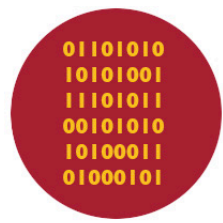# Digital Cultures & Technologies

Interactivity

Art

Theory

St. John Fisher College

Games

Study design and production to prepare for a position as a game designer, programmer or scriptwriter; to create indie games; to prepare for a career in interactive advertising; or to apply for graduate school in game design. Students often minor in Computer Science.

New Media Art

Develop skills and aesthetic judgment as a new media artist, with the opportunity to experiment with computer graphics programming, web technologies, and physical computing (e.g., sensor-embedded installations, wearable computing). Pursue work as an interactive exhibit designer, artist, or entrepreneur.

Analytics and Data

Study data visualization, data science, database design, social network analysis, statistics, and web analytics to obtain employment as an SEO specialist, infographic designer, or data analyst in a variety of corporate and media organizations. Students pursuing this option often minor in Data Science.

Design & Interaction

Study graphic design, photography, user interfaces, and web development in preparation for work in public relations and advertising firms or graphic and web design companies.

B.A. Digital Cultures and Technologies

The major in Digital Cultures and Technologies (DCT) asks students to critically analyze the effects of emerging media and computing on society. At the same time, students develop a practice of production and innovation through the creation of web sites and interactive media, video games, exhibits, digital art, data visualizations, and new tech innovations.

Students study such topics as politics and social media, online identity, new media economics, digital ethnography, visual rhetoric, data mining of texts, and the cultural significance of fan fiction.

Courses are small (10-24 students), creating a community of makers that complements the philosophy and culture of a small liberal arts college. The Gladys Brooks Media Arts Lab provides students 24 hour access to a collaborative work space for creative projects.

Digital Cultures Major (43 credits)

CSCI/DIGC 158: Introduction to Computational Media
COMM 219: Design I
COMM 269: Web Design
COMM 322: Communicaton Career Seminar (1 credit)
DIGC 490: Senior Project

Two of:
        COMM 367: Emergent Media and Web Culture
        ENGL 272: Digital Feminisms
        ENGL 346: Narrative and New Media
        ENGL 380: Visual Rhetoric
        ENGL 382: Digital Literacies

One of:
        DIGC 240: The Networked World
        DIGC 245: Visualizing Data

One of:
        DIGC 258: Introduction to Physical Computing
        DIGC 259: Interaction Art

One of:
        ENGL 355: Professional Writing
        ENGL 356: Editing and Publishing
        ENGL 361: Writing with New Media

One two-course sequence:
        COMM 362/468: Interactive Media Design/Advanced Web Development
        DIGC 271/371: Video Game Design I/ Video Game Design II

Plus nine credits from a variety of electives, including:
        ARTS 112: Digital Art
        ARTS/COMM 236/336: Photo I/Photo II
        COMM 231/328: Video Storytelling/Advanced Video Production
        COMM 261/361: Documentary Film/Documentary Production
        COMM 319: Design II
        COMM 363: Media Research and Web Analytics
        CSCI 260: Introduction to Databases and Applications
        CSCI 355: Mobile Computing
        CSCI 375: Programming the World Wide Web
        DIGC 171: Video Game History
        DIGC 495: Internship
        ENGL 218: Theater and Design
        STAT 160/345: Introduction to Data Science/Exploratory Data Analysis

Refer to the latest course catalog for official requirements.

Digital Cultures Faculty

Jeremy Sarachan (Associate Professor/Chair in the Department of Media and Communication) studies new media and computational approaches to web development, with an interest in interactive art and documentary. He has published articles about identity on the web, fandom and the use of social media, and the nature of play and learning that develops when children engage with virtual worlds. He has a B.A. from the University of Rochester and an M.S. from the Rochester Institute of Technology.

Wendi Sierra (Assistant Professor in the Department of English) has an interest in all areas of digital cultures, with her primary research focused on the rhetorics of games and game design. She also studies critical making and designs both digital and analog games. She is a fan of indie games, horror games, and World of Warcraft, and has a B.A. and M.A. from the University of Oklahoma, and a Ph.D. in Communication, Rhetoric and Digital Media from North Carolina State University.

Barney Ricca (Associate Professor in the Department of Mathematical and Computing Sciences) has pursued research over the years in the physics of musical instruments, methods for understanding complex systems, and the physics of rollercoasters. His current research work concerns complex and networked systems. He teaches classes in network theory and physical computing. He has a B.A./B.S. from the University of Dallas, an M.S. from the University of Chicago, and a Ph.D. from the University of Michigan

Dougie Bicket (Associate Professor in the Department of Media and Communication; B.A. Glasgow Caledonia University; M.A., Ph.D. University of Washington) teaches courses in visual communication, international communication, communication theory, and emergent media.

Heather Erwin (Adjunct Instructor in the Department of Media and Communication and the Program in Visual and Performing Arts; B.F.A. Rochester Institute of Technology; M.S. Nazareth College) is a K-12 teacher and multimedia artist with design experience at the *Democrat and Chronicle*, Selkowitz Marketing, and the New York Agency.

Lisa Jadwin (Professor in the Department of English; B.A. University of California at Davis; M.A., Ph.D. Princeton) teaches courses in film, digital media, and convergence culture. As a designer, she develops electronic instructional materials.

Brad Johnson (Adjunct Instructor in the Department of Media and Communication; A.S. Monroe Community College; B.F.A. Rochester Institute of Technology) is a freelance artist and designer using both digital and traditional tools and media.

Liz Leboffe (Associate Professor in the Department of Mathematical and Computing Sciences; B.A. SUNY Brockport; M.S. RIT) is a computer scientist with interests in databases, networks and the internet. She studies mobile computing and the development of apps for both iOS and Android.

Joseph Loporcaro (Adjunct Instructor in the Department of Computer Science and Media and Communication; B.A. St. John Fisher College; M.A. Syracuse University; Ph.D. University at Buffalo) teaches courses on digital ethics; video game history, design, culture, and journalism; and web design and development. He also advises student gaming clubs and is developing his own video game for commercial release in 2018.

David Pate (Associate Professor in the Department of Economics; B.S. Bentley College; Ph.D. Iowa State University) integrates emerging sources of online data with econometric analysis to examine workforce issues. He employs data visualization tools to explore data and to present analysis.

Deb Vanderbilt (Professor in the Department of English; B.A. Calvin College; M.A., Ph.D. University of Wisconsin at Madison) studies new media genres—electronic literature and interactive narratives. She also investigates digital tools for the analysis of both traditional literature and new media.

Matthew Vercant (Adjunct Instructor in Media and Communication; B.A. SUNY-Fredonia; M.F.A. Minnesota State University, Mankato) is a local business owner with writing, editing, and playtesting credits from Fantasy Flight Games and Minion Games among others, who has worked at all levels of the tabletop game industry. He has also taught literature and creative writing at Minnesota State University, Mankato and Cardinal Stritch University.

Stephen West (Writer-in-Residence in the Department of English; B.A. SUNY Geneseo; M.A., M.F.A. University of Iowa) studies the dialogue between digital and print culture in contemporary literary publishing. He is interested in creative work at the intersection of traditional printing and book arts and electronic literature.

Select Courses
for a full listing, visit our online catalog

Interactive Media

DIGC/CSCI 158: Introduction to Computational Media
Students will explore the creative possibilities of code and gain a working knowledge of variables, conditionals, loops, functions and objects as they learn the fundamentals of procedural thought. Students program in p5.js, a javascript library based on the Processing programming language, and focus on digital art, visualizations, and newsgames.

COMM 269: Web Design
Students design and develop websites for a variety of devices. The course focuses on HTML, cascading style sheets, and digital imaging with Adobe Photoshop, as well as the use of jQuery plugins to create dynamic effects. Graphic design theory, information architecture, and search engine optimization methods are discussed throughout the semester.

COMM 219/319: Design I and II
Students study graphic design and typography as it applies to print, advertising and web design. Software taught includes Adobe InDesign and Illustrator.

COMM 362: Interactive Media Design
Students apply effective information design to the creation of web-based interactive documentaries, museum exhibits, and educational sites, learning techniques for creating data visualizations and dynamic effects.

COMM 468: Advanced Web Development
Students learn to create interactivity with Javascript/Javascript frameworks and databases while designing a site for a small business or nonprofit.

CSCI 260: Introduction to Databases and Applications
This course presents an overview of database organization and management. Topics include database organization and querying techniques with SQL, and data extraction and manipulation. Students develop database applications using Access and MySQL/PHP.

Video Games

DIGC 171: Video Game History
Computer and video games have a history that now spans more than a half a century. This course will explore this history, looking at key titles, cultural impacts and influences, and important moments of technological innovation. Students will conduct archival research at the Strong Museum of Play.

DIGC 271: Video Game Design I
This course acts as an introduction to the basics of game design. Students will develop a theoretically grounded understanding of the game design process, including developing a theme, understanding genre conventions, and designing for an audience. The course will culminate with the development of a digital game.

DIGC 265: Writing for Games
In this course students focus on the practical and artistic writing elements of game design. This includes writing dialogue scripts for video games, understanding the part that narrative writing plays in informing game mechanics, and the creative and technical writing aspects of tabletop role-playing games. Students will workshop their writing in class similar to a development or playtest team, while creating their own game.

DIGC 267: Game Modding
Game modding, the opening up of a game system to allow end users to modify (mod) it, follows the web 2.0 trend of allowing users increasing control over and customization opportunities with the technologies they use. This course explores the modding trend as part of a fundamental shift in how we think about and interact with technology. Students will learn Java and create their own mods in Minecraft.

DIGC 371: Video Game Design II
Students will learn to use a game engine and work through all stages of the game design process, including concept development, design, implementation, play-testing, and deployment. The final product for this course will be a multistage game created in Unity.

Digital Art

ARTS 112: Digital Art
The course introduces students to techniques of using the computer as an artist's tool. Some familiarity with Adobe Photoshop is helpful but not necessary. Project work will explore a variety of digital effects possible and will focus on helping students gain an understanding of important style and art movements of the past. Consideration will be given to developing a basic understanding of related technical issues, such as image capture, file formats, color management, output options and creating works for print or digital display. Course emphasis will be on generating works that reflect a fine art aesthetic.

DIGC/ARTS 258: Introduction to Physical Computing
Tools like the Arduino and the Lilypad wearable micro-processor can be programmed to use a variety of sensors to detect the world and respond in particular ways, and can lead to the invention of new devices and nontraditional means to communicate with the web. This course will teach students the basics for working with these systems, including an introduction to using the hardware (wiring, soldering, etc.) and the software (coding in the Arduino development environment). By the end of the course students will complete an interactive physical computing artifact.

DIGC/ARTS 259: Interaction Art
Students study computer graphics, data-based instal-lations, and video art. To produce this creative work, students will study computer graphics programming, develop skills to collect and visualize data gathered via social media APIs, and experiment with alternative in-terfaces for screen-based and transitory art and video installations. Students will work in p5.js and Python.

DIGC 245: Visualizing Data
This course introduces design and statistical principles as well as programming languages and tools for exploring, analyzing, and displaying information. Students will gain an understanding of the role of data visualizations in analyzing complex data and societal trends. The R programming language is used.

Digital Cultures

COMM 367: Emergent Media and Web Culture
Interactivity, collaboration, and content creation by formerly passive audiences are leading to profound changes in the experience of media and the nature of human communication. This discussion-driven seminar requires students to critically analyze both popular and scholarly texts as a means to study themes related to digital cultures. Typically, the class focuses on online communities, social media theory, and digital activism.

DIGC 240: The Networked World
This course will examine the particular issues surrounding the network structure of relationships, and how that structure impacts our experience of and study of various entities, including search engines, social networks, the spread of technologies and the spread of viruses (both human and computer).

ENGL/WGST 272: Digital Feminisms
While we frequently treat the technological artifacts around us as simple tools, doing so ignores the complex cultural forces that shape our technologies. This course will use feminist theory to explore the co-production of identity and technology, examining how each helps to shape the other. First-wave feminism emerged at a time of great technological upheaval, and as technology has continued to change rapidly over time, so too has feminism.

ENGL 346: Narrative and New Media
Technologies shape the way people read, create, and analyze texts. In this class we'll explore some of the new tools through which people are approaching literature in the digital age. Possible areas of focus include transformational media like online fan fiction, tools for multi-media presentations of a text, coding of literary texts, and data mining resources for texts.

ENGL 380: Visual Rhetoric
Developing a critical awareness of the way images, both moving and still, are constructed to convey particular messages is an important part of rhetorical awareness in the digital age. This course will explore various theories of visual rhetoric. Artifacts analyzed in the course include graphic novels, advertisements, memorial spaces and museums.

ST. JOHN FISHER COLLEGE

Kyle Cataldo '17
Web Coordinator,
CGI Communications
The DCT program has helped me specifically with my knowledge of web design and coding. After taking the intro class, as well as some advanced coding, I was well prepared for the job that I applied for right before graduating. Understanding code and how websites work is pivotal in today's digital society, and I'm extremely grateful for having the opportunity to major in Digital Cultures and Technologies.

Contact Admissions
(585) 385-8064 or
(800) 444-4640
admissions@sjfc.edu
www.sjfc.edu/freshman
www.sjfc.edu/transfer

Jeff Mangiafesto '16
Web Applications
Developer,
Purple Briefcase
The DCT program is unique in that you can try out different fields within technology and focus on what interests you most. Being versatile in both technology as well as developing the ability to pick up new skills is by far the most useful career skill that I gained from the program. The ability to research and learn new languages or information is where I believe this program excels. This versatility within the field combined with the diversity in coursework has opened my career choices up so that I had the preparation, skills, and confidence to find a position I enjoy.
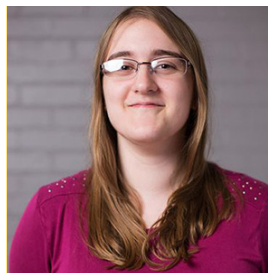
Kate Coleman '15
Developer,
Makeway
I arrived at Fisher as an undecided major and didn't settle on Digital Cultures until early in my junior year. I developed the skills necessary to be competitive in the market in a very short time. After graduation, I was hired through an internship by a growing web development and marketing company almost immediately. I couldn't be happier.

Contact:
Jeremy Sarachan
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