**INDS 250 Industrial Design Studio II**

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| Instructor: Justin Discoe | Semester: Spring 2017 |
|  | Office Hours: by appt. |

# Course Description:

Prepare students for a career as a product and industrial designer with class instruction from the perspective of real-world scenarios, design projects and expectations. Students will execute multiple, phased design projects covering several aspects of the product development cycle. Class sessions will include *Team Meetings* covering project status, new project introductions and expectations – this to help prepare the designer for working as a member of a design team. Students will develop projects from prepared design briefs, covering the basic product description, desired features, costing (COGS = Cost of Goods Sold and SRP = suggested retail price), and packaging type. Projects will include rapid-concepting sessions (loose sketching & rough form studies), exposure to completing product description sheets, creating a “B-Sheet” product renderings, learning about basic packaging and merchandising, while working towards a final *turn-over package* - in a fast-paced, work-place environment. Weekly design critiques will be from a perspective of the client or project brief – consideration of features, size, costing and *drop-dead* date. Students will learn how to manage their time and gain better accuracy of estimating time to complete work, gain further confidence with rapid product sketching and the phases of product development. Class time consists of rigorous work, high expectations with tons of fun, hands-on learning, real world examples including sketchbooks, prototypes and in-class demos.

# Course Outcomes:

Gain a deeper understanding of the structure and function of an in-house design team by working towards deadlines and project expectations found in the workplace; understanding of the role and expectations of a junior industrial designer by developing projects of a similar complexity and pace of deliverables as found in the workplace; improved skill and confidence with hand sketching and articulating ideas through a high volume of in-class sketch exercises, homework and project support ; deeper knowledge of the product development cycle through lecture, discussion and participation in assigned product development projects; develop multiple product designs, helping build a robust portfolio by encompassing multiple skill sets obtained in class lecture, discussion and exercises; identify and develop packaging concepts and structure die-lines using skills and knowledge gained in demonstrations, practice and exercises; gain leadership experience by leading creative team sessions; build and/or improve time management and project estimation skills, while meeting assignment and/or project expectations by consistently meeting weekly project deadlines and work assignments; build on design skills, creativity and confidence through active participation in class work, home work and practice; safely and respectively work in and navigate a product development lab; exhibit an uncompromising and high professional standard for design and prototyping skills, techniques, tools, materials, and craftsmanship; develop product design concepts through sketching, technical drawings, mock-ups and prototyping.

# Semester Schedule:

The schedule is subject to reasonable modification by the instructor in response to the needs of the class. Some units may require several weeks of studio time to complete. Changes will be communicated in a timely manner. This course may include the following units:

## Semester Topics and Projects to Meet Course Objectives

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| **Week** | **Topic** |
| 1 | Team Meeting; introduction to project briefs and design spec sheets; 1st project assignment; project discussion (features/costing); team brainstorm session with sketch demo; x25 b/w sketches assigned. |
| 2 | Team Meeting (project review/status); team brainstorm session; introduction into product concept sheets (B-Sheets); review/discussion of product spec sheets; introduction to market research (tools & techniques); market research assignment. |
| 3 | Team Meeting (project review/status); introduction to ethnography (user research); professional examples (review examples of professional concept sheets) & discussion; introduction to exploded view drawings; team drawing exercise; 1st project turn-over. |
| 4 | Team Meeting (1st project recap/discussion); 2nd project assignment; design brief review (features/costing/packaging); team brainstorm session; intro to sketch models (sizing/ ergonomics); introduction to space envelope (product housing and internal components); studio cutting board tricks & techniques; work session; sketch model assignment. |
| 5 | Team Meeting (project review/status); introduction into packaging concepts; packaging structure mock-up demo; focus group intro (developing questions/understanding results); team sketch session; project curve-ball, dealing with project changes; packaging mock-up assignment. |
| 6 | Team Meeting (project review/status); professional prototype examples; introduction to product costing and material selection; introduction to design freelancing & internships/co-ops; x25 b/w sketches assigned. |
| 7 | Midterm presentations; 3rd project assignment; design brief review (features/costing/packaging); introduction to design notes for effective CAD modeling; intro to LL = *Looks-Like* Models and WL= *Works-Like* models; x25 b/w sketches and research assigned. |
| 8 | Team Meeting (project review/status); entrepreneurism and design discussion; team sketch session for project CAD; 3D printing; completing design spec sheets; 3D print models assigned & x10 b/w sketches assigned. |
| 9 | Team Meeting (project review/status); product pitch exercise/student improv pitches/team pitch; sketching as a universal language in product development); project work B-Sheet session (concept boards); color concept board and costing scenario assignment. |
| 10 | Team Meeting (project review/status); career discussion/life as a designer; B-Sheet presentation, review and discussion; technology discussion and innovation; suppliers and managing design resources; x15 b/w sketches and revisions to B-Sheets assigned. |
| 11 | Team Meeting (project review/status); begin packaging studies using 3D prints; discussion/demo, 2D presentation techniques (digital and old-school), introduction to product deco (decoration: painting (over-spray, book-mask, plate-mask), finishes, tampo, screen-printing); packaging studies, working towards final package structure assigned. |
| 12 | Team Meeting (project review/status); prep for final product pitches, review of concepts, features, material selection, packaging and merchandising; introduction to manufacturing, distribution, wholesale and retail for products; New CAD modeling project assigned (curve-ball!). |
| 13 | Team Meeting (project review/status); finished model techniques (painting, deco, finishing); project CAD exploded views; internship/freelance prospecting & networking (summer); work on final projects assigned. |
| 14 | Team Meeting (project review/status); internship/freelance prospecting & networking results; project pitch practice; team design session – rapid concepting; final presentations to be worked on. |
| 15 | Presentations of final project – begin with enthusiastic product pitch, followed by presentation of sketches, sketch models, research, spec sheets, CAD, final model & packaging. |

# Evaluation:

The grade will be based upon meeting the objectives of each assignment, including documentation of the entire design process. This documentation should show evidence of the quality and continuous improvement of technical and creative problem solving abilities, and the level of project completeness. Participation, attitude, attendance, and the willingness to explore are aspects of improvement. Grades will be assigned after each project, and will be made available to the student regularly. Each project is weighted evenly and the lowest graded project will not be counted. It is hoped this grading method will encourage students to take risks and work out of their comfort zone.

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| A 95-100  A- 90-94 | **Excellent, Professional-level.** Flawless or close to it. Exemplary work/concept/design is exceptionally well executed and communicated. |
| B+ 87-89  B 83-86  B- 80-82 | **Above average, Professional-level.** Good work/concept/design is well executed and clearly communicated. Minor improvements in development, execution or communication of the concept would produce an excellent result. |
| C+ 77-79  C 73-76  C- 70-72 | **Satisfactory.** Work/concept/design shows potential. Development, execution or communication can be improved to produce a professional-level result. |
| D 60-69 | **Minimally acceptable.** Potentially good work, concept, or design is compromised by oversights, errors, or omissions in development, execution, or communication. Concept appears to have potential, but it is not readily apparent from the work presented. |
| F <60 | **Unacceptable.** The combination of poor work/concept/design execution of the major design element(s), or poor execution or communication of the design result in failure to demonstrate the viability of the concept. |

* Class attendance and participation/discussions 40%
* Project documentation (sketches, models, prototypes) 40%
* Presentations 20%

# Attendance:

This is a studio class and attendance is required. A maximum of 2 absences is allowed, for any reason. For each absence after 2, a grade level drop will be deducted at the end of the term. In the event of **6 absences students will fail the course**. Missed assignments and late work must be completed and may receive a reduced grade. Missed assignments and late work must be completed and may receive a reduced grade as much as one letter per week.

**No required text, but recommended readings will be posted on BlackBoard.**

**Materials can be purchased at Michaels, Walmart, or ArtPlus, located at**

**249 Loudon Road, Concord. Their number is 225-8080,**

**Hours: M - F 11:30 – 6 Sat 10 - 4:00**

# Supplies

* Any size sketchbook, Moleskin type/size id very popular with working designers (plain sheets).
* Ream 11 x 17” copy paper - white
* Ream 8.5 x11 copy paper – white
* Roll 12” x 50-yrd onion skin paper (tracing paper roll) – white or yellow (Alvin or Staedtler are popular brands, but a generic brand will work just fine).
* X-Acto knife, #11 blades and self-healing cutting mat.
* 18” steel ruler for cutting.
* Sketching pens – use what feels best to your hand and sketching style. Black ink is most standard, some days I like roller-ball pens, but mostly, I sketch using MUJI 0.05” GEL pens and PAPER MATE felt-tip pens.
* Pencils – good ‘ole #2 or HB that you already have.
* Prismacolour color pencils – non-photo blue & black colors.
* Foamcore- used for sketch models later in semester.
* Paperboard / E-flute corrugated cardboard – used later in semester for packaging mock-ups.
* Modeling foam- Insulation foam can also be purchased at a home improvement store. We will supply a higher density foam which will be approximately $12 for a 4x6x12” block.

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