Electrical and Instrumentation Technology, A.A.S.

The **Electrical & Instrumentation Technology** program offers core courses related to Industrial Electrical Systems and Process Control. The program is designed to develop technical knowledge regarding electrical systems and instrumentation to prepare students to enter careers as I&E Technicians in a variety of industries. The curriculum was developed in partnership with local industries including Chemical Manufacturing, Mining, Electrical Power Plants, and Oil & Gas Production. This program provides training that meets these industries expectations. Students will develop skills needed to install, test, inspect, and maintain equipment and instrumentation designed to measure, record, and implement changes in industrial environments. Upon completion of this program, graduates can expect to find high-demand, well paid employment anywhere in the world. These individuals generally work 40-hour weeks on rotating shifts, perform tasks requiring high mental aptitude and physical ability, while working with a variety of materials and equipment. Most technicians in the local area can expect an annual starting wage of $50,000. This career path has a high probability of advancement depending on technical ability and personal drive.

Degree Requirements

Freshman Year - Fall Semester

- ELTR 1505 - Electrical Assembly & Measure   Credits: 3
- ELTR 1520 - Basic Electricity, DC   Credits: 3
- ELTR 1530 - Basic Electricity, AC   Credits: 3
- PHYS 1050 - Concepts of Physics   Credits: 4
- ENGL 1010 - English Composition I   Credits: 3
- HMDV 1005 - 1st Year Success   Credits: 1   *Subtotal: 17*

Freshman Year - Fall Semester Notes: PHYS 1050 may be replaced by MATH 1000 or higher mathematics course. In addition to ENGL 1010, students may be required to also take ENGL 1011 (2 credits) due to placement, adding 2 additional credits to their graduation total.

Freshman Year - Spring Semester

- ELTR 1840 - Instrumentation I   Credits: 3
- ELTR 2885 - Instrumentation II   Credits: 3
- ELTR 2840 - Motor Controls   Credits: 3
- CMAP 1200 - Computer Information Systems   Credits: 3
- ENGL 2005 - Writing in Technology and the Sciences   Credits: 3   *Subtotal: 15*

Freshman Year - Spring Semester Notes: ENGL 2005 may be replaced by ENGL 1020.

Sophomore Year - Fall Semester

- ELTR 2820 - Power Distribution   Credits: 3
- ELTR 2815 - Programmable Logic Controllers   Credits: 3
- ELTR 2620 - Control System Communications   Credits: 3
- ELTR 2890 - Instrumentation III   Credits: 3
- ELTR 2855 - Advanced PLC   Credits: 3
- ELTR 2825 - Industrial Electrical Troubleshooting   Credits: 3   *Subtotal: 18*

Sophomore Year - Fall Semester Notes: ELTR 2620, ELTR 2855, and ELTR 2890 can be replaced with any directly related course from the following prefixes: AUTO, CMPT, COSC, DESL, ELTR, ES, INDM, MATH, MINE, MCH, OGPT, PHYS, TECH, and WELD

Sophomore Year - Spring Semester

- COMM 1030 - Interpersonal Communication   Credits: 3
- US & Wyoming Constitution   Credits: 3
- TECH 1680 - Reading Technical Schematics   Credits: 3
- INDM 1590 - Industrial Pneumatics   Credits: 3
- TECH 1600 - Industrial Safety   Credits: 3   Subtotal: 15

Sophomore Year - Spring Semester Notes: INDM 1590, TECH 1600, and TECH 1680 can be replaced with any directly related course from the following prefixes: AUTO, CMPT, COSC, DESL, ELTR, ES, INDM, MATH, MINE, MCH, OGPT, PHYS, TECH, and WELD. US & Wyoming Constitution can be fulfilled by HIST 1211, HIST 1221, HIST 1251, or POLS 1000.

Total Credit Hours: 65

All core ELTR courses must be completed with a "C" or better to earn the Electrical and Instrumentation Technology degree.

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WESTERN Wyoming Community College