WASHTENAW COMMUNITY COLLEGE

MASTER SYLLABUS

Course Discipline Code & No: EWA260 **Title:** Applied Science **Effective Term** Fall 2009

Division Code: VCT **Department Code:** VASD **Org #:** 28200

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

Reason for Submission. Check all that apply.

- ☒ New course approval
- ☐ Three-year syllabus review/Assessment report
- ☐ Course change
- ☐ Reactivation of inactive course
- ☐ Inactivation (Submit this page only.)

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.
- ☐ Course discipline code & number (was _____)*
  *Must submit inactivation form for previous course.
- ☐ Course title (was _____)
- ☐ Course description
- ☐ Course objectives (minor changes)
- ☐ Credit hours (credits were: _____)
- ☐ Total Contact Hours (total contact hours were: _____)
- ☐ Distribution of contact hours (contact hours were: lecture: _____ lab _____ clinical _____ other _____)
- ☐ Pre-requisite, co-requisite, or enrollment restrictions
- ☐ Change in Grading Method
- ☐ Outcomes/Assessment
- ☐ 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 (Faculty/Preparer) Signature D. Welch Date: 2/2/09

Print: _____ (Department Chair) Signature _____ Date: _____

Division Review by Dean

☐ Request for conditional approval

Recommendation ☐ Yes ☐ No D. Welch (Dean's/Administrator's Signature) 2/2/09 (Date)

Curriculum Committee Review

Recommendation _____

☐ Tabled ☒ Yes ☐ No Lisa Veasey (Curriculum Committee Chair's Signature) 3/18/09 (Date)

Vice President for Instruction Approval

Roger M. Palay. (Vice President's Signature) 3/19/09 (Date)

Approval ☒ Yes ☐ No ☐ Conditional

Do not write in shaded area.

Log File 2/17/09 Ecopy ☐ Banner 3/23 C&A Database 3/23 C&A Log File 3/23 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:	**Course title:**
EWA260	Applied Science

Credit hours: 3

If variable credit, give range:

_____ _ to _____ credits

Contact hours per semester:

	Student	Instructor
Lecture:	45	45
Lab:	___	___
Clinical:	___	___
Practicum:	___	___
Other:	___	___
Totals:	45	45

Are lectures, labs, or clinicals offered as separate sections?

☐ Yes - lectures, labs, or clinicals are offered in separate sections

☐ No - lectures, labs, or clinicals are offered in the same section

Grading options:

☐ P/NP (limited to clinical & practical)

☐ S/U (for courses numbered below 100)

☒ Letter grades

Prerequisites. Select one:

☒ College-level Reading & Writing

☐ Reduced Reading/Writing Scores (Add information at Level I prerequisite)

☐ No Basic Skills 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 (Can be taken together)	Corequisites (Must be enrolled in this class a also during the same semester)
	_____	___	_____	_____	☐	_____
☐ and ☐ or	_____	___	_____	_____	☐	_____
☐ and ☐ or	_____	___	_____	_____	☐	_____
☐ and ☐ or	_____	___	_____	_____	☐	_____

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

	Course	Grade	Test	Min. Score
	_____	___	_____	_____
☐ and ☐ or	_____	___	_____	_____
☐ and ☐ or	_____	___	_____	_____

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

☐ and ☐ or Consent required

☐ and ☒ or Admission to program required

Program: IBEW 252 Apprenticeship

☐ and ☐ or Other (please specify): _____

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 _____

☐ U of M as _____ ___

☐ _____ as _____ _____

☐ _____ as _____

☐ _____ as _____

☐ _____ as _____

Course	Course title
EWA260	Applied Science

Course description State the purpose and content of the course. Please limit to 500 characters.	This course prepares apprentices in the electrical trades to accurately apply principles of science to their work. Topics include: the structure of matter, the physical characteristics to copper and aluminum as conductor materials, the atomic structure of conductors versus insulators (dielectrics), temperature-pressure enthalpy diagrams for heating and cooling cycles, and light propagation in fiber optic media. This course is taught at the IBEW local training center and is only open to apprentices accepted into a program.	
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)	**Assessment** Methods for determining course effectiveness
	After the successful completion of these courses, the student will be able to: 1. Present atomic structure of matter 2. Discuss how atomic structure affects conductivity and resistance 3. Present fundamental physics of temperature, pressure, sound, and light 4. Apply physics to refrigeration systems, audible alarm devices, and fiber optic communications	This course is assessed externally by the local's Joint Apprenticeship Training Committee (JATC), consisting of NECA representatives (industry) and IBEW members. The local receives feedback on needed technical updates and apprentice skill performance.
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)	**Evaluation** Methods for determining level of student performance of objectives
	Objectives and methods of evaluation follow the curriculum set out by the National Joint Apprentice Training Committee (NJATC).	

List all new resources needed for course, including library materials.
All resources for the program are in place at the Local 252 Training Center.

Student Materials:

List examples of types		Estimated costs
Texts Supplemental reading Supplies Uniforms Equipment Tools Software	All books and supplies provided through the IBEW Local 252 Training Center.	$ 0

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 Local 252 Training Center

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
1. Present atomic structure of matter 2. Discuss how atomic structure affects conductivity and resistance 3. Present fundamental physics of temperature, pressure, sound, and light 4. Apply physics to refrigeration systems, audible alarm devices, and fiber optic communications	Contractors (employer) provide paper feedback forms for apprentice skill performance reviews. JATC contractor members provide specifications detailing technical updates.	Fall 2011 and every three years thereafter.	All	All

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.

   Apprentice feedback forms filled out by the employing contractor.

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

   The standard of success is set by the local JATC.

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

   The data is analyzed by the JATC as a committee.

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

   Results are initially shared with the training coordinator for the local. The training coordinator then works with appropriate instructor staff to make needed changes.