

DIG2121 Digital Visualization

Spring 2026

Course Meetings: TUE | Period 4 (10:40 AM – 11:30 PM)
THU | Period 4-5 (10:40 AM – 12:35 PM)

Course Modality: Multi-Modal (Face-to-Face in PICT or Online)

Course Description

This course introduces students to the fundamental principles and practices of digital visualization. Students will explore how visual elements communicate meaning, influence user experience, and shape digital interactions across various media platforms. Through critical analysis and hands-on projects, students will develop visual literacy skills and learn to apply design principles to create effective digital visualizations. Topics include visual design elements and principles, typography, color theory, visual storytelling in film and photography, animation and interactive media, motion graphics, data visualization, immersive environments (AR/VR), user experience design, AI and generative design, and ethical considerations in digital visualization. This course emphasizes accessibility and uses tool-agnostic or freely available software to ensure all students can participate fully.

Course Prerequisites

This class has no prerequisites.

Learning Outcomes

- Demonstrate visual literacy by interpreting and analyzing visual communication in digital contexts
- Apply fundamental design principles (balance, emphasis, hierarchy, proximity, alignment, consistency) to digital visualizations
- Evaluate the effectiveness of visual storytelling techniques across different media formats
- Create digital visualizations that incorporate appropriate typography, color theory, and composition
- Understand and apply principles of motion graphics and animation in digital media

- Design data visualizations that communicate information clearly and ethically
- Analyze user experience considerations in interactive and immersive digital environments
- Recognize ethical implications of visual representation and design accessible digital content
- Critically assess contemporary digital visualization practices using design principles
- Develop proficiency with industry-standard tools and workflows for digital visualization

Materials & Books

Required Textbook

- Universal Principles of Design, Revised and Updated: 125 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design (3rd Edition) By William Lidwell, Kritina Holden, and Jill Butler (ISBN-13: 978 1631596872)

Required Software/Tools

- Access to free or web-based visualization tools (specific tools will be introduced throughout the course)
- Text editor (for any code-based assignments), Internet access for online research and discussions

Optional Resources

- Various readings and online resources will be provided throughout the semester via Canvas

Materials, Supply, and Equipment Fees

Material, supply, and equipment use fee information is available from the academic departments or from the schedule of courses (Florida Statutes 1009.24). The total course fee for sections where students are located on campus is \$29.00, as they have access to the Digital Worlds Computer and Design Lab. The total course fee for online sections is \$0.00. The total course fee for each course is listed on the UF Schedule of Courses. (<https://registrar.ufl.edu/soc/>)

Course Schedule

This schedule is only a guide and is subject to change.

WEEK	SUBJECT	ASSESSMENT
W 1	Module 01: Introduction to Digital Visualization Visual literacy fundamentals, interpretation of visual communication Design Principles: Accessibility, Affordance, Aesthetic-Usability Effect	Quiz 1 Discussion 1
W 2	Module 02: Elements of Visual Design Line, shape, form, space, texture; Critical analysis of visual storytelling Design Principles: Color, Alignment, Consistency	Quiz 2 Discussion 2
W 3	Module 03: Principles of Visual Design in Digital Contexts Balance, emphasis, contrast, repetition, proportion, movement, unity Design Principles: Hierarchy, Proximity, Feedback	Quiz 3 Discussion 3
W 4	Module 04: Iconic Visual Storytelling – Film & Photography Framing, composition, rule of thirds, visual narrative techniques Design Principles: Figure-Ground Relationship, Rule of Thirds, Good Continuation	Quiz 4 Discussion 4
W 5	Module 05: Contemporary Visual Storytelling – Animation & Interactive Media Principles of animation, interactive narrative structures, storyboarding Design Principles: Iteration, Progressive Disclosure, Affordance	Quiz 5 Discussion 5 Assignment 1 (10%)
W 6	Module 06: Typography in Digital Visualization Typeface selection, hierarchy, readability, legibility, typographic composition	Quiz 6 Discussion 6

	Design Principles: Legibility, Readability, Signal-to-Noise Ratio	
W 7	Module 07: Color Theory in Digital Media Color psychology, color systems, accessibility considerations, cultural meanings Design Principles: Color, Similarity, Accessibility	Quiz 7 Discussion 7
W 8	Module 08: Midterm Review & Assessment Comprehensive review of Modules 1-7	Midterm Exam (20%)
W 9	Module 09: Motion Graphics & Animation in Digital Media Timing, easing, transitions, animated typography, visual effects Design Principles: Apparent Motion, Good Continuation, Chunking	Quiz 8 Discussion 8
W 10	Spring Break	
W 11	Module 10: Data Visualization Principles Chart types, information design, visual encoding, statistical representation Design Principles: Recognition Over Recall, Layering, Signal-to-Noise Ratio	Quiz 9 Discussion 9 Assignment 2 (10%)
W 12	Module 11: Immersive Environments – AR & VR Storytelling Spatial design, presence, immersion, 360° composition, VR narrative Design Principles: Mental Model, Affordance, Depth of Processing	Quiz 10 Discussion 10
W 13	Module 12: User Experience (UX) & Interaction Design Visual hierarchy in interfaces, user flow, navigation, responsive design Design Principles: Recognition Over Recall, Affordance, Feedback	Quiz 11 Discussion 11
W 14	Module 13: Emergent Forms of Digital Media – AI & Generative Design Algorithmic art, AI tools, procedural generation, creative automation Design Principles: Flexibility-Usability Tradeoff, Modularity, Constraint	Quiz 12 Discussion 12 Assignment 3 (10%)

W 15	Module 14: Ethics in Digital Visualization Visual truth, bias in data representation, accessibility, inclusive design Design Principles: Accessibility, Transparency, Cognitive Load	Quiz 13 Discussion 13
W 16	Module 15: Final Review & Assessment Comprehensive review of all course material	Quiz 14 Discussion 14 Final Exam (30%)

Grading Criteria

Assignment / Assessment	% of Grade
Participation and Weekly Discussions: Students are expected to actively participate in weekly online discussions, providing thoughtful analysis and constructive feedback on visual design topics. For face-to-face students, attendance is mandatory and counts toward participation.	10
Weekly Quizzes: Students will complete 14 weekly quizzes through Canvas covering lectures, readings, and design principles from the textbook.	10
Assignment 1: Critical Analysis Project – Students will analyze a contemporary digital visualization using design principles from the course.	10
Assignment 2: Data Visualization Design – Students will create an effective data visualization that demonstrates understanding of information design principles.	10
Assignment 3: Digital Visualization Portfolio Piece – Students will develop a polished digital visualization project demonstrating mastery of multiple design principles covered in the course.	10
Midterm Exam: Comprehensive exam covering Modules 1-7, including design principles, visual analysis, and application of concepts.	20
Final Exam: Comprehensive exam covering all course material with emphasis on Modules 8-14.	30
TOTAL	100%

Letter Grade % Equivalency

Letter Grade	% Equivalency
A	94 – 100%
A-	90 – 93%
B+	87 – 89%
B	84 – 86%
B-	80 – 83%
C+	77 – 79%
C	74 – 76%
C-	70 – 73%
D+	67 – 69%
D	64 – 66%
D-	60 – 63%
E, I, NG, S-U, WF	0 – 59%

More information on grades and grading policies is here:

<https://catalog.ufl.edu/UGRD/academic-regulations/grades-grading-policies/>

Course Policies

Late Submission

All course work must be submitted no later than the due date unless prior arrangements are made with the instructor.

- **Late submission:** If a student submits an assignment after the due date without having made arrangements, 1 point will be deducted for each day late.
- **Deadline extension:** To request an extension for a deadline due to foreseeable reasons (e.g., exam conflicts with other classes, religious holidays, or personal events such as attending weddings), please contact the instructor at least 3 days before the deadline. Failure to adhere to this requirement will result in a 1-point deduction from your grade per day. Exceptions will only be considered for unexpected emergencies listed below.

Policy for Missing Quizzes

Unless students have acceptable reasons for missing quizzes, the maximum grade students can receive is half points of their original grade. For example, if you missed your quiz without prior arrangement, you could receive 50% of your grade when you retake the quiz (e.g., 10 points → 5 points).

Policy for Missing Exams

Midterm and final exams must be taken on the scheduled dates. Makeup exams will only be provided for documented emergencies or acceptable reasons as defined in university policy. Students must contact the instructor as soon as possible to arrange makeup exams.

Attendance and Participation

For face-to-face students, attendance is mandatory and counts toward the participation grade. The instructor will track attendance throughout the semester. Missing class without prior arrangement will result in participation point deductions.

For all students (face-to-face and online), weekly discussion participation is required and counts toward the participation grade. Discussions must be completed by the designated deadlines each week.

Acceptable Reasons for Absence or Failure

Acceptable reasons for absence from or failure to engage in class include the following: illness; Title IX-related situations; special curricular requirements (e.g., field trips, professional conferences); military obligation; severe weather conditions that prevent class participation; religious holidays; participation in official university activities (e.g., music performances, athletic competition, debate); serious accidents or emergencies affecting the student; and court-imposed legal obligations (e.g., jury duty or subpoena). Please provide valid documentation, such as a doctor's note, an email containing information about your special curricular requirements, or any other documentation

related to your absence.

For all planned absences, please inform the instructor at least 3 days prior to the class activity. For all unplanned absences because of accidents or emergency situations, students should contact their instructor as soon as conditions permit.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

Course Technology

Students will be required to have access to and use a personal computer with access to the Internet. Word editing software will be required for written assignments.

The University of Florida and Digital Worlds requires that students have access to and ongoing use of a laptop/mobile computer for DIG courses in order to be able to function in the current learning environment. Digital Worlds requires each DAS major's laptop computer to meet certain minimum specs for heavy graphics use, the requirements documented at:

<https://digitalworlds.ufl.edu/programs/ba-in-digital-arts-sciences/technology-requirements/>

Course Communications

Students can communicate directly with the instructor regarding the course material through the course management system (Canvas) using "Canvas Mail."

Creation of Original Content Ethics

For original projects and all assignment deliverables, students should remember that representations of acts of violence, coarse and offensive language, sexual behavior, bodily function and ability, neurodiversity, and personal identity are likely to cause extreme audience response, regardless of the creator's intentions. In addition, the recreation of such actions and subjects for fictional purposes may unintentionally traumatize or negatively impact those who collaborate in the creation of the images. While the university encourages students to explore themes and tell stories that may include this difficult subject matter, they should be cautioned against modes or styles of representation that might be considered unnecessarily offensive or potentially triggering. Instructors, faculty, and university administrators reserve the right to not show or share any student work they feel is inappropriate for their classroom or for public exhibition, as there may be concerns about the impact of such work on the community. We encourage students to consult with their faculty when producing work that might be considered controversial, and to err on the side of being cautious when it comes to making decisions about a project's content - in other words, make the PG-13 version of your story, not the R version, and certainly not the "unrated" version. This is also to help students understand that most professional creative situations have strict guidelines and limitations on such content and how it is produced: your ability to tell stories effectively with "less" is a strong professional skill that will aid in the dissemination of your work to a broader audience.

Course Technology Support

UF Computing Help Desk

For support related to account services, technical consulting, mobile device services, software services, administrative support, application support center, and learning support services, please contact the UF Computing Help Desk available 24 hours a day, 7 days a week at 352-392-4357 or helpdesk@ufl.edu.

University Policies

Information about university-wide policies and resources can be found here:

<https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/>

Disclaimer: This syllabus represents the instructor's current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.