

## PROGRAM REVIEW STATUS REPORT

**PROGRAM: ENGINEERING SCIENCE ASSOCIATE DEGREE PROGRAM**

Date last updated: March 20, 2014

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AREAS FOR IMPROVEMENT, IMPROVEMENT ACTIVITIES, AND RESOURCE REQUESTS		STATUS OF ACTIVITIES AND REQUESTS	
DATE RECORDED	AREAS, ACTIVITIES, AND REQUESTS	DATE OF STATUS REPORT	STATUS
3-11	Low program graduation rate.	Feb 2012	<p>Program modification implemented Sept 2011 incoming freshmen.</p> <p>Degree works plans have been developed for all Engineering Science students.</p>
		Feb 2013	<p>Implemented (5) SI Leaders in two sections in Fall 12 and three sections Spring 13 of EST104. Will request funded in this year budget.</p> <p>Courses Scheduled flexibility; night section of EST104, Sat sections of EST110, EST111 and EST112</p> <p>Developed two new courses Engineering Mechanics, Statics &amp; Dynamics, EST211 and EST212, respectively. Both courses offered at night for student flexibility, EST211 FA. and EST212 SP.</p>
		Mar 2014	<p>Now offering three sections of EST104 per semester with SI Leaders.</p>
		Mar 2014	<p>Added a second section of EST111/EST112 to the Spring 2014 schedule</p>

		Mar 2014	Program modification implemented Jan 2014. Clarification to program concentrations
		Mar 2014	New Technology Option added. Approved by Academic Affairs. Implementation Spring 2015
		Mar 2014	Worked with Math Department to develop Calc 1A & 1B and Calc 2A & 2B sequence to help students get through Calculus. Implementation Spring 2015
3-11	Low female enrollment in program.	Feb 2013	Still considering approaches.
3-11	Having a full-time faculty member for the physics courses sequence.	Feb 2013	Secured funds from Raytheon headquarters to support a learning community between Calculus I and Physics I. Scheduled for Fall 2013 Science department was approved to establish a search committee for a full time Physics /Engineering faculty
		Mar 2014	New full time Eng. Sci./Physics instructor hired, start Spring 2014
3-11	Making sure funds are available each year to update the AutoCAD. Without this regular updating, both this program and the CAD certificate program would be significantly negatively impacted. The same need for regular updating applies to MATLAB.	Feb 2012	Latest revisions for both AutoCAD and Solid Works were procured in Sept 2011. Will request budget for next year
		Feb 2012	Northeastern University provided first year free for MATLAB in TC136 and walk in computer lab. Will submit request in this year budget.
		Feb 2013	Latest revisions for both AutoCAD and Solid Works was

			<p>procured in Sept 2012. Will request budget for next year</p> <p>MATLAB in TC136 and walk in computer lab was procured. Will submit request in this year budget.</p> <p>Mar 2014</p> <p>AutoCAD, Solid Works, MATLAB and Multisym have been upgraded funds made available.</p>
3-11	Need to continuously update the instructional technology to ensure the ongoing quality of the program.	<p>Feb 2012</p> <p>Feb 2013</p> <p>Mar 2014</p>	<p>New oscilloscopes w/rack mounts procured for Electrical/Computer program</p> <p>Latest revision of Multisym (11.0) installed</p> <p>Solid works 2012 procured.</p> <p>Procured and implemented new Altera Quartus II plus digital boards into ET curriculum, CTE220. Will implement in CE101/CTE103 Engineering Digital courses</p> <p>EST231 Engineering Circuit Analysis I incorporated "Bridge Rectifier Black Box" experiment exam.</p> <p>EST232 Engineering Circuit Analysis II will incorporate "Black Box Filter" lab experiment exam, May 2013</p> <p>Procured a 3D printer for EST112 course (Perkins). Secured funds for curriculum development</p>
3-11	Need for faculty to stay current with respect to technology and instructional methods, through workshops, publications, and	Feb 2012	<p>Faculty will attend ASEE June 2012 and present paper</p> <p>Math faculty incorporated</p>

	conferences.	Feb 2013	MATLAB in differential equation course, sp 2012.  Faculty will attend ASEE June 2013 and present paper  Adjunct instructor participated in summer research at NU under the REU program.
		Mar 2014	Faculty will attend ASEE June 2014
3-11	Need to implement MATLAB in the Calculus, Engineering Physics, and Engineering Circuit Analysis course sequences.	Feb 2012	MATLAB module being implemented in DEQ's
		Feb 2013	MATLAB module implemented in DEQ's
		Mar 2014	Funds secured through STEM Starter Academy grant to run an "in house" three day MATLAB workshop, June 2014