**Name of Administrative or Educational Support Unit**: ­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­Engineering Field of Study

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**Mission:**

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| The mission of the Engineering FOS is to introduce students to the major foundations of mathematics and natural sciences that all engineering students need in order to undertake the successful study of any of the major engineering disciplines. Students learn to observe and to model natural phenomena using the new mathematical tools of the derivative and the integral, allowing them to appreciate the complexities that they will be working with as they design mechanical or electrical components or industrial processes. |

PART I: Might not change from year to year

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| **A. Outcomes(s)**  Results expected in this department/program | **B. Measure(s)**  The instrument or process used to measure results | **C. Target(s)**  The level of success expected |
| 1. Demonstrate an understanding of the Engineering Algorithm and Structural Design by building a toothpick bridge and creating an appropriate Engineering Design Laboratory Log. (ENGR 1201-Introduction to Engineering) | Final Toothpick Bridge Project in ENGR 1201. | Appropriate Rubric (Min. 70% on Assessment) |
| 1. Demonstrate an understanding of how to technically describe “How Things Work in Engineering” by writing a term paper on how your chosen device or invention works in technical detail. (ENGR 1201-Introduction to Engineering) | Final Technical Paper in ENGR 1201 | Appropriate Rubric (Min. 70% on Assessment) |
| 1. Demonstrate an understanding of Statics by completing the comprehensive Final Exam. (ENGR 2301-Engineering Mechanics I) | Comprehensive Exam in ENGR 2301 | Appropriate Rubric (Min. 70% on Assessment) |
| 1. Demonstrate an understanding of Dynamics by completing the comprehensive Final Exam. (ENGR 2302-Engineering Mechanics II) | Comprehensive Exam in ENGR 2302 | Appropriate Rubric (Min. 70% on Assessment) |

PART II:

F r o m P a r t I



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| **A. Outcomes(s)**  Results expected in this department/program | **D. Action Plan**  **Years 5 & 2**  Based on analysis of previous assessment, create an action plan and include it here in  the row of the outcomes(s) it addresses. | **E. Implement Action Plan**  **Years 1 & 3**  Implement the action plan and collect data | **F. Data Results Summary**  **Years 2 & 4**  Summarize the data collected | **G. Findings**  **Years 2 & 4**  What does data say about outcome? |
| 1. Demonstrate an understanding of the Engineering Algorithm and Structural Design by building a toothpick bridge and creating an appropriate Engineering Design Laboratory Log. (ENGR 1201-Introduction to Engineering) | 2016-17:  An action plan to propose for a new AS degree in Engineering was documented here earlier. However, that action plan did not align with the outcomes listed in the program review and therefore is omitted in this document.  Include a toothpick bridge project as a major grade project. | 2015-16:  Implemented in all sections of ENGR 1201 | 2016-17:  151 out of 170 met standard  Average: 81.09938  High: 109  Low: 0 | 2016-17: Standard met ?  Yes |
| 1. Demonstrate an understanding of how to technically describe “How Things Work in Engineering” by writing a term paper on how your chosen device or invention works in technical detail. (ENGR 1201-Introduction to Engineering) | Develop a proposal for a new AS degree in Engineering and present to the College LT. Pursue THECB approval of a new AS degree in Engineering. Review and Approve Program Learning Outcomes for the new degree program.  2016-17:  Include a Technical Research Paper for a major grade in the syllabi | 2015-16:  Implemented in all sections of ENGR 1201  Data Collected | 2016-17:  125 out of 170 met standard  Average: 71.15653  High: 100  Low: 0 | 2016-17: Standard met ?  Yes |
| 1. Demonstrate an understanding of Statics by completing the comprehensive Final Exam. (ENGR 2301-Engineering Mechanics I) | Develop a proposal for a new AS degree in Engineering and present to the College LT. Pursue THECB approval of a new AS degree in Engineering. Review and Approve Program Learning Outcomes for the new degree program.  2016-17:  Conduct a final comprehensive exam at the end of the course | 2015-16:  Implemented the action plan  Data Collected | 2016-17:  17 out of 33 met standard  Average: 60.30952  High: 95  Low: 0 | 2016-17: Standard met ?  No |
| 1. Demonstrate an understanding of Dynamics by completing the comprehensive Final Exam. (ENGR 2302-Engineering Mechanics II) | Develop a proposal for a new AS degree in Engineering and present to the College LT. Pursue THECB approval of a new AS degree in Engineering. Review and Approve Program Learning Outcomes for the new degree program.  2016-17:  Conduct a final comprehensive exam at the end of the course | 2015-16:  Implemented the action plan  Data Collected | 2016-17:  18 out of 26 met standard  Average: 75.47576  High: 99  Low: 0 | 2016-17: Standard met ?  Yes |