**SAN JOSE STATE UNIVERSITY**

**Bachelor of Science in Industrial Technology *Computer Electronics & Network Technology Concentration***

***FRESHMAN YEAR***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fall** | **Units** |  | **Spring** | **Units** |
| Comm 20 or 20N Public Speaking (GE: A1) | 3 |  | GE Area C1 course | 3 |
| English 1A , Composition I (GE: A2) | 3 |  | GE Area D2 course | 3 |
| Math 71, Calculus for Business and Aviation | 3 |  | Bus 90, Business Statistics | 3 |
| Engr 10, Introduction to Engineering | 3 |  | Phys 2A, Fundamentals of Physics | 4 |
| Tech 60, Introduction to Electronics | 3 |  | Tech 63, Digital Circuits | 3 |
| **Total:** | **15** |  | **Total:** | **16** |

***SOPHMORE YEAR***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fall** | **Units** |  | **Spring** | **Units** |
| Chem 1A, General Chemistry | 5 |  | Engl 2, Critical Thinking & Writing (GE: A3) | 3 |
| Phys 2B, Fundamentals of Physics | 4 |  | GE Area C1 course | 3 |
| Tech 62, Analog Circuits | 3 |  | GE Area D3 course  | 3 |
| Tech 65, Networking Theory and Application | 3 |  | CmpE 30, Programming Concepts and Meth | 3 |
|  |  |  | Econ 1B, Principles of Economics: Micro. | 4 |
|  **Total:** | **15** |  | **Total:** | **16** |
|  |  |  |  |   |
| ***JUNIOR YEAR*** |
|  |
| **Fall** | **Units** |  | **Spring** | **Units** |
| Bus 145, Global Operations Strategy | 3 |  | Tech 31, Quality Assurance and Control | 3 |
| Tech 115, Automation and Control | 3 |  | Tech 145, Lean Manufacturing  | 3 |
| Engr 100W, Engineering Reports | 3 |  | Tech 165, Wireless Communications Tech | 3 |
| Tech 163, Telecommunications Systems | 3 |  | Tech 160, Microprocessors Theory and Apps | 3 |
| GE Area C2 course | 3 |  | Tech 198, Technology and Civilization (GE: V) | 3 |
|   **Total:** | **15** |  |   **Total:** |    **15** |
|  |  |  |  |  |  |  |
| ***SENIOR YEAR*** |
|  |
| **Fall** | **Units** |  | **Spring** | **Units** |
| Tech 167, Control Systems  | 3 |  | Tech 169, Applied Electronic Design Tech | 3 |
| Tech 190A, Senior Project I | 3 |  | Tech 190B, Senior Project II | 3 |
| Technical Elective | 3 |  | Technical Elective | 3 |
| Bus 142, Total Quality Management | 3 |  | Bus 141, Procurement and Supply Management | 3 |
| Bus 186, Professional & Business Ethics (GE: S) | 3 |  | Technical Elective  | 1 |
| **Total:** | **15** |  | **Total:** | **13** |
|  | **Total units for degree : 120** |

The Bachelor of Science in Industrial Technology Program with concentration in Computer Electronics and Network Technology is designed to prepare graduates with in-depth knowledge and hands-on experience for careers such as Applications Engineer, Systems Engineer, Customer Support Specialist, Test Engineer, Field Service Engineer, Networking Specialist, Manufacturing Engineer, and Network Administrator.

This program will allow graduates to earn a minor in business as a part of its curriculum.

**Industrial Technology Program Required Course Prerequisites & Co- Req’s**

|  |  |
| --- | --- |
| **Course** | **Prerequisites** |
| Bus 90, Business Statistics  | Math 71 |
| Bus 140, Fund of Operations Management  | Upper Division Standing |
| Bus 141, Materials Management  | Upper Division Standing |
| Bus 142, Total Quality Management | Upper Division Standing |
| Bus 144, Supply Chain Management  | Upper Division Standing |
| Bus 145, Global Operations Management | Upper Division Standing |
| Bus 186, Professional and Business Ethics | Pass WST, Upper Division Standing |
| Chem 1A, General Chemistry | High school chemistry or Chem 10 |
| CmpE 30, Programming Concepts And Methodology | none |
| Econ 1B, Principles of Economics: Microeconomics  | none |
| Engr 100W, Engineering Reports | Pass WST, Upper Division |
| Math 71, Calculus for Business and Aviation  | Math 8 or Math 19 |
| Phys 2B, Fundamentals of Physics | Phys 2A |
| Tech 20A, Computer-Aided-Graphics | none |
| Tech 25, Introduction to Materials Technology  | Pre/ Coreq. Math 8; Coreq: Chem 1A |
| Tech 31, Quality Assurance and Control | Bus2 90 |
| Tech 41 , Machine Shop Safety | Tech 20A |
| Tech 45, Sustainable Facilities Design & Plan  | Tech 20A |
| Tech 46, Machine Operation and Management  | Tech 20A |
| Tech 60, Introduction to Electronics | Math 8 |
| Tech 62, Analog Circuits | Tech 60, Math 71 or 30. Co-req: Phys 2B |
| Tech 63, Digital Circuits | Tech 60 |
| Tech 65, Networking Theory and Application | Tech 60 |
| Tech 115, Automation and Control | Tech 60, Phys 2A/B, Math 71 |
| Tech 140, Green & Sustainable Product Design  | Tech 20A , Chem 1A, Math 71 |
| Tech 145, Lean Manufacturing | Bus 140 or 145 or ISE 140 |
| Tech 146, 3D Printing and Applications | Tech 20A, Tech 25, Tech 140 |
| Tech 147, Green Mfg Analysis & Mgnt  | Tech 45, Tech 46, Tech 115 Coreq: Tech 140 |
| Tech 149, Computer Integrated Mfg Sys | Tech 147, Coreq: Tech 145 |
| Tech 160, Microprocessors Theory and Apps | CmpE 30, Tech 63, Tech 115 |
| Tech 163, Telecommunications Systems | Tech 62, Tech 63 |
| Tech 165, Wireless Communications Tech | Tech 63, Tech 65 |
| Tech 167, Control Systems | Tech 62, Tech 63, Tech 115 |
| Tech 169, Applied Electronic Design | Tech 167 |
| Tech 190 A, Senior Project I | Engr 100W, Senior Standing |
| Tech 190 B, Senior Project II | Tech 190 A |
| Tech 198, Technology and Civilization | Pass WST, Upper Division Standing |