

**Course Outline – 2008/2009 Academic Year
IAT 402-3/403-3: Design Studio I (Science)
School of Interactive Arts and Technology**

Instructors: Thecla Schiphorst, Eric Yang, Ken Zupan, David Okula

Location: SFU Surrey, Room 5140

Prerequisite: For SIAT Majors - completion of 63 credits including upper division writing course and SIAT BSc lower division requirements plus nine upper division IAT credits; for SIAT Joint Majors – 63 credits including upper division writing course and specific lower division requirements plus nine upper division IAT credits; for non-SIAT Majors – special permission of the instructor. Students with credit for IAT 400, INTD 401, INTD 402, INTD 403, INTD 404, INTD 405 or INTD 406 cannot take this course for further credit. **Recommended:** IAT 404 in the subsequent semester.

Course Description:

This course focuses on the design and implementation of an interactive technology product or experience and is the senior capstone project for SIAT students. IAT 402-3 is the first semester of a two-semester long project. The course synthesizes students' knowledge and skills in design for interactive technology and is a stepping-stone for gaining experience within the digital media and cultural industries. Projects are conceptually focused within the streams of design, media arts or informatics and are implemented by interdisciplinary student teams across the SIAT streams. Students work through a design process supported by cultural, research or industry mentors. Weekly lecture-presentations, readings, discussion and design exercises support the practical development of the projects.

Emphasis is on the design process and requires skillful utilization of creative, people and technological resources. Project definition forms the basis of a professional design studio. Ongoing design outcomes will be observed and critiqued on a weekly basis in a studio setting. Design projects are iterated through concept, prototype, implementation, and user testing throughout a two-semester period. Major milestone presentations will be evaluated and critiqued by SIAT faculty and external design experts from the larger design community. Projects will also be presented in public forums including design competitions and international interaction design symposia.

Courses Objectives:

Students who take the class should learn how to:

- Engage in a high-quality design process that can be presented within a national or international 'design for technology' community
- Design an interactive technology project that is realistic, innovative and human centered
- Enhance skills in communicating their technology designs to peers, mentors and external assessors
- Develop and sharpen design experience in real-world environment in order to produce projects that are stepping-stones to professional practice
- Generate, prepare and produce an innovative project concept including the design of experience, interaction, form and usability
- Develop and illustrate a detailed project plan that represents concept implementation including form design, process and resource allocation
- Prepare a market strategy and gather data on prospective users and market opportunities through literature search, market research, and interviews with prospective users
- Develop, visualize and model the design for the project concept using low fidelity and high fidelity prototyping such as mechanical and/or advanced digital modeling and animation techniques
- Present the project in the context of a public presentation; develop a comprehensive and professional design presentation to communicate the breadth and depth of the project and defend the details of the project plan
- Plan and produce a proof of concept prototype for incorporating interaction, software and hardware elements

NOTE: These outlines are drafts and are subject to change.

Delivery Method: Lecture (LEC) and Studio Lab (STL)

Project Focuses:

Project areas are developed with mentors and can include a range of interactive applications such as:

- Mobile applications
- Wearable or Tangible devices
- Sustainable Interaction Design
- Play: Games and Smart Toys
- Interactive Art Installation or Performance
- Interaction for the Home
- Information Visualization or Information Appliances

Evaluation:

The course focuses on the design and implementation of an interactive project. Students will employ theory and design examples discussed during class lecture and presentation through studio work. Evaluation will occur through feedback and critique from faculty and senior designers. Students will engage in developing a project of their choice in teams consisting of 4 to 5 members. Teams are encouraged to collaborate with tutors/mentors enlisted for the course or to develop a high quality self-selected theme. All team concepts are vetted through the instructional faculty and class and must meet a set of design criteria in order to be approved for development. The project will be evaluated through concept definition, concept development and research, digital or physical representation through low-fidelity prototype, and user studies. Students will incorporate design refinements and revisions for their final implementation cycle, which is continued in IAT 405/6 in Spring 2009.

Grading:

Participation: 10%	lab work and class attendance
Project Design: 20%	illustrated on project website
Final Prototype: 20%	semester concept prototype
Weekly Assignments: 20%	Studio Lab work
Oral Presentations: 20%	midterm and final team presentations
Weekly Documentation: 10%	quality/timeliness of documentation process

Texts, Resources & Materials:

Required:

Readings Course Pack contained on WebCT

Recommended Texts:

"Interaction Design: Beyond Human-Computer Interaction" (2007) by Helen Sharp, Yvonne Rogers and Jenny Preece; John Wiley and Sons; ISBN 10 0470018666

"Designing Interactions" (2007) by Bill Moggridge; 1st Edition; MIT Press; ISBN 10 0262134748

"Sketching User Experiences: Getting the Design Right and the Right Design (Interactive Technologies)" (2007) by Bill Buxton; Morgan Kaufmann; ISBN 10 0123740371

"About Face 3: The Essentials of Interaction Design" (2007) by Alan Cooper, Robert Reimann and David Cronin; 3rd Edition; Wiley Publishing; ISBN 10 0470084111

"Design Research: Methods and Perspectives" (2003) by Brenda Laurel and Peter Lunenfeld; MIT Press; ISBN 10 0262122634

"The Art of Innovation: Lessons in Creativity from IDEO, America's Leading Design Firm" (2001) by Tom Kelley, Jonathan Littman and Tom Peters; Doubleday Business; ISBN 10 038549941

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