**Course Number:** ID 2024

**Course Title:** Ind Des Studio 2

**Instructor:**  TBD

**Credit Value:** 3 Credit hours

**Course times:**  M/F, 1:05pm - 4:30pm

**Location:** Architecture (West) 261

**Pre-requisite:** ID 1012 Ind Des Fundamentals 2

**Co-requisites:** ID 2101 3D Modeling and ID 2510 Intro to Smart Product Design

**Catalogue Description:**

This course applies structured design methods to research, exploration of product form and function and introduces the concepts of universal design.

**Learning Outcomes:**

Upon completion of the course students are expected to:

* Understand the relationship between product function and stakeholder needs
* Carry out user needs assessments
* Carry out usability assessments
* Integrate assessment results to support evidence based design
* Apply principles of universal design

**Course Format:**

Instructional methods for teaching the course include:

* Lectures and in-class discussions
* Group and Individual Projects
* In-class exercises
* Presentation and project reviews
* Workshop sessions
* Readings

\*Open studio sessions, may include a combination of project production, one-on-one/group tutorials, and desk critiques

**Weekly Learning Activities:**

* Lecture and Studio Sessions
* Offline Reading
* Outside project work
* Total Hours

**Scope of Work:**

* Students will undertake three projects during this course. Each project will require: the creation of a process book, a presentation of their work, and creation of a designed product as outlined in each project description. Individual projects may require additional deliverables.
* Projects in this class will require time in the workshop, both inside and outside of class.
* Projects and class lectures will be accompanied by outside reading. The readings are compiled to cover the basics and should be considered required. Students are strongly encouraged to explore material beyond the required readings in order to more fully explore the topics that are introduced.
* The class will include outside field trips in order to provide exposure different aspects of the professional design world.

**Course Schedule:**

**Schedule Topic Comments**

**Week 1-5** Bespoke Design Identify an individual user's needs, develop and test an individual custom fit soft-goods product.

**Week 6-10** Universal Design Gather and identify needs for a wide variety of user groups, develop functional and performance requirements based on needs, perform formative and summative usability testing on a designed solution.

**Week 11-15** Design for Extremes Gather and identify needs for a highly specific user group, develop and test a product solution for a specific scenario encountered by the users, learn to incorporate simulation into needs assessment and testing activities.

**General Responsibilities and Expectations:**

Attendance: Students are required to be in class for designated times with all assigned work completed. Attendance will be recorded for each student for each class during the semester. Excessive missed classes will affect final course grades. A total of 3 unexcused absences are allowed before impacting a final grade. A fourth unexcused absence will result in the reduction of one letter grade from the final course grade. Each additional unexcused absence will result in the reduction of an additional letter grade. Excessive unexcused absences will result in failure of the course. Students are expected to be on time. Students will be recorded as late if arriving more than **10 minutes** after the scheduled start of class. 3 unexcused late arrivals will be counted equivalent to 1 unexcused absence.  *It is the student's responsibility to personally check in with an instructor or class TA upon arrival to class and ensure proper recording of attendance. Failure to check in with an instructor upon late arrival may result in being marked absent*.

If you know that you will miss a class for a valid reason (such as for a major religious observance or participation in an approved Institute activity), please let me know at least 24 hours in advance. If an unexpected situation occurs, it is your responsibility to contact me within 24 hours of the scheduled class time. Tardiness or missed classes will be excused for valid reasons. *Valid written documentation must be provided in order to excuse any instance of tardiness or absence and must be provided within 48 hours of the missed class There will be NO exceptions to this policy*. Any extenuating circumstances must be discussed with your section instructor during this time. If for example you are sick the day of class and cannot provide advance notice, then be sure to visit the health center.

Please refer to the Institute attendance policies here: <http://www.catalog.gatech.edu/rules/4/>, and contact me with any questions.

Desk Presentations: Students are expected to maintain a professional standard of presentation in their studios at their desks, such that any faculty or student could stop by at any time and easily understand or engage in the work-in-progress.

Participation:Attendance and participation is expected in class, field trips and scheduled meetings. Demonstration of independence, initiative and time management is also expected.

**Final Deliverables:**

* Final appearance model and/or prototype.
* Public presentation including overview of your problem statement and proposed solution, validation, details and final product rendering, illustrations and/or photos demonstrating the product’s function(s), use(s) context of use, technical specifications and unique characteristics.
* Labeled CD with .ppt of final presentation and pictures/materials documenting each stage of development.
* Process Book

\*\* All deliverables will be due at the times defined in the project descriptions. Late submissions will be penalized. There will be no exceptions without prior instructor approval.

**Evaluation Criteria:**

Projects will be evaluated on demonstrated understanding and relevance to assignment criteria, clarity of representation, clarity of verbal presentation, documentation of the design process in the process book, and demonstration of commitment. Observations of contributions to solo and group activities, craft and quality of material submissions, and clarity of verbal and graphic presentations will also contribute to grade assessment.

**Grading:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project** | | **%** | **Description** |
| 1 | Bespoke Design | 33% | Demonstrate successful translation of user needs and wants in the creation of a custom product for a single user. |
| 2 | Universal Design | 33% | Identify needs, develop and test a product solution to accomplish a task for a wide variety of user groups. |
| 3 | Design for Extremes | 34% | Identify needs, develop and test a product solution to accomplish a task for a specifically defined group of users. |
|  | **Total** | **100%** |  |

**Required Readings:**

Clarkson, et. al. (2003). Inclusive Design: Design for the whole population.

Ch 28 Design and Empathy, pp478-499. Engineering Design Centre, Cambridge.

Clarkson, et. al. (2007). Inclusive Design Toolkit. Capability Simulators, pp3-44~3-49.

Engineering Design Centre, Cambridge.

Cook and Hussey (2008). Assistive Technologies: Principles and Practice 3rd ed. pp3-9.

Mosby/Elsevier, St. Louis.

Clarkson, et. al. (2007). Inclusive Design Toolkit. Dexterity, pp2-10~2-35. Engineering Design

Centre, Cambridge.

IDEO (2003). IDEO Method Cards: 51 Ways to Inspire Design. William Stout, Palo Alto.

IDEO (2011). Human Centered Design Toolkit, 2nd Ed. pp6-9. IDEO, Canada.

IDEO (2011). Human Centered Design Toolkit, 2nd Ed. pp42-47. IDEO, Canada.

Keates and Clarkson (2004). Countering Design Exclusion: An Introduction to Inclusive Design.

Ch 7 Knowing the User, pp84-95. Springer-Verlag, London.

Keates and Clarkson (2004). Countering Design Exclusion: An Introduction to Inclusive Design.

Ch 9 Assessment of Design Exclusion, pp108-123. Springer-Verlag, London.

Karwowski, Waldemar. Handbook of Human Factors in Consumer Product Design : Human Factors and Ergonomics in Consumer Product Design : Methods and Techniques. Ch 3: Persona: A Method to Produce Representations Focused on Consumers' Needs. London, GBR: CRC Press, 2011.

Null and Cherry (1996). Universal Design: Creative Solutions for ADA Compliance. Ch 2 What is

Universal Design, pp25-39. Professional Publications Inc., Belmont.

Pheasant and Haslegrave (2006). Bodyspace: Anthropometry, E rgonomics and the Design of Work. Ch 1.6 The User Centered Approach pp13-15. Taylor and Francis, Boca Raton.

Seidman (1998). Interviewing as Qualitative Research: A Guide for Researchers in Education

and the Social Sciences. Ch1 Why Interview, pp1-8. Teachers College Press, New York.

**General Notes (policies and procedures):**

**Office Hours**

If you would like to meet with me on a particular day, please meet me after class so that we can arrange a time for a meeting. You may also setup a meeting with me via email ([christina.choi@gatech.edu](mailto:christina.choi@gatech.edu)). I normally respond quickly, but please allow 24 hours for a response. If you have an emergency you may call me at 404-277-2748.

**T-Square**

The course will utilize T-Square (t-square.gatech.edu) for the distribution of class materials (such as lecture slides or supplemental readings), announcements, and for turning in class assignments.

**Academic Honor Code**

Refer to details of the Institute’s Academic Honor Code here: <http://catalog.gatech.edu/rules/18/>. Please contact me with any questions.

**Special Needs**

All students with special needs, permanent or temporary disabilities are urged to contact me or [troy.whyte@troy.whyte@design.gatech.edu](mailto:troy.whyte@troy.whyte@design.gatech.edu)   (404-385-1275) for information or assistance to coordinate their service needs.

**Office of Disability Services** website: <http://disabilityservices.gatech.edu/>

The Office of Disability Services, located in Suite 221 of the Smithgall Student Services Building, provides support and information regarding students with disabilities at the Georgia Institute of Technology.  Assistance is also available for meeting the requirements of the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. The Disability Services Program assists students self-identifying as having a disability to obtain reasonable accommodations.   Official documentation of disability is required to determine eligibility for accommodations or adaptations that may be helpful on campus.

Staff members in the Office of Disability Services serve as full-time advocates for students with disabilities. Their role is to ensure that all students have physical and programmatic access to all college programs, thereby enhancing their interactions in all activities of the campus community.

Their purpose is to improve the educational development of students with disabilities and to enhance the understanding and support within the institute through equitable access, accommodations, and the provision of programs and services.

**Student Academic Bill of Rights**

1. The right to attend classes at regularly scheduled times without deviation from such time and without penalty if the student cannot attend instructional, lab, or examination hours not institutionally scheduled.
2. The right to consult with an assigned and qualified advisor for a reasonable amount of time each term.
3. The right to consult with faculty outside usual classroom time such as regularly scheduled office hours by appointment.
4. The right to have reasonable access to campus facilities of which use is required to complete course assignments and/or objectives.
5. The right to receive a syllabus for each course at the first class meeting. The syllabus should include an outline of the course objectives, criteria used in determining the course grade, and any other requirements. Students should be informed of any changes made to the syllabus with reasonable time to adjust to these changes.
6. The right to have reasonable time to learn course material prior to the administration of an examination.
7. The right of each student to receive access to any of his/her records kept by the institution.
8. The right to have reasonable access to grading instruments and/or evaluation criteria and to have graded material returned in a timely fashion.
9. The right to be informed of the grade appeals process.
10. The right to have reasonable facilities in which to receive instruction and examinations.
11. The right to be informed in each course of the definition of academic misconduct.