

Washtenaw Community College Comprehensive Report

UAT 312 Energy Auditing and Retrofit Effective Term: Spring/Summer 2025

Course Cover

College: Advanced Technologies and Public Service Careers

Division: Advanced Technologies and Public Service Careers

Department: United Association Department (UAT Only)

Discipline: United Association Training

Course Number: 312

Org Number: 28200

Full Course Title: Energy Auditing and Retrofit

Transcript Title: Energy Auditing and Retrofit

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Inactivation

Change Information:

Consultation with all departments affected by this course is required.

Rationale: The course is no longer relevant: outcomes have changed enough to create a new course.

Proposed Start Semester: Winter 2025

Course Description: This course will cover how the sustainable energy movement is using the energy retrofit process to meet the goal of making buildings efficient. All steps in the energy retrofit process will be covered with emphasis on the audit and Energy Conservation Measures (ECM) portion of the process. Also, the instruments used in the audit process as well as the engineering concepts of developing ECM will be covered. Limited to United Association Instructor Training program graduates.

Course Credit Hours

Variable hours: No

Credits: 1.5

The following Lecture Hour fields are not divisible by 15: Student Min ,Instructor Min

Lecture Hours: Instructor: 22.5 Student: 22.5

The following Lab fields are not divisible by 15: Student Min, Instructor Min

Lab: Instructor: 1.5 Student: 1.5

Clinical: Instructor: 0 Student: 0

Total Contact Hours: Instructor: 24 Student: 24

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

General Education

Degree Attributes

Below College Level Pre-Reqs

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Explain procedures for identifying energy savings in existing buildings.

Assessment 1

Assessment Tool: Survey of UA training coordinators/supervisors.

Assessment Date: Spring/Summer 2011

Assessment Cycle: Every Three Years

Course section(s)/other population: all

Number students to be assessed: 75% of all students who teach related HVACR courses on behalf of the local union

How the assessment will be scored: Students' training activities will be scored and evaluated on a survey questionnaire covering both learning outcomes.

Standard of success to be used for this assessment: Based on the number of students who teach the learned materials in the subsequent year, 75% of them will score and average of satisfactory or above on the survey questionnaires to be completed by UA training coordinators/supervisors.

Who will score and analyze the data: The UA Program Administrator will coordinate with UA training coordinators and the training department about the implementation of the assessment plan and the collection of data from UAT faculty and will discuss the results with UAT faculty.

2. Use UA and vendor supplied training materials.

Assessment 1

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Assessment Date: Spring/Summer 2011

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Who will score and analyze the data: The UA Program Administrator will coordinate with UA training coordinators and the training department about the implementation of the assessment plan and the collection of data from UAT faculty and will discuss the results with UAT faculty.

Course Objectives

1. Explain procedures for auditing energy usage in existing buildings.
2. Describe opportunities for energy savings.
3. Incorporate UA and Vendor sustainable energy teaching materials into existing courses.

New Resources for Course**Course Textbooks/Resources**

Textbooks

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

<u>Reviewer</u>	<u>Action</u>	<u>Date</u>
Faculty Preparer: <i>Tony Esposito</i>	<i>Faculty Preparer</i>	<i>Nov 01, 2024</i>
Department Chair/Area Director: <i>Marilyn Donham</i>	<i>Recommend Approval</i>	<i>Nov 04, 2024</i>
Dean: <i>Eva Samulski</i>	<i>Recommend Approval</i>	<i>Nov 06, 2024</i>
Curriculum Committee Chair: <i>Randy Van Wagnen</i>	<i>Reviewed</i>	<i>Apr 15, 2025</i>
Assessment Committee Chair:		
Vice President for Instruction: <i>Brandon Tucker</i>	<i>Approve</i>	<i>Apr 15, 2025</i>

Course Discipline Code & No: UAT312 Title: Energy Auditing and Retrofit Effective Term Fall 2009

Division Code: VCT Department Code: UA Org #: 28310 28200

Don't publish: ☐ College Catalog ☒ Time Schedule ☐ Web Page

Reason for Submission. Check all that apply.

☒ New course approval ☐ Reactivation of inactive course

☐ Three-year syllabus review/Assessment report ☐ Inactivation (Submit this page only.)

☐ Course change

Change information: Note all changes that are being made. Form applies only to changes noted.

☐ Consultation with all departments affected by this course is required. ☐ Total Contact Hours (total contact hours were: _____)

☐ Course discipline code & number (was _____)* ☐ Distribution of contact hours (contact hours were: _____)

*Must submit inactivation form for previous course. ☐ lecture: _____ lab _____ clinical _____ other _____

☐ Course title (was _____) ☐ Pre-requisite, co-requisite, or enrollment restrictions

☐ Course description ☐ Change in Grading Method

☐ Course objectives (minor changes) ☐ Outcomes/Assessment

☐ Credit hours (credits were: _____) ☐ Objectives/Evaluation

☐ Other _____

Rationale for course or course change. Attach course assessment report for existing courses that are being changed.

Approvals Department and divisional signatures indicate that all departments affected by the course have been consulted.

Department Review by Chairperson ☐ New resources needed ☐ All relevant departments consulted

Print: Dan Welch Signature: D. Welch Date: 12/11/09

Faculty/Preparer

Dept. Chair Recommendation ☐ Yes ☐ No

Print: Dan Welch Signature: D. Welch Date: 12/11/09

Department Chair

Division Review by Dean

☐ Request for conditional approval

Recommendation ☒ Yes ☐ No [Signature] Date: 12/12/09

Dean's/Administrator's Signature

Curriculum Committee Review

Recommendation ☐ Tabled ☒ Yes ☐ No [Signature] Date: 1/5/10

Curriculum Committee Chair's Signature

Vice President for Instruction Approval

[Signature] Date: 2-8-10

Vice President's Signature

Approval ☒ Yes ☐ No ☐ Conditional

Do not write in shaded area.

Log File 11/16/09 Ecopy ☐ Banner 2/8 C&A Database 2/8 C&A Log File 2/8 Basic skills ☐ Contact fee ☐

Please return completed form to the Office of Curriculum & Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

***Complete ALL sections which apply to the course, even if changes are not being made.**

Course: UAT 312	Course title: Energy Auditing and Retrofit
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Credit hours: <u>1.5</u> If variable credit, give range: _____ to _____ credits	Contact hours per semester: <table> <tr> <th></th> <th><u>Student</u></th> <th><u>Instructor</u></th> </tr> <tr> <td>Lecture:</td> <td>22.5</td> <td>22.5</td> </tr> <tr> <td>Lab:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Clinical:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Practicum:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Other:</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Totals:</td> <td><u>22.5</u></td> <td><u>22.5</u></td> </tr> </table>		<u>Student</u>	<u>Instructor</u>	Lecture:	22.5	22.5	Lab:	_____	_____	Clinical:	_____	_____	Practicum:	_____	_____	Other:	_____	_____	Totals:	<u>22.5</u>	<u>22.5</u>	Are lectures, labs, or clinicals offered as separate sections? <input type="checkbox"/> Yes - lectures, labs, or clinicals are offered in separate sections <input type="checkbox"/> No - lectures, labs, or clinicals are offered in the same section	Grading options: <input type="checkbox"/> P/NP (limited to clinical & practical) <input type="checkbox"/> S/U (for courses numbered below 100) <input checked="" type="checkbox"/> Letter grades
	<u>Student</u>	<u>Instructor</u>																						
Lecture:	22.5	22.5																						
Lab:	_____	_____																						
Clinical:	_____	_____																						
Practicum:	_____	_____																						
Other:	_____	_____																						
Totals:	<u>22.5</u>	<u>22.5</u>																						

Prerequisites. Select one:

☒ College-level Reading & Writing

☐ Reduced Reading/Writing Scores

☐ No Basic Skills Prerequisite

(Add information at Level I prerequisite)

(College-level Reading and Writing is not required.)

In addition to Basic Skills in Reading/Writing:

Level I (enforced in Banner)

Course	Grade	Test	Min. Score	Concurrent Enrollment <small>Can be taken together</small>	Corequisites <small>Must be enrolled in this class also during the same semester</small>
<input type="checkbox"/> and <input type="checkbox"/> or _____	_____	_____	_____	<input type="checkbox"/>	_____
<input type="checkbox"/> and <input type="checkbox"/> or _____	_____	_____	_____	<input type="checkbox"/>	_____
<input type="checkbox"/> and <input type="checkbox"/> or _____	_____	_____	_____	<input type="checkbox"/>	_____
<input type="checkbox"/> and <input type="checkbox"/> or _____	_____	_____	_____	<input type="checkbox"/>	_____

Level II (enforced by instructor on first day of class)

Course	Grade	Test	Min. Score
<input type="checkbox"/> and <input type="checkbox"/> or _____	_____	_____	_____
<input type="checkbox"/> and <input type="checkbox"/> or _____	_____	_____	_____

Enrollment restrictions (In addition to prerequisites, if applicable.)

☐ and ☐ or Consent required

☒ and ☐ or Admission to program required

☐ and ☐ or Other (please specify):

Program: UA Instructor Training Program

Please send syllabus for transfer evaluation to:

Conditionally approved courses are not sent for evaluation.

Insert course number and title you wish the course to transfer as.

☐ E.M.U. as _____

☐ _____ as _____

☐ U of M as _____

☐ _____ as _____

☐ _____ as _____

☐ _____ as _____

MASTER SYLLABUS

Course UAT 312	Course title Energy Auditing and Retrofit	
Course description State the purpose and content of the course. Please limit to <u>500</u> characters.	This course will cover how the sustainable energy movement is using the energy retrofit process to meet the goal of making buildings efficient. All steps in the energy retrofit process will be covered with emphasis on the audit and Energy Conservation Measures (ECM) portion of the process. Also, the instruments used in the audit process as well as the engineering concepts of developing ECM will be covered. Limited to United Association Instructor Training program graduates.	
Course outcomes List skills and knowledge students will have after taking the course. Assessment method Indicate how student achievement in each outcome will be assessed to determine student achievement for purposes of course improvement.	Outcomes (applicable in all sections) After successful completion of this course, the student will be able to: <ol style="list-style-type: none"> 1. Explain procedures for identifying energy savings in existing buildings 2. Use UA and vendor supplied training materials 	Assessment Methods for determining course effectiveness Survey of UA training coordinators/supervisors. Survey of UA training coordinators/supervisors.
Course Objectives Indicate the objectives that support the course outcomes given above. Course Evaluations Indicate how instructors will determine the degree to which each objective is met for each student.	Objectives (applicable in all sections) Outcome 1: <ul style="list-style-type: none"> • Explain procedures for auditing energy usage in existing buildings • Describe opportunities for energy savings Outcome 2: <ul style="list-style-type: none"> • Incorporate UA and Vendor sustainable energy teaching materials into existing courses 	Evaluation Methods for determining level of student performance of objectives Exam consisting of multiple choice, true/false, fill in the blank and short answer questions. Class activity Presentation and demonstration of learned course materials.

List all new resources needed for course, including library materials.
 No new resources required.

Student Materials:

List examples of types Texts Supplemental reading Supplies Uniforms Equipment Tools Software	The UA Training Department provides all necessary books and materials.	Estimated costs \$ 0
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MASTER SYLLABUS

Equipment/Facilities: Check all that apply. (All classrooms have overhead projectors and permanent screens.)

Check level only if the specified equipment is needed for all sections of a course.

☐ Level I classroom

Permanent screen & overhead projector

☐ Level II classroom

Level I equipment plus TV/VCR

☒ Level III classroom

Level II equipment plus data projector, computer, faculty workstation

☐ Off-Campus Sites

☐ Testing Center

☐ Computer workstations/lab

☐ ITV

☐ TV/VCR

☐ Data projector/computer

☐ Other _____

Assessment plan:

Learning outcomes to be assessed (list from Page 3)	Assessment tool	When assessment will take place (semester & year)	Course section(s)/other population	Number students to be assessed
Explain procedures for identifying energy savings in existing buildings	Survey of UA training coordinators/supervisors.	Spring 2011 for students enrolled in Summer 2010, and every three years thereafter.	All	75% of all students who teach related HVACR courses on behalf of the local union
Use UA and vendor supplied training materials	Survey of UA training coordinators/supervisors.	Spring 2011 for students enrolled in Summer 2010, and every three years thereafter.	All	75% of all students who teach related HVACR courses on behalf of the local union

Scoring and analysis of assessment:

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Attach the rubric/scoring guide.

Students' training activities will be scored and evaluated on a survey questionnaires covering both learning outcomes.

2. Indicate the standard of success to be used for this assessment.

Based on the number of students who teach the learned materials in the subsequent year, 75% of them will score an average of satisfactory or above on the survey questionnaires to be completed by UA training coordinators/supervisors.

3. Indicate who will score and analyze the data (data must be blind-scored).

The UA Program Administrator will coordinate with UA training coordinators and the training department about the implementation of the assessment plan and the collection of data from UAT faculty and will discuss the results with UAT faculty.

4. Explain the process for using assessment data to improve the course.

The assessment will be shared with the appropriate UA training coordinators, training department and UAT faculty. The UA Program Administrator will solicit suggestions for improving the results and will work with UA training coordinators, the training department and UAT faculty to make needed changes to improve course content and student performance.