Elaine Schomburg

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Education:

University of Houston
Member of the Honors College and Cullen College of Engineering
Pursuing a Bachelors of Science in Mechanical Engineering, expected graduation date May 2001
Cumulative G.P.A. (4.0 Scale): 3.56
Major G.P.A. (4.0 Scale): 3.61

Major: Mechanical Engineering
Courses: Thermodynamics I, Thermodynamics II, Mechanics, Mechanics II, Mechanical Design I, Mechanical Design II, Mechanical Design III, Mechanical Design IV, Experimental Methods, Introduction to Fluid Mechanics, Solid Mechanics, Computational Methods, Material Science, Heat Transfer, Thermal-Fluids Laboratory, Mechanical Controls and Vibrations Laboratory

Minor: Mathematics
Courses: Calculus I, Calculus II, Calculus III, Engineering Mathematics, Introduction to Partial Differential Equations, and Differential Geometry

Qualifications:

- Proficient in Microsoft Word, Excel, and PowerPoint
- Familiar with KaleidaGraph, Adobe products, and AutoCAD
- Computer programming languages (e.g. Matlab, LabView, and C++)
- Excellent written and verbal communication skills
- Strong guest service skills
- Positive leadership abilities
- Self-motivated
- Well-developed team building skills
- Administrative skills (efficient, able to manage time, good organizer, and able to handle work systematically)

Experience:

August 2000 – December 2000 University of Houston Mechanical Engineering Department – Houston, TX
Title: Design IV Student
I had the opportunity to work on a design project in conjunction with NASA's Johnson Space Center and Lockheed Martin performing a heat transfer analysis utilizing a light emitting diode configuration as the lighting element in the plant growth chamber of the Bio-PLEX.

- Leading an interdisciplinary team
- Project budgeting and cost containment
- Generation of a written project proposal, weekly reports, and formal final report
- Proposal presentation and final presentation to students, professors, and members of the industry

January 1999 – Present University of Houston Mechanical Engineering Department – Houston, TX
Title: Research Assistant
I am currently working on my senior honors thesis entitled "Technical and Social Challenges in Medical Robotics." This project examines the use of automation, control, and computer vision technologies to develop surgical manipulations that assist the surgeon in performing minimally invasive operations.

- Applying principles of Control System Analysis and Design

- Completed a bibliographic database
- Geometric modeling, designing, and optimizing of robotic arms
- Working on an interdisciplinary team
- Addressing engineering design problems and implementing effective solutions

August 2000 – December 2000 Cambridge Oaks Apartments – Houston, TX

Title: Community Assistant

I was responsible for the development and enhancement of the University of Houston student community and each individual resident under my care and supervision. I maintained communication between the residents and the management; implemented the policies, procedures, and regulations of the facility as well as those of the University; and provided leadership to all residents.

- Guest service experience
- Ability to work effectively within a team
- Initiate, plan, and organize programs of a social, educational, cultural, developmental, and recreational nature

May 2000 – Present University of Houston Mechanical Engineering Department – Houston, TX

Title: Undergraduate Advisor

I work with both incoming and current students to create, maintain, and evaluate degree plans. Also, I communicate to the students the opportunities available in the form of scholarships, internships, and student organization involvement.

- Involvement in all aspects of customer service, including: answering questions and providing communication between the students and the Cullen College of Engineering faculty
- Developing problem solving skills and decision making abilities
- Coordinate student-faculty participation in recruitment activities

September 1997 – January 1998 University of Houston Fluid Mechanics Lab

Title: Laboratory Assistant

I worked with a bioreactor development team studying the growth of live cells. My responsibilities included analysis of data brought back from the shuttle flight STS 85, experimental study of microbead trajectory, and image processing.

- Applied principles of Fluid Mechanics and Bioreactor Design
- Performed data acquisition and analysis

Honors and Awards:

- Named Outstanding Senior in Mechanical Engineering at the University of Houston
- GE Fund grant recipient and presenter in the Faculty for the Future Engineering and Science Research Experience for Undergraduates sponsored by Purdue University
- Recipient of the Academic Recognition Scholarship, American Society of Mechanical Engineers Petroleum Division Scholarship, American Petroleum Institute Scholarship, R. W. Baldwin Pi Kappa Alpha Engineering Scholarship, and Engineering Alumni Association Scholarship
- Served on the Cullen College of Engineering Leadership Board as a representative of the Mechanical Engineering Department

Associations and Activities:

- President of Pi Tau Sigma (Mechanical Engineering Honors Fraternity)
- Director of Programs of American Society of Mechanical Engineers
- Member of Tau Beta Pi (Honors Engineering Fraternity)
- Member of Omicron Delta Kappa (National Leadership Honor Society)
- Honors Advocate of the University of Houston Honors College
- Mentor for the Mechanical Engineering course Design I: Design Analysis and Synthesis
- Assistant Coach of Intramural Softball Team

References:

Available upon request