

# ELECTRONICS CORE

The electronic world is evolving. Are you ready to evolve with it? Take your stand at the frontier of Electronic Engineering Technology, Robotics/Automation Technology, or Laser and Optics Technology and have a Life. Changing experience at Indian Hills Community College!

| YEAR ONE |         |                                |         |       |               |
|----------|---------|--------------------------------|---------|-------|---------------|
| TERM     | CLASS   | NAME                           | CREDITS | DAYS  | TIME          |
| FALL     | ELT 373 | DC Circuit Analysis            | 4       | MTWTH | 08:00 - 09:50 |
|          | MAT 742 | Technical Math                 | 2       | MTWTH | 10:00 - 10:50 |
| WINTER   | ELT 375 | AC Fundamentals                | 2       | MTWTH | 08:00 - 08:50 |
|          | ELT 180 | Microcontroller Applications   | 2       | MTWTH | 09:00 - 09:50 |
|          | MAT 761 | Technical Math for Electronics | 2       | MTWTH | 10:00 - 10:50 |
| SPRING   | ELT 505 | Power Transfer Technology      | 2       | MTWTH | 09:00 - 09:50 |
|          | ELT 550 | Analog Devices                 | 4       | MTWTH | 10:00 - 11:50 |

| YEAR TWO |         |                               |         |       |               |
|----------|---------|-------------------------------|---------|-------|---------------|
| TERM     | CLASS   | NAME                          | CREDITS | DAYS  | TIME          |
| FALL     | CSC 110 | Introduction to Computers     | 3       | MW    | 08:00 - 09:50 |
|          | XXX XXX | Approved Communication Course | 3       | TTH   | 08:00 - 09:50 |
|          | COM 723 | Workplace Communications      | 3       | MTWTH | 10:00 - 10:50 |
| WINTER   | EGT 420 | PLTW Digital Electronics      | 3       | MTWTH | 08:00 - 09:50 |
|          | BUS 104 | Business Essentials           | 3       | MTWTH | 10:00 - 10:50 |
| SPRING   | MAT 120 | College Algebra               | 3       | MTWTH | 09:00 - 09:50 |
|          | LEO 102 | Photonics Fundamentals        | 3       | MTWTH | 10:00 - 11:50 |

DID YOU KNOW THAT IF YOU'RE TAKING INDIAN HILLS CLASSES WHILE STILL IN HIGH SCHOOL, YOU ALREADY QUALIFY FOR A

**\$600 SCHOLARSHIP TO INDIAN HILLS**

CHECK OUT THE MINIMUM QUALIFICATIONS AND APPLY TODAY: [WWW.INDIANHILLS.EDU/SCHOLARSHIPS](http://WWW.INDIANHILLS.EDU/SCHOLARSHIPS)



It is the policy of Indian Hills Community College not to discriminate on the basis of race, color, national origin, sex, disability, age (employment), sexual orientation, gender identity, creed, religion, and actual or potential parental, family, or marital status in its programs, activities, or employment practices as required by the Iowa Code §§216.6 and 216.9, Titles VI and VII of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d and 2000e), the Equal Pay Act of 1973 (29 U.S.C. § 206, et seq.), Title IX (Educational Amendments, 20 U.S.C §§ 1681 - 1688), Section 504 (Rehabilitation Act of 1973, 29 U.S.C. § 794), and Title II of the Americans with Disabilities Act (42 U.S.C. § 12101, et seq.).

If you have questions or complaints related to compliance with this policy, please contact Kristen Parks, Director of Human Resources/Equity Coordinator, 525 Grandview Ave, Ottumwa, IA 52501, (641) 683-5108; Chris Bowser, Executive Dean, Student Services, (students), (641) 683-5159; Darlas Shockley, Executive Dean, Arts & Sciences (students with disabilities), (641) 683-5174; or the U.S. Department of Education, Citigroup Center, 500 W. Madison, Suite 1475, Chicago, IL 60661, phone number (312) 730-1560, fax (312) 730-1576.



## Electronic Engineering Technology Curriculum

**44% COMPLETED\***

**ASSOCIATE OF APPLIED SCIENCE DEGREE** | Location: Ottumwa Campus | Start Terms: Fall and Spring Terms

### REMAINING CREDITS: 47

|         |   |   |                          |                        |                                |   |                          |
|---------|---|---|--------------------------|------------------------|--------------------------------|---|--------------------------|
| ELT 378 | AC Circuit Analysis                     | 4 | <input type="checkbox"/> | EGR 410                | PLTW Principles of Engineering | 3 | <input type="checkbox"/> |
| ELT 579 | Micro Circuits                          | 3 | <input type="checkbox"/> | OR                     |                                |   |                          |
| OR      |   |   |                          | EGT 410                | PLTW Principles of Engineering | 3 | <input type="checkbox"/> |
| ELT 932 | Internship                              | 3 | <input type="checkbox"/> | ELT 418                | Communication Systems I        | 4 | <input type="checkbox"/> |
| XXX XXX | Approved Scientific Systems Course      | 3 | <input type="checkbox"/> | ELT 858                | Circuit Design and Test        | 3 | <input type="checkbox"/> |
| XXX XXX | Approved Culture Course                 | 3 | <input type="checkbox"/> | ELT 437                | Communication Networks         | 4 | <input type="checkbox"/> |
| ATR 266 | Automation Programming                  | 2 | <input type="checkbox"/> | ELT 460                | Fiber Optics                   | 3 | <input type="checkbox"/> |
| EGR 400 | PLTW Introduction to Engineering Design | 3 | <input type="checkbox"/> | ELT 515                | Wireless Networks              | 3 | <input type="checkbox"/> |
| OR      |   |   |                          |                        |                                |   |                          |
| EGT 400 | PLTW Introduction to Engineering Design | 3 | <input type="checkbox"/> | <b>OPTIONAL COURSE</b> |                                |   |                          |
| ELT 402 | Introduction to Communication Systems   | 3 | <input type="checkbox"/> | BUS 128                | Foundation to Entrepreneurship | 3 | <input type="checkbox"/> |
| ELT 540 | Linear Components                       | 3 | <input type="checkbox"/> |                        |                                |   |                          |

## Laser and Optics Technology Curriculum

**43% COMPLETED\***

**ASSOCIATE OF APPLIED SCIENCE DEGREE** | Location: Ottumwa Campus | Start Terms: Fall and Spring Terms

### REMAINING CREDITS: 49

|         |                                    |   |                          |                         |                                |   |                          |
|---------|------------------------------------|---|--------------------------|-------------------------|--------------------------------|---|--------------------------|
| ELT 378 | AC Circuit Analysis                | 4 | <input type="checkbox"/> | LEO 253                 | Physical Optics                | 2 | <input type="checkbox"/> |
| LEO 242 | Introduction to Photonics          | 4 | <input type="checkbox"/> | LEO 268                 | Photonics Troubleshooting      | 3 | <input type="checkbox"/> |
| LEO 257 | Laser Components                   | 2 | <input type="checkbox"/> | LEO 266                 | Photonics Applications         | 4 | <input type="checkbox"/> |
| XXX XXX | Approved Scientific Systems Course | 3 | <input type="checkbox"/> | LEO 275                 | Optical Systems Analysis       | 3 | <input type="checkbox"/> |
| XXX XXX | Approved Culture Course            | 3 | <input type="checkbox"/> | LEO 277                 | Photonic Systems Lab           | 3 | <input type="checkbox"/> |
| CAD 180 | Intro to Solidworks                | 2 | <input type="checkbox"/> |                         |                                |   |                          |
| LEO 255 | Geometric Optics                   | 4 | <input type="checkbox"/> | <b>OPTIONAL COURSES</b> |                                |   |                          |
| LEO 259 | Optical Devices                    | 3 | <input type="checkbox"/> | BUS 128                 | Foundation to Entrepreneurship | 3 | <input type="checkbox"/> |
| LEO 262 | Laser System Fundamentals          | 3 | <input type="checkbox"/> | LEO 932                 | Internship                     | 4 | <input type="checkbox"/> |
| LEO 250 | Automated Laser Processing         | 3 | <input type="checkbox"/> |                         |                                |   |                          |

## Robotics/Automation Technology Curriculum

**45% COMPLETED**

**ASSOCIATE OF APPLIED SCIENCE DEGREE** | Location: Ottumwa Campus | Start Terms: Fall and Spring Terms

### REMAINING CREDITS: 46-48

|         |  |   |                          |         |                                      |   |                          |
|---------|--|---|--------------------------|---------|--------------------------------------|---|--------------------------|
| ELT 378 | AC Circuit Analysis                    | 4 | <input type="checkbox"/> | ELT 130 | Control Systems                      | 3 | <input type="checkbox"/> |
| ATR 251 | Robot Programming I                    | 2 | <input type="checkbox"/> | ATR 252 | Robot Programming II                 | 2 | <input type="checkbox"/> |
| ELT 126 | Industrial Electronics                 | 2 | <input type="checkbox"/> | ATR 261 | Robot Controllers I                  | 2 | <input type="checkbox"/> |
| OR      |  |   |                          | ATR 350 | Robot Offline Programming            | 2 | <input type="checkbox"/> |
| MFG 932 | Internship                             | 4 | <input type="checkbox"/> | ATR 267 | Industrial Systems                   | 3 | <input type="checkbox"/> |
| XXX XXX | Approved Scientific Systems Course     | 3 | <input type="checkbox"/> | ATR 262 | Robot Controllers II                 | 2 | <input type="checkbox"/> |
| XXX XXX | Approved Culture Course                | 3 | <input type="checkbox"/> | ATR 274 | Automated System Applications        | 3 | <input type="checkbox"/> |
| ATR 110 | Manufacturing Fundamentals             | 2 | <input type="checkbox"/> | ATR 275 | Industrial Networks                  | 2 | <input type="checkbox"/> |
| CAD 180 | Intro to Solidworks                    | 2 | <input type="checkbox"/> | ELT 124 | Advanced PLCs and System Integration | 3 | <input type="checkbox"/> |
| EGT 450 | PLTW Computer Integrated Manufacturing | 3 | <input type="checkbox"/> |         |                                      |   |                          |