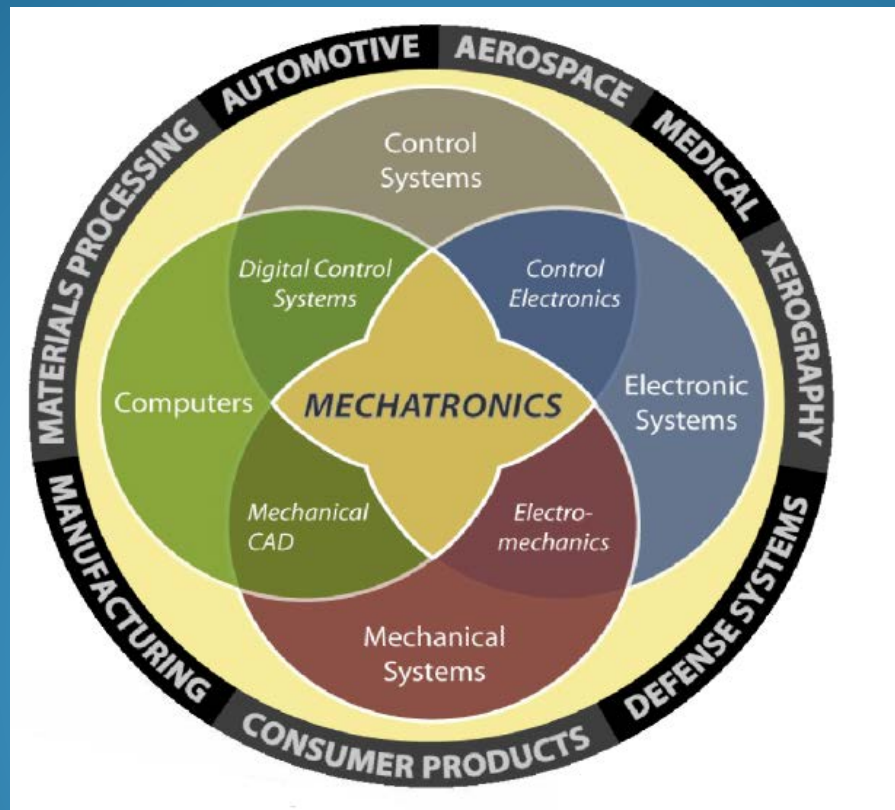
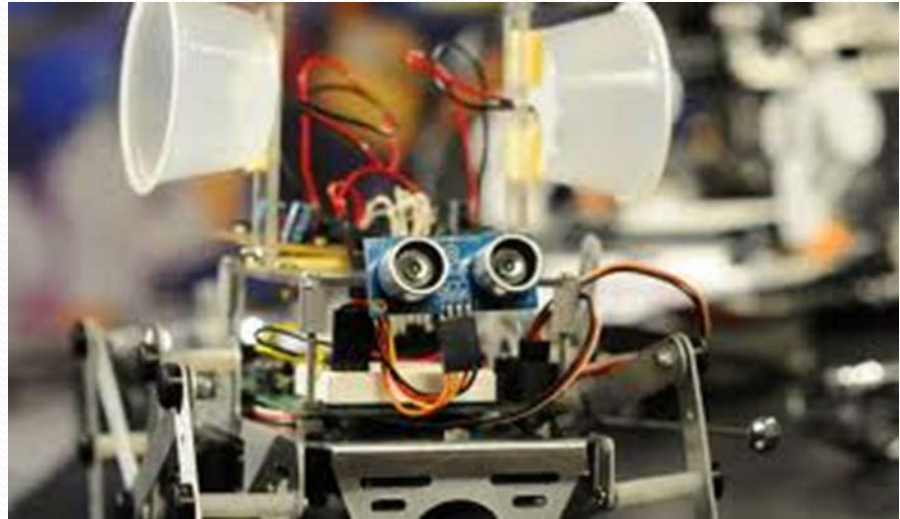


CLC & HSTC DUAL CREDIT PARTNERSHIP IN MECHATRONICS



What is MECHATRONICS?



Mechatronics:

- **“Intelligent” mechanical systems**
- **Involves the use of computers and control systems to operate mechanical systems.**
- **Mechanical, electrical, electronics, computer systems are combined to control many products you use every day.**



Examples of Products That Use Mechatronics

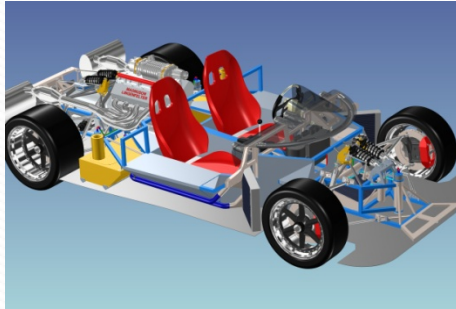
From common appliances and technology.....



to money, ticket, and
DVD dispensing....



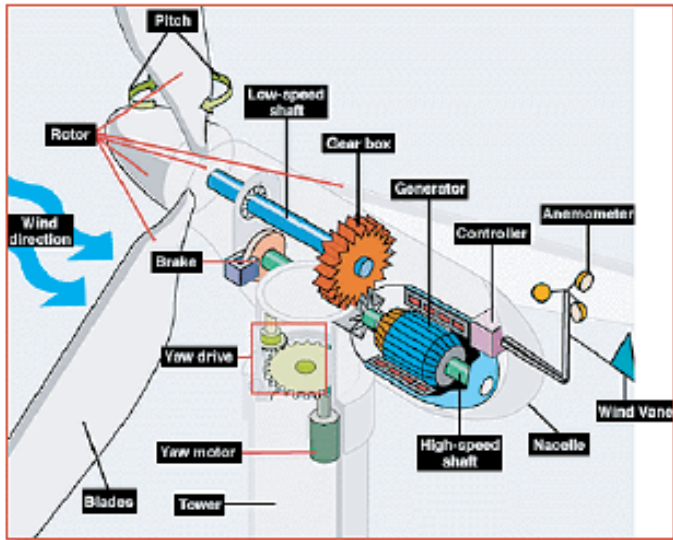
to automotive applications,



industrial automation,

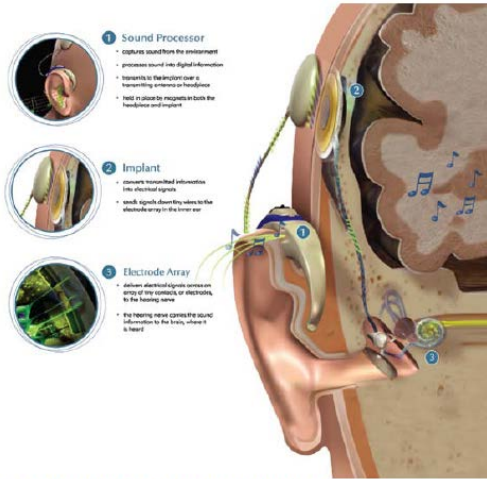


to Green Energy – Wind Turbines,



to Medical Applications...

Cochlear Implants



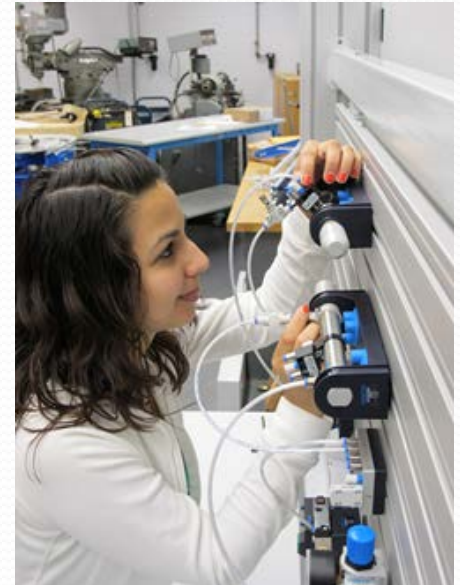
Source: Image Courtesy of Carle Clinic Association and Carle Foundation Hospital

and Prosthetics.



CLC Mechatronics Training

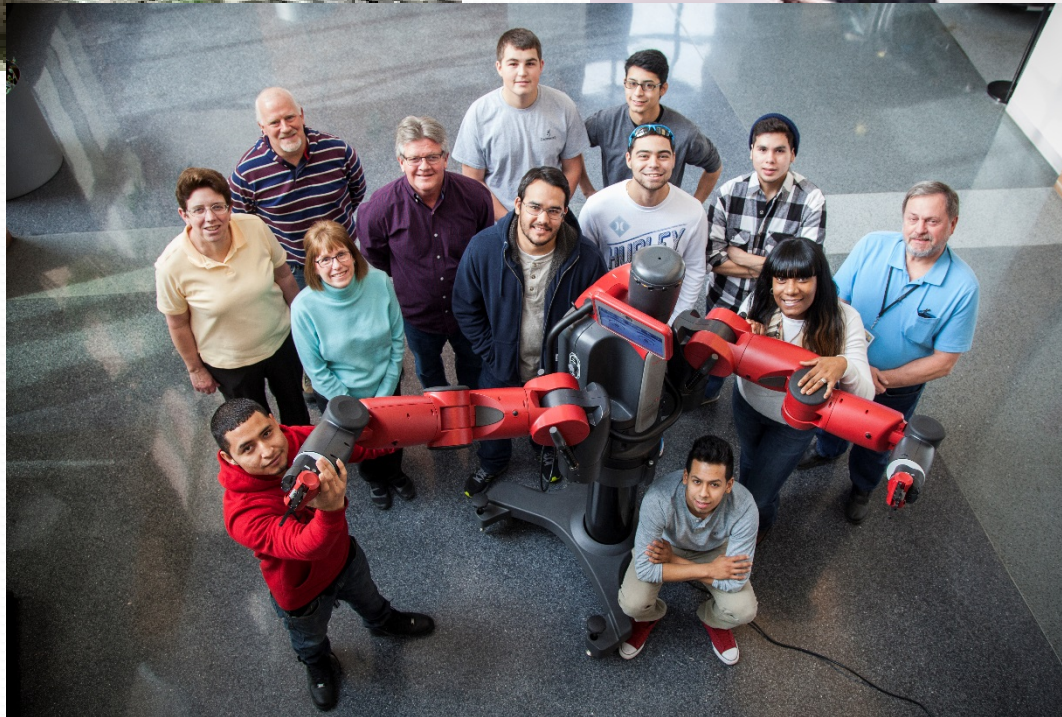
- ❑ DOL GRANT
- ❑ 30 credit hour “Mechatronics Certificate”
 - First cohort: Jan 2013
 - Ninth cohort graduated Fall 2016
 - >80% Retention Rate
 - 80-100% Job Placement
- ❑ Training prepares a student for an entry-level technician job: installation, repair or maintenance of electrical, mechanical and computerized equipment.



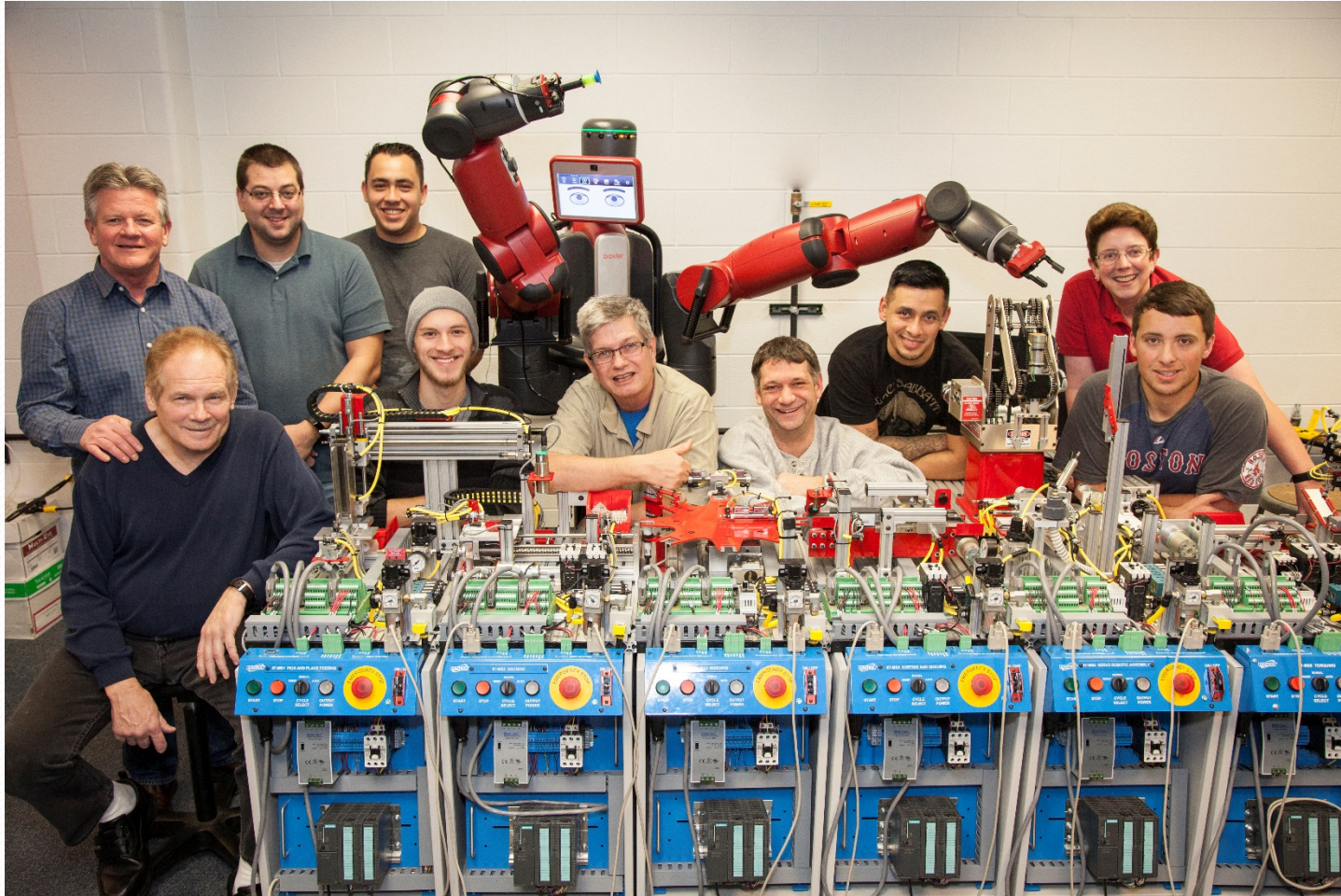
CLC Mechatronics Training



CLC Mechatronics Training Equipment



CLC Mechatronics Training Equipment



What kind of education is needed to prepare for the mechatronics program?

A standard high-school education

- High-school level math, science or computer courses are helpful but not required.
- The ability to do very basic algebra is necessary to succeed in our program.
- A bridge program will be available for students needing a ramp into the technology courses.



National Science Foundation Grant

October 1, 2016



NSF Grant Outcomes



1. AAS Mechatronics Technology degree
2. Dual Credit Pipeline
3. Professional Development for HS Teachers
4. Low Cost Trainers
5. Alignment with national industry Certifications



CLC Mechatronics Career Pathway



CLC Certificate- 30 credits

Employment & Siemens Level I Certification

\$16- \$22/hr. + benefits

Job placement- 85-100%

Professional Development

Supported by NSF

NEW Applied Science Degree

Employment & Siemens Level II certification

\$23-\$32/hr. + benefits

***Mechanical Systems I, II, III**

***Electrical Systems I, II, III**

***Robot Design & Construction I, II, III**

Fundamentals of High Tech Mfg. I, II, III

***CAD I, II, III**

Automation I, II, III

Automation IV, V, VI

Capstone I, II, III

Pneumatics & Hydraulics I, II, III

STEM Readiness I, II, III

H.S. Summer Working Connections

Florida State College Jacksonville- July 24-28, 2017

***Five seats available for CLC district & (FSCJ, AACC)**

Five days, \$100 stipend/day

Travel, lodging, food included

***Selection Criteria:** 1. Bachelor's Degree in related field, 2. Interest in teaching dual-credit, 3. Basic electrical and mechanical background, 4. Industrial experience a plus, 5. Recommendation from Principal, 6. One page proposal addressing items 1-5. Submit to Margie Porter by April 1, 2017 (MargiePorter@clcillinois.edu).

30 credit hour certificate

Automation Systems

Advanced Mfg. Processes

Mechanics and Machine Elements

Process Control

Intro to Totally Integrated Mfg.

Advanced Motor Control

General Education- 15 credits

Bolded- H.S. Dual-Credit Certificate- 15 credits. All courses 1 credit meeting 22.5 hours each.

***Project Lead the Way credit-** TBD

CLC Contacts- Margie Porter, NSF P.I. 847-543-2904 (MargiePorter@clcillinois.edu) or Gary L. Morgan, Grant Coordinator 847-767-1376 (gmorgan@clcillinois.edu)

Other Developments- Low Cost trainer (under \$1,000/trainer) development to support the teaching of bolded courses

CLC & HSTC DUAL CREDIT

PARTNERSHIP IN

MECHATRONICS

