- **4010.** Normal Speech and Language Development. 3 hours. Normal language development from birth through adolescence, with consideration of current theories of acquisition, pertinent research and issues related to cultural diversity.
- 4060. Clinical Practicum in Speech-Language Pathology and Audiology. 1–3 hours. Experience in Speech and Hearing Center. Requirements: All undergraduate majors must enroll for no fewer than two separate terms/semesters for a total minimum of 6 credit hours. Prerequisite(s): 9 hours of major courses to include SPHS 3020. Students must have and maintain a GPA of no less than 3.0 for all departmental courses 3000-level and above, a degree audit on file in SPHS and/or departmental approval. Pass/no pass only.
- **4090. Basic Rehabilitative Audiology.** 3 hours. Methods of improving communication skills of the hearing impaired through speech and language training, amplification, speech reading, auditory training and counseling. Prerequisite(s): SPHS 3070 or equivalent.
- **4120. Neurological Bases of Speech and Hearing.** 3 hours. Structure and function of the human nervous system as related to speech and language learning and usage. Emphasis on the reception and integration of sensation and the production of verbal and non-verbal responses. Prerequisite(s): SPHS 4130 or consent of instructor.
- **4130. Anatomical Bases of Speech and Hearing.** 3 hours. Anatomy and physiology of the articulatory, phonatory, respiratory and auditory systems involved in speech production and perception.
- **4140. Introduction to Language Disorders.** 3 hours. Nature, causes and characteristics of language disorders in children and adults. Principles of evaluation and remediation of language problems. Prerequisite(s): SPHS 4010 or equivalent.
- **4150. Speech and Hearing Sciences.** 3 hours. Fundamental processes underlying the production and perception of speech, and the physical and psychological aspects of sound and their measurement. Prerequisite(s): SPHS 3020 or consent of instructor.
- **4210.** Clinical Methods in Speech-Language Pathology and Audiology. 3 hours. Introduction to the processes involved in the assessment, diagnosis, and remediation of speech, language, and hearing disorders. Factors affecting these processes, such as service delivery, work settings, cultural and linguistic diversity, and public policy are addressed.
- **4900. Special Problems.** 1–3 hours. Problem must be approved by department director.
- 4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.

Studio Art

Studio, ASTU

- **1417. Beginning Watercolor Painting for Non–Art Majors.** 3 hours. (0;6) Experimentation with watercolor painting principles, techniques, brush work and materials. Emphasis on problem solving, basic skills, composition and color.
- **2050** (ARTS 2346). Beginning Ceramics. 3 hours. (2;4) Introduction to hand-building and wheel-throwing techniques; decorating and glazing wares. Prerequisite(s): ART 1440 and 1450.
- **2120. Introduction to Fibers.** 3 hours. (2;4) Introduction to 2-dimensional and 3-dimensional techniques in fibers using mixed media, pigments and dye. Prerequisite(s): ART 1440 and 1450.
- **2130. Fibers: Weaving I.** 3 hours. (2;4) Making warps and threading looms; weaving on simple hand looms, analyzing patterns and design in color and texture. Prerequisite(s): ART 1440 and 1450.
- **2150** (ARTS **2341). Metalsmithing and Jewelry I.** 3 hours. (2;4) Design, construction and forming using basic techniques. Prerequisite(s): ART 1440 and 1450.
- **2200** (ARTS 2323). Beginning Figure Drawing. 3 hours. (2;4) Visual observation of the figure and interpretation through various graphic techniques. Prerequisite(s): ART 1500 and 1510.
- **2210.** Painting I. 3 hours. (2;4) Introduction to canvas painting methods, techniques and concepts. Prerequisite(s): ART 1440, 1450, 1500 and 1510.
- **2215. Painting II.** 3 hours. (2;4) Further development of painting methods, techniques and concepts on canvas and other surfaces. Prerequisite(s): ASTU 2210.
- **2250. Black and White Photography I.** 3 hours. (2;4) A beginning course providing a combination of lecture and studio in a structured approach to the study of cameras, materials, techniques and darkroom procedures. Prerequisite(s): ART 1440 and 1450; or consent of instructor. Concurrent enrollment in lecture and laboratory required.
- **2255. Black and White Photography II.** 3 hours. (2;4) Emphasis on advanced exposure and development controls of the negative and print, photographic chemistry and large-format camera techniques. Prerequisite(s): ASTU 2250.
- 2300. Introduction to Printmaking Techniques. 3 hours. (0;6) Survey of traditional and non-traditional printmaking techniques, introducing students to a variety of basic printmaking processes including the fundamentals of paper, inks, presses, printing and editioning. Prerequisite(s): ART 1440, 1450, 1500 and 1510. For visual arts studies majors only.
- 2350. Sculpture I. 3 hours. (2;4) Creation of original forms in clay, wood or metal; mold making, casting, construction and direct carving. Prerequisite(s): ART 1450 and ASTU 2200.
- **2417** (ARTS 2366). Beginning Watercolor Painting. Watercolor painting on wet and dry papers. Prerequisite(s): ART 1440, 1450, 1500 and 1510.
- 2450. Introduction to New Media Studio. 3 hours. (2;4) This skills-based course prepares students for image-making within the studio-based practice of creating artworks that integrate static digital imaging techniques with film, web, screen and works on paper, as well as other traditional studio practices. Studio research and iterative techniques for the purpose of concept development are introduced. Prerequisite(s): ART 1200, 1440, 1450, 1500 and 1510.

- **2460. New Media Studio I.** 3 hours. (2;4) This studio-based course introduces students to a number of perspectives available to them as artists through the use of 2D time-based media processes with video effects, frame-based animation, and sound output to film, computer applications and the Internet. Prerequisite(s): ART 1200, 1440, 1450, 1500, 1510, and ASTU 2450; or consent of instructor.
- **3050. Intermediate Ceramics.** 3 hours. (2;4) Development of wheel-throwing and hand-building techniques. Clay body formulation, glaze mixing, firing theory and practice. Prerequisite(s): ASTU 2050.
- **3120. Fibers: Screen Printing.** 3 hours. (2;4) Introduction to a wide range of screen printing processes and techniques. Prerequisite(s): ART 1440 and 1450.
- **3130. Fibers: Weaving II.** 3 hours. (2;4) Introduction to special weaving applications, such as two harness tapestry and rug weaving techniques, ikat dye techniques, as well as a variety of off-loom techniques. Prerequisite(s): ASTU 2130.
- **3135. Fibers: Alternative Processes.** 3 hours. (2;4) An introduction to the study of art processes that create both 2-dimensional and 3-dimensional "off-loom" structures. Prerequisite(s): ART 1200, 1440, 1450, 1500, 1510.
- **3150. Metalsmithing and Jewelry II.** 3 hours. (2;4) Design in metal using intermediate processes. Prerequisite(s): ASTU 2150.
- **3160. Metalsmithing and Jewelry III.** 3 hours. (2;4) Design in metal using advanced processes. Prerequisite(s): ASTU 2150, 3150. Mid-point review administered during the term/semester.
- **3200. Intermediate Figure Drawing.** 3 hours. (2;4) Human figure in compositions using drawing and painting media. Prerequisite(s): ASTU 2200.
- **3210. Intermediate Painting.** 3 hours. (2;4) Studio work in various media combined with a general review of contemporary painting theories. Prerequisite(s): ART 2350 and 2360; ASTU 2200, 2215 and 2417. May be repeated for credit. For drawing and painting majors, 3 hours required from ASTU 3210, 3220, 3230 or 3417, with mid-point portfolio review administered at the end of second course.
- **3215. Intermediate Drawing Studio.** 3 hours. (0;6) Explores themes and issues of drawing using a variety of approaches and media. Classroom assignments and self-directed projects may deal with observation, invention, narrative, and/or conceptual approaches. This class will not replace ASTU 3200 but can be used as an elective. Prerequisite(s): ASTU 2200.
- **3220.** Figure Painting I. 3 hours. (0;6) Painting the human figure from life. Topics to be explored include the craft of painting, strategies of representation, color and light, psychological factors, and narrative. Prerequisite(s): ASTU 2200, 2215, 2417 and 3200.
- **3230. Hybrid Forms.** 3 hours. (2;4) Introduction to the theory and practice of non-traditional art media. Lecture and studio with emphasis in studio. Prerequisite(s): junior standing in drawing and painting, sculpture, photography or printmaking.
- **3250.** Color Photography. 3 hours. (2;4) Fundamentals of exposure and development of color transparencies and color negative materials with an introduction to printing both. Prerequisite(s): ASTU 2250, 2255; selection via the entry review process.

- **3260.** Photography: Digital Photoimaging. 3 hours. (2;4) Introduction to the use of computer technology for use in commercial and fine art photography. Introduction to methods of digital capture as well as examination of the influence of technology on the aesthetic philosophies and working methods of photographers. Prerequisite(s): ART 3170, ASTU 3250; selection via entry review.
- **3310. Printmaking: Etching.** 3 hours. (2;4) Introduction to concepts and techniques of intaglio printmaking, including various grounds, aquatint, line etching and stage biting. Black and white and color. Prerequisite(s): ART 1440, 1450, 1500 and 1510.
- **3320. Printmaking: Screen Printing.** 3 hours. (2;4) Introduction to concepts and techniques of water-based screen printing, including hand-drawn stencils and photographic processes. Prerequisite(s): ART 1440, 1450, 1500 and 1510.
- **3330.** Printmaking: Lithography. 3 hours. (2;4) Introduction to concepts and techniques of lithography, including crayon, washes and photo techniques. Black and white and color. Prerequisite(s): ART 1440, 1450, 1500 and 1510.
- **3340.** Printmaking: Relief Print and Monotype. 3 hours. (2;4) Introduction to concepts and techniques of relief printmaking and monotype. Carving and printing wood and linoleum relief blocks and various monotype techniques. Black and white and color. Prerequisite(s): ART 1440, 1450, 1500 and 1510.
- **3350. Sculpture II.** 3 hours. (2;4) All aspects of 3-dimensional form. Prerequisite(s): ART 1450; ASTU 2200 and 2350.
- **3417. Intermediate Watercolor.** 3 hours. (2;4) Conceptual development through transparent paint; work in non-transparent aqua-based media on paper surfaces; historical survey of watercolor. Prerequisite(s): ASTU 2417. May be repeated for credit.
- **3427.** Experimental Topics in Watercolor: Studio I. 3 hours. (2;4) Investigation of alternative formats, subject matter and materials on 2D surfaces using transparent and opaque watercolor. Prerequisite(s): ASTU 2417.
- **3437.** Experimental Topics in Watercolor: Studio II. 3 hours. (2;4) Investigation of alternative formats, subject matter and materials on 2D surfaces and 3D forms, using transparent and opaque watercolor. Prerequisite(s): ASTU 3427.
- 3450. New Media Studio II. 3 hours. (2;4) Intermediate course. Works in tandem with New Media Studio I (ASTU 2460) by introducing new ways for students to generate interactive art experiences through a variety of time-based and interactive digital media processes. Introduces techniques for interactive animation, interactive film, software art and NetArt (art that incorporates the Internet), with a focus on 2D or 3D presentation space. Prerequisite(s): ART 1200, 1440, 1450, 1500, 1510, and ASTU 2450; or consent of instructor.
- 3460. New Media Studio III. 3 hours. (2;4) Studio-based course. Introduces 3D modeling, texturing, key-frame animation, physics, collision detection, and sound for the purpose of creating time-based site-specific experiences. Students explore the relationship of time to space when generating content for their artworks. Techniques for exporting models and animations for 2D and 3D time-based and interactive software environments are also discussed. Prerequisite(s): ART 1200, 1440, 1450, 1500, 1510; ASTU 2450, 2460, 3450; or consent of instructor.

- **4000. Topics in Studio Practice.** 3 hours. (0;6) Variable topics course designed to explore concepts and processes in art making that go beyond the curricular parameters of traditional studio disciplines. Prerequisite(s): junior standing or consent of instructor. May be repeated for credit as topics vary.
- **4010. Professional Practices for the Studio Artist.** 3 hours. Study of theoretical and practical aspects of succeeding as a practicing artist outside the academy. Survey of the protocols and common practices expected of the artist as a productive member of the business community wherein fine art is the commodity.
- **4050. Ceramics Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ATSU 4050, advanced standing and consent of instructor. May be repeated for credit.
- **4120. Fibers: Fabric Design Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ADES 2550, advanced standing and consent of instructor. May be repeated for credit.
- **4130. Fibers: Weaving Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ADES 3555, advanced standing and consent of instructor. May be repeated for credit.
- **4150. Metalsmithing and Jewelry Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ASTU 3160, advanced standing and consent of instructor. May be repeated for credit.
- **4210. Advanced Painting Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): advanced standing and consent of instructor; ASTU 3200; AEAH 4812 or 4813; 3 hours from ASTU 3210; and 3 hours from ART 3210, 3220, 3230 or 3417. Students must have passed mid-point review in painting. May be repeated for credit.
- **4215. Drawing Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): advanced standing and consent of instructor; ASTU 3200, AEAH 4812 or 4813; 3 hours from ASTU 3210; and 3 hours from ASTU 3210, 3220, 3230 or 3417. Students must have passed mid-point review in painting. May be repeated for credit.
- **4220. Figure Painting Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ASTU 3200; AEAH 4372 or 4374; 3 hours from ASTU 3210; and 3 hours from ASTU 3210, 3220, 3230 or 3417. Students must have passed mid-point review in painting. May be repeated for credit.
- **4230. Advanced Hybrid Forms.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): advanced standing in sculpture, photography, painting or printmaking; must have passed mid-point review. May be repeated for credit.
- **4250. Photography Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ASTU 3250, advanced standing and consent of instructor. Must have passed the mid-point review. May be repeated for credit.
- **4260.** Photography: Advanced Digital Photoimaging. 3 hours. (2;4) Comprehensive exploration of computer technology for use in commercial and fine art studio photography; influence of technology on the aesthetic philosophies and working methods of photographers. Prerequisite(s): ART 3170; ASTU 3250, 3260; selection into the photography program via the mid-point review process.

- **4270. Alternate Photographic Processes.** 3 hours. (2;4) Alternate processes in photography with emphasis on hand applied, non-silver photographic emulsions. Prerequisite(s): ASTU 2250, 2255 and 3250; selection into the photography program via the mid-point review. Not offered every term/semester.
- **4280.** Photography: Advanced Lighting Techniques. 3 hours. (2;4) Photographic lighting procedures and studio techniques. Completion of a portfolio of images is required. Prerequisite(s): ASTU 2250, 2255 and passing mid-point portfolio review.
- **4300. Printmaking Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): advanced standing and consent of instructor; specific studio courses may require additional prerequisites. May be repeated for credit.
- **4305. Artist's Bookmaking.** 3 hours. (2;4) Application of the concepts and techniques of bookmaking to create sequential works of art. Emphasis on developing ideas, materials, presentation and basic bookbinding techniques in one-of-a-kind and multiple books. Prerequisite(s): one 3000-level printmaking or photography course, or consent of instructor.
- **4310. Printmaking: Advanced Etching.** 3 hours. (2;4) Exploration of concepts and techniques of intaglio printmaking, including classic and experimental techniques. Prerequisite(s): ASTU 3310; selection into the printmaking program through the mid-point review process. May be repeated for credit.
- **4320. Printmaking: Advanced Screen Printing.** 3 hours. (2;4) Exploration of concepts and techniques of waterbased screen printing, including hand-drawn, photographic and experimental techniques. Prerequisite(s): ASTU 3320; selection into the printmaking program through the midpoint review process.
- **4330. Printmaking: Advanced Lithography.** 3 hours. (2;4) Exploration of concepts and techniques of lithography, including classical and experimental techniques. Prerequisite(s): ASTU 3330; selection into the printmaking program through the mid-point review process.
- 4340. Printmaking: Advanced Relief Print and Monotype. 3 hours (2;4) Exploration of concepts and techniques of relief printmaking and monotype. Classical and experimental techniques are used with special emphasis of seriality and the multiple. Prerequisite(s): ASTU 3340; selection into the printmaking program through the midpoint review process.
- **4350. Sculpture Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ASTU 3350, advanced standing and consent of instructor. May be repeated for credit.
- **4417. Watercolor Studio.** 3 hours. (2;4) Developing additional competence in special areas. Prerequisite(s): ASTU 3200; AEAH 4812 or 4813; 3 hours from ASTU 3210 and 3 hours from ASTU 3210, 3220, 3230 or 3417. Students must have passed mid-point review in painting.
- **4450.** New Media Studio IV. 3 hours. (2;4) Students in this repeatable advanced-level class are expected to create a body of work consistent with a senior-level studio practice. Covers advanced time-based and interactive media processes for interactive 2D and 3D experiences, film, software art, and NetArt, with a focus on the creation of intelligent physical interfaces, controls and kinetics. Prerequisite(s): ART 1200, 1440, 1450, 1500, 1510; ASTU 2450, 2460, 3450; or consent of instructor. May be repeated for credit.

4460. Advanced New Media Studio. 3 hours. (0;6) Students in this repeatable advanced-level course are expected to create a body of work consistent with a senior-level studio practice. Students have more autonomy in the development of their projects in the path of their selected genre or interest. Project-specific techniques continue to be offered in the areas of 2D/3D animation, film, interactive art, NetArt and kinetic installation. Prerequisite(s): ART 1200, 1440, 1450, 1500, 1510; ASTU 2450, 2460, 3450, 3460, 4450. May be repeated for credit.

Teacher Education and Administration

Bilingual and English as a Second Language Education, EDBE

3470. Foundations of Bilingual and English as a Second Language Education. 3 hours. Examination of philosophies and theoretical underpinnings of bilingual and ESL education, including a review of historical antecedents of bilingual education and evolution of federal and state language policies governing the education of language-minority children. Required for students seeking EC–4 or 4–8 generalist certification with specialization in bilingual or ESL education. Prerequisite(s): admission to Teacher Education or consent of department. May be taken concurrently with EDBE 3480.

3480. Bilingualism/Multiculturalism for English Language Learning: Issues and Perspectives. 3 hours. Study of the bilingual/ESL learner; perspectives on multiculturalism; discussions of cognitive, social and affective factors impacting second language development; insights into education in a pluralistic society. Three lecture hours a week. Fifteen (15) hours of field experiences are required. Required for students seeking EC–6 or 4–8 generalist certification with specialization in bilingual or ESL education or 4–8 certification with mathematics/ESL, science/ESL, social studies/ESL or reading/LA/ESL. Prerequisite(s): admission to Teacher Education or consent of department. May be taken concurrently with EDBE 3470.

4470. Curriculum and Assessment for Bilingual/ESL Education. 3 hours. Examination of the organization of curriculum for second language learners with special focus on testing and evaluation procedures appropriate for bilingual and ESL classrooms; study of formal and informal assessment of language proficiency for instructional purposes and use of standardized achievement tests. Required for students seeking EC–4 or 4–8 generalist certification with specialization in bilingual or ESL education. Prerequisite(s): EDBE 3470, 3480 and admission to Teacher Education or consent of department. May be taken concurrently with EDBE 4490.

4480. Bilingual Approaches to Content-Based Learning. 3 hours. (3;0;1.5) Study of appropriate first language usage in bilingual classrooms, focusing on different core curriculum areas, methods and materials and review of language distribution strategies. Focus on responsive instruction that makes use of effective communication techniques and instructional strategies that actively involve students in the learning process. Required for students seeking EC–6 or 4–8 generalist certification with specialization in bilingual or ESL education. Requires 1.5 hours per week field experience in a bilingual education classroom. Language of instruction is Spanish. Prerequisite(s): EDBE 3470 and 3480, admission to Teacher Education or consent of department and successful completion of departmental proficiency examination in Spanish.

4490. Teaching ESL EC-12: Instructional Strategies and Resources. 3 hours. (3;0;1.5) Study of methods and techniques of teaching English as a second language in elementary and secondary schools. Language development techniques and materials for students at different levels of English proficiency. Focus on helping students to develop strategies (consistent with state standards for language and content learning) that can improve the English language proficiency and grade level subject matter knowledge of English language learners. Required for students seeking EC-4 or 4–8 generalist certification with specialization in bilingual or ESL education. Requires 1.5 hours per week field experience. Prerequisite(s): EDBE 3470, LING 4030 and admission to Teacher Education or consent of department. May be taken concurrently with EDBE 4470.

4951. Honors College Capstone Thesis. 3 hours. Major research project prepared by the student under the supervision of a faculty member and presented in standard thesis format. An oral defense is required of each student for successful completion of the thesis. Prerequisite(s): completion of at least 6 hours in honors courses; completion of at least 12 hours in the major department in which the thesis is prepared; approval of the department chair and the dean of the school or college in which the thesis is prepared; approval of the dean of the Honors College. May be substituted for HNRS 4000.

Early Childhood Education, EDEC

2900. Special Problems. 1–3 hours. Open to lower-level students capable of developing a problem independently. Problems are chosen by the student and developed through conferences with the instructor.

3613. Introduction to Early Childhood Education. 3 hours. Historical foundations of early childhood education, current programs, best practices and legal and ethical issues. Introduction of how understanding development of typical and atypical young children influences objectives, activities, materials, and teaching strategies and techniques in an early childhood classroom. Prerequisite(s): DFST 3123 (may be taken concurrently).

4243. Environmental Processes and Assessment. 3 hours. (3;3;0) Considers early childhood learning processes as well as implications for individual, group, and program assessment. Areas of emphasis include development of skills in selection, use and interpretation of developmentally appropriate practices. Focus areas include formal, informal and holistic assessment instruments as well as learning environment materials and resources. Implications for technology in assessment and management are discussed. Laboratory experiences required. Prerequisite(s): DFST 4233. EC-6 students must also complete EDEC 3613 as a prerequisite.

4633. Nurturing Children's Social Competence. 3 hours. Facilitating the social and emotional skills of young children. Incorporates an ecological approach to significant influences on self-esteem and self-concept including diversity, family, creativity and individual differences. Includes analysis of play theory and research. Field experience required. Prerequisite(s): EDEC 3613.

4800-4810. Studies in Development, Family Studies and Early Childhood Education. 1–3 hours. Organized classes for specific program needs and student interests. Prerequisite(s): consent of department. Limited-offering basis. May be repeated for credit.