Project Plan

IPRO 301

I D E A S

Interdisciplinary Design Education And Strategies

Developed for the Summer semester, 2009

Information

Creators

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Abstract

For years, the IPRO Program at IIT has been forced to operate wherever space can be found. Often, facilities are not equipped for the needs of the program. It has become necessary to find a way to give the IPRO Program its own dedicated space.

If we give the program its own space, then what is needed in that space? What needs to be done with it? What types of spaces are necessary? What technologies will be used?

IPRO 301 exists to answer these questions. We will provide ideas to IIT that can solve these problems.

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Chapter 1

Team Information

1.1 Roster & Specific Information

Team Members		
Person	**Contact Info.**	**Major/Year**
Ed Scanlon	escanlo1@iit.edu	4th Year CIS
Philip Brierley	pbrierle@iit.edu	3rd Year BUS
Mihee Choe	mchoe1@iit.edu	3rd Year Arch
Joel Cornelius	jcorneli@iit.edu	4th Year CIS
Kai Hansen	khansen3@iit.edu	5th Year Arch
Gergana Horozova Nalls	ghorozov@iit.edu	5th Year Arch
Faraz Hussain	hussfar@iit.edu	4th Year Biochem and Biophys
Kevin Krupp	kkrupp@iit.edu	4th Year Arch
Alexis Laurence	alauren1@iit.edu	4th Year BUS
Kristin Lucchesi	klucches@iit.edu	3rd Year ECE
Aaran McEneff	amceneff@iit.edu	3rd Year BUS
Vito Natale	vnatale@iit.edu	4th Year Mechanical Engineer
Mehrdad Nikamalfard	mnikamal@iit.edu	4th Year Inudstrial Engineer
Timothy Phillips	tphilli4@iit.edu	4th Year Arch
Dennis Radtke	dradtke@iit.edu	3rd Year Arch
Ruben Robledo	rrobledo@iit.edu	4th Year Arch
Jessica Workman	workjes@iit.edu	5th Year Arch
Julia Valadez	valajul@iit.edu	5th Year Arch

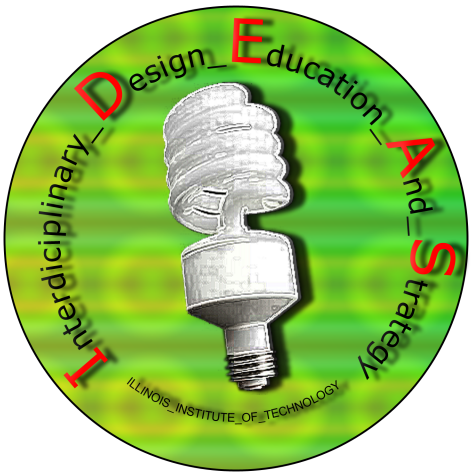
1.2 Identity

1.2.1 Name

IDEAS

This is an acronym for the motto.

1.2.2 Logo



1.2.3 Motto

The motto forms the acronym that is the team name (IDEAS).

Interdisciplinary

Design

Education

And

Strategies

Chapter 2

Team Purpose and Objectives

2.1 Purpose

The main purpose of IPRO301 is to design and develop a dedicated location for IIT's IPRO Program. For the Summer 2009 semester, the purpose will be to come up with design ideas that can solve the problems.

2.2 Objectives

- Determine IPRO's current situation
- Research similar facilities
- 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

Chapter 3

Background

3.1 Client

The client for IPRO301 is the Illinois Institute of Technology. Specifically, this project is for the IPRO Program.

3.2 Problem Description

At this time, the IPRO Program is distributed across the IIT campus, with no specific location for any of its operations.

The main IPRO offices are in the 3424 Building, along with many of the class meeting locations. This building gives the impression of a cold war relic. It lacks power connections in the rooms, modern technology, printing facilities, tables and chairs, and in some cases, windows. It is also heavily used by a number of programs that are completely unrelated to IPRO.

A number of IPRO classes are in almost random locations all over the IIT campus. Many of these locations do not properly function as meeting/conference rooms, do not have technology desks (projectors, computers, power, internet), and in the case of this IPRO (IPRO301), the room is actively used by random other people during the meeting time.

3.3 Potential Solution Technologies

There are two potential options to solve this problem. The first, and more obvious solution, is to build a new facility for the IPRO program. This has the benefit of complete control over everything. The facility can be designed green, modern, secure, aesthetically pleasing, and as useful as it could possibly be. The downside is finding a location. The IIT campus is not large enough to have a number of empty locations available for development.

The second option is to renovate an existing facility. This option has the beenfit of not requireing a location. To some extent, it may be possible to save quite a bit on costs by not pouring a foundation, laying basic structural elements, and other things that can be reclaimed from whatever existing facility.

In either case, the facility in the end will have certain basic requirements. These include technology, including computer labs with internet access and printing facilities, multimedia capabilities, conference centers, and perhaps specialized research laboratories.

3.4 History of Previous Attempts

In the past the IPRO program has moved around without ever having a successful dedicated space.

For some time, offices for this program were in E-1 along with a dedicated conference room and team studio workroom.

The HUB was thought to be the ideal building for a collaborative space. After moving classrooms to the Expo area, it became apparent that the HUB would not suffice do to problems with acoustics and time conflicts with other scheduled events.

One architect drafted plans to establish a space within the HUB, but the plans were never documented as they were impractical and difficult to implement.

Currently the IPRO program is housed in 3424 along with the Stuart School of Business. However, there are limited resources and few classrooms and conference rooms.

3.5 Ethical Issues

Ethical issues faced by this project include gaining access to similar existing facilities. This requires permission from the organizations behind other facilites.

There may be issues involving potential landmark or historical status for buildings on the IIT campus. Modifying an existing facility might result in these issues getting in the way. As noted in the case of Soldier Field (here in Chicago), which lost its national landmark status after renovation, this issue must be considered.

Also involved in renovating existing facilities is the issue of dangerous materials. Some of the IIT buildings quite literally *are* cold war relics. Two IIT buildings are currently not in use, and have asbestos problems that would have to be addressed.

In the case of a new facility, the impact of the facility must be considered. This includes environmental, social, and architectural concerns.

The final concern is funding. Not only is it important to design the best possible facility, but also to consider both the current economic situation, and IIT's current financial situation. Frivolous spending helps nobody.

3.6 Business and Social Costs of the Problem

In addition to the cost of building or renovating, there is also the cost of running the facility that will exist. This is countered by the current cost to the IPRO program, which relies heavily on other program's facilities. Printing, meeting locations, office space, power, communications, and other elements of the IPRO Program's operations have to be covered, whether by the IPRO Program's existing systems, or by outsourcing to other programs or departments.

One of the social costs of the problem is the view and acceptance of the IPRO Program. It is easy to view the program just like its facilites. It is scattered, lacks its own abilities, and does not have an obvious, singular idendity at IIT.

3.7 Proposed Implementation Outlines

IPRO301 has divided into 3 research teams. We will also divide into 3 production teams. Each team will come up with a solution.

One team will be coming up with a solution that applies to the option of constructing a new facility somewhere on the IIT campus. The other two teams will be looking into renovating existing facilities.

3.8 Similar Solutions

There are a number of similar programs and facilities at other universities. Among them are the University of Illinois at Chicago, Purdue University, and Northwestern University.

We will be sending research teams to investigate the facilities at Purdue and Northwestern Universities.

Chapter 4

Team Values Statement

4.1 Team Value Attributes

4.1.1 Communication

- Email will be checked daily by all members. Responses should be timely.
- Review meeting minutes as needed.
- As much as possible, everybody will keep everybody else "in the loop".

4.1.2 Integrity

- Each person will be accountable for his/her words and actions.
- Each person will follow through on all promises.

4.1.3 Respect

- Will remain quiet and attentive when someone is speaking.
- Will not speak poorly of other group members in or out of meetings.
- Will keep criticism professional, not personal.

4.1.4 Timeliness

- Arrive on time or early to meetings (both group meetings and meetings with contacts)
- Turn assignments in on time
- Inform the proper people when something will be behind schedule
- Inform the professors, general manager, and respective team leader when meetings will be missed
- We will begin meetings as close to on time as possible, despite attendance issues
- Tasks will be performed in as efficient a manner as possible

4.2 Conflict Resolution

In case of conflict, the first step is to meet with the team captain and all involved individuals. This meeting will involve no unnecessary people.

Problems between teams, or involving the team captain, or problems that the team captain can not resolve will be moderated by the general manager.

In the event that the problem can not be resolved by the general manager, then the situation will be handled by the professors. If, for any reason, this does not solve the problem, Tom Jacobius may be contacted.

Chapter 5

Methodology/ Brainstorm/ Work Breakdown Structure

5.1 Research

5.1.1 IIT

IT

Interview 1hr

Summation 2hr

Business Model

Interview 1hr

Summation 2hr

Educational Philosophy

Interview 1hr

Summation 2hr

Facilities

Interview 1hr

Summation 2hr

Programming

Interview 1hr

Summation 2hr

Documenting Research

Collection 2hr

Final Document 4hr

Review & Rework (as necessary) 1hr

5.1.2 Purdue

IT

Interview 1hr

Summation 2hr

Business Model

Interview 1hr

Summation 2hr

Educational Philosophy

Interview 1hr

Summation 2hr

Facilities

Interview 1hr

Summation 2hr

Programming

Interview 1hr

Summation 2hr

Documenting Research

Collection 2hr

Final Document 4hr

Review & Rework (as necessary) 1hr

5.1.3 Northwestern

IT

Interview 1hr

Summation 2hr

Business Model

Interview 1hr

Summation 2hr

Educational Philosophy

Interview 1hr

Summation 2hr

Facilities

Interview 1hr

Summation 2hr

Programming

Interview 1hr

Summation 2hr

Documenting Research

Collection 2hr

Final Document 4hr

Review & Rework (as necessary) 1hr

5.2 Production

5.2.1 Facility 1

Programming

Assess Need 4hr

Decide Final Programming 3hr

Document Programming 3hr

Review & Rework (as necessary) 1hr

Schematic Design

Determine Design Need From Programming 5hr

Generate High Level Design Documents 12hr

Finalize Facility 1 Design 3hr

Document Schematics 3hr

Review & Rework (as necessary) 1hr

Design Development

Determine Design Need From Initial Schematics 6hr

Generate Final Design Documents 20hr

Finalize Final Design 5hr

Document Design 4hr

Review & Rework (as necessary) 1hr

Construction Information

Assess Construction Needs From Design 14hr

Collect Construction Needs 8hr

Document Construction Needs 4hr

Review & Rework (as necessary) 1hr

5.2.2 Facility 2

Programming

Assess Need 4hr

Decide Final Programming 3hr

Document Programming 3hr

Review & Rework (as necessary) 1hr

Schematic Design

Determine Design Need From Programming 5hr

Generate High Level Design Documents 12hr

Finalize Facility 2 Design 3hr

Document Schematics 3hr

Review & Rework (as necessary) 1hr

Design Development

Determine Design Need From Initial Schematics 6hr

Generate Final Design Documents 20hr

Finalize Final Design 5hr

Document Design 4hr

Review & Rework (as necessary) 1hr

Construction Information

Assess Construction Needs From Design 14hr

Collect Construction Needs 8hr

Document Construction Needs 4hr

Review & Rework (as necessary) 1hr

5.2.3 Facility 3

Programming

Assess Need 4hr

Decide Final Programming 3hr

Document Programming 3hr

Review & Rework (as necessary) 1hr

Schematic Design

Determine Design Need From Programming 5hr

Generate High Level Design Documents 12hr

Finalize Facility 3 Design 3hr

Document Schematics 3hr

Review & Rework (as necessary) 1hr

Design Development

Determine Design Need From Initial Schematics 6hr

Generate Final Design Documents 20hr

Finalize Final Design 5hr

Document Design 4hr

Review & Rework (as necessary)

1hr

Construction Information

Assess Construction Needs From Design 14hr

Collect Construction Needs 8hr

Document Construction Needs 4hr

Review & Rework (as necessary)

1hr

5.3 IPRO Deliverables

5.3.1 Project Plan

Distribute Work Elements

.5hr

Complete Work Elements

6hr

Collect Work Elements

2hr

Generate Final Document

8hr

Review & Rework (as necessary)

1hr

5.3.2 Midterm Presentation

Analyze Guidelines

2hr

Assess Available Data

4hr

Generate Midterm Presentation

8hr

Review & Rework (as necessary)

2hr

Give Midterm Presentation

.5hr

5.3.3 Brochure

Analyze Guidelines

1.5hr

Choose Information For Inclusion

2hr

Generate Brochure

7hr

Review & Rework (as necessary)

2hr

Upload Brochure For Printing

.25hr

Collect Brochures From IPRO Office

.5hr

5.3.4 Poster

Analyze Guidelines

1.5hr

Choose Information For Inclusion

2hr

Generate Poster

9hr

Review & Rework (as necessary)

2.5hr

Upload Poster For Printing

.25hr

Collect Poster From IPRO Office

.5hr

5.3.5 Final Report

Analyze Guidelines

3hr

Collect Information

4hr

Generate Report

12hr

Review & Rework (as necessary)

2.5hr

Upload Final Report

.5hr

5.3.6 Work Product CD

Collect All Information & Documents

3hr

Burn Disc

2hr

Chapter 6

Expected Results

6.1 Research and Testing

The entire first phase of the Summer 2009 semester of IPRO301 is aimed at research. We will be attempting to gather detailed data about the problems that the new facility must solve, the current situation for the IPRO Program, other similar facilities at other universities, and the facilities that exist at IIT that might be used in a renovation.

6.2 Products of Research and Testing

The results of our research should be a well enough detailed picture of the situation that we can begin to consider potential solutions.

6.3 Potential Task Outputs

Our results will include a fairly decent amount of documentation, as well as the designs for ideas that are produced.

6.4 Expected Deliverables

Deliverables will include all documentation generated to describe our research, all documentation of work done, drawings, pictures, renderings, and possibly models.

6.5 Assumptions, Challenges, & Risks

In the case where ideas involve potential renovation of existing facilities, the assumption is made that the facilities involved would be available.

Our challenges include the fact that all ideas must come from nothing, since the project is just beginning, and the necessity to design around existing structure in the case where existing facilities might be renovated.

The other main challenge is the fact that this new facility must reflect both IIT and the IPRO Program.

The risks are, mostly, that the ideas created could be rejected. The other main risk is money. Obviously, something like this is an expensive undertaking. One of the challenges of the project is to try to make the new facility a good idea financially. Even so, it is possible that ideas could be rejected based on finances.

6.6 Expected Results In the Solution

The main expected result will be 3 booklets, one for each potential solution. These booklets will include programming, floorplans, and other information about the facility.

The other major output will be the collected research about similar facilities. This is where ideas about what should and should not be included in the ideas for solutions at IIT.

Chapter 7

Budget

Budget		
Category	**Amount**	**Description**
Transportation	$150.37	Visiting other universities
Models	$120.00	Models of ideas
Idea Booklets	$198.00	Final booklets for ideas
Research Printing	$90.00	Printing of research related items
Final Proposal	$125.00	Self explanatory
Other Costs	$66.63	Other costs that may arise
Total	**$750.00**	

Chapter 8

Task List and Milestones

8.1 Project Task Lists

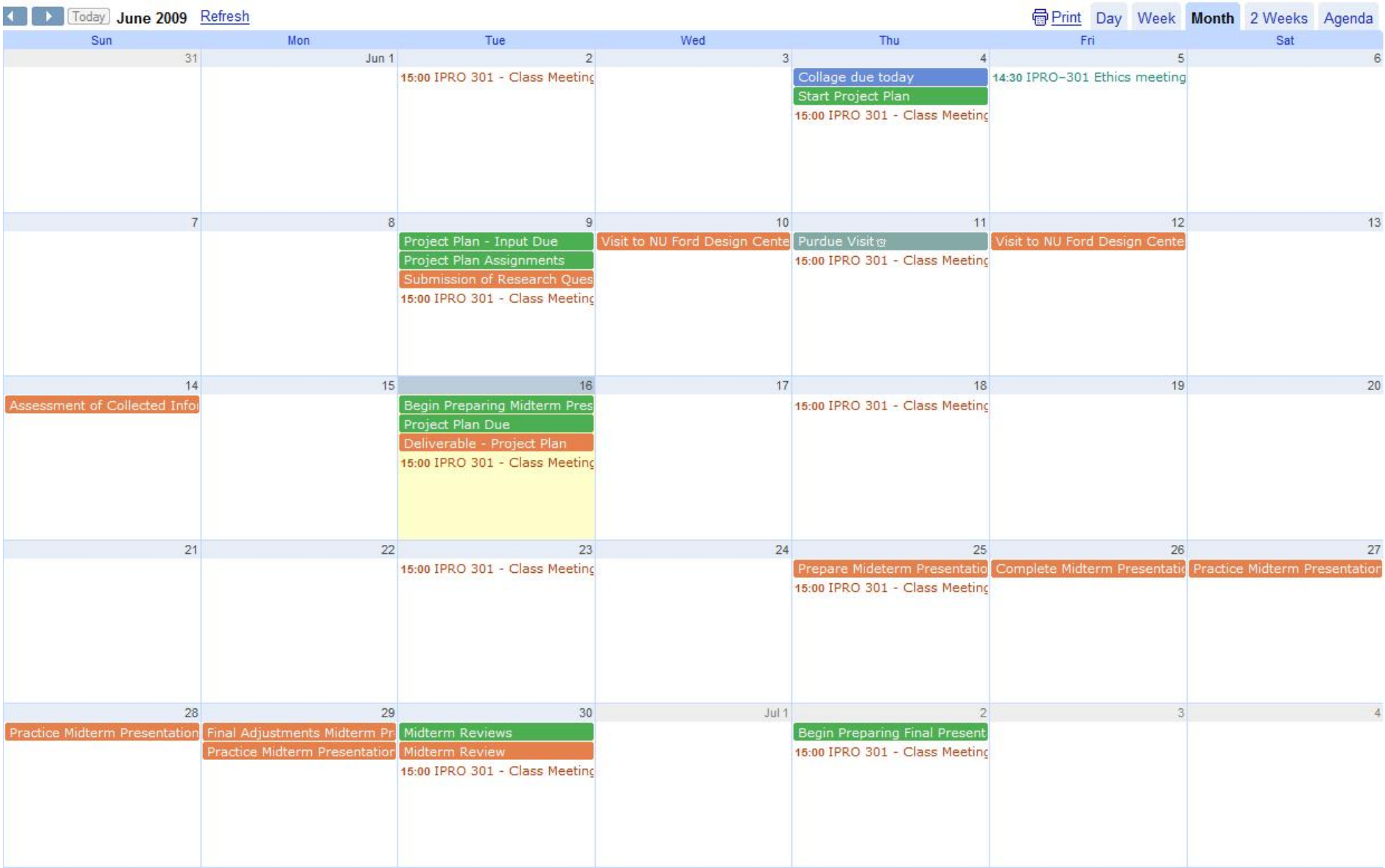
- Research (IIT, Purdue, Northwestern)
- Research Documentation and Analysis
- Creating Solution Ideas
- Documenting Solution Ideas
- Finalizing Solution Ideas
- Creating Solution Documents
- Creating Proposal
- IPRO Day

8.2 IPRO Specific Tasks

- Project Plan
- Midterm Presentation
- Final Presentation
- Brochure
- Poster
- Work Product CD

8.3 Task Breakdown

See figures on the next two pages.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15:00 IPRO 301 - Class Meeting
3
4
Collage due today
Start Project Plan
15:00 IPRO 301 - Class Meeting
5
14:30 IPRO-301 Ethics meeting
6
7
8
9
Project Plan - Input Due
Project Plan Assignments
Submission of Research Ques
15:00 IPRO 301 - Class Meeting
10
Visit to NU Ford Design Cente
11
Purdue Visit
15:00 IPRO 301 - Class Meeting
12
Visit to NU Ford Design Cente
13
14
Assessment of Collected Infor
15
16
Begin Preparing Midterm Pres
Project Plan Due
Deliverable - Project Plan
15:00 IPRO 301 - Class Meeting
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18
15:00 IPRO 301 - Class Meeting
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15:00 IPRO 301 - Class Meeting
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Prepare Mideterm Presentatio
15:00 IPRO 301 - Class Meeting
26
Complete Midterm Presentatio
27
Practice Midterm Presentation
28
Practice Midterm Presentation
29
Final Adjustments Midterm Pr
Practice Midterm Presentation
30
Midterm Reviews
Midterm Review
15:00 IPRO 301 - Class Meeting
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Begin Preparing Final Present
15:00 IPRO 301 - Class Meeting
3
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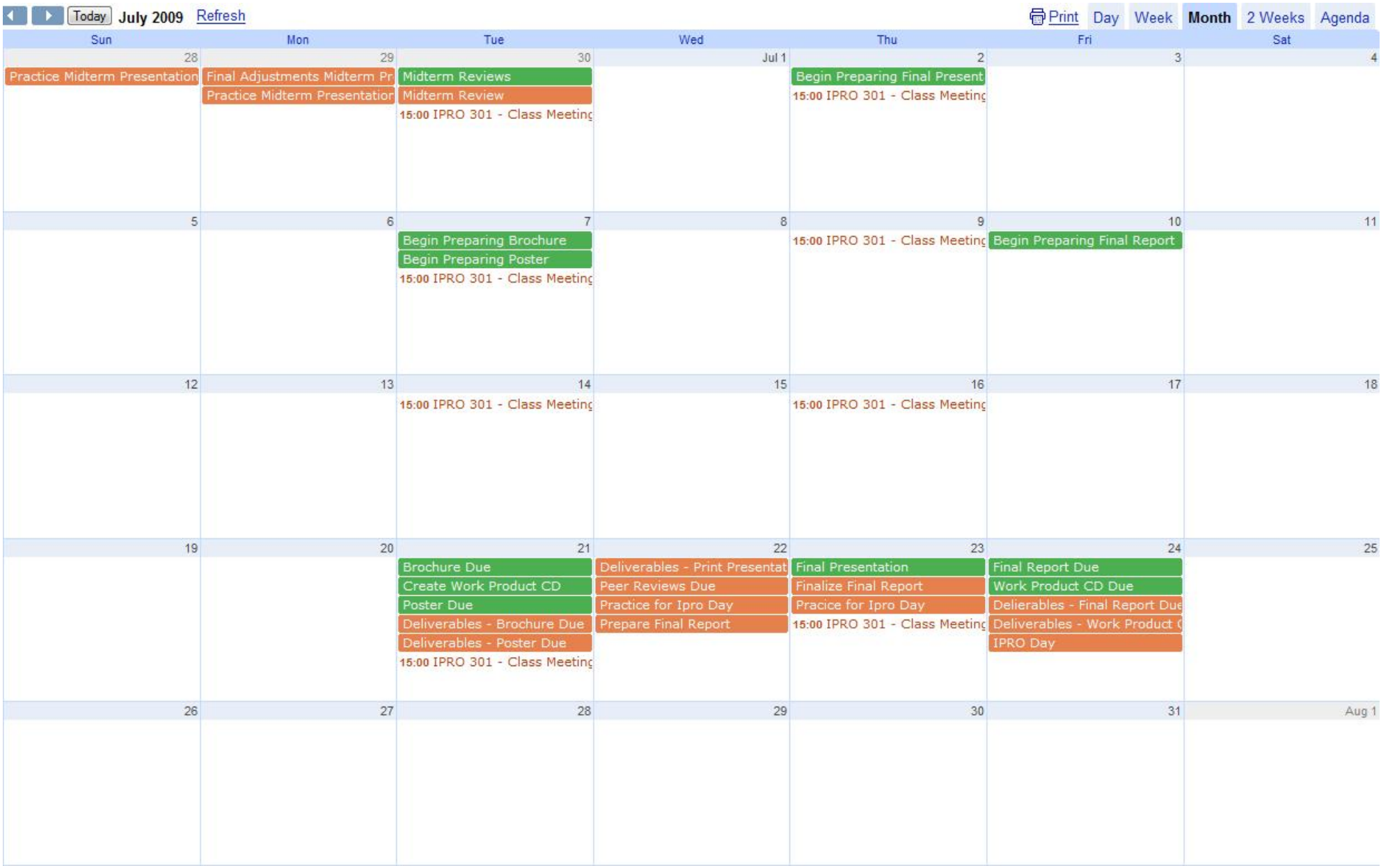
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Practice Midterm Presentation
Final Adjustments Midterm Pr
Practice Midterm Presentation
Midterm Reviews
Midterm Review
15:00 IPRO 301 - Class Meeting
Begin Preparing Final Present
15:00 IPRO 301 - Class Meeting
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11
Begin Preparing Brochure
Begin Preparing Poster
15:00 IPRO 301 - Class Meeting
15:00 IPRO 301 - Class Meeting
Begin Preparing Final Report
12
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15:00 IPRO 301 - Class Meeting
15:00 IPRO 301 - Class Meeting
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25
Brochure Due
Create Work Product CD
Poster Due
Deliverables - Brochure Due
Deliverables - Poster Due
15:00 IPRO 301 - Class Meeting
Deliverables - Print Presentat
Peer Reviews Due
Practice for Ipro Day
Prepare Final Report
Final Presentation
Finalize Final Report
Pracice for Ipro Day
15:00 IPRO 301 - Class Meeting
Final Report Due
Work Product CD Due
Delierables - Final Report Due
Deliverables - Work Product C
IPRO Day
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Aug 1

Chapter 9

Individual Member Assignments

9.1 Team Organization & Responsibilities

For the Summer 2009 semester, this IPRO has divided into three teams. There are also two phases to the project.

Phase one will be research. This research will have one team per university investigating other university facilities.

Phase two will be development. In this phase, ideas will be created for solutions at IIT. Three ideas will be created, one per team.

9.2 Leadership

As there are three teams, there are three team captains. Each is responsible for a team. There is also a general manager, who is responsible for coordinating the three teams.

9.3 Individual Member Responsibilities

Team Organization			
Team	**IIT Team**	**Purdue Team**	**Northwestern Team**
Members	Julia Valadez (Team Captain)	Ed Scanlon (Team Captain)	Kevin Krupp (Team Captain)
	Gergana Horozova Nalls	Dennis Radtke	Aaran McEneff
	Faraz Hussain	Alexis Laurence	Kai Hansen
	Joel Cornelius	Mihee Choe	Phillip Brierley
	Vito Natale	Mehrdad Nikamalfard	Kristen Lucchesi
	Jessica Workman	Timothy Phillips	Ruben Robledo

Chapter 10

Designation of Roles

10.1 Meeting Roles

Roles : Meeting	
Role	**Person**
Minute Taker	Kevin Krupp
Agenda Maker	Ed Scanlon
Time Keeper	Philip Brierly

10.2 Status Roles

Roles : Status	
Role	**Person**
Timesheet Collector	Julia Valadez
Master Schedule Maker	Kristen Lucchesi
iGroups	Timothy Phillips

Bibliography

[1] IIT Logo ( ) belongs to the Illinois Institute of Technology

[2] Purdue University and facilities researched are ©Purdue University

[3] Northwestern University and facilities researched ©Northwestern University

[4] IIT's IPRO Program is ©the Illinois Instistute of Technology

[5] Google Calendar (used in section 8.3) is ©Google