

JOSEPH LUCIANI

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Education

McCormick School of Engineering at Northwestern University | Evanston, IL
Master of Product Design and Development | Capstone Defense June 3rd 2016
Trained in design thinking, user-centered research, manufacturing strategy, and new product development processes

College of Architecture at Illinois Institute of Technology | Chicago, IL
Bachelor of Architecture | Fall 2009
Experienced in the planning, design, and construction of built environments and their structures.

Experience

Segal Design Institute at Northwestern University | Prototyping Specialist | July 2012 - present
Provide support for all McCormick School of Engineering and Segal Design Institute programs. Manage the daily operation, training, and use of the McCormick Prototyping lab. Mentor students in the creation of prototypes with a focus on design, conventional/digital fabrication techniques, and material selection.

Teach introductory and advanced lessons in both additive and subtractive fabrication. Train students in the use of conventional machine tools (Mill and Lathe) as well as digital tools (Laser cutter, Waterjet, CNC machining, CAD/CAM, 3D printing and 3D scanning) Purchase materials as necessary, provide training and support, and oversee operations of Northwestern University extracurricular student projects within prototyping lab.

Support Design Thinking Communication (DTC) program | July 2012 - present
Train and mentor students from all engineering majors in Segal Design Institute's foundational design course, where interdisciplinary teams work together to address a variety of problems in rehabilitation, healthcare, industry, and education. Consult with students about project requirements and how to design prototypes to meet those requirements.

Provide assistance to Mechanical Engineering's Rapid Prototyping Lab | January 2013 - present
Consult and provide access to the lab's 3D printers. Help in processing 3D models in preparation for printing a variety of materials on 3 different machines. Worked with the lab's advisor in the delivery and installation of 2 new 3D printers for the lab. Train, process and maintain the use of a Z Corp zprinter 450, a Fortus 250mc, and a Objet Connex350.

Center for Talent Development at Northwestern University | Instructor | July 2013 - present
Created the syllabus, structure, activities and assessments of 2 3-week courses to facilitate the human-centered design process to a class of high-achieving high school students. Designed the experiential course's to have the appropriate amount of structure while allowing for creativity.

3D Printing & Product development | Summer 2014 - present
Course Description: Design and prototype a product of your own creation in this hands-on design studio course. The course will explore and evaluate Northwestern University's own rapid prototyping lab in the context of the human-centered design process. Learn the fundamentals of 3D design through physical and digital modeling, prototyping and discussion. 3D printing will be used to evaluate design ideas through user testing and feedback as well as product readiness for distribution through Shapeways, an online 3D printing marketplace.

Engineering Design Studio | Summer 2013 - present
Course Description: What does it take to move from problem to ideation to product? In small, flexible teams, students work to solve authentic problems using human-centered design. Teams will design a unique solution following a series of steps, including study and frame the problem, collect data through user observation and testing, prototype, iterate and tell the story. The goal of the course is to create a functioning prototype that is a solution to the presented problem. Design Studio is an interdisciplinary course, and successful students will have varying interests in humanities, math, and science.

Designing meaningful experiences and purposeful built environments through hands-on strategies.

Skills

Spatial visualization and creation
Hand-drawing
Concept sketching
Digital design, 3D scanning
Physical mockups
Additive and Subtractive prototyping
Custom carpentry

Software

Adobe: Photoshop, InDesign, Illustrator
Corel Draw
AutoDesk: AutoCAD, Fusion360, Revit
3D Studio Max
Rhinoceros/Grasshopper
Google SketchUp
Catia, Solidworks
CAM: VisualMill, RhinoCAM, SprutCAM, Flow: Path, Cut, Nest
Microsoft Office

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Idea Shop Prototyping Lab at Illinois Institute of Technology | Lab Manager | July 2010 - 2012

Managed all aspects of the daily operation and use of the lab. Oversaw the delivery of programs within the lab, including learning experiences for IIT, schools, community and public groups. Trained and certified all students, staff, and guests on the use of lab equipment and software. Maintained and managed the implementation and coordination of all new manufacturing equipment and tools within the lab.

Support IIT's Interprofessional Projects (IPRO) Program | July 2010 - 2012

Mentored over 40 teams that join together students of various academic backgrounds and skill sets to tackle real-world problems. Provide a collaborative work environment that promotes team building, innovation, and problem solving.

Consulted for Mechanical and Bio-Medical Engineering Senior Design | Spring 2011 and 2012

Provided mechanical senior design access to our Rapid-prototyping machines while assisting them in processing 3D models for use with 3D printers and 3D scanning for analysis. Consulted with 6 biomedical student teams in material and fabrication techniques as teams developed and constructed their prototypes.

Managed Tellabs Foundation Grant | July 2011 - February 2012

Oversaw the purchase and installation of 4 new pieces of equipment for the lab including a CNC router, CNC vertical mill, vacuum former, and a electrical test bench. Worked with faculty and students to develop appropriate projects for each new machine so the University could benefit from their capabilities.

Directed Product Realization Workshop | Summer 2011

High students were given the task of designing a lamp during a 4 day workshop. Through an iterative process of mocking up formcore models and stepping in and out of digital design modes, students were able to translate their ideas through means of digital fabrication. Students utilized conventional tools, a laser cutter, and a 3D printer to fabricate their final product.

Heffernan Holland Morgan Architecture | Architecture and Planning Intern | May-August 2008

Teamed with architects, landscape architects, urban planners, and civil engineers. Primarily focused on Construction Documents for a Bed and Breakfast Conference Center. Enhanced digital models, AutoCAD drawings, and master plans. Synthesized site research. Created requests for proposals and effective presentations.

Award

Northwestern University Star Award | Award | Summer 2014
Staff-Team Appreciation and Recognition (STAR) Leadership Award

Baden-Württemberg, Germany Wood Award | Award | 2012

Collaborative Practice Honor | Honor | 2011
Association of Collegiate Schools of Architecture

American Institute of Architects "Distinguished Building Award" | Award | 2010

Part of a team of students that designed and built a small field chapel in Baden, Germany, over the course of 2 semesters at IIT. Primary involvement was construction documents during the Spring 2009 semester and construction of the chapel over the subsequent summer.