

USC Iovine and Young Academy

*Arts, Technology and the Business
of Innovation*

Instructor

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Technology Essentials

IDSN 530 | Spring 2023 | 3 Units
Tuesdays 7:30pm - 8:50pm
Online

IT Help

Hours: 8:30am - 6:30pm
Contact Info: iyahelp@usc.edu

Course Description

Technology Essentials establishes a fundamental understanding of engineering and technology across a wide range of areas. Students build theoretical fluency in core concepts, methods, and technologies, and in some cases develop technical competencies. The purpose of this foundation is to create technological fluencies that will enable students to:

- Understand the technological aspects of projects, from their essence and goals to scopes and budgets.
- Improve interactions and teamwork with engineers on projects and teams.
- Better recognize technology opportunities for disruption and innovation in projects and startups.

Learning Objectives and Outcomes

By the end of this course students will acquire a degree of theoretical fluency in technology and engineering that enables them to understand:

- How computing technologies have disrupted and transformed businesses and industries.
- The process of designing and developing a web-based application, from consumer user experience (UX) to back end, through hands-on experiences
- Capabilities of the cloud and its impact on (and opportunities for) technological development, capabilities, and businesses
- The purpose of storing and structuring data, such as in a database
- Core business, design, and development considerations for creating mobile applications and internet-enabled devices
- The basics and uses of data analytics
- Security and performance considerations that impact all of the above.

Recommended Preparation

No prior technology knowledge is required or expected for this class. Those with extensive prior technology education or experience are encouraged to complete IDSN-525 Business Essentials or IDSN-520 Design Essentials in lieu of this course.

Technological Proficiency and Hardware/Software Requirements

This course will be conducted online, using a combination of synchronous and asynchronous methods. Students must provide their own desktop or laptop. The computer specifications must take into account that students will be streaming, and communicating using video-conferencing applications, as well as creating and storing large multimedia files, and possibly rendering 3D objects in real time.

Hardware:

- Camera
- Microphone
- A fast and reliable internet connection
- A processor capable of running applications while streaming video
- An external drive, online storage, or GitHub account

Software:

- An IDE (i.e. MS Visual Studio, Sublime Text, Dreamweaver)
- Adobe Creative Cloud (Photoshop, etc.)
- An office software suite (MS Office, OpenOffice, Google Docs, Numbers)
- An up to date web browser (i.e. Firefox, Chrome, Brave)
- Presentation (PowerPoint, Keynote, Google Slides)
- Zoom

How To Purchase Software at the Discounted Academy Rate

For classes that require them, the following software are available for purchase online through the USC Iovine and Young software catalog at the Academy discounted rate.

Software	IYA Short-Term License at USC Bookstore
Adobe Creative Cloud	\$70 2023–2024 annual license (active through July 2023)
Apple Logic Pro	\$35 semester licenses
SolidWorks	\$35 semester license
Apple Final Cut Pro	\$35 semester license

To purchase:

- Visit: <https://commerce.cashnet.com/IOVINE>

- Select the software license(s) you would like to purchase by clicking “View Details” or the software title, and make your purchase.
- You will receive an order confirmation receipt at the email address you provided.
- You will be notified by email when the software license has been activated.

If you have any questions about this process, please do not hesitate to contact Academy IT Support at iyahelp@usc.edu.

Required Readings and Supplementary Materials

Required reading will be drawn from textbooks, articles, papers, cases, and online publications (e.g., articles, op-ed essays) available through a host of available outlets; in all instances, the material will be delivered via computer. Students will also be required to view online videos; complete web-based, interactive exercises; and respond to peer and faculty comments (within an online discussion forum or group discussion). Lectures, readings, and viewings will be supplemented with current articles and audio/video content.

Grading Breakdown

Assignments	675pts 71.05%
Labs	125pts 13.16%
Attendance and Exercises	150pts 15.79%
Total	950pts 100%

Assignments	Start	Due	Pts
Assignment 1: Interests and Hobbies Website	Week 2	W4	100
Assignment 2.1: Interactive Website, <i>Proposal and Wireframes</i>	Week 4	W5	50
Assignment 2.2: Interactive Website (GROUP), <i>FrontPage and Style Sheet</i>	Week 5	W7	100
Assignment 2.3: Interactive Website (GROUP), <i>Final Build With Video and jQuery</i>	Week 7	W9	150
Assignment 3: Database Commission	Week 8	W9	50
Assignment 4.1: Mobile Project, App Idea (GROUP)	Week 9	W10	25
Assignment 4.2: Mobile Project, Pitch Deck (GROUP)	Week 10	W12	150
Assignment 5: Analytics Paper	Week 13	W15	50
Total			675

Labs	Start	Due	Pts
Lab 1: Edit Student Information File, Post to Web	Week 1	W2	10
Lab 2: Web Page on Past Projects	Week 2	W3	25
Lab 3: Web Page That Is Mobile Responsive	Week 4	W5	15
Lab 4: jQuery Exercise	Week 6	W7	15
Lab 5: Research on Implementing an API, Plug-in or Library	Week 7	W8	15
Lab 6: Web Page Build in Bootstrap	Week 8	W9	15
Lab 7: Research Into Server Scoping	Week 9	W10	15
Lab 8: AR/VR Proposal	Week 12	W13	15
Total			125

Assignments

Assignment 1: Interests and Hobbies Website

Deliverable: Link to completed website

Details: Website with a minimum of three pages (homepage plus 2+ inner pages).

You will create an "interests and hobbies" website containing content (text, images, layouts, design) focusing on your personal interests and hobbies.

Your final site is to contain:

- At least one external css stylesheet.
- Landing page that includes header title, introduction, summary information about subpages, and navigation. You should use the semantic HTML tags matching these sections when possible.
- A minimum of two subpages. Each inner page should contain header, navigation, and focus on one topic/area in depth.
- All pages should have a uniform design, color scheme, and look and feel.
- Overall site shall contain **at least seven** images (among all of the pages).

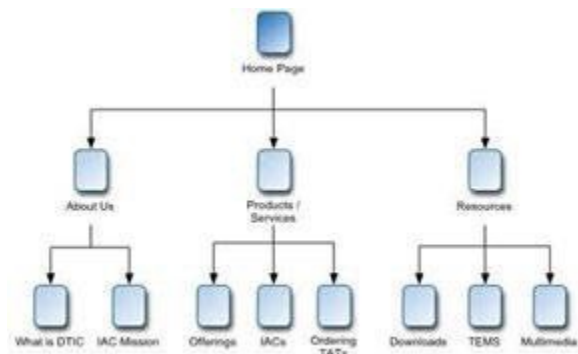
Assignment 2.1: Interactive Website, Proposal and Wireframes

Deliverable: Document (proposal), including screenshots/wireframes

Details: Written (text, narrative) proposal of the website, as well as mock-ups, wireframes, and/or screenshots of a version of the landing page.

Each student will present their proposal in class in week 5. Following the presentations, each student will have 2 days to choose their top three proposals that they would prefer to work with. This will be the basis for the assigned groups for assignments 2.2 and 2.3. The class professor

will assign groups. Group sizes will preferably be three students depending on class size. Your proposal is to contain:



- A graphically rendered or hand-drawn **Site/Flow Chart** for your project (see sample).
- Text/narrative description or declaration of the **Focus/Mission** of the site.
- Text/narrative description about the **Audience/s** for the site.
- Notes about the origin of the **Text and Graphic Content** for the site. Will you scrape news sites, reviews, blogs, image archives? Will your team be writing and shooting the content itself? Etc.
- **Team Roles**: For each group member notes on what roles, they are expected to serve, such as project management, HTML or CSS production, design or graphic production, JavaScript, etc.
- **Wireframes/Mock-Ups** or screenshots of one page of the site. This is meant to provide an example of the general look and feel (or design) and layout approach that your team intends for the site.

Assignment 2.2: Interactive Website (GROUP), Landing Page and Style Sheet

Deliverables: Link to the homepage/landing page of the site, document with a site style guide.

Details: This build is your initial landing page (no inner pages required), including a navigation with content (labels) indicating the inner pages, as well as a general site style guide. There are many examples of website style guides on the Internet.

Your group will build the front page of your site, with text, graphic content, html and css, and a Style Guide (document) that lays out general design elements of the site such as common font, color, and dimensions of elements. See sample style guides for reference/suggestions. This build represents a fairly mature version of your homepage (but without any video or scripting).

Assignment 2.3: Interactive Website (GROUP), Final Build With Video and jQuery

Deliverables: Link to completed website

Details: Final website with landing page, a minimum of three inner pages, and all content including scripting (jQuery recommended), user interactivity, and at least one embedded video.

Having previously completed a build of your landing page for the site, the final build includes the landing and all inner pages.

Final site requirements:

- Consistent design / look and feel across all pages
- Clear navigation and narrative paths through the site
- Real, substantive text and graphic content
- User interactivity implemented through client-side scripting such as jQuery. These should be more sophisticated than plain rollover image behaviors. Better interactions would be hidden regions that animate upon scripted user interactions, interactive menus, etc. You are to have at least three different jQuery interactions.
- At least one embedded video. Embedded audio is good too, especially if triggered by user interactions through scripting.
- Not using semantic HTML tags instead of div tags will cause a deduction in your score

Assignment 3: Database Commission

Deliverables: Submitted document

Details: Create a scope document to be submitted to a DBA to commission a database for a web project. Include sketch of data structures and all relevant information for DBA to design database for commissioned project.

Requirements:

- General description of data set and how it will be used (on which specific website)
- Rough data sketch that includes at least five tables. Each table should have partial list of fields. (Note: You could list the tables and fields as an Excel doc, Word doc, hand sketch, etc.)
- Notes and ideas about how the data might need to be analyzed, totaled, converted into statistics, etc.
- Is there existing data that might need to be imported (starting posts, stats, game scores, course listings, photo galleries, etc.)? Where might it be coming from? Any particular format?
- You get to choose the domain for the database that you are “commissioning”

Assignment 4.1: Mobile Project, App Idea (GROUP)

Deliverables: Submitted document

Details: Pitch a mobile application project. Write up thoughts about what, why, etc.

You will stay in the same groups that you had for assignments 2.2 and 2.3. Your app idea will be a continuation of your website from assignments 2.2 and 2.3.

Your group will be presenting your idea to class in the week it is due. Your document/presentation is to include at least the following:

- Market
- Audience
- A Lean Canvas business plan and monetization strategy

- Challenges
- Layout changes from the website

Assignment 4.2: Mobile Project, Pitch Deck (Group)

Deliverables: Submitted document

Details: Presentation "pitch" deck for a mobile app to be developed, which would theoretically be pitched to a VC.

The pitch "deck" should weave together all of the following elements (some of which you may choose to summarize in the deck and offload the details to an appendix or attached doc). It might be most beneficial to have your group start by collaboratively working up the Lean Canvas on the idea:

- Overall pitch for app:
 - Core idea (problem and solution)
 - Originality, uniqueness
 - Core audience/s (including analysis/arguments about demographics, income levels, other relevant factors)
 - Monetization
 - Competition
- Mock-ups and/or screenshots of the app
- Development cost estimates for:
 - App creation (iOS, Android, hybrid, mobile?)
 - Back-end requirements (server, database, etc.)
 - Other—transactions, special APIs, etc.
- Lean Canvas plan

Your group will be presenting your work to class in week 11.

Assignment 5: Analytics Paper

Deliverables: Submitted document

Details: Minimum of three written pages single spaced with sample/existing data visualizations.

You are to select a domain and data area. An example domain is the medical field. A data area example would be COVID-10 data.

You are to research and think about the nature of the data that domain would use. The final paper should:

- Describe some of the types of data the domain/organization would have.
- List a series of ways the organization would use analytic data and why (motivation). For decision making? For evaluating ROI? To define metrics of success? Etc.

- Describe and explore how analytics would be used to fulfill the organization's data goals. Would they be using predictive, diagnostic, prescriptive, or descriptive analytics (or more than one)?
- Theorize some analytic plans, campaigns, etc.
- Cite some real-world (parallel) examples to the above (i.e., excerpt from and point to studies, articles, papers, etc., where an org had similar(ish) goals to yours in which they used data and analytics to fulfill/inform).
- Define some data visualizations that would be useful (based on the data, organization's goals, analytic output, etc.).
- Finally, give some examples of what you consider effective data visualizations (anything from data dashboards to infographics) from real/past analytic campaigns (do not have to be from the same domain). Obviously, these examples should have parallels or work as effective illustrations of what you would want.

Labs

Lab 1: Edit Student Information File, Post to Web

Deliverable: Edit and upload studentinfo.txt file to your web.iyaclasses.com web space in your public_html folder and also post it to the LMS for lab 1.

To complete this lab, you need to follow the instructions on the Wall for how to Download and install the FileZilla FTP program. After downloading and installing, if you cannot connect, then you will also need to download and install the VPN (Virtual Private Network) software, as well. Instructions for this are also posted to the Wall. If you already have an FTP client installed on your computer, then you can use that.

To help with the use of FileZilla and VPN (if needed) software, we will make time in the week 1 class for students to download and use this software. The professor will lead all students through this process. The goal is to ensure all students are able to access their web account on the webdev.iyaserver.com web server.

Requirements:

1. Create a studentinfo.txt file. You can put whatever information about yourself that you would like to. You should include things such as your name, where you work and your title, hobbies, interests, etc. It is pretty much up to you.
2. Using FileZilla use the following connection information
 - A. Host: webdev.iyaserver.com
 - B. Protocol: FTP
 - C. Username: Your USC userid that you use to get to USC email
 - D. Password: ldsn530_Lastname_USCID, so mine might be ldsn530_Bruneau_1234567
3. Once you are logged in, double click on the public_html folder

4. Upload your studentinfo.txt file into the public_html folder.
5. You can verify that it worked by going to a browser and entering the following URL:
YOURUSCUSERNAME.webdev.iyaserver.com. For me, this would be: https://
jpbruneau.webdev.iyaserver.com.

Once connected you should see your studentinfo.txt file displayed in a list. If you double click on it, you should see the contents of the file you uploaded. If you created a file with a different name, then double click on that file.

If you don't see your file in the list of files, then you may not have double clicked on the public_html folder from step 3 above when uploading your file.

Lab 2: Web Page on Past Projects

Deliverable: Link to web page you created that lists past projects

To complete this lab, you need to compose a web page that lists some of the past projects you have completed, including hyperlinks to select samples. Note: The samples can be PDFs (of essays, illustrations, etc.), graphics (TIFF, PNG, etc.), html (web pages/sites), etc.

You can base this page on sample html pages/templates from previous assignments, demos, and labs, or you can create one from scratch.

Page requirements:

- Header/title section
- General layout region and color scheme
- At least two sections of work (web pages, published research, design layouts, illustrations, code development projects, etc.). Each section should have text title and description. At least three of the overall samples must have hyperlinks to samples/references/actual work.

Lab 3: Web Page That Is Mobile Responsive

Deliverable: Link to published web page

For this lab, you are going to take the front page of your Interests and Hobbies website (Assignment 1), and create a new version of that page (just the front, not the internal pages) that features an adaptive layout, that changes to fit a small mobile device.

Start by saving a copy or new version of your page – do not change your assignment 1 page. In this new version, write CSS media queries that target devices 768 pixels and under, and another for devices above 768 pixels. Transform your page layouts to display differently, better, or optimally for small or narrow mobile screens.

For this lab, you are welcome to edit or tweak your original layout if that helps to reorganize your layout objects in such a way that they work better on both normal/large devices and your targeted small device.

Your lab is to have two media queries: One for 768 pixels and under and another media query for more than 768 pixels. Put all CSS directives for a specific media query in a single media query. You are to have at least 10 different CSS directive changes across the two media queries. You don't need to have 5 media queries in each - you can more than 5 in one media query and less than 5 in the other media query. Also, you are not allowed to change the same 5 CSS directives across the two media queries. You must have 10 different CSS directives that change.

Make sure to include a viewport tag in your header such as:

```
<meta name="viewport" content="width=device-width, initial-scale=1">
```

Lab 4: jQuery Exercise

Deliverable: URL of completed jQuery in web page

You are to add jQuery to your assignment 1 page. You are to add at least 5 jQuery interactions. As in lab 3, don't change your assignment 1, or lab 3 submission. Create a new HTML document as a copy of either assignment 1 or lab 3. As in lab 3, duplicate jQuery interactions only count as one interaction.

Lab 5: Research on Implementing an API, Plug-in, or Library

Deliverable: A PDF document

Choose an API, Plug-in, or Library to research.

For this lab, your API, plug-in, or library write-up is to include:

- Name, description, primary use
- Stats on how many sites use it
- Cost and any limitations such as X use or transactions per month, no license for nonprofit use, etc.
- Technical requirements—must be able to script in X language, only for use in Y CMS, etc.
- Any requirements to implement—from technical skills (knowledge of JS, etc.) to software requirements (must have X library installed, must have Y language)
- Links to:
 - How-to/implementation docs
 - Three sites that use the plug-in/API
 - Forum or site that has discussions about the software, from troubleshooting problems to pro/cons of using it.

- Quote from someone (can be from the web, from a forum) arguing the advantage of using (arguing for) the software—but NOT the author/developer

Examples of APIs:

- Google mapping (and geocoding) API, Slack
- Twitter, Facebook (login and pulling feed/data from site), YouTube, Vimeo
- Tumblr, Instagram, Pinterest, Imgur
- Accuweather, Kayak (travel), Yelp
- FullContact, Stripe, Mailchimp
- ACR Cloud, Apple MusicKit, Spotify
- Amazon S3 (storage), PayPal, FedEx
- Bootstrap
- jQuery
- NextGen Gallery, Jetpack, Yoast SEO, WP Forms, WordFence Security, Askismet Anti Spam
- IMCE, View Bulk Operations (VBO)
- Two-Factor Authentication

Lab 6: Web Page Build in Bootstrap

Deliverable: Link to published web page

For this lab, you will take one starter bootstrap template (from getbootstrap.com or Dreamweaver) and create a web page with "real" content. (You do not have to write/create the content; you can use existing text and images from wikis, existing sites, etc.) Note: You can choose to "remove" the navigation from the template since you are not creating more than one page.

The type of content you need will of course depend on the nature of the bootstrap page you create. A bootstrap page with an image carousel, or one with an image gallery grid, will obviously necessitate more graphics, a different layout will require more narrative text and items.

Note the mention of 'real' content. Some templates have boilerplate text. If you leave that text in your submission, you will lose points.

Lab 7: Research Into Server Scoping

Deliverable: A PDF document

Research an existing website to scope out its general traffic levels, technology platform, and some range of what hosting might cost.

Your document is to include your research results in the following areas, INCLUDING reference URLs:

- Approximate monthly users and visits
- Technologies/platform site is built/based on List
- "Rough" hosting cost range, and pros and cons, between hosting through at least two of the following:
 - Traditional shared-environment hosting
 - Dedicated server hosting
 - Co-location hosting
 - AWS
- Some general variables that could affect the hosting cost

Note: There are a number of websites that provide traffic information about other websites. An Internet search for 'website traffic', or similar search, will display a number of choices that you can use for this lab.

Lab 8: AR/VR Proposal

Deliverable: A PDF document

Write a proposal to use virtual and/or augmented reality to transform an existing app or mobile game. Requirements:

- Name of application or mobile game. URLs to docs/description.
- Description of original VR/AR component to add to the app. What are the primary arguments/advantages/value added?
- Development requirements, challenges: What are some technical requirements (dev platform, o/s restrictions, APIs) to implement? List three major technical challenges/implementations.

Participation

Students are expected to actively participate in this course. In an online forum, participation includes:

- Careful reading and viewing of assigned materials by the date due
- Regular, substantive contributions to discussions
- Active engagement with online content
- On-time attendance and full attention in synchronous sessions
- Significant collaboration with classmates and teammates

Course grades may be affected for students who do not contribute to the course through active participation. Students should notify the instructor in advance if they are unable to attend class. Those unable to attend will be required to review the online recording for the session missed, and submit thoughtful feedback to the Instructor.

Grading Scale

Course final grades will be determined using the following scale:

A	95 - 100
A-	90 - 94
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
D+	67 - 69
D	63 - 66
D-	60 - 62
F	59 or below

Assignment Submission Policy

All assignments and labs must be delivered, per instructor guidelines, one hour before that section's live session, on the date that deliverable is due. No exceptions. (Early submissions are, of course, encouraged!)

Late Submissions

Assignments will be accepted after the deadline with the following grade penalties. Do not ask for extensions.

- | | |
|---|----------------|
| • Submission in the 24 hours after the deadline | 20% deduction |
| • Submission in the 48 hours after the deadline | 50% deduction |
| • Submission more than 48 after the deadline | 100% deduction |

Correcting a Grading Error or Disputing a Grade

If you don't inform the instructor of missing or incorrect grades within two weeks of those grades being posted, the grades will be assumed correct. Do not wait until the semester's end to check or appeal any grades. If you feel a grade merits re-evaluation, you are encouraged, within one week of the instructor providing a grade and initial feedback, to send the instructor a memo in which you request reconsideration. The memo should include a thoughtful and professional explanation of your concerns. Be aware that the re-evaluation process can result in three types of grade adjustments: positive, none, or negative. (Note: Complaints on the date of a graded assignment's return to you will not be addressed; it is essential to wait one full day prior to raising a concern.)

Class Attendance Policy

The Academy maintains rigorous academic standards for its students and on-time attendance at all class meetings is expected. Each student will be allowed **three absences** over the course of

the semester for which no explanation is required. Students are admonished to not waste excused absences on non-critical issues, and to use them carefully for illness or other issues that may arise unexpectedly. Except in the case of prolonged illness or other serious issue (see below), **no additional absences will be excused**. Each unexcused absence will result in the lowering of the final grade by $\frac{1}{3}$ of a grade (e.g., an A will be lowered to A-, and A- will be lowered to a B+, etc.). In addition, being tardy to class will count as one-third of an absence. **Three tardies will equal a full course absence.**

Students remain responsible for any missed work from excused or unexcused absences. Immediately following an absence, students should contact the instructor to obtain missed assignments or lecture notes and to confirm new deadlines or due dates. Extensions or other accommodations are at the discretion of the instructor.

Automatically excused absences normally may not be used for quiz, exam or presentation days. Using an excused absence for a quiz, exam or presentation, such as in the case of sudden illness or other emergency, is at the discretion of the instructor.

In the case of prolonged illness, family emergencies, or other unforeseen serious issues, the student should contact the instructor to arrange for accommodation. Accommodation may also be made for essential professional or career-related events or opportunities. Additionally, students who need accommodations for religious observations should provide advanced notice to instructors and student athletes should provide Travel Request Letters. All accommodations remain at the discretion of the instructor, and appropriate documentation may be required.

Unless students provide an accommodation letter from USC's Office of Student Accessibility Services (OSAS) or a letter from IYA Student Services detailing visa or travel restrictions, attendance and active participation is expected in the classroom. Any student with such accommodations should submit their accommodation document to the instructor as soon as possible to discuss appropriate accommodations.

Students who are experiencing illness should not attend class in person. Please inform the instructor in advance of any class sessions that you can't attend for medical reasons, and accommodations will be arranged to view recorded lectures and submit alternatives to any missed class participation. Students will not be penalized for not attending class in person under these circumstances.

General Classroom Policy

Students will arrive to class sessions on time.

Have technology and presentations prepared ahead of time.

Treat class time as an opportunity.

Participate in class discussions and critiques.

Confront difficulties in your work in the spirit of learning, creative exploration and growth.
Ask for help from your instructors when needed
Respect your fellow students at all times.

Remote Learning Environment Expectations

Students will arrive to zoom sessions on time.
Have technology and presentations prepared ahead of time.
Video cameras must be on to be counted as present.
Keep microphones muted when not speaking.
One person talks at a time, questions may also be asked in chat.

All class sessions in zoom will be automatically recorded. They will be available for 2 weeks on zoom but they will not be archived. If you miss a class it is your responsibility to view the recorded session as soon as possible.

Course Content Distribution and Synchronous Session Recordings Policies

USC has policies that prohibit recording and distribution of any synchronous and asynchronous course content outside of the learning environment.

Recording a university class without the express permission of the instructor and announcement to the class, or unless conducted pursuant to an Office of Student Accessibility Services (OSAS) accommodation. Recording can inhibit free discussion in the future, and thus infringe on the academic freedom of other students as well as the instructor. ([Living our Unifying Values: The USC Student Handbook](#), p13).

Distribution or use of notes, recordings, exams, or other intellectual property, based on university classes or lectures without the express permission of the instructor for purposes other than individual or group study. This includes but is not limited to providing materials for distribution by services publishing course materials. This restriction on unauthorized use also applies to all information, which had been distributed to students or in any way had been displayed for use in relationship to the class, whether obtained in class, via email, on the internet, or via any other media. ([Living our Unifying Values: The USC Student Handbook](#), p13).

Contact Hours

This 3-unit course requires 1125 minutes of instructional time per semester, which equals 75 minutes of instructional time each week. Instructional time may be further broken down into 37.5 minutes of asynchronous time and 37.5 minutes of synchronous time. In addition, it is expected that students will work, on average, an additional 300 minutes per week outside of class — on readings/viewings, homework assignments, field experiences, and individual or team projects. Synchronous class sessions will be offered as regularly scheduled evening or weekend classes, once each week.

Course Schedule (Subject to Change)

Week 0	Course Overview Importance of Technology
Week 1	Unit 1 Course Introduction, Role of Engineering and Technology Over Time, Information Systems as the Enabling Technology of Today
Week 2	Unit 2 Web Objects, Hypertext Markup Language (HTML)
Week 3	Unit 3 Web Design, Cascading Stylesheets (CSS)
Week 4	Unit 4 Responsive Web Design and Search Engine Optimization
Week 5	Unit 5 Web Experiences, Interactivity, JavaScript
Week 6	Unit 6 Server-Side Scripting, Templates, APIs
Week 7	Unit 7 Libraries, Frameworks, Content Management Systems
Week 8	Unit 8 Data Structures, Database Fundamentals, Structured Query Language (SQL)
Week 9	Unit 9 Servers, Domains, Cloud
Week 10	Unit 10 User Interface Design for Mobile Applications
Week 11	Unit 11 Mobile Development, Internet of Things, IoT Dev
Week 12	Unit 12 Software Development, Video Games, AR, VR, and Next Generation Media
Week 13	Unit 13 Artificial Intelligence, Machine Learning (ML)
Week 14	Unit 14 Data Analytics, Data Science
Week 15	Unit 15 Security, Performance, Legal Issues

Academic Integrity

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission

of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the [USC Student Handbook](#). All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

The impact of academic dishonesty is far-reaching and is considered a serious offense against the university and could result in outcomes such as failure on the assignment, failure in the course, suspension, or even expulsion from the university.

For more information about academic integrity see the [student handbook](#) or the [Office of Academic Integrity's website](#), and university policies on [Research and Scholarship Misconduct](#).

Policy for the use of AI Generators

Since creating, analytical, and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by the student working individually or in groups. Students may not have another person or entity complete any substantive portion of the assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. Therefore, in most cases, using AI-generated tools is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity. If there are questions or you think there is a special use case you would like an exemption for, ask your instructor.

Students and Disability Accommodations

USC welcomes students with disabilities into all of the University's educational programs. [The Office of Student Accessibility Services \(OSAS\)](#) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More

information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems

[Counseling and Mental Health](#)

(213) 740-9355 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

[988 Suicide and Crisis Lifeline](#)

988 for both calls and text messages – 24/7 on call

The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline is comprised of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

[Relationship and Sexual Violence Prevention Services \(RSVP\)](#)

(213) 740-9355(WELL) – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender- and power-based harm (including sexual assault, intimate partner violence, and stalking).

[Office for Equity, Equal Opportunity, and Title IX \(EEO-TIX\)](#)

(213) 740-5086

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

[Reporting Incidents of Bias or Harassment](#)

(213) 740-5086 or (213) 821-8298

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

[The Office of Student Accessibility Services \(OSAS\)](#)

(213) 740-0776

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

USC Campus Support and Intervention

(213) 740-0411

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity, Equity and Inclusion

(213) 740-2101

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency

UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety

UPC: (213) 740-6000, HSC: (323) 442-1200 – 24/7 on call

Non-emergency assistance or information.

Office of the Ombuds

(213) 821-9556 (UPC) / (323-442-0382 (HSC)

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

Occupational Therapy Faculty Practice

(323) 442-2850 or otfp@med.usc.edu

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.