

2010 ROBOTECH Velocity Prep

Del Valle High School | UT Mechanical Engineering Department

GENERAL PROGRAM INFORMATION

Velocity Prep was created in 2001 in direct response to industry and education leaders' desire to see high school students gain relevant work experience and exposure to career paths available in Central Texas. Velocity Prep engages a group of 20 high school students in 160 hours of professional work experience.

Velocity Prep is delivered as a four-week summer program in which students form a consulting company and are paid a stipend for their work. Skillpoint's industry or community partner serves as the Velocity Prep client, "employing" the students as a consulting company to tackle an issue of importance to the client. Working with the client and other relevant experts, student's research, plan, develop, and present specific project deliverables to address the client's real-world problem in a hands-on setting, both on the school campus as well as at the client's workplace.

The goal of the program is to immerse students in activities and tasks that mirror those found in a real business environment. During the Velocity Prep program students:

• meet with business and community leaders	• research real-world topics
• learn to communicate and work effectively in teams	• complete a final report
• create criteria and boundaries for their project	• present their work to the public
• tour companies and other relevant sites	• get paid for their hard work

2010 ROBOTECH | OPERATIONAL OVERVIEW

From June 1 – 30, 2010, twenty (20) Del Valle High School students will participate in the ROBOTECH Velocity Prep program as a consultant for their client, Dr. Benito Fernández, UT Mechanical Engineering Department. Dr. Fernández has agreed to provide a robotics project description and to recommend a short list of potential College Mentors that could support the student consulting team. In addition, he has agreed to provide funding for the project that will cover the costs associated with the College Mentor stipend (\$3,000), robotics equipment (\$1,500), and student travel (\$500) – see Velocity Prep Budget Template below.

The Velocity Prep student consultants will report to Del Valle High School Monday – Thursday from 8:00 AM – 3:00 PM for four weeks. In order to meet the 160 hours of professional work experience, on Fridays the students will travel to Austin in order to participate in a guided site tour at a private sector partners' campus, to be organized by Skillpoint Alliance. In addition, Dr. Fernández has agreed to host the student consultants for work hours at the Robotics Lab at the UT Mechanical Engineering Department on Fridays for the remainder of the day.

Dr. Fernández will host an initial project consultation at UT Mechanical Engineering during the week of June 1, 2010. The student consultants will prepare project deliverables and make a final presentation on June 30, 2010. Dr. Fernández will make arrangements for a team of four (4) UT Mechanical Engineering faculty members to be on-site for the final project presentation. In addition, Skillpoint Alliance will secure private sector partner participation in the final presentation.

PARTICIPANTS

The Client (Dr. Benito Fernández – UT Mechanical Engineering Department) will provide experiences that expose students to industry-related issues and give students a sense of what it is like to work in a professional environment. As much as possible, Velocity Prep should reflect the authentic relationship between a client and consultant, with the client identifying a project that results in actionable items drawn from consultant-generated findings and recommendations.

Responsibilities

- Dr. Fernández (the Client) has identified a real-world robotics problem in need of a solution; the Client should benefit directly from the students' findings and proposed solution(s);
- By May 10, 2010, Dr. Fernández will provide an outline of the robotics problem to assist Skillpoint Alliance staff and the College Mentor in shaping the project;
- By May 19, Dr. Fernández will identify potential candidates for the College Mentor position, which Skillpoint Alliance will interview and may choose to hire;
- Dr. Fernández will serve as the main contact at UT for students throughout the project, unless Dr. Fernández assigns an alternative contact. In addition, we encourage Dr. Fernández to allow additional client staff to interact with and provide information to students, as appropriate;
- Dr. Fernández will host an initial consultation and a final student presentation on the UT Campus;
- Dr. Fernández will secure funding to cover expenses associated with a College Mentor, robotics equipment, and student travel.

Skillpoint Alliance is responsible for the overall management and delivery of Velocity Prep.

Responsibilities

- Skillpoint Alliance will secure program funding, including in-kind support, for delivery of ROBOTTECH Velocity Prep project and student participant stipends;
- Skillpoint Alliance will secure the participation of the Client and College Mentor;
- Skillpoint Alliance will work with the Client and College Mentor to identify and shape the project, ensuring that the project goal is reasonable and attainable;
- Skillpoint Alliance will support the College Mentor in all aspects of the delivery of the project;
- Skillpoint Alliance will work with the College Mentor to secure private industry site visits during the program;
- Skillpoint Alliance will coordinate with Del Valle High School to select student participants; deliver survey materials; and ensure transportation, food, and space availability;
- Skillpoint Alliance will ensure that evaluation, financial administration and reporting processes are in place and carried out.

Students will gain direct knowledge about their client's industry and acquire the values, skills and work habits demanded by employers and necessary for success in the workplace. Students will learn to effectively work in teams to accomplish identified objectives and produce specific deliverables, including setting reasonable goals and timelines. Finally, students will earn a stipend to ensure that they do not have to choose between participating or obtaining summer jobs.

Responsibilities

- Student participants will develop and monitor a detailed project work plan to include activities, deliverables, due dates, and person(s) responsible;
- Student participants will work with the Client Mentor and other appropriate experts to acquire necessary information and/or skills, including industry site visits and hands-on learning opportunities;
- Student participants will conduct a formal presentation of findings and recommendations to the client (family, school personnel and other supporters will be invited to attend)

The College Mentor serves the critical roles of acting as a positive role model, facilitating the work of the Velocity Prep company and serving as the liaison between Skillpoint, the Client, and the Project Liaison(s). The College Mentor will gain valuable experience by working directly with an industry client, serving as project manager for a large group and preparing a project summary report.

Responsibilities

- Prior to beginning the program, the College Mentor will work with Skillpoint and the Client to outline the nature of the problem and help shape the project, including identifying additional experts and working with the Project Liaison(s) on logistics and scheduling;
- The College Mentor will work with Skillpoint staff to create desired outcomes and evaluation procedures for the project'
- The College Mentor will collaborate with the Client as necessary to define the students' work plan;
- The College Mentor will facilitate student workflow by ensuring that students' expectations remain reasonable and appropriate to the project, keeping students on schedule and accountable, acting as a sounding board to focus students' ideas and tasks, and addressing student motivation and performance issues;
- The College Mentor will serve as a role model by modeling a positive attitude, effective relationships and productive work habits;
- The College Mentor will work with Skillpoint staff to identify criteria for awarding bonuses;
- The College Mentor will prepare a summary report describing project goals, accomplishments, student outcomes, expenditures, and suggestions for improvement;
- The College Mentor will coordinate student transportation and site logistics with Del Valle HS Project Liaison.

Project Liaison(s), typically a campus or school district staff member, works with Skillpoint staff and the College Mentor to handle the logistics necessary for effective delivery of the project.

Responsibilities

- The Project Liaison will recruit and match students to the project;
- The Project Liaison will assist the College Mentor in coordinating and scheduling student engagement with industry leaders, including transportation;
- As necessary, the Project Liaison will work with the College Mentor to ensure that school facilities and necessary equipment are available;
- The Project Liaison will be available to assist the College Mentor with any last-minute logistical issues; and
- The Project Liaison will maintain student and logistical documentation for the project's summary report

2010 ROBOTECH Velocity Prep Budget Template
 Del Valle High School | UT Mechanical Engineering Department

	Request	In-Kind
Velocity Prep Management Skillpoint salaries/benefits	\$0	\$7,230
Project Liaison \$1,000 stipend	\$0	\$1,000(ISD)
College Student Mentor \$3,000 stipend	\$3,000	\$0
Student stipends (20 @ 160 hours) \$800 stipend (\$5.00/hr) + \$1000 for bonuses	\$0	\$17,000
Program Supplies and Equipment	\$1,500	\$0
Food and Beverages Final Presentation and Reception	\$0	\$500
Transportation Four industry site visits @ \$250/visit	\$500	\$500
TOTAL	\$5,000	\$25,330

PROGRAM ACTIVITIES

The key to hosting a successful Velocity Prep is replicating a real-world business environment. Velocity Prep consulting will lead project teams in order to address the needs of actual clients, engage in direct correspondence with mentors and client contacts, define the project scope, and present deliverables to their client. A typical Velocity Prep will engage participants in the following activities:

Understand the Client

Students served as team members for a Velocity Prep Consulting Company that has been hired by a client to investigate a particular problem and provide a viable solution. In order to serve the needs of their client, they first need to understand the client’s line of business. Teams will set up a meeting with the client to get to know the client as an individual, what the company does, and how the assigned project will be of value to the bottom line. Velocity Prep consultant will also want to find out how best to communicate with the client, including points of contact, preferred methods of communications, and expected turnaround time.

Define the Scope of Work

Once a sense of the client is established, the Velocity Prep consultants will gather specifics about the project assignment in order to develop a project plan. During the initial client consultation, the Velocity Prep team will determine the problem, clearly define the project deliverables, identify limiting factors (such as time, cost, geography, etc), and establish a timeline for delivering work product to the client.

Memo

Depending on the scope of work, it may be helpful for Velocity Prep consultants to prepare memos that detail team research or potential project recommendations. Project coordinators and team supervisors will be responsible for requesting memo assignments as needed.

Create Criteria & Decision Matrix

How will you know if your idea is good? How will you prove it to your boss? To your client? Is the solution feasible? What are the project constraints?

Project Proposal

Once an investigation approach has been approved by team leaders or the project coordinator, Velocity Prep consultants will prepare a formal proposal for the client that uses and expands on the memo by offering more details about the intended research strategy, scope of work, and project deliverable timeline. This Proposal could include a preliminary literature review (survey of credible information available). This is the first document that the client will see.

Professional Correspondence

Communicate effectively and professionally with industry & subject matter experts via email. Set up meetings, follow-through with tasks, request data, and send thank you notes.

Performance Reports

Every week the consultants will report their tasks to project supervisors through pre-determined social media.

Drafts of Report Sections

Before finalizing the report, Velocity Prep consultants will write a draft of the report sections to be evaluated by the project coordinator. The Report Draft should convince the supervisor that the analysis is either finished or a couple of days away from completion. The report should also show that the project team has a good handle on how to present and format the information, even though all the graphics may not yet be finished.

Presentation Preparation

Project team(s) will present final reports to an audience of business and government leaders.

Final Report

At the completion of the project, the project coordinator will send the Final Report to the client. This report will include the complete body of research, any decision matrices or criteria, and findings. In addition, the report should cover:

- What are the financial, physical, social, cultural factors that affect your project?
- What was the process your team(s) used to determine the final project?
- What is the suggested course of action for your client?
- Any ethically questionable behaviors to worry about?
- What other factors would have to be in place before this project could be implemented

TYPICAL PROJECT TIMELINE	
WEEK 1: Client Needs & Work Plan	Orientation: HR Paperwork, Rules, Procedures
	Site tour with client(s): what do they do, size of company, budget, educational background, skills needed to work there
	Overview of the project: Identify the problem, constraints, deliverables, timelines
	Resource exchange: determine points of contact, background data sources,
	DELIVERABLE: Form project work teams
	DELIVERABLE: Define Project Deliverables
	DELIVERABLE: Progress Report
WEEK 2: Research & Preliminary Findings	Brainstorm on alternatives
	Conduct team and individual research
	Site visits with/from subject matter experts
	Specialized skills training/development
	Establish evaluation criteria to determine feasibility
	Team leaders consult with client
	Evaluate alternatives
	DELIVERABLE: Progress Report
WEEK 3: Preparation of the Deliverable	Draft Deliverable
	Team leaders consult with client
	Site visits with/from subject matter experts
	Conceptualize the final presentation
	Secure the presentation venue and site needs
	DELIVERABLE: Final Report scheduled for printing
	DELIVERABLE: Progress Report
WEEK 4: Final Presentations	Draft and edit Presentation
	Presentation rehearsal
	DELIVERABLE: Final Presentation to Client
	DELIVERABLE: Evaluation & Performance Review
	PAY DAY & Merit Bonuses