

Healthcare Design Project

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Key Words Healthcare Design, Critical Thinking, Problem Solving

Category PTH: Healthcare

Type Studio Project

Level Junior (2nd Semester) / Senior

Duration 6 Weeks

Note: This project has been utilized in a 5 credit hour studio course meeting 3 times per week, 4 hours each meeting. The attached schedule and requirements may be adjusted to meet your course parameters.

Abstract The design of healthcare facilities presents an opportunity to affect people in what is often a very stressful time in their lives. Uncertainty and often trepidation is associated with visits to healthcare facilities of various types. Perhaps this is due to our focus on healing rather than wellness, or disease versus health. Regardless, stress levels are increased with most visits to healthcare facilities. Patients, families, staff, and physicians are but some of the users affected by the design of these facilities.

While this project focuses on a healthcare facility in this country, it attempts to look at the subject through a much broader lens. How do we design for children, some who come into the world the size (and sometimes the color) of a pound of butter? Or, for those elderly people whose poorly functioning joints decrease their comfort and ability to navigate? How do we design for their families, doctors, nurses, and care partners? How do we make a difference? This project includes work at both small and large scales – at the scale of furniture and detail within a space to the scale of the facility itself. The project asks us to question how our work fits within a global view of health and how it can inform beyond the limits of our selected subject matter.

Learning Objectives

- To understand sources of information related to the design of health-related facilities.

- To gain an awareness of current issues affecting health and wellness with associated design responses.
- To recognize the role of evidence-based design in the design research, programming, and design of a healthcare facility.
- To demonstrate appropriate vocabulary in professional presentation and documentation of the design process.
- To engage in critical discourse regarding current issues in design as they relate to creating environments for healing.
- To apply appropriate life safety and building codes in the design process for health-related environments.
- To demonstrate proficiency in the exploration and generation of multiple alternatives when design decision-making.
- To understand the role of materials in the design of healthcare environments, from their contribution to a healthy interior environment to the aesthetic and functional parameters of a healthcare project.
- To understand the impact and contribution of color and light for specific healthcare environments and apply them appropriately.
- To demonstrate an iterative process in the development of design projects.
- To demonstrate willingness to give and respond to criticism, to engage in open dialog regarding design projects.

Alter Learning Objectives as needed. For instance, if this project is intended to achieve particular results within your curriculum, be sure to include goal(s) accordingly and remove others that are not appropriate.

Criteria Specialty Types: For this project, students randomly select among _____ specialty types of healthcare situations. The specialty types of healthcare for this project include:

- Pediatrics
- Geriatric
- Orthopedics + Sports Medicine
- Oncology Clinic
- Dental
- Orthodontist
- Medical Spa

Depending upon the number of students in your course, select a representative number of clinic types to use and create a word document. Cut up and have students select out of a 'hat', thus teams are randomly formed. You will wish to have teams with 5-6 people on each, therefore, if your class has 15 people, select 3 of the project types and make five slips with that project type on them, for a total of 15 slips.

Building Types: The two building types (see attachments) include a stand-alone facility or the top floor of a medical office building. Both of the facility floor plans

are available in AutoCAD format. You might select a setting for the building – not necessarily in your city! Establish a direction and type of view, or if in an urban setting, the typical height of surrounding buildings.

Process The project consists of 4 phases including the Research and Program Phase, Concept Phase, Schematic Design Phase, and Design Development Phase. See attachments for detailed descriptions, deliverables, and grading criteria for each phase.

Critical thinking and problem solving are reinforced throughout the project in the gathering of relative information, discernment of its value, application to project parameters, judging relative values, gathering additional information and feedback, developing design responses, testing and altering to create viable design solutions meeting functional, aesthetic, and programmatic parameters; narrowing choice and developing in detail those components which best exemplify the finalized design. Writing is reinforced through the iterative creative development of a concept statement (generative intention); and technical writing appropriate to the interior design profession in the research and preparation of a comprehensive program.

Oral communication is reinforced through informal structured interactions in desk critiques; with small groups; semi-formal presentations of three distinct phases of the project; and a formal final presentation. Visual literacy is reinforced through the continual development of visual products to communicate in two- and three-dimensional imagery. In addition, desk critiques during each studio session require immediate thumbnail sketches to communicate design ideas, and intermediate group critiques require communication with visual media of varying sorts to communicate progression. Students must be able to read one another's visual media to understand the proposed solutions and develop appropriate comments.

Required Materials Access to the internet for research and programming phases.
PowerPoint or other presentation program (such as Adobe Acrobat).
Sketchbook.
Flimsy/trace paper for overlay process in design ideation
Presentation board (such as foam core)
Basswood, metal, glass or Plexiglas for development of gesture model
SketchUp, Rhino, AutoCAD, Revit, 3ds Max, or other programs for exploring, modeling, and rendering design solutions.

Presentation Method The format for the final presentation at the conclusion of the Design Development Phase is determined by the student. The grading for this project include not only the design content of the project, but also the effectiveness of communication of that content (graphically and verbally). In addition to graphic imagery, the students create a professional-quality Materials, Furnishings, Art, and Accessories Board(s).

Evaluation Guidelines Points allotted for this project are 250 points and are allocated as follows:

- Research and Programming Phase: **75 pts**

- Generative Intention/Concept Phase: 25 pts
- Schematic Design Phase: 50 pts
 - Schematic #1 (25 pts)*
 - Schematic #2 (25 pts)*
- Design Development Phase: 50 pts
- Final Project/Presentation: 50 pts

The point allocations here may be altered to reflect your focus. In this example, equal weight is given to both the research and programming phases and conceptual and schematic design phases, to emphasize their relative importance in the process. Likewise, equal weight is given to both the design development phase as well as the final project/ presentation phases.

In addition to an evaluation and analysis by the professor, students are also responsible for conducting peer evaluations at multiple stages of the project. These peer evaluations can be instrumental in their personal growth in design, from an intake of others' comments as well as forming their own constructive insights to others' projects.

Resources

To build upon the students' knowledge of the current status of healthcare design, its issues, opportunities, challenges, and research, the following set of resources are invaluable as they begin their journey:

Center for Healthcare Design <http://www.healthdesign.org/>

Clinic Design – Transforming Primary Care Environments
<http://clinicdesign.healthdesign.org/about>

Whole Building Design Guide (WBDG)
http://www.wbdg.org/design/health_care.php

Evidence Based Design <http://edac.healthdesign.org/>

Research Library with downloadable papers from the Center for Healthcare Design
<http://www.healthdesign.org/chd/research>

International Academy for Design & Health <http://www.designandhealth.com/>
Planetree <http://www.planetree.org/>

American College of Healthcare Architects
http://www.healtharchitects.org/Education/resource_center.asp#interiordesign

American Society of Interior Designers Knowledge Center
<http://www.asid.org/designknowledge/research/>

Health Environments Research and Design Journal (HERD)

<http://www.herdjournal.com/ME2/Default.asp>

InformeDesign <http://www.informedesign.org/Default.aspx>

Appendix

Plans and Schedules

A1.1 Schedule with Notes for Instructor

A1.2 Schedule for Students

A1.3 Medical Office Building Plan

A1.4 Stand Alone Facility Plan

Research and Programming Phase

A2.1 Research and Programming Brief

A2.2 Research and Programming Grade Sheet

Generative Intention / Concept Phase

A3.1 Concept Phase Brief

Schematic Design Phase

A4.1 Schematic Design Brief

A4.2 Schematic Design Grade Sheet

A4.3 Schematic Design Grading Rubric

A4.4 Schematic Design Peer Review

Design Development Phase

A5.1 Design Development Brief

A5.2 Design Development Peer Review

A5.3 Design Development Grading Rubric

A5.4 Design Development Grade Sheet

Student Work Samples

A6.1 Student Work Samples