

# 1.125 Software Engineering & Architecting

## Programming the Web

| SES #  | Date        | TOPICS                               | HOMEWORK                     |
|--------|-------------|--------------------------------------|------------------------------|
| LECT 1 | Thu, Sep 6  | Introduction & Course Overview       | HW00: Install VSCode         |
|        |             |                                      |                              |
| LECT 2 | Tue, Sep 11 | Browser Basics, HTML , JavaScript    | HW01: Web Page - HTTP Server |
| LECT 3 | Thu, Sep 13 | Arrays and Objects                   |                              |
|        |             |                                      | HW01 DUE, HW02 OUT           |
| LECT 4 | Tue, Sep 18 | Functions and Call Styles            | HW02: Walk JSON Data         |
| LECT 5 | Thu, Sep 20 | Callbacks, Map Reduce Pattern, Async |                              |
|        |             |                                      | HW02 DUE, HW03 OUT           |

## Open Source, Libraries and Packages

| SES #   | Date        | TOPICS                                      | HOMEWORK                |
|---------|-------------|---------------------------------------------|-------------------------|
| LECT 6  | Tue, Sep 25 | Nodejs, NPM and GitHub                      | HW03: Messaging Service |
| LECT 7  | Thu, Sep 27 | WebSockets and REST APIs                    |                         |
|         |             |                                             | HW03 DUE, HW04 OUT      |
| LECT 8  | Tue, Oct 2  | Data Services                               | HW04: Three Tier Apps   |
| LECT 9  | Thu, Oct 4  | Cloud Services, Docker and Lambda Functions |                         |
|         |             |                                             | HW 04 DUE               |
| Holiday | Tue, Oct 10 | Columbus Day                                | No HW this week         |

## Blockchain

| SES #   | Date        | TOPICS                       | HOMEWORK               |
|---------|-------------|------------------------------|------------------------|
| LECT 10 | Thu, Oct 11 | Hashes and Merkle Trees      |                        |
|         |             |                              | HW05 OUT               |
| LECT 11 | Tue, Oct 16 | PKI and Encryption           | HW05: MetaMask         |
| LECT 12 | Thu, Oct 18 | Smart Contracts on Ethererum |                        |
|         |             |                              | HW05 DUE, HW06 OUT     |
| LECT 13 | Tue, Oct 23 | Initial Coin Offering        | HW06: Project Proposal |
| LECT 14 | Thu, Oct 25 |                              |                        |
|         |             |                              | HW06 DUE, HW07 OUT     |

## Computing Today

| SES #   | Date        | TOPICS                                        | HOMEWORK                     |
|---------|-------------|-----------------------------------------------|------------------------------|
| LECT 15 | Tue, Oct 30 | Asynchronous Computation - Byzantine Generals | HW07: Project Deliverable 01 |
| LECT 16 | Thu, Nov 1  | IPFS and Distributed Hash Tables              |                              |
|         |             |                                               | HW07 DUE, HW08 OUT           |
| LECT 17 | Tue, Nov 7  | Future of Work Discussion                     | HW08: Project Deliverable 02 |
| LECT 18 | Thu, Nov 8  | Why is Software Hard? Agile, Machine Learning |                              |
|         |             |                                               | HW08 DUE, HW09 OUT           |

| Project |             |                       |                              |
|---------|-------------|-----------------------|------------------------------|
| SES #   |             | TOPICS                | HOMEWORK                     |
| QUIZ    | Tue, Nov 13 | Project               | HW09: Project Deliverable 03 |
| LECT 19 | Thu, Nov 15 | Project               |                              |
|         |             |                       | HW09 DUE                     |
| LECT 20 | Tue, Nov 20 | Project               | HW05: No HW this week        |
| LECT 21 | Thu, Nov 22 | Thanksgiving Vacation |                              |
|         |             |                       | HW10 OUT                     |
| PROJ 01 | Tue, Nov 27 | Project               | HW10: Project Deliverable 04 |
| PROJ 02 | Thu, Nov 29 | Project               |                              |
|         |             |                       | HW10 DUE                     |
| PROJ 04 | Tue, Dec 4  | Project               |                              |
| PRESENT | Thu, Dec 6  | Project Presentations |                              |
|         |             |                       | Term Project Due             |