IST 402: Cognition in Life: Foundations for the Expression of Team Cognition in Collaborative Systems

Organizational success in contemporary society is highly predicated on effective teamwork (collocated and distributed teams) that requires cognitive processes (problem solving, situation assessment, memory, learning, decision making), supportable through information and collaborative technologies.

What will the course be like?
Would you like to be part of an ongoing team simulation where you assess emerging crisis situations, make plans accordingly to utilize available resources, and develop cognitive readiness with your teammates to manage emergencies within in a small university town? If so, then this IST 402 course is just for you and will engage you in unique experiential learning opportunities. Additionally, the course will explore (1) the theory, methods, measures, and applications underlying team cognition (2) how information/collaborative technologies can be used to facilitate and enhance teamwork in a connected, distributed global planet. An emphasis will be placed on understanding five world views of team cognition through the use of papers, discussion, cases-exercises, models, application areas, and technological designs.

Ideas to be discussed:
Much of cognition in life not simply registered within our brain but is a) socially situated with other people through teamwork b) distributed across numerous situated contexts and environments c) embodied with action through what we can actually do (mind-body-context) d) enhanced by information, collaboration, and learning technologies. This course provides broad experiences and learning relative to team, situated, and distributed cognition. At the end of the course students will have the ability to see how cognition is used within different contexts, how technology use extends cognition in unique ways, and to go about designing collaborative technology for a chosen problem domain.

Target Audience:
IST/SRA junior and seniors, although the course might be useful for other majors at Penn State (e.g., psychology, industrial engineering, engineering design, learning, design and technology) and provide a 400-level option for IST graduate students.

Evaluation Methods:
Course evaluation is based on performance involving four objectives: awareness-based learning, knowledge-based learning, experiential learning, and design case learning. These objectives will be stratified across assignments that include being part of a crisis management simulation, class discussion groups, oral presentations, and a design project. The grade will be based on individual work (55%) and teamwork (45%). There is no textbook nor will there be a final exam for this course.