**Date** 2012-13 **Name of Administrative or Educational t Unit:** \_\_Engineering Field of Study

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**Mission:**

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| The Engineering Field of Study is preparation for a Bachelor of Science in several disciplines within the school of engineering at a college or university. The completed Field of Study is designed to transfer to any Texas public college or university. Upon completion of the Field of Study Curriculum, a certificate will be awarded to acknowledge completion and recognize preparedness to transition from an associate level to a baccalaureate (BA/BS) level, at any Texas public institution. In addition to the Engineering Field of Study, a specific set of four University of Texas at Dallas (UTD) Engineering courses are offered in support of our Collin-UTD Bachelor of Science in Engineering Articulation Agreement. Five areas of Engineering are covered by these courses: Electrical Engineering, Computer Engineering, Telecommunications Engineering, Software Engineering and Mechanical Engineering. |

**PART I: Might not change from year to year**

| 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 |
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| 1. The student will demonstrate an understanding of the Engineering Algorithmand Structural Design by building a Toothpick Bridge and creating an appropriate Engineering Design Laboratory Log. (ENGR 1201 – Introduction to Engineering) | Engineering Algorithm and Structural DesignRubric for Bridge Project in ENGR 1201 | 70 average rating |
| 2. The student will demonstrate an understanding of how to technically describe“How Things Work in Engineering” by writing a term paper on exactly how a chosen device or invention works in technical detail.(ENGR 1201 – Introduction to Engineering) | Rubric for Final Technical Paper in ENGR 1201. | 70 average rating |
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|  3. The student will demonstrate an understanding of Statics by completing the comprehensive Final Exam. (ENGR 2301 – Engineering Mechanics I)  |

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|  Key for Comprehensive Exam in ENGR 2301  |

 | 70 average rating |
| 4. The student will demonstrate an understanding of Dynamics by completing the comprehensive Final Exam. (ENGR 2302 – Engineering Mechanics II)  | Key for Comprehensive Exam in ENGR 2302. | 70 average rating |

**PART II: For academic year (enter year i.e. 2011-12)**

**From Part I**

| A. Outcomes(s)Results expected in this department/program | D. Action PlanYears 5 & 2Based 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 PlanYears 1 & 3Implement the action plan and collect data | F. Data Results SummaryYears 2 & 4Summarize the data collected | G. FindingsYears 2 & 4What does data say about outcome? |
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| 1. The student will demonstrate an understanding of the Engineering Algorithmand Structural Design by building a Toothpick Bridge and creating an appropriate Engineering Design Laboratory Log. (ENGR 1201 – Introduction to Engineering) | 2010-11: Develop an extra design project to provide increase in student application practice.2012-13:

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|  Per meeting minutes,. In order to improve student understanding and performance, it was decided that the second (just prior) toothpick bridge assignment would be a Team (2 or 3 student) Project. Thereby, allowing students to take the knowledge from Bridge #1 and share their intellectual property on the second “Team Project Bridge” prior to building the Final Toothpick Bridge Project.  |

 | Implement the action plan and collect data | 2011-12:

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|  161 out of 176 met std. Average= 85.5, High= 110, Low= 0  |

 | 2012: Standard MetPer meeting minutes, target will be to improve student understanding and performance. |
| 2. The student will demonstrate an understanding of how to technically describe“How Things Work in Engineering” by writing a term paper on exactly how a chosen device or invention works in technical detail.(ENGR 1201 – Introduction to Engineering) | 2012-13:

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|  Per meeting minutes, Standard met. In order to improve student understanding and performance, it was decided to move up the project due date by 2 weeks. Thereby, a student’s performance would improve based on not having everything due in the 15th and 16th week of the class.  |

 | Implement the action plan and collect data |

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| 2012: Technical Research Paper- 153 out of 176 met std.Average= 81.5, High= 100, Low= 0  |

 | 2012:Standard Met.23 students (13%) did not meet the standard of 70%. |
| 3. The student will demonstrate an understanding of Statics by completing the comprehensive Final Exam. (ENGR 2301 – Engineering Mechanics I)  | 2012-13: 13 See Action Plans for Goals 1 & 2. | Implement the action plan and collect data | 2012: Comprehensive Final Exam- 36 out of 38 met std. Average= 82.05, High= 100, Low= 72   | 2012: Standard Met; Per meeting minutes, no action is required. |
| 4. The student will demonstrate an understanding of Dynamics by completing the comprehensive Final Exam. (ENGR 2302 – Engineering Mechanics II)  | 2012-13 See Action Plans for Goals 1 & 2. | Implement the action plan and collect data | 2012: Comprehensive Final Exam- 18 out of 19 met std. Average= 83.26, High= 98, Low= 65  | 2012: Per meeting minutes, Standard was met. No Action Required  |