

# Progress Plan for Graduate Masters Thesis Program Systems Design Engineering

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My area of research involvement is related to the application of EID (Ecological Interface Design) to the development of improved TCAS (Traffic Alerts and Collision Avoidance System) displays for commercial aircraft. The design methodology of EID is well explored by Burns, Vicente, Bisantz, and Rasmussen. Hopefully, this research effort will help make the commercial skies a safer place.

## Plan of Graduate Courses

The academic courses completed are: SYDE 622 & COGSCI 600

Academic courses to be completed are: SYDE 740 Topic 3 & Experimental Methods

## Completed and Upcoming Milestones

### First Term (Fall, 2002)

1. Completed courses: **COGSCI 600** (Cognitive Science seminar course) & **SYDE 622** (Machine Intelligence)
2. Began literature review regarding TCAS Collision Avoidance System for commercial aircraft
3. Completed a poster presentation for SUNY Conference in Buffalo, November, 2002
4. Completed a research report on Human Performance in the Collision Avoidance domain for COGSCI 600

### Second Term (Winter 2003)

1. To prepare a conference proceeding for HFES 2003. Draft to be submitted to Prof. Catherine Burns in middle of February
2. Completing reading course, **SYDE 740, Topic 3**. Collection of research papers in the area of EID and Collision Avoidance
3. To prepare a literature review paper on EID and relevance to TCAS
4. To create TCAS plug-in for Flight Simulator 2002

### Third Term (Summer 2003)

1. To take a course on **Experimental Statistics and Methods** to assist with experimental setup and design
2. To complete TCAS plug-in for Flight Simulator 2002
3. Propose improved TCAS interface designs for testing
4. Create new designs for Flight Simulator 2002
5. Organize and schedule graduate seminar

### Fourth Term (Fall 2003)

1. Write and submit thesis paper
2. Ask supervisor(s) to recommend thesis readers and seek their approval from Associate Chair
3. Conduct experimental design
4. Evaluate experimental results
5. Determine, with the assistance of the Graduate Secretary, the critical dates for thesis submission