

# COMMUNICATION ARTS, BACHELOR OF FINE ARTS (B.F.A.) WITH A CONCENTRATION IN SCIENTIFIC ILLUSTRATION

The B.F.A. in Communication Arts with a concentration in scientific illustration is designed for students who seek to develop the artistic skills and visual communication strategies necessary to effectively present complex and detailed scientific information. The degree requirements combine art and design courses with science courses to develop a broad base of scientific understanding and refined artistic aptitude.

The communication arts courses for the concentration mirror those for the non-concentration B.F.A., with additional requirements focused on representational drawing of scientific observations. The approved science courses allow students to pursue a focused scientific specialty or a broad understanding of scientific concepts.

Students will need to plan their academic study efficiently in order to include the appropriate science courses into the academic requirements for the B.F.A. degree. Seeking advisement during the process is highly recommended.

A student who intends to establish a professional career in medical illustration should refer to the minor in scientific illustration (<http://bulletin.vcu.edu/undergraduate/arts/communication-arts/scientific-illustration-minor/>).

## Student learning outcomes

- Students will demonstrate proficiency in observational drawing.
- Students will be able to analyze, synthesize and evaluate artwork from conceptualization to completion.
- Students will effectively apply the elements and principles of design to creative solutions.
- Students will demonstrate technical proficiency in a variety of digital and physical media.
- Students will engage with the historical and current contexts of communication arts.
- Students will demonstrate professional best practices and ethical behavior.

## Special requirements

A cumulative GPA of 2.0 in the major is expected for continuance in the program.

## Degree requirements for Communication Arts, Bachelor of Fine Arts (B.F.A.) with a concentration in scientific illustration

Course	Title	Hours
General education ( <a href="http://bulletin.vcu.edu/undergraduate/undergraduate-study/general-education-curriculum/">http://bulletin.vcu.edu/undergraduate/undergraduate-study/general-education-curriculum/</a> )		
Select 12-13 credits from general education foundations and 17-18 credits from areas of inquiry.		30
<b>Major requirements</b>		
• Major core requirements		

COAR 201	Drawing Studies: The Figure Observed	3
COAR 202	Drawing Studies: The Figure in Context	3
COAR 203	Digital 3D Studio	3
COAR 300	Illustration: Drawing and Painting	3
COAR 320	Concept Drawing	3
COAR 321	Sequential Imaging	3
COAR 352	History of Visual Communications I	3
COAR 353	History of Visual Communications II	3
COAR 464	Senior Portfolio	3
CREA 350	Piloting the Enterprise	3
• Additional major requirements		
COAR 332	Digital Drawing	3
COAR 341	Scientific Illustration	3
• Major electives		
COAR upper-division electives		18
<b>Ancillary requirements</b>		
Art Foundation Program		
ARTF 131	Drawing Studio	3
ARTF 132	Surface Research	3
ARTF 133	Space Research	3
ARTF 134	Time Studio	3
ARTF 139	Project Studio	2
or ARTF 138	Project Seminar	
ARTH 103 & ARTH 104	Survey of Art I and Survey of Art II	6
Additional requirements		
BIOL 151	Introduction to Biological Sciences I (satisfies general education BOK for natural sciences and/or AOI for scientific and logical reasoning)	3
BIOZ 151	Introduction to Biological Science Laboratory I	1
CHEM 101	General Chemistry I (satisfies general education BOK for natural sciences and/or AOI for scientific and logical reasoning)	3
CHEZ 101	General Chemistry Laboratory I	1
Science electives (chosen from approved list below)		14
Total Hours		120

The minimum number of credit hours required for this degree is 120.

## Approved science electives

Course	Title	Hours
BIOL 103	Global Environmental Biology	4
BIOL 152	Introduction to Biological Sciences II	3
BIOZ 152	Introduction to Biological Science Laboratory II	1
BIOL 205	Basic Human Anatomy	4
BIOL 320	Biology of the Seed Plant	4
BIOL 322	Economic Botany	3
BIOL 332	Environmental Pollution	3
BIOL 333	Evolution of the Angiosperms	3
BIOL 335	Global Change Biology	3

BIOL 341	Human Evolution	4
ENVS 105	Physical Geology	3
ENVS 201	Earth System Science	3
ENVS 301	Introduction to Meteorology	3
ENVS 310	Introduction to Oceanography	3
PHIS 206	Human Physiology	3
PHYS 101	Foundations of Physics	3
PHYS 107	Wonders of Technology	4

What follows is a sample plan that meets the prescribed requirements within a four-year course of study at VCU. Please contact your adviser before beginning course work toward a degree.

#### Freshman year

Fall semester		Hours
ARTF 131	Drawing Studio	3
ARTF 132	Surface Research	3
ARTF 139	Project Studio	1
or	or Project Seminar	
ARTF 138		
ARTH 103	Survey of Art I	3
UNIV 111	Focused Inquiry I (satisfies general education UNIV foundations)	3
Play course video for Focused Inquiry I		
General education course		3
Term Hours:		16

#### Spring semester

ARTF 133	Space Research	3
ARTF 134	Time Studio	3
ARTF 139	Project Studio	1
or	or Project Seminar	
ARTF 138		
ARTH 104	Survey of Art II	3
UNIV 112	Focused Inquiry II (satisfies general education UNIV foundations)	3
Play course video for Focused Inquiry II		
General education course		3
Term Hours:		16

#### Sophomore year

Fall semester		Hours
BIOL 151	Introduction to Biological Sciences I (satisfies general education BOK for natural sciences and/or AOI for scientific and logical reasoning)	3
BIOZ 151	Introduction to Biological Science Laboratory I	1
COAR 201	Drawing Studies: The Figure Observed	3
COAR 203	Digital 3D Studio	3
COAR 352	History of Visual Communications I	3
Term Hours:		13

#### Spring semester

CHEM 101	General Chemistry I (satisfies general education BOK for natural sciences and/or AOI for scientific and logical reasoning)	3
CHEZ 101	General Chemistry Laboratory I	1
COAR 202	Drawing Studies: The Figure in Context	3
COAR 353	History of Visual Communications II	3
UNIV 200	Inquiry and the Craft of Argument (satisfies general education UNIV foundations)	3
Science electives (chosen from approved list)		3-4
Term Hours:		17

#### Junior year

##### Fall semester

COAR 300	Illustration: Drawing and Painting	3
COAR 332	Digital Drawing	3
COAR upper-division elective		3
General education course		3
Science elective (from approved list)		3-4
Term Hours:		16

##### Spring semester

COAR 320	Concept Drawing	3
COAR 341	Scientific Illustration	3
COAR upper-division elective		3
General education course		3
Science elective (from approved list)		3-4
Term Hours:		15

#### Senior year

##### Fall semester

COAR 321	Sequential Imaging	3
CREA 350	Piloting the Enterprise	3
COAR upper-division elective		6
Science elective (from approved list)		3-4
Term Hours:		15

##### Spring semester

COAR 464	Senior Portfolio	3
COAR upper-division elective		6
General education course		3
Term Hours:		12
Total Hours:		120

The minimum number of credit hours required for this degree is 120.

#### COAR 200. Visual Studies: Drawing. 3 Hours.

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: ARTF 131. A course in drawing from direct observation of specific references: visual analysis, surface light and color, structure, and context. Various painting and drawing media will be explored. Assignments will incorporate applicable references to the history of art and contemporary developments.

**COAR 201. Drawing Studies: The Figure Observed. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: ARTF 131. Enrollment is restricted to communication arts majors. Students will study and explore how to draw from direct observation using the figure as the primary means to understand proportion, volume and spatial relationships. Class will include skeletal structure, basic anatomy and physical aspects of the figure. Various drawing and painting media will be explored. Specific assignments will be informed by the reference and use of the figure in the history of art and contemporary developments.

**COAR 202. Drawing Studies: The Figure in Context. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: ARTF 131. Enrollment restricted to communication arts students. Drawing from direct observation using the figure as the primary means to understand proportion, volume and spatial relationships. Specific problems will include the figure as a dynamic element in different lighting, spatial and conceptual contexts. Various drawing and painting media will be explored. Assignments will incorporate applicable references to the history of art and contemporary developments.

**COAR 203. Digital 3D Studio. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Enrollment is restricted to majors and minors in the Department of Communication Arts. The course focuses on the use of 3D software as a powerful drawing tool and current methodologies. Modeling, surfacing, lighting, rendering and applicability to industry and personal expression will be addressed.

**COAR 210. Visual Studies: Design. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: ARTF 132 and 133. A course in which an understanding of the relationship between form and communication is developed. The student will develop an awareness and appreciation for visual imagery as a tool for the transmission of information and ideas.

**COAR 211. Fundamentals of Typography. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: ARTF 132. An introduction to the study of typography as used in communication arts. Course will include the study of hand-drawn and digital letterforms and their context. Students will be introduced to professional digital methods (e.g., Illustrator).

**COAR 300. Illustration: Drawing and Painting. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 202. Explores and addresses formal, conceptual and technical considerations and issues involved in the use of drawing and painting. Various drawing and painting media will be explored.

**COAR 301. Drawing Studies: The Figure (Intermediate). 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. May be repeated for up to 6 credits. Prerequisite: COAR 201. Drawing from direct observation at the intermediate level using the figure as the primary means to understand proportion, volume and spatial relationships. Various drawing and painting media will be explored.

**COAR 302. Print Media. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 202. An intermediate course in the use of printing processes and techniques to develop communicative imagery. Assignments will incorporate applicable references to the history of art and contemporary developments.

**COAR 303. Color Theory and Practice. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 300. An intermediate course in the application of color theory to specific illustrative problems. A number of color theories, both historical and contemporary, will be studied and applied.

**COAR 304. Illustration Media and Techniques. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 200 and 202. Explores various mixed-media techniques, including both two- and three-dimensional approaches to illustrative problems.

**COAR 305. Figure in Illustration. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 202. An introduction to the visual representation of the human form as it applies to illustration.

**COAR 307. The Face. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 201 and COAR 202. Employing a variety of drawing media, students will explore the nuances of the human face as a subject. This course focuses on both process and the realization of final projects.

**COAR 308. Cut Scene. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Studio course focusing on research and experimentation in specialized visual communication media utilizing consumer electronics.

**COAR 311. Type and Image. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 211. An advanced course that explores graphic design with an introduction to digital methods as a means to express and communicate ideas. Assignments will incorporate applicable references to the history of art and contemporary developments.

**COAR 320. Concept Drawing. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 202. Explores the use of drawing as a tool to communicate concepts. Various painting and drawing media will be explored. Assignments will incorporate applicable references to the history of art and contemporary developments.

**COAR 321. Sequential Imaging. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: junior standing in communication arts. Sequential imagery as applied to books, graphic novel and film storyboarding. Various painting and drawing media will be explored. Assignments will incorporate applicable references to the history of art and contemporary developments.

**COAR 325. Botanical Drawing. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 300. This course explores plant life from direct observation and analytical drawing. Students examine the major divisions and structures of plants and how to depict their unique form.

**COAR 326. Imagery for Science Fiction and Fantasy. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 300 and 320. This course focuses on assignments for science fiction/fantasy subject matter and its various commercial applications.

**COAR 327. Comics and Graphic Novels I. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 201 and COAR 202. This course develops skills essential for visual storytelling through comics and graphic novels.

**COAR 328. Comics and Graphic Novels II. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 327. This course further develops skills essential to expanding understanding of visual storytelling through comics and graphic novels.

**COAR 332. Digital Drawing. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 201 and COAR 202. An intermediate course exploring the use of computer and peripheral devices in the creation of personal work. Students will be introduced to relevant conceptual themes and professional methods and practices.

**COAR 341. Scientific Illustration. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. An introductory course in the development of accurate representational imagery for recording scientific observations and ideas.

**COAR 352. History of Visual Communications I. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Prerequisites: ARTH 103 and 104. An examination of the historical developments in visual communications from cave paintings to modernism.

**COAR 353. History of Visual Communications II. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Prerequisites: ARTH 103 and 104. An examination of the historical developments in visual communications from modernism to the contemporary era.

**COAR 391. Communication Arts Topics. 1-3 Hours.**

Semester course; 1-3 lecture hours. 1-3 credits. May be repeated for a maximum of 12 credits. Topical lectures in design issues and visual communications.

**COAR 392. Research/Individual Study. 1-6 Hours.**

Semester course; 1-2 lecture and 3-6 studio hours. 1-6 credits. May be repeated for a total of 6 credits. Enrollment requires permission of instructor, approval of faculty adviser and chair. The structuring, research, execution and presentation of an independent project in visual communications under the direction of a faculty adviser. The student will be encouraged to become a self-generating problem seeker and solver with the ability to carry out self-stated goals.

**COAR 401. Drawing Studies: The Figure (Advanced). 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. May be repeated for up to 12 credits. Prerequisite: COAR 301 or permission of instructor. Drawing from direct observation at an advanced level using the figure as the primary means to understand proportion, volume and spatial relationships. Various drawing and painting media will be explored.

**COAR 407. Senior Project. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 300 and COAR 320. Enrollment restricted to students with senior status in communication arts. Focuses on the assessment and advancement of studio techniques, methods and practices. Students document and share their decision-making processes in the generation of creative projects.

**COAR 420. Graphic Essay. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: UNIV 200 or HONR 200 and COAR 320. An advanced course that explores the relationship between text and image, and their potential as tools to enable us to create and communicate effectively. Assignments will incorporate applicable references to the history of art and literature.

**COAR 421. Imagery for Children. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 300. An advanced course developing both fiction and nonfiction illustrations intended for the preschool and elementary school children's publishing market.

**COAR 422. Editorial Illustration II. 4 Hours.**

Semester course; 3 lecture and 3 studio hours. 4 credits. Prerequisites: COAR 300 and 320. An advanced course developing the student's skill at interpreting an author's manuscript. The major emphasis is given to illustrations appearing in books and magazines.

**COAR 432. 3D Image and Movement. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 203. Enrollment is restricted to majors in the School of the Arts. Course addresses current technological tools to explore the relationship between image, object and movement.

**COAR 433. Game Design, Theory and Practice. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 203 and COAR 321. Students will study the history, theory and design of games, gaming concepts and narrative from past to present.

**COAR 435. 3D Modeling for Concept Design. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 203 and COAR 320. A focus on the use of high polygraph 3D graphics software as tools to create highly detailed computer models for concept design, movies, broadcast media and games.

**COAR 436. Visual Effects I. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: CINE 217 and COAR 432. Synthesizes prerequisites in 3D modeling, rigging and rendering with an introduction to fundamental skills used in the creation of visual effects. Students will learn basic compositing and the integration of computer graphics and 3D components with live-action plates.

**COAR 437. Visual Effects II. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 436. Continues the instruction and practice of visual effects with advanced techniques for 3D animation and VFX development, including 3D pre-vis, match-moving, dynamics, multi-pass rendering and node-based compositing. Students will explore advanced rendering and compositing techniques for 3D computer graphics.

**COAR 441. Scientific Illustration II. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisite: COAR 341. An advanced course in the development and creation of accurate documentation and representation of scientific information and imagery including plant taxonomy, insect morphology, and physiological and pathological processes.

**COAR 450. Business of Communication Arts. 3 Hours.**

Semester course; 3 lecture hours. 3 credits. Prerequisite: UNIV 200 or HONR 200. The study of business management with an emphasis on ethics and the standards of fair practice including financial and contractual guidelines.

**COAR 462. Projects in Illustration. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: senior standing in communications arts and permission of the instructor. An advanced-level course in conceptualization, execution, realization and documentation as realized through a series of projects in illustration. Students will be required to create, acquire and structure projects that will test their conceptual and technical abilities. Project work will be exhibited, documented or printed. Various drawing, painting and mixed media will be explored. Assignments will incorporate applicable references to the history of art and contemporary developments.

**COAR 463. Communication Arts Honors Studio. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. May be repeated for up to 12 credits. Prerequisites: junior standing in communication arts, 3.0 GPA and permission of the CA faculty. An advanced course for selected students. Expectations include to work on individual and group projects at a professional level.

**COAR 464. Senior Portfolio. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. Prerequisites: COAR 300 and COAR 320. Enrollment restricted to students with senior status in communication arts. Focuses on the curation and evolution of a portfolio that aligns with the student's professional goals. Integrates effective oral, written and visual communication, critical-thinking and advanced studio and professional practices.

**COAR 491. Studio Topics in Communication Arts. 3 Hours.**

Semester course; 2 lecture and 3 studio hours. 3 credits. May be repeated for credit. Topical studio focusing on research and experimentation in specialized visual communication media.

**COAR 492. Communication Arts Internship. 1-6 Hours.**

Semester course; 1-6 credits. May be repeated for a maximum of 12 credits. Prerequisites: senior standing, 3.0 GPA or permission of the chair. Supervised pragmatic work experiences. Training is provided under the direction and supervision of qualified professional practitioners.