

ENT 103 Industrial Computer Application (OL)

Instructor Contact Information:

James Martini, Associate Professor-Energy Technology
E-mail: jmartini@hfcc.edu, or Ucompass e-mail
Work phone: 313 845-6453 or FX 313 845-9872
Office Location: T-211L second floor of Tech Bldg
Office hours: Call for Appointment, or contact online.
Generally available by appointment – arrange by e-mail

- I. Division: Energy Technology Department, Technology Division
- II. Course Number and Title: MFMT 103 **Industrial Computer Application (OL)**
- III. Credit Hours: 2 Credits
- IV. Total Contact Hours: 32 Contact Hours (Online Course)
- V. Prerequisites: None
- VI. Co-requisites: None
- VII. Course Grading Scale: A-E
- VIII. Catalog Description: (This Is A 100% Online Study Course!)

An introductory online course .designed to provide computer familiarity, not proficiency. Industrial applications of computers will be stressed. Computer software, programming, storage/input/output devices and controls as they apply to industry will be explored. Design as well as hands-on, primarily competency based. The course will provide experiences and in keyboarding, windows programs, word processing, spreadsheets, databases, computer graphics, basic programming, time permitting two dimensional computer aided drafting. May be conducted totally online.

COURSE OVERVIEW:

a-Energy Technology courses and programs provide students with the capability to meet or exceed the requirements for entry and advanced level multi-functional, multi-skilled power or process plant engineers, boiler operators or heating plant operators, building engineers, HVAC heating and cooling service technicians, instrument and control technicians, and multi-skilled maintenance technicians. All courses in each program are performance-based, practically oriented to field conditions and are designed to ensure students meet minimum National Skills Standards and minimum mandatory critical incident workplace competencies to perform at designated field proficiency levels.

Courses include National Skills Standards requirements as specified by nationally recognized heating/cooling field organizations including ARI/GAMA, (Air-Conditioning Refrigeration Institute) and as specified by several internationally recognized power field organizations including NIULPE (National Institute for the Uniform Licensing of Power Engineers), local licensing agencies, VTECS (Southern Association of College and Schools), and National Skills Standards studies by HFCC faculty for occupations in the power/building engineering field.

b-Energy Technology Online Study: Energy Technology online courses and programs are field-orientation-intensive requiring learners to carefully review, study and interface with practical activities associated with field conditions and operational situations. Learners study and respond to various types of field equipment, system conditions and

operation and maintenance (O & M) situations. Learners accomplish this in each major subject area by reviewing materials which are taken from workplace literature and actual field systems. Learners may utilize a workbook to complete study and record multi-skilling tasks similar to activities completed by skilled technicians in the field. Learners may be required to complete sketches, workbook exercises, and field activities along with quizzes and exams related to the study materials and field systems.

Study may also include but is not limited to the following elements: Basic and advanced study of power engineering O & M activities, detailed study of manufacturers' technical and engineering publications, investigative reports, field reports, collaborative learning experiences, case studies, online participation in discussions and web quests, virtual tours of plants or buildings equipment-systems, situation concept mapping, equipment-system operational critiques, data and records analysis, problem/solution analysis and reporting, creating proposals, research papers-reports, creating a journal of field experiences, equipment and system comparison studies, creation of step-by-step operation and maintenance procedures, completing service and maintenance analysis projects, and virtual skill demonstrations of required field activities.

Online learners are encouraged to gain valuable field experience by any or all of the following while completing their studies online: Find willing engineers or partner organizations and seek as many plant and building visits or tours as possible to enhance their understanding of the course materials. Students are also encouraged to attend expos, conferences, shows and seminars related to the building/plant operation and maintenance field.

Online learners are also encouraged when and where possible to complete laboratory or field experiences which may be documented through Coop education experiences, practicums, independent study, internships, externships, capstone experiences, job shadowing, portfolios, and similar activities.

c-Energy Technology Traditional Classroom-Lab Studies: Energy Technology traditional classroom-laboratory courses and programs are hands-on intensive requiring multi-skilled activities and a practical field orientation to assignments in multiple-activities laboratories. Laboratory equipment and systems are designed to duplicate operating building and plant field conditions providing the learner with "live" operation and maintenance experiences thus making the knowledge, skills and technology transfer to the workplace highly significant for graduates of these programs.

d-Required Computer Skills Students who take on-line or web-based courses and/or traditional classroom-laboratory courses in the Energy Technology Program should be familiar with the basic word processor functions (such as found in MS Word Note Pad, Word Pad or WordPerfect for Windows. Students should have experience using e-mail, have had experiences using typical search engines (such as Yahoo, Goggle or Internet Explorer) and accessing and utilizing the Internet to find information and materials from suppliers, library resources or other data banks. Students should also have easy, dependable access to a personal computer with a word processor and browser (such as Internet Explorer) to allow continuing Internet access during the semester. On-campus students can utilize classroom computers to complete the majority of their assignments for classroom and web-based courses. However, students enrolled in online courses must have continuing access to a computer and the Internet throughout the semester usually apart from the college computers. While the Media Center and the Library

computers can be used to complete on-line work for various courses, depending on them as the only computer source is not advised for on-line study.

Accessing on-campus computers may be difficult during busy periods and Learners will need to conform to the Media Center's hours. Therefore, it is recommended that students consider only using the Media Center as a backup to PC's at home or work.

Students lacking basic computer skills should consider taking the MFMT 103 Computer Maintenance & Energy Technology - basic computer orientation course prior to or in conjunction with their initial (or first) course of study in the Energy Technology Department.

COURSE MEASURABLE OBJECTIVES(*)

A. Measurable Objectives (* Meets critical thinking objectives)

Students must be able to:

To allow student to meet the criteria of obtaining graduation requirements related to computer skills, and the following requirements. Computer literacy is defined to include the following competencies:

1. Log into and out of a computer network.
2. Operate basic PC hardware, including common input, output, and storage devices.
3. *Use an operating system to perform file management tasks, such as finding, organizing, saving, copying, and printing files.
4. Send and open e-mail, including attachments.
5. *Use basic word processing functions to prepare a document that incorporates a variety of formatting options.
6. *Use a browser to locate information on the Internet, identify appropriate search terms, and use a search engine effectively.

B. Major Core Course Objectives:

Students must be able to:

1. Define various computer hardware and how applied for productive work.
2. Define and use various computer software to complete field oriented activities productively.
3. Define and use e-mail to complete field oriented activities productively.
- 4.

PRIMARY RESOURCES:

The rapidly changing technology in this field and the regular exposure by power engineers to high tech workplaces, makes it necessary to have continuous access to The resources required to complete the course. Various materials are required for all students in online, classroom, and web-based sections. Learners must be fully prepared for study every session, (whether for online or in the classroom), with the required resources, texts, and related supplemental materials. This includes the required textbook, workbook, notebook, handouts, and project or exercise materials and, if applicable, floppy or CD-type disks on which to record or collect data.

COURSE TEXTBOOK & MATERIALS

SUPPLEMENTAL REFERENCES & READINGS:

Check the External Links section of the course for access to online resources for this course.

Please copy and paste any web links listed below into your browser to view the websites.

ONLINE RESOURCES:

Check the External Links section of the course for access to online resources for this course.

TENTATIVE INSTRUCTIONAL PLAN - COURSE OUTLINE-TOPICS

Course Outline and/or Calendar or Weekly Schedule may be accessed in Module One for the Course.

Module 1 Introduction to Online Study and the Computer

Module 2 Getting Online

Module 3 The Internet

Module 4 E-Mail

Module 5 Microsoft Word

Module 6 Adobe Acrobat

Module 7 Operating Systems

Microsoft @Windows Operating System

Using Windows Explorer

MS-DOS

Module 8 Using Windows Media Player

Module 9 Microsoft Excel

Module 11 MS Powerpoint

Module 12 Computer Virus

Module 13 Energy Intensive Industrial-Commercial Computer Applications

Module 14 The Computer System (Optional Module)

Module 15 Basic Computer Hardware (Optional Module)

Module 16 Summary and Final Exam

INSTRUCTIONAL POLICIES - COURSE COMPLETION REQUIREMENTS

Recommended Schedule For Course Completion:

- A. Students enrolling in the course will be expected to complete the course in the time period of one semester. Students should progress at the rate of one module per week or according to the weekly schedule-calendar. Consequences related to reduction of a final grade may result, at the discretion of the individual instructor, whenever the quality of the student's work has been affected by nonparticipation and non-completion of course assignments and activities.
- B. Following directions in the syllabus, provides the best avenue for success. Read directions very carefully and follow all suggestions and requirements. Learners may submit assignments early, but are cautioned to not submit the bulk-type multiple assignments together. Assignments must not be submitted together. Submitting assignments in the order assigned will insure that you are progressing according to academic standards and following the design of the course.

DETERMINATION OF FINAL GRADE-ASSESSMENT OF ACADEMIC ACHIEVEMENT

COURSE LEARNING ASSESSMENT: Learners are expected to complete all performance requirements for the course and to demonstrate mastery of the course concepts and course learning outcomes. This may require learners to use library resources and to document research with citations, bibliographies, and references as applicable in completing their coursework. Mastery of course concepts may require demonstration of critical thinking and communication skills by a combination of: assignment postings, reports or written assignments, self-assessments, problem-solving analysis, interviews and observations, completion of exams or exercises and other activities. Submitting assignments in the order assigned will insure that you are progressing according to academic standards and following the design of the course. Your grade for this course will be based on mastery of course concepts as demonstrated by successfully completing the performance requirements.

COURSE GRADING POLICY

A. Graded Elements in the Course:

Fulfilling course objectives and assignments requires that each student complete a range of assignments. In addition to exercises assigned throughout the semester. All Energy Technology courses include varying levels of the following elements:

- 1) Readings-Subject Matter Study: Access subject materials from texts, handouts, assigned resources, supplementary materials and recommended resources.
- 2) Workbook/Written Activities Related to Readings/Lecture: Completion of assignments related to readings including answering text chapter questions and, workbook questions, exercises and sketches.
- 3) Laboratory Activities:
 - i. In the online study situation, completion of online experiences which duplicate laboratory-type hands-on experiences such as virtual online activities or locally available field activities.
 - ii. In the traditional classroom situation, completion of laboratory and hands-on exercises along with their related results reports and/or field experiences.
- 4) Written and/or On-Line Exams:
 - i. Completion of required written or online exams for each unit/module for each course when required.
 - ii. Completion of proctored written or online final and/or mid-term exams for each course.
 - iii. Completion of standardized competency, license and certification exams (such as those provided by ARI, NIULPE, EPA and others)
 - iv. Completion of short quizzes, practical lab exams, classroom-lab practical exercises and other activities used to check progress, understandings and prerequisites for advanced study in a course.
- 5) Reports, Projects: Completion of individual reports, papers, projects, or presentations assigned by the instructor.
- 6) Internet Exploration or Quest Assignments: Completion of a minimum of four to eight subject-matter enhancement activities/reports by obtaining information and data on the Internet relative to the course subject matter.

B. Attendance-Course Participation:

1) Online Study-Course Participation:

- I. Learners are ultimately responsible for participating in a course through the following academic activities:
- II. Uploading assignments, posting to discussion folders and responding to instructor or academic advisor inquiries. Learners are expected to be involved in ongoing instructional activities based on the recommended schedule for course completion as detailed in the syllabi, and/or course calendar or weekly schedule.
- III. In order to actively participate in a course, Learners must make contact with their faculty instructor on a regular basis through one of the following methods:
- IV. Posting of an assignment (e.g., an Internet site visit, a paper, project, completion of an exam or exercise, etc.) in the course work area of the course web site.
- V. Posting of an assignment to share with the instructor and other Learners in the course web site (e.g., identification of an exceptional web site, a review of a book or article, a proposal for a research study, a presentation in the form of a PowerPoint presentation file, reporting on participation in a research study, etc).
- VI. Participation in a threaded discussion in the course web site (e.g., commenting on a discussion question posted by the instructor, providing feedback to another Learner, etc.).
- VII. Viewing instructional materials (e.g., suggested online sites and/or materials, a PowerPoint presentation prepared by the instructor, a streaming audio or video presentation, etc.).
- VIII. Learners must use the HFCC Ucompass- messaging system on the course web site to contact instructors.
- IX. Learners who are unable to regularly participate in their online course should contact their instructor at the earliest possible time to resolve any problems.

2) Traditional Classroom Courses:

- I. Students are expected to attend all the sessions of the classes for which they are enrolled. Any classroom classes which are missed can impact the final grade due to missing important lecture and classroom/laboratory activities.
- II. Penalties may be imposed, at the discretion of the individual instructor, whenever the quality of the student's work has been affected by absence or tardiness.
- III. Instructors are not obligated to repeat instruction or provide additional lab time for sessions missed by individual students.
- IV. Skilled Trades Division apprentices missing more than three sessions in an Energy Technology course cannot take the final exam nor pass the course.
- V. No system of "cuts" operates at Henry Ford Community College. Students, as a matter of courtesy, should explain the reason for an absence to their instructors. Lack of attendance may affect the student's final grade.
- VI. Absences in connection with participation in authorized college activities must be considered in the total picture of absences for all purposes, and it is the responsibility of the student to make up work missed.

- VII. Students are required to be present at the final examination. In case of absence, it is the student's responsibility to contact the instructor in regard to makeup.

C. Typical Grading Percentages:

Each instructor will determine the percentage allocated to the individual elements for a course. A "typical" (but not mandatory) assignment of percentages is as follows: (Check the Student Assignment Completion Sheet, the Course Rubric, Course Schedule or Calendar for specific points assigned to each course requirement. Individual instructors may vary these percentages in the course they are teaching)

- I. Readings-Subject Matter Study 5-10%
- II. Workbook/Written Activities Related to Readings/Lecture and assigned materials 10-25%*
- III. Online Activities, Online Exercises, and/or Online Virtual Lab-Type Experiences or Laboratory Activities 20-60%*
- IV. Written and/or On-Line Exams 10-25%*
- V. Assignments including Reports, Projects 5-25%*
- VI. Internet Exploration Assignments 10-20%*
- VII. Participation-(Online Attendance) - (Varies with student participation and instructor review) including logged UCompass presence (time on task) in completing the online activities. TOTAL - 100%
- VIII. Late Assignments: Assignments that are turned in late will result in a 5% deduction per day from the overall grade of the assignment. Late assignments are accepted only when completed within one week after their due date.
- IX. Note: *Items which may be adjusted by an instructor significantly upward or downward in totally on-line courses reflect activities which may be more associated with that mode of instruction.

D. Grade Scale

Grades are based upon the following college scale:

Below 70=E, 70 to 74=D, 75 to 84=C, 85 to 94=B, 95 to 100=A

DROP POLICY

The official college policy for dropping a course is by the end of the first week for 100% refund (Check the Drop Policy-Refund Policy on-line at HFCC.edu). Students seeking a drop for a course must do so according to college policy - usually the tenth week, otherwise a failure for the course may be recorded.

Once a student has officially been enrolled in a course, membership in this class does not cease until the student has officially dropped the class in the Office of the Director of Admissions and Registration. A class may be dropped without any entry on the student's permanent record up to the "official state count date.* Classes dropped after the official state count date and before the end of the tenth week of classes, will be recorded on the student's permanent record as DR (dropped without prejudice). After the tenth week of classes, classes dropped will be recorded as DR or E at the discretion of the instructor.

The student's right to drop a class during the first ten weeks of a program shall not apply in classes where cheating is involved. (See "Policy on Academic Dishonesty" and student handbook.)

INCOMPLETE WORK

A student performing satisfactorily in a course may be granted an incomplete at semester's conclusion if some part of his/her course work remains unfinished.

A student performing unsatisfactorily in a course may receive an "E" at the semester's end if some parts of his/her work remains unfinished.

To receive a grade, a student must eliminate his/her deficiencies by the following mid-semester date.

Upon completion of unfinished work by the student, the course instructor initiates a grade change to be entered on the student's record. If no grade change is initiated, the Incomplete becomes a DR on the student's record.

TUITION REFUNDS

Refunds on tuition and fees (except registration fees) may be obtained on all classes of fifteen-week duration officially dropped according to the following schedule:

- 100% Before Classes Begin
- 100% 1st week of classes
- 50% 2nd week of classes

No tuition refunds are given after the end of the second week of classes and no exceptions are made for students who enter late. Courses of other than fifteen-week duration have differing refund schedules. Details may be obtained in the Office of the Registrar. Students receiving federal financial aid have additional refund options available to them. They should review the brochure Financial Aid Information Guide and Consumer Information Supplement, available in the Financial Aid Office.

ACADEMIC INTEGRITY: All work submitted in each course must be the Learner's own. This includes all assignments, work on exams, exams, reports, articles or papers, sketches, workbook exercises, and other projects or activities required by the Instructor. The submission of another person's work represented as that of the Learner's without properly citing the source of the work will be considered plagiarism and will result in an unsatisfactory grade for the work submitted or for the entire course, and may result in academic dismissal. To avoid plagiarism, do not "copy and paste" into any assignments without using quotations marks and citing in APA format the source of the material. Your work may be submitted to TurnItIn.com for originality evaluation.

STUDENT CONDUCT - ONLINE COURSE POLICY

- A. Students at HFCC are expected to show respect for order, the law, the personal rights of others, and the educational mission of the College, as well as to maintain standards of personal integrity.
- B. Students working online will be held to the same behavioral standards as students in traditional classrooms.
- C. Please be aware that instructors will be observing your threaded discussions with each other, and may review those discussions, commenting where appropriate with the goal of helping you to better understand the course content. Specifically, you should adhere to the following guidelines:
 - a. Personal correspondence should be conducted elsewhere.
 - b. Treat and respect others as you would like to be treated.
 - c. "Flaming", an angry series of words or comments used to personally attack others who may disagree with you, is not permitted.

- d. Take time to review the tone, language, word choice, spelling, and grammar of any written correspondence prior to sending it. You will be judged by the quality of your work.
- e. HFCC's computer use policy is in effect. It can be found at <http://www2.hfcc.edu/resources/policy.htm>.
- f. Students are responsible for completing their own online course work.

POLICY ON ACADEMIC DISHONESTY

- A. College Policy on Academic Dishonesty (Cheating) Henry Ford Community College considers academic dishonesty to be a serious offense. It is the policy of the College that determination of and appropriate action in respect to academic dishonesty by a student shall be a matter of individual judgment by the instructor. The instructor may administer a penalty up to and including failure in the particular course. It is the professional obligation of the faculty to enforce academic integrity in their courses. Academic dishonesty is any activity intended to improve a student's grade fraudulently.* It includes, but is not limited to, the following:
 - a. Unauthorized acquisition of tests or alteration of grades (such as the stealing of tests, test keys, or grade books from faculty offices or elsewhere, or the purchasing of tests or grade books);
 - b. Unauthorized use of notes, books, or other prohibited materials during an examination;
 - c. Open cheating on an examination (such as copying from another student's paper);
 - d. Permitting another person to take a test in the student's place or receiving unauthorized assistance with any work for which academic credit is received;
 - e. Providing unauthorized assistance with any work for which academic credit is received;
 - f. Revision of graded work in an attempt to receive additional credit fraudulently;
 - g. Plagiarism (using another person's work without acknowledgment);
 - h. Any other conduct intended to obtain academic credit fraudulently or dishonestly.
- B. Energy Technology Policy for Computer-Utilized, On-Line and Web-Based Courses The following practices for students taking Energy Technology courses are considered improper and prohibited according to the Academic Dishonesty Policy or as a violation of the Copyright Act:
 - a. Submitting Xerographic-type copies of any work - All work should be original and submitted in original writing-printing.
 - b. Copying or reproducing tests or examinations for on-line courses - This material is covered by the copyright act and as such is proprietary to the instructor or the college and is NOT to be reproduced UNDER ANY circumstances (You cannot legally print out course exams!).
 - c. IMPORTANT! Copying the exams and/or answers to written or computerized exams is considered grounds for immediate failure in the course according to the Academic Dishonesty Policy!
 - d. Assignments, student completion sheets, forms, handouts, course packs, computer links and other material provided by instructors may be copied (usually in one copy only as required) by students for their individual use in completing course activities.

- e. Completing specifically identified computerized final exams or written exams with the help or assistance of another person or having another person complete work on any of your exams and submitting this work as your own.
- f. Falsifying assignments, copying another person's work, or completing any worksheets, lab assignments, or required hands-on lab exercise sheets - which require actual hands-on lab or research, work to be completed prior to submission.

CREDIT FOR PRIOR COLLEGE LEVEL LEARNING

This course is considered capable of providing college credit based upon a determination by appropriate faculty through consideration of one or more of the following: 1) field experience, 2) licenses held, 3) completing course exams and/or 4) performance sequences, and/or 5) completing a portfolio, holding a current certification from American Red Cross or American Heart Association for 1st Aid, CPR, AED and/or, 6) this course may be waived in a program, provided that the student still meets the total credit requirement for the certificate, diploma, or degree and has completed (essentially equivalent) compliance training during employment in industry for a period of two or more years as reviewed and approved by a faculty member.

Note: Courses with the (PL) designation qualify for prior college-level learning credit evaluation, which may be granted, based upon completion of the PLACE portfolio development course MFMT 108 or through departmental exams. This course may include field-type "hands-on" experiences such as field trips, plant visits, field quests or activities which will be identified and/or included as mandatory requirements for the course depending upon license agency mandates, learner needs or program requirements, instructor-determined requirements, and/or employer requirements,

STUDENT SUPPORT SERVICES

Instructional Technology & Tech Buddies

- A. If you require assistance accessing UCompass Educator courses, please contact Instructional Technology at 313.845.9663, ext. 3, 4, or 5 or via e-mail at signorelli@hfcc.edu, kolin@hfcc.edu, or vbeaty@hfcc.edu.
- B. On-campus assistance is also available in the Student Center at the Tech Buddy Desk or within Instructional Technology, Monday - Friday, 8:30 a.m. - 4: 30 p.m. Instructional Technology is located on the lower level of the Learning Technology Center (same building as Campus Safety), room A-004. Media Center
- C. Located on the second floor of the Library, the Media Center is an open access computer lab where students can go to work on computer assignments, access the Internet, and/or check their e-mail. For more information, you may contact the Media Center at 313.845.6386. For more information regarding Library Services, you may phone 313.845.9606.

Assisted Learning Services

The Assisted Learning Services Program is designed to assist physically challenged, learning disabled, or academically challenged students at Henry Ford Community College to overcome barriers to education through supportive services. In addition, the Assisted Learning Services Department also provides tutoring services to the general student population. Assisted Learning Services is located in the LRC (Learning Resources Center), north side (parking lot side) main level. For more information, you may contact the office at 313.845.9617 or for the hearing impaired 313.845.9804.

Learning Lab

Located on the second floor of the Learning Resource Center, the Learning Lab assist HFCC students with identifying and improving the skills needed for success in the areas of Reading, Writing, and Math. Although operation hours may slightly vary each semester generally, the Learning Lab is open Monday, Tuesday, Wednesday, Thursday, from 7:30 a.m. – 8:40 p.m., on Friday from 7:30 a.m. – 4:30 p.m., and Saturday from 9:40 a.m. – 1:40 p.m. For more information, contact the Learning Lab at 313.845.9643.

Sample