Spring 2006 Elective Course

New Course Offering
IT485: University-Wide Interdisciplinary Project
Predicting by Inventing

Course: IT485-108: University-Wide Interdisciplinary Project (Call 13976)
Course Type: Technical Elective
Pre-Requisite(s): Junior or Senior Standing
Who can take it?

The course is open to undergraduate students in: School of Management, Newark College of Engineering, College of Science and Liberal Arts, College of Computing Sciences, School of Architecture and IT program. ***Please consult with your academic advisor as to how best to use this course in your curriculum***

Class Time: Thursday 6-9PM
Class Location: TBA
Website: http://www.eljabiri.com (has most up-to–date information)
Virtual Classroom System: http://webct.njit.edu

Instructor: Osama Eljabiri, Lecturer and Director of CCS capstone courses.
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Background

Real world business problems are complex and many are multidimensional. Real world projects are no thing like what you see in controlled academic environments. They are very dynamic, people-driven and multidisciplinary by nature. After more than 250 industry-sponsored and entrepreneurial projects our undergraduate capstone students have carried out in the last three years, we have come to realize the extreme importance of "collaborative intelligence" like never before. This course mirrors this experience and establishes a new foundation for university-wide collaboration in real world projects.

Objectives

This course introduces a unique learning model in which students will have access to three types of resources: interdisciplinary teams, interdisciplinary real world projects and interdisciplinary training. You will work shoulder to shoulder with students from other colleges and/or departments and a diverse industry stakeholders' community who will view the problem from every possible angel. As a team, you will be trained on how to manage complex projects, carry out comprehensive feasibility studies, diagnose business and technical problems, architect full-scale solutions, deploy and adapt technology, test, market, and evolve. As an individual, you will have the opportunity to express yourself as your team's math, statistics, management, finance, marketing, humanities, engineering, biomedical, bioinformatics, chemistry, physics, IT, IS or computer science expert. The course does not only introduce students to real world strategic and interdisciplinary problem solving but also to crucial communication and presentation skills.

Multiple Benefits for Students

1- Real world problem solving experience sponsored either by the industry or students entrepreneurs.
2- Team-Based collaboration across five NJIT colleges.
   [No matter what discipline you are coming from, there is always a place for you]
3- Market-driven training via complementary Open University.
4- Access university-wide human, technical and financial resources.
5- Entrepreneurship track for students who wish to form their own business.
6- Fast career development track including possible job opportunities.
7- For more demanding projects, you can earn up to 6 credit hours over two semesters.

How Does it Work?

The class will meet on weekly basis for the first seven weeks of the semester in terms of training and administrative sessions that will be run by course instructor. After this phase, teams will work in an independent style and the training process will switch to an advising mode in addition to Open University sessions.

During the first two weeks of the semester, project opportunities will be presented by industry sponsors or entrepreneurs, project managers will be selected and interdisciplinary teams will be formed or integrated.

The following is an illustration of how all projects will progress:

1- Each team will have to finish their project within a series of (5) sprints (or iterations) where each sprint is two-week long.
2- Development teams meet with the client, or product owner, before each sprint to prioritize the "features" to be done and select the tasks the team can complete in the upcoming sprint.
3- During each sprint, the ideal situation is that the team stays on track by holding brief 30-minute meetings as frequent as possible every week. If that was difficult, the team should have at least two brief 45-minute meetings each week. The Webct system will be used as a virtual communication environment to support live classes.
4- At the end of each sprint, the team delivers a product increment or component, and presents it to class and project sponsor as scheduled. A total of 5 presentations are required including three in-class.

The interdisciplinary team formation process assures a unique role for each student no matter what discipline he/she is coming from. This role can take one of three forms: single team structure, multi-team structure and discipline expert. This will depend on projects needs and skill sets available.

Non-Traditional Course Work

Since this is a team-based project course, the major assignment is the project itself in terms of scheduled deliverables and presentations in an evolutionary fashion. Project deliverables, presentations, sponsor evaluation, progress reports, class attendance and participation compose the evaluation criteria for this course.

Accordingly, this course will require no other assignments, no quizzes or exams. This course is pressure-free regarding traditional course work. Additionally, there will be numerous opportunities for extra credit points.

In this course, attendance is extremely important and will be recorded every class as well as attending sponsor and team meetings alike.

You Are Invited to Be Our Partner

If you are a highly motivated person looking for an elective course that would facilitate a unique and rewarding real world learning experience in a collaborative environment, look no further. In this course you don't only learn about other disciplines, but they also learn from you. You will be treated as a partner and as a resource. You will be part of a problem solving process bringing your own field of study or expertise whether to tackle an industry-related problem or to work with a student entrepreneur or even to become one. Yes, if you have a truly innovative idea, you can start your own business right from this course with access to numerous university resources across the board. For every one else, there will be a broad array of industry-sponsored projects to select from.

How Can I Learn More?

If you are interested in this course and wish to learn more, please feel free to contact me by email, phone or in person any time. My contact information is listed above. I will be more than happy to give you a tour about this course and introduce you to some of our Spring 2006 sponsors and projects. You can even become a pioneer and start working on your Spring 2006 project in advance. Pioneers will be considered for substantial extra credits.