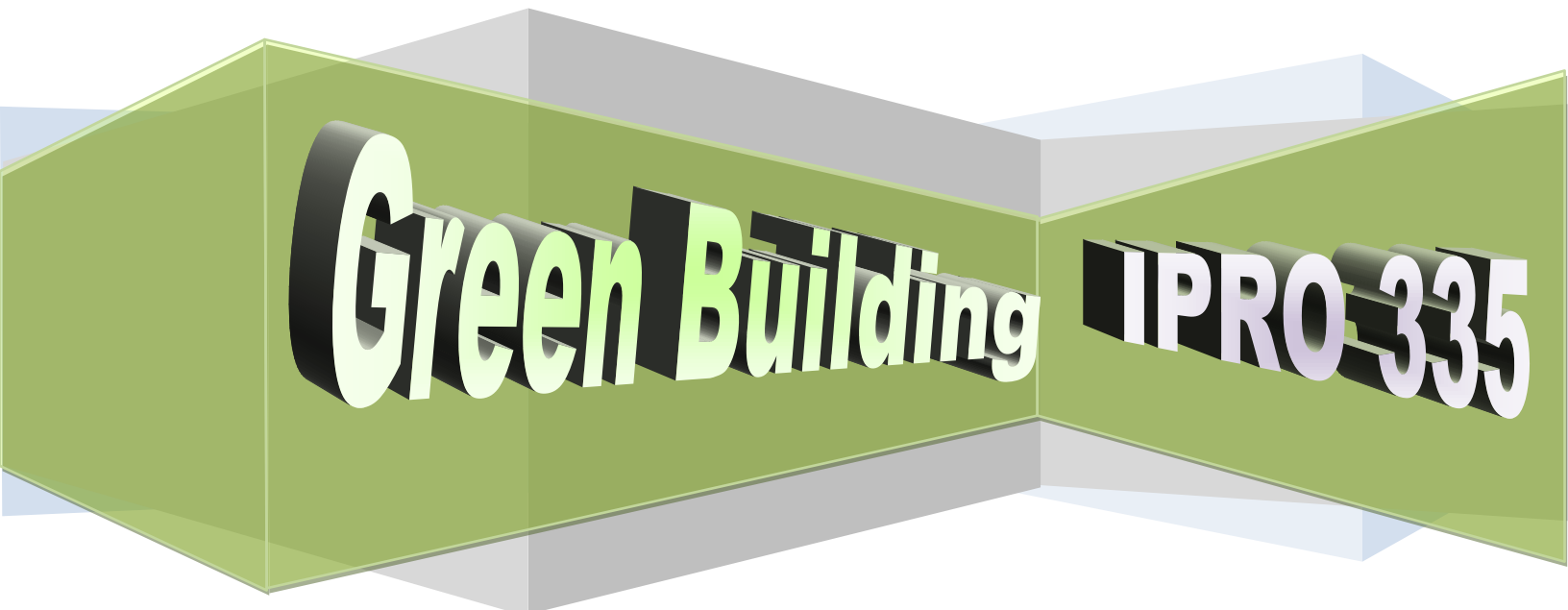


Illinois Tech  
IPRO 335

# Project Plan

Advisor Dr. J. Budiman & Dr. J. Shen



Green Building

IPRO 335

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## 1 Team Information

Member's Name	Contact Info	Skills & Strengths	Experience and Academic Interest	Team Assignments
Marcin Antol	antomar@iit.edu	Electricity, computers, lighting, reliable	Worked as an electrical engineer intern at an Architectural/Engineering Firm called OWP/P	Solar Panels Geothermal/HVAC
Grahm Balkany	balkgra1@iit.edu	Great leadership qualities,	Designer Architecture and Architectural Eng Civil Eng.	Architectural Design Building Envelope
Shawn Block	sblock1@iit.edu	Eager to learn more about green building and to work with new people	Focus is on MEP field Architectural Eng.	Plumbing Fire Protection
Brittanie Campbell	bcampbe3@iit.edu	Creative, efficient, organized, willing to work for the sustainability cause	AutoCad, Revit & MathCad Architectural Eng.	Geothermal/HVAC Landscaping/Green roof
Carl Hart	chart3@iit.edu	Autocad, Revit, Trace, HAP, HVACLoadExplorer, V-A Select; Quick learner, analytical	Internships within the mechanical department of an A/E firm and an acoustical consulting firm Architectural Eng.	Geothermal/HVAC Energy Modeling
Ashley Hodgson	ahodgson@iit.edu	Works well in team situations, open to opinions, and good speaker	Experienced with modeling software and roofing technologies	Architectural Design Building Envelop Landscaping/Green roof
Tracy Korbus	tkorbus@iit.edu	Easy to work with Good math skills Excited about green building	Interested in learning to design systems. Experience with some HVAC. Architectural Eng.	IPRO Bridge
Jutarop Limpinyakul	jlimpiny@iit.edu	Math and physics Hard worker, some public speaking experience	Engineering systems analysis Mechanical Engineering	Plumbing Solar Panels Geothermal/HVAC
Tom Lis	tlis@iit.edu	Knows AutoCad, Photoshop, and Illustrator very well	Experience with residential construction. Has done both field and design work.	Building Envelope Landscaping/Green roof
Anton Llakmani	allakman@iit.edu	Project estimating, highly analytical and detail-oriented	AutoCad, Revit & MathCad Architectural Eng.	Architectural Design Solar Panels
Brandon Macklin	bmacklin@iit.edu	Hardworking, enthusiastic about efficient design	AutoCad, Revit & MathCad HVAC design Architectural Eng.	Geothermal/HVAC Cost Est./Scheduling

Luke McGuire	lmcguire@iit.edu	A team player,	HVAC Architectural Eng.	Plumbing Energy Modeling
Nishant Modi	nmodi5@iit.edu	Dedicated, curious, believe in refining a project to its highest degree		Plumbing Solar Panels
Linh Nguyen	lnguye7@iit.edu			Building Envelop Solar Panels Landscaping/Green roof
Tagir Nigamatzyanov	tnigamat@iit.edu	Negotiating Management skills	Gain knowledge in designing green buildings Architectural Eng.	Geothermal/HVAC Cost Est./Scheduling
Kaye Palomo	kpalomo@iit.edu	Works well with teams, very good listener, proficient in programs such as AutoCAD, Revit, and MathCad	HVAC, Building Enclosure IPRO 337 Zero Energy Lab (Spring 2008) Architectural Eng.	Geothermal/HVAC Energy Modeling
Ronald Ramey	rramey@iit.edu	AutoCAD, Revit, HVAC Load Explorer	Past research/design in alternative energy (solar and wind), familiarity with enclosure design, experience designing plumbing/HVAC/Electric al systems.	Geothermal/HVAC Fire Protection
Anthony Saracino	asaracin@iit.edu	Knowledge of sustainability, familiarity with team/group projects	LEED AP Architectural Eng.	Plumbing Landscaping/Green roof Fire Protection
Daniel Socher	sochdan@iit.edu	Performing analysis, offering feedback, participating in high-performing teams, managing workflow, implementing change	Becoming a better communicator, developing a business plan, project marketing, goal communication, learning more about my fellow classmates	Architectural Design
Sophia Tan	stan5@iit.edu	Organized, hardworking, efficient	Architecture	Building Envelope Solar Panels
Jeremy Williams	jwilli28@iit.edu	Eager to learn to design environmentally sound structures	Architectural Eng. Interests in financial aspect of green building	Landscaping/Green roof Fire Protection

## **2 Team Identity**

### **2.1 Team Name:**

Undecided, decision is still in progress

### **2.2 Logo**



### **2.3 Motto**

"Work as a team, and keep the planet clean."

## **3 Team Purpose & Objectives**

### ***3.1 Team Purpose***

The teams' task is to demonstrate the interdisciplinary cooperative requirements as needed to fulfill a mission of sustainability. This IPRO simulates an actual building development within the Chicago City limits. Specifically a green building development, which means that there is an increase in efficiency of the resources used while the building is constructed, operative, and removed.

### ***3.2 Team Objectives***

Using our obtained knowledge from IIT's grandeur education and outside experiences we will implement a design for a green building. Our team objective is to integrate building systems in the most sustainable design possible. The building's systems will be designed to reuse resources such as energy and water. We will also be implementing new levels of communication between architects and engineers.

## **4 Background**

### ***4.1 Client Information***

Currently, we have not acquired any outside sponsors; although, in simulation, our client base is for artists, painters and sculptors, particularly those who would be interested in using the rented art gallery in order to display their finished art pieces. Our construction is predominately an art studio space.

### ***4.2 Project Obstacles***

The main obstacle for this project is to design sustainable systems that will actually work if put into production. For some of the students this is a first time hands on experience. For others it will test their knowledge of the industry that they have already been introduced to.

### ***4.3 Involved Technologies***

The process of creating a Green building will involve a lot of innovative thinking. There are many great ideas out there now that we will be able to research, but in order to apply them to our building design it will take a good amount of ‘out of the box’ thinking.

### ***4.4 Past IPRO Work***

In past IPRO projects for green building, the objective was a renovation. The team had to redesign systems in an already existing building, which may have put many limitations on design plans.

### ***4.5 Ethics***

Some general ethics that is involved with this project, and just about any project, is for everyone to work together. It is important and ethical for everyone to pick up their own slack in this project. Assigned tasks should be done to the best of their ability and on time.

### ***4.6 Business Costs***

This project has no funding limit. There will be no restrictions on the notional budget. During the design process, a track record will be made of estimated costs, but it is very difficult to fore see the building’s value at this time.

## **5 Team Values Statement**

### ***5.1 Desired Behaviors***

Team members are expected to uphold certain standards when it comes to their responsibilities within the groups. This includes:

Communication between group members

Communication amongst the different groups

Attending meetings

Sharing information

Finishing tasks on time

Finishing a task completely and efficiently

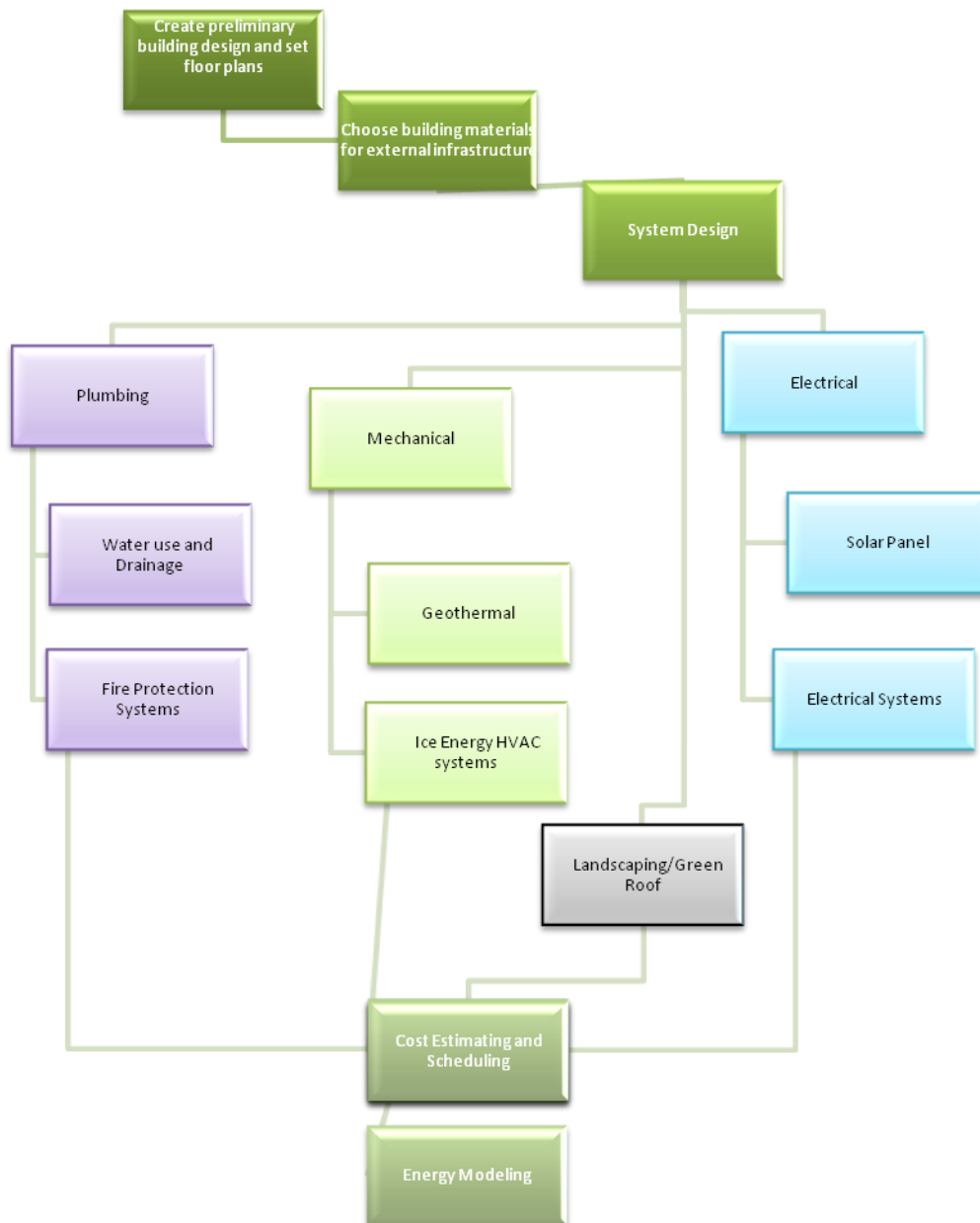
### ***5.2 Addressing Conflicts***

Problem solving will involve a great amount of research. This research on already existing buildings using sustainability designed systems. All team members must put their allotted time in to compile this research in order for proper design to take place.



## 6 Methodology/Brainstorm/Work Breakdown Structure

The following hierarchy shows the assumed process in which the tasks will be done.



Job tasks within subdivision have not been assigned or even developed yet. Groups need to work on what they plan to do with the building design and then will distribute tasks amongst the group members.

## 7 Expected Results

By the end of the semester we anticipate to produce an infrastructure that incorporates sustainability design in its various building systems. The idea is to have a complete plan for an Art Studio space in Chicago with an energy saving design in mind.

Much testing will be done with valued computer software programs. It is very probable that groups will design and redesign so that all the systems can coexist in the building and work to the highest efficiency.

We are hoping to open new doors for the design community, by combining the work force of architects and architectural engineers.

The green building that is being designed will have innovated systems. We have an unlimited hypothetical budget to complete this task. So the ideas we are able to work with are endless with no money limit in mind.

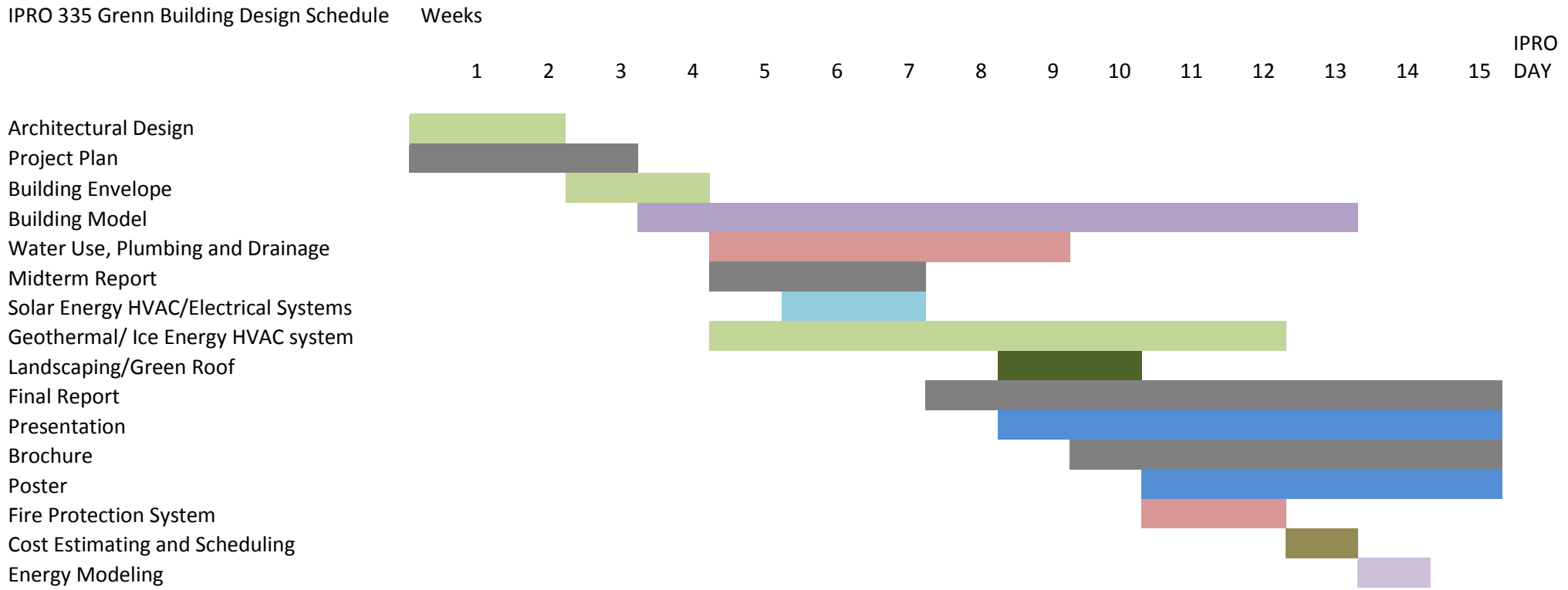
## 8 Project Budget

The class is planning a field trip to Spancrete pre-cast fabrication company in Wisconsin. The trip will include 5 drivers with an estimated cost of \$127.60 per driver.

Also, the budget must include a model of the building designed to show the finished product. (Last semesters IPRO estimated this cost to be around \$300).

Item	Amount
Class field trip	\$638
Model	\$300
Other expenses	\$562
Total	\$1500

## 9 Schedule of Tasks



## 10 Designation of Roles

Liaison – Tracy Korbus

### Team Divisions

#### 1. *Architectural Design*

Grahm Balkany\*  
Anton Llakmani  
Ashley Hodson  
Daniel Socher

#### 2. *Building Envelope*

Grahm Balkany\*  
Tom Lis  
Ashley Hodson  
Sophia Tan  
Linh Nguyen  
Daniel Socher

#### 3. *Water Use, Plumbing System and Drainage*

Anthony Saracino\*  
Shawn Block  
Luke McGuire  
Ben Limpinyakul  
Nishant Modi

#### 4. *Solar Energy HVAC/Electrical Systems*

Marcin Antol\*  
Sophia Tan  
Linh Nguyen  
Anton Llakmani  
Nishant Modi  
Ben Limpinyakul

#### 5. *Geothermal/ Ice Energy HVAC system*

Brandon Macklin\*  
Ben Limpinyakul  
Carl Hart  
Tagir Nigamatzyanov  
Kaye Palomo  
Brittanie Campbell  
Ronald Ramey  
Marcin Antol

#### 6. *Landscaping/Green Roof*

Brittanie Campbell\*  
Linh Nguyen  
Ashley Hodson  
Tom Lis  
Anthony Saracino  
Jeremy Williams

#### 7. *Fire Protection System*

Anthony Saracino\*  
Shawn Block  
Ronald Ramey  
Jeremy Williams

#### 8. *Cost Estimating and Scheduling*

Tagir Nigamatzyanov\*  
Brandon Macklin

#### 9. *Energy Modeling*

Luke McGuire\*  
Carl Hart  
Kaye Palomo

*\*Group Leader*