

# Interprofessional Approach to Architectural Engineering Capstone Design: A Stadium to Replace the United Center

## IPRO 335 Illinois Institute of Technology, Spring 2006

### **Objectives:**

This project involves design of a multipurpose sporting arena to be located within the city of Chicago. The arena should seat a capacity of about 20,000 spectators and will house such sports as pro and college basketball, ice hockey, arena football, and also will be used for musical events. Assume the arena is to be located at the current location of United Center with the same amount of above ground area available for parking.

### **Organization:**

The IPRO 335 team was split into four main groups for the semester. These included the Architects team, the Civil-Engineering team, the Structural-Engineering team, and the Mechanical-Electrical-Plumbing team. Other short term groups were created to work on the final report and presentation, and to do specific research.

### **Accomplishments:**

The group met several challenges including: architectural design, structural design, site design, basic mechanical system design, and basic plumbing design, and basic acoustic considerations. The stadium also deals with a variety of sustainable issues. A large portion of the site is given back to green space by incorporating an extensive underground parking garage with a park at ground level. The stadium itself incorporates an outdoor seating area and carefully considers the connection between 'inside' and 'outside.' In addition to the current programmatic elements required by the United Center facility, a new museum is also allocated within the proposed structure.

This IPRO not only met challenging design problems, but also learned effective group collaboration and communication- a tool that is imperative in the day to day rigors of these professions.

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Team Members			Advisors
Adon Austin	Kallinikos Kechagias	Arianna Roustan	Eduardo De Santiago
Elyes Boundaoui	Donald McDougal	Dennis Sanz	Ralph Muehleisen
Jeffery Grajewski	Jorge Medina	Myung-eun Suk	
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