

Client/Company/Organization: Iowa State University

Submitter (name): Nir Keren/Mani Mina

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Project Title:

Web Portal for Diagnosing Learning Style (WP)

Project Abstract (include **ALL project goal(s)**, design constraints, and technical approaches and tools):

Extensive efforts have been invested in the last two decades in attempts to understand how students learn and in development of assessment tools to evaluate learning. Yet the challenges remain. This proposal request designing and testing, of web portal for diagnosing learning style (WP).

The WP is a problem solving simulator for identifying phases for individuals through tracing information processing and solution analysis (see image for example).

The WP will deployed over the web. WP will allow for easy authoring of problems; that includes well-designed user interfaces, databases for data collection, analyzers, etc. The system should be gated with userID's and Passwords.

Expected Deliverables (include expected schedule, cannot be open-ended, **must list at least one deliverable**):

Operable, web-based application for WP

Specialized Resources Provided by Client (be as specific as you can):

Anticipated Cost: \$500

Financial Resources Provided by Client (if any): \$500

NOTE: General Resources Provided by ISU/ECpE: MSDNAA software, and access to resources in ECpE teaching and research labs, e.g., electronics, embedded systems, etc.

Enter # Students Preferred/Required:

- Electrical Engineering
- Computer Engineering
- Software Engineering
- Other (specify):

Special Skills Required of Students (be specific):

Anticipated Client Interaction (estimate):

- 1 meeting per week
 - phone, internet, live
- 1 meeting per month
 - phone, internet, live
- 2 or more meetings per month
 - phone, internet, live
- 1 meeting per semester
 - phone, internet, live

Meeting ABET Criteria

Please rate the following statements as they relate to your proposed project:

0 – Not at all

1 – A Little

2 – Somewhat

3 – A Lot

4 – Completely

On this project, students will need to apply knowledge of mathematics, science, and engineering

0 1 2 3 4

This project gives students an opportunity to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability

0 1 2 3 4

This project involves students from a variety of programs, i.e., SE, EE, and CprE

0 1 2 3 4

This project requires students to identify, formulate, and solve engineering problems

0 1 2 3 4

This project gives students an opportunity to use the techniques, skills, and modern engineering tools necessary for engineering practice

0 1 2 3 4

Project Approval – for use by ECpE Senior Design Committee

Approved

Not Approved

Faculty Advisor Assigned: _____

Project Number Assigned: _____

SOURCES OF NOISE

The following three pieces of equipment are located in a manufacturing facility. You are being asked to evaluate whether employees at the facility are at risk of being overexposed to noise induced by the equipment. Employees in the facility are exposed to the noise 8 hours a day. The noise power in watts [W] and noise level in decibel [dB] are available next to the sources. Employees are considered overexposed if noise level exceeds 90 dB during the entire 8 hours of a shift. Information on sound and noise will be revealed upon "clicking" on the information buttons.

Information Buttons

L = 86 [dB]
P = 0.00056 [W]



L = 88 [dB]
P = 0.00123 [W]



L = 87 [dB]
P = 0.00100 [W]



Similar Solution(s)

The Nature of Sound

Frequency of Sound Waves

Amplitude of Sound Waves

Acoustic Power and dB

Anatomy of the Ear

Please present your solution in details in the dialog box below. Do not forget to submit your solution upon completing typing in the box.

Submit your Solution