

# DIGITAL MULTIMEDIA DESIGN

---

**STUDIO**



---

# Table of Contents

About	1.1
Introduction	1.2
General Resources	1.3
Collaboration tools	1.3.1
Concept development	1.3.2
Design process and methods	1.3.3
Documentation resources	1.3.4
Digital Design Project Types	1.3.5
Projects	1.4
Project 1: Group Design Project	1.4.1
Weekly activity reports	1.4.1.1
Phase 1: Gather and organize	1.4.1.2
Phase 2: Develop a design sprint	1.4.1.3
Phase 3: Pitch	1.4.1.4
Phase 4: Sprint!	1.4.1.5
Phase 5: Document	1.4.1.6
Project 2: Independent Design Project	1.4.2
Concept Pitch	1.4.2.1
Work Statement	1.4.2.2
Production Reports	1.4.2.3
Documentation	1.4.2.4
Project Files	1.4.2.5
Writing Project	1.4.3
Project Categories and Resources	1.5
License	1.6

# DMD 300: Digital Multimedia Design Studio

DMD 300 is the second of three spine courses in the Bachelor of Design in Digital Multimedia Design (DMD) program at Penn State University. This program is the first entirely online multi-college undergraduate bachelor's degree program offered at Penn State.

Visit the [DMD Program Hub](#) for more details.

## Contributors

### Primary course author

Michael Collins

### Instructional design

Katrina Wehr

### Alterations and improvements

Benjamin Andrew

Christine Shanks

## License

This work is licensed as [CC-BY-4.0](#). Some content is taken from other sources and cited throughout. However, this work is a living draft, presented as is, and may be changed or updated without notice.

## Contributing

Anyone can recommend additions or alterations. Please, submit a [pull request on github.com](#) or file an issue in the [issue queue](#).

# Introduction

This course follows [DMD 100: Digital Multimedia Design Foundations](#). In that course, students were given a fairly rigid design process to follow with prescribed outcomes and formats. In DMD 300: Digital Multimedia Design Studio, students will have the opportunity to build their own design process and work with digital formats and tools of their choosing.

## Course description

In DMD 300: Digital Multimedia Design Studio, students synthesize the concepts, theories, and applications acquired in the introductory courses and begin to think critically about their professional objectives. Students will work on projects aimed to help them understand available learning pathways and real world applications based on their scholarly and professional interests. Students will work collaboratively to investigate a problem space, conduct a needs assessment, write a design plan or proposal, develop deliverables, and implement and evaluate the final product(s).

Students will develop a sense of stewardship over the project development process by completing project milestones that reinforce time management behaviors, participating in team building activities that facilitate discussion and interaction, co-authoring project proposals that prompt critical analysis, and distributing production tasks to encourage ownership in completing both defined and open-ended assignments. Students will also be required to thoroughly document and reflect on the production process and project impact through blogging and discussions.

Through the duration of the course, students are encouraged to interact with industry advisors for feedback and direction as they work through real-world challenges in their selected digital tools and methodologies.



# Collaboration tools

## 1. Team communications

- i. Video conferencing
  - Zoom ([psu.zoom.us](https://psu.zoom.us))
  - Skype
  - Google Hangouts / Meet
  - Slack ([dmd-program.slack.com](https://dmd-program.slack.com))
  - Discord
  - Loom — record short video feedback on designs

## 2. Team management and tasks

- Canvas group's page
- Mural: [Member invite link](#)
  - For group/team projects, one person from each group should join Mural.co via this link, create the murals, and invite the rest of the team as guests. This account is limited to 10 members, and we cannot add everyone as members unfortunately.
  - For individual student projects, you may create your own mural.com education account, and invite your instructor as a member.
- Trello
- Basecamp
- Asana
- Notion

## 3. Collaborative writing tools

- i. Google Docs
  - Features include track changes, comments, chat, export as pdf, etc.
- ii. Office365 docs
  - Features include track changes, comments, chat, export as pdf, etc.
- iii. [Gitbook.com](#) and Github.com
  - Developer centric writing and collaboration.
  - Can write in markdown and publish to HTML very easily.

## 4. Collaborative Design Tools

- InVision collaborative image "Boards" and "Freehand" whiteboards.
- [Google Slides]
  - Simple way to share images and comments.
- Figma
  - Design app for UI design, featuring online collaborative projects.

# Concept development

A concept is a core idea (or set of ideas) that signify basic values, motivations and practices inherent in a project. A project lacking strong concept development tends to be shallow and without regard for cultural and community contexts, which will become apparent during discussion and critique. There are two typical concept development approaches. The *directed concept approach* refers to when a concept is established and defined at the beginning stages of project development, and the *emerging concept approach* is where the concept is allowed to emerge and evolve during the production of a project.

## Situating (Directed concept approach):

- "Top-down" approach
- Process of deduction
- Theory » Hypothesis » Observation » Confirmation

Concepts are directed through a mapping process either before or in the beginning stages of a project. An interpretation of outcomes of an inquiry will depend in part on the frame of reference of existing knowledge. What is known helps identify what is not. Situating is a method that opens up lines of inquiry commonly used to review literature and information sources in the public domain. Situating is a curatorial process for looking at existing things in new ways.

## Revealing (Emerging concept approach):

- "Bottom-up" approach
- Process of induction
- Observations » Pattern » Hypothesis » Theory

Concepts emerge over the course of the project through an ongoing discovery process. A core purpose of inquiry is to discover new knowledge or the possibility of thinking about things in new, innovative ways. To reveal something relies on others experiencing a change of awareness or understanding. Revealing, therefore is not only a method of discovery, but requires multiple ways of communicating to target groups and others.

# How to develop a good concept

Creative thinking methods are helpful for identifying a concept. However, more often than not, everyday observations are enough to spark an idea. It is helpful to keep around a small notebook or store a running list of ideas on a mobile device.

## Key features of a good concept:

1. Feasible to accomplish in the given timeframe
2. Invention and/or unexpected combinations to produce novelty
3. Links to relevant cultural, historical, social contexts
4. Explores moral and ethical issues or quandaries
5. Aesthetic and theoretical explorations

In DMD 100, students are guided through the entire production of three projects through a careful orchestration of design thinking exercises and a set of rules or criteria that bounded the scope. The rules set in place made it so that the student could concentrate on the content of the project, rather than finding an appropriate scale and bounds for the project. In a capstone project, students are responsible for establishing these rules for themselves, an often difficult task that takes practice to master.

# Suggested Brainstorming Methods

These are some 100% subjective strategies that you can try if you're struggling to come up with a good project idea:

- Make a list of things you're uniquely good at, and a second list of things you'd like to incorporate in the project. This can help narrow your sights.
- Make a [mind map](#) of words or ideas associated with a central concept. Discover unexpected relationships and personal sensibilities.

- Take a walk. Take a nap. Try to set aside your work and creative concerns and let your mind wander.
- Write a list of questions. Be uncertain, and maybe one of these will establish a creative destination as you seek for answers.
- Make a list of your favorite artists, designers, writers, or other inspirational makers. Think of their individual styles and sensibilities as ingredients that you want to put into your work. What if you combined Person A's work with Person B. What would that be like?
- Make an [affinity diagram](#), a format for design workshops and team brain-storming.



# Design process and methods

There is a huge array of design thinking methods, design sprint frameworks, and other ideas about the design process available for you to draw from. It may seem overwhelming at first, but make note and gather only what seems useful for your own work. Spend some time looking through the following curated lists to get an idea of what's out there:

## Web resources

- [IDEO DesignKit](#)
- Google Ventures
  - [The Design Sprint](#)
  - [Sprint Playlist](#)
- Dan Nessler
  - [How to apply a design thinking HCD, UX or any creative process from scratch](#)
- [Stanford D.School: Design Thinking Bootleg](#)
- [Circular Design Methods](#)
- [Double Diamond method](#) ( a.k.a. the Design Council's Framework for Innovation)]
- [Three Triangle method](#) (inspired by Double Diamond)
- [LinkedIn Courses on Research and Project Management](#)
  - [Project Management Simplified](#)
  - [UX Research Methods for Agile](#)
  - [UX Foundations: Research](#)

## Useful books:

- [Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions](#)
  - [Read Penn State eBook](#)
  - [Purchase on Amazon](#)
- [Sprint: How to Solve Big Problems and Test New Ideas in Just Five Days](#)
  - [Purchase on Amazon](#)
- [Design Sprint](#)
  - [Read Penn State eBook](#)
  - [Purchase on Amazon](#)

## Documentation resources

1. [Citation tools](#)
2. [APA Guide](#)
3. [MLA Citation Guide](#)

# Digital Design Project Types

The following is a list of media that you might choose to work with in your projects for this class. This isn't comprehensive and people are always discovering new ways to create experiences and tell stories, but you can use this as a menu to browse and consider:

1. What form (i.e. finished product) will work best for communicating your content?
2. What skills or techniques do you want to master?
3. What processes or raw materials relate to your conceptual research topic?

Additional resources for learning these fields can be found at the end of this course book under [Project Categories](#), but your learning path will be largely self-directed—with advice from your instructor of course!

- **2D and 3D Animation**

- Narrative short film
- Explainer animation (Vox makes a lot of fun infographic style videos)
- Motion graphics (bumper animations, commercials, titles, user interface elements in 3D environments)
- Experimental or non-narrative content: Examples on [vimeo.com](https://vimeo.com)
- Scientific or data-driven simulations and visualizations
- VJ loops for live performances
- Projection mapping (projecting video onto structures or surfaces)
- Web-based animation (HTML/CSS/Javascript)

- **2D Design, 3D Rendering, and Illustration**

- Branding and/or print design
  - Design system or standards manual
  - Logo design
  - Stationary or merchandise design
- Posters and Infographics
- Typeface design
- Digital illustrations
  - Concept art for pre-production (character, vehicle, environment design for comics, games, film, etc.)
  - Sequential comics (print or web)
  - Digital children's book (for iPad or mobile device)
- Architectural renderings
- Product renderings
- App or website mockups (see those respective development pages for more)
- Data visualizations or Infographics
- 2D or 3D assets for games including character design and environment design
- Code-generated art

- **Apps and Interactive Media**

- Augmented/Virtual Reality (AR/VR) games, visualizations, architecture, and journalism.
- Interactive 2D or 3D fiction or non-fiction story
- 2D or 3D video game, ideally something creative or serious
- Physical game (printed boards, cards, and/or 3D objects)\
- Projected or screen-based interactive installation art
- Physical computing project (Arduino, Raspberry Pi, etc.)
- Creative coding projects (e.g. Processing)
- Apps for mobile devices or desktop.

- **Audio Production**

- Podcast
- Audio tour or site-specific experience
- Experimental installation (something that explores the possibilities of sound and perception)

- **Installations and Objects**

- Physical art object(s)
- Installation or exhibition
- Detailed proposal for an exhibition
- Speculative installation
- Design-based community event or festival
- Curation of an art or design exhibition
- Public art or intervention
- Fabricated designs or prototypes
- **Products, Services, and UX**
  - Functional mobile or web app
  - High fidelity interactive mockups (UI)
  - Speculative or discursive design projects
  - Comprehensive user Experience (UX) Research
  - Instructional design product
  - Digital fabrication products or prototypes (furniture, wearables, clothes, structures, etc.)
- **Video Production and Photography**
  - Video
    - Narrative short film — Something with characters and a plot.
    - Experimental film — [Examples on vimeo.com](#)
    - Documentary short
    - Animations — See Animation page 😊
  - Photography
    - Physical exhibition
    - Virtual exhibition
    - Digital/Print publication
- **Web Design**
  - Landing page or informational site
  - Business or eCommerce site
  - Experimental site
  - Net art
  - Interactive storytelling
  - Web app

# Projects

## Problem spaces

- Social and cultural organization and governance
- Labor, business, and entrepreneurship systems
- Environmental and biological systems
- Knowledge and informing systems
- Food systems
- Health systems

## Format

- Documentary or historical reflection
- Speculative fiction
- Aesthetic exploration and expression
- Campaign or event
- Visual taxonomy and vocabulary

## Media

- Book or poster
- Web informative or interactive
- 3D Interactive (Games, VR, and AR)
- Sound and audio
- Video and film
- Animation or Gifs
- Social media

# Project 1

## Description

In this project, you will work in small team to produce a design process, digital media, and documentation. Your team will build its own project by setting meeting agendas, creating a concept pitch, develop and use a design process/sprint structure, track and document progress using a project blog, and produce project documentation. The project outcomes can take the form of any combination of digital media formats including 2D, 3D, video and motion design, interactive and web, UX/UI app design, and product design. The projects could emphasize a wide range of approaches including tool building, product or service, marketing or awareness campaigns, calls to action, open-source tools, traditional or experimental digital story telling, speculative design, wayfinding, identity systems, toolkits, educational materials, etc.

Avoid basing your project around existing intellectual properties (movies, comics, games, etc.) unless you do something conceptually sophisticated like a parody, deconstruction, etc.

Please read through [project categories](#) to learn more about the types of projects possible to produce and their production needs. While the media and form of your project is up to you, the following focus word should be used as a jumping off point for your project's concept.

### The conceptual focus word for this project is: “Inclusive”

Inclusive Design is a methodology, born out of digital environments, that enables and draws on the full range of human diversity. Most importantly, this means including and learning from people with a range of perspectives.

— [Microsoft Inclusive Design Toolkit](#)

Inclusive design doesn't mean you're designing one thing for all people. You're designing a diversity of ways to participate so that everyone has a sense of belonging.

— Kat Holmes for [FastCompany](#)

"Inclusive design" is a specific methodology related to accessibility (an attribute of any design) and [universal design](#) (one-size-fits all); the FastCompany article above addresses the differences between these terms.

**For this project, you can interpret the theme of "inclusive" however you see fit.** You don't have to follow existing guidelines for inclusive design, but may wish to read about them. Think about unique perspectives, diverse audiences, and edge cases. Products like the [Swiss Army Knife](#) and the [OXO Good Grips peeler](#) were developed for specific users, but proved desirable for larger audiences.

#### Further Inspiration:

- [Xbox Adaptive controller](#)
- [Humaaans](#) illustratin design library
- [Braille Neue](#) font
- [How to begin designing for diversity](#) by Boyuan Gao and Jahan Mantin of Project Inkblot
- [The 7 principles of inclusive design](#) by the National Disability Association
- [Microsoft Inclusive Design toolkit](#)
- [Design is diversity](#) by Fabricio Teixeira (and related articles at UX Collective)
- [The Moral Responsibility of Cinema: The Politics of Representation and Expectation](#) by Tat Wei Lee
- [Design for All](#) documentary film by Target; poorly named because it's about inclusive design for *specific* needs more than universal design. Watch the trailer or check out the film on Hulu.
- [Gender-neutral design system by TurboTax](#) described in a great blog post.
- [Gender, like language, is fluid](#) by Jennifer Daniel, about inclusive emoji sets.

## Project overview

**The project will consist of five phases:**

- Phase 1: Gather and organize (one week)
- Phase 2: Develop a design sprint (one week)
- Phase 3: Pitch (one week)
- Phase 4: Sprint! (three weeks)
- Phase 5: Document (concludes the Sprint)

## Objectives

**The purpose of this project is to help you:**

- Gain experience working in a design team
- Practice developing a design process
- Practice evaluating and reflecting on the effectiveness of a design process
- Select and test design methods, techniques, and tools to produce digitally designed, critically engaged, and systemically considered creative explorations and outcomes
- Produce a detailed project document
- Practice publishing skills by keeping a [team project blog](#)

## Team Dynamics

Though working on a design team as part of a class project can not fully mimic real-world project teams you will encounter or already have encountered, it should suffice for helping you understand the general tactics and etiquette. Finding a team that meshes immediately and is good at resolving internal conflict makes for a very productive and gratifying project experience. Unfortunately, when this doesn't happen, team dynamics can be counterproductive. If you run into any issues with your team members that cannot be resolved, please communicate with them with your instructor so they may step in and help mediate the situation.

## Rubric

**This final project is graded as a team.** All members will receive the same grade for the final deliverable. Each person's weekly activity reports are graded individually.

All project deliverables must be met for the project to be graded. A non-submission or non-completion for any project phase is considered an incomplete project.

1. Produced and submitted project deliverables according to requirements: 40%
2. Project outcomes:
  - Concept 20%
  - Craft 20%
  - Design process 20%

# Weekly Activity Reports

At the end of each week, each individual student will submit a short report of group project activity. This shows that you understand what each member is contributing and demonstrates your own contributions to the project.

## Requirements:

1. **Title:** Weekly Report # (e.g. Weekly Report #3)
2. **Your Name**
3. **Group Members:** (names)
4. **Activity description**
  - Your contributions for the week
  - Describe contributions to the project from each member.
5. **General comments:**
  - Briefly talk about how things are going. This is the space to complain, brag, comment on challenges you are facing, or talk about things that are going really well.

## Rubric

1. Fullfilled all report requirements. (40%)
2. Demonstrated significant group or team project contributions. (60%)

## Submission

Please upload this to canvas as either a word document ( .doc , .docx ), or written in the text submission field.



## Phase 1: Gather and organize

Meet with your team and begin to establish meeting times and meeting agendas.

Synchronous meetings can be very productive and are recommended for weekly check-ins with your group, but you can get started discussing things over a chat tool or email.

### Agenda items for design meetings

The following are some recommended items to consider for meeting agendas. Ultimately, you are responsible for crafting meeting agendas:

1. Introductions or icebreaker
2. Read through the project prompt and forthcoming steps, look at provided resources, and discuss any questions about the project that the team may have (Please send questions to your instructor if you are still unclear after this discussion).
3. What are your immediate thoughts about the prompt? Share some creative work or experiences that it reminds you of.
4. Decide on team collaboration tools. A more comprehensive list is located on the [collaboration tools page](#).
5. Identify meeting times.
6. Discuss types of digital media workflows, tools, and formats that are of interest to the group.
7. Brainstorm specific design challenges (problems to solve) or subjects related to the prompt. It may be beneficial to bring some ideas to the initial meeting, or to convene a second meeting later to spend more time discussing. The project's focus word is meant to give you a starting point, and guide any design thinking activities, similar to the ones used in the Double Diamond process in DMD100. You can [refer back to DMD100](#) at any time if you do not recall the activities that were used.
8. Decide whether to assign team member roles. If roles are desired, what are they and who are they assigned to?
9. Articulate some goals for the project and yourselves (even if the exact idea for the project has yet to be determined)

## Phase 2: Develop a design sprint

### What's a Design Sprint?

Developed by GV (Google Ventures, a subsidiary of Alphabet), a design sprint is a specific format to develop solutions to a design problem. You can read their [explanation of the process](#) or watch this [90 second video explainer](#). The GV Design Sprint is supposed to be an accelerated design process that packs brainstorming, prototyping, and user testing into five days. We won't follow their methods exactly, but the links above may help guide you as you design a process that works for your group and schedule.

For Phase 2 of this project, each group will develop a preliminary design sprint schedule document and [project blog](#).

The sprint document should include:

### Cover/title page

- **Title:** Design Sprint Schedule
- Date
- Team member names
- Course name
- Instructor(s)

### Schedule:

Consult the [design process and methods page](#) to choose design and research methods that fit your team's needs and interests. Place the chosen methods onto a schedule that plots a course to the final project due date. Name the method and describe what occurs in each session (what you're doing) with the anticipated outcomes (why you're doing it).

- **Date:** A date or date range for which your group will conduct each phase of the project.
  - Avoid doing everything in the last possible week.
- **Objective:** Schedule some time for each item in the following list. These are the essential steps of design thinking, and go by various names depending on the design framework you're looking at. The important part is to articulate *what you're trying to accomplish* at each step of the project, or *why* you're doing each specific thing. You may repeat categories and objectives as often as needed, and they do not all need to be collaborative or group-based:
  - Research/discovery
  - Ideation/concept development
  - Production/testing/iteration
  - Analysis/feedback
- **Description:** Briefly describe how you are accomplishing the objective and the anticipated outcomes from using your chosen design methodology.

You include other columns or items in your timeline as desired, such as specific tools you plan to use or specific group members who will complete a task. This can be a table or a hierarchical text document.

### Example Schedule:

Date	Objective	Description	Deliverable	
Jan. 15–24	Discovery	Research existing products in field and brainstorm solutions to project challenge.	Create product pitch	
Jan. 24–30	Ideation	Brainstorm specific solutions to problem and create low-fidelity sketches.	Low-fidelity prototypes	

## Project Blog

The project blog should be hosted using [Sites at Penn State](#) (which uses Wordpress). Your team should use this blog to track the progress of the project and to show interesting project outcomes.

- [You can add multiple users](#) to a blog so everyone can edit and create posts.
- If any project team members are concerned about privacy, project members may use a pseudonym (pen name) and in addition, the blog is able to be password protected to Penn State WebAccess users. Please contact your instructor if this is a concern and need help with blog configuration.

Your first post can introduce the team members or project topic. You may have some preliminary ideas to share, but it's okay if your project idea is still undefined — it won't be until the Pitch in Phase 3!

## Submission details:

1. Publish a link to the project blog on the classwide Canvas discussion.
2. Upload a .zip file to the Phase 2 Canvas assignment that includes:
  - Link to the blog in the assignment submission
  - Design Sprint Schedule document in PDF format.

## Phase 3: Pitch

Produce a short presentation that explains the project concept. Use presentation slide software to design the presentation and record a video presenting the slides in a professional manner. You can include voice narration or on screen text to explain what we're looking at. Please include:

1. **Slideshow Video:** Clearly legible text or voice narration
  - If doing voice narration, you can choose one team member to narrate, or have different members contribute narration of different slides.
2. **PDF export** of slides used for the video.

The video should be fun and engaging! Imagine you are pitching this potential stakeholders or investors. Use bold imagery and visual design. Don't put loooooong passage of text on a slide and then read it to us. Keep it simple and concise.

## Requirements

- Must include original images or sketches depicting how the final project might appear
- Must include images of related creative work or designs that indicate your stylistic goals, competitors, or inspiration.
- Video should be 2-5 minutes long

## Resources

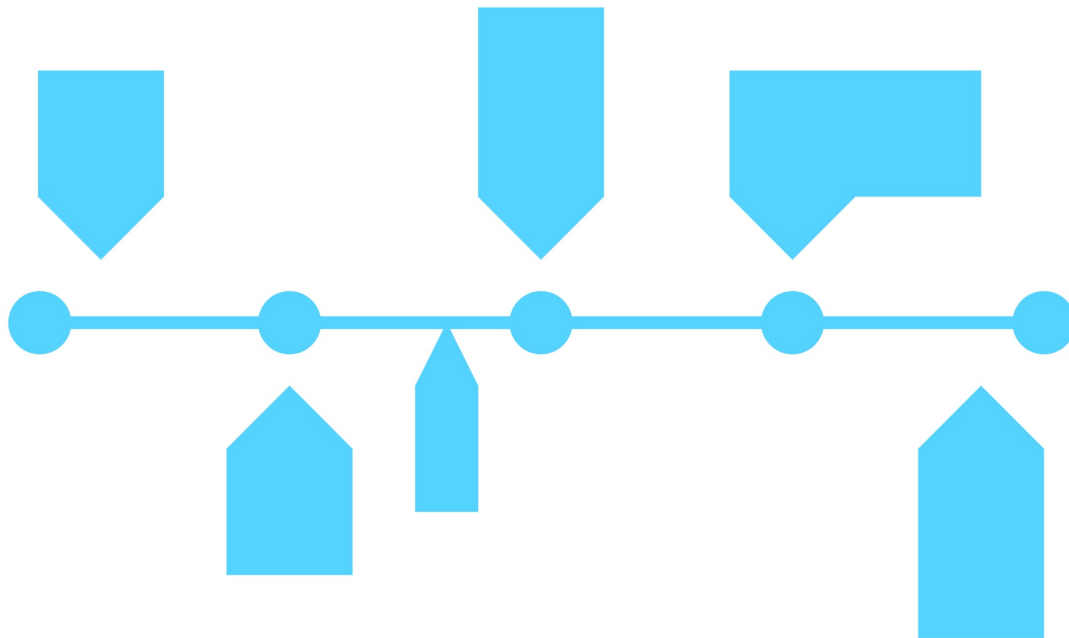
- [How to record slideshow and narration with Powerpoint](#)
- [How to record your screen with Quicktime](#) (Mac). Other screen-recording software is available online. Do this if you want to record a Google Slide presentation.
- Audio recording programs:
  - [Audacity](#): free open-source audio recording; [tutorial](#) for how to record with computer mic.
  - Adobe Audition: available with PSU Adobe account; professional grade audio editor. [Here's a tutorial](#) for recording a simple audio file.
- How to reduce video filesize (if your video is larger than 500MB or taking forever to upload):
  - Use Adobe Media Encoder to resize or compress a video file (without editing it, if you want to trim a video or do complex editing, use Adobe Premiere).
  - [This video](#) shows how to reduce the bitrate (i.e. quality) of the video to lower the file size. You can also choose to resize the video; e.g. from 1080p (1920px x 1080px) to 720p (1280px x 720px).

## Submission details:

1. Post the pitch to the project blog
2. Upload a .zip file to the canvas assignment that includes:
  - Pitch video (Please export/compress this video. It should be less the 500MB in filesize)
  - PDF export of the slides

Note: only one person in the group needs to submit the file to the group assignment.

## Phase 4: Design sprint



1. **Rule number one in art and design - if it's not documented, it never happened.** Please keep detailed and dated notes, photos, screenshots, video recordings, and other forms of documentation of team meetings, brainstorm sessions, concept research, design sprints or working session outcomes, etc. This will help your team immensely when crafting the project document, and will mostly likely be referred back to quite often. Consider keeping these materials in a shared team folder. See [collaboration tools](#) for information on available resources.
2. **Consider setting roles and responsibilities.** Members may have multiple roles.
3. If your team feels that the design process isn't working as intended, feel free to change up the design of the sprint. However, don't give up too early, sometimes you have to trust the process to give it a chance to work.

## Sprint Updates (Group Blog Posts)

In addition to your individual Weekly Reports, each group must post a blog post to a public blog.

Each Sprint Update must be **at least 500 words long** and **include images or video media**.

## Resources

- WP Beginner: [How to Add a New Post in WordPress and Utilize all the Features](#)

## Submission details:

1. Publish 5 or more detailed posts to the <http://sites.psu.edu> blog that you created to track your project's progress from the design sprint. Upload media and write descriptions and other relevant information.
2. The end results of the design process are included in what gets published on this blog, they do not need to be uploaded to canvas

other than what is included in the project document PDF.

## Phase 5: Project document

Each team should produce a single Project Document.

### Requirements

**1. Cover/title page:**

- Project title
- Date
- Team members
- Course name
- Instructor(s)
- Link to Team blog

**2. Team**

- Member names and short bios that include relevant interests, skills, and capabilities.

**3. Summary**

- Concept statement: Brief description of topic or design challenge and how it will be approached in a concise opening sentence or paragraph.
- Find and include a quote that relates to the project in some way, particularly if it's from the project's research.
- Add details including the project's context, outstanding issues, and goals. Include aspects of how the topic is interesting, important, or novel, and how you (the team) arrived at these conclusions. What contributions does the project make or intend to make? Does it reimagine, reframe, refactor, re-contextualize, or otherwise perform remix or invention? (200 words minimum)

**4. Design process overview**

- Timeline of events, according to your chosen design methodology. For each stage of the design process, describe the following:
  - Anticipated outcomes
  - Activities or work completed, and how they contributed to the project's development.
  - Actual outcomes

**5. Final Product**

- Depending on the nature of your project, this could be:
  - Images of your final product or design
  - Link to video, website, etc.
  - Additional files such as a ZIP archive, executable app, etc.

**6. Final Outcomes**

- Analyze and deconstruct central issues of your project using [form and context analysis](#). I.e. How successfully does your solution solve the problem?
- [Identify forces that impact form](#)
- Are there any ethical considerations?
- Include figures and diagrams of conceptual relationships
- Describe media used in digital production. For example, print, web, info-graphics, game/interactive, animation, video/film, audio/sound, physical installation, etc.

**7. Lessons learned**

- Assess how well your group's chosen design process worked (e.g. double diamond). How might it be improved upon in the future?
- Share your thoughts on the premise of a fast-paced "design sprint" and the steps prescribed by the class (sprint timeline, pitch video, blog posts, etc.)
- Reflect on the process of collaboration within your group. What were the biggest challenges you faced as a group? (e.g. meeting times, delegation, clashing visions, etc.) What strategies or advice might you use in future collaborative work?

**8. Bibliography**

- You can choose either APA, MLA, or Chicago format for document. See [documentation resources](#) for help.

## Formatting requirements:

- PDF document in US Letter size.
- Please see [documentation resources](#) for guidance.
- Proofread and spellcheck
- Additional files if necessary to show your completed work (e.g. video, executable app, ZIP archive, etc.)

## Submission details:

Upload the PDF document to the canvas assignment by the due date and time listed (only one person in the group needs to submit the file to the group assignment).



# Project 2

## Description

For this project, you will produce a digital design work that critically engages with the project's theme. You will also develop a design concept, production process, and a well-articulated work statement to explain your work to a wide audience. This is an opportunity to work on a project over a longer period and focus your creative interests in anticipation of the capstone course (DMD-400).

---

## Project Topic: A.I.

Algorithms have shaped our relationship to culture ever since social media feeds and streaming recommendations became dominant venues for creative work. But so-called artificial intelligence tools like image and text generators are evolving at [exponential rates](#) and offer new possibilities to artists and designers, while simultaneously [threatening](#) entire creative fields with the possibility of automation. So let's think about what this means for our future, and see what current AI tools can bring to our workflows.

## Required Readings

### ***You Look Like a Thing and I Love You* by Janelle Shane (2019)**

- What is AI? (pg. 1–28)

See PDF posted on Canvas.

After exploring hilarious AI-fails on her blog for many years, Janelle Shane explains how AI works (or doesn't work) with the help of delightful illustrations. The book goes into some detail about specific algorithms and learning models used for AI, but this introductory chapter is very accessible and should pull back the curtain a little and help you think about AI as a tool and not the magical force it sometimes feel like.

### ***Futureproof: 9 Rules for Humans in the Age of Automation* by Kevin Roose (2021)**

- Part 2, Rule 4: Leave Handprints (pg. 115–130)
- Appendix: Making a Futureproof Plan (pg. 203–027)

[Access ebook through Penn State library](#)

This book explores the state of AI-driven automation in knowledge industries like journalism, tech, business, and — yes, design. Roose is a New York Times contributor and co-host of the tech podcast [Hard Fork](#). He also made headlines in 2023 for [a conversation](#) with Bing's AI chatbot, where the program called itself Sydney and proclaimed its love for Roose.

In ***Futureproof***, Roose outlines nine rules for living and working in the “age of automation.” The fourth rule, “Leave Handprints” is one of the most applicable to artists and designers, but the other rules all offer useful approaches to maintaining a healthy mind and creative practice. So I'm also asking you to read the short appendix, where Roose shares actual examples of how to apply his rules to everyday life.

## Instructions

Use something generated by AI in your project.

This could take the form of text, images, videos, music, or other media assets that you insert into a creative project.

Or you could use AI tools as part of your process: to brainstorm ideas, discover visual inspiration, layouts, narratives, etc. For example, you could generate some AI poster designs, and then create higher quality posters yourself using colors and layout ideas from the AI-generated images. You could generate a list of possible design solutions to a UX problem, or a short story to illustrate with original comic artwork.

Beyond process or materials, what should your project be **about**? That's up to you, but you could consider the topics of artificial intelligence, automation, labor, robots, consciousness, human-ness, or other ideas related to the process we will use. Often when the concept of your work aligns with the form, sparks happen and everything becomes stronger.

These topics are not required; you can choose any subject for your project and simply use AI tools to generate something.

## Resources

▮ *As of August 2023 (New tools or updates may be available)*

*Any text, images, or media you put into these tools will be used to train and improve AI programs. For that reason do not share overly private information or media, and if you have concerns, contact your instructor.*

### Text

**Premium Choice:** [Chat GPT-4](#): A paid upgrade on the free model, and you can use plugins to let it browse the web, execute code, and interact with third party APIs.

**Free Recommendations:**

- [Chat GPT](#): Fast and easy to use, can generate code; cannot browse the web to find latest information.
- [Bing](#): Runs a mix of GPT 3.5 and 4, including ability to search the web and "see" images to analyze them. A little more creative and weird than the other models, and therefore great for brainstorming ideas.
- [Bard](#): Google's AI chatbot can run code and "see" images to analyze them.
- [Google Docs](#): Currently available only as a beta-release, you can generate and edit text directly in Google Docs. To request access, sign up for Google Workspace Labs at the link above.
- [Claude](#): Competitive with GPT-4 and notable for having an insanely large context window, meaning you can paste in entire books for it to transform, summarize, or interact with.
- [Lex](#): An AI-assisted text editor, if you prefer that to a chat interface. Write a document and let the AI continue your ideas, generate text, or develop notes into full text.

**Example prompts:**

- "How might a mobile app help library visitors engage with books in a new way?"
- "Write the copy for a landing page about an eco-conscious clothing company. Include section headings and use fun, pithy language that would appeal to teenagers."
- "I'm developing a fantasy video game, list some potential names for a magical island inhabited by pirates."
- "Who are some artists working with animation and site-specific projection?"
- "Help me write a comic about a conversation between a robot and a butterfly. Use script formatting, and include a visual description of each frame."

Remember that you can follow-up your prompts with more specifics to "steer" the response in the direction you want. You might have to help the chatbot along a few times to produce the kind of results you're looking for.

### Images

**Premium Choice:** [Midjourney](#): A fantastic tool that is worth a month of subscription to try it out. Uses a simple interface via Discord, where you type commands to generate or modify images. Follow their [quick start guide](#) and read about the many [commands](#) and [parameters](#) available to customize your results.

**Free Recommendations:**

- [Bing Image Creator](#): Uses DALL-E model, and is pretty great and easy to use.

- [Playground](#): A powerful GUI for generating images with Stable Diffusion; 1000 free images and licensed for commercial use.
- [Adobe Firefly](#): Notable for the fact that its AI model was trained exclusively on images Adobe owns (through Adobe Stock), so it is not exploiting artists by copying their style, if that's a concern for you.

### Example Prompts

- "A photograph of a man lounging under a tree on a summer afternoon, golden hour, cinematic bokeh, sepia colors."
- "A cartoon illustration of watermelon hugging a tomato, vibrant colors and radiating lines of energy."

Use very descriptive language, references to specific art styles, camera terms, or art media. You can alter the prompt if the results aren't to your liking, and remember that Midjourney has very specific [parameters](#) to help guide the resulting images.

Most of these tools will generate 4 images at once, and you can pick your favorite one to scale up to a higher resolution.

### Other Image Tools:

- [DALL-E 2](#): Owned by OpenAI, who makes Chat-GPT, this tool offers a limited number of free images before you have to pay for them.
- [Vizcom](#): Generate realistic imagery through a combination of sketching (!) and text prompts. Popular with industrial and product design. Looks 3D but I think it just outputs images.
- [Hugging Face](#): A vast library of user-created tools built on popular machine-learning systems, including some visual interfaces for the open source Stable Diffusion.
- [Spline Style Transfer](#): Spline is a cool web-based 3D modeling app, and while they're still working on a true "text-to-3D" model, you can use text prompts to generate images based on your 3D models, trying out new color or aesthetic ideas in an instant.
- [Icons8 Upscaler](#): Most generative image tools create fairly small images, so this AI tool can be used to scale them up to larger sizes.

### Advanced Use of Stable Diffusion:

As an open-source model, you can do an awful lot with [Stable Diffusion](#) if you're comfortable with some coding, including integrating it with other applications.

- [Overview and tips on running SD locally](#)
- [Beginners guide to using Stable Diffusion on Google Colab](#)
- [Using your own training images with Stable Diffusion and DreamBooth](#) (to generate images similar to your own input images)

## Video & Sound

**Premium Choice:** [Runway](#): A host of tools, including many for transforming video clips: remove background, enhance audio, remove objects, add subtitles, text-to-color-grade, text-to-3D, bokeh simulation, and more. Now with "text-to-video" generation!

### More:

- [EBSynth](#): Generate video and animations based on an input video + an input image. See FAQ page for tutorials.
- [Mubert](#): Generate instrumental music tracks online or using a plugin for Premiere and After Effects.
- [Pollinations](#): A collection of experimental AI tools with a free trial and then paid results; includes text-to-music and video generation, tools for animating still images, and more.
- [ElevenLabs](#): Generate realistic speech from text, including the ability to upload recordings to use as a basis for the synthetic voice.

## Software Add-ons

- Figma Plugins
  - [Magician](#): Generate icons, text copy, and images from text prompts.
  - [Ando](#): Generate designs and imagery from vector shapes, layouts, and text prompts.
- Photoshop
  - [Generative Fill](#): Official Adobe tool for generating and extending images in Photoshop, based on text prompts. To use, install the Beta version of Photoshop via the Creative Cloud app.
- VS Code
  - [GitHub CoPilot](#): Generate working code in a variety of languages, based on prompts or snippets (paid).

## ...More?

There are many, many, AI tools out there... with more appearing every day. So feel free to search online or ask your instructor for guidance on what you want to accomplish.

---

## Deliverables

1. [Production blog](#) (Canvas)
  2. [Concept pitch](#) (Canvas, production blog)
  3. [Production Reports](#) (Production blog)
  4. [Work statement](#) that uses design language (Canvas)
  5. [Project files:](#) (Canvas)
  6. [Project documentation](#) (Canvas, production blog)
- 

## Schedule

- **Week 7**
    - Read Project 2 description
    - Schedule one-on-one discussion with instructor
  - **Week 8**
    - Concept pitch slides are due (Canvas).
  - **Week 9**
    - Discuss pitch with instructor
    - Production Report #1 due
  - **Week 10**
    - Writing Project due
  - **Week 11**
    - Production Report #2 due
    - Mid-production Instructor Check-in
  - **Week 12**
    - Production Report #3 due
    - Work statement draft #1 due
  - **Week 13**
    - Production Report #4 due
    - Work Statement Draft #2 due
  - **Week 14**
    - Production Report #5 due
  - **Week 15**
    - **Final Submissions:**
      1. Project Files
      2. Final Work Statement
      3. Project Documentation
- 

## Project media

If you are unsure of what types of digital projects are available to create, please have a look at the list of [digital design project types](#). This is not a comprehensive list, but you should be able to locate your own creative interests within.

---

## Rubric

All project deliverables must be met for the project to be graded. A non-submission or non-completion for any part of the project is considered an incomplete project.

- Met deliverable requirements: 20%
- Concept: 20%
- Research and Process: 20%
- Craft: 20%
- Work Statement: 20%

# Concept pitch

The concept pitch is a presentation document that serves as both a communication tool and as a means of ensuring that you develop a project with that can be reasonably accomplished in the given timeframe. This project concept pitch should have no less than 10 slides. The basic structure is as follows:

1. **Title slide**
  - i. Title
  - ii. Name
  - iii. Date
  - iv. Course ("DMD 300: Digital Multimedia Design Studio")
  - v. Semester (Example: "Spring 2019")
2. **Bio**
  - o Here you will list what you know, and what you are interested in. This should be related to the project concept. (IE - if you are skilled and interested in web development, it would be confusing to then propose an animation project.)
  - o List existing digital media skills and other relevant skills.
  - o List any skills you hope to obtain during this project.
3. **Concept**
  - o Concise description of the project idea.
  - o What's interesting about it and or what is new/novel?
  - o What Digital media is used?
  - o What topics need to be researched?
  - o Who is the audience for the work?
  - o Which category
4. **Project Type**
  - o Specify which of the project categories and types your project falls under.
  - o Example: "2D Design, 3D Rendering, and Illustration: Typeface design"
  - o If nothing on the list matches your idea exactly, describe it as best you can and still choose the closest category.
5. **Production Scope**
  - o What are the deliverables to be completed or produced? (IE - storyboards, interviews, web application, website, wireframes, animatics, character designs, scripts, game executable, video, etc.)
6. **Production Pipeline**
  - o What tools will be used?
  - o What design processes and methods will be used?
  - o Who will be involved (list any collaborators, advisors, etc.)?
  - o Will you use management tools to keep on track?
7. **Required Capabilities**
  - o What capabilities and skills are required to complete the project?
8. **Existing Capabilities**
  - o Show past work that demonstrates your existing capabilities as related to the project concept.
9. **Needed Capabilities**
  - o List any items from the Required Capabilities slide that are not in your Existing Capabilities slide.
  - o Explain how you will get up to speed in time.
10. **Timeline**
  - o List steps in the production timeline.
  - o Like we did in Project One, label the stages of your timeline with design objectives like "discovery" and "iteration" to describe *why you're doing each item* in the timeline.
11. **Research**
  - o What areas of research do you intend to pursue during the production of this project?
  - o What are your research resources?
12. **Questions for your project reviewers**

- List three questions that might help you better some aspect of the project. Avoid vague questions such as, “Is this a good project?” or “What should I do?”. Instead focus your questions on the specific areas of your project that could benefit from feedback.

### **Submission details:**

1. Export this presentation as a PDF.
2. Submit the PDF presentation on canvas and your production blog by the deadline.

# Work Statement

Develop a 150–500 word work statement that thoughtfully employs relevant and critical art and design language. This statement should be developed with feedback from your instructor to adjust tone, terminology, and structure. You will use MS Word tracked changes to refine and edit the statement over the duration of the project.

The statement's use of language should seek a balance of accurate technical terminology, concise statements about the work, and language that is accessible to a diverse audience and is wholly descriptive. It is easy for artists and designers to adopt opaque language when attempting to describe abstract works. Developing playful language can be a fun exercise, but has the tendency to confuse or shut out those without a strong grasp of obscure and creatively applied vocabulary. There are really no rules with how language is used, but ultimately the goal in a work statement is that the artist or designer can clearly communicate their ideas, processes, and outcomes to a wide audience.

## Structure of the work statement

Please write the statement using proper grammar, sentence structure, and with complete paragraphs. Do not include the requirements as sections, the writing should flow as a single description of your project.

1. Include your name, project title, semester and year (IE – Fall 2022).
2. Explain what the project is and how it works.
  - E.g. "This project is an online game for children that teaches players living in war-torn countries how to avoid landmines."
3. Describe the type of media used and why that choice is effective or interesting.
4. Describe the design challenge that your work addresses (the provocation, or existing problem you hope to tackle). Do not write about challenges *you personally had* in producing the work.
5. Describe the process or how you approached solving for the design challenge.
6. Describe the impact the work might have, the context in which it sits, why it's interesting, etc.

## Statement writing advice

- [Artist Statement Guidelines](#)
- [UNSCA](#)

## Helpful terminology

- [Moma Art Glossary](#)
- [Technical Design Terminology](#)
- [Linguistic Glossary](#)
- [Critical thinking terms](#)
- [Example of a needlessly complex statement and it's translation](#)

## Artspeak

- [International Art English](#)
- [International Disco Latin](#)
- [artspeak.wtf](#)
- [The Guardian: A user's guide to artspeak](#)

## Artist Statements

The Work Statement is specifically about this project, but artist statements are a helpful analog. These are short, pithy statements that summarize an artist's entire body of work. Good ones minimize "artspeak" (above) in favor of intimate and provocative accompaniments to their work.



- [How to Write an Artist Statement](#)
- [Sample Artist Statements](#)
- [Artist Statements We Love](#)

## Example of Student Work

View a [sample work statement \(pdf\)](#) from a previous student.

## AI-Assisted Revision

As you explore the use of AI in design, it's worth seeing how AI can help us with writing too.

Algorithms are not very interesting; they don't know what you know, and they don't care about anything. But they are really good at regurgitating the writing style of other people into a sort of average result. And you can iterate and guide an AI to give you more interesting results, possibly editing its suggestions into your own writing. This can help align your writing with the conventions and language of a particular industry.

For one draft of your Work Statement, you should use an AI assistant to revise the text or generate feedback.

Use one of the AI resources listed under the Text section of the [Resources page](#).

You can paste your entire statement into one of the tools, and say something like:

- "Rewrite the following text in the style of a UX case study."
- "Help me improve the following design statement, including grammar and clarity of ideas."

Or you can start from scratch to see what it generates; this will produce something super generic and lacking important details about *your* work, but the language and structure may be useful reference:

- "Write an artist statement for someone who makes digital photo-collages of body parts."

## Submission details:

- Upload the work statement as an MS Word Document to Canvas as indicated deadlines.
- For the AI-Assisted Draft:
  - Identify which AI program you used
  - Include your prompts
  - Make it clear which writing is your own and which is computer-generated. (That could mean color-coding text, or including multiple versions of your statement with clear labels.)
  - Include a brief reflection on the use of AI, such as describing its strengths and weaknesses.

## Production reports

A production report is a comprehensive update about what progress has been made. A report can consist of any visual or text description and may include screenshot images, photographs of prototypes, video of working functionality, code snippets, production artwork, concept maps, research findings, work inspiration, storyboards and scripts, etc. Include hyperlinks to your research sources, tutorials you followed, or other influences on your work!

**Each blog post should be a minimum of 500 words long, and include images or other media.**

## Focus on AI

At least one of your blog posts should include an in-depth report on your use of AI tools.

- Explain what tools you used.
- Describe or show your input data.
- What challenges or surprises did you encounter?
- What did it feel like? How do these tools change your professional expectations or capabilities?

## Production blog

All reports should be published on the production blog by the due dates indicated on the project schedule. The production blog can be hosted anywhere.

Hosted blog choices include:

- [sites.psu.edu](https://sites.psu.edu)
- [Github Pages](https://github.com)
- [Medium.com](https://medium.com)
- [Adobe Spark](https://adobe.com/spark)
- [Wix](https://wix.com)
- [WordPress.com](https://wordpress.com)
- [Blogger](https://blogger.com)
- [Tumblr](https://tumblr.com)
- [Squarespace](https://squarespace.com)
- [Weebly](https://weebly.com)

# Documentation

1. **Title slide**
  - i. Title
  - ii. Name
  - iii. Date
  - iv. Course ("DMD 300: Digital Multimedia Design Studio")
  - v. Semester (Example: "Spring 2019")
2. **Bio**
  - Include a bio that describes relevant interests, skills, and capabilities.
3. **Work Statement**
  - A final draft of work statement language developed during Project 2.
4. **Design process overview**
  - Timeline of events
  - List methods used with brief descriptions
  - Anticipated outcomes of each step and how they contributed to the project's development.
5. **Outcomes**
  - Analyze and deconstruct central issues using [form and context analysis](#).
  - [Identify forces that impact form](#)
  - Are there any ethical considerations?
  - Include figures and diagrams of conceptual relationships
  - Describe media used in digital production. For example, print, web, info-graphics, game/interactive, animation, video/film, audio/sound, physical installation, etc.
6. **Images**
  - Include 4–8 images that show key features of your work with short descriptions of each image.
7. **Bibliography**
  - You can choose either APA or MLA format for document. See [documentation resources](#) for help.

## Formatting requirements:

1. PDF document in US Letter size.
2. Please see [documentation resources](#) for guidance.
3. Proofread and spellcheck

## Submission details:

1. Upload the PDF document to the canvas assignment by the deadline.
2. Upload PDF to production blog by the deadline.

## Files

The following are examples of project file types:

1. High resolution images
2. photo documentation
3. video
4. Pre-press PDF documents
5. executable game or app file for download (macOS and Windows compatible)
6. Zip archive of files
7. URL of live website (not a link to a paid web service such as InvisionApp)

For archival purposes, the files must be as self-contained as possible. (I.E.–if I were to look at them without an Internet connection, would the project still work? This will not always be possible given the nature of certain projects.)

## Submission details:

1. Upload to canvas by the deadline.

# Writing project

## 1. Analyze a specific work by an artist, designer, filmmaker, or studio

Incorporate a discussion of one creative work or project into your essay. This should somehow relate to your central line of investigation, and relate to media you are interested in.

- You are encouraged to look for new, obscure, historical, or otherwise thought-provoking creators — not just mainstream pop culture.
- **Include a thorough and detailed description of the work's design** — Assume your reader has not seen the work before. Describe formal qualities such as, colors, shapes, movement, structure, and so on. Use descriptive adjectives to help the reader picture the work.
- **Include the work title, date, medium, and location (as relevant)**
- Describe pertinent historical context for the work.
- Include credible scholarly sources to support claims and information.

## 2. The title of your essay should be a question

What questions do you have about the ideas, feasibility, or historical context of your work? What unexpected connections can you make? What is missing? What is confusing? The title of your essay should end in a question mark and should seek to discover an answer (or possible answers) to this question or explore the context that gave rise to the question.

## 3. Citations

To support your arguments and explore the work of your chosen artist, incorporate quotes or data from a minimum of three published sources. Do not cite Wikipedia (but you can peruse the citations of a Wikipedia page to find authoritative sources).

Search for articles and ebook at the [Penn State Library](#) or [Google Scholar](#)

## 4. Not sure where to begin?

1. You could start with an artist or designer, and pose a question that intrigues you about their work, or suggests a possible connection to your project.
2. Consider the historical or theoretical context of one of your current or past projects, and find writing and creative work that lies in a similar orbit.
3. This writing should be thought of as art or design criticism (a critical and reasoned examination of a cultural object). Consider your unique point-of-view and feel free to choose a subject that you are passionate about.
4. Imagine someone else was writing a serious essay about your work, what connections or questions would they include?

## Writing requirements

Your essay should include discrete paragraphs that give structure to your writing, including an introduction and conclusion. This essay is a substantial part of the class and should demonstrate college-level writing and your ability to research appropriate sources.

Please use MS Word for this project with the following structure:

- Name, date, title
- Minimum of 1000 words (2 pages single spaced)
- Bibliography using citations throughout writing

- Submit a DOCX file

## Rubric

1. Word count met: 5%
2. Formal writing style. Includes use of art and design vocabulary throughout writing: 40%
  - [This list is a decent reference.](#)
3. Thoughtfully and critically answered writing prompts: 45%
4. Spelling, punctuation, grammar: 10%

## Resources for Discovering Artists and Designers

- [Fast Company](#): An essential design publication; features mainstream design and weird creative stuff.
- [We Make Money Not Art](#): A quirky blog of new media art; search for key words to browse years of material.
- [Dribbble](#): A social media platform for designers (mostly UI and graphic design)
- [Creative Bloq](#): A very pop-y blog of creative tech stuff.
- [Surface Magazine](#): A high-brow publication on "architecture, art, design, fashion, and travel."
- [99% Invisible](#): Every designer's favorite podcast; browse years of stories on design of all kinds.
- [Abstract](#): The Art of Design: A Netflix series about innovative designers.
- [Art21](#): A great video series on artists of all kinds.
- [TED Talks](#): You know what they are; search for designers, artists, and practioners.
- **The world around you**: look through your books, albums, video games, or other design work that you love and find out who made it.

# Project Categories and Resources

An independent or capstone project will fall into one of several possible media types. These categories are not designed to limit your ideas, but to provide a menu possible project outcomes. You can blend categories together and steer your work into other areas if your instructor approves your plan.

## DMD Resource Hub

Each of the categories below includes examples of specific project types, recommended production requirements, and expectations for a proof of concept.

Because these guides are used in both DMD-300 and DMD-400, the pages are hosted a separate Gitbook that can be accessed by students in both classes:

**Access Link:** [DMD Art and Design Resources](#)

## Categories

- [2D and 3D Animation](#)
- [Apps and Interactive Media](#) (VR, AR, and games)
- [2D Design and Illustration](#)
- [Web Design and Development](#)
- [Video Production and Photography](#)
- [Audio Production and Recording](#)
- [Products, Services, and UX](#)
- [Installations and Objects](#) (digital fabrication, art objects, prototypes, and exhibitions)

If you're unsure of a direction to take or have suggestions for this resource list, simply get in touch with your instructor.

## OER License

This OER book is licensed as [CC-BY-4.0](#). Some content is taken from other sources and cited throughout. However, this work is a living draft, presented as is, and may be changed or updated without notice.

## Attribution

You are welcomed and encouraged to use the content in this book for your own teaching needs. At a minimum, please provide attribution via html source schema, see below for usage. Use the [Google Structured Data Testing tool](#) to test that the schema is functioning properly. More information can be found on [OERSchema.org](#).

If your publishing method prohibits schema, please use the visible attribution method provided.

### OER Schema metadata attribution:

Add [OER Schema](#) and CC License to HTML source:

```
<!-- Add OERSchema and CC schema vocabulary to object -->
<div prefix="oer: http://oerschema.org/ cc:http://creativecommons.org/ns dc:http://purl.org/dc/terms/" resource="#oer-source">

    <!-- Add OER resource text and media here. -->

    <!-- Link the license and attribution to the page -->
    <link about="#oer-source" property="cc:license" content="https://creativecommons.org/licenses/by/4.0/">
    <meta about="#oer-source" property="cc:attributionUrl" content="https://www.gitbook.com/book/dmd-program/dmd-300-sp17"
>

    <meta about="#oer-source" property="cc:attributionName" typeof="oer:Resource" content="Michael Collins">

</div>
```

### Visible attribution

“[DMD 300: Digital Multimedia Design Studio](#)” by Michael Collins is licensed under [CC-BY-4.0](#).”

```
<a href="https://github.com/dmd-program/dmd-300-sp19">DMD 300: Digital Multimedia Design Studio</a>” by Michael Collins is
licensed under <a href="https://creativecommons.org/licenses/by/4.0/">CC-BY-4.0</a>.
```