**Syllabus: *Redesigning The Neonatal Intensive Care Unit***

***www.redesignhealthcare.org***

**Sept. 23**: Class Intro

\*Intro to NICU

\*Intro to Design Thinking through Oral Hygiene Exercise

**Sept. 25**, Studio 2:NICUS all over the world--a lecture by Dr. William Rhine about his experiences in various facilities. 3-4pm

Intro to Design Thinking Lecture 4-4:30

“Getting to know you.” Lets hear about each student and their motivation for being in this class. 30 min.

**Sept. 30**, Studio 2: Observation and Developing Personas Workshop

Through observation of our users and their surroundings, we can begin to figure out what motivates them, what matters to them, and how they use the products around them. We can develop a much deeper understanding of our users and design products, features or systems that they really want or need. Those personas can ultimately feed your design process.

Discuss how to keep a sketchbook to record process-show some examples.

*Homework-buy sketchbook and bring to CAPE for observation of simulations.*

**Oct. 2**,Center For Advanced Pediatric & Perinatal Education, 700 Welch Road, Suite 200

Palo Alto, CA 94304: NICU Simulations-common emergency NICU scenarios.

(Jan Records)

**Oct. 7**, Lucile Packard Children’s Hospital Lobby, 725 Welch Rd, Palo Alto, CA 94304:

Visit Lucile Packard NICU 3:15-4

Debrief in LPCH Auditorium 4-5:05

Homework: <http://66.147.244.82/~redesii8/wp-content/uploads/2014/02/NICU-design-standards-8th-edition2.pdf>

(Jan Records)

**Oct. 9**, Studio 2: Dr. Robert White: *The Evolution of NICU Design Standards, & The importance Of Design In Supporting Developmental Care.*

(Jan Records)

*Homework:* Read: pages: 101-104, 123-132, & 156-165 of Mardelle McCuskey Shepley’s book: Design For Pediatric And Neonatal Critical Care, which can be found online at: http://www.redesignhealthcare.org/redesigning-the-neonatal-icu/homework-icu/

**Oct. 14**, Studio 2: Dr. Mardelle  McCuskey Shepley: *The History Of NICU Design*

Debrief and Discuss Homework Reading

Jules discusses the purpose of field guides and distributes Heather Keller’s field guide for parents prior to next class. Interview Skill Workshop (TBD)

*Homework: Add a few questions on Heather’s field.*

**Oct. 16**, Studio 2: 3-5pm Heather Keller-Patient Centered Design Lead, Stanford NICU

facilitates a discussion panel of NICU parents to learn more from the user’s perspective.

(Jan Records)

*Homework:* Readings from Tammy Thompson (TBD)

**Oct. 21/23\***, Studio 2: Architect Tammy Thompson, president and founder of Institute for Patient-Centered Design, Inc., a nonprofit organization established to give patients a voice in the design of health environments. Tammy will discuss her path to healthcare design and the creation of the nonprofit organization *Patient Centered Design*. Tammy will conduct a 2-day design charrette. Topic TBD

(Jan records the 23rd)

**\*Oct. 23**, Studio 2: Design Coaches and Mentors will be introduced to students at 4:30pm

**Oct. 28**, Studio 2: Dennis Boyle, founding member and partner at IDEO

Dennis will be sharing various projects IDEO has worked on in the healthcare space so students can understand the process multidisciplinary design teams goes through to develop meaningful solutions.

Form project groups based on area interest (groups of 3-4 students). Examples of areas with opportunity for redesign might be: Data Display, Work Flow Systems, Medical Product Design, Interior Design or Educational Media.

Jules talks aboutcreating a field guide for ethnography work the following class. As well as remind students of the interview skills they learned earlier in the quarter. Jules passes out sheet with info on each “user” (clinicians and parents) participating in ethnography day

Oct. 30 so students can get an idea of who they would like to interview.

(Jan Records)

*Homework: Student groups need to create a field guide together for their next class and decide who they would like to interview*

**Oct. 30**, Studio 2:

Groups will conduct ethnography with clinicians and parents. Interviews will last the full length of class. Groups no larger than 3. One person asks questions, one person takes notes, one person takes photos.

(Jan Records)

*Homework*: Groups need to conduct at least 1 more interview with an additional user before Nov. 6th synthesis workshop. Contact Heather Keller (hkeller@stanfordchildrens.org) and/or Dr. Rhine (wrhine@stanford.edu) if you need help locating people to interview.

**Nov. 4,** Center For Advanced Pediatric & Perinatal Education, 700 Welch Road, Suite 200

Palo Alto, CA 94304: Students get the chance to compare and contrast physical and virtual medical simulation tools.

Dr. Louis Halamek discusses the role of physical simulation and debriefing in industries where the risk to human life is high, focusing on its current and potential future applications in healthcare. Dr. Parvati Dev and Dr. William Heinrichs from *Clinispace* discuss their virtual simulation tool and its application.

**Nov. 6,** Studio 2: Jules talks about brainstorming, synthesis and prototyping.

Students synthesize together in their groups and create a POV as well as HMW statement.

Invite design coaches. Students will present their synthesis work to each other.

*Homework:* Describe the problem and need. Name your project. How does your project satisfy that need? Create a tagline. Extra Credit: design a logo for your team project.

**Nov. 11**, Studio 2: Brad Slaker, Founder of DesignWise Medical Inc.

Brad will speak about the process for creating a closed loop neonatal oxygen control system, and generally what it takes to bring a new product for the NICU to market. (30 min.)

Team work time 1 hour.

Teams present to class what they don’t know yet, and how they will devise a physical way to get the feedback they need to move forward.

*Homework: create physical prototypes that will help them understand what they don’t yet know. Present prototypes to users and get feedback they can bring back to class.*

**Nov. 13**, Studio 2: In-Class work day with teams/coaches/instructors.

*Prototype with Purpose. Full class.*

Every team will refine a prototype they had presented to a user during class. Teams will present the prototype/s at the end of class and describe the challenges ahead

(5 min. presentations from each group followed by feedback from classmates/coaches/instructors)

(Jan Records)

Jules talks about final presentations and expectations.

*Homework: Bring refined prototype back to same users for more input.*

**Nov. 18**, Kaiser Permanente Garfield Innovation Center: Tour of NICU prototype designed by Angelene Baldi <http://www.fastcompany.com/1615196/designing-perfect-health-care-clinic>

**Nov. 20**, Studio 2: Group work time. Coaches invited.

**Thanksgiving week Nov. 25/27**

**Dec. 2,** Center For Advanced Pediatric & Perinatal Education, 700 Welch Road, Suite 200

Palo Alto, CA 94304:Students who wish to present their final projects at CAPE will present today.

(Jan Records)

**Dec. 4,** Studio 2: Students who wish to present their final project in studio will present today.

(Jan Records)

Class celebration! Turn in sketchbooks for grading