## TSU Electrical and Electronics Engineering Bachelor Program

## Tab.

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| Year; Semester | Course (Department, Number, Title) List all courses in the program by term starting with the first term of the first year and ending with the last term of the final year | | Indicate Whether Course is Required, Elective or a Selected Elective by an R, an E or an SE. 1 | Subject Area (Credit Hours) | | | | Last Two Terms the Course was Offered; Year and, Semester, or Quarter | Maximum Section Enrollment for the Last Two Terms the Course was Offered 2 |
| Math & Basic Science | Engineering Topics Check if Contains Significant Design () | General Education | Other |
| 1;1 | (MATH1) Calculus 1 | | R | 5 |  |  |  |  |  |
|  | Introduction into Electrical and Electronics Engineering | | R |  | 5 |  |  |  |  |
|  | Language 1 (English) | | R |  |  | 5 |  |  |  |
|  | Principles of Physics 1 | | R | 5 |  |  |  |  |  |
|  | Principles of Physics Laboratory 1 | | R | 3 |  |  |  |  |  |
|  | Introduction into Biology | | R | 5 |  |  |  |  |  |
| 1;2 | Principles of Physics 2 | | R | 5 |  |  |  |  |  |
|  | Principles of Physics Laboratory 2 | | R | 3 |  |  |  |  |  |
|  | Language 2 (English) | | R |  |  | 5 |  |  |  |
|  | Economics | | R |  |  | 5 |  |  |  |
|  | (MATH2) Calculus 2 | | R | 5 |  |  |  |  |  |
|  | Humanities (History) UE (University electives) | | SE |  |  | 5 |  |  |  |
|  | Humanities (Archeology) | | SE |  |  | 5 |  |  |  |
| 2;1 | (MATH4) Linear Algebra | | R | 5 |  |  |  |  |  |
|  | Language 3(English) | | R |  |  | 5 |  |  |  |
|  | Programming in C | | R | 5 |  |  |  |  |  |
|  | Engineering Electronics | | R |  | 5 |  |  |  |  |
|  | Engineering Electronics Laboratory | | R |  | 3 |  |  |  |  |
|  | (MATH5) Complex Analysis, Fourier Analysis | | R | 5 |  |  |  |  |  |
|  | Humanities (Introduction into Art) | | SE |  |  | 5 |  |  |  |
| Tab. Electrical and Electronics Engineering (continued) | | | | | | | | | |
| Year; Semester | Course (Department, Number, Title) List all courses in the program by term starting with the first term of the first year and ending with the last term of the final year | | Indicate Whether Course is Required, Elective or a Selected Elective by an R, an E or an SE. 1 | Subject Area (Credit Hours) | | | | Last Two Terms the Course was Offered; Year and, Semester, or Quarter | Maximum Section Enrollment for the Last Two Terms the Course was Offered 2 |
| Math & Basic Science | Engineering Topics Check if Contains Significant Design () | General Education | Other |
| 2;2 | Electrical Circuits I | | R |  | 5 |  |  |  |  |
|  | (MATH3) Calculus 3 | | R | 5 |  |  |  |  |  |
|  | Language (English) (advanced level) | | R |  |  | 5 |  |  |  |
|  | (AE) Methods of Analysis | | R | 5 |  |  |  |  |  |
|  | Humanities (Religious Studies) | | SE |  |  | 5 |  |  |  |
|  | Humanities (Georgian Literature) | | SE |  |  | 5 |  |  |  |
| 3;1 | Computational and Statistical Methods for Electrical and Electronics Engineering | | R |  | 5 |  |  |  |  |
|  | Electrical Circuits II | | R |  | 5 |  |  |  |  |
|  | (MATH6) Numerical Methods | | R | 5 |  |  |  |  |  |
|  | Digital Systems | | R |  | 5 () |  |  |  |  |
|  | Power systems I | | R |  | 5 |  |  |  |  |
|  | Explorations: Humanities ( Philosophy) | | R SE |  |  | 5 |  |  |  |
| Tab. Electrical and Electronics Engineering (continued) | | | | | | | | | |
| Year; Semester | Course (Department, Number, Title) List all courses in the program by term starting with the first term of the first year and ending with the last term of the final year | | Indicate Whether Course is Required, Elective or a Selected Elective by an R, an E or an SE. 1 | Subject Area (Credit Hours) | | | | Last Two Terms the Course was Offered; Year and, Semester, or Quarter | Maximum Section Enrollment for the Last Two Terms the Course was Offered 2 |
| Math & Basic Science | Engineering Topics Check if Contains Significant Design () | General Education | Other |
| 3;2 | Electrical and Magnetic Fields for Engineers | | R |  | 5 |  |  |  |  |
|  | Linear Systems and Signal Theory | | R |  | 5 |  |  |  |  |
|  | Power systems II | | R |  | 5 |  |  |  |  |
|  | Digital System Design | | R |  | 5 |  |  |  |  |
|  | Explorations: Mathematics in Science and Art | | SE |  |  | 5 |  |  |  |
|  | European Institutions(European values) | | R |  |  | 5 |  |  |  |
| 4;1 | Antennas and EM Wave Propagation | | R |  | 5 |  |  |  |  |
|  | Electrical Devices and Sensor Systems | | R |  | 5 () |  |  |  |  |
|  | Explorations: Microeconomics of Competitiveness | | R |  |  | 5 |  |  |  |
|  | Electrical Materials and Devices | | R |  | 5 |  |  |  |  |
|  | PRE Senior Design Project | | R |  | 2 |  |  |  |  |
|  | From Elective Labs | | E |  | 3 () |  |  |  |  |
|  | From Elective Labs | | E |  | 3 () |  |  |  |  |
| 4;2 | Senior Design Project | | R |  | 8() |  |  |  |  |
|  | Applied Electrodynamics | | R |  | 5 |  |  |  |  |
| From Elective Courses | | E |  | 5 () |  |  |  |  |
| From Elective Courses | | E |  | 5 () |  |  |  |  |
| From Elective Courses | | E |  | 5 () |  |  |  |  |
|  | | | | | | | | | |
| TOTALS-ABET BASIC-LEVEL REQUIREMENTS | | | | 61 | 109 | 70 |  |  |  |
| OVERALL TOTAL CREDIT HOURS FOR COMPLETION OF THE PROGRAM = 240 | | | |  |  |  |  |  |  |
| Must satisfy one set | Minimum semester credit hours | | |  |  |  |  |  |  |
| Minimum percentage | | |  |  |  |  |  |  |
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| **Elective Courses** | | |
|  | Multicore Programming | 5 |
|  | Microprocessors | 5 |
|  | Device Control Laboratory | 3 |
|  | Remote Laboratory | 3 |
|  | Embedded OS Laboratory | 3 |
|  | Biomedical Electronic Equipment | 5 |
|  | Computer Modeling and Data Visualization | 5 |
|  | Energy conversion and alternative source of energy | 5 |
|  | Embedded SW | 5 |
|  | Embedded Communication | 5 |
|  | Metrology | 5 |