IPRO 371 : Sustainable Landscape Design for the IIT Rice Campus

Project Plan Report

Objective

The ultimate goal of Ipro-371 is to plan, design, and implement a sustainable landscape for the Rice Campus. A mission of this magnitude is outside the scope of a single semester. Therefore, the main focus of this semester will be to complete a topographical survey of the Rice campus, to encourage involvement by the administration of the Rice campus, and to complete an application to the DuPage County Water Quality Improvement Program. The application to the Dupage Country Water Quality Improvement Program will include plans to undertake a stream restoration plan for Willoway Brook, assess the feasibility of installing a green roof, and design a rain garden.

Background

In 1991, the Rice Campus opened following the generous gift of 19 acres of land in Wheaton, Illinois from the Rice Foundation. The Rice Campus offers a plethora of educational options through the Center for Professional Development. It serves as a facility for many corporate functions by day and offers courses to students by night. In this way, the Rice Campus serves both the business and individuals of Wheaton and the surrounding areas.

The development and improvement of the landscape at the Rice Campus is beneficial to IIT and the community of Wheaton. These improvements must be made for two reasons. First, the Rice Campus landscape is significantly underdeveloped. Since it resides on 19 acres of land inside a larger community, the community and IIT stand to gain if the land surrounding the Rice Campus is improved. Second, a more impressive landscape will make the building a more attractive venue for holding corporate events. As such, it will be a bigger asset to IIT.

A sustainable landscape is a landscape that will improve the environment and reduce labor costs. Sustainable landscapes improve the environment by properly managing environmental resources (such as rain water) and providing enhanced wildlife habitat. These landscapes also lower costs by introducing plants that are appropriate to the situation. A sustainable landscape plan will not only improve the look of the Rice Campus, but, in the long run, it will reduce the associated costs.

The situation also presents the opportunity for IIT to take a leadership role in the community. By introducing elements of sustainable landscape, rainwater management, and other environmentally friendly initiatives into their landscape, the Rice Campus will provide a role model for landscapes throughout the community.

Research Methodology

To tackle the large and complex problem of designing a sustainable landscape at Rice Campus, the IPRO team will break down the problem into three steps:

- Define and Explore the Problem
- Generate Solutions
- Decide the Course of Action

Define and Explore the Problem

The main goal of this phase is to generate a central problem statement by which the team can brainstorm potential solutions. There are three steps that our team will take in exploring this problem:

1) Collect and analyze information and data about sustainable landscapes.
2) Talk with experts in various fields of sustainable landscape design.
3) Brainstorm potential solutions.

More specifically:

1) Poll of stakeholder concerns
2) Collect maps
3) Topographical survey of the site
4) Consult experts in the field

Generate Solutions

The approach that the team is taking for this stage of the project is to create a list of potential research topics within the sustainable landscape design field, and for each team member to select a topic. The individual team member will research their individual topic, and using the findings from their research, the team member can bring creative solutions back to the team.

Decide the Course of Action

This research stage is where the different potential solutions are evaluated. The main method of evaluation will be in the form of a life-cycle assessment matrix. A life-cycle assessment matrix is a matrix incorporating different aspects of the implementation phase (i.e. manufacturing, processing, etc.) and weighing them against various constraints like cost or aesthetics.

Expected Results

IPRO-371 has several expected results this semester, including the completion of the DuPage County Water Quality Improvement Program application and a complete topographical survey of the Rice Campus. The completion of all IPRO deliverables and the preparation of a plan to continue the sustainable landscape development at the Rice Campus are also expected.

Proposed Project Budget

1) Visiting rice campus (travel expenses) $125
2) Complete documents and reports $100
3) Presentation costs $300
4) Advertising $50
5) Surveys $50
6) Maps and topographical surveys $300
7) Contract fees $400
8) Phone calls $15

Total: $1340

Task Schedules / Milestones

February 3	Project plan due
Feb-March	Gather required documents for conceptual design report
Feb-March	Survey IIT Rice Campus (potential bottleneck due to weather, transportation, etc.)
March	Prepare conceptual design report, including narrative of proposed remedial solution and benefits, estimate of project schedule, estimate of cost, expected funding, and list of project stakeholders
March 10	Team assessment questionnaire
March 24	Mid-term progress report due
March 29	Conceptual design report due to DuPage County
April 21	Website, poster, and abstract due
April 26	PowerPoint presentation due
April 29	IPRO Projects Day
May 3	Team debriefing and team assessment questionnaire
May 5	Final project report due

Individual Team Member Assignments

- Research (Team 1)
  - Surveying the site
  - GIS and map collection
  - Researching topical areas of design

- Analysis (Team 2)
  - Descriptive narrative for project application
  - Scheduling
  - Budgeting

- Presentation (Team 3)
  - Website design
  - Project plan for site
  - Coordination of the IPRO presentation