JOSEPH LUCIANI

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

1762 Manchester Rd.
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Education

McCormick School of Engineering at Northwestern University | Evanston, IL
Master of Science Product Design and Development | Spring 2016
Trained in design thinking, user-centered research, manufacturing strategy, and new product development.

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

Proof of Concept Center at University of Connecticut Storrs, CT | Aug. 2016-Present
Director
Quiet Corner Innovation Cluster (QCIC)

Director of 1.5 million dollar grant sponsored by the Economic Development Administration, the State of Connecticut and the University of Connecticut tasked with forging partnerships between small and medium sized business and the university for the promotion of business growth and economic development across the state. Executed and managed 19 sponsored research projects across 15 industrial partners utilizing the Proof of Concept Center as a hub of innovation and core for prototyping and instrumentation work.

Collaborative Service work

Collaborate and provide mentorship and training in prototyping utilizing the labs equipment, providing access and training to the labs 3D printers, laser cutter, CNC machining centers and turning center, a CNC router, abrasive waterjet, collaborative robot and 3D scanner.

Innovation Partnership Building (IPB) development

Provided digital design and graphic art work for our marketing and communication administrator to advertise and highlight projects and equipment available at IPB through wall art and infographics and an annual report.

Assisted the Vice Provost of Strategic Initiatives in project development for the University's Technology Park which opened in Fall 2017. Conferred with university partners to develop a Proof-of-Concept Center (POCC) and ancillary makerspaces across campus. Conducted a needs assessment for the center's design and worked with faculty to identify equipment and process requirements. Forge industry partnerships in a business development role for the POCC and other university programs. Worked with the building's architect and construction manager in the planning and workflow of equipment within the space. Evaluated and procured rapid prototyping equipment for use within the center. Built a pipeline of future projects with industry partners that fosters the idea of the university serving as an extension of their Research and Development departments.

Skills:

Spatial visualization, Hand-Sketching and Drafting
Digital design, 3D scanning
Physical mockups Additive and Subtractive prototyping
Multi-axis CNC and Traditional Milling and Turning, Sheet Metal work, Abrasive water jetting, Laser Cutting, Welding, Thermoforming, Textiles/Sewing, Resin and Composite lay-up

Software:

Adobe Creative Suite: Photoshop, Indesign, Illustrator, Premiere, Audition
Corel Draw, Inkscape
AutoDesk: AutoCAD, Fusion360, Inventor, 3D Studio Max, Blender, 3DF Zephyr
Rhinoceros + Grasshopper
Trimble SketchUp
Visual Mill, Flowpath, OMAX Make, Layout, and Intellimax, Stratasys Insight and GrabCAD, Objet Studio, Preform, Cura
RoboDK, Geomagic Design X and Control X

Proof of Concept Center Equipment:

Stratasys F370, Stratasys Objet Connex 350, Formlabs Form 2, Universal Laser Systems ILS12-150D, Iconic CNC Router, Haas CM-1 CNC Mill with 5-axis rotary table, Haas CL-1 CNC Lathe, PocketNC 5-axis Desktop Mill, OMAX Protomax abrasive waterjet, Faro Quantum S 3D scanning arm, Universal Robot UR10e, Electronic workbench

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Segal Design Institute at Northwestern University Evanston, IL | July 2012-July 2016
Senior Prototyping Specialist
Provided support for all McCormick School of Engineering and Segal Design Institutes programs. Managed the daily operation, training, and use of the McCormick Prototyping lab. Mentored students in the creation of prototypes with a focus on design, conventional and digital fabrication techniques, and material selection. Taught introductory and advanced lessons in both additive and substrative fabrication. Trained 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) Purchased materials as necessary, provided training and support, and oversaw operations of Northwestern University's extracurricular student projects within the lab.

Support Design Thinking and Communications (DTC) program

Trained and mentored students from all engineering majors in Segal Design Institute's foundational design course, where interdisciplinary teams worked together to address a variety of problems in rehabilitation, healthcare, industry, and education. Consulted with students about project requirements and how to design prototypes to meet those requirements.

Assisted in Mechanical Engineering's Rapid Prototyping lab

Consulted and provided access to the lab's 3D printers. Helped in processing 3D models in preparation for printing in 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. Trained, processed, and maintained the use of a 3D systems zprinter 450, a Fortus 250mc, and a Stratasys Objet Connex 350.

Center for Talent Development at Northwestern University

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 courses to have the appropriate amount of structure while allowing for creativity.

3D Printing & Product development

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 distribution through Shape-ways, an online 3D printing marketplace.

Engineering Design Studio

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.

Segal Design Institute Equipment:

(4) Haas Mini-Mills, Haas VF-2 machining center, 8 Bridgeport Series 1 Knee mills, 8 Hardinge HLV lathes, Bridgeport EZpath II CNC lathe, Bridgeport CNC surface grinder, Shopsabre RC8 CNC router, Formech 508DT vacuum former, Flow 1313B abrasive waterjet, Universal Laser System ILS12-150D, Universal Laser System 660, Stratasys Objet Connex 350, Fortus 250mc, ZCorp Zprinter 450, Hexagon Romer 3D scanning arm, Miller Tig/Mig welding, Plasma cutter, DoALL horizontal bandsaw, (2) DoALL vertical bandsaws, Milwaukee Panel saw, SawStop Tablesaw, Dewalt Sliding Mitersaw, Baileigh tube bender, 48" sheet metal shear, 48" sheet metal finger brake, 24" sheet metal roller, (2) Drill presses, Down draft table, Paint booth

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IdeaShop Prototyping Lab at Illinois Institute of Technology (IIT) | July 2010-July 2012
Lab Manager Chicago, IL

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.

IdeaShop Equipment:
Stratasys UPrint Plus, ZCorp Zprinter450, Epilog Helix 24, ShopSabre 4896, Roland 540SA, Roland 3D scanner, Formech 6060, HP DesignJet 48 Plotter, Tablesaw, Panel saw, Bandsaw, Scroll saw, Drill press Electronic workbench

Support IIT's Interprofessional Projects (IPRO) Program

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

Mechanical and Bio-Medical Engineering Senior Design

Provided 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.

Managed Tellabs Foundation Grant

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

High School students were given the task of designing a lamp during a 4-day workshop. Through an iterative process of mocking up foam-core 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.

Awards

U.S. Senator Chris Murphy "Murphy's Monday Manufacturer" Honor | April 2018

Recognition by Senator Chris Murphy for the work carried out through UConn's QCIC program for its outstanding contribution to the state.

Northwestern University Star Award Award | Summer 2014
Staff-Team Appreciation and Recognition 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 2008 semester and construction of the chapel over the subsequent summer.