

# Assessment: Reporting Unit Four Column

## Network Security and Electronics - B.S.

<i>Objectives</i>	<i>Assessment Methods</i>	<i>Results/Observations</i>	<i>Meaningful Changes</i>
<p><b>16-20 BS-Network Security &amp; Electronics-1 Critical Thinking -</b> Students in the Network Security &amp; Electronics program will be able to use critical thinking skills. <b>Objective Status:</b> Active <b>Objective Type (Control-click to select multiple):</b> 16-20 Plan, B.S. Network Security and Electronics, Critical Thinking Learning Objective, Program-Level Learning Objectives (PLLO)</p>	<p>Evaluation of academic program critical thinking activities. <b>Criterion:</b> * 75% of students will score 70% or higher on the problem solving process of the exit exam, and analysis of technical articles/media sources in the capstone course. * At least 75% of students will score 70% or higher on specified activities. <b>Schedule:</b> Annually <b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty, Network Security &amp; Electronics Curriculum Committee and advisory committee.</p>	<p><b>Result Status:</b> Result Open-Further action needed <b>Result/Observation Type:</b> Strength All the BS students who took the performance section of the departmental exit exam scored 70% or higher, with an average of 96.4% on the problem solving section of the in the areas of networking, computer system, and electricity &amp; electronics. 93.75% of BS degree students in spring 2016 completed the article/media analysis related to project of whom 93.3% scored 70% or higher with an average of 80.0%. (04/26/2017) <b>Related Documents:</b> <a href="#">NET sacs soc -- meaningful change evidence 2015-16ay .pdf</a></p>	<p><b>Meaningful Changes:</b> In the 2015-2016 academic year, faculty updated the performance-based exit exam by adding prompts related to identification of assumptions made while solving technical problems. (04/26/2017)</p>
	<p>Co-op Survey <b>Criterion:</b> * 75% of students will score 70% or higher (3.5 or higher out of 5) on the critical thinking portion of the survey. * 75% of students will score 4 or higher (out of 5) on the critical thinking portion of the survey. <b>Schedule:</b> Annually <b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty, Network Security &amp; Electronics Curriculum Committee and advisory committee.</p>		

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<p><b>16-20 BS-Network Security &amp; Electronics-2 Communication -</b> Students in the Network Security &amp; Electronics program will communicate effectively both orally and written. <b>Objective Status:</b> Active <b>Objective Type (Control-click to select multiple):</b> 16-20 Plan, B.S. Network Security and Electronics, Communication Skills Learning Objective, Program-Level Learning Objectives (PLLO)</p>	<p>Evaluation of academic program communication activities. <b>Criterion:</b> * 75% of students will score 70% or higher on the capstone presentation with demonstration portfolio and brochure. * 75% of the students will score 70% or higher. <b>Schedule:</b> Annually <b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty, Network Security &amp; Electronics Curriculum Committee and advisory committee.</p>	<p><b>Result Status:</b> Result Open-Further action needed <b>Result/Observation Type:</b> Strength 16 BS students attempted the capstone project presentation, demonstration and project brochure related activities. The capstone projects are available for viewing online through the department page (<a href="https://goo.gl/Lvrl7l">https://goo.gl/Lvrl7l</a>, <a href="https://goo.gl/TZdVxs">https://goo.gl/TZdVxs</a>). Advisory committee members were invited to the capstone presentations/demonstrations and members participated in voting on the outstanding capstone project. One outstanding project and two certificate of merit were awarded based on recommendations by advisory committee members. 93.75% completed the final presentation and demonstration assessment, all of whom scored 70% or higher with an average of 93.0% Student performance continues to be very good. 86.7% scored 70% or higher on the course portfolio with an average of 87.2%; and on the project brochure with an average of 98.7%. Creative use of graphics and text used by students for highlighting key parts of their designs. The free-form designs used by students for showcasing their projects have been very effective. Students used block diagrams and flowcharts for specified aspects of their projects. Exemplary work from previous semesters has encouraged students to develop better documentation including embedding suitable media in their demonstrations. (04/26/2017) <b>Related Documents:</b> <a href="#">NET sacs soc -- meaningful change evidence 2015-16ay .pdf</a></p>	<p><b>Meaningful Changes:</b> A portion of syllabi for the capstone course NET 499 in spring 2015 and spring 2016 highlighted the increased requirements in the implementation portion of final report. This new activity emphasizes a multi-phase prototyping process in order to give student experience with better project planning. (04/26/2017)</p>
	<p>Co-op Employer Survey <b>Criterion:</b> * 75% of students will score 70% or higher (3.5 or higher out of 5) on the communication portion of the survey. * 70% of students will score 4 or higher (out of 5) on the communications portion of the survey. <b>Schedule:</b> Annually <b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty,</p>		

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<p><b>16-20 BS-Network Security &amp; Electronics-3</b> - Graduates of the Bachelor of Science in the Network Security and Electronics program will demonstrate essential networking knowledge and skills in a LAN/WAN environments.</p> <p><b>Objective Status:</b> Active</p> <p><b>Objective Type (Control-click to select multiple):</b> 16-20 Plan, B.S. Network Security and Electronics, Program-Level Learning Objectives (PLLO)</p>	<p>Network Security &amp; Electronics Curriculum Committee and advisory committee.</p> <p>Online portion of the Departmental Exit exam related to Networking</p> <p><b>Criterion:</b> 75% of the students will score 70% or higher</p> <p><b>Schedule:</b> Annually</p> <p><b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty, Network Security &amp; Electronics Curriculum Committee and advisory committee.</p>	<p><b>Result Status:</b> Result Closed-No further action needed</p> <p><b>Result/Observation Type:</b> Strength</p> <p>20 BS degree students took the exit exam, averaging a score of 81.75% in the networking section. 90% students scored 70% or higher on the online portion of the exit exam related to networking. Based on student performance on the exit exam the areas requiring improvement have been identified as: OSI layer, hardware addressing, network printing, appropriate hardware selection for optimal performance and for solving malware issues, and ports used for network application access. (04/26/2017)</p> <p><b>Related Documents:</b></p> <p><a href="#">NET sacs soc -- meaningful change evidence 2015-16ay .pdf</a></p>	<p><b>Meaningful Changes:</b> During the 2015-2016 academic year (2015 fall semester), faculty implemented activities related to Database program. This was based on the results as well as NET Advisory committee recommendations during the 2014-15 academic year. (04/26/2017)</p>
<p><b>16-20 BS-Network Security &amp; Electronics-4</b> - Graduates of the Bachelor of Science in the Networking Security &amp; Electronics program will demonstrate essential computer system knowledge and skills.</p> <p><b>Objective Status:</b> Active</p> <p><b>Objective Type (Control-click to select multiple):</b> 16-20 Plan, B.S. Network Security and Electronics, Program-Level Learning Objectives</p>	<p>Laboratory/performance portion of the Departmental Exit exam related to Networking</p> <p><b>Criterion:</b> 75% of the students will score 70% or higher</p> <p><b>Schedule:</b> Annually</p> <p><b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty, Network Security &amp; Electronics Curriculum Committee and advisory committee.</p>	<p><b>Result Status:</b> Result Closed-No further action needed</p> <p><b>Result/Observation Type:</b> Strength</p> <p>20 BS degree students took the exit exam, averaging a score of 85.25% in this section. 90% of students scored 70% or higher on the online portion of the exit exam related to computer systems. Based on student performance on the exit exam the areas requiring improvement have been identified as: online-research based comparison of various computing technologies, securing standalone devices, comparison of access times, printer operations, and bus architecture in computer systems. Performance on power</p>	<p><b>Meaningful Changes:</b> Based on these results, faculty increased the use of virtualization (virtual systems) for understanding data flow within systems, and also the use of database security tools implemented. For example, a special topics course (NET 395) was taught in fall 2015 on Database Design and Security. Additionally, a course activity</p>

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<p>(PLLO)</p>	<p>Laboratory/performance portion of the Departmental Exit Exam related to computer systems.  <b>Criterion:</b> 75% of the students will score 70% or higher.  <b>Schedule:</b> Annually  <b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty, Network Security &amp; Electronics Curriculum Committee, and Advisory Committee.</p>	<p>related issues in computer systems has improved.  (04/26/2017)  <b>Related Documents:</b>  <a href="#">NET sacs soc -- meaningful change evidence 2015-16ay .pdf</a></p>	<p>related to observing data traffic in virtual systems added as part of lab completed in a virtual environment.</p> <p>Exit exam for Computer Systems was also updated based on curriculum committee discussions. Sample of updated exam question shown. (04/26/2017)</p>
<p><b>16-20 BS-Network Security &amp; Electronics-5</b> - Graduates of the Bachelor of Science in the Network Security &amp; Electronics program will demonstrate essential electricity/electronics knowledge and skills.  <b>Objective Status:</b> Active  <b>Objective Type (Control-click to select multiple):</b> 16-20 Plan, B.S. Network Security and Electronics, Program-Level Learning Objectives (PLLO)</p>	<p>Departmental exit exam developed and evaluated by the Network Security &amp; Electronics Curriculum Committee  <b>Criterion:</b> 75% of the students will score 70% or higher  <b>Schedule:</b> Annually  <b>Who will use the data (How and When)?:</b> Department of Applied Engineering &amp; Technology faculty, Network Security &amp; Electronics Curriculum Committee and advisory committee.</p>	<p><b>Result Status:</b> Result Closed-No further action needed  <b>Result/Observation Type:</b> Strength  20 BS degree students took the exit exam, averaging score of 80.58% in this section. 65% scored 70% or higher on the online portion of the exit exam related to electricity/electronics systems. While the overall average continues to be approximately the same as in previous years, the number of students needing support in this area has increased with regards to the online portion of the assessment. On the hands-on performance skills being tested all students performed well. The curriculum committee is reviewing strategies for motivating computer networking students to effectively search and apply information while solving electricity/electronics problems. Based on student performance on the exit exam the areas requiring improvement have been identified as: calculations of data communication speeds and power in electrical circuits; semiconductor device testing procedures,</p>	<p><b>Meaningful Changes:</b> In order to strengthen understanding with standard prefixes and timing and frequency calculations in electronics, updated assignment in Spring 2016 EET 252 (Digital Electronics) was introduced. Specific updated section in Assignment 2 highlighted. (04/26/2017)</p>

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	<p>Performance portion of exit exam</p> <p><b>Criterion:</b> 75% of the students will score 70% or higher</p> <p><b>Schedule:</b> Annually</p> <p><b>Who will use the data (How and When)?:</b> 75% of the students will score 70% or higher</p>	<p>transistor operations, determining digital logic and voltage levels, power calculations, converting word problems to Boolean Algebra for solving using digital circuits and logic diagrams; and color codes used with resistors (04/26/2017)</p> <p><b>Related Documents:</b></p> <p><a href="#">NET sacs soc -- meaningful change evidence 2015-16ay .pdf</a></p>	