

AIMS² Research Project in Civil Engineering and Construction Management

Research Duration: Summer 2019 (June – August 2019)

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Title of Project: A Mobile Construction Management Risk Assessment Model

Goals and Objectives of the Project, Expectations and Outcomes

Construction projects are considered very critical in term of the different type risks associate with the. Risks can be classified as know risks, unknown risks, and dynamic risks. In this study, a mobile application using virtual labs will be developed. Risks can be assessed and evaluated based on their severity as low risks, moderate risks, and high (extreme) risks. Using virtual lab an interactive mobile model can be developed. The application will help in determining the risk level instantly, decision can be made efficiently, and all development efforts can be prioritized effectively.

Student research assistants are expected to work 5 to 10 hours per week. This project does not require students to have strong background in construction management/engineering majors, nor programming skills. However, they must be willing to learn while learning and think deeply about this project. Students will explore open web-resources, learn and use qdex (qdex is an eLearning mobile platform for STEM education). With faculty mentors' instruction, they will create and test the virtual-lab modules.

Through this experience students will develop research skills such as

- (1) an ability to evaluate information found in open web-resources,
- (2) an ability to develop and refine research questions to get the needed results,
- (3) an ability to display persistence by continuing to pursue information to gain a broad perspective,
- (4) an ability to respect intellectual property rights,
- (5) an ability to use interpersonal relationship to gather and share information.