Lansing Community College

Course Cover Sheet

M-CAM Training Area:
☐CNC/Machining ☒Multi-Skilled Mechatronics ☐Production Operation ☐Welding/Fabrications

Program(s): Intro to Mechatronics Block 1-3

Course: Computer Literacy

Course Description: This course introduces participants to typical computer systems and the basics of using operating systems related to the advanced manufacturing industry.

Participants will cover the use of application software such as Microsoft Office.

Basic skills in using the Internet and an Intranet to search for information such as manuals, software, drivers, etc. will also be introduced.

Delivery method is hybrid, open entry/open exit.

Date Created: September, 2015. Revised November, 2016

Employer/Industry Partner: Magna/DexSys, Lansing, Michigan and various manufacturing companies in Mid-Michigan.

Faculty Developer(s)/Instructional Designers(s): Jane Knapp/Ann Lapo

College Contact: Jill Doederlein

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Additional Information/Comments: Due to the increased need to offer a flexible delivery format to meet the needs of students'/workers' busy schedules, LCC partnered with AMTEC (Automotive Manufacturing Technical Education Collaborative) led by Kentucky Community Technical College to offer open entry open exit modular courses in a hybrid format (lessons online and hands-on labs with an instructor on campus). LCC instructors added content based on the needs of local industry.

M-CAM Bay de Noc | Grand Rapids | Kellogg | Lake Michigan | Lansing | Macomb | Mott | Schoolcraft

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TOTAL TIME REQUIREMENT for the course is approximately 24 hours.

PREREQUISITES: Reading Level 4. Writing Level 4.

OBJECTIVES: (for a complete list of objectives, see each module)
After completing this course, the student should be able to:
- Describe common computer hardware components and usage.
- Identify and describe operation of common data storage devices.
- Explain the purpose of security, protection, maintenance, and backup tools.
- Demonstrate knowledge of computer ergonomics: proper posture during computer use, physical consequences of poor ergonomics.
- Describe the purpose of an operating system.
- Identify steps to install software onto a computer.
- Perform file management techniques: download, upload, move, copy, delete.
- Compare input and output devices.
- Create basic word processing and presentation documents.
- Create basic worksheets with formulas and a chart.
- Create basic databases.
- Produce, send, and reply to correspondence using email. Include attachments.
- Describe common uses of communication/collaborative software to collaborate in online meetings.
- Use Internet tools to find specific information.
- Describe the use of an Intranet to search for company-related information.

100 Computer Literacy consists of four modules:

Computer Literacy consists of four modules:
1001 - Orientation to Computer Systems (5 lessons to read on your own, 4 labs to do at LCC with an instructor)
This module Introduces participants to typical computer systems and associated components.

1002 - Operating Systems (4 lessons, 2 labs)
Introduces participants to the basics of computer operating systems

1003 - Computer Applications (5 lessons, 5 labs)
Provides students with basic skills in application software.

1004 - Internet/Intranet (4 lessons, 2 labs)
Provides students with basic skills in effectively using Internet/Intranet environments.

MATERIALS:
Online portion of the class:
Software: Internet access, Web browser, word-processing software, Adobe Reader, up-to-date virus protection for the online portion of this course.

- Go to elearning.autoworkforce.org – modules 1001, 1002, 1003, 1004 to access the lessons, labs specifications and assessments for this course.

Hands-on labs portion of the class:
- Tools and equipment specified in the Resources section—per module — for each hands-on lab.

GRADING POLICY:
- Successful completion of all Labs (at least 80% recommended). Rubrics provided in AMTEC online specify how grading is determined.
- Successful completion of each module's post-assessment (at least 80% recommended).

College Grading Standards	Percent
4.0 Excellent	91-100%
3.5	86-90%
3.0 Good	81-85%
2.5	76-80%
2.0 Satisfactory	71-75%
1.5	66-70%
1.0	60-65%
0.0	0-59%

ACCEPTABLE USE POLICY:
Computer Resources
Use of College-owned computer resources is a privilege extended by the College to students, employees, and other authorized users as a tool to promote the mission of the College. All users agree to be bound by the terms and conditions of the LCC Acceptable Use Policy at the time they complete an account application form. Copies of the LCC Acceptable Use Policy are available at the Library Circulation Desk and may also be accessed on the World Wide Web. The URL is http://www.lcc.edu/policy/policies_1.aspx#ACCEPTABLE_USE_POLICY

Transfer Potential

For transferability information, please consult the Transfer Equivalency Information located at the LCC website at http://www.lcc.edu/transfer. For additional transferability information, contact the LCC Academic Advising Center, (517) 483-1904.

The MACRAO Transfer Agreement simplifies the transfer of students from one Michigan institution to another. The most current MACRAO Transfer Agreement information can be found at http://www.lcc.edu/transfer/macrao_agreement.aspx.

Student Code of Conduct and General Rules and Guidelines

LCC supports a positive educational environment that will benefit student success. In order to ensure this vision, the College has established the LCC Student Code of Conduct and the Student General Rules and Guidelines to ensure the protection of student rights and the health and safety of the College community, as well as to support the efficient operation of College programs. In addition, the College has established guidelines for the redress of grievances by individuals accused in such proceedings. A copy of the most current Code can be found on the College's website at http://www.lcc.edu/catalog/policies_procedures/studentrulesguidelines.aspx#code.

OUTLINE FOR FACE-TO-FACE ACCELERATED ALTERNATIVE DELIVERY FOR A GROUP:

Orientation (class time 2 hours):

- PowerPoint "What is Mechatronics" presentation by instructor
- Personal Survey (This is a quick survey that is a checklist of prior knowledge and the student's study plan)
- Comprehensive Exam Part 1 (written-multiple choice)
- Together: Go through the Comprehensive Exam to score it. (This will determine who can "test out" and go directly to Part 2--the hands-on portion of the exam)

Part 2 (hands-on lab 2 hours):

- The classroom must be equipped with Windows-based computers, a printer, and Microsoft Office software.
- Each student will receive a Flash Drive with the following Word files (see "files to use in the lab" content below for 1002 and 1003):
    o oranges.doc
    o apples.doc
    o penguins.doc
    o tulips.doc
    o 1003_flyerimage
- Each student will receive a "1003-Lab 1 flyer-specs.pdf" handout (used for the Word section-#6)
- This Part of the exam is for those who have scored highly on Part 1 OR can be used as a final exam after students have completed work on the AMTEC labs.
- Re-visit the Personal Survey again to review each student's study plan and knowledge so far. (This could also be done by the Success Coach)

Subject Matter Expert (SME) Course Review Summary

College: Lansing Community College

M-CAM Training Area: ☐CNC/Machining ☒Multi-Skilled/Mechatronics ☐Production Operation ☐Welding/Fabrication

Degree Program Name:

Title of Course: Mechatronics Computer Literacy

Subject Matter Expert (SME) Reviewer Information
Name: Robert C. Hess
Title: Senior Instructional Designer/Trainer
Phone: 566-322-1033
Email: bob.hess@mhtechnologies.net
Organization/Affiliation: MH Technologies

Attach Resume or provide credentials (showing years of experience and work experience that is relevant to course content):

Synopsis of Findings:

Labs 1001 - 1004

1. **Acceptable for training.**

Reviewers Signature _____Robert C. Hess_____   Date: _____3/8/17_____

Michigan Coalition for Advanced Manufacturing
Subject Matter Expert Course Review

1. Course Overview and Objectives	Exceptional	Satisfactory	Ineffective
The goals and purpose of the course is clearly stated.		X	
Prerequisites and/or any required competencies are clearly stated.		X	
Learning objectives are specific and well-defined.		X	
Learning objectives describe outcomes that are measurable.		X	
Outcomes align to occupational focus (industry skills and standards).		X	
Comments or recommendations:			

2. Material and Resources	Exceptional	Satisfactory	Ineffective
The instructional materials contribute to the achievement of the course learning objectives.		X	
The materials and resources meet/reflect current industry practices and standards.		X	
The instructional materials provide options for a variety of learning styles.		X	
Resources and materials are cited appropriately. If applicable, license information is provided.		X	
Comments or recommendations:			

3. Learning Activities	Exceptional	Satisfactory	Ineffective
Provide opportunities for interaction and active learning.		X	
Help understand fundamental concepts, and build skills useful outside of the learning object.		X	
Activities are linked to current industry practices and standards.		X	

Comments or recommendations:			

4. Assessment Tools/Criteria for Evaluation	**Exceptional**	**Satisfactory**	**Ineffective**
The course evaluation criteria/course grading policy is stated clearly on syllabus.		X	
Measure stated learning objectives and link to industry standards.		X	
Align with course activities and resources.		X	
Include specific criteria for evaluation of student work and participation.		X	
Comments and recommendations:			

5. Equipment/Technology	**Exceptional**	**Satisfactory**	**Ineffective**
Meets industry standards and needs.		X	
Supports the course learning objectives.		X	
Provides students with easy access to the technologies required in the course/module.		X	
Comments and recommendations:			

Robert C. Hess

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Qualifications

Dedicated, articulate, and enthusiastic with strong analytical and organizational abilities. Effective communication and interpersonal skills. Ability to work independently or as an integral part of a team to accomplish goals. Experience prioritizing and completing numerous concurrent responsibilities while meeting time and organizational goals. Sound professional attitude, strong work ethic and pride in personal performance.

Experience

2015 – Present   M H Technologies LLC   Warren, MI
Senior Instructional Designer/Trainer
- Perform Needs Analysis and quote training programs
- Develop on-line training programs, system manuals, student workbooks, and job aids
- Deliver on-site training programs

2002 – 2015   R.C. Technologies   Shelby Twp. MI
Business Owner – R.C. Technologies
- Research and quote training programs
- Development of training programs for Ford Motors, DaimlerChrysler, General Motors, Kuka Robotics, Fame Conveyor, Lamb Technicon, Delphi, Magna, and SPX
- Design training programs, system manuals, student workbooks, PowerPoint presentations, and job aids
- Deliver on-site training programs
- Professional Industrial photography

1995 – 2002   DCT Inc.   Sterling Heights, MI
Training Designer
- Research and quote training programs
- Design training programs, system manuals, student workbooks, and job aids
- Deliver on-site training programs

1990 – 1995   Bond Robotics   Sterling Heights, MI
Training Manager / Field Service Engineer
- Managed Training Department
- Research and quote training programs
- Design operation and maintenance manuals plus training guides
- Deliver all training programs
- Perform on-site electrical and mechanical customer support for installation, start-up, and debugging of pressroom automation

1986 – 1990   Robotic Vision Systems, Inc.   Sterling Heights
Field Service Engineer / Trainer
- Research, installation, programming and training of 3D vision guided robotic welding and sealant systems for military, aerospace, and automotive industry

Education

Education   1977 – 1981   Ferris State University   Big Rapids, MI
- BSEE