| Course Number | CS 484 | Course Title | User Interface Design and Development |
|---|---|---|---|
| Semester Hours | 3 | Course Coordinator | Tong Shu |
| Catalog Description | | | Problems and processes in the design of highly usable systems. Understanding stakeholders, requirements, tasks, prototyping, evaluation, guidelines and design process and heuristics. Interactive software concepts and implementation considerations. A group project is an integral part of this course. |

## Textbooks

LaViola, J. J. Jr., Kruijff, E., McMahan, R. P., Bowman, D. & Poupyrev, I. P. (2017). *3D User Interfaces: Theory and Practice.* Addison-Wesley Professional, 2nd Edition. ISBN: 978-0134034324.

## References

Noble, J. (2012). *Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks.* O-Reilly Media, 2nd Edition. ISBN: 9781449311445.

## Course Learning Outcomes

- To learn about usability and the value of involving users in an iterative incremental development process.
- To be able to apply prototyping and evaluation skills to interaction design.
- To be able to understand and apply common design notations to interaction design problems.
- To be able to apply and appreciate design heuristics and usability testing to interaction design problems.
- To gain experience and appreciation of team development work.

## Assessment of the Contribution to Student Outcomes

| Outcome → | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Assessed → | X | X | X | | X | X |

## Prerequisites by Topic

CS 306 with a grade of *C* or better or graduate standing.

**Major Topics Covered in the Course**

1. Introduction to Interaction and Usability {3 classes}

2. Frameworks and Styles of Interaction {3 classes}

3. Processes for Interaction Design {4 classes}

4. Discovering Requirements {4 classes}

5. User & Task Analysis {3 classes}

6. Guidelines and Standards for Interface Design {4 classes}

7. Prototyping {4 classes}

8. Evaluation and Usability Testing {3 classes}

9. Constructing User Interface Software {3 classes}

10. Design Techniques and Heuristics {3 classes}

11. Design Models and Metrics {3 classes}

12. Patterns in HCI/ID, Future Directions etc. {3 classes}

Latest Revision:  Spring 2020