PHASE I

TEAM ORGANIZATION

IIT
Julia Valadez [Captain]_Facilities
Gergana Horozova_Facilities
Jessica Workman_Facilities
Joes Cornelius_IT
Vito Natale_Educational Philosophy
Aaran McEneff_Business
Faraz Hussain_Business

NORTHWESTERN
Kevin Krupp [Captain]_Educational Philosophy
Philip Brierley_Business
Kristin Lucchesi_IT
Kai Hansen_Facilities
Ruben Robledo_Facilities

PURDUE
Edward Scanlon [Captain]_IT
Dennis Radtke_Facilities
Mihee Choe_Facilities
Timothy Phillips_Facilities
Alexis Laurence_Business
Mehrdad Mikamalfard_Educational Philosophy

PROBLEM STATEMENT

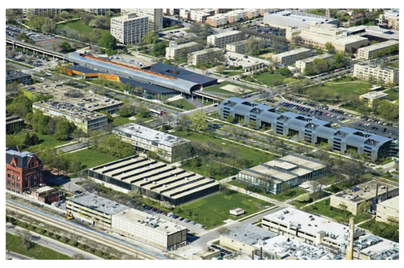
•IIT IPRO teams have been scattered throughout classrooms and buildings with no real collaboratory space to call their own.
•The disjointed nature of the IPRO program creates an inefficient workplace environment which lacks resources and hinders team progress.
•A collaboratory space is needed for teams to work and as a showcase for interdisciplinary teams to show their accomplishments.
•Having this space will provide a more productive and efficient workspace for a program which helps define IIT as a university.
•The purpose of IPRO 301 (I.D.E.A.S) is to inspire and create a vision of what could be in an IPRO collaboratory center.

OBJECTIVES

•Determine IPRO's current situation
•Research similar facilities [case studies]
•Research needs of the program
•Develop designs for potential new IPRO spaces (considering both renovating existing facilities and constructing new facilities)
•Create a proposal, which includes each design

METHODOLOGY

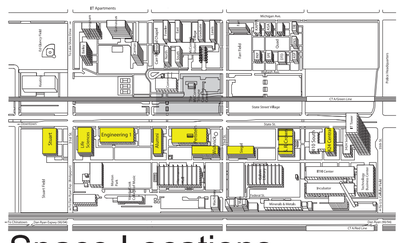
Phase I
•Research two case studies and existing conditions
•Develop graphic content/documentation
Phase II
•Research site context for given sites
•Develop program responses
•Concept development/visualization



IIT

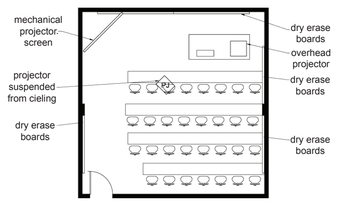
Gross Area: 22,800 SF

Students: 600

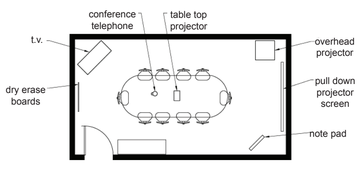


Space Locations

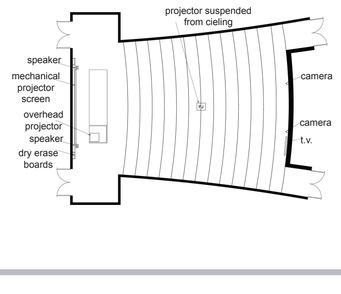
Typical Classroom
24' x 24'
Occupancy: 30



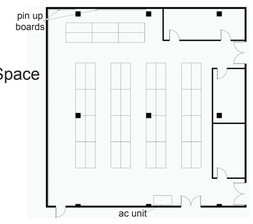
Typical Conference Room
Occupancy: 15



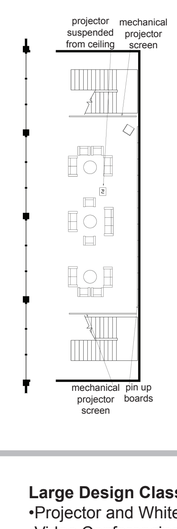
Typical Auditorium
Occupancy: 224

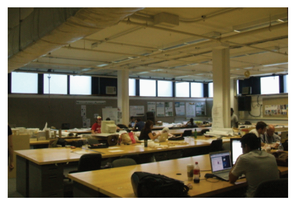


Typical Lounge Space
Open Plan



Typical Studio Space
Open Plan





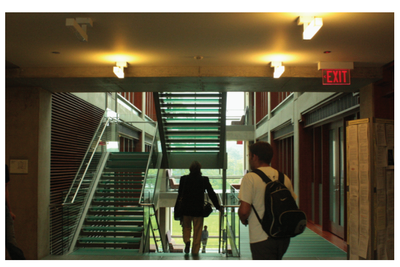
Architecture
•Current IPRO spaces were analyzed and documented focusing on room type, location, size, light conditions, available technology, HVAC systems, furniture, availability of resources, and ease of access
Educational Philosophy
•Goal: to help students gain experience working on a real-world problem with students from various disciplines
•Current Values: communication, teamwork
•Future Values: prototyping
Information Technology
•Software/data management is satisfactory
•Hardware resources are more lacking
•IPRO classrooms vary in their technological offerings
Business
•Annual costs for the program are $1.1 million per year including salaries
•The IPRO program does not receive government funding

NORTHWESTERN

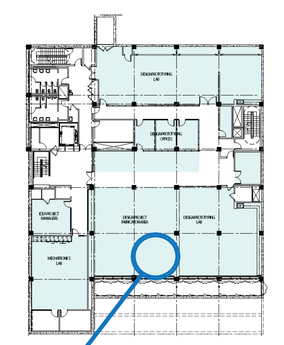
Segal Design Institute and Ford Center

Gross Area: 65,700 SF

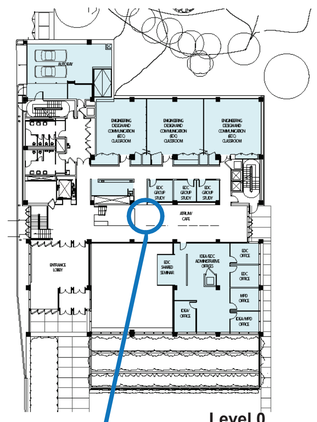
Students: 600



Design & Prototyping Labs
•Available 24hrs per day
•Access to rapid Prototyping, CAD, and CNC facilities.
•3 Permanent Staff Members
•2-3x Height Spaces

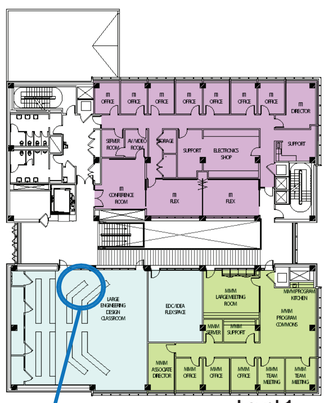


Level -1



Level 0

Large Design Classroom (Lecture Hall
•Projector and White Screen
•Video Conferencing Capabilities
•Seats 70



Level 1

Architecture
•LEED Certified: Environmental Systems include Displacement Ventilation
•Building is designed to facilitate the design process
Educational Philosophy
•The Vision: Segal Design Institute (SDI) prides itself on creating what they envision as an 'entirely different sort of engineer' for whom engineering centers around human-based designs that seek to improve the lives of others
Information Technology
•IT network connects shops, labs, and computer labs for file sharing
Business
•Funding for the Ford Center came from Northwestern University
•Program receives a $50,000 endowment from the Segal Family

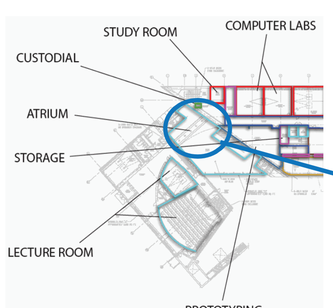
Purdue

Neil Armstrong Hall of Engineering

Gross Area: 60,000 SF

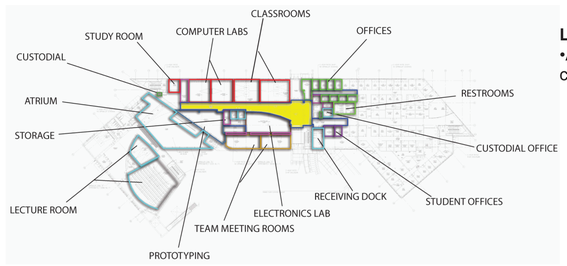
Students: 300

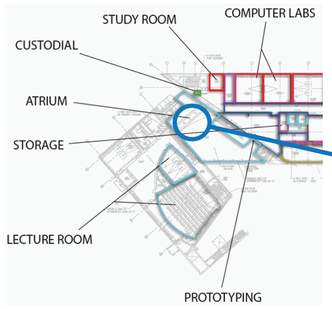
Atrium
•Provides a dramatic, welcoming northern gateway to Purdue's campus
•Highlights significant achievements of Purdue's engineering program
•Showcases the importance and vitality of EPICS at Purdue



Left Wing

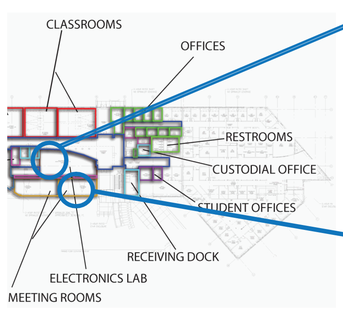
Location of Walkway
•All major building facilities are centered around a single walkway





Left Wing

Display Area
•Allows visitors and prospective students to see and engage in complete projects



Right Wing

Architecture
•Team Learning Modules are adaptable and link classrooms and other collaboration spaces with design and fabrication areas
•Classrooms and hallways use "auto power down" lighting
Educational Philosophy
•The Vision: Engineering Projects in Community Service (EPICS) is a program in which teams are designing, building, and deploying wheel systems to solve engineering based problems for local community service and educational organizations
Information Technology
•Computers are energy star rated for efficiency
•Card Readers are used for building access
Business
•Annual costs for the program are $1,731,883 per year including salaries
•Program receives $1 million in Federal Grants each year