human processes, employ

maps and databases to represent and model real-life situations, analyze spatial, temporal, and functional relationships, and communicate findings. 2 lec, 4 lab.

440 **Environmental Impact Analysis (4)**

Prereq: jr and 8 hrs GEOG. Introduction to analytic techniques, legal responsibilities, and administrative procedures in evaluating environmental impacts of land use change. Practice in production of environmental impact statements and in documenting scientific research.

447 Natural Resource Conservation (4)

Prereq: 241. Themes in American environmental history, resource conservation and management, and contemporary environmentalism.

456 The City and the Environment (4)

Prereq: 201. Examination of historical and present-day environmental impacts of urban and suburban expanision in a North American context.

466 Remote Sensing (5)

Prereq: 271 or equiv. Application of computerbased statistical patterns recognition techniques to the digital analysis and classification of remotely-sensed imagery. Includes lab.

468 Automated Cartography (5)

Prereq: 360 or perm. Computer techniques and importation of spatial data from a variety of contemporary sources to generate digital maps using two or more software programs. Projects range from mapping the Athens campus using digital aerial photography to making comprehensive maps via data from the Internet, GPS, and satellite data, suitable for GIS export. Includes lab.

471 **Quantitative Methods (4)**

Prereq: 271, and jr or permisson. Systematic survey of methods of multivariate analysis used by geographers.

475 Geocomputing (4)

Prereq: jr and 8 hrs GEOG. Introduction to the methods of systems analysis and modeling directed to the study of physical, human, and environmental processes and their interaction at regional and global scales.

476 Field Methods (4)

Prereq: 271 or equiv. Introduction to geographic field methods and techniques. Field mapping, data collection, spatial sampling, data analysis, synthesis, and reporting. 2 lec, 4 lab.

Principles of GIS (5) 478

Prereq: 260 and 271 or equiv. Systematic introduction to the procedures and techniques that guide the design, implementation, and application of geographic information systems. 3 lec, two 2-hr labs.

Geographic Information Analysis (5) 479

Prereq: 478. In-depth examination of the methods of spatial data analysis and the utilization of GIS in geographic problem solving. 3 lec, two 2-hr labs.

481 Senior Seminar (2)

Prereq: sr and major. Selected topics.

485 Internship (1-15)

Prereq: jr., major, and permission. Provides qualifying students with credit for work-study experience in cartography, remote sensing, land use planning, resource management, and other fields of applied geography. Supervised by geography faculty and evaluated by on-the-job supervisor.

486 Practicum in Cartography and Remote Sensing (2-5)

Prereq: 361, 466, jr., major, and perm. Individualized undergraduate thesis-level work– theoretical or practical—in cartography and/or remote sensing.

490 Geographic Studies (1-5, max 15) Prereq: jr and perm. Supervised studies in fundamentals of geographic research.

494 Field Problems (1-5, max 5)

Prereg: major or perm. Research on field problem using standard geographic field methods.

Geological Sciences (GEOL)

101 Introduction to Geology (5) (2N)

Nature and distribution of earth materials and their utilization as natural resources: discussion of earth structure, earthquakes, mountain building, and continental drift; development of landscapes. 4 lec, 2 lab. Not open to students who have had 283

120 The Mobile Earth (4) (2N)

An examination of the earth's dynamic systems including continental drift, sea-floor spreading, mountain building, volcanic activity, and earth-quakes, and their explanation in terms of plate tectonic theory. Intended for both science and nonscience majors seeking a nontechnical overview of plate tectonics. 4 lec.

Geology of the National Parks (4) 130 (2N)

Survey of the geologic features of the national parks of the United States, emphasizing the history of their geologic development. 4 lec.

170 Ore, Energy, and Society (4) (2A) Survey of a broad array of Earth resources

with the goal of examining the impact of those resources on society. The influence of plate tectonic processes and Earth's evolution on resource distribution will be considered. The manner in which technological changes in mineral processing are changing recycling rates and are fostering closer connections between industries, the environment, and society will be explored.

Statistical Methods in Geology (4) 205 Prereq: 101 (spring) M. Stoertz. Elementary statistics applied to geologic data. Use of statistical software, spreadsheets, and tools for geologic data analysis (e.g., Rose and Stiff diagrams). Labs will use data sets from branches of geology including hydrology, sedimentology, geophysics, structural geology, and paleontology. 3 lec, 2 lab.

Introductory Oceanography (4) (2N) 211 Survey of physical, chemical, biological, and geological aspects of oceanography. 4 lec.

Environmental Geology (4) (2A) 215

Survey of geological aspects of environmental crisis. Focus on major environmental processes, immediate and extended influence of humans, and prospects for future of physical environment. Presupposes no background in sciences. 4 lec.

Earth and Life History (4) (2N) 221

T. Worsley. A nontechnical survey exploring the 4.5 billion year history of the interaction between life and the environment. Topics include the origin of the earth, the origin and development of life, the origin and evolution of the continents, the history of the atmosphere and ocean, catastrophic extinctions, and the impact of human evolution

231 Water and Pollution (4) (2A)

The interrelationship between geologic and hydrologic principles and technology as they relate to the use of water resources and the environmental problems associated with its pollution

Historical Geology (4) 255

Prereq: 101. (winter) D. Kidder. An introduction to the geologic history of the Earth, emphasizing the tectonic, stratigraphic, and climatic record of North America. 3 lec, 2 lab.

270 World Mineral Resources (3)

Prereq: soph. Major deposits of metal nonmetallic, and fuel resources which form backbone of modern industry. Economics and basic geologic controls of mineral production reviewed. 3 lec with demonstrations. Not open to geology majors.

Geology for Engineers (4) 283

(fall) Geologic principles applied to engineering projects and materials. 3 lec, 2 lab. Not open to students who have had 101.

312 Earth Materials and Resources (5)

Prereq: 101, CHEM 122 or 152, nonmajors only. G. Heien. An introduction to minerals and rocks, emphasizing common varieties and those important as mineral resources. 3 lec, 4 lab.

315 Mineralogy (5)

Prereq: 101, CHEM 122 or 152. (fall) G. Heien. Crystallography, crystal chemistry, and mineralogy, emphasizing mineral identification and formation and association of minerals in different geologic environments. 3 lec. 4 lab.

320 Petrology (4)

Prereq: 315. (winter) D. Schneider. Characteristics and origin of igneous, sedimentary, and metamorphic rocks and their identification in hand specimens. 2 lec, 4 lab.

Principles of Geomorphology (5) 330

Prereq: 101. (spring) Basic concepts of origin and development of landforms. Lab study of topographic maps and aerial photographs. 4 lec, 2 Jah

340 Principles of Invertebrate

Paleontology (4) Prereq: 101, 255. (fall). Invertebrate fossils emphasizing theory of their study, morphology, classification, and biologic relationships. 3 lec, 2 lab, field trip.

350 Stratigraphy-Sedimentology (4) Prereg: 255 or concurrent, 320. (spring) *E*. 350

Gierlowski-Kordesch. Introduction to principles of stratigraphy and sedimentation. Interpretation of depositional environments and their relation to plate tectonic setting. 3 lec, 2 lab.

360 Structural Geology (5) Prereg: 350. (fall) *D. Nance*. Principles of rock deformation and interpretation of folding and faulting and related topics. Field-oriented structural problems, structural maps, and use of stereographic projections. 4 lec, 2 lab, field trip.

405 Modeling and Computational Methods in Geology (5) Prereq: CS 220 or 230, MATH 163B or 263B, GEOL 405

205 or MATH 250. (spring) D. Lopez. Applied computer-based mathematical methods in geology. Basic geostatistical concepts. Data analysis, conceptual models, and hypothesis testing in geological problems. Mathematical simulation of geological processes and analysis of solutions. Programming exercises in Fortran and use of software to model processes in hydrogeology, geochemistry, and other fields of geology. 4 lec, 2 lab.

420 Petrography (5)

Prereq: 320, 350, or concurrent. (spring) D. Schneider. Petrogenesis of igneous, metamorphic, and sedimentary rocks and their identification via microscopic analysis of thin sections. 3 lec, 4 lab.

Water Geochemistry (4) 427

Prereq: 101, CHEM 123 or 153. D. Lopez. (fall) Geochemical origin of major ions in natural waters and the role of fluid-mineral interactions in the evolution of sediments, the ocean, and the atmosphere. Major geochemical cycles. Introduction to thermodynamical equilibrium, kinetics, complexation, oxidation-reduction, and cation exchange. Case studies of important geochemical and environmental issues. 3 lec, 2 Ĭab.

428 Physical Geochemistry (4) Prereq: 427. D. Lopez. (winter, alt.)

Basic principles of physical chemistry for hydrogeologic, environmental, and geologic applications. Topics include adsorption and desorption reactions, chemistry of sulphur and iron, introduction to stable isotopes, transport mechanisms of chemical species, and origin, formation, and migration of oil. 3 lec, 2 lab.

Contaminant Geochemistry (4) 429

Prereg: 101, 427. D. Lopez. The main purpose of this course is to provide students with knowledge of the chemical principles and processes involved in the generation and movement of contaminants. It will give students an understanding of the sources, fate, and chemical behavior of some of the most important classes of chemical pollutants. 4 lec.

432 Origin and Classification of Soils (4)

Prereq: 330. Consideration of concept of soil and factors of soil formation, introduction to soil morphology and systems of soil classification, discussion of major soil groups of world and soils of Ohio. 3 lec, 2 lab, field work.

433 Glacial Geology (4)

Prereq: 330, 350. Formation and behavior of glaciers, past and present, consideration of glacial processes, and causes and implications of ice ages. 3 lec, 2 lab, field trips.

435 Quaternary Geology (4)

Prereq: 330, 350. Evaluation of the several geological records of Quaternary environmental change, including geomorphic land forms and sediments, ice cores, soils, organic sediments/ fossils, cave deposits, tree rings, and others. Quaternary geochronology will also be considered.

439 Fluvial Geomorphology (4)

Prereq: 330 or GEOG 315. G. Springer. Study if stream processes and human interactions with rivers, including the qualitative and quantitative techniques used to study natural and disturbed streams as presented in lecture and field settings. 4 lec.

443 Advanced Invertebrate Paleontology (5)

Prereq: 340. (winter) R. Mapes. Study of selected groups in Phylum Mollusca with details of modern biology, environmental habitats, life modes, etc., applied to fossil record. 3 lec, 4 lab.

446 Earth Systems Evolution (4)

Prereg: 312 or 350; PHYS 201 or 251. (winter) *T*. Worsley. Synthesis of the coupled histories of the earth's interior, surface, and life. 3 lec, 2 lab.

451 **Diagenesis (4)**

Prereq: 424. D. Kidder. Critical view of diagenetic principles using numerous examples. Many topics are selected from recent journal articles. Students read, present, and discuss current literature, as well as writing a term paper. 4 lec.

452 **Depositional Environments (4)**

Prereq: 350. D. Kidder. Advanced coverage of depositional processes and environments. Latter part of course focuses on global sedimentation and events. Students read, present, and discuss current literature, as well as writing a term paper. 4 lec.

453 Physical Limnology (4)

Prereq: 101, CHEM 123 or 153. (Fall) E. Gierlowski-Kordesch. Physical parameters and processes in lake environments, including temperature, light, heat, oxygen, alkalinity, and dissolved ions. Labs include outdoor sampling and measurements. 3 lec. 2 lab.

457 Petroleum Geology (4)

Prereq: 360 or concurrent. (spring) G Nadon. Course is designed for geology students at the senior undergraduate and graduate level. It will provide students with an understanding of the basic concepts and processes that govern a) the generation, migration, and trapping of hydrocarbon resources, and b) the fundamentals of exploration for, and exploitation of, these resources. 3 lec, 2 lab.

Fluvial Sedimentology (4) 458

Prereq: 350. (Fall) G. Nadon. Provides students with an understanding of how to interpret the depositional environment of sedimentary rocks deposited by rivers and the large and small-scale forces that control the formation and preservation of these deposits.

464 Regional Tectonics (4)

Prereg: 360. (spring) D. Nance. Global tectonics and structure of continental cratons and margins, mid-ocean ridges, island arcs, and major orogenic belts. 4 lec.

466 Geodynamics: The Earth's Interior (4) Prereq: 312 or 320. (spring) D. Green. Solid earth geophysics (gravity, magnetics, seismicity, heat flow) and internal structure, dynamics, and evolution of Earth's core, mantle, and crust. 4 lec.

Tectonophysics (4) 467

Prereq: MATH 340, PHYS 202 or 253. (winter) D. Green. Quantitative modeling of solid earth physical processes. Physical properties of minerals, rocks, and unconsolidated materials. Modeling of tectonic plate flexure, geothermal heat flow, seismic wave propagation, and fault mechanics. 4 lec.

471 Advanced Environmental Geology (4) Prereq: 101, CHEM 123 or 153. (fall) *D. Lopez.*

Covers the conceptual basis for understanding transport and reaction processes that govern change in many environmental systems. Emphasizes processes occurring at the three major environmental interfaces: air and water, water and the adjoining earthen material, and air and soil. Includes chemical and thermal equilibrium, chemical transport, and transport and transfer of energy across the interfaces. 4 lec.

475A Field Camp I (4) Prereg: 360. (fall) D. Schneider, G. Nadon, D. Nance. Introduction to field mapping techniques based on projects in the Appalachian region This course, only in combination with GEOL 475B (Field Camp II), satifsfies the field camp requirement.

475B Field Camp II: Death Valley (5)

Prereq: 475A. (winter intersession) D. Schneider, G. Nadon, D. Nance. Application of field and mapping techniques learned in GEOL 475A, based on projects in the Death Valley region. This course, only in combination with GEOL 475A (Field Camp I), satisfies the field camp requirement.

476 Subsurface Methods (4)

Prereq: 350, PHYS 202 or 253. (winter) G. Nadon. Resumé of drilling, sampling, and logging by electric, radioactivity, temperature, and neutron methods as applied to petroleum exploration, water, and engineering projects. 3 lec, 2 lab.

480 Principles of Hydrogeology (4)

Prereq: 101 or 283, MATH 163B or 263B, PHYS 202 or 253. (fall) M. Stoertz. Principles governing occurrence, movement, and recovery of water in soil and aquifers. Hydrologic cycle, water budget, hydrology of agriculture, watershed studies, water chemistry, and pollution. 3 lec, 2 lab.

481 Groundwater Flow Modeling (4)

Prereq: 480. (winter) M. Stoertz. Steady and unsteady flow to well, analysis of pumping test data, water well design, well development, interference of wells, and design of well fields. 3 lec, 2 lab.

482 **Transport Processes in Groundwater**

(4) Prereq: 481, MATH 340. (spring) D. Lopez. Basic principles and fundamental equations; D.E. of groundwater motion, solution of boundary value problems for different types of aquifers. Analytical and numerical methods in subsurface hydrology with emphasis on finite difference method; digital model. 4 lec.

483 Field Hydrology (6)

Prereq: water resources background. (summer) K. Edwards, D. Green, D. Lopez, M. Stoertz. Field training in techniques of hydrology, hydrogeochemistry, and water resources evaluation. 3 wks.

485 Introduction to Applied Geophysics (4)

Prereq: PHYS 202 or 253. (fall) D. Green. Introductory course in environmental and geotechnical geophysics. Survey of applied geophysical methods including seismic, gravity, magnetic, electrical, and electromagnetic techniques. 3 lec, 2 lab.

486 Applied Seismology (4) Prereq: 485. (spring) *D. Green.* Field methods and analysis techniques for seismic characterization of shallow subsurface, multichannel digital data acquisition, generalized reciprocal refraction and common offset refraction techniques as practiced in environmental and geotechnical industries. 4 lec.

489 Advanced Topics in Hydrogeology (1–4)

Prereq: 480, perm. *M. Stoertz, D. Lopez.* In-depth study of an advanced or current topic in hydrogeology, exploring (but not limited to) such areas as karst hydrogeology, fracture-flow hydrology, mine hydrology, unsaturated flow, and inverse modeling. Consult instructor for topics

490 Seminar in Geology (1-2)

Prereg: perm. Several seminars on specific topics in geological sciences will be offered yearly. It is recommended that all majors participate in at least one seminar

491 Geologic Studies (1–6, max 12) Prereg: perm. Staff. Individual or small group

independent study arranged with faculty members

492 Internship (1–15)

Prereq: perm. Provides qualified students with the opportunity to receive credit for work experiece directly related to the geological sciences. Supervised by geological sciences faculty and evaluated by an on-the-job supervisor. A report detailing the internship activities is required before credit is awarded.

495 Senior Thesis (1-5)

Prereq: perm. Independent research project requiring departmental approval of thesis proposal before registering. Required for departmental honors program.

German

See Foreign Languages and Literatures.

Gerontology

Undergraduate Certificate

The Colleges of Health and Human Services and Arts and Sciences cosponsor a Gerontology Certificate Program for students who desire to supplement their undergraduate curriculum with a career in working with or for the elderly. Traditional aging-related content, and the global impact of aging are linked with program initiatives that enable students to appreciate how this growing population affects their own area of study. Health care, social services, recreation, mental health, education, administration, and business are examples of service areas that now employ large numbers of persons working with and for the aging population. This program is open to any undergraduate student in the University. See the College of Health and Human Services section.

Global Learning Community (GLC)

The Global Experience (1) 100

Prereq: Fr or soph. To raise the awareness of a broad range of global issues from an interdisciplinary perspective. To use a problem-based format to address these issues. To foster contacts between American and international students in order to learn about other countries and cultures. To encourage teamwork and collaboration among students and faculty from different disciplines—both face to face and by using Intranet communication software.

Global Learning Community 201 Introductory Project (3)

Introduction to project-based learning. Team research and analysis of global issues, with an emphasis on business, communication, and international relations. Perform country, industry, and company analyses; recommend options and solutions; and present ideas orally and in writing. Sample projects: Should McDonalds continue to invest in Russia? Should Wal-Mart expand into Malaysia? Should Amazon.com stay in the French and/or German markets? What should Starbucks' strategy be in Southeast Asia? (2001)

Business and Communication in 202 **Transitional Socieities (5)**

Prereg: soph. (fall and two weeks of winter intersession) Two-stage project focusing on issues and challenges faced by companies, organizations, and nongovernmental organizations in transitional societies. In stage one, teams undertake a country analysis and develop a communications campaign to promote the country to a global media audience. In stage two, work continues in bi-national teams on projects for companies or organizations. Two weeks of winter intersession are spent overseas (Hungary; Ecuador; Czech Republic; Thailand) conducting the project. Sample projects: How can Hungary tell its story through the global media? What story can Ecuador tell through the global media to promote its economic goals? How can Brno tell its story through the media? How can a Bangkok enterprise tell its story through the media

Building Cross-National Alliances (4) 203 Prereq: 201, 202. (winter) Understanding

barriers and opportunities in countries and regions at various stages of development, and the significance of cross-national alliances. Team research and analysis of global ventures in various fields, accounting for relevant legal, economic, political, and social factors. Sample projects: Investigate potential market entry for satellite cell phones in China, Australia, Italy, Japan, Brazil, and Kuwait. Building institutional partnerships for student exchange and study abroad programs in Argentina, Ghana, Morocco, and Turkey. World Music and Social Change.

204 Communication and Development (4) Prereq: 201, 202. (winter) Research and analysis of how communication can be used to promote development in such areas as agriculture, education, public health, the environment, nation-building, and political and social democracy. Examines changing definitions of development and places emphasis on understanding the historical, social, economic, and political circumstances that impact development and communication strategies used to promote development. Sample projects: Research development needs in a specific country and write a grant proposal for a communication

205 **Global Leadership Conference (2)** Prereq: 203, 204. (spring) Teams plan a conference on global issues in business and communication. Selection of a conference theme and topics from proposals submitted by teams. Teams assigned specific planning tasks such as panels and speakers, budget and funding, logistics, and publicity.

campaign to address these needs.

Global Economic Trends and Strategic 301 Alliances (4)

Prereq: 205 or perm. (fall) Focuses on how strategic alliances are shaping and changing economic and political relations among the countries of the world, and the impact of such changes on society and culture. Research the development of bilateral trade relations, regional economic groups, and the growth and interdependency of global financial markets. Analysis of how such economic alliances are reflected in geopolitics and international diplomacy, and in cooperative global initiatives in such areas as natural resources, space exploration, education, and sports. Sample project: research global mergers, joint ventures, and alliances in the airline, automotive, and telecommunications industries.

Global Competition and Industry 302 Trends (4)

Prereq: 301 or perm. (winter) Understanding international trade and global industry structures by comparing and contrasting joint ventures, mergers, and acquisitions. Comparison of markets and industries to determine the advantages and disadvantages of global and cross-industry expansion, and assessment of strategies for entry into new markets or new industries

303 Starting a New Venture/Initiative (4)

Prereq: 302 or perm. (spring) Development and launch of a new venture or initiative for a national, regional, or global market or audience. Broadly defined to include commercial products and services, not-for-profit initiatives in eduction or social and economic development Identification of target market/audience; analysis of competition or environmental assessment; preparation of a business plan with detailed financial information, marketing strategy, and assessment of human resources and training needs

International Internship (0-6) 400

International internship that allows students to apply the knowledge and skills obtained in two years of project-based learning on global issues. Taken after sophomore year, with faculty approval, during summer, or fall or winter quarters. Written report and oral presentation on internship experiences to sophomore and junior GLC students upon return

Government

See Political Science.

Greek

See Foreign Languages and Literatures.

Hazardous Materials Technology (HMT)

The following courses for the A.A.S. in hazardous materials technology are available only on the Chillicothe campus:

Hazardous Materials Regulation I (4) 110 Addresses U.S. laws and regulations that pertain to environmental law and liabilities associated with handling hazardous materials. Topics include the basics of environmental law, liability and enforcement, Resource Conservation and Recovery Act (RCRA), transportation of hazardous materials, and the Clean Air Act. Current events will be discussed and analyzed

120 Hazard Communication Standard (3) Emphasis on hazard communication programs, their development and implementation, and their compliance with federal Hazard Communication Standard and "Right-to-Know" laws. Topics include Material Safety Data Sheets (MSDS), written programs, employee training, and labels and placarding.

Industrial Processes (3) 130

Generation of hazardous materials in such settings as electroplating, metal finishing, printed circuit board production, oil refining, chemical production, steel production, paper industry, and various other production areas. Emphasis on acute and chronic exposure. Hazardous materials handling and minimized waste generation will be covered.

140 Hazardous Materials Regulation II (4)

Prereg: 110. The Environmental Protection Agency (EPA) is the major focus. Included are the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Superfund Amendments and Reauthorization Act (SARA); the Clean Water Act; the Safe Drinking Water Act; the Oil Pollution Act; and the National Environmental Policy Act (NEPA). Regulatory compliance is a major topic, with some case studies

150 Emergency Response I (3)

Emphasizes the development of emergency response contingency plan for a facility. Includes analyzing hazards, writing and implementing contingency plans, training employees for an emergency, and evaluation of the contingency plan. Emergency operations are also explored with emphasis on field exercises incorporating drum handling, instrumentation surveying, decontamination procedures, personal protective equipment, and medical evaluations.

200 Hazardous Materials Recovery, Incineration, and Disposal (4)

Prereq: EVT 100. Directed toward the recovery, incineration, and disposal of hazardous waste. Topics include the contracting of qualified disposal organizations, obtaining permits, and ensuring compliance of hazardous waste. Onand off-site treatment technology as well as chemical and physical characteristics of hazardous materials and waste are discussed. Environmental contamination for air, water, and land is explored. Some air dispersion modeling is included

Hazardous Materials Regulation III (4) 210

Prereq: 140. Final course in the regulation serie addresses the Toxic Substances Control Act (TSCA), asbestos regulations, pesticides, the Emergency Planning and Community Right-to-Know Act (EPCRA), and the OSH Act. Case studies, class participation, and reports are emphasized.

220 **Hazardous Materials Health Effects** (3)

Prereg: BIOL 101. Literature review of human health risks related to chemical exposures. A study of risk factors, types of chemical entry, effects on organs, acute and chronic effects, and measures to control exposure.

Emergency Response II (3) 230

Prereq: 150. Application of emergency response procedures under simulated emergency conditions. Students respond to the emergency, assess the seriousness of the incident, supervise cleanup, and provide information to the public and media. Students successfully completing this course will be certified at the First Responder Awareness Level and Operations Level

Hazardous Materials Testing (4)

Prereq: 200. Development of an effective field sampling program for hazardous materials. Includes proper sampling procedures, use of hazardous materials testing equipment, and chemical analysis of hazardous waste materials. Students will become proficient in the use of sampling equipment as well as portable and laboratory-based qualitative and quantitative analytical apparatus used in routine and emergency situations.

289 Special Topics (1-5)

Prereq: 100, HMT advisor perm. Special topics in hazardous materials. Areas include OSHA's 40-Hour Compliance Training, instrumentation, internships, co-ops, and special studies.

Health and Human Services (HS)

102 **HCOP Six-Week Skill Enrichment (5)** Prereq: HCOP student. Six-week prematriculation program for entering minority freshmen majoring in selected health-related programs. Skill enrichment in math, biology, composition, computer word processing, and study techniques through lecture and lab experiences. Clinical visits and observations at various health care facilities provide students with exposure to allied health professions.

491 Special Topics in Gerontology (1-4; maximum credit from all enrollments is 8)

Prereq: jr. Examination of various contemporary trends and issues in the study of geriatrics. Draws upon current literature and research for in-depth consideration of special topics in gerontology.

Health Sciences

Environmental Health (EH)

Introduction to Environmental Health 260 and Safety (4) (2A)

Survey of technical and administrative procedures needed to control the environment, especially as they relate to health effects encountered in daily activities. Emphasis on general ecological environmental protection and environmental degradation, along with safety concepts, practices, and procedures. 4 lec.

275 Environmental and Occupational

Health and Safety Regulations (4) Overview of the history, development, and current application of major regulations, amendments, and reauthorizations related to the environmental and occupational health and safety regulatory process. 4 lec.

Water Supply and Wastewater Environmental Health Practice (4) 310

Prereq: 260, CHEM 153. Examination of processes for the development of water resources, guantity and guality requirements, preventive control measures and treatment, collection of wastewaters, and treatment for disposal or reuse. Health implications of water quality management stressed. 3 lec. 2 lab.

Solid and Hazardous Waste 312

Management (4) Prereq: 260. Problems in and solutions to the storage, collection, and disposal of hazardous and nonhazardous wastes with special emphasis on life cycle analysis and risk assessment. 4 lec.

320 Shelter Environments (4) Prereq: 260. Physiological and psychological aspects of exterior and interior environmental concerns. Emphasis on housing standards, building codes, vector control, separate concerns of urban and rural housing, migrant labor housing, mobile home construction, and mobile home park design. 4 lec.

330 Food Quality Control (4) Prereq: 260; BIOS 221, 222. Emphasizes the topics of foodborne diseases and regulatory programs relative to sanitary inspection and control of food service and processing systems. 3 lec, 2 lab.

425 **Environmental Health and Safety Risk Communication (4)**

Prereq: 260. Hands on application of principles in communicating environmental health and safety risks to the public. Students will work with current environmental health and safety issues to develop and implement risk communication plans. 4 lec.

430 Vector Control and Pesticide Use (4) Prereq: 260. Vectors responsible for rodent- and anthropoid-borne diseases of medical and veterinary importance with special emphasis on human health and welfare implications. 3 lec, 2 lab

440 Air Quality and Pollution Control (4) Prereq: 260, CHEM 153. (Evaluating and monitoring air quality; effects of pollution control and lab procedures in air quality investigation. Special emphasis on air pollution's effects on human health and welfare. 3 lec, 2 lab.

450 Institutional Environmental Health Practice (4)

Prereq: 260. Emphasis on the institutional aspects of shelter as they relate to disease prevention and control within hospitals, nursing homes, day care centers, schools, and correctional facilities. 4 lec.

Recreational Environmental Health 455 Practice (4)

Prereq: 260. Broad view of all major aspects that should be considered in the planning, development, and operation of recreational environments as they relate to proper environmental health protection. 4 lec.

Prereq: 260. Provides knowledge and understanding of processes involved in the development and implementation of environmental health and safety programs. Focus on design, implementation, maintenance, and evaluation of workplace safety programs, with emphasis on inspection programs, planning, administration, and communication. 4 lec.

464 **Environmental Health Practicum (15)** Prereq: sr, perm, major. Supervised learning experience in an approved clinical/environmental health facility designed to provide the student with practical comprehensive opportunities in environmental health to enhance and complement required classes

Independent Study (1–5) 490 Prereg: major and perm

Environmental Health/Industrial 491 **Hygiene Professional Topics Seminar** (1-4)

Prereq: 260, jr or sr. Provides a forum for students interested in environmental health, safety, and industrial hygiene to express their views on current topics in the profession. Instructors will facilitate reviews of current research, emerging interest areas, graduate education, the job market, and among other topics.1-4 lec.

Health Sciences (HLTH)

101 Introduction to Health and Human Services Professions (2)

Course examines various roles of health care professionals in health care delivery system, describes education and training program options, explores opportunities for employment, and introduces medical terminology. Students receive credit (CR), not a letter grade. 2 lec.

105 **Preventing Sexual Violence (4)**

(fall, spring) Provides both male and female students with information about sexual violence, its different forms, frequencies, and impact. Students gain an understanding of cultural influences, offender and survivor characteristics, and support services. Information and skills directed at reducing students' likelihood of being involved in sexually offensive/violent situations. 4 lec.

202 Introduction to Health and Lifestyle Choices (4) (2A)

Prereq: fresh or soph. Practices and appreciation of means whereby health of individual and group may be maintained. 4 lec.

Foundations in Health Education (4) 203 Examines both theory and practice, including terminology, theoretical models, health issues, health organizations, employment opportunities, historical contributions, ethics, and relationship to the remainder of the medical community. 4 lec.

Alcohol, Tobacco, and Other Drugs (4) 204 Presents basic pharmacology and toxicology of common drugs, alcohol, and tobacco and consequences of their abuse. 4 lec.

205 Preventing HIV and STIs (4)

Examines the signs and symptoms, methods of transmission, treatment, and prevention of HIV and sexually transmitted infections (STIs). Emphasis on education as a means to reduce the risks of becoming infected. 4 lec.

Health of Women (4) 210

The health needs and concerns of women within the physical, mental-emotional, and social dimensions of functioning are examined. Emphasis on women as health care and product consumers. 4 lec.

212 **Controlling Stress and Tension (4)**

Prereq: 202. Holistic approach to stress management covering recognition of tension, physiological response, relaxation techniques, and individual stress profile. 4 lec.

Violence in America (4) 215

Focuses on the etiology and prevention of violence as it occurs in the home, workplace, on American highways, and in the daily interactions with others. Emphasis placed on gender violence etiology, prevention, and reporting. 4 lec.

Introduction to Health Care 217

Organizations (4) Prereq: 202. Focuses on U.S. health system, describing health care institutions, providers, payment practices, and significant health legislation. Discusses trends and future perspectives against historical background. Assists manager to develop panoramic view of health care organizations. 4 lec.

225 Long-Term Care Administration I (4) Prereq: MGT 200. (fall) Presents laws, regulations,

and standards that impact long-term care facilities management. Discusses client rights and responsibilities and their implications in managing such facilities. Stresses ethical and moral issues confronting manager. Reviews risk management and strategies for providing safe and comfortable environment. 4 lec.

230 Medical Terminology (2)

Prereq: BIOS 103 or BIOS 170. Medical terms associated with body systems, disease processes, laboratory tests, and clinical procedures commonly found in the health care setting. Emphasis on the development of appropriate administrative policies and procedures based on selective disease processes. 2 lec.

Family and Consumer Health (4) 270

Covers consumer health issues, health quackery, purchasing health products and services, alternative health care, and marketing strategies. Regional practices within the U.S. will be discussed. 4 lec.

290 Health Aspects of Aging (4) Theories of aging involving changes in structure

and performance. Emphasis on normal aging changes, mental changes, mental health, health promotion, and community health. 4 lec.

300 Worksite Health (2)

Prereg: ir. Examination of worksite health programs. Guidelines for development of health promotion programs in corporate settings discussed. 2 lec.

316 Human Resource Management and Training in Health Care (4) Introduces students to the management and

development of personnel within various health care settings. Examines and analyzes various human resource issues within the unique health care arena. 4 lec.

320 Strategies for Communicating Health Information (4)

Prereq: 202, jr. Instruction, principles, and curricula used in presenting health information at the preschool, elementary, middle, and secondary school levels. 4 lec.

Long-Term Care Administration II (4) 325

Prereq: 225. (winter) Presents managerial ideologies important to manager of long-term care facilities. Fully develops role of administrator in planning, organizing, directing, controlling, and staffing for specific services of long-term care facilities within holistic framework for client care. Studies professional relationships and coordinating function of manager. Includes contributions of rehabilitation and recreation services to long-term care. 4 lec.

Community Health Epidemiology (4) 330

Prereq: 202, jr. Use of epidemiology by community health providers to prevent health disorders and to plan for meeting the health needs of populations. Special focus on the use and interpretation of morbidity and mortality data in studying acute and chronic disorders. 4 lec.

335 Administration of Acute Care Facilities (4)

Prereq: jr. (winter, spring) Focuses on the understanding, skill, and ethical issues important to the management, organization, planning, financing, and evaluation of an acute health care facility and its services to patients. Emphasis on

the admin-istrator's role in an acute health care facility. 4 lec.

Courses / Health Sciences

340 **Contemporary Problems in Health** Care Organizations (4)

Prereq: jr. (fall, winter) Identifies the major issues in the development and management of a wide range of health care programs and organizations. Provides exercises in the application of management skills necessary to confront the major changes and problems identified. 4 lec.

345 School Health (4)

Prereq: jr. Principles, problems, organization, and administration of school health programs. including health services, healthful school environment, health instruction, and school and community relationships. 4 lec.

350 Independent Study (1-5)

Prereq: jr, perm. Study and/or research in selected topics of interest to students in health sciences.

364 **Community Health Field Experience** (1-5)

Prereq: 202, jr. Observation and participation in activities of community health agency or medical facility or program.

370J Writing for Health Sciences (4) (1J)

Prereg: jr or sr. Designed to improve the technical writing skills of students in health or healthrelated fields. Writing tasks are designed to provide students with experience in writing within formats and subject areas of their field of study. 4 lec.

390 **Community Health (4)**

Prereg: 202, 204, jr. Institutional frameworks for promoting and maintaining health of people of community, state, and nation. 4 lec.

405 Long-Term Care Administration III (4) Prereq: 325. (spring) Deals with administrative processes in long-term care management. Orients student to modern information systems and use of data in managing decision action and record keeping. Presents content on building effective public relations, managing volunteer programs, and in supporting client governance. Prepares student to sit for licensure exams. 4 lec.

406 Alternatives to Traditional Long-Term Care (4)

Prereg: 217; 325 or 335. Exposes the student to information related to alternative forms of delivery for long-term care. Major thrust directed to assisted living operations and regulations. 4 lec.

Health Issues: U.S. Underserved 410 Populations (4)

Prereq: jr, 202, 204, 390. In-depth analysis of critical health issues germane to underserved populations in the United States. Emphasis on those groups suffering the most profound consequences of health problems and disease. 4 lec.

412 **International Health Programming** (4)

Prereq: jr. Addresses diverse, rapidly changing health problems in underdeveloped and industrialized countries while exploring roles of health professionals. Surveys program interventions and solutions that are available or under development. 4 lec.

418A Instructional Experiences (1–3) Supervised practice in organizing and teaching activities in college.

419 **Health Education for the Elementary** School (4)

Prereq: 202. Application of principles of curriculum development, identification of appropriate concepts and practices, and use of teaching methods and resources at elementary school level. 4 lec.

421 **Financial Administration of Health** Care Facilities (4)

Prereq: ACCT 101 or 201, sr. Emphasis on the interpretation and application of accounting and financial concepts of health services with an introduction to strategic financial planning. 4 lec.

422 **Reimbursement Payment Systems in** Health Care Organizations (4)

Prereq: 421, sr. Analysis of reimbursement systems for acute care, long-term care, home care, and alternative care systems. Both current and projected systems will be examined. 4 lec.

Community Health Services 464 Practicum (15)

Prereq: 364, sr, perm. Participation in activities of official or voluntary public health agency. Supervision of experience to be done by agency personnel and University faculty.

470 **Advanced Community Health (4)**

Prereg: 300, 345, 390. Combines lecture with practical experiences with student using previously learned content to develop relevant community health programs. Knowledge of assessment, planning, implementation, and evaluation are required. 4 lec.

Practicum in Health Services 480 Administration (10)

Prereq: perm. Provides a practical field experience in the operational skills necessary to manage a health care organization. The student works under the direct supervision of health care managers and carries out assigned tasks, which may include the direct provision of care, development of programs, maintenance of systems, and management of data.

Internship in Health Administration 481 (15)

Prereq: perm, completion of coursework. Provides an administrative/programmatic experience under the direct supervision of an administrator in a health-related organization. Students complete supervised projects, plans, and other administrative tasks under the joint supervision of a health care facility administrator and a University faculty member.

489 **Community Health Planning and** Administration (4)

Prereq: sr. Effective planning and management techniques germane to community health service settings in regard to approaching and addressing health problems. Emphasis placed on assessing health needs, relating those needs to particular population groups, analysis of the economics involved, program recommendations, as well as program implementation. 4 lec.

Independent Study (1-5) 490

Prereq: jr or sr, perm. Allows for special study of topics of interest to students of health care programming and administration.

491A-F Special Topics Workshops (1-3)

Prereq: perm. (A) focuses on administrative practices and issues; (B) focuses on environmental and occupational health and safety; (C) focuses on legal aspects; (D) focuses on client-centered care programs; (E) focuses on team-building and interpersonal relationship skills; and (F) focuses on intercommunity relationships and consortia arrangements.

Industrial Hygiene (IH)

200 Introduction to Industrial Hygiene and Occupational Safety and Health (4)

Introduction to occupational safety and health and industrial hygiene including historical developments, health and safety program concepts, social and legislative requirements, professional relationships, and general introduction to concepts of anticipation, recognition, evaluation, and control of exposures. 4 lec.

Industrial Hygiene Sampling and 400 Analysis (5)

Prereq: 200. Lectures and lab to introduce field sampling and lab instrumentation and analytical methods common to industrial hygiene. Students required to interpret readings, analyze samples, and prepare appropriate reports. 3 lec, 3 lab.

Toxicological Effects of Hazardous 401 Materials (4)

Prereq: 200. Basic toxicology of hazardous dusts, fumes, vapors, gases, and liquids found in the workplace. Techniques necessary to recognize, evaluate, and control exposure to organic solvents, metals, asbestos, lead, radon, and other substances will be introduced. 4 lec.

405 Ventilation for Contaminant Control (4)

Prereq: 200. Designed to impart a working knowledge of the principles, methods, and practices of controlling worker exposure to hazardous concentrations of air contaminants and to present logical methods of design, evaluation, and maintenance of such systems. 4 lec

410 **Physical Hazards: Evaluation and** Control (4)

Prereq: 200. Designed to provide a functional knowledge of methods used to evaluate and control noise, vibration, heat, light, and other factors affecting the health and well-being of the worker. 4 lec.

Introduction to Radiological Health: 415 Evaluation and Control (5)

Prereq: 200. Introduction and overview of health effects of various sources of radiation including sources, evaluation, safety, and control factors. 3 lec. 3 lab.

420 Hazardous Material: Management and Control (4)

Prereq: 200. Lectures on gases, vapors, dusts, liquids, and solids and their physical and chemical properties. Emphasis is upon evaluation and control methods. Student is required to develop controls for specific cases and present them in technical reports. 4 lec.

Hearing, Speech and Language Sciences (HSLS)

107 Voice and Articulation (2)

Designed to help student recognize, evaluate, and compensate for or improve speech production characteristics. 2 lec.

Introduction to Communication 108 Disorders (5) (2A)

Introduction to the field of human communication disorders, including disorders of hearing, speech, and language. 5 lec.

207 English Pronunciation—International Students (2)

Prereq: successful completion of OPIE or comparable proficiency in English. (arranged) Group and individual instruction and pronunciation of sounds, rhythm, and stress patterns of English for international students and non-native speakers of English. 1 lec, 2 lab.

208 Phonetics (5)

(fall, spring) Speech sounds from sociological and physiological points of view. Mastery of International Phonetic Alphabet and English phonetic transcription. 4 lec, 2 lab.

240 **Professional Orientation (3)**

Prereq: HSLS major, soph. (fall, spring) Introduction to clinical practice issues in communication disorders. Includes video observation of diagnostic and treatment sessions with individuals who have a wide variety of communication disorders. 2 lec, 2 lab.

252 Speech Science (4)

(fall, winter) Physical properties of speech signals. Analysis of speech and speech perception. Lab exercises and experiments included. 4 lec.

Hearing Science (4) 253

Prereq: 252. (winter, spring) Physiological and psychological aspects of sound and measurement of human hearing, including sound transmission and analysis, electrophysiology of the ear, psychoacoustics. 4 lec.

- 297T Sophomore Tutorial I (1–15)
- 298T Sophomore Tutorial II (1-15)
- 299T Sophomore Tutorial III (1–15)

300 Aging and Disorders of Communication (4)

(fall, spring) Basic information concerning nature of minor and major communication disorders. communication aids, and alternative approaches to rehabilitation. 4 lec.

310 Language Development (4)

Prereq: jr. or sr. (fall, winter) Foundation in language acquisition in young children. Includes development of semantics, syntax, phonology, morphology, pragmatics, and theories regarding development. 5 lec.

313 Anatomy and Neurology of Communication (4)

Prereq: jr. (fall, winter) Structures, musculature, and functions involved in respiration, phonation. resonance, and articulation for speech. 4 lec.

336 Speech and Hearing Disorders in the Public Schools (3-4)

Prereq: not open to HSLS majors. (arranged) Nature, causes, and treatment of speech-language problems in public school children with special reference to role of classroom teacher.

Pre-Professional Service I (2) 341

Prereq: 240, jr, pass speech proficiency test. (fall, winter) Intermediate exploration of clinical practice issues in communication disorders. Includes service experience in a professional context. 1 lec, 2 lab.

378 Sign Language (4)

Prereq: not open to HSLS majors. Instruction in manual sign language system used by deaf. Emphasis on vocabulary, encoding, and decoding signs to communicate effectively. 4 lec.

379 **Basic Manual Communication (4)**

Prereq: major. (fall, winter) Basic instruction and practice in fingerspelling and signing used by deaf and hard of hearing. 4 lec.

380 Basic Audiology (5)

Prereq: 252, 253. (fall, winter) Provides a basic understanding of the standard clinical procedures used to assess the auditory system, including puretone audiometry, speech tests, tympanometry, and acoustic reflex testing. Emphasis on interpretation of audiometric test results. Anatomy and physiology of the auditory system reviewed as related to disorders of the ear. Exposure to instrumentation, test materials, and practical testing experience provided in weekly laboratory sessions. 4 lec, 2 lab.

385 Sign Language I (4) Prereq: Open only to non-HSLS majors (no credit if credit already for HSLS 385A). Basic introduction to sign language, including finger spelling, number concepts, and encoding and decoding of sign. 4 lec.

385A Sign Language I (4) Prereq: Open only to HSLS majors (no credit if credit already for HSLS 385 or 379). Basic introduction to sign language, including finger spelling, number concepts, and encoding and decoding of sign. 4 lec.

386 Sign Language II (4)

Prereq: 385 or 385A. Intermediate instruction and practice in manual communication with emphasis on interactive signing. Includes introduction to American Sign Language (ASL). 4 lec.

387 Sign Language III (4)

Advanced instruction in American Sign Language (ASL). Addresses culture of deaf populations and principles of interpreting with an emphasis on practical applications. 4 lec.

390 **Research in Hearing, Speech and** Language Sciences (4)

Prereq: PSY 221, jr. or sr. Introduction to research in the fields of speech-language pathology and audiology. Topics include the scientific method, generating relevant research questions, types of data and research designs, and fomulating and communicating conclusions and interpretations. 4 lec

397T Junior Tutorial I (1–15)

- 398T Junior Tutorial II (1-15) 399T Junior Tutorial III (1–15)

410 Language Science (4)

Prereq: 310 or LING 350 or 351. Theoretical approaches to language acquisition, neural correlates of language learning, noninvasive imagining techniques, relation of memory and cognition to language, and models of language processing, 4 lec.

413 **Communication Acoustics (3)**

Prereq: Non-HSLS major. (spring) Provides telecommunications majors and other interested students with background information in acoustics as related to human speech production and perception. 2 lec, 2 lab.

418 **Disorders of Articulation and**

Phonology (4) Prereq: 208, 313. (fall, spring) Phonetic acquisition, articulation evaluation. Emphasis on practical approaches to therapy for individuals with articulation and phonological disorders. 5 lec.

Organic and Structural 419 **Communication and Related** Disorders (4)

Prereq: 313. (winter, spring) Provides a background on the nature and management of communication disorders caused by injury or malfunction of speech and language mechanism and nervous system. Illustration of case management presented for selected representative cases. 5 lec.

420 **Multicultural Aspects in**

Communication Sciences (4) Prereg: 108, 208, Multicultural topics related to the fields of speech-language pathology and audiology including speech and language acquisition in diverse cultures, social and geographical dialects, introductory concepts of bilingualism, hearing disorders, and aural rehabilitaion. 4 lec.

422 Diagnostics (3)

Prereq: 310, sr. Types of diagnosis in evaluation of speech and language problems. Screening tests, use of statistics in testing, basic interview and history procedures. 3 lec.

Professional Training Seminar (3-4) 433 (arranged) Seminar in concepts underlying therapy procedures.

442 Pre-Professional Service II (3)

Prereq: 341, sr. (fall, spring). Advanced exploration of clinical practice issues in communication disorders. Includes service experience in a professional context. 2 lec, 2 lab.

Audiology Practicum (2) 442A

Prereq: admission to pregraduate program. (winter, spring) Experience in audiological diagnosis and evaluation in campus clinical facility and off-campus test sites. 1 lec. 2 lab.

442C Advanced Speech/Language Practicum (2)

Prereq: 442, admission to pregraduate program. (winter, spring) Application of diagnosis, therapy planning, and therapy techniques. 1 lec, 2 lab.

444 Language Disorders in Children (4)

Prereq: 310. (fall, spring) Introduction to disorders of language that may be observed in children with mental retardation, hearing impairment, autism, learning disabilities, specific language impairments, and other disabilities. 5 lec

471 Aural Rehabilitation (4)

Prereg: 380. (winter) Differential diagnosis of children with suspected auditory disorders. Basic remedial procedures employed with hearing handicapped. Practice in planning lessons in speech reading and auditory training. 5 lec.

Advanced Manual Communication (4) 480 Prereq: 378 or 385 or 379. (spring) Advanced

instruction and practice in manual communication for students who anticipate study in clinical audiology or education of the deaf and special education.

- 498 Special Problems (1–15) Prereg: written proposal and perm.
- Senior Tutorial I (1-15) 498T
- Independent Reading in Speech 499 Pathology, Audiology, and Speech Sciences (1-15)
- 499T Senior Tutorial II (1-15)

History (HIST)

101 Western Civilization in Modern Times (4) (25)

Prereq: fr or soph only. Renaissance to 1648: Renaissance, Reformation, origins of national state system, diplomacy, and imperialism as applied to Portugal, Spain, and Hapsburg Empire, and commercial and scientific revolutions.

Western Civilization in Modern Times 102 (4) (2S)

Prereq: fr or soph only. Continuation of 101. Covers 1648 to 1848: absolutism, constitutionalism, operation of coalition diplomacy, and imperialism as applied to France and Britain; westernization of eastern Europe Enlightenment, French Revolution, agricultural, commercial, and industrial revolutions and growth of ideologies-liberalism, socialism, and nationalism

103 Western Civilization in Modern Times (4) (2S)

Prereq: fr or soph only. Continuation of 101–102. Covers 1848 to present: continued industrial revolution and spread of liberalism, socialism, and nationalism; rise and fall of German bid for power in two world wars; new ideologies of materialism, positivism, Social Darwinism, irrationalism, totalitarianism; Russian and Chinese revolutions and international communism; rise and fall of Western empires in Africa and Asia.

121 Western Heritage: Classical Age (4) (2H)

Account of origins of Western heritage from ancient Near East to end of Classical Age. Included are such topics as ancient religions, philosophies, literature, and visual arts with particular emphasis on Greece and Rome.

122 Western Heritage: Medieval Legacy

(4) (2H) Discussion of period from decline of Roman Empire to the Renaissance focusing on development of Judaeo-Christian traditions, concept of civilization, and emergent individualism. Important subtopics include growth of universities, chivalry, scholasticism, and humanism.

123 Western Heritage: Modernity (4) (2H)

Major intellectual currents and cultural results from time of Renaissance to present examined in humanistic perspective. Included are such topics as origins of modern philosophy, languages, revolutions, political ideologies, and cultural pluralism

Introduction to Non-Western 132 History Before 1750: Cross-Cultural Perspectives (4) (2C)

Introduces cross-cultural perspectives in non-Western history. Focus is on the major themes in human development, such as the history of the rise of civilization, world religions, and trading systems.

Introduction to Non-Western History Since 1750: Cross-Cultural 133 Perspectives (4) (2C)

Introduces cross-cultural perspectives in non-Western history. Focus is on the major themes in human development, such as the rise of nationalism, modernization, and Westernization, in order to understand the nature of global and cultural interaction in the modern era

200 Survey of United States History, 1600-1865 (4) (2S)

A survey of American history from colonial origins through the Civil War. The major political, social, cultural, and economic developments will be discussed.

201 Survey of United States History, 1865-present (4) (2S)

A survey of American history from the Reconstruction to the present. The major political, social, cultural, and economic developments will be discussed.

The Rise of Modern Asia (4) 246

Introductory survey of the history of a vast region that has experienced considerable changes during the past 150 years. Ten units will compare the national experiences of China, Japan, Indonesia, Vietnam, South Korea, Taiwan, Singapore, and the Philippines through stages of transition from colonialism to independence movements, from agrarian to industrial economies, and from authoritarian dynastic states toward democratic nation-states

265A Nazi Germany (4)

Rise of Hitler to 1933; Hitler takeover; totalitarianization of Germany; Nazi foreign policy; WWII: Hitler's war on Jews; Hitler's fall; meaning of fascism.

297T Honors Tutorial Seminar, U.S. History (3-5)

Prereg: HTC. (fall) Covers U.S. history, 1607 to present.

298T Honors Tutorial Study, U.S. History (1-5) Prereq: HTC. (winter) Independent study, U.S. history.

299T Honors Tutorial Study, U.S. History (1-5) Prereq: HTC. (spring) Independent study, U.S. history.

300A Colonial America to 1689 (4) Prereq: soph. B. Steiner, P. Griffin. English background, establishment of settlements, first economies, evolution of political and religious structures, relations with England, internal conflicts, Glorious Revolution.

300B Colonial America, 1689-1763 (4)

Prereq: soph. B. Steiner, P. Griffin. Governmental changes, credit and currency, Great Awakening, cultural developments, old colonial system, Anglo-French rivalry, nature of colonial society, problems of maturing political units.

300C Revolutionary Era, 1763-1789 (4)

B. Steiner, P. Griffin. Causes of American Revolution and struggle for independence. Confederation, movement for new government, framing of Constitution.

300D Early American Republic (4)

Beginning with the ratification of the Constitution and concluding with the end of the War of 1812, this course will explore the ways in which the people of the new nation struggled to construct their political, social, and cultural institutions

Historical Research and Writing (4) 301J (1J)

Prereq: jr, major or perm. D. Baxter. Deals with techniques and mechanics of historical research and writing. After introduction to use of primary and secondary sources and use of history reference material, students are guided through steps of research and writing; compiling bibliography, analysis of sources, organization of evidence, and style and composition of written paper.

302 American Indians (4)

Prereq: soph. K. Jellison, P. Griffin. Treats Indian society before white contact; Spanish, French, and English impact; Indian removal; Indian wars; problems of cultural contact; preservation versus assimilation: Indian society today.

303 United States in World War II (4)

Prereq: soph. Military and diplomatic role of U.S. in WWII; political, economic, and social impact of war on that nation

305 The United States and the Vietnam War (4)

Prereq: soph. Examination of American experience in Vietnam, both in terms of military and diplomatic history of war itself, and its impact on American society.

306 American Environmental History (4) Prereg: A survey of the evolution—from 1565 to the present-of American attitudes toward and interactions with the natural world, including such topics as romanticism, the "code of the sportsman," conservation, the "land ethic," and "deep ecology."

Famous Trials in American History (4) 307 This course uses the medium of famous trials to explore the relationship between law and society in American history from the 17th to the 20th centuries. Some of the cases to be studied are landmarks in the history of law, while others provide social and cultural insights Along the way, the class will consider the role of governmental entities, the legal profession, the judiciary, the press, and the public in famous trials

Pre-Civil War America, 1815-1850 (4) 308A Prereg: soph. P. Field. New definitions of demo

cracy, westward expansion, early industrialization and class formation, moral reform move ments, slavery and sectionalism, Mexican War, conflict of Jacksonian Democrats and Whigs.

308B The Civil War and Reconstruction (4)

Prereq: soph. P. Field. Forces making for increased sectionalism in 1850s; rise of new parties; military engagements; society and institutions in North and Confederacy during wartime; attempts to restructure Southern society after war and why they failed.

Foundations of Modern America: The Gilded Age, 1877–1901 (4) 308C

Prereq: soph. P. Field. Labor unrest, nativism and anti-semitism, imperialism, government corruption, Social Darwinism, urban growth, Victorian morality, and Indian wars examined as outgrowths of efforts of American people to adapt to modernization and industrialization in late 19th century.

309A American Constitutional History, Part 1: Origins to Reconstruction (4)

Prereg: soph. Traces the history of American constitutionalism from its English roots through the aftermath of the Civil War. While the purview of the course is not restricted to the federal constitution, that document will form its chief focus Ideas institutions and individuals responsible for the construction of America's unique constitutional heritage will be studied in considerable detail.

American Constitutional History, Part 2: Gilded Age to Present (4) 309B

Prereq: soph. Studies the history of American Constitutionalism from the last half of the 19th century to the last half of the 20th. Course will concentrate on the Federal Constitution and its role in shaping the public and private lives of Americans. Particular attention will be paid to the ideas, institutions, and individuals responsible for making the Constitution a battleground rife with intellectual, social, and cultural significance.

309C Famous Trials in British History (4) Prereg: soph. Uses the medium of famous trails to explore the relationship between law and society in British history. Some of the cases to be studied are landmarks in the history of law, while others provide insight into the social, cultural, and political characteristics of a particular period in British history.

310A 20th-Century America, 1900-1928 (4)

Prereq: soph. P. Milazzo. Emphasis on political and cultural history. Major topics include early 20th-century progressivism as an intellectual movement and its manifestations in state and local politics; presidencies of Theodore Roosevelt and Woodrow Wilson; impact of World War I; ambivalent character of the 1920s in American culture and politics; origins and effects of the affluent society.

310B 20th-Century America, 1928-1945 (4) Prereq: soph. P. Milazzo. Emphasis on politics, culture, and foreign policy. Major topics include origins and nature of the Great Depression; Franklin D. Roosevelt and the emergence of the

modern presidency: political and intellectual character of the New Deal; origins and impact of American involvement in World War II; wartime military history, diplomacy, and politics.

310C 20th-Century America, 1945-Present (4)

Prereg: soph. P. Milazzo. Emphasis on politics. culture, and foreign policy. Major topics include origins and nature of the Cold War; impact of foreign involvements on American politics; political leadership in the media age; radicalism and social change in the '60s and '70s; the rise of cultural politics and its effect on economic-based political coalitions; resurgence of conservatism in the '70s and '80s.

313 Jews in American History (4)

Prereq: soph. M. Fletcher. Examines political, economic, and religious interaction between Jews and American society. Includes Sephardic and Ashkenazic immigrants, growth of Reform and Conservative Judaism, Zionism, and modern problems of American Jews. From 1654 to present.

314D American Social Thought to 1815 (4)

Prereq: soph. K. Mattson. Major aspects of intellectual history of American colonies and U.S. to 1815, organized around two major themes Puritanism, and secularization of American thought in 18th century.

314E American Social Thought, 1815–1915 (4)

Prereq: soph. K. Mattson. Major aspects of intellectual history of U.S. 1815-1915, stressing rise of romantic nationalism; triumph of democratic attitude; slavery controversy; impact of Civil War and Darwinian evolution.

314F **American Social Thought Since 1915** (4)

Prereq: soph. K. Mattson. Major aspects of intellectual history of U.S. since 1915, with principal attention to continuing impact of evolutionary naturalism, especially in development of pragmatism; trends in liberal and conservative political ideologies; rise of pessimistic theology and its ramifications; modernism in arts: New Radicalism and Counter Culture.

History of African Americans to 315A 1865 (4) (25)

Prereq: soph. Beginning with introduction of slavery in 1619, course deals with black person's role in America through Civil War. Concerns slavery, abolition, and many attempts by black people to improve their position.

315C African Americans in American History, 1865-1939 (4) Prereq: junior. *M. Fletcher.* Concerns

Emancipation and its continuing effects on African Americans; life in the post-Civil War South; new Black leaders such as Washington, DuBois, and Garvey; and the migration to the North.

315D African Americans in American

History, 1940-Present (4) Prereq: junior. *M. Fletcher*. Concerns World War II and its continuing effects on African Americans, migration to the North, the Civil Rights movement, and the problems of equality.

316A History of United States Foreign Relations to 1914 (4) Prereg: soph. C. Pach. U.S. foreign relations

from war for independence to WWI, stressing development of traditional policies-isolationism, neutrality, Monroe Doctrine-and emergence of U.S. as world power.

316B History of United States Foreign Relations, 1914–1945 (4)

Prereq: soph. C. Pach. American foreign relations in two world wars and interwar period, emphasizing shifting perceptions of vital interests involved in transition from intervention to nonentanglement to intervention again and emergence as superpower.

316C History of United States Foreign Relations, 1945 to Present (4)

Prereq: soph., C. Pach. American foreign relations in Cold War and after, emphasizing confrontation between U.S. and Communist world, emergence of detente, and background of current foreign policy issues.

Ohio History to 1851 (4) 317A

Prereq: soph. B. Steiner. Ohio to 1851: prehistoric Ohio, early exploration, settlement, government; statehood and economic development; political parties, antislavery movement, constitutional change.

317B Ohio History Since 1851 (4)

Prereq: soph. Ohio since 1851: pre-Civil War politics, Civil War. Economic and political transition during post-Civil War. 20th-century problems. Biographical sketches.

318 American Westward Movement (4)

Prereq: soph. American West; Appalachian West, Ohio frontier, Far West. Explorers, fur traders and trappers, miners, cattlemen, stage lines and railroads, farmers. Conservation.

319B American Baseball to 1930 (4)

Prereq: soph; no credit if 319A. American baseball—as sport, entertainment, business, and cultural institution-from origins in children's games and spread as adult activity in mid-19th century to emergence as full-blown professional sport after Civil War, formation of present league structures, Black Sox scandal of 1919–20, reconstitution of baseball's governance, and Babe Ruth-dominated "golden age" of 1920s. Includes player-owner conflicts, foremost players, managers, and teams; separate development of black baseball.

319C American Baseball Since 1930 (4)

Prereq: soph; no credit if 319A. American baseball-as sport, entertainment, business, and cultural institution—from Great Depression of 1930 through World War II; postwar boom, slump, and franchise migrations: major league expansion in 1960s; player-owner conflicts; and good and bad times in 1980s and 90s. Includes continuing evolution of game; foremost players, managers, and teams; Negro leagues and their demise; and All-American Girls Professional Baseball League (1943-54).

320A Women in American History Before 1877 (4)

Prereq: soph., K. Jellison. American women's history from the colonial era through Reconstruction. Topics include the traditional life of Native American women, witchcraft in colonial New England, women in the American Revolution, African American women in slavery, early American childbirth customs, the early women's rights crusade, women on the trans Mississippi frontier, and women in the Civil War.

320B Women in American History Since 1877 (4)

Prereq: soph. K. Jellison. American women's history since Reconstruction. Topics include the experiences of immigrant women in the U.S., prostitution in the Gilded Age, the Progressive Era birth-control movement, achievement of the right to vote, women in the two world wars, women in the civil rights movement, the new feminist movement, the backlash against feminism, Roe v. Wade and the abortion debate.

320C Women's Health and Medicine in America (4)

Prereq: soph. This course examines, from the colonial era to the present, changes in the medical treatment of women and changes in the perception of what constitutes women's health and illness. The class will explore how the complex interplay of scientific inquiry, social mores, cultural fears and expectations, and the relationship between physicians and women have contributed to changing definitions of women's health and medicine.

History of the Military in America: 1600 to 1898 (4) 321A

Prereq: soph. M. Fletcher. Military institutions in American history; role of technology in warfare; innovations and reforms in military; war and its conduct; military and civilian society in war and peace.

History of the Military in America: 1898 to Present (4) 321B

Prereq: soph. M. Fletcher. Continuation of 321A. See 321A for description

321C Military History of the Civil War (4)

Prereq: soph. The military aspects of the US Civil War, who won and lost and why. Also the roles of individual men and women, white and black. Battles and leaders.

322 1960s in U.S.: Decade of Controversy (4)

Prereq: jr. Allows students to go beyond the popular stereotypes of the 1960s to understand the decade as a period of social, cultural and political confrontation that laid the groundwork for life in the present-day United States. Primary focus on social protest movements of the era: the Civil Rights movement, the student movement, the antiwar movement, the counterculture, and the women's movement.

323A Latin American History: The Colonial Era (4) (2C)

Prereq: soph. M. Grow. Examines historical origins of Latin American society. Themes include internal nature of Iberian and pre-Columbian Indian societies, circa 1492; conquest and subordination of Amerindian civilizations by Spain and Portugal; distribution of power, land, and labor in post-conquest Latin America; order and instability in colonial society; and region's position in international economy.

323B Latin American History: The 19th Century (4) (2C)

Prereq: soph. M. Grow. Examines 19thcentury origins of modern Latin American underdevelopment, focusing on causes and consequences of Revolutions of Independence; dynamics of dictatorship and democracy in postindependence Latin American political culture; and decision-making process by which Latin America's 19th-century leaders integrated their national economies into international economic system as specialized exporters of raw materials.

323C Latin American History: The 20th

Century (4) (2C) Prereq: soph. *M. Grow.* Survey of modern Latin American history focusing on causes and consequences of structural instability in Latin America since 1900. Special emphasis is placed on collapse of region's traditional liberal/export model of national development in 1930s; competing political/ideological responses to structural crisis in region (social revolution, authoritarianism, democratic change); and ongoing search for viable formulas of economic development.

History of U.S.-Latin American 325 **Relations (4)**

Prereq: soph. M. Grow. Survey of inter-American relations in the 19th and 20th centuries, focusing on evolving, and often conflicting, definitions of national interest which have shaped U.S. and Latin American policy orientations toward one another.

329A Ancient Egypt and Mesopotamia (4)

Prereq: soph. Prehistoric eras; origins of Mediterranean civilizations; problems of ancient chronology; civilizations of Sumerians, Babylonians, Egyptians, Assyrians, Biblical Hebrews, and Persians. Stresses archaeological and literary sources, comparative social and religious concepts, acculturation, contributions to Western civilization.

329B Ancient Greece (4)

Prereq: soph. Aegean prehistory, Minoan civilization, Mycenaean Greeks, Dorian invasions, Greek Renaissance, growth of polis, Athenian society and culture. Persian and Peloponnesian Wars, political history of Greece to Alexander.

Stresses archaeological sources, mythology, and drama. Hellenic contributions to Western civilization

329C Ancient Rome (4)

Prereq: soph. Early peoples of Italy, Etruscans, constitutional development of Republic, growth of empire, civil wars, history of princi-pate to Constantine. Stresses archaeological sources, Latin literature, Roman life and institutions, Roman contributions to Western civilization.

330 History Through Film (4)

Prereq: soph. Examination of selected topics in U.S., European, or Third World history through films and readings accompanied by lectures and discussion

330A African History Through Film (4)

Prereq: soph. This course explore transformations in the nature of African societies, cultures and economies in the twentieth century, particularly in the post-1960 period. It will use film as a medium for studying issues as they are understood by Africans themselves. We will see African filmmakers as social historians, historians concerned with the everyday nature of the lives of common people.

331 The Ancient Greek Games: The Panhellenic Festivals (4)

Prereq: soph. Examines panorama of Greek athletic activity over period of approximately 3,000 years beginning with Minoan or Cretan civilization, ca. 3000 B.C., and terminating with decline of polis, or Greek city-state, ca. 146 B.C. Explains how Panhellenic festivals helped to unite various currents of Greek civilization

History of Women in the Middle East 332

(4) Prereq: jr. S. Quinn. Main themes, divided chronologically and thematically, include the history of veiling, polygamy, divorce, and laws of personal status during the early periods of Islam; a re-examination of "harem politics" and the role of women in the Ottoman empire; the effects of Westernization and modernization in the 19thcentury societies; and recent trends such as the enforcement of the veil in the Islamic Republic of Iran and Egyptian fundamentalist movements: section on women poets and novelists.

333 Oil and World Power (4)

Prereq: soph. Energy crisis in historical perspective. Focus on oil industry during past century with particular attention to Middle East and North Africa; economic, environmental, geological, political, and technological elements of current situation.

334 The Arab-Israeli Dispute (4)

Prereq: soph. Analysis of underlying causes of Arab-Israeli confrontation from 1890s to present, including origins of Arab nationalism and Zionism, evolution of British Mandate in Palestine, Great Power involvement in Middle East, and recent developments in conflict between Israel and Arabs.

335A Survey of Middle East History to

1800 (4) (2C) Prereq: soph. S. Quinn. Islamic history and civilization from rise of Islam to end of 18th century. Includes discussion of role of prophet Muhammad, doctrines and institutional system of Islam medieval Islamic caliphates and their cultural achievements, and contributions of Persians and Turks to Islamic civilization

Survey of Middle East History Since 335B 1800 (4) (2C)

Prereq: soph. S. Quinn. History of Middle East since era of French Revolution. Transformation of Ottoman and Persian Empires into 20thcentury Middle East states; impact of nationalism, secularism and industrialism on region; and position of Middle East in contemporary world affairs.

335C Legacy of Genghis Khan (4)

Prereq: soph. S. Quinn An examination of Genghis Khan's life and legacy, emphasizing historical problems such as the life of the Khan, Mongol military tactics, economic policies, the

interaction between nomadic and settled peoples. premodern state formation, and Mongolinfluenced artistic and literary achievements. Particular attention given to Genghis Khan's legacy in the Middle East and Islamic world. including conquests of the warlord, Tamerlane, and the rise of the three "Gunpowder Empires."

336A North Africa in Modern Times (4)

Prereq: soph. Maghrib: its geography, ethnic composition, and history since antiquity; French conquest of Algeria, Tunisia, and Morocco; administrative systems; economic development; French-Muslim relations.

336B North Africa Since 1914 (4)

Prereq: soph. Rise of nationalism; struggle for political independence; political, economic, and social problems in independent North Africa; North Africa in world affairs.

338 History of West Africa (4)

Prereq: soph History of West Africa from early times to present; peopling of sudanic and forest regions; development of trade; Islam and rise of sudanic empires; slave trade and forest states; colonial era; independence movements; problems of nationalism.

338A History of East Africa (4) Prereq: soph. History of East Africa from early times to present, with particular emphasis on period since 1750. Although neighboring countries also studied, greatest attention paid to region that comprises present-day Kenya, Uganda, and Tanzania.

341A Early Africa (4) (2C)

Prereq: soph. W. Hawthorne. Africa in ancient world; spread of agriculture and iron working; rise of Islam: migrations of peoples: development of states; arrival of Europeans; beginning of slave trade.

341B Africa During Atlantic Slave Trade (4) (2C)

Prereq: soph. *W. Hawthorne*. Slave trade; religious revolutions in western Sudan: development of African states; commercial revolution of 19th century; birth of plural society in South Africa; European partition of Africa.

341C Modern Africa 1890-Present (4) (2C)

Prereq: soph. W. Hawthorne. Establishment of European rule in Africa: colonial period: rise of nationalism; decolonization and independence; problems of modern Africa.

342A South Africa to 1899 (4)

Prereq: soph. W. Hawthorne. Establishment and transformation of African societies (Bantu migrations); coming of Europeans; evolution of Cape society (black, white, colored); conflicting nationalisms; Great Trek; rise of Zulu empire and mefcane; mineral revolution and subjection of African chiefdoms; British imperialism and coming of South African War.

342B South Africa Since 1899 (4)

Prereq: soph. South African (Boer) War and reconstruction; formation of Union; global war and racial/regional/class conflicts over land, labor, and politics; rise of Afrikaner nationalism and triumph of apartheid; rise and radicalization of African nationalism; collision of nationalisms and expansion of conflict in 1970s; South Africa and modern world.

343 **Revolutions in Southern Africa (4)**

Prereq: 246. Historical background and developments up to present of revolutions in Mozambigue, Angola, Zimbabwe (Rhodesia), Namibia (South West Africa), and Azania (South Africa). 2 lec, 1 disc, and 1 film per wk.

344A History of the Malay World (4)

Prereq: soph. W. Frederick. Comparative view of Southeast Asian archipelago, emphasizing Indonesian civilization after 1750. Penetration of West, struggle with Imperialism and modernization, and present dilemmas. Indigenous views focus of attention.

344B History of Burma and Thailand (4) Prereg: soph. *W. Frederick*. Comparative study of neighboring Buddhist states, emphasizing themes of change and continuity since mid-18th century. Special attention given to divergent responses to colonialism and Western-style development, and similarities in political and social forms.

344C History of Vietnam (4) Prereq: soph. *W. Frederick*. Modern Vietnamese civilization since 15th century, emphasizing political and social change after 1800. Special attention given to Vietnamese struggle with outside powers, including China, France, U.S., and Soviet Union.

345A Southeast Asia to c. 1750: The Creative Synthesis (4) (2C)

Prereq: soph. *W. Frederick*. Highlights of pre- and proto-history and development of classical states. Emphasis on cultural synthesis (Hindu, Buddhist, Muslim, and animist influences) and theme of change and continuity in both Great and Little traditions of region.

Southeast Asia, c. 1750 to 1942: Change and Conflict (4) (2C) 345B

Prereg: soph. W. Frederick. Indigenous change and widening effects of Western penetration, with emphasis on social and cultural developments. Nature of colonialism in region, and response of colonized seen in light of both traditional and modern influences.

345C Southeast Asia, 1942 to the Present:

The Search for Stability (4) (2C) Prereq: soph. W. Frederick. Japanese occupation and its relationship to great national revolutions of 1940s. Social and cultural context of nationalism and revolt, search for new political forms, and struggle against disunity and poverty.

346C Ancient China (4)

Prereq: Jr. Traces the evolution of the Chinese cutural norms from pre-history through the Qin to the Song dynasty. In some 3,000 years, the writing of the philosophical classics, the creation of literary and artistic models, and the development of the imperial governmental institutions made this China's Golden Age.

346D Imperial China (4)

Prereq: Jr. Imperial China surveys the middle period between ancient and modern China: from the 1200s when the Mongol Empire rose to conquer the Song, through to the maturation of Chinese civilization in the Ming/Qing to the decline of the imperial state in the 19th century. Two of Chinas greatest pre-modern novels will express contemporary values.

346E Modern China since 1911 (4)

Prereq: Jr. This course spans the past century of revolutions, beginning with the overthrow of the Qing in 1911. From a disintegrated state with warlords, through the Kuomintang's National Revolution and war with Japan to the victory of the Chinese Communist Party. Then, Mao Zedong's political movements, and post-Mao economic reforms continue the efforts to make China once again strong and prosperous.

348A Traditional Japan (4)

Prereq: soph. Traces major elements of Japanese culture and thought from their indigenous origins, through major Chinese influence, results of medieval civil warfare, and up to premodern workings of Japan's sophisticated commercial economy.

348B Modern Japan (4)

Prereq: soph. Political weakness of Tokugawa system leading to opening of Japan to Western trade and restoration of emperor; favorable economic and political base which allowed Japan to enter successfully into competition with European nations; Japan's ultranationalist era and postwar reconstruction.

350A History of Early Science (4)

Prereq: soph. Overview of the history of science from the ancient world to the 17th century. Examine areas of knowledge and technique most modern people consider to be a part of science,

and some they do not, including medicine. astronomy, construction, mining, navigation, and warfare. Consider how politics, economy, gender, and religion affected the development of these technologies and sciences.

351 Medieval People (4)

Prereg: soph. In-depth inquiries into lives and epochs of representative individuals of medieval Europe: Middle Ages through biography.

352 **Medieval Civilization (4)**

Prereq: soph. Survey of cultural and intellectual history. Transmission of Christianity and classical culture to barbarians and their work of combining them into new civilization in early Middle Ages. Medieval civilization at its height: Church, schools and scholastic thought, and secular culture.

353A The Early Middle Ages (4)

Prereg: soph Foundation of Medieval synthesis, 300-1100; collapse of Roman world, establishment of successor states, spread of Christianity, formation and development of European culture.

353B The Later Middle Ages (4)

Prereq: soph. Maturing of Medieval Europe and transition to early modern era, 1100-1450; developments in commerce, religious life and institutions, governments, politics, learning, and secular culture.

354A Early Christianity: East and West (4)

Prereg: soph. Investigates historical development and spread of Christianity from its origins to about A.D. 600. Content includes Greek and Hebraic backgrounds, early church fathers of East and West, ecumenical councils, early heresies, and development of church doctrine

354B Modern Christianity (4)

Prereq: jr. This course will explore the modern history of the world's largest and most geographically diverse religious tradition. While primarily considering modern Christianity's Euro-American "heartlands" this class will also examine Christianity's transition during the modern period from a religion centered on Europe, its colonies and settlements to a global religion that has helped define and resist modernity.

356A The Italian Renaissance (4) Prereq: soph. *P. Bebb.* Major political, social, economic, and cultural currents of Italian city-states from 1300 to 1550. Focus on Dante, Petrarch, Boccaccio, Bruni, Machiavelli, Guicciardini, Michelangelo, Leonardo da Vinci, etc.

356B The Northern Renaissance (4)

Prereq: soph. P. Bebb. History of Renaissance outside Italy: politics, economics, sociology, and intellectual currents of Germany, France, Spain, Burgundy, and England from 1300 to 1600. Treated thematically, course focuses on Erasmus, More, Ximenes, Reuchlin, Hutten, Bude, etc.

356C The Reformation (4)

Prereq: soph. P. Bebb. Protestant, Catholic, and Counter-Reformations in Europe, showing their relationships to social, political, economic, and religious movements of 15th and 16th centuries. Roles of Luther, Zwingli, Calvin, Cranmer, Erasmus, Loyola, etc.; Protestant and Catholic churches and sects in western and eastern Europe.

Florentine People (4) 357

Prereq: soph. P. Bebb. Major figures in Florence from 1300 to 1600, from Dante to Galileo; concerns are with some originators of modern thought in areas of artistic theory, poetic form, Italian language, political ideas, scientific method, and historical composition.

358A Early Modern Europe, 1559-1648 (4)

Prereq: soph. D. Baxter. Europe from 1559 to 1648. Main political, economic, and social developments in Europe during Age of Spanish Preponderance; Philip II, wars of religion, Richelieu, Thirty Years' War, and ideological struggles.

358B Early Modern Europe, 1648–1715 (4) Prereg: soph. D. Baxter. Europe from 1648 to 1715. Main political, economic, and social developments in Europe during Age of Louis XIV; French hegemony, rise of balance of power, absolutism

358C Early Modern Europe, 1715–1774 (4)

Prereg: soph. D. Baxter. Europe from 1715-1774. Main political, economic, and social developments in Europe during 18th century: despotism, diplomatic revolution, competition for empire, Enlightenment.

360A Women in Early Modern European History, 1400-1800 (4)

Prereq: junior. The course explores the social, cultural, political, and economic roles of women in Europe for the fifteenth through the eighteenth centuries. Key issues will include women's political power and participation in politics; sexuality and the body; women's spiritual and religious roles; and women's interactions with men

360B Women in Modern European History, 1800-present (4)

Prereg: junior. The course explores the role of women in western European society from the French Revolution to the present. Key themes will include how women have affected and been influenced by social, cultural, and political currents: the place of women in historical literature; and how women's roles have changed over time at the political as well as the everyday levels.

360C Women Warriors: Women and War in Europe (4)

Prereg: soph. This course analyzes the role of women in military capacities in Western Europe from a social-cultural perspective.

The French Revolution (4) 361

Prereq: soph. D. Baxter. The French Revolution traditionally has been seen as the dividing line separating the Old Regime from modern times. This course examines the origins, course of events, and significance of the French revolutionary experience.

362A Europe, 1814-1871 (4)

Prereq: soph. Europe from Congress of Vienna through Franco-Prussian War, including growth of liberalism and nationalism, revolutions of 1830 and 1848, Industrial Revolution, unification of Italy and Germany, social and intellectual movements.

362B Europe, 1871-1914 (4)

Prereq: soph. Development of Austria-Hungary, France, Italy, Germany, Great Britain, and Russia, including imperialism, background of WWI, and social and intellectual movements.

364A Europe Between World Wars (4)

Prereq: soph. Fascism, Communism, World Depression, and Twenty-Year Armistice between 1919 and 1939. Economic and cultural approach.

364B Contemporary Europe (4)

Prereq: soph. Cold War, Communist bloc, European integration, decolonization, Gaullist regime, and problems of present-day Europe.

Modern France in the 19th Century 366A (4)

Prereq: soph. Rise and fall of Napoleon; his impact on France and Europe; monarchist interlude; revolution of 1848 and election of Louis Napoleon; Second Empire, liberal and authoritarian; wars and transformation of Europe; fall of Napoleon and Paris Commune; Third Republic.

366B Modern France in the 20th Century (4)

Prereq: soph. Dynamic and stagnant aspects; nostalgia and rejection of 20th century; impact of 20th century; democracy in France; European and colonial wars; communist movement from Popular Front to Common Program; anticommunism in France; French in changing world; De Gaulle, his predecessors, and his successors.

368A Modern Germany in the 19th Century (4)

Prereq: soph. Cosmopolitanism and movement to create national German state; rise of capitalism and decline of handicraft; liberation of German peasantry; revolution of 1848 and reaction; blood-and-iron chancellor; Germany's rise to European predominance; rise of worker movement; German society at turn of century.

368B Modern Germany in the 20th Century (4)

Prereg: soph. N. Goda. Germany on eve of WWI: military fiasco and creation of Weimar Republic; Weimar, Berlin, Munich, and Dresden; attempt to forge democracy; Third Reich and transformation of German society; WWII and Final Solution; Communist Germany and Federal Germany; two societies and two states since 1945.

History of Byzantine Empire, 324-370 1453 (4)

Prereq: soph. Decay of Roman World and emergence of Christian empire, 324–717; Medieval Roman Empire, 717–1056; weakening of central administration and apparent revival under Comneni, 1025–1204; Byzantium and neighboring world, 1204-1453; church and state; education and learning; Byzantine art; social, political, and military developments.

371 Witchcraft 1400–1750 (4) Prereq: jr; 101, 122, or 123. Witchcraft in Europe, the British Isles, and the American colonies 1400– 1750: its historical origins; its social-intellectual bases; the roles of gender, the law, church and state, and popular and elite cultures; the great witch hunts and trials; and witchcraft's decline and disappearance.

Balkans in Early Modern Period, 372A 1453-1804 (4)

Prereq: soph. Ethnographic structure of Balkan peoples under rule of Ottoman Empire. Ottoman institutions and society; political, social, economic, religious, and cultural developments in Balkans in 15th, 16th, 17th, and 18th centuries.

372B Balkans in 19th Century, 1804-1878 (4)

Prereq: soph. Evolution of modern Balkan nationalism and rise of Balkan states. Ottoman dissolution and Balkan revolutionary nationalism: political, social, economic, religious, and intellectual developments; domestic Balkan policy and foreign intervention.

Balkans in 20th Century, 1878 to 372C Present (4)

Prereq: soph. D. Curp. Historical, cultural, and ethnic background of Balkan peoples. Social, economic, political, and intellectual developments in Balkans and East Europe; communication of southeast European states.

Balance of Power: Napoleon to the 374A Kaiser (4)

Prereq: soph. N. Goda. Diplomatic history from Congress of Vienna to WWI, including age of Metternich, Italian and German unification, new imperialism, and prewar alliances and alignments.

374B Origins of World War II, 1914-1941 (4)

Prereq: soph. N. Goda. International problems of peace and war, international organization and alliances. Theme: origins of WWII.

374C The Cold War, 1941-1989 (4)

Prereq: soph. N. Goda. International problems of peace and war on worldwide scale since 1939. international organization and alliances. Theme: global balance of power.

375 World War I (4)

Prereq: soph. Covers the origins of the war, both diplomatic and strategic, as well as the peacemaking afterward, but the central focus will be the war itself: the major offensives, Allied and German strategies and tactics, trench warfare of the Western Front, chemical warfare, the war in the air and on the seas, the home front, the use of the machine gun and the tank

376 **Biography: Leaders in 19th Century** Europe (4)

Prereq: soph. Lives of great and near great as they influenced history.

378 Espionage and History (4)

Historical perspective on modern secret intelligence operations, including espionage, propaganda, disinformation, cryptography, and counterintelligence. Examination of role of secret intelligence in foreign policy and national public policy, especially in times of war and crisis. Attention paid to intelligence and national security requirements of societies valuing openness and human freedom. Course stresses specific historical examples.

379 History of Sea Power (4)

Students examine the role of navies and maritime strategy in war, diplomacy, and the world economy form ancient times to the present. The focus is on the development of the British and American sea power: doctrine and operations; the impact of politics, culture, geography, finance, and technology; and the future of sea power.

380 Geopolitics and History (4)

The focus is on the development and influence of global strategic views in the context of European imperialism, the two world wars, and the Cold War; major thinkers such as Mackinder, Mahon, and Haushofer; the impact of air power, space, and information warfare: the outlook of emerging powers, including China and India; geopolitics in the interpretation of international history.

381 History of the Family (4)

Prereq: soph. *D. Baxter*. Chronological examination of the history of the Western family from medieval to modern times in Europe and Ámerica. Focuses on changes in family life through time. Particular attention devoted to role of women in their relationship to men and children, for until the 20th century the characteristic area of women's activity was the family.

382A History of Russia (4)

Prereq: soph. S. Miner. Russian origins, Greek and Mongol influences, expansion of Muscovy, Ivan the Terrible, Peter the Great, Catherine the Great, Russia as great power, and shapes of its 19thcentury society.

382B Russia: Road to Revolution 1825-1917 (4)

Prereq: soph. S. Miner. From tsarist Russia to communist revolution. Background for revolution: origins of Russian socialism, rapid social and economic change, 1905 Revolution, war and the collapse of the Romanov dynasty in 1917.

382C Soviet Union (4) Prereq: soph. S. Miner. Soviet Union since the 1917 Revolution. Stalinism, WWII and expansion, Krushchev, Brezhnev. Emphasis on internal affairs.

382D The USSR in World War II (4)

S. Miner. History of the Soviet Union during WWII. Topics include wartime diplomacy, espionage, social and political history of the USSR during the war, the creation of the communist states in Eastern Europe after the war, and the origins of the cold war

Later Medieval England, 1307–1485 389

(4) Prereq: soph. Age of Chaucer and Wars of the Roses. Investigation of political, social, intellectual, ecclesiastical, and economic aspects of period of ferment and rapid change.

390A Tudor England (4)

Prereq: soph. England in 16th century: Tudor absolutism, English Reformation, and major cultural and economic developments of Shakespeare's England.

390B Stuart England (4)

Prereq: soph. England in 17th century: constitutional crisis of Stuart period, republican experiment under Cromwell, and major cultural and economic developments.

391A English History to 1688 (4)

Prereg: soph. For English, political science, and prelaw majors and general students of history. Survey of institutional aspects of medieval England and social, political, and constitu-tional developments in Tudor and Stuart periods.

391B English History Since 1688 (4)

Prereg: soph. J. Brobst. For English, political science, and prelaw majors and general students of history. Emphasizes cultural and economic developments, growth of British Empire, constitutional and social reforms, and impact of WWI and WWII.

392A Georgian England (4)

Prereq: soph. Survey of political, social, intellectual, cultural, and economic developments of England in years prior to and during American and French revolutions.

392B Victorian England (4) Prereq: soph. Survey of England's history in 19th century, including examination of major political, cultural, and economic trends.

392C 20th Century Britain (4)

Prereq: soph. Students study Britain in the 20th century, focusing on the decline from world power: the onset of trouble before 1914; the experience of two world wars; society and policy between the wars, especially appeasement and its background; postwar developments, including the welfare state, de-colonization, and European integration.

392D British Empire (4)

Prereq: soph. The rise and fall of the British Empire: constitutional, strategic, and economic problems since 1783; ideologies of empire; the importance of the "Old Dominions" (Canada, Australia, New Zealand, and South Africa); the special position of India within the larger system; de-colonization and its impact.

392E British India and Great Game (4)

Prereq: soph. Students study the making of modern India, Pakistan, and Afghanistan, focusing on South Asia's importance in relation to world power: imperialism and nationalism, economic development, and the background to international security problems, including Kashmir, terrorism, and nuclear proliferation.

394A The Medieval English Constitution (4)

Prereq: soph. English government from Anglo-Saxon times to end of Middle Ages. Growth of machinery of monarchy, central administration, courts and common law. Rise of Parliament.

394B The Modern English Constitution (4)

Prereq: soph. Emergence of modern English constitution during 16th and 17th centuries: creation and growth of Tudor Constitution; significance of English Reformation for constitution; Tudor Parliament; "Century of Revolution" (1603-1689) and crisis of Constitution; problems of sovereignty and obligation; constitution today.

395 History of Canada (4)

Prereq: soph. Introduction to Canada; study of its exploration and development under France and England, and its emergence as important modern nation.

European Intellectual and Cultural, 396A 18th-20th Century (4) (1J)

Prereq: jr. Intellectual and cultural trends from the Enlightment to the beginning of the 20th century. Themes include economic liberalism, philosophical liberalism, revolution, romanticism, nationalism, philosophy of history, Marxism, Nietzsche, racism, anti-Semitism, Social Darwinism, interpretive sociology, and comparative history.

European Intellectual and Cultural, 396B

20th Century (4) (1J) Prereq: jr. Intellectual and cultural currents in 20th century Europe. Themes include radicalization of intellectual life, Freud and psychoanalysis, fascism, Nazism, Communism, capitalism, feminism, postwar conservatism, postmodernism, collapse of European communism, and fin de siecle liberalism.

Writing on Historical Themes (4) (1J) 396J Prereg: jr. Students study and write on selected historical themes. Equal emphasis on historical materials and writing. Fulfills jr-level English composition requirement.

397T Honors Tutorial Study, European

History (1–5) Prereg: HTC. (fall) Covers European history from Renaissance to present.

398T Honors Tutorial Study, European History (1-5)

Prereq: HTC. (winter) Independent study. European history.

Honors Tutorial Study, European 399T

History (1-5) Prereq: HTC. (spring) Independent study. European history.

401A Studies in Colonial American History (4)

Prereq: 24 hrs HIST. Literature and source materials of colonial American history. Readings and reports.

401B Studies of the Era of the American **Revolution (4)**

Prereq: 24 hrs HIST. P. Griffin. Literature and source materials of American Revolution. Readings and reports.

405 Studies in the Foundation of the American Republic, 1783-1819 (4)

Prereq: 24 hrs HIST. literature and source materials of early national period of American history. Readings and reports.

Studies of the Era of Sectional 407 Controversy: 1819-1850 (4)

Prereq: 24 hrs HIST. Literature and source materials of era of sectional controversy, 1819-1850. Readings and reports.

409 **Studies in the Era of the Foundations**

of Modern America, 1850-1901 (4) Prereg: 24 hrs HIST. Literature and source materials for period 1850–1901 in U.S. history. Readings and reports.

Studies in the History of the United 411 States in Recent Times (4)

Prereq: 24 hrs HIST. Literature and source materials of recent U.S. history. Readings and reports.

Studies in the Social, Cultural, and 415 Intellectual History of the United States (4)

Prereg: 24 hrs HIST. Selected topics

417 Studies in the History of American Foreign Relations (4)

Prereq: 24 hrs HIST. C. Pach. Literature and source materials of American foreign relations. Readings and reports.

421 Studies in Regional History (4)

Prereq: 24 hrs HIST. Literature and source materials of U.S. regional history. Readings and reports.

424 Studies in the History of U.S.-Latin American Relations (4)

Prereq: 325. M. Grow. Readings and research papers on major issues in 20th-century U.S.-Latin American relations

426 **Dictatorship in Latin American** History (4) Prereq: 323C. *M. Grow.* Focuses on predominant

type of political/governmental system in Latin America: authoritarian dictatorship. Examines major examples of 20th-century ideological authoritarianism in Latin America ranging from populist authoritarianism of Juan Peron in Argentina to bureaucratic authoritarian regimes recently in power in Southern Cone and Brazil. Attention devoted to competing schools of interpretation which attempt to explain recurring phenomenon of nondemocratic forms of government in Latin America.

427 **Studies in Recent Latin American** History (4)

M. Grow. Literature and source materials of recent Latin American history. Readings and reports.

429 **Studies in the History of Ancient** Greece (4, max 8) Prereg: 24 hrs HIST. Literature and source

material of ancient Greek civilization. Readings and research paper. Themes vary from quarter to quarter. May be repeated for credit.

Studies in Middle East History (4) 435 Prereg: 24 hrs HIST. Selected topics on Middle East since 1914. Readings and reports.

Studies in African History (4) 441 Prereq: 16 hrs HIST or INST. W. Hawthorne Literature and source materials of African history. Readings and reports.

445 Studies in the History of Southeast Asia (4)

Prereg: 24 hrs HIST. W. Frederick. Literature of Southeast Asian history and culture generally, with particular emphasis on selected developments in 19th and 20th centuries. Readings and reports.

Studies in the History of East Asia in 449 Modern Times (4)

Prereq: 24 hrs HIST. Historical literature relating to process of modernization of China and Japan from 1860s to 1960s. Readings and reports.

453 D-Z Studies in Medieval History (4)

Prereq: junior. Selected topics in medieval history. Readings in original sources and scholarship. Reports and final essay.

463 Studies in 19th-Century Europe (4) Prereq: 24 hrs HIST. Literature and source

material of 19th-century Europe. Readings and reports.

Studies in Modern France (4) 467

Prereg: 24 hrs HIST. Literature and source material of modern France. Readings and reports.

483 **Studies in Russian and Soviet History** (4)

Prereq: 24 hrs HIST. S. Miner. Literature and source material of Russian and Soviet history. Readings and reports.

Studies in Early Modern English 491

History (4) Prereq: 24 hrs HIST. Studies in early modern English history from multidisciplinary perspectives.

493 **Studies in British History Since 1714** (4)

Prereg: 24 hrs HIST. J. Brobst. Literature and source material of British history since 1714. Readings and reports.

495 History Internship (5)

Prereq: jr, perm. Designed to enhance skills for history majors through history-related work assignments in public and private agencies.

496 **Ouantitative Methods in History (4)**

P. Field. Introduction to descriptive and inductive statistical techniques used in historical research and analysis of current literature employing such techniques. Instruction in use of computer

497T Advanced Honors Tutorial Study (1-5) Prereq: HTC. (fall) Independent study, advanced level.

Problems in History (1–5, max 9) 498

Prereq: 24 hrs HIST. Intensive individual work either in research or individual systematic reading along lines of student's special interest under supervision of staff member.

498T Advanced Honors Tutorial Study (1-5) Prereq: HTC. (winter) Independent study, advanced level.

499 **Honors Studies of Selected Historical** Topics (1-5, max 15)

Prereq: perm. Study, reading, research, and writing on selected topic: intended for students who plan to graduate with honors in history. Arrangements should be made during junior year.

499T Advanced Honors Tutorial Study (1-5) Prereq: HTC. (spring) Independent study, advanced level.

Human and Consumer Sciences

Child and Family Studies (HCCF) Introduction to Child Development 160 (4) (25)

Fundamental patterns of development and behavior during prenatal period through early childhood, 4 lec. No credit awarded if EDEL 200 or PSY 273 has been taken

Observing and Recording Children's 160A Behavior (3)

Prereq: 160 or concurrent. Documenting children's cognitive and academic learning and their social, emotional, and physical development by using a variety of observational strategies such as running records, anecdotal records, checklists, rating scales, time sampling, event sampling, and formal observational instruments, 3 lec.

Introduction to Early Childhood 170 Education (3)

Overview of the profession of early childhood education and the role of the teacher. 3 lec.

260 **Diversity in Early Childhood** Education (3)

Prereq: C or better in 170. Focuses on increasing awareness, sensitivity, and understanding of the diverse cultural, ethnic, linguistic, religious, and family backgrounds of children in early childhood education. 3 lec.

260L **Clinical: Diversity in Early Childhood** Education (1)

Prerea: C or better in 170, concurrent with 260. Clinical experience in an early childhood setting that provides an opportunity to interact with children who share diverse (cultural, linguistic, ethnic, racial, socioeconomic, family forms, etc.) background experiences. 3 lab.

Infant and Toddler Development (3) 265 Prereq: 170. Provides in-depth information about

the physical, social, emotional, cognitive and language development of children from birth to 3 years. Typical and atypical patterns will be covered as well as the environmental conditions that support optimal development. 3 lec.

270 Family Living (3)

(fall) Person-centered analysis of basic human relationship processes leading to successful modern American marriage, partnerships, and family experience. Special discussion and analysis of problems in each family stage, and of special issues in family life today. 3 lec.

299 Introduction to Human Services-**Professional Assessment (3)**

Prereq: soph, major. (fall) Introduction to field of child and family services/education/human services for students who have declared majors in child development, family studies, or family and consumer sciences education. Seminar sessions and performance assessment provide opportunity to assess professional competence at this level. 3 lec.

Human Sexualities (4) 360

Prereq: jr or sr. Explores effect of human sexuality on aspects of one's ability to form relationships which are integrative, creative, and recreative. Emphasis on realization on dynamic potential in wholeness of life pattern and in relationships, in light of scientific research. 4 lec.

361 **Guidance and Classroom** Management in Early Childhood (3)

Prereq: C or better 160 or PSY 273; 361L concurrent. Application of theories and principles of preschool guidance by directed observation of adult-child interactions and supervised participation in early childhood education programs, 3 lec.

361L Clinical: Guidance and Classroom Management in Early Childhood (1) Prereq: C or better in 160 or PSY 273. Observation

and participation in the guidance and classroom management in approved early childhood settings. 3 lab.

Creative Experiences in Early 363 Childhood (4)

Prereq: C or better 361; CR or C or better 361L; 361L concurrent. Selection, preparation, presentation, and evaluation of activities and materials in art, music, language, psychosocial, and physical development for early childhood programs. 4 lec.

363L **Clinical: Creative Experiences in Early** Childhood (1)

Prereq: C or better in 361; CR or C or better 361; CR or C or better 361L. Observation and presentation of creative experiences in approved early childhood settings. 3 lab.

364 **Premath and Science with Young** Children (4)

Prereq: C or better 361; 1 course BIOL or BIOS. (winter) Examples of early childhood programs, primary elements and issues that differentiate them. Selection, preparation, presentation, and evaluation of premath and science activities and materials. 3 lec, 3 lab.

365 Infant and Toddler Education (3)

Prereq: C or better 361, 361L. (fall, alt yrs) Knowledge of ways in which children learn from birth to 3 years; opportunity to structure environment to foster social, emotional, cognitive, and physical development of infant, as well as understanding of issues and trends in infant education. 3 lec.

365L Clinical: Infant and Toddler Education (3)

Prereq: C or better in 361; 365 concurrent. Assigned responsibility for care and education of infants and toddlers in groups. 9 lab.

Practicum in Early Childhood 366 Education (6)

Prereq: 363, 364, perm. Lab experience in assisting the planning, guiding, supervising, and evaluating preschool children's growth and behavior in all phases of early childhood education programs. Required for students in the associate's degree program.

371 Family and Life Span Development (3)

Prereq: jr. Synthesis of essential concepts useful in comprehending families in light of developmental concept for family analysis through stages of individual and family life cycle. Course offers a survey study of the life span set in the context of the family. 3 lec.

380 Death and Dying (4)

Prereq: jr. (spring) Examines why people fear death, how death affects family relationships, dynamics of guilt and bereavement, meanings of death, processes of dying, disposition of body, caring relationships. Synthesizes multiple dimensions of death and dying. 4 lec.

399 Junior Practicum—Professional Development (5)

Prereq: C or better 299, jr, major. (spring) Provides students with practical field-based experience in professional areas. 3 lec, 6 lab.

400 Senior Seminar (3)

Prereq: 299, 399 or concurrent, perm. Provides opportunity for comprehensive assessment in relation to personal and professional growth prior to exiting programs as professionals in child development or family studies. 3 lec.

Evaluation in Child and Family Studies 441 (3)

Prereq: sr. (arranged) Evaluation and assessment methods and techniques in relation to process and products in home economics programs and professions. 3 lec.

444 Adult Education in Human and Consumer Sciences (4)

Prereq: jr or sr. (winter, alt even yrs) Organization procedures, curriculum materials, and methods of conducting adult education groups in home economics. 4 lec.

Home Management for the Disabled Homemaker (4) 452

Prereq: jr or sr. (arranged) Recognizes unique home management demands faced by persons with disabilities and their families and determines creative methods and identifies resources to meet those demands. 4 lec.

Functional Assessment in 453 Independent Living (3)

Prereq: jr. (arranged) Explores functional assets and limitations of persons with disabilities in completing household tasks, identifies methods and materials used in assessment of functional limitation, and determines resources and strategies to increase ability of clients to perform household tasks. 3 lec.

455 **Curriculum and Teaching Strategies** in Early Childhood (4)

Prereq: All methods courses. Synthesis of early childhood curriculum content, teaching strategies, and decision-making processes in curriculum development and implementation. 4 lec.

Clinical: Curriculum and Teaching Strategies in Early Childhood (2) 455L

Prereg: All methods courses. Supervised lesson planning and teaching in early childhood classrooms serving children age 3 to grade 3.6 lab.

462A Diversity in Families (4)

Prereq: C or better 371. (fall) Analysis of emerging pluralistic marriage and family life patterns in American society. 4 lec.

462B Parenthood (4) Prereq: C or better 371. (fall) Analysis of dynamics of parenthood. 4 lec.

462C Middle Childhood (4)

Prereq: C or better 371. (winter) Analysis of developmental tasks of middle childhood years as they reflect and influence family guidance and transmission of values. 4 lec.

462E Youth Identity Crisis (4)

Prereq: C or better 371. (spring) Analysis of identity crisis in terms of its psychosocial aspects of adolescence. 4 lec.

462F Family Ties and Aging (4) Prereq: C or better 371. (spring) Synthesis of multiple dimensions of aged family. 4 lec.

463 Administration in Early Childhood (3)

Prereq: C or better 363. (spring) History, philosophy, and objectives of preschool education including current trends. Problems in organizing and administering preschools, play groups, and Head Start programs with emphasis on housing, staff, schedules, and financing. 3 lec.

Parent Education (3) 465

Prereq: C or better 361, 371. (fall) Philosophy, techniques, materials, and methods used in working with parents. Opportunities for observation and participation with parent groups, parent conferences, and home visitations. 3 lec.

Philosophy and Theories of Child 467

Development (3) Prereq: C or better 170, sr. (fall, alt yrs) Review of theories of child development with synthesis approach for students in early childhood education programs. 3 lec.

471 Family Life Education (4)

Prereq: C or better 371, jr. (winter) History, philosophy, and objectives of family life education, including current trends. Selected fundamental education problems explored. Examination of various dimensions of teacher's role and critical appraisal of student's professional competency to teach classes in family life education. 4 lec.

Special Studies in Child and Family 472 Studies (2-5)

Prereq: perm. In-depth independent study in selected area.

474 **Student Teaching in Early Childhood** (6 - 12)

Prereq: perm. Lab experience in planning, guiding, supervising, and evaluating preschool children's growth and behavior in all phases of early childhood education programs.

499 **Field Experience in Family Studies**

(12) Prereq: 399, 400, perm. On-the-job training through cooperation with social, welfare, or community agencies, hospitals, early childhood programs.

Food, Nutrition and Hospitality (HCFN)

105 Introduction to Food Operations Management (1)

Prereq: perm, acceptance as food service student manager trainee. Overview of basic management concepts as they relate to the successful operation of a food service. 1 lec.

110 Introduction to Hospitality (4)

Prereq: fr or soph only. (fall, winter) Overview of restaurants, institutional food service, hotels, and travel and tourism. Exploration of different career possibilities in the hospitality industry. 4 lec

120 Meal Management (3)

Prereq: human & consumer science major (fall, spring) Principles of food preparation and nutrition emphasizing use of time, energy, and resources in management of meals. Government regulations controlling food supply. Special fee. 2 lec, 3 lab.

128 Introduction to Nutrition (4) (2A)

Nutrients, their food sources and functions in body, application to planning adequate diet through life cycle. 4 lec.

222 Food Science and Principles (4)

Prereq: C or better in 120; CHEM 121 or 151. (winter) Scientific principles applied to selection, storage, and preparation of foods. Special fee. 3 lec, 3 lab.

Infant and Child Nutrition (4) 232 Prereq: 128, HCCF 160 or PSY 273 or EDEL 200. (arranged) Dietary factors related to nutritional status in pregnancy, infancy, preschool, and school-age children. Contribution of nutrition education and school lunch program in school curriculum. 3 lec, 2 lab.

260A Lifespan Nutrition: Maternal to Adolescence (2)

Prereq: C or better in 128. Examination of nutritional needs and unique concerns to foster optimal growth and development during maternity (pregnancy and lactation), infancy, childhood, and adolescence. Principles of sound nutrition, as elucidated through current research, used to plan and implement recommendations for dietary change during these four stages of the life cycle. 2 lec.

260B Lifespan Nutrition: The Adult and **Geriatric Years (1)**

Prereq: C or better in 128. Examination of nutritional needs and unique concerns to foster achievement and maintenance of optimal health during the adult and older years. Principles of sound nutrition, as elucidated through current research, used to plan and implement recommendations for dietary change during these two stages of the life cycle. 1 lec.

Sophomore Practicum—Professional 299 Awareness (1)

Prereq: C or better 120, 128, COMS 101 or 103. (fall) Development of an awareness of the history, philosophy, goals, organization, and requirements of the dietetic profession. 1 lec.

299B Sophomore Practicum: Introduction to Food Service (4)

Prereq: C or better 120. Food science principles applied to quantity food production. Develop an understanding of food safety and sanitation, standardized recipes, and food service equipment. 8 lab.

Food Sanitation and Safety (2) 330

(winter) Applied food service sanitation procedures in the food handling functions of purchasing, storage, preparation, and service. Hazard Analysis Critical Control Points (HACCP) covered. Upon completion, students eligible for national and Ohio certification in Food Safety. 2 lec.

333 **Principles of Quantity Food**

Production (2) Prereq: C or better 128, 222. (fall) Food preparation principles applied to large quantity food production, menu planning, recipe standardization, food cost, and service in institutions. Experience in residence dining halls. 2 lec.

334A Introduction to Food Production: Dietetics (2)

Prereq: C or better 330; 333 or concurrent. Application of principles of quantity food production. Experience in School of Human and Consumer Sciences commercial kitchen and café. Apply food safety and sanitation principles by participating in HACCP plan. Use standardized recipes and foodservice equipment in production of foods for service in Atrium Café. 6 lab.

334B Introduction to Food Production; Food Service (3) Prerea: C or better 330: 333 or concurrent.

Application of prinicples of quantity food production. Experience in School of Human and Consumer Sciences commercial kitchen and café. Apply food safety and sanitation principles by participating in HACCP plan. Use standardized recipes and foodservice equipment in production of foods for service in Atrium Café. 8 lab.

335 Food Service Purchasing (4)

Prereq: C or better 333. (winter) Managerial approach to the purchasing and selection of a wide variety of food, beverage, and nonfood items. Emphasis placed on purchasing the optimal amount at the optimal price. Upon completion, students eligible for national certification in Food Purchasing. 4 lec.

340 **Hospitality and Nutrition Study Tour** (2-4)

Prereq: Max 5 hrs. Exposure to the latest trends, foods, and equipment in the hospitality industry.

Catering Practicum (1-3)

Prereq: Perm. Catering for special events that provide students the opportunity to apply technical, conceptual, and interpersonal skills. Emphasis on group dynamics and management team functions. 3-9 lab.

Intermediate Nutrition (4) 382

Prereq: C or better 128, CHEM 123 or 153. (spring) Examination of the macronutrients from a scientific standpoint, including their metabolism, utilization at the cellular level, and recommended intake for the prevention of chronic disease and health maintenance. 4 lec.

Dietetics/Nutrition with Science Field 399A **Experience (5)** Prereq: C or better 299, 424, 499A, BIOS 345.

(summer) Professional experience in hospitals, nursing care centers, community agencies providing nutrition care, government agencies charged with nutrition policy, or other direct nutrition providers under daily supervision of a Registered Dietitian (RD).

399B Food Service Field Experience (5) Prereq: C or better 334. (summer) Professional experience in restaurants, hotels, or other hospitality establishments under the supervision of an experienced professional.

400A Dietetics Senior Seminar (1)

Prereg: 399A. Provides an opportunity for majors in dietetics and nutrition with science to demonstrate personal and professional growth by investigating a topic and presenting it in class. Students lead discussions on topics that affect the profession and share experiences gained during field experience. 1 lec.

400B Food Service Seminar (1)

Prereq: 399B. Provides an opportunity for food service management students to demonstrate personal and professional growth by sharing work experiences in verbal and written form with staff and fellow students. 1 lec.

422 **Experimental Foods (4)**

Prereq: C or better in 222; CHEM 302. (spring) Factors which affect results of different methods used in food preparation. Research techniques using subjective and objective evaluation of products. Special fee. 3 lec, 3 lab.

424 **Nutrition Treatment in Outpatient** Care (4)

Prereq: C or better 382; BIOS 345 or concurrent. Medical nutrition therapy associated with the prevention and treatment of disease, including overweight/obesity, hypertension, hyperlipidemia, diabetes, mellitus, and kidney disease. 4 lec.

World View of Nutrition (3) 426

Prereq: C or better 128; SOC 101 or ANTH 101; jr or sr. (winter) Survey of world food situation with consideration of environmental, cultural, governmental, and economic factors that relate to food production and consumption. Evaluation of these patterns in meeting dietary needs. 3 lec.

427 Studies in Foods and Nutrition (2-4, max 8)

Prereq: 128, 222, jr. (arranged) Directed studies in some aspect of foods and/or nutrition; topics selected by students with approval of faculty member; frequent conferences.

478 **Advanced Nutrition (4)**

Prereq: C or better 382, BIOS 345, CHEM 302 (fall). Examination of the micronutrients from a scientific standpoint, including their metabolism, utilization at the cellular level, and recommended intake for the prevention of chronic disease and health maintenance. 4 lec.

429 Community Nutrition (3) Prereq: C or better 128, 382, jr. (spring)

Assessment of community nutrition needs. Survey of agencies and programs providing services Role of nutritionist. Methods and resources for nutrition education. Legislation. 3 lec.

430 **Therapeutic Nutrition (4)**

Prereq: C or better 424, 428, BIOS 345, (winter) Medical nutrition therapy associated with the prevention and treatment of disease, including gastrointestinal, pulmonary, and wasting diseases. Enteral and parenteral nutrition. 4 lec.

431 Studies of Science of Nutrition (1) Prereq: C or better 428; BIOS 345 or 342 and 343; BIOS 463. (arranged) Nutrition as related to physiological and metabolic processes. Individual research project. 2 lab.

432 **Research Design and Methods in** Nutrition (3)

Concurrent with 430; PSY 121 or 221. Overview of research design and methodology with practice application to the fields of nutrition and dietetics. A group research project will be carried out. 2 lec., 3 lab.

437 Food Service Systems I (5) Prereq: C or better 334; CS 120 or HS 309. (winter) Introduction to tools and functions of management in food service with emphasis on organization structure, catering, inventory control, staffing, work methods, human relations skills, sanitation, and safety. 4 lec, 3 lab.

438 Food Service Systems II (4)

Prereq: C or better 437; ACCT 201. (spring) Institutional equipment purchasing, kitchen layout design, facilities management, and cost control. 4 lec.

439 International Cuisine (4)

Prereg: C or better 334, 437. (spring) Principles of international cuisine, advanced food preparation, and research of areas of specific interest. Special fee. 2 lec. 4 lab.

440 Beverage Management (4) Prereg: C or better 437. (spring) Managerial

approach to beverage management in hotels, restaurants, and catering operations. Emphasis on facility planning, merchandising, and managing a beverage operation. Upon completion, students eligible for national certification in Beverage Management. 4 lec.

498B Food Service Professional **Development (2)**

Prereq: C or better 399B, major. (fall) Professional experience for food service majors with opportunities for career assessment. Practice in interviewing and job-seeking skills. 2 lec.

499A Nutrition Counseling (2)

Prereq: C or better in 382. Introduction to the theory of medical nutrition therapy; communicating health and nutrition advice to consumers; and behavior change models used in MNT. 2 lec.

499B Food Service Practicum (3)

Prereq: 498B or concurrent. (arranged) Food service experience at a food service establishment under the supervision of an experienced professional.

499C Nutrition Counseling Practicum (1)

Prereq: C or better in 499A or concurrent. Offers the opportunity for students to counsel client(s) in a one-on-one and group format under the supervision of a resgistered dietitian; including assessment, treatment, evaluation and follow-up in out-patient care. 3 lab.

General Education (HCGE) 110 **Education in Family and Consumer** Sciences (2)

Prereq: Fr or soph only. Opportunity to gain awareness of varied career choices as a family and consumer sciences education major and introduce students to workforce education for middle, high school and adult education. Emphasis on curriculum discussion, new trends in career/technical education and various resources. 2 lec.

Teaching of Family and Consumer 340 Sciences (4)

Prereq: HCCF 299, EDCI 200, 201, 202. Family and consumer sciences programs at junior and senior high school level. Special emphasis on vocational education. curriculum development, evaluation procedures, and methods of teaching. 4 lec.

345J Writing in Human and Consumer Sciences (4) (1J)

Prereq: jr. (winter) Investigation and analysis of current issues and concerns in human and consumer sciences professions. Emphasis placed upon developing variety of writing formats in order to communicate effectively with selected audiences. 4 lec.

Equipment (2-4) 391

Prereq: 390. (arranged) Selection and use of household equipment including materials, construction, operation, and care.

395 Home Management (3)

Prereq: soph. (arranged) Decision making applied to use of family resources with purpose of creating family environment in which optimum human development will occur. 3 lec.

Home Management Laboratory (4) 396

Prereq: soph. (arranged) Principles of decision making and management in group living situation. Home management house experience provided. 8 lab.

450 **Problems in Teaching Home**

Economics (2-4, max 6) Prereq: perm. (arranged) Individual problems in teaching.

459 Human and Consumer Sciences Seminar, Workshop and Short Course in International Service (2-4)

Special seminar or workshop for international students or for family and consumer sciences majors who want to prepare for international service.

479A-K Workshop in Human and Consumer Sciences (1-6)

Special workshops on topics related to human and consumer sciences

4794 Home Economics Education

- 479B **Clothing and Textiles**
- 479C Food and Nutrition
- 479D **Child Development**
- 479F Consumer Economics
- 479F **Home Furnishings**
- 479G Home Management
- 479H **Household Equipment**
- School Lunch Management 4791
- Family Life Education 479K

490A-D Independent Study (2-5, max 15)

Prereq: perm. Independent study, advanced level, under direction of faculty member in area of specialization.

- 490A Family Studies and Community Service
- 490B Fashion and Retail Merchandising
- 490C Interior Architecture
- 490D Human Nutrition and Food Science 491A Understanding Play (4)

Prereq: HCCF 160 or EDEL 200. Study of selected play theory for purpose of developing recreation therapy programs. (No credit if REC 460 is taken.) 3 lec. 2 lab.

491B-F Seminar or Short Course in Human and Consumer Sciences(2-4)

Advanced studies of research and recent developments in any of the five areas of family and consumer sciences

- 491B Foods and Nutrition
- 491C Home Economics Education
- 491D Housing and Management
- 491E **Textiles and Clothing**
- 491F Research

495H **Human and Consumer Sciences** Honors Seminar (1-4)

Prereq: perm. Research and recent developments in human and consumer sciences.

497H Readings in Honors Work (1-4) Prereq: perm. Independent reading in

preparation for honors thesis. Exploration of reading topics in consultation with faculty.

Honors Practicum in Human 498H

and Consumer Sciences Prereq: perm. Implementation of honors project or research in advancement of honors thesis.

Field Work in Home Economics—Job 499B Training (5-12)

Prereq: perm. (arranged) On-the-job training in area of specialization.

499B Field Work in Home Economics—Job Training (5–12) Prereq: perm. (arranged) On-the-job training in

area of specialization.

499H Honors Thesis in Human and **Consumer Sciences (3-7)**

Prereq: perm. Completion, oral defense, and presentation of honors thesis.

Interior Architecture (HCIA) 180 Introduction to Residential Design

and Architecture (3) (fall, spring) Study of residential design and architecture. Topics include designfundamentals, history of design, construction systems and materials, interior components, and professiona practice in interior architecture. 3 lec.

180A Introduction to Residential Design Studio (1)

Prereq: 180 or concurrent, IT 104 or concurrent; major. (fall, spring) Investigation and application of design theory and residential space planning. 2 lab.

181 Color Theory (4) Prereg: IT 104 or concurrent or HCRM major. Focuses on the characteristics, relationships, and theories of color based on major color systems. The visual and psychological effects of color and light, various color phenomena, and the formal and expressive elements of color for interior environments are explored. Color is studied in terms of furnishings and finishes as related to space, form, and light. 2 lec, 4 lab.

200 **Beginning Computer-Aided Design** (2)

Prereg: soph; CS 120 or MIS 201; HCID, HCRM, or Food Service Mgt major. (winter) Investigation of design using 3-D modeling and computer drafting applications. Emphasis given to application of these techniques to solve specific interior design/retail merchandising/food service types of design problems. 2 lec.

201 **Environmental Design Studio I (4)**

Prereq: major, concurrent 201A. Conceptua investigation of the built environment with relation to digital and physical media in the design process. Emphasis placed on 3-dimensional and 4-dimensional explorations. Students must have completed a successful portfolio review and maintain a computer workstation in the design studio for this course. 8 lab.

201A Environmental Design Seminar I (2) Prereg: major only. Discussion and presentation

of design and process theory and application as related to implementation of digital and physical media in the studio setting. Students must have completed a successful portfolio review and maintain a computer workstation in the design studio for this course. This course must be taken concurrent with HCIA 201. 2 lec.

202 **Environmental Design Studio II (4)**

Prereq: 201, 201A, concurrent 202A Investigation of basic environmental design process, ideation, communication, and application and evaluation of materials. Students must maintain a computer workstation in the design studio for this course. 8 lab.

202A Environmental Design Seminar II (2)

Prereq: 201, 201A. Discussion and presentation of basic environmental design theories, concepts, and skills as related to projects in HCIA 202. Students must maintain a computer workstation in the design studio for this course. This course must be taken concurrent with HCIA 202. 2 lec.

211 **Problems in Environmental Design** Studio I (4)

Prereq: perm, non-major, concurrent 211A. Investigation for the non-major of conceptual issues of the built environment with relation to digital and physical media in the design process. Emphasis placed on 3-dimensional and 4-dimensional explorations. 8 lec.

211A Problems in Environmental Design Seminar I (2)

Prereq: perm, non-major. Discussion and presentation of design process theory and application as related to implementation of digital and physical media in the studio setting for non-majors. This course must be taken concurrent with HCIA 211. 2 lec.

212 **Problems in Environmental Design** Studio II (4)

Prereq: perm, non-major, concurrent 212A. Investigations for the non-major in concepts and issues of basic environmental design. Emphasis on understanding design process, research, and evaluation of projects. Students may work in groups with interior architecture majors. 8 lab.

212A Problems in Environmental Design Seminar II (2)

Prereq: perm, non-major. Discussion and presentation of theories, concepts, and skills related to HCIA 212. This course must be taken concurrent with HCIA 212. 2 lec.

Rendering and Presentation Techniques (4)

Prereq: 202. (fall) Emphasizes the rendering of texture, light, shadow, materials, and interior architectural details. Techniques include perspectives, elevations, isometrics, and sketching in various color and black-and-white media. Final presentation techniques, such as logo development, lettering styles, and point size, are stressed. 2 lec, 4 lab.

288 Lighting Fundamentals (3)

Prereq: jr.; pass portfolio review. (winter) Fundamental concepts of illumination. Examination of vision, light, color, tasks, and quality of light. Terminology, symbols, concepts, electrical systems, basic equations, and lighting calculations. Exploration of light sources and controls. Study of physiological and psychological considerations. 3 lec.

299 **Professional Practices (2)**

Prereq: major. (fall) Study of field of interior design concentrating on career opportunities and professional organizations. 2 lec.

Computer-Aided Design: Professional 300 **Applications (2)**

Prereq: HCIA, HCRM, Food Ser Mgt major. Instruction of computer-aided design applications to support the generation of architectural floor plans, elevations, schedules and details in construction documents. 2 lec.

Interior Architecture Studio I (4) 301

Prereq: 202, 202A, concurrent 301A. Introductory studies in professional interior architecture studio practices. Design investigations as related to research, analysis, theory, ideation and conceptualization, programming, schemtic design, project evaluation and refinement, materials, finishes and detailing, furnishings, lighting, communication graphics, and formal presentation. Topics vary based on current social and aethetic issues that may include commercial, institutional, and/or residential design typologies. Students must maintain a computer workstation in the studio for this course. Special fee \$15. 8 lab.

301A Interior Architecture Seminar I (2) Prereq: major. Discussion and presentation of theories, concepts, and skills related to 301. This course must be taken concurrent with HCIA 301. Students must maintain a computer workstation in the studio for this course. 2 lec.

302 Interior Architecture Studio II (4) Prereq: 202, 202A, concurrent 302A. Intermediate studies in professional interior architecture studio practices. Design investigations as related to research, analysis, theory, ideation and conceptualization, programming, schemtic design, project evaluation and refinement, materials, finishes and detailing, furnishings, lighting, communication graphics, and formal presentation. Topics vary based on current social and aethetic issues that may include commercial, institutional, and/or residential design typologies. Students must maintain a computer workstation in the studio for this course. Special fee \$15. 8 lab.

302A Interior Architecture Seminar II (2)

Prereg: major. Discussion and presentation of theories, concepts, and skills related to 302. This course must be taken concurrent with HCIA 302. Students must maintain a computer workstation in the studio for this course. 2 lec.

Problems in Interior Architecture I (4) 311

Prereq: perm, non-major, concurrent 311A, jr or sr. Problems in interior architecture for nonmajors. Emphasis placed on understanding design process, research, conceptualization, critique, and evaluation of projects. Students may work in groups with interior architecture majors. 8 lab.

311A Problems in Interior Architecture Seminar I (2)

Prereq: perm, non-major, jr or sr. Discussion and presentation of theories, concepts, and skills

related to HCIA 311. This course must be taken concurrent with HCIA 311. 2 lec.

330 **Cyberspace Design: Construction and** Implementation of 3-Dimensional Digital Environments (5)

Prereq: 180. Exploration and design of 3dimensional cyberspace environments as related to the discipline of interior architecture. 2 lec., 8 lab.

340 Interior Design Computer-Aided Design (3)

(fall, winter) Investigation and development of design using computer-aided design (CAD) program for floor plans, furniture placement, 3-D views, and plotting using computers. 2 lec, 2 lab.

350 Materials Construction I (3)

Prereq: soph, jr, or sr. Investigation of material selection and application, construction systems, and building codes as related to interior architecture. Field trips to actual construction sites when available. 3 lec.

351 Materials Construction II (3)

Prereq: 350. Investigation of interior finishes and materials, fire performance characteristics of materials and material specifications. Field trips to actual construction sites when available. 3 lec.

Business Procedures and Contract 352 Documents (3)

Prereq: 351. (spring) Investigation and application of business procedures, types of business insurance, liabilities, contractual agreements, and the support materials needed to operate a professional design practice. Professional presentation skills explored. 3 lec.

361 **Professional Design Development** and Construction Document Studio (4)

Prereq: 301, 301A or 302, 302A; concurrent 361A. Emphasis placed on innovative and creative architectural detailing, communication issues and standards of architectural construction documents, application of building codes, and application accessibility and universal design issues. Students will create a set of construction documents that include code analysis, accessibility and universal design anaylsis, plans sections, details, schedules, and specifications. Projects based on continuation documents are created in electric format. Students must maintain a computer in the design studio as part of this course. Special fee \$15. 8 lab.

361A Professional Design Development and Construction Drawing Seminar(2)

Prereq: 301, 301A or 302, 302A. Discussion and presentation of theories, concepts, and skills related to HCIA 361. This course must be taken concurrent with HCIA 361 Students must maintain a computer in the design studio as part of this course, 2 lec.

385 Home Furnishings Workshop (4)

Prereq: 113, 180 or 6 hrs ART and perm. (arranged) Lab problems in advanced techniques in home furnishings, including upholstering, slip-covering, and refinishing furniture.

Lighting Design and Application (3) 389

Prereq: 288. (arranged) Application and design of interior illumination systems. Use of manufacturer product catalogs and data. Consideration of special lighting applications. Further study of light quality and color effects. Use of lighting formulas and calculations. 3 lec.

400 Senior Seminar—Professional Evaluation (1-3)

Coreq: 499 or concurrent. Provides opportunity for students to demonstrate personal growth by sharing experiences in verbal and written form with faculty and fellow students

Interior Architecture Studio III (4)

Prereq: 361, 361A, concurrent 401A. Continuation of intermediate studies in professional interior architecture studio practices. Design investigations as related to research, analysis, theory, ideation and conceptualization, programming, schematic design, project evaluation and refinement, materials, finishes and detailing, furnishings, lighting, communication graphics, and formal presentation. Topics vary based on current social and aesthetic issues that may include commercial, institutional and/or residential design typologies. Students must maintain a computer workstation in the studio for this course. Special fee \$15.8 lab

401A Interior Architecture Seminar III (2) Prereg: 361, 361A, Discussion and presentation of

theories, concepts, and skills related to 401. This course must be taken concurrent with HCIA 401. Students must maintain a computer in the design studio for this course 2 lec

Interior Architecture Studio IV (4) 402 Prereg: 361, 361A, concurrent 402A, Advanced studies in professional architecture studio practices. Design investigations as related to research, analysis, theory, ideation and conceptualization, programming, schematic design, project evaluation and refinement, materials, finishes and detailing, furnishings, lighting, communication graphics, and formal presentation. Topics vary based on current social and aesthetic issues that may include commercial, institutional and/or residential design typologies. Students must maintain a computer workstation in the studio for this course. Special fee \$15. 8 lab.

402A Interior Architecture Seminar IV (2) Prereq: 361, 361A. Discussion and presentation of theories, concepts, and skills related to 402. This course must be taken concurrent with HCIA 402 Students must maintain a computer in the design studio for this course. 2 lec.

411 **Problems in Interior Architecture** II (4)

Prereq: perm, non-major, concurrent 411A, jr or sr. Problems in interior architecture for nonmajors. Emphasis placed on understanding design process, research, conceptualization, critique, and evaluation of projects. Students may work in groups with interior architecture majors. 8 lab.

411A Problems in Interior Architecture Seminar II (2)

Prereq: perm, non-major, jr or sr. Discussion and presentation of theories, concepts, and skills related to HCIA 411. This course must be taken concurrent with HCIA 411. 2 lec.

470 **Research and Programming for**

Interior Architecture (3) Prereq: 361, 361A, sr. Research methodologies and programming as related to interior architecture. Related topics include behaviorenvironment relationships, study of precedents in design typologies, and foundations in design appropriateness. Work in class directly relates to the development of project statement, program, research, and analysis for senior thesis project. 3 lec.

480 **History of Furniture and Interior Design I (3)** Prereq: jr. Study of the history of interiors,

furnishings, decorative arts, and architecture of the ancient world; the Middle Ages, Gothic and Renaissance; the French Periods and the Beidermeir Period, 3 lec.

481 History of Furniture and Interior Design II (3)

Prereq: jr. Study of the history of interiors, furnishings, decorative arts, and architecture of England (Tudor through Victorian) and America (Early American through Victorian). 3 lec.

487 History of Furniture and Interior Design III (3)

Prereq: jr. Study of the history of interiors, furnishings, decorative arts, and architecture of the twentieth century. 3 lec.

Advanced Interior Design Studio II 484 (4)

Prereq: 281. (winter) Investigation, design, and specification of materials and furnishings for hotels and restaurants. Lab experiences include executing plans, elevations, perspectives, cost

estimates, rationales, and oral presentations. Special fee. 2 lec, 6 lab.

486 Advanced Interior Design Studio IV (4) Prereq: 281, major. (spring) Investigation, design, and specification of materials and furnishings for historic preservation/restoration or adaptive re-use of historic structures. Lab experiences include executing plans, elevations, perspectives, cost estimates, rationales, and oral presentations. Special fee, 1 lec, 6 lab.

495 Thesis Interior Architecture Studio (5)

Prereq: 402, 402A, 470. Independent project design and development as proposed in HCIA 470. Project requires application of interdisciplinary knowledge. Includes final exhibition or project. Student must maintain computer workstation in the design studio for this course, 10 lab.

499 Field Work—Interior Design (3-12) Prereq: 280, 350A, 352. On-the-job training through cooperation with residential and contract firms for interior design majors.

Retail Merchandising (HCRM)

150 Design and Illustration Techniques (4) Design and illustration techniques in relation to stylization and customer profiling. Variety of media introduced for visually communicating through a variety of presentation formats. Students learn the fundamental elements and principles of design, composition, and layout in preparation for professional portfolio. 2 lec., 4 lab.

201 Introduction to Retailing (4)

(fall, spring) Introductory examination of retailing as major economic force in the country and as significant contributor for career opportunities. Practical analysis of retail operations and impact of socioeconomic factors. Focus on terminology, trends, retailers, and advances in retail technology. 4 lec.

213 **Design Analysis: Theory and**

Prereq: 117, soph, Tier I math. (arranged) Fundamental principles as applied to understanding use and fit of commercial pattern and apparel construction. Emphasis on scientific thought, creative expression, and construction problems. 2 lec, 4 lab.

250 The Consumer in American Society (4) (2S)

Prereq: ECON 103 or soph. An analysis of basic components and operations of the economic system in the United States as they affect the consumer. Current consumer issues, influences, restrictions of consumer freedom of choice, major consumer expenditures, and resources which are available to consumers as they participate in decision making and consumption are discussed. 4 lec.

283 **Apparel Production Process (4)**

(on demand) Examination of ready-to-wear apparel production and manufacturing, related to design, sizing, fit and apparel components. 4 lec.

299 **Professional Development (4)**

Prereq: soph, jr or sr. (winter) In-depth study of career opportunities and job responsibilities; assessment of personal and professional assets and needs. On-the-job mini-experience related to career option. 4 lec

Studies in Clothing and Textiles (2-4, 312 max 8)

Prereq: perm. Selected topic in clothing and textiles.

315 **Elementary Textiles (4)**

Prereq: soph, Tier I math. (fall, winter) Properties and processing of fibers, yarns, fabrics, dyes, and finishes, with emphasis on consumer use. 3 lec, 2 lab

383 **Product Development, Evaluation,** and Distribution (4)

Prereq: C or better 201 or 283. Examination of the evaluation criteria for quality control of apparel, and related products. 4 lec.

Career Search Strategies (3) 399

Prereg: 299, jr, major. (fall) Job-seeking skills, company review, issues in professional development. Mini-professional experience. 3 lec.

399A **Retail Merchandising Field Work** Experience (2)

Prereg: C or better in 399. Students seek and complete a field work experience in the retail industry for a total of 150 hours over a 5-10 week period (15-30 hours per week). Projects are related to the learning experience of the individual student. Emphasis is on reflection of the learning experience and its relationship to program goals.

399B Retail Sales Internship (4)

Prereq: Acceptance into Sales Centre, perm. Students seek and complete a field work in an are of retail selling. A minimum of 300 hours of work experience are completed in an 8-10 week time period (37-40 hours per week). Projects are related to the learning experience and its relationship to program goals.

400 Internship Preparation (1) Prereg: C or better in 399. Professional skills are evaluated, internship plans are discussed, and portfolios are reviewed. 1 lec.

405A History of Costume (4)

Prereq: jr. (winter) Costume through ages as reflection of historical period and source for present-day design. 4 lec.

405B History of Textiles (2) Prereq: 315. (spring, even yrs) Textiles through ages as reflective of historical period and source for present-day design. 2 lec.

Global Issues in Textile, Apparel, and 407 **Retail Industries (4)**

Prereq: C or better in 201, Jr comp, Sr. (winter) Economic factors influencing textile and fashion industries treated in depth. 4 lec.

415 Flat Pattern (4)

Prereq: jr. (spring, odd yrs) Creative apparel design and interpretation with emphasis on flat pattern manipulation. 2 lec, 4 lab.

416 Draping (4)

Prereq: jr. (arranged) Designing of apparel using draping techniques. Emphasis on fabric as medium rather than pattern development in design process.

417 **Retail Merchandising—Management**

(4) Prereg: 201; CS 120, HS 309, MIS 100 or HCID 340; jr. (fall, winter) Marketing and management principles related to buying and controlling of merchandise. Emphasis on organizational structure, personnel management, planning, buying, and controlling merchandise assortments. Retail mathematics problems included. 4 lec.

418 **Quality Control for Apparel and** Textiles (4)

Prereq: C or better 315; sr. (spring) Principles, techniques, and standard testing methods for textiles and clothing. Lab sessions emphasize standard textile testing procedures and research methods. 2 lec, 4 lab.

419 Studies in Textiles Testing (3)

Prereq: perm. Individual research and lab testing of problems in advanced textiles.

420 New York Study Tour (2)

Prereq: jr. (spring, even yrs) Directed study problems related to textile and apparel industry in conjunction with on-site tours of textile and apparel market centers. Fees for travel, food and housing. Students receive credit (CR), not a letter arade.

Retail Merchandising—Promotional 423 Strategy (4)

Prereq: C or better in 201, JOUR 250, 150 or ART 113 or 116 or HCIA 181, jr or sr. Provides a broad understanding of the ways in which goods, services, and ideas can be promoted within the retail industry. Emphasis on practical application. Incorporates factors influencing retail promotional planning such as communication theory, corporate and store image, target markets, and competitive marketplace stance with the promotional mix components. 4 lec.

437 Strategic Merchandise Planning (4)

Prereq: C or better 417. (winter, spring) Advanced use of spreadsheets and merchandise mathematics incorporated into computer simulations of various merchandising techniques. Topics include assortment planning, buying, personnel management, and inventory control. 4 lec.

454 **Clothing for Persons with Special** Needs (3)

(arranged) Exploring dressing techniques and functional design alternatives for individuals with special needs. Focus given to populations such as elderly, physically, or mentally disabled, and temporarily or permanently disabled. 3 lec.

Strategic Retail Policy (4) 480

Prereq: C or better 499. Capstone course serves as an intensive personal and professional assessment tool for prospective retailers. Projects lead to a completed professional portfolio. 4 lec

Internship: Retail Merchandising (16) 499

Prereq: major, sr., 400, 12 hrs. from 383, 407, 417, 423, 437, perm. On-the-job experience through cooperation with industry and/or retail establishments.

Humanities

See English.

Human Resource Management (HRM)

298 Internship (1)

Prereq: perm. Internship experience that provides on-site exposure to general business operations and procedures. Intended for experiences following the freshman year.

320 Human Resource Management (4) Prereg: MGT 202 or MGT 240 or perm. Survey

of human resource management practices in areas of human resource planning, recruitment, selection, training and development, performance appraisal, compensation, discipline, safety audits, and personnel research. Includes applications in employment law and discussion of interface of line and staff responsibilities in organization.

Advanced Concepts in Human 324 Resource Management (4) Prereg: MGT 200 or 202 or 240. A course

designed for students entering the HRM major. Topics covered include staffing, training and development, performance management, compensation and benefits, and employment relations. Also covered is the role of the HR manager as a contributing member of the management team and the strategic relationship of the HR function to the organization.

398 Internship (1-4)

Prereq: perm. Internship experience that provides opportunities to learn by participating in day-to-day activities of a business concern for at least four consecutive weeks. Intended for experience following the sophomore year.

425

Employee Relations (4) Prereq: MGT 200. Study of discretionary and mandatory employee relations issues such as discipline procedures, individual employment contracts, union contract administration, and alternative dispute resolution. Topics also include employee safety and health issues, and compliance with health and safety regulations.

430 Compensation Management and Human Resource Information Systems (4)

Prereq: 320 or 324, or perm. Advanced study of

compensation and the management of complex compensation systems. Topics will include job analysis, job evaluation, pay structure design and implementation, and performance-based pay. The role of information systems in the creation and administration of compensation systems will be addressed

440 Training, Development, and

Performance Management (4) Prereq: 320 or 324. Advanced study of strategic knowledge and performance management systems in organizations. Topics include design, delivery, and evaluation of human resource development and knowledge management interventions; employee performance measurement systems design, implementation, and evaluation.

450 **Recruitment and Selection (4)**

Prereg: 320 or 324. Students will gain expertise in the design and application of strategic internal and external recruitment and selection methods, legal compliance and application to relevant issues such as downsizing, rightsizing, reengineering, and outplacement.

455 international Human Resource Management (4)

Prereq: HRM 320 or 324. Course exposes students to the management of human resources in foreign countries. Students will explore topics dealing with cultural issues associated with doing business in different countries. Recruiting, selecting, and motivating individuals in a foreign country, and the unique challenges of multinational human resource management will be studied.

460 **Strategic Human Resource** Management (4)

Prereq: 430, 440, 450. Integrative course serving as capstone course. Students expected to apply functional HRM knowledge to an understanding of how, through acting as internal change agents, HRM helps the organization achieve its strategic objectives. Current applications such as outsourcing and downsizing may be brought into focus.

491 Seminar (1–5) Prereq: perm. Selected topics of current interest in human resource management.

497 Independent Research (1-4)

Prereq: perm. Research involving some human resource management topic. Topic selection and study are under direction of faculty member.

498 Internship (1-4) Prereg: perm.

Human Services Technology (HST)

The following courses for the A.A.S. in human services technology are available on the Chillicothe and Southern campuses.

100 Introduction to Human Services Technology (4)

Comprehensive introduction to knowledge and skills required for successful human services work. Topics include history and issues in human services, philosophical models, methods of service delivery, professional roles, and others.

120 **Crisis Intervention (3)**

Provides theoretical understanding and skill-based training in assessment and intervention strategies that are solution oriented and that may be applied to a variety of crisis situations.

150 Behavior Management I (3)

Prereq: PSY 101 recommended. Examines application of behavioral principles and techniques to various human problems. Emphasis on learning to objectively describe, measure, and analyze behavioral data. Ethical issues in behavior management discussed.

151 Behavior Management II (4) Prereg: 150. Continuation of 150, exploring

additional applications of behavioral techniques in both individual and group settings. Practice provided in contingency contracting and designing token economy.

Behavior Management III (4) 152

Prereg: 151. Continuation of 151 with emphasis on specific behavioral techniques such as progressive relaxation training and biofeedback Discussion of cognitive methods of behavior change. Course also attempts to integrate use of behavioral techniques with other intervention approaches

165 Intervention Strategies (4)

Explores theories and current issues in counseling and intervention; also discusses methods for implementing outcomes, as well as values and ethical practice concerns.

Group Dynamics I (4) 170

Prereq: PSY 101 recommended. Explores theories and issues current in group dynamics. Provides exercises to demonstrate applications of various theoretical positions. Also discusses methods for implementing groups and outcome evaluation.

Group Dynamics II (3) 171

Prereq: 170. Continuation of 170 with emphasis on participation in variety of group exercises. Students involved both as participants and group leaders. Critical feedback and evaluation provided through videotaped group sessions.

Chemical dependency (3) 175

Explores the dynamics of substance abuse and chemical dependency, along with treatment models and intervention strategies.

190 Case Management (4)

Introduction to the philosophy, goals, and methods of case management and its roles in the fields of social and protective services, mental retardation/developmental disabilities, mental health, and corrections.

200 Personal Management (3)

Examines management of one's own behavior and positive relationship with others in social context. Emphasis on empathy and understanding through literature and/or other modes of communication.

210 Practicum I (2)

Prereq: perm. Students will participate in 150 hrs of supervised field experience at local agency or institution. Provides opportunity to gain practical training and experience under guidance and supervision of professional agency staff.

211 Practicum Seminar I (1)

Opportunity for group discussion of special topics and problems related to student practicum experiences and professional development. Enrollment concurrent with 210.

220 Practicum II (2)

Prereq: 210. Provides additional opportunities to develop helping skills and to practice techniques learned in class. Students may opt for more intensive experiences at same agency as 210 or select another from those participating with HST program. 150 hrs required.

222 Practicum Seminar II (1)

Opportunity for group discussion of special topics and problems related to student practicum experiences and professional development. Enrollment concurrent with 220.

Practicum III (2)

Prereq: 220. Emphasis of final 150-hr practicum on continued skill development and broadening of experience. Students who have completed 210 and 220 at same agency expected to select another for final practicum.

Practicum Seminar III (1) 255

Opportunity for group discussion of special topics and problems related to student practicum experiences and professional development. Enrollment concurrent with 250.

275 Community Resources (3) Prereg: soph or perm. Topics include basics of

program planning; organizing community and local support for programs; researching potential funding sources. Development of grant writing skills including the areas of budget preparation and program evaluation.

290 Special Problems (1-4, max 10) Provides opportunity for students to explore

topics of interest on individual basis, or in structured courses developed as common interests arise. Additionally, credit may be awarded for advanced practicum experiences. May be repeated.

Indonesian/Malaysian

See Foreign Languages and Literatures.

Industrial Maintenance Technology (IMT)

The following courses for the proposed A.A.S. in industrial maintenance technology are available only on the Lancaster campus:

Applied Manufacturing Techniques 110 (3)

Comprehensive study of machine processes used in manufacturing with regard to selection, plant layout, and maintenance requirements. 2 lec, 2

115 Welding and Fabricating (3)

Welding and fabricating, including use of sheet metal fabricating. Covers gas and electric welding and cutting processes, as well as weld joint preparation and finishing. 1 lec, 4 lab.

Metal Machining I (3) 117

Prereg: 110. Basic operation and capabilities of conventional machine tools commonly used in the repair and maintenance of industrial equipment, 1 lec. 4 lab.

150 Machine Repair I (3)

The study of basic machine components used to build industrial machinery. Topics include gears and gear boxes, drivers, clutches, brakes, chains, couplings, and others. This course includes a hands-on laboratory experience providing the student with the necessary skills to repair or replace these components in various types of machinery

189 Special Topics (1-3, max 9)

Prereq: 110. Special topics that are current and relevant to the industrial maintenance field. May be repeated.

217 Metal Machining II (3) Prereq: 117. Study and application of advanced metal machine tool practices, including the programming and operation of computer numerical controlled (CNC) milling equipment. 1 lec. 4 lab.

220 **Basic Hydraulics and Pneumatics (4)** Application of hydraulic and pneumatic

principles to common industrial control circuits, emphasizing maintenance of hardware and circuitry. 2 lec, 4 lab.

230 Tool Design (4) Prereq: 117. Basic jig and fixture design. Relation to manufacturing processes, material requirements, gauging and cutting tools, with emphasis on repair and maintenance. 1 lec, 6 lab.

Materials and Material Testing (3) 240

Prereq: 110. Applications of materials used in manufacturing and design, including metals, plastics, ceramics, lubricants, coatings, and testing methods. 2 lec, 2 lab.

Machine Repair II (3)

Prereq: 150. Machine repair as it relates to industrial equipment, including replacement of machine components such as bearings, shafts,

and other wearing parts. 1 lec. 4 lab.

Self-Directed Work Teams (4) 275

Industrial work teams and the methods used to make them work. Explores use of continuous improvement and project management as they relate to the team concept. Includes field trips to local companies utilizing these methods. 2 lec. 4 lab

289 Independent Study (1-5, max 5)

Prereq: 110. Study of a particular topic pertinent to the industrial maintenance field under the direction of a faculty member. May be repeated. 1-5 lec, 2-8 lab.

290 Externship (4) Prereq: 110, 115, 117, 220, 240, 250. Perform-ance of industrial maintenance technician duties in a supervised, unpaid experience, working 20 hours/ week with a local company. Efforts are made to rotate experience

Industrial Technology (IT)

Introduction to Industrial Technology 100 (1)

Introduction to career opportunities, job functions, and professional organizations in industrial technology. Discussion of curriculum and departmental procedures. 1 lec.

101 **Engineering Graphics Fundamentals** (3)

Basic theory and practice in engineering drawing. Topics include geometric construction, orthographic projection, dimensioning, and auxiliary, section, and pictorial views. Lab activities include free-hand sketching and computer-aided design (CAD) using AutoCAD and SolidEdge software. 2 lec, 3 lab.

102 **Engineering Graphics Applications (4)**

Prereq: IT 101. Theory and practice of constructing three-dimensional geometric models using computer aided-design (CAD). Also includes geometric dimensioning and tolerancing, fasteners, and the integration of graphic documents into the industrial environment. Lab activities include development of note, detail, and assembly drawings. 2 lec. 4 lab.

103 **Computer Applications in Industrial** Technology (4)

Study of computer hardware and software including operating systems, word-processing, spreadsheet, business graphics, presentation, and Web application software. Lab exercises will stress common applications of software in engineering and technology and use of networks to share data among applications. 3 lec, 2 lab.

Architectural Drawing (5) 104

Prereq: interior design major or perm. Basic techniques used in architectural drawing. Includes use of instruments, orthographic and isometric projection, floor plans, elevations, and sections 5 lec

110 Introduction to Manufacturing Processes (4) (2A)

Survey of industrial materials and processes with applications to current manufactured consumer products. Emphasis is placed on generic processes such as forming and separating as applied to a variety of industrial materials. 4 lec.

Manufacturing Materials (4) 111

Survey of industrial materials used in manufacturing. Includes characteristics and applications of ceramic, metallic, and polymeric materials, primary and secondary manufacturing processes for conversion into standard stock, parts and finished products, and relationships between product requirements and materials characteristics. Lab activities emphasize use of manufacturing documentation and tooling to produce quality products. 3 lec, 2 lab.

112 Introduction to Manufacturing (4)

Prereq: 101. Introduction to the workings of a manufacturing enterprise. Includes the study of planning, organizing, and controlling labor,

307

material, equipment and tooling. Lab activities emphasize use of manufacturing documentation and tooling to produce quality products. 2 lec, 4 lab.

117 **Basic Metal Machining (4)**

Prereq: 101. Study and application of the machining processes used in manufacturing, emphasizing economic impact of design parameters. Includes process planning, machine tool set up and operating procedures, metal cutting parameters, and machine tool capabilities. Also includes precision measurement and introduction to CAD/CAM (computer-aided design/computer-aided manufacturing) and nontraditional machining. Lab activities include analyzing part prints, selecting equipment, and using traditional machine tools to produce parts. (No credit for both 117 and 216.) 2 lec, 4 lab.

201 **Computer Graphics (4)**

Prereq: 101. Study and application of advanced computer-aided design (CAD) and computer-aided engineering (CAE) systems using solid modeling and parametric design principles. Includes the development of product models, assemblies, detailed drawings, and analysis models to generate multiple product variations. Also includes data translation issues related to CAD/CAE data and raster and vector conversations. Lab activities based upon commercial CAD/CAE systems. 2 lec, 4 lab.

205 Geometric Dimensioning and

Tolerancing (4) Prereq: IT 102, (117 or 216). Theory and practice of geometric dimensioning as a precise engineering language to specify part geometry based on the function and relationship of assembled parts. Includes size tolerances, data, and all geometric characteristics. 4 lec.

Computer Methods in Industrial 206

Technology (4) Prereq: (IT 103 or MIS201 or CS120). IT 112. Study of common methods and algorithms in industrial technology. Emphasis on design methodology for developing solutions to industrial problems using commercial software. Lab activities include advanced spreadsheet modeling of algorithms and database design implementation. 3 lec, 2 lab.

Industrial Plastics (4) 208

Prereq: 102, 111, 112, (CHEM 121 or 151). Study of plastics materials and manufacturing processes. Includes material properties and applications. Emphasis on major industrial processes including injection molding, extrusion, and thermoforming. Lab activities include material testing, process set-up and operation, and quality control. 2 lec, 4 lab.

215 Metal Casting (4) Prereq: 102, 111, 112. Theory and practice of cast metals and foundry processes. Includes pattern design, pattern making, sand analysis, charge metal composition, flow analysis, and foundry-related documentation. Lab activities include sand casting and full mold casting of aluminum. 2 lec, 4 lab.

216 Metal Machining (4)

Prereq: 102, 111, 112. Study and application of machining processes used in manufacturing, emphasizing shop floor management and problem solving. Includes process planning, machine tool set up and operating procedures, metal cutting parameters, and machine tool capabilities. Also includes precision measurement and introduction to computer numerical control (CNC) and nontraditional machining. Lab activities include analyzing part prints, selecting equipment, and using traditional machine tools to produce parts. (No credit for 117 and 216.) 2 lec, 4 lab.

217 Production Metal Machining (4) Prereq: 206 and 216. Theory and practice of production techniques for metal machining using computer numerical control (CNC), machine tools, and electrical discharge machining (EDM) Includes part print analysis, process analysis and planning, quality assurance factors, and computeraided design and machining (CAD/CAM). Lab

activities include programming CNC turning and machining centers to create molds and massproduce parts. 2 lec, 4 lab.

218 Metal Fabricating and Casting (4) Prereq: 102, 111, 112 (CHEM 122 or 152). Theory

and practice of sheet metal forming and fabricating, and hot metal casting. Explores the relationship between material properties and processing capabilities. Lab activities emphasize shearing, bending, welding, mechanical fastening, and sand casting. 2 lec, 4 lab.

220 Aircraft Powerplants (4) Prereq: Aviation management or flight major. Theory of operation of reciprocating engines and gas turbine engines for aircraft. Exposure to thermodynamics of power delivery. Includes fan, jet, shaft, and propeller propulsion machines. Also includes propulsion systems issues such as fuel, lubrication, air supply, and electrical systems. Lab experiences provide investigation of actual hardware and exposure to FAA regulations and engine maintenance considerations. 3 lec. 2 lab.

221 Power Transmission (4) Prereq: PHYS 201 or 251. Theory and application of physical principles associated with the use of mechanical, hydraulic, pneumatic, and electrical power in manufacturing. Includes gear trains, couplings, clutches, pumps, cylinders, compressors, and electric single and multiphase motors. Lab activities include working with gear systems, internal combustion engines, conveyors, motors, hydraulic and pneumatic systems. 3 lec, 2 lab.

222 **Civil Engineering Graphics (3)**

Prereq: 101, CE major. Theoretical applications of problems relating to true length lines, angle between a line and a plane, dihedral angles, and true size and shape of places. Development of practical application drawings in the areas of poverty layout, road plan and profile, reinforced concrete retaining walls, environmental problems. layout of water, storm sewer, and sanitary sewer utililities. Includes use of computer-aided design (CAD) software. 2 lec. 3 lab.

230 Manufacturing Computer Technology (4)

Prereq: 206. Overview of hardware platforms, operating systems, networks, and applications used in manufacturing. Includes use of computers to support automated production machinery and equipment. Emphasis on designing, planning, developing proposals for, and implementing integrated computer and production systems. Lab demonstrations illustrate the technology components presented in lecture. 3 lec, 2 lab.

231 **Manufacturing Database** Applications (4)

Prereq: 206. Survey of database types and their applications in manufacturing. Includes principles of database design and implementation. Also includes introduction to e-commerce and the sharing of database information over the Internet. Activities include using IDEF1x to design databases, developing graphical front-ends, and implementing typical manufacturing databases using commercial software. 3 lec, 2 lab.

303 Applications of Object Oriented Programming (4)

Prereq: 206. Introduction to object oriented programming and rapid application development using Visual Basic as programming language Lab activities emphasize the development of programs for various industrial technology applications, including the use of graphics and integration with other Windows-based programs. 3 lec, 2 lab.

Plastics Tooling (4) 309

Prereq: 208. Study of tooling required for extrusion, injection molding, compression molding, thermo-forming, and other production processes used to produce plastic parts. Lab activities include design and construction of molds for plastic forming. 2 lec, 4 lab.

Superabrasive Machining (4) 317

Prereq: 216. Study and application of industrial diamonds and cubic boron nitride tools for metal machining and grinding. Includes manufacture. identification, and selection of superabrasive tools. Lab activities include tool wear studies and economic analyses. 2 lec, 4 lab.

318 **Computer Numerical Control (4)**

Prereq: 217. Advanced computer-aided design and computer-aided machining (CAD/CAM) for computer numerical control (CNC) machine tools. Lab activities emphasize mold design and construction on CAD/CAM software, 2 lec. 4 lab.

320 **Hydraulics and Pneumatics (4)**

Prereq: 221. Application of hydraulic and pneumatic principles to common industrial uses for power transmission and mechanism control. Includes a study of hardware and circuitry. Lab activities include construction and testing of fluid power circuits. 2 lec, 4 lab.

Industrial Electronics (4) 332

Prereg: 221, PHYS 202 or 252. Theory and application of fundamental concepts of DC and AC circuits. Includes measurement of DC and AC electrical parameters and operation of electrical output devices such as transistors, operational amplifiers, AC and DC motors, solenoids, and transformers. Also includes Boolean logic used in digital circuits. Lab experiences include building, testing, and troubleshooting basic AC and DC electrical circuits. 3 lec, 2 lab.

Manufacturing Networks and Data Communications (4) 337

Prereq: 230, 332. Theory and applications of communication technology used in manufacturing plants. Includes study of dedicated device communications, network communication protocols for interconnecting manufacturing equipment and computers, and specialized standards for communicating with controllers and shop floor data acquisitions systems. 3 lec. 2 lab.

347 Plastics Molding Processes (4) Prereq: 208, 216, (CHEM 121 or 151). (fall)

In-depth analysis of selected molding plastics processes including essentials of product/process design and their impact on product quality. Lab activities involve extensive analysis of molding and processes. 2 lec, 4 lab.

348 Plastics Forming and Fabricating (4) Prereq: IT 208, 216 (CHEM 121 or 151). Advanced

study of plastics product manufacturing using extrusion, blow molding, thermoforming, fabrication, composite, and finishing processes. Includes part and mold/die design, material selection, process optimization, and manufacturing costs. Lab activities include mold building and testing and process optimization. 2 lec, 4 lab.

351 Production Tooling (4) Prereq: 208, 217, 218. Theory and practice of designing and constructing tooling to improve productivity and quality in various manufacturing applications. Includes an introduction to tool and die design. Lab activities include using computer-aided design (CAD) software to design work holding jigs and fixtures. Also includes construction and testing of jigs, fixtures, and gages. 2 lec, 4 lab.

354 Automatic Identification and Data Capture (4) Prereq: 332. Study of methods and systems

used to automatically identify objects including bar coding, optical character recognition, magnetic stripe, radio frequency identification and biometrics. Various industrial applications will be studied, such as inventory, production control, order picking, and shipping/receiving. Lab experiences emphasize application of automatic identification technologies. 3 lec, 2 lab.

361 Product Design (4)

Prereq: 102, 206, (208 or 216). Study of product design from concept to release for production, with emphasis on design for manufacturability. Lab activities include the design, development, and creation of a prototype product using various software systems. 3 lec, 2 lab.

362 Product Documentation (4)

Prereg: 206, 208, 216, 218. Theory and practice of documenting the objectives and outcomes of a manufacturing company using the international quality standard ISO 9000:2000. Also includes product configuration control and product data management (PDM). 4 lec.

363 Quality Assurance and Metrology (4) Prereq: 206, 208, 216, 218, ENG 305J, and MATH

251 or QBA 201. Theory and practice of quality assurance principles in manufacturing. Includes statistical process control, process capability, gage capability, and guality management. Lab activities include experiments in linear measurement using traditional tools and computerized coordinate measurement machines (CMM). 3 lec. 2 lab.

390 Industrial Materials (4)

Prereq: 208, (CHEM 122 or 152). Advanced theory and application of common industrial materials. Includes examination of the behavior of ceramics, polymers, metals, and composites. 4 lec.

Industrial Work Experience (1) 395

Prereq: perm. Credit for work experience related to B.S.I.T. degree. Minimum 10-week term of fulltime employment required. Written report required. May be repeated for maximum of 3 credits.

Senior Seminar (1) 400

Prereq: sr. Discussion of projected employment opportunities, career enhancement activities, and professional development options in industrial technology. 1 lec.

405 **Dimensional Analysis (4)**

Prereq: 205. Study effects of general and geometric dimensioning on the form, fit, and function of an assembly of parts. Emphasis on solving assembly stack-up problems by manual calculation and computer simulation programs to determine clearance or interference between assembled components. 4 lec.

435 Industrial Instrumentation and **Controls (4)** Prereg: 303, 332. Theory and application of

digital controls in manufacturing. Includes relay logic and closed loop control theory using negative feedback. Introduction to sensors, signal conditioning, circuits, D-A and A-D conversion, and Proportional-Integral-Derivative (PID) control. Lab experiments include programmable logic controllers and control of mechanical, hydraulic, pneumatic and electrical systems. 3 lec, 2 lab.

436 **Electronic Applications in** Manufacturing (4)

Prereq: 332. Study of practical applications of electronic control systems in manufacturing, including sensors, process control, packaging systems, assembly and material handling. Emphasis on analysis and improvement of existing applications. Lab activities focus on the integrated control of conveyors, robots, and machines. 3 lec, 2 lab.

452 **Contemporary Integrated**

Manufacturing (4) Prereq: (351 or 354), OPN 310. Capstone course. Theory and application of computer and information technology in manufacturing. Introduces integration strategies and product phases from conception to retirement. Lab activities include the implementation of the above plan including tool build, plant layout, and actual production of parts and product. IT 452 and 462 must be taken as a two quarter sequence. 3 lec, 2 lab.

462 Product Manufacturing (5)

Prereq: (351 or 354),363, OPN 310. Capstone course requiring student teams to use knowledge from previous technical and business courses to develop a manufacturing plan for a product. Development and implementation of a plan for manufacturing a product. Includes production planning and control, resource planning, product cost considerations, facilities planning, and tooling design and construction. Lab activities include the implementation of the above plan including tool build, plant layout, and actual

production of parts and product. IT 452 and 462 must be taken as a two quarter sequence. 2 lec, 6 lab.

464 **Robotic Applications (4)**

Prereq: 332. Theory and application of robots used in manufacturing. Includes classifications, sensors and feedback mechanisms. robot/ computer communications, and programming. Also includes selection of robots based on task and economic criteria. Lab activities include on- and off-line programming of robots and developing robotic work cells. 3 lec, 2 lab.

483 Industrial Safety (3)

Prereq: 217. Study of organized industrial safety programs, including historical and social perspectives. 3 lec.

Maintenance Systems (4) 484

Prereq: 320 or 332. Study of organized industrial maintenance systems. Includes environmental control, structural, mechanical, and electrical requirements. 4 lec.

Special Investigations (1-4) 490

Prereq: perm. Independent concentrated study in a specific area under the direction of a faculty member

491 **Special Topics in Industrial** Technology (1-5)

Prereq: perm. Selected topics that are current and relevant to industrial technology. May be repeated.

Interdisciplinary Arts (IART)

Offerings include courses in introduction to fine arts and history courses in individual content areas.

IART 117 and 118 are provided for majors in the College of Fine Arts who wish to study the relationship of all the arts, and for all students in the University who wish to select courses with the basic purpose of understanding their cultural heritage.

These courses fulfill:

- 1 Tier II requirements for majors in the College of Fine Arts.
- 2 Tier II requirements for students in other degree colleges and for transfer students from other universities; and
- State requirements for licensure in the 3 College of Education.

117 Introduction to Fine Arts (4) (2H)

Designed to develop and increase the perceptual skills of students in the arts through an examination of subject, matter, form, and content in each art by means of a critical method of analysis. Painting, sculpture, architecture, literature, and music are covered. Opportunities for participation with the arts through lectures, technical demonstrations, campus field trips, and small-group discussions.

Introduction to Fine Arts (4) (2H) 118

Designed to develop and increase the perceptual skills of students in the arts through an examination of subject, matter, form, and content in each art by means of a critical method of analysis. Photography, film, theater, dance, and opera are covered. Opportunities for participation with the arts through lectures, technical demonstrations, campus field trips, and small-group discussions.

150 Viewing Performance (2)

Integrates classroom and student life activities at the University by combining the productions of the Schools of Music, Dance, and Theater with a seminar course dealing with characteristics and artistic concerns of each medium. A twohour seminar precedes and follows each of the performances. No credit to those with credit for DANC 150, MUS 150, or THAR 150.

211 History of Art (4) (2H)

Survey of Western painting, sculpture, and architecture from prehistoric to early Christian. Students advised but not required to enroll in 211, 212, and 213 in sequence. No credit to those with credit for AH 211.

212 History of Art (4) (2H)

Continuation of 211 from early Christian period of Europe through Renaissance. Students advised but not required to enroll in 211, 212, and 213 in sequence. No credit to those with credit for AH 212.

History of Art (4) (2H) 213

Continuation of 212 from Barogue to present. Students advised but not required to enroll in 211, 212, and 213 in sequence. No credit to those with credit for AH 213.

270 Theater History I (4) (2H)

Development of theater and drama in prehistoric, Greek, and Roman periods. No credit to those with credit for THAR 270.

Theater History II (4) (2H) 271

Development of theater and drama in Medieval and Renaissance periods. No credit to those with credit for THAR 271.

272 Theater History III (4) (2H)

Development of theater and drama from Renaissance to modern. No credit to those with credit for THAR 272.

320X Fine Arts—Florence (1-6)

Prereq: enrollment in OU Italy Program. (spring) Study of fine arts as seen and performed in city of Florence. Churches, museums, and galleries, along with theatrical and musical events, provide examples for study.

321 History and Literature of Music (3)

Prereq: MUS 103. R. Wetzel. History of music with survey of musical literature to 1450. No credit to those with credit for MUS 321.

322 History and Literature of Music (3) Prereq: 321 or MUS 321. R. Wetzel. History of music with survey of musical literature, 1450-1720. No credit to those with credit for MUS 322.

323 History and Literature of Music (3) Prereg: 322 or MUS 322, R. Wetzel, History of music with survey of musical literature, 1720 to present. No credit to those with credit for MUS 323.

360J Writing in the Arts (4) (1J)

Prereq: 117, 118; major in fine arts; or perm. Critical analyses of form, media, and content in fine arts stressing instruction in critical writing

400 Senior Seminar: Comparative Arts (3)

Prereq: fine arts sr or perm. Designed to increase insight of art majors into all fine arts. Specifically, to understand similarities and differences which exist among several arts through consideration of basic aesthetic concerns.

Great Masterworks (4) 419

Life, times, and works of at least two major artists within specified cultural period.

470 Tragedy (4)

Study of tragic genre through study of plays and critical and theoretical documents. No credit to those with credit for THAR 470.

Comedy (4)

Study of comic genre through examination of plays and critical and theoretical documents. No credit to those with credit for THAR 471.

472 Forms of Drama (4)

Study of genres of melodrama, farce, and tragicomedies through examination of plays and critical and theoretical documents. No credit to those with credit for THAR 472.

481 Individual Problems (1-6) Prereq: perm.

International Studies (INST)

The following courses are available through the Center for International Studies. Four are interdisciplinary courses focusing on Africa (113), Asia (103), Europe (118), and Latin America (121). These courses, which provide an introduction to the regions, satisfy social science requirements, University General Education Tier II (Cross-Cultural Perspectives) requirements, as well as major and certificate requirements.* In addition, 80 faculty members in various departments on campus teach more than 150 courses each year that relate to Africa, Asia, Latin America, and Europe.

Modern Asia (5) (2C) 103

Introduction to history, cultures, and current problems of civilizations of Asia. Interdisciplinary survey dealing with China, Japan, India, and Southeast Asia (Burma, Thailand, Vietnam, Cambodia, Laos, Malaysia, Singapore, Indonesia, and the Philippines).

Modern Africa (4) (2C) 113

Interdisciplinary introductory survey of Africa, its culture, history, and modern development. Disciplines include: anthropology, art, dance, economics, education, geography, history, linguistics, literature, and political science.

118 European Studies (4) (2S)

An interdisciplinary introduction to Europe and European Studies through discussion of selected topics from perspectives of geography, history, politics, sociology, economics, literature, and the arts. Special emphasis is given to post-Cold War issues, problems, and developments

Interdisciplinary Survey of Latin 121 America (4) (2C)

Introduction to Latin America through geography, politics, sociology, economics, literature, and art. Special emphasis given to 20th Century issues, problems, and developments

350 Focus on Malaysia (5)

Introduction to geographical, historical, demographic, cultural, and political settings of Malaysia within the wider context of Southeast Asia. A survey of the historical development of Malaysia with emphasis on the period from the Second World War.

490 Tun Razak Seminar: Southeast Asia Studies (5)

The Tun Razak Seminar is designed to enable the holder of the Tun Abdul Razak Chair to present his or her particular specialization. This means the content of the course could be different from year to year, depending on the discipline of the holder. The focus of the course will be on Malaysia as well as other parts of Southeast Asia.

495 Internship (1–15)

This course is designed to allow for a practical experience in an international organization or corporation in the U.S. or abroad to complement the theoretical base supplied in area studies and comparative cultures courses. The applied experience will allow you to see the practical way in which cross cultural issues and second language usage are manifested in a work environment. The internship experience will also allow you to identify personal learning goals that will enhance your career prospects.

*For degree requirements, see "International Studies" in the College of Arts and Sciences section.

Italian

See Foreign Languages and Literatures.

Japanese

See Foreign Languages and Literatures.

Journalism (JOUR)

Journalism and Society (4) 101

An overview of the nature, purposes, and influence of journalistic work within its social, political, economic, historical, and international contexts. No credit if JOUR 105 or TCOM 105 taken.

Introduction to Mass Communication 105 (4) (2S)

All forms of mass communication, including newspapers, magazines, radio-television, book publishing, public relations, advertising, and photoiournalism. Begins with analysis of communication process and ends with media career opportunities. No credit if JOUR 101 or TCOM 105 taken.

Precision Language for Journalists (4) 133

Intensive drill in grammar, punctuation, syntax, and usage in contexts designed especially for future journalists. Extensive attention to media examples. Diagnostic tests during first week place each student to work at own level, whether basic to prepare for beginning courses or more advanced for those who already show considerable ability but would like to sharpen language skills for advanced courses. No credit if 133A. Either 133 or 133A satisfies journalism core requirement.

133A Precision Language for Journalists (4)

Same as 133 except reserved for majors. No credit if taking 133. Either 133 or 133A satisfies journalism core requirement.

189 Journalism Workshop (1-4)

Workshop on selected topics of journalism and mass communication. May be repeated to total 6 hrs of credit.

Graphics of Communication (5) 221

Creative and practical aspects of typography, layout, and design of printed communication.

News Writing (4)

Prereq: typing proficiency and C or better in 133 or 133A. Methods of gathering and evaluating news and writing typical news stories. Practice work covering assignments and preparing copy. No credit if 231A. Either 231 or 231A satisfies journalism core requirement.

231A News Writing (4)

Same as 231, including same prereqs, except reserved for majors. No credit if 231. Either 231 or 231A satisfies journalism core requirement.

Information Gathering (3) 233

Prereq: C or better in 133 or 133A. Gathering of information by journalists and other mass communicators from various sources, such as interviewing, use of libraries, government documents, computerized data bases, syndicated research, and business documents. Prepares communicators to conduct research and to assess and use material in media-related decision making

235 Picture Editing (3) Prereq: 221, 231. Same as VICO 335. Principles and practices of picture editing. Includes consideration of picture sources, assignment, and handling; photographic technique and aesthetics; legal and ethical factors; visual idiosyncrasies of various media.

Advertising Principles (4) 250

Major factors in development of advertising programs

270 Introduction to Public Relations (3)

Prereq: soph. Provides an overview of public relations, its history, development, practice, and application. Looks at the process of public relations, including the planning, implementation, and evaluation of public relations campaigns. Surveys techniques, strategies, and tactics used by public relations practitioners. Analysis of case studies.

History of American Journalism (4) 311 Prereq: 233. Development of newspaper,

magazine, and broadcast journalism from colonial period to present. Social, political, economic, and mechanical aspects

Fundamentals of Online Journalism 314 (4)

Prereq: 221, 231, 233, or perm. Selecting, editing, writing, and formatting content for Web based media. Evaluating and criticizing online iournalistic practices.

321 Print Advertising and Layout (4) Prereq: 221, 231 or 231A, 250. See title.

331 Reporting Contemporary Issues (3) Prereq: 231 or 231A. Research, reading, and speech reporting on current social problems. Emphasis on analytical skills and ability to report in depth for mass audience.

233 Information Gathering (3) Prereq: C or better in 133 or 133A. Gathering

of information by journalists and other mass communicators from various sources, such as interviewing, use of libraries, government documents, computerized data bases. syndicated research, and business documents. Prepares communicators to conduct research and to assess and use material in media-related decision making.

Picture Editing (3) 235

Prereq: 221, 231. Same as VICO 335. Principles and practices of picture editing. Includes consideration of picture sources, assignment, and handling; photographic technique and aesthetics; legal and ethical factors; visual idiosyncrasies of various media.

250 **Advertising Principles (4)**

Major factors in development of advertising programs.

270 Introduction to Public Relations (3) Prereq: soph. Provides an overview of public

relations, its history, development, practice, and application. Looks at the process of public relations, including the planning, implementation, and evaluation of public relations campaigns. Surveys techniques, strategies, and tactics used by public relations practitioners. Analysis of case studies.

History of American Journalism (4) 311 Prereq: 233. Development of newspaper, magazine, and broadcast journalism from colonial period to present. Social, political, economic, and mechanical aspects.

314 **Fundamentals of Online Journalism** (4)

Prereq: 221, 231, 233, or perm. Selecting, editing, writing, and formatting content for Web based media. Evaluating and criticizing online journalistic practices

321 Print Advertising and Layout (4) Prereq: 221, 231 or 231A, 250. See title.

331 **Reporting Contemporary Issues (3)** Prereg: 231 or 231A. Research, reading, and speech reporting on current social problems. Emphasis on analytical skills and ability to report in depth for mass audience.

332 **Reporting Practice (2)**

Prereq: 231 or 231A, perm. Students develop news stories in city and sports reporting, along with features.

News Editing (4) 333

Prereq: 221, C or better in 231 or 231A Copyreading, headline writing, news selection, and layout of news pages.

334 **Editing Practice (2)**

Prereq: 333, perm. Copyreading, handling of local correspondence, wire copy, and working out make-up problems.

Advanced Picture Editing (3) 336

Prereq: 325, 335, and perm. Advanced course in picture editing designed to equip students with basic knowledge and working skills necessary for employment on newspaper or magazine picture desk.