Program Change Request

Date Submitted: 10/12/18 7:35 pm

Viewing: BS-ESET : Electronic Systems Engineering Technology - BS

Last approved: 03/27/18 6:05 pm
Last edit: 11/08/18 8:21 pm
Changes proposed by: mdjohnson

Contact(s)

<table>
<thead>
<tr>
<th>Name</th>
<th>E-mail</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Johnson</td>
<td><a href="mailto:mdjohnson@tamu.edu">mdjohnson@tamu.edu</a></td>
<td>979-845-4902</td>
</tr>
<tr>
<td>Jay Porter</td>
<td><a href="mailto:jporter@tamu.edu">jporter@tamu.edu</a></td>
<td>979-845-1459</td>
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</table>

Academic level: Undergraduate
Effective Term: 2019-2020
Department: Eng Tech & Ind Distribution
College: Engineering
Program type: Degree
Degree designation: BS - Bachelor of Science
With a major in: Electronic Sys Engr Technology (ESET)
Associated Program: Not Applicable

Catalog Program Title: Electronic Systems Engineering Technology - BS
CIP and Fund code: 15030300

Rationale for Proposal:
The program is removing ENGR 482 from changes to the ESET curriculum since are being made to reflect changes by the course is being phased out by College of Engineering to the College. First year curriculum and to the engineering/physics courses sequences. To accommodate this removal, the program will:
- change an existing course to a W course to account for the loss of ENGR 482.
- add an LPC course to account for the loss of ENGR 482 meeting the LPC requirement.
- add an ethics component to other courses in the curriculum to account for the loss of ENGR 482 satisfying the ABET ethics requirement. These include substituting ENGR 111, ENGR 112, PHYS 218 and PHYS 208 with ENGR 102, ENGR 216 (cross listed with PHYS 216), ENGR 217 (cross listed with PHYS 217), PHYS 206 and PHYS 207. The rationale is to continue to have the same physics theory as before augmented by real world applications in engineering. The total hours do not change and the core curriculum requirements are still met.

Program hours: 127
Is this program eligible for financial aid: Yes
Will program hours change: No
due to the proposed
curriculum changes?

Program delivery mode  On-campus

## Catalog Program Requirements

### Second Year

<table>
<thead>
<tr>
<th>Plan of Study Grid</th>
<th>Semester Credit Hours</th>
</tr>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td></td>
</tr>
<tr>
<td>ENGR 217/PHYS 217</td>
<td>Experimental Physics and Engineering Lab III - Electricity and Magnetism 12</td>
</tr>
<tr>
<td>ESET 210</td>
<td>Circuit Analysis 1</td>
</tr>
<tr>
<td>ESET 219</td>
<td>Digital Electronics 1</td>
</tr>
<tr>
<td>ESET 269</td>
<td>Embedded Systems Development in C 1</td>
</tr>
<tr>
<td>PHYS 207</td>
<td>Electricity and Magnetism for Engineering and Science 1</td>
</tr>
<tr>
<td>Semester Credit Hours</td>
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<tr>
<td><strong>Spring</strong></td>
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</tr>
<tr>
<td>ESET 211</td>
<td>Power Systems and Circuit Applications 1</td>
</tr>
<tr>
<td>ESET 315</td>
<td>Local-and-Metropolitan-Area Networks 1</td>
</tr>
<tr>
<td>ESET 329</td>
<td>Six Sigma and Applied Statistics 1</td>
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<tr>
<td>ESET 349</td>
<td>Microcontroller Architecture 1</td>
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<tr>
<td>Mathematics 1,6</td>
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<td>Semester Credit Hours</td>
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### Third Year

<table>
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<tr>
<td><strong>Fall</strong></td>
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</tr>
<tr>
<td>ESET 319</td>
<td>Engineering Leadership 1</td>
</tr>
<tr>
<td>ESET 333</td>
<td>Product Development 1</td>
</tr>
<tr>
<td>ESET 350</td>
<td>Analog Electronics 1</td>
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<tr>
<td>ESET 355</td>
<td>Electromagnetics and High Frequency Systems 1</td>
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<td>ESET 369</td>
<td>Embedded Systems Software 1</td>
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<td><strong>Spring</strong></td>
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<tr>
<td>ESET 352</td>
<td>Electronics Testing I I</td>
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<tr>
<td>ESET 359</td>
<td>Electronic Instrumentation 1</td>
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<td>ESET 415</td>
<td>Advanced Network Systems and Security 1</td>
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<td>ESET 455</td>
<td>Wireless Transmission Systems 1</td>
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<td>ENTC 399</td>
<td>High Impact Experience</td>
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### Fourth Year

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<td><strong>Fall</strong></td>
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<tr>
<td>ESET 410</td>
<td>Engineering Technology Capstone I I</td>
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<tr>
<td>ESET 462</td>
<td>Control Systems 1</td>
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<td>Technical elective 1,6</td>
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<td>Select one of the following:</td>
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<tr>
<td>ENGL 210</td>
<td>Technical and Business Writing</td>
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<tr>
<td>COMM 203</td>
<td>Public Speaking</td>
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<tr>
<td>COMM 205</td>
<td>Communication for Technical Professions</td>
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<td><strong>Spring</strong></td>
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<tr>
<td>ESET 420</td>
<td>Engineering Technology Capstone II I</td>
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<td>ENGR 482/PHIL 482</td>
<td>Ethics and Engineering</td>
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<tr>
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<td>Total Semester Credit Hours</td>
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6See departmental advisor for a list of approved electives. ENTC 485 is not for general use as a technical elective.

7All students are required to complete a high-impact experience in order to graduate. The list of possible high-impact experiences is available in the ETID advising office.

This curriculum lists the minimum number of classes required for graduation. Additional courses may be taken.

## Total Program Hours 127

https://nextcatalog.tamu.edu/courseleaf/approve/?role=Faculty%20Senate
### Additional Information

<table>
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<tr>
<th>Required Proposal</th>
<th>ESET_Degree_Eval_Rev.pdf</th>
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<tbody>
<tr>
<td>Forms</td>
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<td></td>
<td>ESET_Deg_Eval.pdf</td>
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<tr>
<td>Reviewer Comments</td>
<td>Sandra Williams (sandra-williams) (11/05/18 3:09 pm): UCC approved November 2018.</td>
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Information for Degree Evaluation

This is NOT an official evaluation.

Print Instructions

Program Evaluation

Limitation Correspondence: No more than 12 hours of correspondence earned through an accredited institution may be used for an undergraduate degree.

Limitation Combination: Maximum combination of 18 hours of 481, 482, 485 and/or 491 courses may be used for an undergraduate degree.

Limitation No more than 50% of courses required for the degree plan can be taken as Distance Education Courses for non-distance degree programs.

Limitation Only one of the following will satisfy the requirements for a degree: GENE 301, GENE 302, GENE 315, and GENE 320.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 131, MATH 142, MATH 147, MATH 151, and MATH 171.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 140, MATH 141, and MATH 166.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 148, MATH 152, and MATH 172.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 221, MATH 251, and MATH 253.

Limitation Only one of the following will satisfy the requirements for a degree: MATH 304, MATH 309, MATH 311, and MATH 323.

Limitation Only one of the following will satisfy the requirements for a degree: STAT 301, STAT 302, and STAT 303.

<table>
<thead>
<tr>
<th>Program :</th>
<th>BS ESET</th>
<th>Catalog Term :</th>
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<td>Fall 2018 - College Station</td>
<td>Evaluation Term :</td>
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<td>Majors :</td>
<td>Electronic Sys Engr Technology</td>
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Transfer : 0.000 0

This is NOT an official evaluation.

Area Major Coursework ( 79.000 credits ) - Not Met :

| Met | Condition | Rule | Subject | Attribute | Low | High | Required | Credits | Required | Used | Courses | Term | Subject | Course Title | Attribute | Credits | Grade | Source |
| No | A. | ENGR 102 2hrs | | | | | | | | | | | | | | | | | |
| No | AND | B. | ENGR 216 or PHYS 216 2hrs | | | | | | | | | | | | | | | | |
| No | AND | C. | ENGR 217 or PHYS 217 2hrs | | | | | | | | | | | | | | | | |
| No | AND | D. | ENGR 251 4hrs | | | | | | | | | | | | | | | | |
| No | AND | E. | ESET 211 3hrs | | | | | | | | | | | | | | | | |
No AND F. ESET 219 4hrs
Must make a grade of 'C' or better.

No AND G. ESET 269 3hrs
Must make a grade of 'C' or better.

No AND H. ESET 315 4hrs
Must make a grade of 'C' or better.

No AND I. ESET 319 3hrs
Must make a grade of 'C' or better.

No AND J. ESET 329 3hrs
Must make a grade of 'C' or better.

No AND K. ESET 333 3hrs
Must make a grade of 'C' or better.

No AND L. ESET 349 4hrs
Must make a grade of 'C' or better.

No AND M. ESET 350 4hrs
Must make a grade of 'C' or better.

No AND N. ESET 352 4hrs
Must make a grade of 'C' or better.

No AND O. ESET 355 4hrs
Must make a grade of 'C' or better.

No AND P. ESET 359 4hrs
Must make a grade of 'C' or better.

No AND Q. ESET 369 4hrs
Must make a grade of 'C' or better.

No AND R. ESET 415 3hrs
Must make a grade of 'C' or better.

No AND S. ESET 419 3hrs
Must make a grade of 'C' or better.

No AND T. ESET 420 2hrs
Must make a grade of 'C' or better.

No AND U. ESET 455 4hrs
Must make a grade of 'C' or better.

No AND V. ESET 462 4hrs
Must make a grade of 'C' or better.

No AND W. Technical Electives 6hrs
See advisor for list of approved technical electives. Must make a grade of 'C' or better.

unofficial evaluation

Area Communication (6.000 credits) - Not Met

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<th>Met</th>
<th>Condition</th>
<th>Rule</th>
<th>Subject</th>
<th>Attribute</th>
<th>Low</th>
<th>High</th>
<th>Required Credits</th>
<th>Required Courses</th>
<th>Term Subject</th>
<th>Course Title</th>
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<tr>
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<td>A.</td>
<td></td>
<td>ENGL 103 or ENGL 104 3hrs</td>
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<tr>
<td></td>
<td>B.</td>
<td></td>
<td>Communications Elect 3hrs</td>
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<td>ENGL 210; COMM 203, 205</td>
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unofficial evaluation

Area Mathematics (11.000 credits) - Not Met

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<th>Rule</th>
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<th>Low</th>
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<th>Required Credits</th>
<th>Required Courses</th>
<th>Term Subject</th>
<th>Course Title</th>
<th>Attribute</th>
<th>Credits</th>
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<tr>
<td>No</td>
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<td></td>
<td>MATH 151</td>
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</table>
Must have a grade of 'C' or better.

No AND B. MATH 152
Must have a grade of 'C' or better.

No AND C. MATH Elective 3hrs
Must make a grade of 'C' or better.
Select course approved by advising department.

unofficial evaluation

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<th>Area</th>
<th>Life and Physical Sciences (10.000 credits) - Not Met</th>
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<td>Met</td>
<td>Condition</td>
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<td>No</td>
<td>A.</td>
</tr>
<tr>
<td>No</td>
<td>AND B.</td>
</tr>
<tr>
<td>No</td>
<td>AND C.</td>
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unofficial evaluation

<table>
<thead>
<tr>
<th>Area</th>
<th>Language, Philosophy &amp; Culture (3.000 credits) - Not Met</th>
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<td>Condition</td>
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unofficial evaluation

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<thead>
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<th>Area</th>
<th>Creative Arts (3.000 credits) - Not Met</th>
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unofficial evaluation

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<tr>
<th>Area</th>
<th>Social and Behavioral Sciences (3.000 credits) - Not Met</th>
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unofficial evaluation

<table>
<thead>
<tr>
<th>Area</th>
<th>Citizenship (12.000 credits) - Not Met</th>
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unofficial evaluation
**Description**  Completion of 4 semesters of Upper-Level ROTC may be substituted for 3 hours of American History and 3 hours of Political Science.

<table>
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<th>Condition</th>
<th>Rule</th>
<th>Subject</th>
<th>Attribute</th>
<th>Low</th>
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<th>Required Term</th>
<th>Subject</th>
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<tr>
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<td>American History Rqmt</td>
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<td>Select from any course with the [K HIS] attribute.</td>
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<tr>
<td>No</td>
<td>AND</td>
<td>B.</td>
<td>Political Science Rqmt</td>
<td>6hrs</td>
<td>Take POLS 206 and POLS 207.</td>
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Total Credits and **GPA** 0.00 0.00

unofficial evaluation

**Area**  Work Not Applied - Met

**Description**  See advisor for acceptable substitutions.

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<th>Attribute</th>
<th>Low</th>
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Total Credits and **GPA** 0.00 0.00

unofficial evaluation

**Area**  High Impact Experience - Not Met

**Description**  One course required.

A list of possible high-impact experiences is available in the ETID advising office.

- ENTC 399

Total Credits and **GPA** 0.00 0.00

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**Area**  University Writing Requirement - Not Met

**Description**  Two courses required.

Only sections of ESET 419; ENGR 482; PHIL 482 the Writing attribute [UWR T] may be used to satisfy this requirement.

Total Credits and **GPA** 0.00 0.00

unofficial evaluation

**Area**  Int’l & Cult Diversity - Not Met

**Description**  Select from courses with the International and Cultural Diversity attribute [UICD] (except sections of BUSN 289 with the UWR T attribute).

Total Credits and **GPA** 0.00 0.00

unofficial evaluation

Detail Requirements https://compass-ssb.tamu.edu/pls/PROD/bwckcapp.P_VerifyDispEvalV...
### Foreign Language - Not Met

<table>
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<th>Low</th>
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<th>Required Credits</th>
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<th>Grade</th>
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<td>Foreign Language Rqmt</td>
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</tbody>
</table>

Complete one of the following:
1. Two years of the same foreign language in High School.
2. A two semester sequence of the same foreign language for University credit.

Total Credits and GPA 0.000 .00

unofficial evaluation

### Residence Requirement - Not Met

**Description:** A minimum of 36 hours of 300-400 level coursework must be completed at Texas A&M University, 12 hours must be in the major field.

<table>
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<th>A.</th>
<th>Subject Attribute</th>
<th>Low</th>
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<th>Required Credits</th>
<th>Courses</th>
<th>Term Subject</th>
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<tbody>
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Select from ENGR 111, 112; ESET 300-499.

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<th>B.</th>
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<td>Residence 300-499 24hrs</td>
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Select any courses level 300-499.

Total Credits and GPA 0.000 .00

unofficial evaluation

### GPR-Major - Not Met

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<th>Required Credits</th>
<th>Courses</th>
<th>Term Subject</th>
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Select from ESET 100-499; CHEM 102, 107; ENGL 103-104; ENGR 385, 482; MATH 151, 152, 251, 304, 308; PHYS 206-207; STAT 211; PHIL 482.

Must maintain a GPR of 2.000 in all courses taken.

Total Credits and GPA 0.000 .00

unofficial evaluation

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