artist’s statement, an introduction to professional practice, readings in current topics in the discipline, and a review of the implications for Reformed practice in the arts beyond Trinity. Students use the advanced/topics courses in their junior and senior year begin to work toward this exhibition. In order to participate in the senior exhibition students must successfully defend their work before the faculty on the basis of the categories developed throughout the program. Prerequisites for art studio majors: completion of concentration, art history courses and an exhibition in the student gallery. Prerequisites for art education majors: completion of an intermediate studio course, art history/aesthetics requirement, and an exhibition in the student gallery. Note: Students must be on campus for this course. Art Education students will find it difficult to do student teaching while taking this course unless they have worked ahead for the senior show typically by taking an advanced course the fall semester prior to enrolling in Senior Seminar.

**ARTH ART HISTORY**

**ARTH 230 Art History: Art & World Religions-CCS**

*Spring*

This course covers the art of India, China, Japan, Arabia, Native America, and Africa, and Greco-Roman art and Christian art up to the Renaissance. Fulfills one of the cross-cultural studies Foundations requirements.

**ARTH 232 Art History: Renaissance and Rococo, 1400-1760 (3)**

*Fall*

This lecture course studies the development of Renaissance styles. Students gain insight into the historical roots and spirit of Renaissance style. The course involves the student in analysis of Renaissance imagery, development through Italy and Northern Europe, and its development through Mannerism, Baroque, and Rococo.

**ARTH 234 Art History: Neoclassicism to Surrealism, 1789-1945 (3)**

*Spring*

This lecture course studies the rise of European modernism from the French Revolution and its expression in Neoclassicism to the School of Paris until its demise at World War II. This course explores the changes in art brought on by the Enlightenment’s influence on politics, and on the industrial and scientific revolutions of the 19th and 20th centuries.

**ARTH 235 Art History: After 1945, Abstract Expressionism to Present (3)**

*Fall*

This lecture course examines American and European art from 1945 to the present: abstract expressionism and the responses it generated through the 1970s; post-modernism from the 1980s and 1990s and the contemporary scene. Prerequisite: ARTH 234.

**AUSB AU SABLE INSTITUTE**

Au Sable Institute of Environmental Studies course descriptions can be found at http://ausable.org/

**BIOL BIOLOGY**

**BIOL 100 Introduction to Biological Science (3)**

*Fall, Spring*

This course provides an introduction to the life and environmental sciences. The characteristics of living things and their relationships to each other are emphasized. Topics include cell structure and function, genetics, life cycles of plants and animals, the structure and function of animal organ systems, the functioning of ecosystems, and human impacts on ecosystems. The history of and methods used in science are considered. The course includes a laboratory component. This course is designed primarily for students in the elementary education program and is designed to meet the biology requirement for non-science majors. Because of content overlap, students cannot receive credit for BIOL 100 if they take BIOL 110 or 111. $50 Lab Fee.

**BIOL 101 Human Biology (3)**

*Spring*

This course begins a survey of organic compounds and cell structure and function. It proceeds through a systematic study of the human body emphasizing both normal and diseased states. The course covers human nutrition, exercise, reproduction, growth and development, and the spread of disease. Ethical issues raised by modern technology and human ecology are included. The course includes a laboratory component and is designed to meet the biology requirement for non-science majors. Because of content overlap, students cannot receive credit for BIOL 101 if they take BIOL 205 or 206. $50 Lab Fee.

**BIOL 102 Environmental Science (3)**

*Fall*

This course covers ecology principles related to population, ecosystem, and biosphere levels of organization. It then applies these principles to understand environmental issues brought on by the 21st century exponential growth in human population and human resource consumption. The course includes a laboratory component and is designed to meet the biology requirement for non-science majors. $50 Lab Fee.

**BIOL 110 Introduction to Biology (4)**

*Fall*

An introduction to biological principles and processes common to living organisms. Topics covered include basic cell biology, biochemistry, photosynthesis, respiration, cell division, gene regulation, and principles of genetics and evolution. The course includes a laboratory component. This course is designed for biology majors and minors and is not recommended for non-majors to meet their Foundations requirement. Prerequisite: Minimum ACT Composite
score of 21 or a grade of B- or better in BIOL 100 or another college biology course or instructor permission with ACT 18–20. $50 Lab Fee.

**BIOL 111 Survey of Plants and Animals (4)**

*Spring*

This course consists of surveys of the kingdoms of life. Taxonomic relationships and physical, morphological, and behavioral adaptations of organisms are emphasized. The course includes a laboratory component. Prerequisite: BIOL 102 or BIOL 110 or permission of instructor. $50 Lab Fee.

**BIOL 201 Ecology (4)**

*Fall, Even*

A study of the concepts and principles of ecology at various levels of organization. Laboratory work emphasizes field studies and may include weekend field trips. Prerequisites: MATH 151 and BIOL 111. $50 Lab Fee.

**BIOL 204 General Microbiology (4)**

*Fall*

A study of structures, metabolism, and genetics of microorganisms. Pathogenic relationships with humans and body defense mechanisms are studied. Laboratory work involves isolation, culture, identification, and antibiotic sensitivities of microorganisms. The course includes a laboratory component. Prerequisites: one year of chemistry and one course in biology or concurrent enrollment in BIOL 205. $50 Lab Fee.

**BIOL 205 Human Anatomy & Physiology I (4)**

*Fall*

This course is designed for students interested in allied health sciences and others who wish to know the structure and function of the human body. It begins with a brief introduction to cell structure and function, body organization, and tissue components. A systematic study of the integumentary, skeletal, muscular, nervous, and sensory systems follows. The course includes a laboratory component. The course is designed as an introductory course that, along with BIOL 206, constitutes a complete survey of the human body. Prerequisite: sophomore standing or permission of instructor. $50 Lab Fee.

**BIOL 206 Human Anatomy & Physiology II (4)**

*Spring*

A continuation of BIOL 205, this course covers basic genetics and the endocrine, digestive, respiratory, circulatory, excretory, and reproductive systems. The course includes a laboratory component. Prerequisite: BIOL 205. $50 Lab Fee.

**BIOL 210 Cadaver Dissection (1)**

*Summer*

Cadaver dissection is a laboratory based course where students will learn human anatomy by dissecting human cadavers. Entry into the course is by instructor approval only. Prerequisites: BIOL 205, BIOL 206 or junior or senior standing, biology major. Lab fee waived.

**BIOL 244 Medical/Biological Terminology (1)**

*Fall, Spring*

Basic biological and medical terminology is reviewed, including the construction of words from Greek and Latin word elements. Medical terminology as used in the allied health sciences is emphasized. The course is taught by the self-study method. It does not meet the requirements of the education program.

**BIOL 252 Economic Botany (3)**

*Varies*

Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

**BIOL 253 Woody Plants of Western Great Lakes Region (4)**

*Varies*

Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

**BIOL 254 Introduction to Horticulture (3)**

*Varies*

Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

**BIOL 255 Plant and Animal Relations (4)**

*Varies*

Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

**BIOL 301 Computational Biology (4)**

*Spring, Odd*

This course focuses on computational strategies toward solving biological problems. The challenges of processing large datasets to identify meaningful biological insights are discussed. This course includes a laboratory component. Prerequisites: BIOL 110, MATH 151, CPSC 111. Cross-listed with CPSC 313. $50 Lab Fee.

**BIOL 303 Genetics (4)**

*Spring, Even*

An investigation of the principles of inheritance with some emphasis placed on human genetics. Mendelian inheritance, pedigree analysis, genetic mapping, chromosomal aberrations, mutations affecting fitness, and natural selection for population genetics are discussed. The course includes a laboratory component. Prerequisite: 8 hours in biology, including BIOL 306. $50 Lab Fee.

**BIOL 306 Cell and Molecular Biology (4)**

*Spring*

A study of cell structure and physiology with emphasis on cell organelles, cell physiology, molecular genetic control, and cell division. The course includes a laboratory component. Prerequisites: MATH 151, BIOL 110, and CHEM 102 or concurrent enrollment in CHEM 206. $50 Lab Fee.
BIOL 308 Developmental Biology (4)
*Fall, Even*
A study of a maturation of germ cells, cleavage, and early development of various organisms, with special emphasis on the formation of fetal membranes and structures in vertebrates. The course includes a laboratory component. Prerequisites: twelve semester-hours in biology; BIOL 306 highly recommended. $50 Lab Fee.

BIOL 310 Comparative Vertebrate Physiology (4)
*Fall, Odd*
A comparative study of the physiology of vertebrates. Emphasis is placed on the functioning of organ systems in various vertebrate classes and their adaptation to the environment leading to an understanding of evolutionary relationships. The course includes a laboratory component. Prerequisites: twelve semester-hours in biology; BIOL 306 highly recommended. $50 Lab Fee.

BIOL 314 Conservation Biology (4)
*Fall, Odd*
An in-depth study of the science of conservation, building on ecological principles to evaluate how anthropogenic changes and management strategies have influenced species, communities, and ecosystems. Biodiversity losses, population analysis and management, conservation design, and ecological restoration are discussed. This course includes a laboratory component. Prerequisite: MATH 151 and BIOL 111. $50 Lab Fee.

BIOL 316 Advanced Molecular Biology (4)
*Spring, Odd*
Combines an in-depth study of the complex molecular interactions leading to gene expression. Regulation of transcription, RNA processing, translation, and more will be studied in the context of this field that now permeates all of modern biology. Primary literature will be discussed in order to learn new applications of molecular biology including designed genes, regulatory networks, and artificial cells. A research laboratory component is included. Prerequisite: BIOL 306. $50 Lab Fee.

BIOL 324 Individual Research (2)
*Fall, Spring*
Must be arranged with a member of the biology department prior to registration.

BIOL 351 Plant Ecology (4)
*Varies*
Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

BIOL 352 Plant Genetics (4)
*Varies*
Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

BIOL 355 Vascular Plant Taxonomy (4)
*Varies*
Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

BIOL 357 Biology of Fungi (4)
*Varies*
Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

BIOL 358 Introduction to Soil Science (4)
*Varies*
Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

BIOL 360 Medical Botany (3)
*Varies*
Offered at Morton Arboretum. Specific information available from biology department faculty. Prerequisites: BIOL 110 and BIOL 111. Highly recommended: BIOL 201.

BIOL 362 Marine & Island Ecology of Bahamas (4)
*Spring*
This course provides an introduction to marine and island ecology. Classes are held at the Shedd Aquarium. The course includes a one-week laboratory trip to the Bahamas during the last part of May. Prerequisites: BIOL 110 and 111. Highly recommended: BIOL 201.

BIOL 391 Science Majors Junior Seminar (1)
*Spring*
A seminar for all junior majors in biology and chemistry. Meets one hour per week to discuss the nature of scientific research, the relationship between faith and science, and ethical issues. Students begin developing a major paper on the ethics of a scientific topic. Prerequisites: junior standing and completion of 50% of the hours towards the biology major.

BIOL 392 Science Majors Senior Seminar (1)
*Spring*
A seminar for all senior majors in biology and chemistry. Similar to BIOL 391 but includes the completion and oral presentation of the major paper begun in BIOL 391. Prerequisite: BIOL 391.

BIOL 395 ACCA Seminar Course (2)
*Fall, Spring*
The biology division of ACCA offers a two-hour seminar-format course each semester. These courses consist of 10 lectures by experts drawn from universities and other institutions of the greater Chicago area. The seminars are held at a central location; Trinity provides transportation for its students. Topics vary from year to year as determined by the faculties of the schools involved. Prerequisites: BIOL 110 and one other biology course.
BIOL 399 Individual Study (1)  
*Fall, Spring*  
Must be arranged with a member of the biology department prior to registration. Lab fees may apply.

BIOL 400 Field Education (2)  
*Fall, Spring*  
Must be arranged with a member of the biology department prior to registration.

**BUAD BUSINESS**

**BUAD 121 Principles of Management (3)  
*Fall, Spring*  
An analysis of the managerial functions of planning, organizing, staffing, leading, directing, and controlling. Incorporated within the presentation of these functions is a discussion of our responsibilities as Christians. Attention also is given to career preparation. $55 fee for web-based business simulation.**

**BUAD 131 Principles of Marketing (3)  
*Fall, Spring*  
An introduction to the activities and decisions faced by marketing managers in business and non-business organizations. Emphasis is placed on a basic understanding of the principles of marketing and on the operation of the marketing function.**

**BUAD 211 Professional Communications (3)  
*Spring*  
The student will learn the skills essential to becoming a successful business communicator. The communication process, listening and speaking skills, and nonverbal communication will be explored in the context of ethical behavior, changing technology and workforce diversity. Students will be provided with an opportunity to write short business messages and to integrate their skills into communication for employment and preparation for a professional career. Prerequisite: sophomore standing.**

**BUAD 241 Business Finance (3)  
*Spring*  
A study of financial decision-making in the areas of working capital management, short-term and long-term financing, financing risk, and capital asset management. The topics of present value, future value, taxes, depreciation, and financial markets are also presented. Prerequisites: Earned grade of "C" or better in ACCT 221.**

**BUAD 253 Legal Environment of Business (3)  
*Spring*  
An introduction to the rapidly changing legal environment of business through (1) an explanation of the nature and functions of our legal system; (2) an integrated approach to ethics and global issues; and (3) a practical group of cases designed to assure that students understand legal issues in a manner that will be useful to them as Christian citizens and employees. Prerequisite: sophomore standing.**

**BUAD 289 Middle Grades Business Methods (3)  
*Varies*  
In this course, students will study and implement a variety of pedagogical methods for teaching and learning of business. The class will focus on ever-changing technological advances in a global society with an emphasis on the knowledge and skills to succeed in the 21st century. Students will engage in experiences and practice with technology tools and collaborative activities that prepare them to be effective users and continual learners of technology, including instruction in online pedagogy. They will learn to facilitate inquiry-based activities that include critical thinking, creative problem solving, effective communication, and collaboration. Prerequisite: admission into teacher education program.**

**BUAD 301 Business Ethics and Society (3)  
*Spring*  
This course examines theories of ethical behavior, explores their influence on contemporary business practice, and develops a Biblically-based framework within which to address the moral issues inherent in business life. Prerequisite: BUAD 121 and junior standing.**

**BUAD 311 Global Business (3)  
*Fall*  
This course is designed to provide the student with an opportunity to acquire an understanding of how a U.S.-based organization can transact business successfully with its customers, suppliers, vendors, and resources providers located in foreign countries. The student will be given the opportunity to explore cultural environments, global politics, economic systems, and diversity from an international, regional, and global perspective. Prerequisite: BUAD 121 and junior standing.**

**BUAD 321 Strategic Management (3)  
*Spring*  
An examination of the strategic management process. This course serves to integrate the knowledge the student has gained in previous business courses. Special emphasis will be placed on the student's ability to work in groups and to manage a company using a web-based business simulation. Prerequisites: accounting, business, finance, marketing, or entrepreneurial management major; earned grade of "C" or better in BUAD 121, 131, 241, ACCT 221, 222, ECON 121, 122; and junior standing. $70 fee for web-based business simulation and national test.**

**BUAD 332 Business Research Methods (3)  
*Fall*  
The gathering and interpretation of customer, market, and business information in solving business problems through the use of current research methods. Emphasis on developing hands-on experience with questionnaire development, focus group research, and other practical business research methodologies. Prerequisite: MATH 151, and junior standing or permission of instructor.**