## **BALL STATE UNIVERSITY**

## ACADEMIC POSTING 2018-2019

VOLUME XLVIII – 4

March 12, 2019

This posting may contain all or part of the following: new, revised, and dropped programs, courses and prefixes. The posting period begins March 12, 2019. If no demurrer is received within ten school days, the changes will be certified for implementation. *The effective date for implementing the undergraduate and graduate materials posted after April 15, 2019 is Fall Semester 2020.* 

# COLLEGE OF ARCHITECTURE AND PLANNING

## **Department of Architecture**

## **ARCHITECTURE (ARCH)**

## **Revised:**

## 320 (410) Introduction to Professional Practice (3)

Exposure to diverse practice models in architecture and related fields (professional mentorship, case study research, analysis of diverse roles and relationships of key stakeholders in the architectural profession and allied disciplines) and application of these experiences to practice scenarios (role playing, collaborative teamwork and practice plan development/marketing proposals). Provides experience with the diverse breadth of architectural practices to inform students' professional path.

*Open only to* B.ARCH; BA/BS architecture; environmental design.

## **Dropped:**

410 Clinical Practice (3)

# **Department of Construction Management and Interior Design**

## **INTERIOR DESIGN (IDES)**

## New:

**100 Introduction to Interior Design (2)** Introduces the interior design profession to students. Discusses the curriculum, career options, licensing, accreditation, design

process, associations and knowledge and skills required from an entry level interior designer. Designed for students already in the program and students who may want to explore this field and is presented as a comprehensive overview that may be helpful in future interior design studies or in the selection of a major.

## 310 Construction Management for Interior Design (1)

Provides a necessary baseline knowledge vocabulary and understanding of the role and activities of the interior designers as it relates to architects, material suppliers, inspectors and constructors in the commercial building process. Discusses the skills generally required for sound project management typically associated with the interior design profession. The elements of a project and the role and responsibilities of the Project Manager are studied. Students are also acquainted with site supervision, financial, labor, safety, equipment, contracting issues, typical construction delivery systems, the planning and contracting, estimating methodology, contract forms and provisions related to liability for interior design and construction companies. International Building Code and the importance of contract language negotiations are discussed.

Prerequisite: IDES 324.

Open only to Interior Design majors and minors.

## 330 Construction Documents for Interior Designers (2)

Designed to practice the fundamentals of construction documentation for interior designers. Students use a previously designed space to develop a comprehensive set of construction drawings and schedules which would enable an Owner or Contractor to provide a Rough Order of Magnitude cost for the project.

Prerequisite: IDES 324 and 362.

Open only to Interior Design majors and minors.

## Revised:

111 Graphic Communication 1 (3) Various graphic communication techniques used as tools of interior design. Emphasis will be on sketching, perspective drawing, paraline drafting, color rendering, and 3-D model making.

Prerequisite: IDES 100 and 101.

115 Interior Materials and Applications (3) Study of interior materials, finishes, furniture, and architectural components. Covers floor, wall, and ceiling finishes, furniture, cabinetry, and case goods. Selection criteria, green design, cost, quality, application, sources, and specifications will be discussed and analyzed.

Open only to interior design majors and minors.

**369** Internship in Interior Design (3) Provides the opportunity for the student to work in an established internship setting in interior design, architecture, or related design firms to gain professional experience in the field of environmental design.

*Prerequisite*: IDES 324 and permission of the internship coordinator.

A total of 6 credits may be earned. *Open only to* Interior Design majors.

## **COLLEGE OF FINE ARTS**

## School of Art

**ART: CRAFTS (ACR)** 

## **Revised:**

211 Ceramics: Introduction (3) Basic hand-building techniques: pinch, slab, and coiling methods. Decorating, glazing, and firing will be part of the studio experience.

\*Prerequisite: ADS 101 or 102 or CAP 102.

\*Open only to School of Art majors and minors.

**221 Metals: Introduction (3)** Introduction to jewelry and object making using metal. Emphasis on design and the introductory techniques of sawing, soldering, forming, and setting.

*Prerequisite*: ADS 101 or 102 or CAP 102. *Open only to* School of Art majors and minors.

**224** (**324**) **Metals: Introduction to Enameling** (**3**) Introduces the process of fusing glass to metal. Students will be exposed to the medium as an alternative mark-making/painting process as well as a vehicle for object making and jewelry fabrication. Historical as well as contemporary examples will be studied in order to create a contextual basis for the work explored in the course. The discussion of such works will help to develop skills in critical thinking.

*Prerequisite*: ADS 101 and 102 and 103 and AFA 101. *Open only to* School of Art majors and minors.

**231 Glass: Introduction (3)** Introduction to studio glass, history and practice. Emphasis on beginning techniques of blown glass, fused glass, and cold working processes.

*Prerequisite*: ADS 101 or 102 or CAP 102. *Open only to* School of Art majors and minors.

**233 Glass: Introduction to Kiln Sculpting (3)** Introduction to glass work constructed and manipulated in the kiln. Studio practices will include fusing and slumping, sand casting, relief, and lost wax.

Prerequisite: ADS 101 or 102 or CAP 102.

Open only to School of Art majors and minors.

## 322 Metals: Metalsmithing and Die Forming (3)

Introduction to metalsmithing techniques, including raising for vessels and chasing and repousse. Basic hammering and forming techniques will be covered.

Prerequisite: ACR 221.

Open only to School of Art majors and minors.

**426 Metals: New Technologies (3)** New technologies in metalsmithing, which can include electroforming, laser cutting, and 3D printing.

Prerequisite: ACR 221.

Open only to School of Art majors and minors.

**427 Metals: Advance Studio Problems (3)** Advanced investigation of metal with an emphasis on research and defining a personal studio practice.

*Prerequisite*: ACR 322 and 323 and 324. *Open only to* School of Art majors and minors.

**437 Professional Practices for the 3D Artist (3)** Focuses on portfolio preparation, job opportunities, residencies, galleries, contracts, and commissions.

Prerequisite: ACR 211 or 221 or 231 or 233 or AFA 221. Open only to School of Art majors and minors.

## **Dropped:**

**324 Metals: Color (3)** 

**ART: DESIGN (ADS)** 

## New:

103 4D Foundations Studio (3) Introduction to technical, formal and conceptual use of four-dimensional art practices including time and space, sound, moving images, performance and interactive projects. Emphasis placed on development of ideas by exploring strategies for artistic thinking, creative process and problem solving, and interdisciplinary collaboration.

Open only to School of Art majors and minors.

200 Design: Computer for Visual Communication/Graphic Design (3) Introduction to software programs and workflow to complete design work. A technical foundation course to prepare incoming Visual Communications/Graphic Design students for producing design work. This course is for students intending to be Visual Communications/Graphic Design students. Completion of this course is a requirement of the Visual Communications/Graphic Design portfolio review.

*Open only to* intended Visual Communications/Graphic Design majors.

## **Revised:**

**101 2D Foundations Studio (3)** Exploration of basic art principles, elements, and concepts emphasizing spatial organization of the two-dimensional plane. Also employs basic media, techniques, and tools emphasizing craftsmanship. *Open only to* School of Art majors and minors.

**102 3D Foundations Studio (3)** Introduction to the fundamental concepts of organizing form in three-dimensional space. Emphasis on the concepts of material manipulation and process as a form of thinking. Utilizes a variety of common 3D media and basic processes aimed at developing creativity in 3D problem solving. Serves as an introduction to the wood shop.

Open only to School of Art majors and minors.

## **ART: FINE ARTS (AFA)**

**101 Drawing Studio (3)** Introduction to drawing and the application of basic principles and elements of art as they relate to drawing concepts. Emphasizes development of perceptual awareness and familiarity with a broad range of media and techniques.

Open only to School of Art majors and minors.

**202 Drawing: The Figure (3)** Life drawing and intensive study of the human figure. Descriptive, expressive, and interpretive methods of imagining the figure are explored, and a variety of materials and techniques are introduced.

Prerequisite: AFA 101.

*Open only to* School of Art majors and minors or by instructor permission.

**211 Painting: Introduction (3)** Introduction to painting. Study of basic considerations of image making with oil paint. Focuses on media, techniques, design elements, and concepts.

Prerequisite: ADS 101 or 102 or CAP 102; AFA 202. Open only to School of Art majors and minors or by instructor permission.

**217 Painting: Watercolor (3)** Introduction to materials and techniques of transparent watercolor as they apply to the solution of painting problems.

Prerequisite: ADS 101 or 102 or CAP 102; AFA 202. Open only to School of Art majors and minors or by instructor permission.

**221 Sculpture: Introduction (3)** Introduction to traditional and contemporary sculpture. The materials associated with additive, subtractive, and substitution techniques will be demonstrated.

Prerequisite: ADS 101 or 102 or CAP 102. Open only to School of Art majors and minors.

**231 Printmaking: Introduction (3)** Beginning printmaking techniques with an emphasis on intaglio and relief processes.

*Prerequisite*: ADS 101 or 102 or CAP 102; AFA 202. *Open only to* School of Art majors and minors or by instructor permission.

## **ART: HISTORY (AHS)**

## New:

**230 Ancient Art (3)** Examines the art and architecture of the ancient world, focusing on Greece and Rome, and with special emphasis on art in its cultural (i.e. social, religious, and political) context.

Prerequisite: AHS 100 or 101 or 102.

**281 Mexican Art (3)** Survey of the art of Mexico from approximately the year 1000 through the modern period, with an emphasis on the work of the major Mexican artists of the nineteenth and twentieth centuries in its social and political contexts.

Prerequisite: AHS 100 or 101 or 102.

**285 African Art (3)** A survey of the art and architecture of Africa from prehistory to the present.

Prerequisite: AHS 100 or 101 or 102.

**295 Islamic Art (3)** A survey of the art and architecture of the Islamic world from the 7<sup>th</sup> century to the present.

Prerequisite: AHS 100 or 101 or 102.

**456** Capstone Seminar in Art History (3) A seminar on a theme or issue in art history. Topics will vary and students may take any given topic only once. Students will complete a research project related to the seminar's topic as their capstone experience.

*Prerequisite*: AHS 100 or 101 or 102 and at least 15 credits in AHS at the 200-level or above and permission of the instructor.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

*Open only to* art history majors who have at least 18 credits of AHS courses and permission of the instructor.

## **Revised:**

**101 Introduction to Art History: Global Traditions (3)** Provides an introduction to the art and architecture of the premodern world and the methods used by art historians. Major traditions in Europe, Asia, Africa, and the Americas are examined in terms of media, technique, style, subject matter, and sociocultural context.

Open only to School of Art majors and minors.

102 Introduction to Art History: The Modern and Contemporary World (3) Provides an introduction to the history of art and architecture from Renaissance Europe to the present, including the rise of modernism in the nineteenth and twentieth centuries and key issues related to the global contemporary art world of the late twentieth and twenty-first centuries.

Open only to School of Art majors and minors.

**201 Art Criticism and Meaning (3)** Employs lecture, discussion groups, and critical writing to explore aesthetics and content in art, in response to texts in art history, theory,

and criticism, case studies in art history, and developments in contemporary art.

Prerequisite: AHS 100 or 101 or 102.

Open only to School of Art majors and minors.

**302** Special Topics in Art History: Asian, African, Islamic, or Latin American (3) Investigation of a particular topic, theme, or issue in Asian, African, Islamic, and/or Latin American art history. A particular topic can only be taken once.

Prerequisite: AHS 100 or 101 or 102.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

**303 Special Topics in Art History: Ancient to Early Modern Europe (3)** Investigation of a particular topic, theme or issue in Ancient to Early Modern European art history. A particular topic can only be taken once.

Prerequisite: AHS 100 or 101 or 102.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

**303 Special Topics in Art History: Ancient to Early Modern Europe (3)** Investigation of a particular topic, theme, or issue in Ancient to Early Modern European art history. A particular topic can only be taken once.

Prerequisite: AHS 100 or 101 or 102.

A total of 9 credits may be earned, but no more than 6 in any one semester or term.

**455** (**498**) **Seminar in Art History** (**3**) A seminar on a theme or issue in art history. Topics will vary and students may take any given topic only once. Students will complete a research project related to the seminar's topic.

*Prerequisite*: AHS 100 or 101 or 102 and at least 3 credits in AHS at the 200-level or above.

A total of 12 credits may be earned, but no more than 6 in any one semester or term.

*Open only to* students who have at least 9 credits of art history courses, or by permission of the instructor.

## **Dropped:**

498 Seminar in Art History (3)

## ART (ART)

## New:

**314 Animation: Experimental Techniques (3)** Experimental animation is a course designed to break down preconceived ideas about animation. In this course, students will explore unconventional animation methods using different types of media to convey a story, idea, or theme.

*Prerequisite*: ART 312 and 316. *Open only to* Animation majors.

**333 Photography: Fine Art Digital Imaging 2 (3)** Course continues technical and conceptual themes from ART 233 as

they relate to the manipulation of fine art images within the digital environment, focusing on advanced processes and selfdirected projects.

Prerequisite: ART 233.

Open only to School of Art photography/intermedia majors.

## 412 Animation: Compositing and Motion Graphics (3)

Teaches several different approaches to animation covering the integration of CGI, digital effect techniques, and establishing motion graphics fundamentals for animation and video production.

Prerequisite: ART 313.

Open only to Animation majors.

## **Revised:**

**100 Art Orientation** (1) Introduces first year art majors to the departmental, collegiate, and university courses, programs, and policies. Assists art majors in the transition to university life and equips them with skills and knowledge for navigating academics, community, and culture in the School of Art.

Open only to School of Art majors.

**210 Introduction to 3D Animation (3)** Provides an introduction to techniques of three-dimensional computer graphics, as well as the fundamental concepts and philosophy of animation. The techniques include 3D modeling, digital lighting and shading, and basic animation. Autodesk Maya is the primary software to complete the course assignments.

*Prerequisite*: ADS 101 and 102 and 103 and AFA 101. *Open only to* Animation majors.

**211 Traditional Animation (3)** Introduces classic animation principles, experimentation, observation, professional practices, and project refinement.

*Prerequisite*: ADS 101 and 102 and 103 and AFA 101. *Open only to* Animation majors.

## 231 Photography: Black and White Darkroom (3)

Introduction to film photography and darkroom printing as an expressive art form emphasizing the development of photographic vision as well as technical proficiency. Students furnish their own 35mm film cameras with a working lightmeter, adjustable aperture, adjustable shutter speed, and manual focusing.

Prerequisite: ADS 101 and AFA 101. Open only to art majors.

**232 Photography: Darkroom to Digital (3)** Emphasizes medium-format film cameras, converting film to digital, digital capture, digital printing basics and an introduction to color photography. Continued exploration of contemporary fine art photography production, issues and theory.

Prerequisite: ART 231.

*Open only to* School of Art majors and minors or by permission of the instructor.

**233 Photography: Fine Art Digital Imaging (3)** Emphasizes fine art image making, focusing on the use of photographic images within the digital environment. Topics include:

techniques and aesthetics of digital imaging, digital cameras, scanning, fine art printing, and color management. Subtle image enhancement to complex compositing and manipulation will be explored.

*Prerequisite*: ART 200 and 231 or by permission of the professor.

Open only to School of Art majors and minors.

**234** (**321**) **Intermedia: Video** (**3**) Comprehensive introduction to experimental video and its impact on contemporary new media art practices, surveying new media video art and artists in a range of formats including installation and performance. Technical demonstrations and workshops will cover camera, sound, lighting, pre-production, and digital editing techniques.

*Prerequisite*: ADS 101 or 103 or by permission of the instructor.

Open only to School of Art majors and minors.

**311 Animation: 3D Modeling, Texturing, Lighting, and Rendering (3)** Intermediate study of 3D computer animation. Topics will include modeling, animation, surfaces, lighting, and rendering.

Prerequisite: ART 210.

Open only to Animation majors.

**312 Animation: 3D Animation, Rigging, and Simulation (3)** Intermediate study of 3D computer animation. Topics will include animation, rigging, and simulation.

*Prerequisite*: ART 311. *Open only to* Animation majors.

**313 Animation: Specialty (3)** Advanced study of 3D computer animation. Students will begin to focus on a specialty in the commercial field of animation. Topics may include modeling, texturing, rendering, character animation, rigging, and simulation.

Prerequisite: ART 312.

Open only to Animation majors.

**315 Animation: Character Design (3)** Focuses on visual character development from descriptions, scripts, reference, or biographies. Includes research, observation, experimentation, and construction.

Prerequisite: ART 211.

Open only to Animation majors.

**316 Animation: Storyboarding (3)** Explores large-scale narrative, entertainment, and explanation as a way to eliminate interior ideas and logistics problems in storyboarding.

Prerequisite: ART 315.

Open only to Animation majors.

**331 Photography: Lighting Equipment and Techniques (3)** Introduction to lighting systems, including: LED, Tungsten and Flash equipment. Both studio and location techniques will be explored through creative projects.

*Prerequisite*: ART 232 or 233 or 330 or by permission of the professor.

Open only to School of Art majors and minors.

**411 Animation: Pre-Production (3)** Introduces a variety of artistic development solutions to facilitate large-scale project creation. Focuses on problem solving, research, organization, digital printing, and workflow.

Prerequisite: ART 316.

Open only to Animation majors.

**414 Animation: Production (3)** Design and production of a collaborative animation project. Projects will be produced in collaboration with an interdisciplinary group of artists, animators, or composers.

Prerequisite: ART 411.

Open only to Animation majors.

## **Dropped:**

321 Video and Intermedia Art 1 (3)

# GRAPHIC COMMUNICATIONS MANAGEMENT (GCM)

## New:

**299X Graphics: Experimental Topics (3)** Topics relevant to the discipline. Course titles will be announced before each semester.

*Prerequisite*: permission of the School of Art director. A total of 6 credits may be earned, but no more than 3 in any one semester or term.

**369 Graphics: Internship (3)** Emphasizes internal or external placement in a graphic communications workplace. Provides opportunities to integrate and apply course content to the workplace.

*Prerequisite*: permission of the School of Art director. A total of 6 credits may be earned, but no more than 3 in any one semester or term.

**373 Graphics: Packaging Construction and Design (3)** Advanced applications in packaging. CAD packaging software will be explored. Topics include design, sustainability, layout, and fabrication of structural materials, multi-content packages, specialty boxes, and point of purchase displays.

Prerequisite: GCM 283 or permission of the instructor.

## **Revised:**

**180 (TGRA 180) Graphics: Intro to Printing Processes (3)** Introduction to graphic communications through digital prepress, conventional and digital press, and postpress/finishing processes. Students develop fundamental skills through hands-on experience.

**181** (TGRA 181) Graphics: Impact Printing Processes (3) Explores printing systems through the use of traditional printing processes. Focus will be on offset lithography, flexography, and gravure. Emphasis will also be placed on artwork preparation, image generation, platemaking, and presswork associated with these printing processes.

**182** (**TGRA 182**) **Graphics: Digital Imaging** (3) Emphasizes the theoretical and practical applications of digital imaging technologies including Adobe Illustrator and Adobe Photoshop. Includes an in-depth look at vector and raster graphic file types as well as trapping, photo manipulation, color settings/corrections, color modes, and photo editing.

**183** (TGRA 183) Graphics: Screen and Specialty Graphics (3) Studies screen and other specialty graphics operations and their relationships to various substrate materials. Includes screen printing, pad printing, and vinyl cutting. A focus is placed on production techniques, equipment requirements and usage, and capabilities in the area of screen and specialty graphics.

**184** (**TGRA 184**) **Graphics: Computer Applications (3)** Examines and applies computer applications for design and graphic communications, including image illustration, manipulation, composition, and layout.

**281** (**TGRA 281**) **Graphics: Ink and Substrate** (3) Focuses on inks, substrates, and ink-substrate interactions. Students also develop ink and paper testing skills which are essential in the graphic communications industry.

Prerequisite: GCM 180, 181, 183, or permission of the instructor.

283 (TGRA 283) Graphics: Packaging Technology (3) Explores the effective use of packaging within graphic communications. Using current software specific to packaging, students will acquire an understanding of the process as images are created and applied to current packaging principles. Also includes the specific substrates and output processes.

**285** (TGRA 285) Graphics: Digital Prepress (3) Focuses on the development of skills in pagination and file preparation for print and cross media graphics. Students will develop skills in Adobe InDesign while covering topics including: preflight, imposition, layout, print settings, fonts/typography, and print workflows.

**286** (TGRA 286) Graphics: Fundamentals of Photography (3) Emphasizes design, exposure techniques, composition, basic digital image capture, and electronic image manipulation.

**381** (**TGRA 381**) **Graphics: Color Management** (3) Focuses on the measurement, evaluation, and monitoring of color as it is transferred through various input and output devices. Both theoretical and practical applications will be covered with the opportunity for students to understand the complex variables within the area of graphic communications.

**382** (**TGRA 382**) **Graphics: Advanced Digital Output** (3) Advanced study of digital imaging systems. Topics include the control and calibration of image creation as well as image

output and proofing. Importance of current imaging standards will also be addressed.

Prerequisite: GCM 285 or permission of the instructor.

## 383 (TGRA 383) Graphics: Offset Lithographic Presswork

(3) Advanced study of lithographic printing designed to provide an understanding of the control, operation, and advancements of lithographic printing presses. Information for both web and sheet-fed operations will be included with emphasis on monitoring and controlling printing press characteristics.

Prerequisite: GCM 181 or permission of the instructor.

## 385 (TGRA 385) Graphics: Cross Media Communications

(3) Explores the multiple ways alternative media is used to promote communication goals. The creation and interpretation of these methods will provide important information that will allow students to understand how use of cross media publishing can improve return on investment of traditional print media.

## 386 (TGRA 386) Graphics: Planning and Finishing (3)

Designed to provide an understanding of the requirements in today's finishing operations. Covers the many aspects of mailing and fulfillment vital to today's print operations. Also includes the specifications necessary to produce materials in a cost effective manner.

**387** (**TGRA 387**) **Graphics: Applications of Commercial Photography** (**3**) Emphasizes color theory, digital editing software, and composition principles as they relate to product photography. Applications to commercial photography, lighting, and photographic studios will also be covered.

*Prerequisite*: GCM 286 or ART 231 or equivalent or permission of the instructor.

415 (TGRA 499) Graphics: Problems in Graphic Communications (3) Individual advanced study and experimentation in graphic communications.

Prerequisite: permission of the instructor.

A total of 6 credits may be earned, but no more than 3 in any one semester or term.

## 484 (TGRA 484) Practicum in Graphic Communications

(3) Integration of graphic communications process, from design, to production of print products and services for clients. Emphasis is placed on managing the process and participating in a variety of roles utilizing skills learned in classes. These skills include: customer service, design and layout, time management, planning, press production/supervision, and quality control.

*Prerequisite*: permission of the School of Art director. A total of 9 credits may be earned, but no more than 3 in any one semester or term.

## 486 (TGRA 486) Graphics: Advanced Management

**Systems (3)** Designed to cover the latest technologies in the facilitation and control of graphic information and distribution. Covers database management, variable data publishing, and digital rights management.

*Prerequisite*: senior standing, or permission of the instructor.

## 488 (TGRA 488) Graphics: Cost Analysis (3) An

introduction to project workflow issues and estimating practices prevalent in the graphic communications industry. Emphasis is placed on computer-based estimating practices currently used in the industry today, which include estimating, scheduling, and cost analysis.

*Prerequisite*: senior standing, or permission of the instructor.

## 489 (TGRA 489) Graphics: Quality Control and

**Automation (3)** Develops understanding and knowledge within the areas of quality control and automation through an in-depth exploration of control systems used in the graphic communications industry. Topics include total quality management, process control, industrial standards, workflow management and automation, etc.

Prerequisite: GCM 381 or permission of the instructor.

## 490 (TGRA 480) Graphics: Capstone for Graphic

**Communications** (3) Focuses on emerging trends, processes, and technologies in the contemporary graphic communications industry. Students are required to complete a senior project related to graphic communications.

Prerequisite: permission of the School of Art director.

## TECHNOLOGY: GRAPHIC ARTS/MANAGEMENT (TGRA)

## **Dropped:**

180 Introduction to Graphic Communications (3)

181 Print Imaging Systems (3)

182 Digital Imaging 1 (3)

183 Screen and Specialty Graphics (3)

184 Computer Applications in Graphic Arts (3)

281 Ink and Substrate (3)

283 Packaging Technology (3)

285 Digital Imaging 2 (3)

286 Digital Photography 1 (3)

381 Color Management (3)

382 Digital Imaging 3 (3)

383 Offset Lithographic Presswork (3)

385 Cross Media Communications (3)

386 Planning and Finishing (3)

387 Digital Photography 2 (3)

480 Capstone for Graphic Communications (3)

484 Practicum in Graphic Communications (3)

486 Advanced Management Systems (3)

488 Cost Analysis (3)

489 Quality Control and Automation (3)

499 Problems in Graphic Communications (3)

## **COLLEGE OF HEALTH**

## School of Kinesiology

## **Dropped/replaced:**

Dropped courses on left; replacement courses on right

PEP  $164 \rightarrow KINE 164$ 

PEP  $250 \rightarrow KINE 250$ 

PEP 299X  $\rightarrow$  KINE 299X

PEP 331  $\rightarrow$  KINE 331

PEP  $366 \rightarrow KINE 366$ 

PEP  $368 \rightarrow KINE 368$ 

# **Department of Nutrition and Health Science**

## **NUTRITION (NUTR)**

## **Revised:**

**240 Nutrition for Educators (3)** General principles of nutrition as related to growth, development, and health of the infant, child, adolescent, and adult. Focus on integration of nutrition education strategies and classroom application.

Not open to students who have credit in NUTR 275 or 340. *Open only to* majors in: elementary education, family and child, and health and physical education; minors in FCS.

# COLLEGE OF SCIENCES AND HUMANITIES

## **Department of Chemistry**

**CHEMISTRY (CHEM)** 

#### **Revised:**

111 General Chemistry 1 (4) Chemistry of the elements and their compounds with emphasis on basic principles. Atomic and molecular structure, chemical bonding, stoichiometry, properties of solutions, and nature of matter. Three hours of lecture and one three-hour recitation-laboratory period weekly. Core Transfer Library: Physical Sciences (IPS 1721).

*Prerequisite*: ALEKS Math placement score of 30 or MATH 108 or any higher level Math course or permission of the department chairperson.

## **Department of History**

## HISTORY (HIST)

## New:

## 429 Topics in the History of Gender and Sexuality (3)

Examines selected topics in the history of gender and sexuality. Topics will vary from semester to semester. Geographical and chronological focus will vary according to the expertise of the instructor.

A total of 6 credits may be earned.

Open only to students who have completed 30 credits or more.

## **SOCIAL STUDIES (SS)**

## **Dropped:**

392 Teaching State/World Connections (3)

## **Department of Mathematical Sciences**

## **MATHEMATICAL SCIENCES (MATH)**

## New:

**354 Exam Prep for Exam P/1 (3)** Individualized study for the actuarial exams given by the Society of Actuaries and the Casualty Actuarial Society, Exam P/1.

*Prerequisite:* C- or better in MATH 320 or permission of the department chairperson.

**610 Statistical Programming: Base SAS 9 (3)** Statistical programming in line with the exam content guide for the Base Programming for SAS 9 certification exam. Programming techniques for managing, summarizing and analyzing data, and reporting results will be taught.

*Prerequisite recommended:* MATH 221 or MATH 320 or ECON 221.

**629 Introductory Survival Analysis (3)** Introduction to Survival Analysis and Time-to-Event data; One, Two & K-sample Nonparametric methods for Censored Data; Association between Explanatory Variables with Survival Times using Parametric Models; Introduction to the Cox

Regression Model; Additional Topics (Competing risks, Frailty Models, Recurrent Events).

*Prerequisite*: MATH 621 or permission of the department chairperson.

## 656 Bayesian Methods and Linear Mixed Models (4)

Covers Bayesian analysis with Markov Chain Monte Carlo (MCMC) methods and linear mixed models. These statistical methods will be applied to examples using a statistical computing language.

*Prerequisite:* MATH 620 or equivalent or permission of the department chairperson.

#### **Revised:**

**259 Introduction to Actuarial Science (3)** Basic introduction to software currently used by actuarial software professionals. Includes a regularly scheduled computer laboratory.

*Prerequisite*: *C*- or better in MATH 166 and MATH 251, or permission of the department chairperson.

**320 Probability (4)** Probability theory for discrete and continuous sample spaces, random variables, density functions, distribution functions, marginal and conditional distributions, mathematical expectation, moment-generating functions, common distributions, sampling distribution theory, central limit theorem, t, chi-square, and F distributions.

*Prerequisite: C-* or better in MATH 166 or permission of the department chairperson.

**321 Mathematical Statistics (4)** Random sampling, statistical inference, and sampling distributions, point and interval estimation, matching moments, maximum likelihood, mean square error, consistency, efficiency, uniformly minimum-variance unbiased estimator (UMVUE), Neyman-Pearson Lemma, Likelihood ratio tests, classical tests of significance, goodness-of-fit, contingency tables, correlation, regression, nonparametric methods, Bayesian methods.

*Prerequisite:* C- or better in MATH 320 or permission of the department chairperson.

**351 Mathematics of Finance (3)** Mathematical theory of compound interest, force of interest, determinants of interest rates, annuities, equations of value, yield rates, amortization, sinking funds, bonds, duration, convexity, immunization, cash flow matching and interest rate swaps.

*Prerequisite: C-* or better in MATH 165 and MATH 251, or permission of the department chairperson.

Prerequisite or parallel: MATH 166.

**355 Exam Prep for Exam FM/2** (3) Individualized study for the actuarial exams given by the Society of Actuaries and the Casualty Actuarial Society, Exam FM/2.

*Prerequisite: C-* or better in MATH 351 or permission of the department chairperson.

**452 Long-Term Actuarial Mathematics 1 (4)** Survival distributions, life tables, the mathematics of life insurance, life annuities, net premiums, gross premiums, and net premium reserves.

*Prerequisite: C-* or better in MATH 321 and MATH 351, or permission of the department chairperson.

**453 Long-Term Actuarial Mathematics 2 (4)** Mathematics of multiple life functions, multiple state models, multiple decrement models, valuation theory for pension plans, estimation of survival models based on empirical data, profit testing, and modeling of mortality improvement.

*Prerequisite:* C- or better in MATH 452 or permission of the department chairperson.

**454 Statistics for Risk Modeling (4)** Covers analytic methods for risk modeling including statistical learning, generalized linear models, time series models, principal components analysis, decision trees, and cluster analysis. These analytic methods will be applied to examples using the R statistical computing language.

*Prerequisite: C-* or better in MATH 321 or permission of the department chairperson.

**457 Short-Term Actuarial Mathematics 1** (4) Loss and frequency distributions, limited expected value, parametric and non-parametric models, scale distributions, creating new distributions, insurance coverage modifications by deductibles and limits, efforts of inflation, aggregate distributions for collective and individual risk models, classical and Bayesian credibility models.

*Prerequisite*: *C*- or better in MATH 321 or permission of the department chairperson.

**458 Short-Term Actuarial Mathematics 2 (3)** Statistical methods for fitting parametric actuarial models, maximum likelihood estimation for censored or truncated data, hypothesis tests and model selection, basic ratemaking and loss reserving for property and casualty insurance, actuarial models for individual health insurance.

*Prerequisite: C-* or better in MATH 321 or permission of the department chairperson.

**459 Investments and Financial Markets (4)** Develops the student's knowledge of the theoretical basis of corporate finance, financial models, and financial derivatives and the application of those models to insurance and other financial risks. A knowledge of basic corporate finance is assumed.

*Prerequisite: C-* or better in MATH 267, MATH 320, and MATH 351, or permission of the department chairperson.

**462** (**362**) **Numerical Analysis 1** (**3**) Explores a variety of algorithms in numerical analysis/computation mathematics, with an emphasis on their theoretical and computational aspects. For the programming component of the course, mathematical software packages Matlab or Octave are used.

*Prerequisite: C-* or better in MATH 166, MATH 217, and MATH 374, or permission of the department chairperson.

**471 Real Analysis 1** (3) Real number systems: least upper bound property, Archimedean property and their consequences; Basic topology; cardinality, metric spaces, completeness, compactness, connectedness; Numerical sequences and series: convergence tests, upper-lower limits; Continuity: continuous functions, uniform continuity,

Intermediate and Extreme Value Theorems; Differentiability; L'Hospital's Rule, Taylor's Theorem. Time permitting, instructors may add more material that exemplifies the above topics.

*Prerequisite:* C- or better in MATH 215 and MATH 267, or permission of the department chairperson.

**557 Short-Term Actuarial Mathematics 1 (4)** Loss and frequency distributions, limited expected value, parametric and non-parametric models, scale distributions, creating new distributions, insurance coverage modifications by deductibles and limits, effects of inflation, aggregate distributions for collective and individual risk models, classical and Bayesian credibility models.

*Prerequisite*: MATH 620 or equivalent or permission of the department chairperson.

Not open to students who have credit in MATH 457.

**559** Investment and Financial Markets (4) Develops the student's knowledge of the theoretical basis of corporate finance, financial models, and financial derivatives and the application of those models to insurance and other financial risks. A knowledge of basic corporate finance is assumed.

*Prerequisite*: MATH 267, MATH 320, and MATH 351, or equivalents, or permission of the department chairperson.

Not open to students who have credit in MATH 459.

**562 Numerical Analysis 1 (3)** Explores a variety of algorithms in numerical analysis/computational mathematics, with an emphasis on their theoretical and computational aspects. For the programming component of the course, mathematical software packages Matlab or Octave are used.

Prerequisite recommended: MATH 166 and MATH 217 and MATH 374.

Not open to students who have credit in MATH 462.

571 Real Analysis 1 (3) Real number systems: least upper bound property, Archimedean property and their consequences; Basic topology: cardinality, metric spaces, completeness, compactness, connectedness; Numerical sequences and series: convergence tests, upper-lower limits; Continuity: continuous functions, uniform continuity, Intermediate and Extreme Value Theorems; Differentiability; L'Hospital's Rule, Taylor's Theorem. Time permitting, instructors may add more material that exemplifies the above topics.

*Prerequisite recommended*: MATH 215 and MATH 267. *Not open to* students who have credit in MATH 471.

# 613 (519) Quantitative Reasoning for Teachers (3) Interpreting and using quantitative information in authentic contexts involving number, algebra, measurement, data analysis, and chance; representing quantitative information with mathematical models, and using quantitative information to analyze and construct written arguments. Includes

to analyze and construct written arguments. Includes explorations of pedagogical issues and design of teaching materials for the development of quantitative literacy.

614 (514) Algebraic Reasoning for Elementary, Middle School, and Foundational Mathematics Teachers (3) Algebra as the study of patterns, as a symbolic language, as a

tool for problem solving, as the study of functions, as generalized arithmetic, and as a way of modeling physical situations.

*Prerequisite*: at least one year of teaching experience or permission of the department chairperson.

**615** (**517**) Number Concepts and Number Theory for Teachers (3) Number development, number systems, properties and characteristics of classes of numbers, number sense, number theory, operations and their relationships, and algorithms.

*Prerequisite*: at least one year of teaching experience or permission of the department chairperson.

616 (518) Rational Numbers and Proportionality for Elementary, Middle School, and Foundational Math Teachers (3) An in-depth study of rational number concepts and operations and the development of proportional reasoning. Also, issues related to teaching.

*Prerequisite*: at least one year of teaching experience or permission of the department chairperson.

**622** (**523**) Environmental Statistics (**3**) Aims to provide an introduction to the types of statistical analyses used in environmental studies. Topics include collecting environmental data with special emphasis on inaccessible and sensitive data, population size estimation, sampling in the wild such as quadrat, recapture, transect and adaptive sampling, composite sampling, ranked set sampling, examining environmental effects by regression-type models, statistical verifiability of environmental standards and regulations, time series, longitudinal, spatial, and temporal methods for the environmental processes.

*Prerequisite:* MATH 320 or permission of the department chairperson.

**640** (**542**) Geometry and Measurement for Elementary, Middle School, and Foundational Mathematics Teachers (3) Students will develop visualization skills; identify two-and three-dimensional shapes and know their properties; connect geometry to other mathematical topics; research historical topics relevant to elementary and middle school geometry.

*Prerequisite*: at least one year of teaching experience or permission of the department chairperson.

**651** (**551**) **Mathematics of Finance** (**4**) Mathematical theory of compound interest, force of interest, annuities, equations of value, yield rates, amortization, sinking funds, bonds, market derivatives, depreciation, and current topics in finance.

Prerequisite recommended: MATH 166.

**652** (**552**) **Long-Term Actuarial Mathematics 1** (**4**) Survival distributions, life tables; the mathematics of life insurance, life annuities, net premiums, and net premium reserves.

Prerequisite: MATH 321 or equivalent. Prerequisite or parallel: MATH 651.

## 653 (553) Long-Term Actuarial Mathematics 2 (4)

Mathematics of multiple life functions, multiple state models, multiple decrement models, valuation theory for pension

plans, estimation of survival models based on empirical data, profit testing, and modeling of mortality improvement.

\*Prerequisite: MATH 652 or equivalent.

654 (558) Short-Term Actuarial Mathematics 2 (3)

Statistical methods for fitting parametric actuarial models, maximum likelihood estimation for censored or truncated data, hypothesis tests and model selection, basic ratemaking and loss reserving for property and casualty insurance, actuarial models for individual health insurance.

*Prerequisite*: MATH 620 or equivalent and MATH 557 or equivalent, or permission of the department chairperson.

659 Research Seminar in Actuarial Science (3) Research study in actuarial subjects of current interest in life, property/casualty, health, pension, and/or financial risk management. Literature searches on selected topics. Articles from research journals may be read and discussed. Will use actuarial skills from several courses. A paper will be required. Case studies and special projects will be completed and results presented on a team basis.

Prerequisite: MATH 557.

Prerequisite or parallel: MATH 653.

## **Dropped:**

362 Numerical Analysis 1 (3)

514 Algebraic Reasoning for Elementary, Middle School, and Foundational Mathematics Teachers (3)

**517** Number Concepts and Number Theory for Teachers (3)

518 Rational Numbers and Proportionality for Elementary, Middle School, and Foundational Math Teachers (3)

519 Quantitative Reasoning for Teachers (3)

**523 Environmental Statistics (3)** 

542 Geometry and Measurement for Elementary, Middle School, and Foundational Mathematics Teachers (3)

551 Mathematics of Finance (4)

552 Mathematics of Life Contingencies 1 (4)

553 Mathematics of Life Contingencies 2 (4)

554 Mathematics of Investments (3)

558 Actuarial Models 2 (3)

626 Stochastic Processes (3)

658 Risk Theory (3)

## **TEACHERS COLLEGE**

# Department of Early Childhood, Youth, and Family Studies

# EARLY CHILDHOOD, YOUTH, AND FAMILY STUDIES (ECYF)

New:

**497 Independent Study in Early Childhood, Youth, and Family Studies** (1-6) Independent study and research in early childhood, youth, and family studies.

*Prerequisite*: permission of the department chairperson. A total of 6 credits may be earned.

## **Revised:**

**345** (EDEL 340) Culture and Language in Teaching and Learning (3) Examines the impact of culture and language on teaching and learning. Discusses teacher behaviors, educational materials, and school practices that affect the academic success of students from diverse cultural and linguistic backgrounds.

Prerequisite: EDEL 200.

## **EDUCATION: ELEMENTARY (EDEL)**

## **Dropped:**

340 Culture and Language in Teaching and Learning (3)

## Department of Educational Psychology EDUCATIONAL PSYCHOLOGY (EDPS)

## New:

**661 Individual Diagnostic Assessment (3)** Administration, interpretation, and analysis of individual assessment for the purpose of diagnostic decision making.

*Prerequisite*: EDPS 653 with a grade of B or better (or equivalent) or permission of the department.

## **Revised:**

**765 Theories of Learning (3)** A doctoral seminar in contemporary learning theories. Covers the foundations of diverse learning theories within psychology. The application of learning theories in educational and psychological practice, including attention to considerations for individual variations among learners due to diversity are addressed.

## **Department of Elementary Education**

**EDUCATION: ELEMENTARY (EDEL)** 

## **Revised:**

## 244 Early and Elementary Education for Social Justice (3)

A broad understanding of social, economic, cultural, and linguistic diversity within the context of early and elementary education in today's society.

*Prerequisite*: EDEL 100 or SPCE 201 with a minimum grade of C.

## **Dropped:**

680 Advanced Teaching Methods in Language Arts (3)

**EDUCATION: READING (EDRD)** 

### **Revised:**

## 430 Assessment and Intervention in Elementary Schools

(3) Provides prospective teachers with the understanding of difficulties in reading and practical experiences in assessing reading difficulties and in study of corrective treatments. Includes guided laboratory experience. Must earn a grade of C or better to pass the course.

*Prerequisite*: EDRD 350 or EDRD 400 with a grade of C or better; completion of decision point 2; admission to the teacher education program.

## 624 (545) Integrating Technology in the Literacy Program

(3) Candidates will explore many different possibilities for integrating cutting-edge technology into the literacy program and explore how technology affects the development of literacy strategies and skills.

## 685 (EDEL 680) Advanced Teaching Methods in Language

**Arts (3)** Provides an understanding of the relationship of listening, speaking, reading, and writing. Identification of instructional challenges in each of these areas and explorations of possible solutions can lead to a more integrated language arts program.

## **Dropped:**

545 Integrating Technology in the Literacy Program (3)

## **Department of Special Education**

## **SIGN LANGUAGE (SNLN)**

## New:

**300 Structure of American Sign Language (3)** Provides targeted development to advance student's skills in fingerspelled word recognition, numbering, classifiers and American Sign Language (ASL) grammar. Practice in specific

skills that underlie the fingerspelled word recognition process, and practice in correctly recognizing finerspelled words and numbers in context. In addition to receptive skill development, students will hone their articulation and production of fingerspelling, numbering, classifiers and grammar.

Prerequisite: SNLN 251 or 252 with a grade of C or better.

## **Revised:**

**651** (**551**) American Sign Language 1 (3) Introduction to sign language systems including fingerspelling and American Sign Language (ASL). Development of receptive and expressive skills in sign language is emphasized.

Not open to students who have credit in SNLN 251.

**652** (**552**) American Sign Language 2 (3) Designed to improve conversational skills in American Sign Language to functional level for expressive and receptive use in educational and other settings. Introduction to issues related to Deaf culture.

Prerequisite: SNLN 251 or 651.

Not open to students who have credit in SNLN 252.

**653** (**553**) **American Sign Language 3** (**3**) Emphasizes the development of conversational skills in American Sign Language. Stress is placed on vocabulary building and interpretation of culturally related cues.

Prerequisite: SNLN 252 or 652.

Not open to students who have credit in SNLN 253.

**654** (**554**) American Sign Language 4 (**3**) Advanced development of American Sign Language fluency in occupation and professional settings. Special emphasis is placed on sign dialects and related Deaf cultural issues.

Prerequisite: SNLN 253 or 653.

Not open to students who have credit in SNLN 254.

## **Dropped:**

551 American Sign Language 1 (3)

552 American Sign Language 2 (3)

553 American Sign Language 3 (3)

554 American Sign Language 4 (3)

## **SPECIAL EDUCATION (SPCE)**

## New:

291 Social Services in the Deaf Community (3) Major concepts and issues in the field of deafness and the Deaf community as current trends and issues are explored as they related to social services and working with deaf/hard of hearing individuals. Resources will be explored for different field and areas of study as they related to deaf/hard of hearing individuals and their families.

**321 Educational and Rehabilitation Strategies for Deaf** and Hard of Hearing (3) Strategies and methods that are used for promoting oral/aural rehabilitation within deaf education will be presented. From the knowledge of development of speech and hearing and technology, students will use critical thinking to construct objectives, activities, and materials for deaf/hard of hearing students.

Prerequisite: SPCE 246.

**322 Deaf People and Civil Rights (3)** Explores aspects of life in the Deaf community including cultural identity, education, language, the medical perspective, advocacy, audiology, and oppression as they relate to civil rights and disability law. The concepts will be explored through different lenses as students consider the development of the laws and human rights with a focus on languages and linguistic minorities.

**323 Deaf Culture:** A Global Perspective (3) Designed to encompass all the skills and knowledge necessary to think critically about topics related to signed languages and their users globally. Inquiry into American Deaf culture and the cultures of other global Deaf communities will expand one's critical understanding of how these minority cultures function and thrive within broader society.

324 Deaf Community in the Modern World: Current Issues (3) Considers current events related to the Deaf community. Topics will include demographics of deafness; factors affecting an individual's choice to affiliate with the Deaf community; current linguistic and cultural oppression; economic, legal, and social implications of deafness; diversity

economic, legal, and social implications of deafness; diversity within the Deaf community; deafness in literature, media and the effects of arts and technology's effect on Deaf culture.

**325** Deaf and Hard of Hearing Students with Multiple Disabilities (3) Considers the individual needs of deaf students with multiple disabilities in the context that guides much of deaf education. Issues related to placement and curriculum options for deaf students with multiple disabilities will be analyzed. Explores the effectiveness of personcentered planning for deaf students with multiple disabilities.

#### **Revised:**

perspectives.

**210** Theory and Practices in Early Childhood Special Education (3) Examines the sociological, political, historical, and educational perspectives related to education of infants, toddlers, and preschoolers with exceptional needs, and their families.

*Prerequisite*: SPCE 200 or 201 or 302 with a grade of C or better.

**240** Introduction to Sign Systems, Educational Environments, and Services (3) Introduces a variety of sign systems (cued speech, visual phonics, Signed Exact English, and others), educational environments and services across the continuum provided to deaf/hard of hearing individuals. These will be discussed through different philosophical and historical

*Prerequisite:* SPCE 200 or 201 (SPCE 201 for deaf and special education majors only).

246 Speech Development and Technology for Deaf and Hard of Hearing Individuals (3) Serves to provide a basic introduction to the development of speech and hearing and technology used to support speech and hearing for deaf/hard of hearing individuals. Includes the knowledge, theories, and foundation for understanding speech development, hearing, and technology.

*Prerequisite:* SPCE 200 or 201 (SPCE 201 for deaf and special education majors only).

248 Practicum with Students who are Deaf or Hard of Hearing (3) Includes work with deaf/hard of hearing students form various age ranges. Participants will practice planning, writing, and implementing relevant instructional objectives using specialized technology, resources, and instructional strategies unique to individuals who are deaf or hard of hearing.

*Prerequisite:* SPCE 246 or permission of the department chairperson.

**454** Introduction to Language Acquisition for Deaf and Hard of Hearing Individuals (3) Philosophy underlying various methods of language will be discussed as they apply to deaf education including bilingual education. Participants will compare and contrast various aspects of communication strategies. Topics include interactive language, written language and reading.

Prerequisite: SPCE 240 and 246.

456 Language Methods for Deaf and Hard of Hearing

**Students** (3) Emphasizes analyzing language samples, taken from students who are deaf/hard of hearing, and other related assessments to develop behavioral objectives in the areas of form and content. Includes writing behavioral objectives in the language areas of form, content, and use for inclusion in Individual Educational Plans.

Prerequisite: SPCE 454.

458 Teaching Reading Across the Content Areas for Deaf and Hard of Hearing Students (3) Explores various approaches to teaching reading and applies them to reading instruction for deaf/hard of hearing students across the content areas. Curriculum maps and unit plans are developed to integrate reading across the curriculum. Reviews of reading assessments for deaf/hard of hearing students are applied to the reading strategies used for fluency, phonetics, comprehension and vocabulary.

Prerequisite: EDRD 400; SPCE 454.

466 Student Teaching: Deaf and Hard of Hearing (1-12)

Required pre-service teaching practica for students seeking licensure in special education for deaf and hard of hearing students. Offered credit/no credit only.

*Prerequisite*: admission to student teaching. A total of 12 credits may be earned.

**637 Special Education Administration and Law (3)** Special inquiry into federal and Indiana law pertaining to the

establishment of supervision of special education programs. Students will learn about legal aspects of special education in relation to the functions of a Special Education Director.

**640 (540) Introduction to Deaf Education (3)** Serves as an introduction to deaf education and the needs of deaf/hard of hearing students. A variety of topics will be explored such as educational settings, Deaf culture, and communication.

Prerequisite: SPCE 600 or permission of the graduate advisor.

**645** (558) Reading Methods for Deaf and Hard of Hearing Students (3) Explores various approaches to teaching reading and applies them to reading instruction for deaf/hard of hearing children across the content areas. Curriculum maps and unit plans are developed to integrate reading across the curriculum. Reviews of reading assessments for deaf/hard of hearing students are applied to reading strategies used for fluency, phonetics, comprehension and vocabulary.

Prerequisite: SPCE 640 and 641.

**670 Practicum in Deaf Education (3)** Includes experience with deaf/hard of hearing students from various age ranges. Participants will practice the planning, writing, and implementation of relevant instructional objectives.

Prerequisite: permission of the department chairperson.

## **Dropped:**

540 History of Education of Deaf Students and Psychology of Deafness (3)

558 Teaching Reading and School Subjects to Deaf/Hard-of-Hearing Students (3)

651 The Eye: Its Functions and Health (3)

652 Programs and Services for Individuals with Visual Impairment (3)

 $653\ Communication\ Skills\ for\ Individuals\ with\ Visual\ Impairments\ (3)$ 

654 Instructional Accommodations for Individuals with Visual Impairment (3)

655 Principles of Orientation and Mobility (3)

656 Practicum in Teaching Students (3)

Laura Helms Interim Dean, University College