# CIS 3110 Lesson Plan, Spring 2025

Thursday Zoom link here
Passcode is : **CalPoly**

| Meet times per week | Topics and exercises |
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| 1/21,23 | Syllabus, overview. HTML (key tags).<br>• Textbook 1: MDN Core<br>• Basic HTML learning<br>• Opening talk, here<br>• Thursday session, went over the four 'html' lesson files in our github here |
| 1/28,30 | HTML Styling and Identity: CSS<br>• Basic linking via href<br>• Building basic navigation features, via styles<br>• Using css to create uniform navigation features, across the site<br>• Jan 28 video<br>• Added intro to CSS, via MDN<br>• Advanced CSS via Bootstrap, video<br>• Bootstrap resources here |
| 2/04, 6 | HTML interactivity. Forms, controls (buttons, text boxes, dropdowns, radios)<br>• Talk on project one, video<br>• Will explore early steps, project 1 here |
| 2/11, 13 | Project 1 work time<br>• Video on project initiation, use of LLMs in professional practice<br>• More on divs, cards, rows and containers, in bootstrap (grid systems) |
| 2/18, 20 | Javascript fundamental programming<br>• chart.js discussion, sources here<br>• Core js lecture sources here<br>• 2/18 will explore demo here<br>• Tuesday video is here, on making it work<br>• 2/20 using this repo folder, here<br>• 2/20 video demo<br>• Link to the exercise ppt |
| 2/25,27 | getElementById(), array mapping, integrated/ applied javascript<br>• My initial code demo, github<br>• Feb 25 lecture<br>• Textbook / reading: MDN on getElementById()<br>• Array mapping intro<br>• Micro project: integrating getElement and data<br>• Textbook: template literals in javascript<br>• Discussion on business intelligence applications. Online dashboards, |

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| | integrated CSS, data (array mapping), and visualization<br>● 2/27 talk 1, with intro.html<br>● 2/27 video |
| 3/04,6 | Advanced dashboarding with bootstrap, javascript. Applying full responsive and data toolkits, in service of a business intelligence application.<br><br>Harnessing javascript in response, data intensive applications. Introduction to dashboarding<br>● Demonstration: data getter, analytics applications in the browser (GH)<br>● Presentation: Assignment 2<br>● Example dashboard<br>● Video thursday<br>● Video tuesday |
| 3/11, 13 | Intermediate dashboarding with bootstrap, javascript<br>● Project 2 kickstart, (wireframe, bootstrap layout)<br>○ Slide outline for tuesday, thursday<br>○ chart.js shopping spree we discussed in lecture<br>● Mar 13, next step, wireframing visualizations and data schema |
| 3/18, 20 | Intermediate dashboarding with bootstrap, javascript<br>● Teacher Q&A tuesday/thursday<br>● Project one example, nice job |
| 3/25, 27 | Project two work and refinement, feedback and coaching<br>● Thursday video |
| 4/1, 3 | Spring break |
| 4/8, 10 | Introduction to Angular.js. Component architectures<br>● **Our online reading resources are homed here**<br>● Installing angular.js here<br>● 4/8:getting started with angular.js<br>● 4/10: Angular 1: ng serve, ng create app, ng create component. Linking between importable components, primary or main app<br>● *Introduction, hello world, create home component* tutorials covered<br>● Video walkthrough lecture, 4/10 |
| 4/15, 17 | Angular 2:<br>● 4/15: Housing location component, angular interfaces, adding input to components. Video presentation<br>● 4/17: property bindings for components, dynamic values for templates, template data iteration via *ngFor. Video presentation |
| 4/22, 24 | Angular 3:<br>● 4/22: angular data services, javascript object notation files. Video walkthrough<br>● 4/24: routing, detail pages and disclosure pages, video walkthrough |
| 4/29,<br>5/1 | Angular 4:<br>Opening talk |

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| | • angular forms<br>• search functionality<br>• Http and socket communications |
| 5/06, 8 | Project 3 refinements and due dates<br>• How to finish and submit project 3 |
| 5/13 - | Finals Week |

## Assignment / Project One

Build a 4 page website, using Bootstrap. You should have:

1. A jumbotron home page
2. A page with four to six divs
3. A page with a form, with multiple text boxes and a submit button, dox
4. Page with multiple cards
5. Footers on each page
6. Navs on each page, great docs page

Optimal completion date, March 1 or Feb 21.
Should address an industry, and represent a company in an industry.
**Record a video presentation, screen recording, submit the URL to canvas.**

# Assignment Two

Project, analytics and interactive websites
Produce an online analytics dashboard.
Guidelines

1. A total of five data sources must be used.
2. Five charts should appear
3. Several columns should be used, to align multiple charts horizontally, and vertically.
    a. For each row, a different column configuration should take place, making each chart a different size, depending on their importance and use case, to the user.
    b. Use bootstrap to configure columns, per row, such that each row contains charts of differing sizes
    c. Your data sources should be synthetic, and generated via simulation, utilize Gemini in a notebook to generate substantial (but fake) datasets, in .csv form
    d. Use a data getter approach to marshall and feed each chart (parse)
    e. Use a strategy for each chart, so that the underlying data receives meaningful visual expression. No single strategy (ie bar, histogram, pie) should be reused more than once in the project. Five different chart types should appear.
4. Post your project to github, where a README.md page explains the project, and a youtube video is embedded, where you explain your dashboard.
5. The data should have an industry application. Like in project one, you must develop datasets that would appear in a real world industrial context (ie, shopping patterns in a store, viruses in a community, trucks in a logistic pattern)
6. Notes page

# Assignment Three

Project, building for Angular.js. Use the fundamental building blocks of Angular.js, as demonstrated in lectures Build an application, with an industry focus, where a searchable infrastructure populates components, receives input, and does navigation via routes.

An ‘A’ project will demonstrate skills all the way through the *Add Search Functionality* of our angular.js tutorial (here). It will be appropriate to simply use the tutorial as your project, given our time constraints in May.

How to finish

**Acceptable templates**
Students must show participation and completion, and document their work with a narrated video, on a public github, as a means to show their training in Angular.js.

We will be working with the Google tutorial on Angluar here.