Revised System Engineering Courses

**ENGR 1202 Foundations of Engineering II.** Two semester hours. (SP/SS)
Introduction to engineering ethics and professional responsibilities; development of skills in problem solving, analysis, estimation, design, and teamwork; introduction to systems engineering; computational analysis, computer programming applications. Students work in teams on an engineering design project, including construction, testing, and reporting. Prerequisite: ENGR 1201 and MATH 2413. Course Fee: $35.

Previous Description:

ENGR 1202 *Foundations of Engineering II.* Two semester hours. (FL/SS)
Development of skills in problem solving, design, analysis, estimation and teamwork; utilization of computer tools for documentation and presentation; introduction to logic processing and computer programming; introduction to systems and industrial engineering; introduction to conservation principles in engineering sciences. Prerequisite: ENGR 1201 and MATH 2413. (Formerly ENGR 1212)

Justification

ENGR 1202 requires modification in the description as it is a pre-engineering course which needs to be adjusted based on TAMIU-TAMU Pre-Engineering Agreement program. 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 AutoCAD, LabView and MatLAB. The cost of the above mentioned softwares and renewal fees per year are:

1. AutoCAD—$10,000 for Campus Academic License with a renewal fee of $6,600 per year.
2. LabView—$7,999 For Academic Department License with $500 renewal fees after 5
years.

3. Matlab—$9,000 for 100 concurrent users licenses for with $90 per user per year renewal fees.

Also, the students build projects using parts of toy boats and sheets of ABC Styrene Plastic at thickness of 0.040 mm, 0.020, & 0.030 mm for designing the body. These parts need to be replaced and restore for student usages every semester. Therefore, an average cost of $35 needs to be added as a course fee for ENGR 1202 to purchase of different parts for the project 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.

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<td>Qingwen Ni</td>
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<td>Kevin Lindberg</td>
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