IPRO 309
Web Portal that Creates Awareness about Engineering Careers for High School Students, Teachers and Counselors

Presented By:
Alex Ostapczuk
Ryan Ilagan
Victor Lomeli

Overview

- History
- Objective
- Goals
- Team Organization
- Portal Design
- Data Collection
- Future Steps
- IPRO Team experience
- Issues
- Acknowledgements

History

- The project started in the spring semester of 2001
- Needs surveys conducted between high school counselors and students
- Web Portal description created
- Web Portal design implemented and populated with data

Objective

- To develop a completely functional web portal that inspires High School students to consider careers in engineering
- Populate the Web Portal with data
- Maintain the Web Portal

Goals

- Implementation of design
- Population with data (i.e. links, synopses, surveys, etc…)
- Interview professors, professionals, and students

Team Organization

- Divided into two sub teams
- Encountered problems with scheduling
- Tried to assign equal amount of tasks

Research Topics

- Content vs. Links
- Engineering Majors Available
- Link Research
- Interviews
- Testing of the Site

The Link Argument

- Portal: Implies collection of Links
- Providing Content will be synonymous to “reinventing the wheel”
- Time and Space is too consuming

The Content Argument

- We can not stimulate a students interest
- Our site would not have any autonomy
- Content gives the user another reason to return to our site

Engineering Majors

- A student can not be interested in something that he is unaware of
- Aimed to answer some basic questions
- Provide all other information that is relevant to particular field

IEC Educational Services

Engineering Majors

Includes synopsis, salary statistics, work values and suggested High School prep.

Scholarship Information
Find money for college. Search for scholarships and more

Featured College Programs
Innovative College Programs around the country

Interviews
Discussions with college students and professors (audio/video)

Engineering Events
Listing of student exhibits, several corporate exhibits, career fairs and other events.

Quick References

Engineering: Your Future
Graduating Engineer
The Princeton Review
Engineering Societies

Engineering Majors Listing >>

Aerospace Engineering

Architectural Engineering

Biological Engineering

Chemical Engineering

Computer Engineering

Computer Science

Electrical Engineering

Mechanical Engineering

Nuclear Engineering

IEC Educational Services

Engineering Majors

Includes synopsis, salary statistics, work values and suggested High School prep.

Scholarship Information
Find money for college. Search for scholarships and more

Featured College Programs
Innovative College Programs around the country

Interviews
Discussions with college students and professors (audio/video)

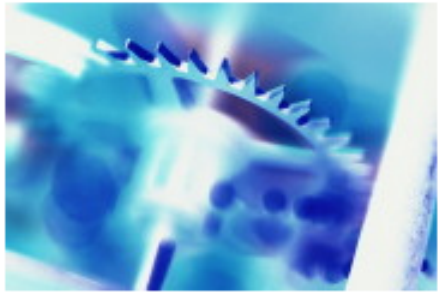
Engineering Events
Listing of student exhibits, several corporate exhibits, career fairs and other events.

Quick References

Engineering: Your Future
Graduating Engineer
The Princeton Review
Engineering Societies

Engineering Majors Listing > Mechanical Engineering

"Diversity" is the key word when it comes to Mechanical Engineering. There are many fields in which Mechanical engineering plays a role: automated manufacturing, environmental control, transportation, biomedical fields, computer fields, fossil fuel and nuclear power...the list goes on and on. Mechanical Engineers are concerned with imagining and implementing programs and devices that improve our world and our movement in it. A Mechanical Engineering major's designing endeavors are diverse, from tiny measuring instruments to huge aircraft carriers or power plants. They also are involved with testing, evaluating, distributing, and marketing the devices they and their colleagues create. If the all of these challenges appeal to you, Mechanical Engineering might be a major to consider. As with other engineering programs, your course of study may include one or more semesters of a co-operative education program, in which you will be employed full-time with an appropriate company. A co-operative is a great way to put your knowledge to use, and often times your co-op job leads to post-graduation employment.



More about Mechanical Engineering

High School Preparation
Sample College Curriculum
Careers
Salary Stastistics
Work Values
Abilities Required
Knowledge Required

IEC Educational Services

Engineering Majors

Includes synopsis, salary statistics, work values and suggested High School prep.

Scholarship Information
Find money for college. Search for scholarships and more

Featured College Programs
Innovative College Programs around the country

Interviews
Discussions with college students and professors (audio/video)

Engineering Events
Listing of student exhibits, several corporate exhibits, career fairs and other events.

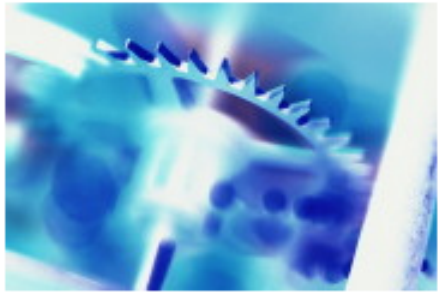
Quick References

Engineering: Your Future
Graduating Engineer
The Princeton Review
Engineering Societies

Engineering Majors Listing > Mechanical Engineering

High School Preparation

Science and math courses will be most helpful if you're looking towards a Mechanical Engineering major. Try to take higher-level courses if they're offered, like calculus and any AP classes. And no matter how much you get teased, go to science fairs and other scientific competitions. Be that geek whose entries always win. Nothing prepares you for a Mechanical Engineering major better than taking the things you learn in your chemistry and physics classes and putting them to practical use



More about Mechanical Engineering

High School Preparation
Sample College Curriculum
Careers
Salary Stastistics
Work Values
Abilities Required
Knowledge Required

Link Research

- Introduction of the “link bucket”
- Filtration process
- Categorization of select links

Interviews

- Provides more content
- Gives the site a human touch
- Did not want this to be a deterrent
- Edited the interviews into short segments

Testing of the Site

- Team tested
- Creation of surveys to judge the site and provide feedback on improvements
- The creation of the on-line survey

Future Steps

- More Interviews
- More links
- More engineering majors covered
- Portal Testing
- Surveys

Tasks and Responsibilities

- Overall creation of the Web Portal
  - Graphical Design
  - Flow of contents
  - Database Design
- Interfacing with Research Team
  - Gathering + organization of contents
  - Providing useful tools: Online Survey

Vastly Improved Web Portal

- Old Web Portal
  - Static Information
  - Use of pure HTML
  - Sparse Information
  - Few Links
  - Limited Future upgradeability
- New Web Portal
  - ASP versus pure HTML

Dynamic Information

- Database Driven Content
- Separation of Front End and Back End
  - Interface can be easily changed
  - Information can be added and deleted easily
- Future Enchantments
  - Administration Pages

Interactive Site

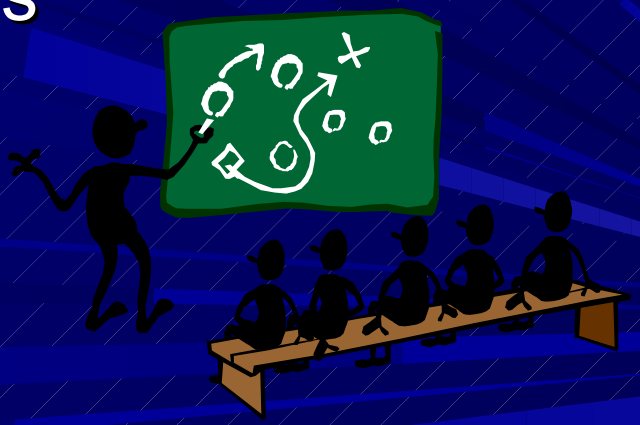
- Student Network
- Online Survey
- Future Enhancements
  - Games
  - Quizzes
  - Student Profiles
  - Secure Student Network

Technology

- Composition
  - ASP 3.0
  - Microsoft Access 2000
- Tools
  - Macromedia Ultradev 4.0
  - Macromedia Fireworks 4
  - Adobe Photoshop 6

IPRO Team Experience

- Work as a team
- Integration of different ideas, experiences, and views
- Students apply what they learned in the classroom
- Work closely with Professionals



The team

- Advisor: Dr. Voland
- Web Team: Ryan Ilagan, Victor Lomeli, Mulyadi Oey, Aditya Mardia
- Research Team: Allan Howard, Gordan Raic, Vaibhav (Manu) Sawhney, Fan Ping, Alex Ostapczuk
- Sponsor: Mike Janowiak

Acknowledgements

- International Engineering Consortium
  - Mike Janowiak, Amit Choksi, Natalie Bastermagian
- Advisors
  - Dr. Gerard Voland, Mihir Patel
- IPRO office staff
- Professors
  - Prof. Axelrod, Prof. LoCicero
- Professionals
  - Roger Trimstra