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| **Catalog Year 2021-2022**ITC, Industrial Cyber Security Engineering Technology | ***(For internal use only)***[x]  *No change*[ ]  *UCC proposal* |
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| **Course Subject and Title** | **Cr.**  | **Min.** **Grade** | **\*GE,** **UU or UM** | **\*\*Sem. Offered** | **Prerequisite** | **Co-Requisite** |
| Semester One |
| ESET 0100: Introduction to Engineering Technology | 1 | C- |  | F, S, D |  | ESET 0100L |
| ESET 0100L: Introduction to Engineering Technology Laboratory | 1 | C- |  | F, S, D |  | ESET 0100 |
| ESET 0181: Information Technology Fundamentals | 3 | C- |  | F, D |  |  |
| ESET 0223: Digital Control Theory | 2 | C- |  | F, S, D |  | ESET 0227 |
| ESET 0227: Digital Control Systems Lab | 1 | C- |  | F, S, D |  | ESET 0223 |
| ESET 0282A: Introduction to Networking I | 1 | C- |  | F, D | ESET 0181 |  |
| ESET 0282B: Introduction to Networking II | 2 | C- |  | F, D | ESET 0282A or instructor approval |  |
| ESET 3383: Security Design for Cyber-Physical Systems | 3 | C- |  | F, D | Pre- or Co-Req: ESET 0181, 0282B, 0223, 0227, or instructor approval | Pre- or Co-Req: ESET 0181, 0282B, 0223, 0227, or instructor approval |
| ESET 3384: Risk Management for Cyber-Physical Systems | 3 | C- |  | F, D | ESET 0181 or instructor approval | ESET 0282 A/B; ESET 0223, 0227, 3384 or instructor approval |
|  Total | 17 |  |  |  |  |  |
| Semester Two |
| ESET 0120: Introduction to Energy Systems | 2 | C- |  | F, D |  | ESET 0120L |
| ESET 0120L: Introduction to Energy Systems Lab | 1 | C- |  | F, D |  | ESET 0120 |
| ESET 0242: Practical Process Measurements and Control | 2 | C- |  | F, D |  |  |
| ESET 4481: Defending Critical Infrastructure & Cyber Physical Systems | 3 | C- |  | S, D | ESET 0282B, 3383, 3384, or instructor approval | ESET 4481: Defending Critical Infrastructure & Cyber Physical Systems |
| ESET 4486: Network Security for Industrial Environments | 3 | C- |  | S, D | ESET 0282B, 3383, or instructor approval | ESET 4486: Network Security for Industrial Environments |
| ESET 4487: Professional Development and Certification | 3 | C- |  | S, D | ESET 3383 | ESET 4481, 3384, 4486 |
| ESET 4489: Capstone in Industrial CS | 3 | C- |  | D | Pre- or Co-Req: ESET 4486, 4481, or instructor approval | Pre- or Co-Req: ESET 4486, 4481, or instructor approval |
|  Total | 17 |  |  |  |  |  |
| \*GE=General Education Objective, UU=Upper Division University, UM= Upper Division Major\*\*See Course Schedule section of Course Policies page in the e-catalog (or input F, S, Su, etc.)  |

A Major Academic Plan (MAP) is one way to complete a degree in a set number of semesters. The *example* below is only one strategy. Actual plans for individual students will vary based on advisor recommendations and academic needs. Official Program Requirements including Major, General Education, Electives, and university requirements (see pg.2) are based on Catalog Year.

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| **2021-2022 Major Requirements** | **CR** | **GENERAL EDUCATION OBJECTIVES****Satisfy Objectives 1,2,3,4,5,6 (7 or 8) and 9** | **0 cr. min** |
| **MAJOR REQUIREMENTS** | **34** | 1. Written English (6 cr. min) ENGL 1101 |  |
| ESET 0100: Introduction to Engineering Technology | 1 |  ENGL 1102 |  |
| ESET 0100L: Introduction to Engineering Technology Laboratory | 1 | 2. Spoken English (3 cr. min) COMM 1101 |  |
| ESET 0120: introduction to Energy Systems | 2 | 3. Mathematics (3 cr. min) Recommended by Dept |  |
| ESET 0120L: Introduction to Energy Systems Laboratory | 1 | 4. Humanities, Fine Arts, Foreign Lang. **(2 courses; 2 categories; 6 cr. min)** |
| ESET 0181: Information Technology Fundamentals | 3 |  |  |
| ESET 0223: Digital Control Theory | 2 |  |  |
| ESET 0227: Digital Control Systems Laboratory | 1 | 5. Natural Sciences **(2 lectures-different course prefixes, 1 lab; 7 cr. min)** |
| ESET 0242: Practical Process Measurements and Control | 2 |  |  |
| ESET 0282A: Introduction to Networking I | 1 |  |  |
| ESET 0282B: Introduction to Networking II | 2 | 6. Behavioral and Social Science **(2 courses-different prefixes; 6 cr. min)** |
| ESET 3383: Security Design for Cyber-Physical Systems | 3 |  |  |
| ESET 3384: Risk Management for Cyber-Physical Systems | 3 |  |  |
| ESET 4481: Defending Critical Infrastructure & Cyber Physical Systems | 3 |  |  |
| ESET 4486: Network Security for Industrial Environments | 3 | One Course from EITHER Objective 7 OR 8 **(1course; 3 cr. min)** |
| ESET 4487: Professional Development and Certification | 3 | 7. Critical Thinking |  |
| ESET 4489: Capstone in Industrial CS | 3 | 8. Information Literacy  |
|  |  | 9. Cultural Diversity **(1 course; 3 cr. min)** |
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|  |  | General Education Elective to reach 36 cr. min. **(if necessary)** |
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|  |  |  **Total GE** |  |
|  |  | Undergraduate Catalog and GE Objectives by [Catalog Year](https://www.isu.edu/advising/academic-support/general-education/) *http://coursecat.isu.edu/undergraduate/programs/* |
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|  |  | **MAP Credit Summary** | **CR** |
|  |  | Major  | 34 |
|  |  | General Education  | 0 |
|  |  | Upper Division Free Electives to reach 36 credits | 0 |
|  |  | Free Electives to reach 120 credits | 0 |
|  |  |  TOTAL | 34 |
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|  |  | **Graduation Requirement Minimum Credit Checklist** | **Confirmed** |
|  |  | Minimum 36 cr. General Education Objectives (15 cr. AAS) |  |
|  |  | Minimum 15 cr. Upper Division in Major (0 cr. Associate) |  |  |
|  |  | Minimum 36 cr. Upper Division Overall (0 cr. Associate) |  |  |
|  |  | Minimum of 120 cr. Total (60 cr. Associate) |  |  |
|  |  |  |  |
| **Advising Notes** | ***MAP Completion Status (for internal use only)*** |
|  |  | *Date* |
|  |  |  |
|  | *CAA or COT:* | TIM 10/21/2019 |
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|  | **Complete College American Momentum Year****Math and English course in first year-Specific GE MATH course identified****9 credits in the Major area in first year****15 credits each semester (or 30 in academic year)****Milestone courses** |
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|  |  Form Revised 9.10.2019 |

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