Revised System Engineering Courses

SENG 3340 Robotics and Automation. Three semester hours. (*)

Study of the use, design, and deployment of industrial automation and robotics technologies in high-precision, multi-product manufacturing environments. Robot manipulators, kinematics and dynamics, robot automation and control, integrated robotic systems for manufacturing, automation in manufacturing, Programmable Logic Controllers, automation in service industry, applications to industrial systems. Prerequisite: SENG 3310. Course Fee: $35.

Justification

The topic automation in service industry is redundant based on the course description. Also, a course fee of $35 needs to be added for this course.

Justification for Adding Course Fee

This course requires several softwares such as LabView, MatLAB, Microsoft Academic Licenses (MSDN Licenses). The cost of the above mentioned softwares and renewal fees per year are:

1. LabView—$7,999 For Academic Department License with $500 renewal fees after 5 years.
2. Matlab—$9,000 for 100 concurrent users licenses for with $90 per user per year renewal fees.
3. MSDN Academic Alliance (Microsoft softwares)—$1,200 for the Department Licenses with renewal fee of $500 per year after 3 years.

Also, during the course period students use different electronic parts including programmable logic controllers, integrators, C/C++ compilers for programming robots, etc., which incur costs to replace and restore parts for student usages. Therefore, an average cost of $35 needs to be
added as a course fee for SENG 3340 to purchase of different electronic products and renewal/update the software licenses.

Program: Add: _____ Change: _____ Attach new/changed Program of Study description and 4-year plan. If in current catalog, provide change and attach page with changes in red.

Minor: Add: _____ Delete: _____ Change: _____ Attach new/changed minor. If in current catalog, provide change and attach page with changes in red.

Faculty: Add: _____ Delete: _____ Change: _____ Attach new/changed faculty entry. If in current catalog, provide change and attach page with changes in red.

College Introductory Pages: Add information: _____ Change information: _____ Attach new/changed information. If in current catalog, provide change and attach page with changes in red.

Other: Add information: _____ Change information: _____ Attach new/changed information. If in current catalog, provide change and attach page with changes in red.

Approvals:

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Department Curriculum Committee

Chair
Department

Chair
College Curriculum Committee

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