

VISUAL EFFECTS & MOTION GRAPHICS

Bachelor of Arts – 180 CREDITS

Twelve 11-week quarters, or 132 weeks

The Visual Effects & Motion Graphics 12-quarter bachelor's degree program is designed to prepare graduates in two major areas—visual effects and broadcast graphics. These interrelated fields deal with design, layering, and movement of digital imagery relative to enhancing or telling a visual story. Both have become established areas of specialization in the broader field of media. Even limited budget productions now typically incorporate visually sophisticated graphics and effects. Audience awareness and expectations have fueled a growing demand for skilled artists and technicians in this field.

Motion graphics is designing screen visuals for media projects for both broadcast and non-broadcast productions. A motion graphics specialist makes type, colors, and images move to communicate, educate, entertain, or build brand value. Visual effects use computer software to assemble various component images into a single, integrated believable scene. The components that are digitally layered could be live action shots, digital animations, or still images; combining them requires expertise in color and lighting adjustment, motion tracking, matte painting, set extensions, and other related skills using 2D and 3D techniques.

Graduates of the Visual Effects & Motion Graphics program are prepared for entry-level employment as broadcast design assistants, digital artists, digital visual effects specialists, researchers, and streaming server specialists. They may also work as assistant composers, composite artists, content acquisition specialists, interactive video producers, and motion graphics artists.

Objectives: Upon completion of this program, graduates will be able to:

- demonstrate skills in design and composition integration, visual communication, and typography.
- demonstrate the ability to create a production plan, deliver to team projects, and complete projects in accordance to production plans.
- demonstrate the ability to apply appropriate technology skills on projects.
- apply required critical thinking skills and needs analysis to deliver to project requirements.
- demonstrate a professional level of delivery on projects through the production process.
- demonstrate the ability to create 2D and 3D effects that appear realistic and believable.
- demonstrate the ability to create animations using typography and graphics.
- demonstrate the ability to integrate camera work into a project, enhancing the subject and concept.

BACHELOR OF ARTS IN VISUAL EFFECTS & MOTION GRAPHICS

Typical Course Sequence

Subject to change without notice at the discretion of the school.

		Lecture Hrs.	Lab Hrs.	Contact Hrs.	Credits	No. of Weeks
AR111	Fundamentals of Design◇	22	22	44	3	11
AR121	Perspective◇	22	22	44	3	11
AR131	Principles of Photography◇	22	22	44	3	11
AR181	Color Theory◇	22	22	44	3	11
AR241	3D Design◇	22	22	44	3	11
ARH107	Art History**	44	0	44	4	11
CG131	Image Manipulation◇	22	22	44	3	11
CG135	Traditional Typography◇	22	22	44	3	11
CG215	Advanced Image Manipulation◇	22	22	44	3	11
CG221	Broadcast Graphics ◇	22	22	44	3	11
CG231	Digital Audio/Video ◇	22	22	44	3	11
COM201	Speech **	44	0	44	4	11
DF121	Intermediate Video Production◇	22	22	44	3	11
DF131	Fundamentals of Lighting◇	22	22	44	3	11
DF211	Fundamentals of Editing◇	22	22	44	3	11
DF215	Intermediate Editing◇	22	22	44	3	11
DM111	Sound Design◇	22	22	44	3	11
DM341	Media Compositing◇	22	22	44	3	11
ENG101	English Composition**	44	0	44	4	11
EX400	Externship++	0	0	90	3	11
FX211	Matte Painting◇	22	22	44	3	11
FX221	2D Motion Studies◇	22	22	44	3	11
FX231	Storyboarding◇	22	22	44	3	11
FX241	Digital Matte◇	22	22	44	3	11
FX321	3D Effects◇	22	22	44	3	11
FX331	Production Management◇	22	22	44	3	11
FX341	Compositing I◇	22	22	44	3	11
FX351	Advanced Sound Design◇	22	22	44	3	11
FX371	Production Studio I◇	22	22	44	3	11
FX381	Motion Design◇	22	22	44	3	11
FX391	Interactive Visual Design◇	22	22	44	3	11
FX411	Post-Production Management◇	22	22	44	3	11

FX421	Production Studio II◇	22	22	44	3	11
FX431	Compositing II◇	22	22	44	3	11
FX441	Special Topics for Effects++	22	22	44	3	11
GR121	Graphic Symbolism◇	22	22	44	3	11
HIS301	U.S. History	44	0	44	4	11
HUM100	Sensory Language and Culture**	44	0	44	4	11
MA115	Principles of 3D Modeling◇	22	22	44	3	11
MA175	2D Animation Principles◇	22	22	44	3	11
MA215	Principles of 3D Animation◇	22	22	44	3	11
MA230	Hard Surface and Organic Modeling◇	22	22	44	3	11
MA260	Materials and Lighting◇	22	22	44	3	11
MA295	Digital Design and Motion◇	22	22	44	3	11
MA440	Portfolio Pre-Production◇	22	22	44	3	11
MA490	Portfolio Production◇	22	22	44	3	11
MAT104	College Algebra**	44	0	44	4	11
PHI201	Critical Thinking**	44	0	44	4	11
PHI421	Ethics**	44	0	44	4	11
VP111	Video Camera & Lighting Techniques◇	22	22	44	3	11
VP115	Introduction to Audio◇	22	22	44	3	11
	General Education Elective, 4-credit	44	0	44	4	11
	General Education Elective, 4-credit	44	0	44	4	11
	General Education Elective, 4-credit	44	0	44	4	11
	General Education Elective, 4-credit	44	0	44	4	11
	General Education Elective, 3-credit	22	22	44	3	11
	General Education Elective, 3-credit	22	22	44	3	11
	Totals without Externship Elective	1496	968	2463	180	132
	Totals with Externship Elective	1474	946	2510	180	132

◇ = Area of Concentration; ** = General Education ++Program Elective: FX441 or EX400 Externship

Visual Effects & Motion Graphics, Bachelor of Arts Degree

Qtr	A	B	C	D	E
1	AR111 Fundamentals of Design Prereq: None	CG135 Traditional Typography Prereq: None	AR121 Perspective Prereq: None	VP111 Video Camera and Lighting Techniques Prereq: None	ENG101 English Composition Prereq: DEV001 or Accuplacer
2	AR181 Color Theory Prereq/Coreq: AR111	FX231 Storyboarding Prereq: AR101	CG131 Image Manipulation Prereq/Coreq: Satisfactory score on Institute placement exam	AR131 Principles of Photography Prereq/Coreq: CG131	MAT104 College Algebra Prereq: DEV002 or Accuplacer
3	MA175 2D Animation Principles Prereq: AR101	MA115 Principles of 3D Modeling Prereq: CG131	CG221 Broadcast Graphics Prereq: CG131	DF121 Intermediate Video Production Prereq: VP111	HUM100 Sensory Language and Culture Prereq: None
4	MA230 Hard Surface and Organic Modeling Prereq: MA115	DF211 Fundamentals of Editing Prereq: VP111; Co-req: DF121	CG215 Advanced Image Manipulation Prereq: CG131	GR121 Graphic Symbolism Prereq: CG141, GR112 or CG221	PHI201 Critical Thinking Prereq: None
5	AR241 3D Design Prereq: AR181	MA215 Principles of 3D Animation Prereq: MA115	CG231 Digital Audio/Video Prereq: CG221	VP115 Introduction to Audio Prereq: None	ARH107 Art History Prereq: ENG101
6	FX221 2D Motion Studies Prereq: MA175, CG231	DF131 Fundamentals of Lighting Prereq: VP111	FX211 Matte Painting Prereq: AR121	DF215 Intermediate Editing Prereq: DF121, DF211	COM201 Speech Prereq: ENG101 and HUM100/HUM231
7	FX241 Digital Matte Prereq: FX211	FX321 3D Effects Prereq: MA215	DM341 Media Compositing Prereq: CG231	MA295 Digital Design and Motion Prereq: CG131	HIS301 U.S. History Prereq: ENG101 and HUM100/HUM231
8	FX331 Production Management Prereq: AD Approval	MA260 Materials and Lighting Prereq: MA115	FX341 Compositing I Prereq: DM341	DM111 Sound Design Prereq: VP115	General Education Elective 4-credit
9	FX411 Post-Production Management Prereq: FX331	FX371 Production Studio I Prereq: FX331	FX381 Motion Design Prereq: FX341	FX391 Interactive Visual Design Prereq: MA295	General Education Elective 4-credit
10		FX421 Production Studio II Prereq: FX371	FX431 Compositing II Prereq: FX341	FX351 Advanced Sound Design Prereq: DM111	General Education Elective 4-credit
11	MA440 Portfolio Pre-Production Prereq: AD approval	Elective Option: EX400 Externship or FX441 Special Topics for Effects Prereq: 11 th quarter		General Education Elective 3-credit	General Education Elective 4-credit
12	MA490 Portfolio Production Prereq: MA440			PHI421 Ethics Prereq: ENG101, HUM100/HUM231, PHI201	General Education Elective 3-credit

Typical Course Sequence-Subject to change at the discretion of the school

COURSE DESCRIPTIONS

AR111 FUNDAMENTALS OF DESIGN

3 Credits

Prerequisites: None

The creative process is introduced using the visual elements of art to provide the student with a firm, workable foundation in design. This class is fundamental in learning how to make appropriate design decisions while organizing visual space. A variety of concepts, materials, and techniques are used to investigate the aesthetic, scientific, and psychological properties of design.

AR121 PERSPECTIVE

3 Credits

Prerequisites: None

Basic one-, two-, and three-point mechanical perspective with an emphasis on three-dimensional space perception is introduced in this course. Students learn the use of basic art and drafting tools.

AR131 PRINCIPLES OF PHOTOGRAPHY

3 Credits

Prerequisite or Concurrent: CG131 Image Manipulation

This course introduces beginning students to the technical aspects of photography. Students complete photographic assignments related to basic camera operation and exposure control through the use of traditional and digital photographic techniques. This course does not include darkroom experience.

AR181 COLOR THEORY

3 Credits

Prerequisite or Concurrent: AR111 Fundamentals of Design

The creative process is introduced using the visual elements of both additive and subtractive color and the basic principles of design. The psychological and cultural aspects of color will be examined in making appropriate design decisions. Color concepts used in a variety of disciplines will be explored. Students will be able to utilize the basic principles and elements of design theory as they apply to assigned projects.

AR241 - 3D DESIGN

3 credits

Prereq: AR181 Color Theory

This studio course explores three-dimensional form and space, and introduces students to the materials, techniques, and ideas that comprise the world of natural and artificial objects. The process begins with a study of concepts, materials, and observations. It continues through lectures, demonstrations, critical analyses, and class discussion.

ARH107 ART HISTORY

4 Credits

Prerequisite: ENG101 English Composition

This course presents a comparative study and comprehensive presentation of visual images and design that chronicles the socioeconomic, political, technical, and philosophical evolution of Western Civilization from ancient times to the present. Students solve assigned design problems to demonstrate their understanding of art history.

CG131 IMAGE MANIPULATION

3 Credits

Prerequisite: Satisfactory score on Institute placement exam

This course is designed to examine photo-retouching and image manipulation using computers. Employing software applications to scan original artwork, photos, or public domain images from CD-ROMs, students will use filtering capabilities, interactive brightness and contrast controls, and other image manipulation tools to enhance and retouch the images.

CG135 TRADITIONAL TYPOGRAPHY

3 Credits

Prerequisite: None

Students are introduced to the history of type. Relationships of letters, space, fonts, and type systems will be studied and applied. Students will style text and letterforms and incorporate type in compositions. This class is fundamental in learning how to make appropriate type and design decisions while organizing visual space.

CG215 ADVANCED IMAGE MANIPULATION

3 Credits

Prerequisite: CG131 Image Manipulation

This course is designed to further enhance the skills acquired in previous image manipulation and technology-based classes. Emphasis will be placed on advanced applications in the appropriate selection of variables for the project. Integration of programs to achieve a required product will also be emphasized.

CG221 BROADCAST GRAPHICS

3 Credits

Prerequisite: CG131 Image Manipulation

The basic elements, principles, and attributes of design will be utilized to mechanically and digitally produce letters, numbers, symbols, and shapes. Students will apply storyboarding, typography, and logo design principles to create graphics for video, animation, multimedia, and Web design projects.

CG231 DIGITAL AUDIO /VIDEO

3 Credits

Prerequisite: CG221 Broadcast Graphics

Sound and video are critical ingredients in the production of successful visual presentations. Students use digital sound and video editing equipment to organize audio and video clips to custom design video and narration to fit their media productions.

COM201 SPEECH

4 Credits, General Education

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities

Students will learn how to communicate their ideas effectively to others through visual and oral presentations. Students will learn how to present and assimilate information logically and effectively, using available resources and demonstrating professional performance.

DF121 INTERMEDIATE VIDEO PRODUCTION

3 Credits

Prerequisite: VP111 Video Camera & Lighting Techniques

This course introduces the student to the digital video camera as a technical and creative tool for communication. Students will recognize the principles of visual design for motion pictures, develop their ability to evaluate the visual potential of locations, interpret the technical requirements of motion picture photography, and operate professional video cameras.

DF131 FUNDAMENTALS OF LIGHTING

3 Credits

Prerequisite: VP111 Video Camera & Lighting Techniques

Students in this course will learn about the basic physics of light and electricity as it relates to different film and video lighting applications in the field. This will include the qualities and colors of light from different sources and angles, and the basic techniques to match or manipulate them. The focus will be on field lighting with portable light kits and reflectors to light people and objects in a variety of situations. The basic differences between field lighting equipment and studio lighting will also be covered.

DF211 FUNDAMENTALS OF EDITING

3 Credits

Prerequisite: VP111 Video Camera & Lighting Techniques Co-Requisite: DF121 Intermediate Video Production

Students are introduced to various editing processes including cuts-only, A/B roll, offline, and non-linear editing. Students also learn project management, how the editing process begins in program design and preproduction, and how it continues through production to the final edit.

DF215 INTERMEDIATE EDITING

3 Credits

Prerequisite: DF121 Intermediate Video Production, DF211 Fundamentals of Editing

This course explores online editing including A/B roll, SMPTE time code, video effects, audio mastering, and character generator capabilities. Emphasis is placed on artistic, ethical, and technical considerations. Utilizing non-linear editing systems, students explore the applications of desktop editing and special effects in video applications.

DM111 SOUND DESIGN

3 Credits

Prerequisite: VP115 Introduction to Audio

This course focuses on voice, music and sound effects, and the impact they have on the visual image. It also explores the various methods and techniques for digital sound composition and design. Students will focus on using digital sound systems and manipulating sound elements for intended effects in media content.

DM341 MEDIA COMPOSITING

3 Credits

Prerequisite: CG231 Digital Audio/Video

Focused on concepts and techniques of compositing and integration, this course enables students to assemble media content elements for overall design and prepare the final product for delivery. Students will learn to manage various digital media files and process them to finalize the media content design.

ENG101 ENGLISH COMPOSITION

4 Credits

Prerequisite: DEV001 Developmental Composition or satisfactory score on Institute placement exam

This course emphasizes the planning, writing, and revision of compositions, including the development of critical and logical thinking skills. Essays demonstrate expressive and informative writing, as well as analytical, evaluative, and persuasive writing.

EX400 EXTERNSHIP

3 Credits

Course prerequisites: Completed nine quarters of study; A CGPA of 2.5 and Academic Director Approval. Culinary Arts student must have completed nine quarters and Academic Director approval.

Students may choose as an elective to participate in an externship program by working part-time with cooperating employers. Field experience in the student's area of interest is gained by applying competencies learned in previous courses. Coordinated by Career Advisors, administered by Academic Directors, and evaluated by Faculty advisors, the experience enhances the student's overall understanding of his/her chosen field.

FX211 MATTE PAINTING

3 credits.

Prerequisites: AR121 Perspective

Starting with traditional painting and set design techniques for creating matte paintings incorporated into a broadcast or film effect, students will design backgrounds, environments, and scenery creations. This course will also introduce students to the history of matte painting.

FX221 2D MOTION STUDIES

3 credits.

Prerequisites: MA175 2D Animation Principles and CG231 Digital Audio/Video

This course begins with an overview of the history of visual effects with emphasis on the various effects processes in their historical contexts. It continues with discussions of the fields of post-production, animation, and broadcast graphics. Students conduct analysis of major sectors of those industries, and career opportunities within them.

FX231 STORY BOARDING

3 Credits

Prerequisite: AR101 Fundamentals of Drawing

This course focuses on planning for complex layered composites. Students will apply industry-standard storyboarding and scripting techniques to visual effects. Contents to be covered include purposes and formats of storyboards, basic terminology and concepts used in storyboarding, and the application of storyboarding techniques to the creation of storyboards with or without a written script.

FX241 DIGITAL MATTE

3 credits

Prerequisites: FX211

Utilizing various painting and compositing packages, students will learn the principles of rotoscoping and digital painting as applied to rig removal, special effects, and background elements.

FX321 3D EFFECTS

3 credits

Prerequisites: MA215 Principles of 3D Animation

Using a 3D modeling program, students will practice building particle systems for use in compositing, as well as particle dynamics, space warps, and special effects such as combustions and explosions. Students will also use 3D lighting to match real-world lighting.

FX331 - PRODUCTION MANAGEMENT

3 credits.

Prerequisites: Academic Director approval

Students will learn to manage the production process. They will develop skills in managing clients and personnel. Students will discover the critical nature of pre-planning and organization. The course will explore the various technical and artistic issues that affect a project. Students will understand the financial implications of project management. Skills will be developed in establishing timelines and deadlines.

FX341 COMPOSITING I

3 credits.

Prerequisites: DM341 Media Compositing

This course will explore various techniques to create and implement Computer Graphic Images (CGI) into live action. The course will explore various methods of compositing concepts to enhance and expand productivity. Emphasis will be placed on creating Computer Graphic (CG) environments and integrating elements into live action.

FX351 ADVANCED SOUND DESIGN

3 Credits

Prerequisite: DM111 Sound Design

A survey of advanced topics relating to sound for video including the audio post-production process, sound synchronization, multi-channel surround mixing, complex sound effect creation and sound design, advanced music and dialogue editing are covered in this class.

FX371 PRODUCTION STUDIO I

3 credits.

Prerequisites: FX331

In this course, two group projects will be produced. Students will build upon previously learned foundation skills in broadcast design and visual effects by simulating a real world production environment. The emphasis will be placed

on the competitive and collaborative aspects of broadcast design production, as well as various professional methods, procedures, techniques, skills, resources, and equipment.

FX381 MOTION DESIGN

3 credits.

Prerequisites: FX341

In this course, students will utilize advanced broadcast and corporate motion graphics techniques. The class will reinforce client relations, media design, compositing, and digital video production. Assignment work will incorporate type design, animation, live action, video, and editing to produce a client-specific production.

FX391 INTERACTIVE VISUAL DESIGN

3 Credits

Prerequisite: MA295 Digital Design & Motion

Interactive Visual Design is a mastery level course encompassing broadcast design skills and information architecture as utilized in convergence media such as DVD and WebTV.

FX411 POST-PRODUCTION MANAGEMENT

3 credits.

Prerequisites: FX331

This course is a continuation of Production Management. In this class, students will organize into a production company that analyzes, documents, and produces a client-driven project.

FX421 PRODUCTION STUDIO II

3 credits

Prerequisites: FX371

3 credits. This course is designed to expose students to the disciplines used in animation and related industries. In this course, students will work as a production team to continue developing the full station ID (including bumpers, trailers, interstitials, openings, commercials, and lower thirds) that they started in the previous quarter.

FX431 COMPOSITING II

3 credits.

Prerequisites: FX341

This course introduces students to the various methods of matching the motion shot on a live-action plate and applying that motion to a digital element. 2D and 3D tracking methods will be introduced. This course will also introduce students to morphing technology and methods by which elements can be seamlessly blended together within the frame.

FX441 - SPECIAL TOPICS FOR EFFECTS

3 credits.

Prerequisites: None

Topics are based upon important trends and developments in visual special effects (VFX). Lectures, demonstrations, or research reports pertaining to areas of interest in VFX are presented by resident faculty, expert visitors, and working professionals. Group projects may also be assigned. Study and discussion of computer hardware, operating systems, networking, programming languages, inter-active digital media, streaming media, HDTV, entrepreneurship, marketing, workgroup organization, and film industry are but a few possible topics that may be covered. This course allows the student to select special topics in VFX and produce, under the guidance of an instructor, work related to the industry. The student will also be exposed to the various applications of VFX and apply VFX skills to chosen topics.

GR121 GRAPHIC SYMBOLISM

3 Credits

Prerequisite: CG141 Digital Typography, GR112 Layout Design, or GR221 Digital Layout

This course trains the student to communicate in symbolic terms. It focuses on the understanding of symbols and their relationship to society through research of historical and current symbols. Highly simplified images, abstract shapes, and typography are used in the development of trademarks, logos, and pictograms.

HIS301 U.S. HISTORY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture or HUM231 Humanities
This course will examine the history of the United States by exploring the origins of contemporary American culture, its institutions, and its values.

HUM100 SENSORY LANGUAGE & CULTURE

4 Credits

Prerequisite: None

The media revolution communicates through images and sound, as much as it does through the written word. This course, combining competencies in Humanities, Psychology, and Art Survey, will introduce the student to the ways in which we experience our surroundings through sensation and perception. Strategies of interpretation and theories of visual and artistic logic are introduced.

MA115 PRINCIPLES OF 3D MODELING

3 Credits

Prerequisite: CG131 Image Manipulation

Students in this course learn the skills to produce three-dimensional models in a computer-based environment.

MA175 2-D ANIMATION PRINCIPLES

3 Credits

Prerequisite: AR101 Fundamentals of Drawing

Students will study timing and weight through a series of projects designed to demonstrate the principle of animation. Issues such as key framing, in-betweening, and cycling will be addressed.

MA215 PRINCIPLES OF 3D ANIMATION

3 Credits

Prerequisite: MA115 Principles of 3D Modeling

In this course, students are introduced to basic 3D animation techniques. Topics to be covered are key framing, squash and stretch, motion control, basic dynamics, hierarchical linking, pivot points, morphing, animated textures, lights, and cameras.

MA230 HARD SURFACE & ORGANIC MODELING

3 Credits

Prerequisite: MA115 Principles of 3D Modeling

This course covers advanced modeling techniques used for building organic and hard surface objects and environments.

MA260 MATERIALS & LIGHTING

3 Credits

Prerequisite: MA115 Principles of 3D Modeling

In this class, students will be introduced to materials, textures, and lighting strategies to add detail and realism to objects without adding complexity to the model. Students will simulate real-world surfaces containing reflection, grandiosity and other effects.

MA295 DIGITAL DESIGN & MOTION

3 Credits

Prerequisite: CG131 Image Manipulation

This course provides students a comprehensive foundation in a vector-based environment that facilitates the integration of graphics, animation, text, video, audio, and interactive Web content. Students will explore the role of preproduction planning and output considerations in the production of projects based on client criteria.

MA440 PORTFOLIO PREPRODUCTION

3 Credits

Prerequisite: Academic Director approval

In this course, students focus on the preproduction phase of their digital portfolio. Through class activities, students organize their work to reflect and enhance their individual strengths in computer animation.

MA490 PORTFOLIO PRODUCTION

3 Credits

Prerequisite: MA440 Animation Portfolio Production

Through this course, students complete the digital portion of their portfolio. The students assess the strengths and weaknesses of their work to augment the final presentation. The course stresses the importance of professional presentation.

MAT104 COLLEGE ALGEBRA

4 Credits

Prerequisite: DEV002 Essentials of Math or satisfactory score on Institute placement exam

This course includes the necessary skills to solve algebraic problems, graph algebraic functions, and simplify complex algebraic expressions.

PHI201 CRITICAL THINKING

4 Credits

Prerequisite: None

This course is designed to assist students in becoming more effective learners. Content focuses on identifying and developing skills, processes, and techniques for effective assimilation of knowledge. Reasoning principles for critical analysis and evaluation of thought and discourse will be explored. Students learn to apply creative and critical techniques in problem solving and decision-making.

PHI421 ETHICS

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanites, PHI201 Critical Thinking

Students participate in an examination of human life, experience, and thought in order to discover and develop the principles and values of pursuing a more fulfilled existence. Theories designed to justify ethical judgments are applied in a selection of contemporary personal and social issues.

VP111 VIDEO CAMERA & LIGHTING

3 Credit

Prerequisite: None

This course introduces students to various technical aspects of this dynamic and versatile career path. Students examine the basic techniques of preproduction and production including lighting, cameras, lenses, mounting equipment, framing and composition, videotape, VCRs, studio facilities, and personnel. Using video recorders and players, the techniques of dubbing, assembling, and inserting visuals and sound from source to source are also practiced.

VP115 INTRODUCTION TO AUDIO

3 Credits

Prerequisite: None

This course investigates the principles of recording sound. Introduction to Audio includes the study of sound characteristics, basic acoustics, ergonomics, and basic techniques for field recording. Waveform physics and psychoacoustics are also covered. The role of sound in video production is explained and demonstrated.

GENERAL EDUCATION ELECTIVES

ARH201 RENAISSANCE & BEYOND

4 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, ARH107 Art History

This course introduces students to the art of the Renaissance, Mannerism, Baroque, Neoclassic, and Romantic periods. Students are exposed to a wide variety of artworks in the context of history, theory, and biography. Field trips and guest lecturers may be employed to enhance course material.

ARH221 AFRICAN-AMERICAN ART

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, ARH107 Art History

This course presents selected topics on African Americans in the visual arts, including the history of African Americans' achievements and struggles in the visual arts, and varied ways of thinking and writing about African Americans, art, and culture. Topics will include but are not limited to: African- American Folk Art and Slavery; African- American Art After Emancipation; African- American Art and the Harlem Renaissance; African-American Art and the Civil Rights Movement; African-American Women Artists; and collecting African-American Art. This course will utilize the eCompanionsystem for class research links, email communications, discussions, and paper submissions.

ARH311 19TH & 20TH CENTURY ART

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, ARH107 Art History

Students are exposed to a wide variety of artworks in the context of history, theory, and biography from 1851 to the present. This class introduces the beginnings of modernity through specific art movements including Realism, Cubism, Futurism, Surrealism, Dada, Abstract Expressionism and Pop Art.

ARH401 OUTSIDER ART

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, ARH107 Art History

This course will address aesthetic, historical, cultural, and political aspects of art forms including the art of visionaries, eccentrics, psychotics, and others who do not look to the history of art as a point of reference.

AST321 ASTRONOMY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, any lower level MAT course

Students study the macroscopic physical universe, including our planetary system, star systems and lifecycles, and theories of origin. Techniques of measurement, dating, and scale will be explored. Field trips may be included to enhance course material.

BOT321 BOTANY

3 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, MAT104 College Algebra

This course will address the role of plants in the world ecosystem, including temporal, cultural, and economic uses for food, medicines, and industrial products. Plant function and structure will be examined, as well as the interrelationships between plants and people.

CHM201 CHEMISTRY

4 Credits

Prerequisite: MAT104 College Algebra

Students will learn basic composition, structure, and properties of substances and will investigate the transformations that occur within them. Consideration will be given to the classification of matter, Atomic Theory, stoichiometry, aqueous solutions, gases, liquids, solids, energy, electronic structure of atoms, chemical bonding, equilibrium, acid and bases, and thermodynamics.

ECO231 ECONOMICS

3 Credits

Prerequisite: MAT104 College Algebra

This course provides an introduction to the principles of economics, emphasizing an analysis of the economy as a whole. Interrelationships among the consumer, business, and government sectors are explored from American and international economic perspectives.

ENG291 NON-FICTION WRITING

4 Credits

Course Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities

This course is designed to offer students the practical ability to communicate technical aspects of various industries to diverse audiences. Students will learn how to analyze technical objects and processes, and will write reports, manuals, and end user instructions. They will enhance their writing skills using clear and concise language, integrating text with graphics, and designing documents.

ENG321 WORLD LITERATURE

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities

This course expands and refines the objectives of English Composition. It emphasizes critical- and logical-thinking skills, reading comprehension, problem definition, research strategies, as well as analytical, evaluative, and/or persuasive writing.

ENG322 LITERATURE

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities

This course emphasizes the examination of various literary selections. Topics include the short story, poetry, plays, and the novel. Critical analysis of texts will be accomplished through discussion, essays, and research of literary topics, authors, and selections.

ENG326 CONSTRUCTION OF A MYSTERY

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities

This course is designed to investigate the elements and principles of building the effective “who-, what- and why-dunnit.” It trains the student sleuth in the methods of mystery construction and deconstruction. Not only will the student hone practical writing abilities and learn applicable formulae of the medium, but he/she will also be introduced to the methods of investigation used by professionals in solving some of the great mysteries of our time.

ENG331 JOURNALISM

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM Humanities

This course will give students a foundation in the skills and concepts of journalism, including reporting, writing, editing, design, and ethics for print and electronic media. Students will focus on the philosophy of ethical journalism and its function in society. Students will build teamwork, writing, and analytical skills, while gaining a greater understanding of the structural and business aspects of journalism.

ENG400 SCIENCE FICTION LITERATURE

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities

This course is designed to examine the genre of science fiction writing. Through a varied selection of science fiction short stories, students will read and critically analyze the creative process and uses of this specialized style of writing.

ENG401 CREATIVE WRITING

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMAN231 Humanities

In this course, students will address the technical components and structure of the creative writing process, from the stimulation of imagination through the final editing stages. Formality and aesthetics will be combined in the creation of original works using various formats. Workshops, including discussion, interpretation, and creative and critical written response, are emphasized.

ENG411 THE NOVEL

4 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMAN231 Humanities

In this course, students examine works in the genre of literary production called the novel. The novel is contrasted with other literary formats and understood in historical context. This course invites students on a quest to envision how authors create “maps of the human heart in their fiction.” Students will also explore how the novel creates a sense of community for readers.

ENG491 MYTHOLOGY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMAN231 Humanities

Mythology studies the myths and legends of civilizations that influenced the development of the English-speaking world. The course includes a comparison of the myths of other cultures.

ENV411 ENVIRONMENTAL SCIENCE

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUMAN231 Humanities, PHI201 Critical Thinking

This course is an introduction to the study of the physical environment and some of the major related issues and problems. Areas of concern include the nature of the environment, climactic factors, natural resources, solid and hazardous waste, pollution, global environmental hazards, and energy production. These topics are studied in relation to population, land use, environmental ethics, decision making, and environmental management.

HIS311 WORLD CIVILIZATION

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMAN231 Humanities

In this course, students will explore the cultural, intellectual, economic, scientific, and political trends that have shaped the historical development of humankind.

HIS325 WORLD CONFLICT

4 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMAN231 Humanities

Students will explore the concepts of cooperation, competition and conflict on a variety of levels. Specific areas of the world will be chosen to illustrate the effects of natural resources, religion, population, technology, and politics on human cooperation. Emphasis will be placed on analysis of current world conflict.

HIS331 GOVERNMENT & POLITICS

4 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities
This course develops skills for understanding and analyzing political and governmental functions in the contemporary world. The students will examine the role of government, political institutions, procedures and processes, policy issues, solutions, popular values, and participation, in terms of political stability and change, ideologies, conflict, institutions, and issues.

HIS341 HISTORY OF POPULAR CULTURE

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities
The development of popular entertainment owes much to American myths, icons, heroes, and institutions, as represented in American popular culture from the late nineteenth century to the present. Students examine the history of these art forms through popular novels, films, radio programs, songs, and television.

HIS345 NATIVE AMERICAN STUDIES

3 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities
This course will survey systems of relationships between human beings and nature in the Native American cultures. Topics will include concepts of power, spirituality, ceremonialism, ethical systems, politics, and social problems and education that have impacted historical and contemporary communities.

HIS411 ALTERNATE THEORIES IN GOVERNMENT

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, any lower level history course
This course will provide a comparative view of the history and goals of government from a non-traditional perspective. Students will be introduced to theories encompassing extremist views, and will be challenged to judge for themselves the realities of world politics and their impact on diverse societies. Guest speakers and field trips may be employed in support of course material.

HIS450 JAPANESE POP CULTURE

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities
The development of popular entertainment owes much to Japanese myths, icons, heroes, and institutions as represented in Japanese popular culture from the late nineteenth century to the present. Students examine the history of these art forms through popular novels, films, radio programs, songs, and television.

HUM211 FILM & SOCIETY

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities
This course examines twentieth-century culture and society through film. Students will critically analyze how cultural and social conflicts are portrayed and worked out in popular films, and examine how motion pictures create a window into modern society. Students will also learn how to read film as cultural texts to better understand history and culture manifestations.

HUM231 HUMANITIES

4 Credits

Prerequisite: None
Students perform a comparative study of the humanities through exploration of visual and performing art forms, including painting, sculpture, photography, literature, film, music, drama, and dance. Each genre is considered from the perspective of historical and cultural contexts through analysis of design elements used in creating works of art involving descriptive, interpretive, and evaluative methods.

HUM301 MUSIC & SOCIETY

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities
After being introduced to basic music theory and music vocabulary, students will explore the role of music in different societies. Students will also analyze how music influences, and is influenced by, language, geography, politics, and other aspects of culture.

HUM311 THEATER

3 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, COM201 Speech

This course explores the development of the theater and performance, as well as presenting various periods of dramatic achievement in an interdisciplinary and international context. Students learn to appreciate the many dimensions of the stage including acting, set design, costume, lighting, direction, and production.

HUM312 STORY TELLING & THE ORAL TRADITION

4 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, COM201 Speech

Students will explore the art of relating stories in the oral tradition. Folklore, fables, fairytales, and legend have, for generations, ensured the permanence of history, culture, theories of origin, admonition, and cultural beliefs. In this course, students will learn the functions, traditions, and methods of passing along history for generations to come.

HUM401 MAGIC & RITUAL

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities

This course initiates the students into the powerful roles played by ritual and magic in various cultures. Magical systems, including those such as Tarot, dream divination, I Ching, and astrology will be studied. Students will reflect on the impact of dreams and rituals, as well as examine notions of an ordinary world through the lens of synchronicity and the magic of daily life. Students will analyze their own personal rituals and tend to the power of dreams through art making, dialogue, and journaling.

HUM450 HONORS SEMINAR IN HUMANITIES

4 Credits

Prerequisite: All required lower level courses in discipline, minimum 3.5 GPA, and approval of Academic Director of General Education.

In this course students will build on their previous humanities experience to explore more advanced topics.

KIN311 KINESIOLOGY

4 Credits

Prerequisite: MAT104 College Algebra

In this course, students study the human body and its major systems, as well as how the body grows, moves, and functions.

LIN201 SPANISH LANGUAGE & CULTURE

4 Credits

Prerequisite: None

Students will explore Spanish culture and the cultures of the countries historically colonized by Spain. Students will survey the political, social, and cultural development of Spain and compare that survey to its past colonies.

Migration of Spanish language and culture will be examined. Conversational Spanish language will be emphasized.

LIN202 SPANISH LANGUAGE & CULTURE II

4 Credits

Prerequisite: LIN201 Spanish Language & Culture

This is a continuation of LIN201, where students will explore the Spanish culture in greater depth, with the emphasis being placed on political, social, and cultural developments, as well as continued conversational Spanish language.

LIN211 FRENCH LANGUAGE & CULTURE

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language and Culture/ HUM231 Humanities

In this course, students will be introduced to French civilization and its historical culture. They will survey philosophical, artistic, political, social, and literary development of the French nation. Students will also be exposed to the French language through conversational activities, music, idiomatic expressions, and proverbs. A study of American and French nuances and differences will be investigated, as well as France's gastronomic culture.

LIN301 LANGUAGE & CULTURE

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities

In this course, students will study the language and culture of a specific people, as determined by the instructor and the quarter offered. In addition to gaining a grasp of basic vocabulary and grammar, students will explore the artistic, political, philosophical, and technical contributions of that culture.

MAT121 TRADITIONAL GEOMETRY

4 Credits

Prerequisites: MAT104 College Algebra

Topics include line, angle, and diagonals in terms of polygons, triangles, quadrilaterals and circles. Students will learn to apply radius, chord, diameter, secant and tangent to circles. Students will also learn to apply sine, cosine, tangent, cotangent, secant, and cosecant to triangles and rectangles. Solid geometry, including prisms, pyramids, cylinders, cones, and spheres, will be studied.

MAT450 HONORS SEMINAR IN MATHEMATICS

4 Credits

Prerequisite: All required lower level courses in discipline, minimum 3.5 GPA, and approval of Academic Director of General Education

In this course, students will build on their previous mathematics experience to explore more advanced topics.

PHI311 MYTH & SYMBOL

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities

Through reading and discussion of the myths and symbols of ancient, pre-industrial, and contemporary societies, students focus on diverse systems for organizing human experience. The course is interdisciplinary, comprising anthropology, psychology, literature, and religion in pondering questions of origins and the concept of heroism. Students learn to recognize the mythological patterns at work in modern society and artwork.

PHI321 BELIEF SYSTEMS & SPIRITUALITY

3 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, PHI201 Critical Thinking

Students will explore humanity's enduring interest in the sacred, and its need to understand the relationship between the created order and a creator. Students will discuss the questions of faith, meaning, purpose, and community, as well as analyze how different cultures have responded to those questions.

PHI401 WORLD RELIGIONS

3 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/HUM231 Humanities, ARH107 Art History

This course presents an overview of various faiths in addition to those Western, including their theology, history, sacred texts, and ritual. It is designed to broaden perspectives and encourage understanding of the numerous institutions by which people exhibit and practice their beliefs. Included among topics to be covered are Zoroastrianism, Hinduism, Buddhism, Judaism, Christianity, Islam, Sikhism, and Unitarianism. The course will introduce students to the concept of interfaith dialogue.

PHI421 ETHICS

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMANITIES, PHI201 Critical Thinking

Students participate in an examination of human life, experience, and thought in order to discover and develop the principles and values of pursuing a more fulfilled existence. Theories designed to justify ethical judgments are applied in a selection of contemporary personal and social issues.

PSY261 PSYCHOLOGY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMANITIES

This course is designed to introduce the student to the nature of psychology. Topics discussed include aspects of human development, personality theory, psychological aspects of stress, and the psychology of learning, creativity, and motivation. The course will provide, through both content and methodology, insight into human behavior and self-awareness.

PSY301 DEVELOPMENTAL PSYCHOLOGY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMANITIES

Developmental Psychology surveys research and theory on human life-span development. The course will examine social, cognitive, emotional, and physical aspects of development from conception to death.

PSY311 PSYCHOLOGY OF DIVERSITY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMANITIES

This course reviews theories and research on human diversity with a focus on populations within the United States. Examination of diversity will include culture, ethnicity, race, gender, age, sexual orientation, religion, and physical challenges such as deafness and physical size. Effective interaction among cultures requires a learned appreciation for the perspectives of people from divergent backgrounds. Through a combination of social psychology, group dynamics, personal exploration, and community involvement, the course serves to develop skills to increase the student's appreciation of our diverse world.

PSY321 DEVIANT SOCIAL BEHAVIOR

4 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMANITIES

Abnormal Psychology examines those disorders that are perceived as deviations from normal behavior. Included among those behaviors and phenomena are disorders associated with mood, personality, anxiety, and organic mental disorders. In addition to understanding the components, symptoms and manifestations of deviant behaviors, students will gain perspective in their diagnosis, treatment, and impact upon society as a whole.

PSY322 FORENSIC PSYCHOLOGY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUMANITIES

The focus of this course will be on examining the relationship between the practice of psychology and the functioning of the legal system. The course surveys such aspects of forensic psychology as assessment,

treatment, and consultation services. Practical clinical issues will be highlighted, as well as the relevant aspects of legal evidentiary process and procedure. Students will gain an understanding of the ways psychology can assist and influence the legal system, with special emphasis being placed on ethical issues in forensic practice.

PSY401 INTERPERSONAL COMMUNICATIONS

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities

This course covers the theory and practice of communication skills that affect day-to-day interactions with other persons. Topics may include using verbal and nonverbal symbols, interactive listening, resolving interpersonal conflict, and developing and maintaining personal and professional relationships.

SCI450 HONORS SEMINAR IN SCIENCE

4 Credits

Prerequisite: All required lower level courses in discipline, minimum 3.5 GPA, and approval of Academic Director of General Education

In this course, students will build on their previous science experience to explore more advanced topics.

SOC201 CULTURAL ANTHROPOLOGY

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities

This course introduces cultural anthropology as a sub-field of anthropology. Emphasis is on the diversity of cultural patterns throughout the world and the essential humanity of all people. Students will study a variety of social structures found among peoples of different technological, geographical, historical, and cultural settings.

SOC211 SOCIAL CULTURAL EXPRESSION

4 Credits

Prerequisite: ENG101 English Composition, HUM100 Sensory Language and Culture/ HUM231 Humanities

This course seeks to explore the history, customs, social interaction, heritage, and regionalism of a specific people. Each quarter, a different culture is selected for in-depth research and examination. Students will gain perspective on numerous aspects of a given culture and will make comparisons between that culture and their own, enabling them to develop a greater understanding of the implications of diverse processes of socialization.

SOC301 PHYSICAL ANTHROPOLOGY

3 Credits

Prerequisites: ENG101 English Composition, HUM100 Sensory Language & Culture/ HUM231 Humanities

This course introduces physical anthropology as a sub-field of Anthropology that centers on the biological adaptation of humans and nonhuman primates. It focuses on patterns of human biological variation and evolution.

SOC450 HONORS SEMINAR IN SOCIAL/BEHAVIORAL SCIENCE

4 Credits

Prerequisites: All required lower level courses in discipline, minimum 3.5 GPA, and approval of Academic Director of General Education

In this course, students will build on their previous social/behavioral science experience to explore more advanced topics.