

## Program Information Report

## Apprenticeship &amp; Union Trades

**Industrial Training (ASINDT)****Associate in Science Degree****Program Effective Term: Fall 2024****High Demand Occupation High Skill Occupation High Wage Occupation****Program is also available online**

This program gives indentured journeymen of the United Association or Ironworkers, the opportunity to apply their work as certified apprentice instructors toward an associate in science degree in Industrial Training. Students will complete the general education courses, five summer instructor training sessions, and receive prior learning credits for experience in an area of specialization such as plumbing, pipefitting, HVAC, sprinkler fitting and ironworking.

**Articulation:**

Eastern Michigan University, several BS degrees;  
 Ferris State University, Bachelor degree.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site:  
<https://www.wccnet.edu/learn/transfer-wcc-credits/articulation-agreements.php> .

**Program Admission Requirements:**

Open only to United Association and Ironworker instructors.

<b>General Education Requirements</b>		<b>(30 credits)</b>
Writing	Elective(s)	3
UAT 210	Public Speaking*	1.5
UAT 213	Planning, Teaching and Assessing Effective Lessons - Advanced*	1.5
Math	Elective(s)	3
Nat. Sci.	Elective(s)	3
	Nat. Sci. Lab Elective(s)	3
Soc. Sci.	Elective(s)	6
Arts/Human.	Elective(s)	6
	General Education Elective(s) (0-3 credits) to reach a minimum 30 General Education Credits	3

\*Students may choose any WCC courses that meet the Second Composition/Writing or Communication requirement. Only applies to UA programs.

**WCC General Education Requirements**  
Effective Fall 2018

Associate degree programs were updated to meet the revised WCC general education requirements below.

**Course Distribution Requirements**

Associate degree students must complete courses from each of six General Education content areas. The requirements vary, depending on which degree is being earned. The number of general education credit hours required for each degree is as follows.

	AA	AS	AAS
Writing/Composition	3-4 credits	3-4 credits	3-4 credits
2nd Writing/Composition or Communication	3-4 credits	3 credits	3 credits
Mathematics	3-4 credits	3-4 credits	3-4 credits
Natural Sciences <sup>1</sup>	7-8 credits	7-8 credits	3-4 credits
Social & Behavioral Science <sup>2</sup>	6 credits	6 credits	3 credits
Arts and Humanities <sup>3</sup>	6 credits	6 credits	3 credits
General Education Electives to reach 30 credits	0-2 credits	0-2 credits	N/A
Minimum	30 credits	30 credits	18 credits

<sup>1</sup> Two courses in Natural Science including one with laboratory experience (from two disciplines)

<sup>2</sup> From two disciplines

<sup>3</sup> From two disciplines

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**School of Apprenticeship and Occupational Studies**

Find a trade-related associate's degree program that builds on your professional abilities while giving you the knowledge and skills needed to move into organizational leadership.

Washtenaw Community College offers programs at several levels for students who want to begin new careers, or advance in their existing careers. The first level is the certificate, which can vary from nine to thirty-six credits, depending on the field. Certificates generally prepare students for entry-level jobs.

The next level, an Associate in Applied Science, is available for some programs.

Alternatively, students can earn an AAS in Occupational Studies by completing a certificate and General Education requirements.

**Articulated Union Building Trade Apprenticeship Programs**

These programs are restricted to members of approved union building trade apprenticeship programs, including United Association (UA).

**Industrial Training (ASINDT)**

**Associate in Science Degree**

**Program Effective Term: Fall 2018**

**High Demand Occupation High Skill Occupation High Wage Occupation**

**Program is also available online**

This program gives indentured journeymen of the United Association or Ironworkers, the opportunity to apply their work as certified apprentice instructors toward an associate in science degree in Industrial Training. Students will complete the general education courses, five summer instructor training sessions, and receive prior learning credits for experience in an area of specialization such as plumbing, pipefitting, HVAC, sprinkler fitting and ironworking.

**Articulation:**

Eastern Michigan University, several BS degrees;  
 Ferris State University, Bachelor degree.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site: <http://www.wccnet.edu/curriculum/articulation/levelone/colleges/>.

**Program Admission Requirements:**

Open only to United Association and Ironworker instructors.

Major/Area Requirements		(12 credits)
	UA students must complete a minimum 12 additional credits from a combination of required teaching methods courses and technical update courses (UAT courses).	12
	Ironworker students must complete 15 credits from a combination of required teaching methods courses and technical update courses (IWT courses).	

General Education Requirements		(32 credits)
Writing	Elective(s)	6
UAT 210	Public Speaking*	1.5
UAT 213	Planning and Presenting Lessons*	1.5
Math	Elective(s)	3
Nat. Sci.	Elective(s)	3
	Nat. Sci. Lab Elective(s)	3
Soc. Sci.	Elective(s)	6
Arts/Human.	Elective(s)	6
	General Education Elective(s) (0-2 credits) to reach a minimum 30 General Education Credits	2

\*Students may choose any WCC courses that meet the Second Composition/Writing or Communication requirement. Only applies to UA programs.

**Minimum Option Credits Required for the Program:**

**19**

Complete a specialization in plumbing, pipefitting, HVAC, sprinkler fitting or ironworking. Students should apply for non-traditional credit evaluation of their apprenticeship experiences to meet the specialization requirement.

**Industrial Training Options**

Architectural and Ornamental Ironworker (AOIW)		(19 credits)
IWA 120	Introduction to Ironwork	3

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IWA 122	Ironworker - General Rigging	2
IWA 131	Introduction to Metal Building	2
IWA 161	Introduction to Architectural and Ornamental Ironwork	2
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
IWA 265	Advanced Architectural and Ornamental Ironwork	6

<b>HVAC Specialty (HVTC)</b>		<b>(26 credits)</b>
UAE 140	Introduction to HVACR Service Technician Practices	3
UAE 142	Soldering and Brazing	3
UAE 144	Refrigeration	2
UAE 146	Air Conditioning	2
UAE 148	Electrical Controls	2
UAE 150	DC Electronics	2
UAE 152	Advanced Electrical Controls and Pneumatic Controls	3
UAE 154	Advanced Air Conditioning and Refrigeration	3
UAE 156	Air and Water Balancing and Motor Alignment	3
UAE 158	Advanced HVACR Practices	3

<b>Journeyman Ironworker (JMIW)</b>		<b>(26 credits)</b>
IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 131	Introduction to Metal Building	2
IWA 141	Introduction to Reinforcing Ironwork	3
IWA 155	Rigging/Machinery Mover II	3
IWA 161	Introduction to Architectural and Ornamental Ironwork	2
IWA 172	Introduction to Structural Features	4
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
IWA 272	Advanced Structural Features	3

<b>Metal Building Erector (MTBE)</b>		<b>(19 credits)</b>
IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 131	Introduction to Metal Building	2
IWA 161	Introduction to Architectural and Ornamental Ironwork	2
IWA 172	Introduction to Structural Features	4
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
IWA 235	Advanced Metal Building	2

<b>Pipefitter Specialty (PIPE)</b>		<b>(26 credits)</b>
UAF 102	Introduction to Arc Welding, Soldering, and Brazing	3
UAF 120	Introduction to Pipefitter Practices	3
UAF 122	Drawing Interpretation and Plan Reading	2
UAF 124	Oxy Fuel Cutting and Shielded Arc Welding	2
UAF 126	Hydronic Heating and Steam Systems	2
UAF 128	Refrigeration and Electrical Controls	2
UAF 130	Advanced SMAW Welding	3
UAF 132	Advanced Pipefitter Topics	3
UAF 134	Controls and Instrumentation	3
UAF 136	GTAW Welding	3

<b>Plumber Specialty (PLUM)</b>		<b>(26 credits)</b>
UAP 100	Introduction to Plumbing Practices	3
UAP 102	Introduction to Arc Welding, Soldering and Brazing	3
UAP 104	Drawing Interpretation and Plan Reading	2
UAP 106	Oxy Fuel Cutting and Shielded Arc Welding	2
UAP 108	Water Supply and Drainage	2
UAP 110	Customer Service Techniques	2
UAP 112	Plumbing Fixtures and Appliances	3
UAP 114	Plumbing Codes and Regulations	3
UAP 116	Medical Gas and Backflow Prevention Techniques	3
UAP 118	Advanced Plumbing Practices	3

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<b>Reinforcing Ironworker (REIW)</b>		<b>(19 credits)</b>
IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 141	Introduction to Reinforcing Ironwork	3
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
IWA 241	Advanced Reinforcing Ironwork	7
<b>Rigger/Machinery Mover (RGMM)</b>		<b>(19 credits)</b>
IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 151	Rigging/Machinery Mover I	3
IWA 155	Rigging/Machinery Mover II	3
IWA 191	Reinforced Iron and Structures for Rigging	4
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
<b>Sprinkler Fitter Specialty (SPRF)</b>		<b>(26 credits)</b>
UAR 160	Introduction to Sprinkler Fitter Practices	3
UAR 162	Basic Drawing and Introduction to Automatic Sprinklers	3
UAR 164	Reading Automatic Sprinkler Piping Drawings	2
UAR 166	Installation of Sprinkler Systems	2
UAR 168	Architectural Working Drawings and Blueprint Reading for Sprinkler Fitters	2
UAR 170	Sprinkler Water Supply and The Automatic Sprinkler	2
UAR 172	Types of Fire Protection Systems and Alarms	3
UAR 174	Special Application Sprinkler Systems and Hydraulics	3
UAR 176	Human Relations	3
UAR 178	Technical Writing	3
<b>Trade Related Elective Credits (TRI)</b>		<b>(19 credits)</b>
Trade Related Elective Credits (19-26)		19-26

**Minimum Credits Required for the Program:**

**63**

WASHTENAW COMMUNITY COLLEGE

GENERAL EDUCATION REVISION AAS PROGRAM CHANGE FORM 2018-2019

Program Code: <b>ASINDT</b>	Program Name: <b>Industrial Training</b>
Division Code: <b>ATP</b>	Department: <b>JA</b>

This form is to be used only for General Education Revision Program Changes for Associate in Applied Science (AAS) programs. Any other program changes should be submitted separately using a standard Program Change Form.

**Directions:**

1. Review each general education area under **Requested Changes** below and respond as needed.
2. Attach the semester program layout showing the current program listing from the WCC catalog.
  - a. Indicate any changes to be made on the semester layout.
  - b. Draw a line through any courses that should be removed on the semester layout.
  - c. Write in any courses that need to be added on the semester layout.
3. Submit this form and semester program layout to the Office of Curriculum and Assessment (SC 257).


Current General Education Requirements		Revised General Education Requirements 2018-2019	
AAS		AAS	
Writing	3-4 credits	English Composition	3 - 4 credits
Speech	3 credits	2 <sup>nd</sup> Course in English Composition or one course in Communication	3 - 4 credits
Mathematics	3 - 4 credits	Mathematics	3 - 4 credits
Natural Sciences	3 - 4 credits	Natural Sciences	3 - 5 credits
Social & Behavioral Sciences	3 credits	Social & Behavioral Sciences	3 credits
Arts & Humanities	3 credits	Arts & Humanities from	3 credits
Critical Thinking	0 credits	Total	18 credits
Computer & Information Literacy	3 credits		
Total	21-24 credits		

Please review each General Education Area in the chart below, and record the needed changes in the chart and on the attached semester program layout.

REQUESTED CHANGES	
<b>General Education Area</b>	
<b>English Composition</b> – The requirement for one writing/English composition course remains the same. No changes will be made unless specifically requested below. (Use Writing Elective or ENG 111)	
Optional Change:	
<b>2<sup>nd</sup> Course in English Composition or one course in Communication</b> WCC previously required both a second composition/writing course and a communication course. Your options are:	
<ol style="list-style-type: none"> <li>1. Allow students to select any course that meets composition/writing or communication (<i>recommended</i>).</li> <li>2. Require students to take a specific composition course (identify course below and on semester layout).</li> <li>3. Require students to take a specific communication course (identify course below and on semester layout).</li> </ol>	
Requested Change:	



	<b>Mathematics</b> – The requirement for one mathematics course remains the same. However, the courses that meet the MTA requirement have changed slightly. See the course listing for details
	Optional Change:
	<b>Natural Sciences</b> - The requirement for one natural science course remains the same. No changes will be made unless specifically requested below.
	Optional Change:
	<b>Social &amp; Behavioral Sciences</b> – The requirement for one social and behavioral science course remains the same. No changes will be made unless specifically requested below.
	Optional Change:
	<b>Arts &amp; Humanities</b> – The requirement for one arts and humanities course remains the same. No changes will be made unless specifically requested below. (Note: A department can designate a COM course as a requirement here. The same course cannot be counted in two areas.)
	Optional Change:
	<b>Computer and Information Literacy</b> The requirement for computer and information literacy has been removed. Your options are: <ol style="list-style-type: none"> <li>1. Continue to require a specific computer course. If a specific course is required in your program, we will leave it there. If you previously used "Computer and Information Literacy Course," you will need to specify either a specific course or a list of courses from which to choose.</li> <li>2. Remove the computer and information literacy course if the program will still meet the minimum of 60 credit hours.</li> <li>3. Remove the computer and information literacy course and replace the course with elective or other credits as needed to meet the minimum of 60 credit hours.</li> </ol>
	Required Change:

Reviewer	Print Name	Signature	Date
Initiator			
Department Chair			
Division Dean/ Administrator			
Vice President for Instruction	Kimberly Hurris		1/9/18

**Office use only**

Entered in:  Banner  C&A Database  Log File  
1/22/18 1/22/18

PROGRAM CHANGE OR DISCONTINUATION FORM

Program Code: ~~ASINDT/APITRN~~ Program Name: Industrial Training  
 Division Code: Voc. Department: United Association  
 Tech.

Effective Term: ~~201109~~  
 201209

**Directions:**

1. Attach the current program listing from the WCC catalog or Web site and indicate any changes to be made.
2. Draw lines through any text that should be deleted and write in additions. Extensive narrative changes can be included on a separate sheet.
3. Check the boxes below for each type of change being proposed. Changes to courses, discontinuing a course, or adding new courses as part of the proposed program change, must be approved separately using a Master Syllabus form, but should be submitted at the same time as the program change form.

**Requested Changes:**

<input type="checkbox"/> Review	<input checked="" type="checkbox"/> Program admission requirements
<input type="checkbox"/> Remove course(s): _____	<input type="checkbox"/> Continuing eligibility requirements
<input checked="" type="checkbox"/> Add course(s): <u>Add Ironworker Instructor Classes for Major and apprenticeship credits</u>	<input type="checkbox"/> Program outcomes
<input type="checkbox"/> Program title (title was _____)	<input type="checkbox"/> Accreditation information
<input checked="" type="checkbox"/> Description	<input type="checkbox"/> Discontinuation (attach program discontinuation plan that includes transition of students and timetable for phasing out courses)
<input type="checkbox"/> Type of award	<input type="checkbox"/> Other _____
<input type="checkbox"/> Advisors	
<input type="checkbox"/> Articulation information	

Show all changes on the attached page from the catalog.

**Rationale for proposed changes or discontinuation:**

Ironworker Instructor Training students will be eligible for this degree. This program is similar to the UA Instructor Training Program in structure and content. Students will be required to take 5 professional level teaching courses and 5 training electives to complete their teaching certificate with the Ironworkers. Students can then complete their degree by taking their general education requirements and having served a 3 or 4 year apprenticeship with the Ironworkers. (See attachment for specific program changes.)

**Financial/staffing/equipment/space implications:**

None. Current staffing will handle these students.

**List departments that have been consulted regarding their use of this program.**

UA and Apprentice Studies

**Signatures:**

Reviewer	Print Name	Signature	Date
Initiator	Mike Griffith		2-7-12
Department Chair	Scott Klapper		2-7-12
Division Dean/Administrator	Mary Douch		2-7-12
Vice President for Instruction	Stuart Blacklaw		3/12/12
President			

Do not write in shaded area. Entered in: Banner \_\_\_\_\_ C&A Database 4/23 Log File 4/23/12 Board Approval \_\_\_\_\_

Please submit completed form to the Office of Curriculum and Assessment and email an electronic copy to [sjohn@wccnet.edu](mailto:sjohn@wccnet.edu) for posting on the website.

*In done logged 2/8/12 sjv*



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Alternatively, students can earn an AAS in Occupational Studies by completing a certificate, advanced certificate and General Education requirements.

**United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada**

These programs are restricted to members of the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada.

**Industrial Training (ASINDT)**

**Associate in Science Degree**

**Program Effective Term: Fall 2012**

This program gives indentured journeymen of the United Association or Ironworkers, the opportunity to apply their work as certified apprentice instructors toward an associate in science degree in Industrial Training. Students will complete the general education courses, five summer instructor training sessions, and receive non-traditional credits for experience in an area of specialization such as plumbing, pipefitting, HVAC, sprinkler fitting and ironworking.

**Articulation:**

Eastern Michigan University, several BS degrees;  
 Ferris State University, Bachelor degree;  
 National Labor College, Bachelor degree.

Copies can be obtained from the Counseling Office, a program advisor, or from the Curriculum and Assessment Office Web site: <http://www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges>.

**Program Admission Requirements:**

Open only to United Association and Ironworker instructors.

Writing	Elective(s)	6-7
UAT 210	Public Speaking*	1.5
UAT 213	Planning and Presenting Lessons*	1.5
Math	MTH 169 or higher	3-4
Nat. Sci.	Must contain a lab	3-4
Soc. Sci.	Elective(s)	6
Arts/Human.	Elective(s)	6
Computer Lit.	Elective(s)	3

\*Students may choose any WCC courses that meet the speech requirement. Only applies to UA programs.

UA students must complete 12-15 additional credits from a combination of required teaching methods courses and technical update courses (UAT courses) 12-15  
 Ironworker students must complete 15 credits from a combination of required teaching methods courses and technical update courses (IWT courses).

**Minimum Option Credits Required for the Program:**

**19**

Complete a specialization in plumbing, pipefitting, HVAC, sprinkler fitting or ironworking. Students should apply for non-traditional credit evaluation of their apprenticeship experiences to meet the specialization requirement.

**Industrial Training Options**

<b>Architectural and Ornamental Ironworker (AOIW)</b>		<b>(19 credits)</b>
IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 131	Introduction to Metal Building	2
IWA 161	Introduction to Architectural and Ornamental Ironwork	2
IWA 201	Introduction to Welding	3

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IWA 224	Labor and Trade History	1
IWA 265	Advanced Architectural and Ornamental Ironwork	6

**HVAC Specialty (HVTC) (26 credits)**

UAE 140	Introduction to HVACR Service Technician Practices	3
UAE 142	Soldering and Brazing	3
UAE 144	Refrigeration	2
UAE 146	Air Conditioning	2
UAE 148	Electrical Controls	2
UAE 150	DC Electronics	2
UAE 152	Advanced Electrical Controls and Pneumatic Controls	3
UAE 154	Advanced Air Conditioning and Refrigeration	3
UAE 156	Air and Water Balancing and Motor Alignment	3
UAE 158	Advanced HVACR Practices	3

**Journeyman Ironworker (JMIW) (26 credits)**

IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 131	Introduction to Metal Building	2
IWA 141	Introduction to Reinforcing Ironwork	3
IWA 155	Rigging/Machinery Mover II	3
IWA 161	Introduction to Architectural and Ornamental Ironwork	2
IWA 172	Introduction to Structural Features	4
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
IWA 272	Advanced Structural Features	3

**Metal Building Erector (MTBE) (19 credits)**

IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 131	Introduction to Metal Building	2
IWA 161	Introduction to Architectural and Ornamental Ironwork	2
IWA 172	Introduction to Structural Features	4
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
IWA 235	Advanced Metal Building	2

**Pipefitter Specialty (PIPE) (26 credits)**

UAF 102	Introduction to Arc Welding, Soldering, and Brazing	3
UAF 120	Introduction to Pipefitter Practices	3
UAF 122	Drawing Interpretation and Plan Reading	2
UAF 124	Oxy Fuel Cutting and Shielded Arc Welding	2
UAF 126	Hydronic Heating and Steam Systems	2
UAF 128	Refrigeration and Electrical Controls	2
UAF 130	Advanced SMAW Welding	3
UAF 132	Advanced Pipefitter Topics	3
UAF 134	Controls and Instrumentation	3
UAF 136	GTAW Welding	3

**Plumber Specialty (PLUM) (26 credits)**

UAP 100	Introduction to Plumbing Practices	3
UAP 102	Introduction to Arc Welding, Soldering, and Brazing	3
UAP 104	Drawing Interpretation and Plan Reading	2
UAP 106	Oxy Fuel Cutting and Shielded Arc Welding	2
UAP 108	Water Supply and Drainage	2
UAP 110	Customer Service Techniques	2
UAP 112	Plumbing Fixtures and Appliances	3
UAP 114	Plumbing Codes and Regulations	3
UAP 116	Medical Gas and Backflow Prevention Techniques	3
UAP 118	Advanced Plumbing Practices	3

**Reinforcing Ironworker (REIW) (19 credits)**

IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 141	Introduction to Reinforcing Ironwork	3

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IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1
IWA 241	Advanced Reinforcing Ironwork	7

**Rigger/Machinery Mover (RGMM) (19 credits)**

IWA 120	Introduction to Ironwork	3
IWA 122	Ironworker - General Rigging	2
IWA 151	Rigging/Machinery Mover I	3
IWA 155	Rigging/Machinery Mover II	3
IWA 191	Reinforced Iron and Structures for Rigging	4
IWA 201	Introduction to Welding	3
IWA 224	Labor and Trade History	1

**Sprinkler Fitter Specialty (SPRF) (26 credits)**

UAR 160	Introduction to Sprinkler Fitter Practices	3
UAR 162	Basic Drawing and Introduction to Automatic Sprinklers	3
UAR 164	Reading Automatic Sprinkler Piping Drawings	2
UAR 166	Installation of Sprinkler Systems	2
UAR 168	Architectural Working Drawings and Blueprint Reading for Sprinkler Fitters	2
UAR 170	Sprinkler Water Supply and The Automatic Sprinkler	2
UAR 172	Types of Fire Protection Systems and Alarms	3
UAR 174	Special Application Sprinkler Systems and Hydraulics	3
UAR 176	Human Relations	3
UAR 178	Technical Writing	3

**Trade Related Elective Credits (TRI) (19 credits)**

Trade Related Elective Credits (19-26)	19-26
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**Minimum Credits Required for the Program: 61**

**PROGRAM PROPOSAL FORM**

- Preliminary Approval** – Check here when using this form for preliminary approval of a program proposal, and respond to the items in general terms.
- Final Approval** – Check here when completing this form after the Vice President of Instruction has given preliminary approval to a program proposal. For final approval, complete information must be provided for each item.

<p><b>Program Name:</b></p> <p><b>Division and Department:</b></p> <p><b>Type of Award:</b></p> <p><b>Effective Term/Year:</b></p> <p><b>Initiator:</b></p>	<p><u>Industrial Training</u></p> <p><u>UA Programs and Services</u></p> <p> <input type="checkbox"/> AA   <input checked="" type="checkbox"/> AS   <input type="checkbox"/> AAS  <input type="checkbox"/> Cert.   <input type="checkbox"/> Adv. Cert.   <input type="checkbox"/> Post-Assoc. Cert.   <input type="checkbox"/> Cert. of Comp.         </p> <p><u>Fall 2005</u></p> <p><u>Dan Welch and Mike Griffith</u></p>	<p>Program Code <b>ASINDT</b></p> <p>CR Code <b>460102</b></p>
<p><b>Program Features</b> Program's purpose and its goals. Criteria for entry into the program, along with projected enrollment figures. Connection to other WCC programs, as well as accrediting agencies or professional organizations. Special features of the program.</p>	<p>This program gives apprenices and journeypersons of the United Association of Plumbers and Pipefitters the opportunity to apply their work as certified apprentice instructors toward an associate's degree in Industrial Training. In addition to the fifteen credits awarded for completion of five summer instructor traning sessions, students will complete a minimum of 19 credits in general education courses and receive 32 non-traditional credits for experience in an area of specialization: Plumbing, Pipefitting, HVAC, or Sprinklerfitting.</p> <p>Only open to United Association of Plumbers and Pipefitters Apprentices/Journeyworkers.</p> <p>This program currently maintains an enrollment of 1,600-2,000 students per year.</p>	
<p><b>Need</b> Need for the program with evidence to support the stated need.</p>	<p>An Associate in Science option is needed for students transferring to four year schools with additional science and math entry requirements.</p>	
<p><b>Program Outcomes/Assessment</b> State the knowledge to be gained, skills to be learned, and attitudes to be developed by students in the program. Include assessment methods that will be used to determine the effectiveness of the program.</p>	<p><b>Outcomes</b></p> <ol style="list-style-type: none"> <li>1. Apply UA recommended instructional techniques in designing learning experiences for UA members.</li> <li>2. Use UA recommended instructional materials effectively in designing learning experiences.</li> <li>3. Design and implement learning experiences that teach the principles of applied knowledge subjects such as science, mathmatics, drawing, and electricity.</li> <li>4. Acquire knowledge of the technical aspects, latest developments, and skills of</li> </ol>	<p><b>Assessment method</b></p> <ol style="list-style-type: none"> <li>1. Students submit lesson plans, tests, presentations, and other instructional materials for review, and for possible inclusion in the UA Online Curriculum Database. Materials are reviewed by committee using a UA approved checklist.</li> </ol>

	the crafts to incorporate into learning experiences for UA members.	
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<p><b>Curriculum</b></p> <p>Courses.</p> <p>List the courses in the program as they should appear in the catalog. List minimum credits required. Include any notes that should appear below the course list.</p>	<p>UAT 111, UAT 121, UAT 131, UAT 141, UAT 151, UAT 161, UAT 171, UAT 201, UAT 202, UAT 203, UAT 204, UAT 205</p> <p>See attached sheet for additional description of courses.</p> <p>66-71 Credits Required</p>
<p><b>Budget</b></p> <p>Specify program costs in the following areas, per academic year:</p> <p>Faculty Training/travel Materials/resources Facilities/equipment Other</p>	<p><b>Start-up costs</b> None. Program is ongoing.</p> <p><b>Ongoing costs</b> Cost of instruction is paid for by the UA Training Department.</p>
<p><b>Program Description for Catalog and Web site</b></p>	<p>This program gives apprentices and journeymen of the United Association of Plumbers and Pipefitters the opportunity to apply their work as certified apprentice instructors toward an associate's degree in Industrial Training. In addition to the fifteen credits awarded for completion of the five summer instructor training sessions, students will complete a minimum of 19 credits in general education courses and receive 32 non-traditional credits for experience in an area of specialization such as plumbing, pipefitting, HVAC, or sprinklerfitting. Those enrolling in this program can elect to receive an associate in applied science degree instead of an associate in science degree. An advisor will direct students who are interested in this option.</p>
<p><b>Program Information</b></p>	<p><b>Accreditation/Licensure -</b></p> <p><b>Advisors -</b> Mike Griffith, Dan Welch</p> <p><b>Advisory Committee -</b> Mike Arndt, Steve Allen, Cathy Merkel, Dan Welch, Mike Griffith</p> <p><b>Admission requirements -</b> Open only to United Association of Plumbers and Pipefitters apprentices/Journeyworkers</p> <p><b>Articulation agreements -</b> Ferris State University and National Labor College</p> <p><b>Continuing eligibility requirements -</b></p>

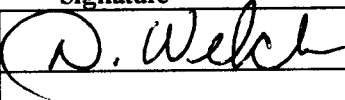
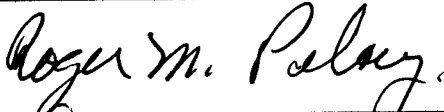
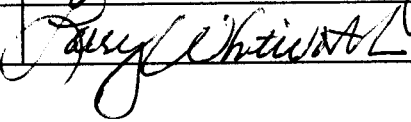
**Assessment plan:**

Learning outcomes to be assessed	Assessment tool	When assessment will take place	Course section(s)/other population	Number students to be assessed
1-4	UA Online Curriculum Database	Annually in November	Limited to certificate graduates	Random 50 students



**Scoring and analysis plan:**

1. Indicate how the above assessment(s) will be scored and evaluated (e.g. departmentally developed rubric, external evaluation, other). Describe the scoring range to be used, or include a copy of the rubric.  
 The UA Online Curriculum Database contains tests, lesson plans, worksheets, diagrams, Power Point presentations and other teaching materials. The database is used to share materials between locals who teach the same curriculum. Each year the uploaded materials will be randomly reviewed for quality and content. The content review may indicate subject areas in the program that need updated training. The quality review of uploaded documents will confirm the desired level of overall work products.
  
2. Indicate the standard of success to be used for this assessment (e.g. 75% of students must meet all learning outcomes).  
 As instructors submit materials for inclusion to the online database, they are reviewed by a committee for content and appearance. The review standards include technical accuracy, appropriateness for the subject area, page layout, and completeness. Documents are either approved for inclusion, sent back for revisions, or rejected.
  
3. Indicate who will score and analyze the data.  
 UA and WCC members of the advisory committee and appointed subject matter experts in each of the trade areas will review the database.
  
4. Explain how and when the assessment results will be shared with the department and other involved faculty.  
 This annual review will be shared with the advisory committee each November as input to the planning for the following year's Instructor Training program.
  
5. Describe any additional assistance the department will require to complete this assessment.  
 None

Reviewer	Print Name	Signature	Date
Department Chair/Area Director	Daniel Welch		3/23/05
Dean			
Vice President of Instruction <input type="checkbox"/> Approved for Development <input type="checkbox"/> Final Approval			4/4/05
President			4/4/05
Board Approval			

# United Association

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## Industrial Training (ASINDT) Associate in Science Degree

'UNDER CONSTRUCTION'

Program Effective Term: Fall 2005

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This program gives indentured apprentices and journeymen of the United Association of Plumbers and Pipefitters the opportunity to apply their work as certified apprentice instructors toward an associate in science degree in Industrial Training. Students will complete the general education courses, five summer apprentice training sessions, and receive non-traditional credits for experience in an area of specialization such as plumbing, pipefitting, HVAC, or sprinkler fitting.

### Articulation:

Ferris State University and National Labor College

### Program Admission Requirements:

Open only to United Association of Plumbers Apprentices/Journeymen

### Continuing Eligibility Requirements:

Students must demonstrate basic computer literacy skills by successfully passing the Computer and Information Literacy Test. The test may be taken at any point during the program, but must be completed before graduating.

### General Education Requirements

**(27 credits)**

Writing	ENG 107, ENG 111, ENG 226	6-7
Speech	Elective(s)	3
Math	Math 169 or higher	3-4
Nat. Sci.	Must contain a lab	3-4
Soc. Sci.	Elective(s)	6
Arts/Human.	Elective(s)	6

### Major/Area Requirements

**(15 credits)**

Students must complete 15 credits from the following: 15  
UAT 111, UAT 121, UAT 131, UAT 141, UAT 151, UAT  
161, UAT 171, UAT 201, UAT 202, UAT 203, UAT 204,  
UAT 205

**Minimum Concentration/Option Credits  
Required for the Program:**

26

Complete a specialization in plumbing, pipefitting, HVAC, or sprinkler fitting. Students should apply for non-traditional credit evaluation of their apprenticeship experiences to meet the specialization requirement.

**Minimum Credits Required for the Program**

68

## Industrial Training Options

### HVAC Specialty (HVTC) (26 Credits)

UAE 140	Introduction to HVACR Service	3
UAE 142	Soldering and Brazing	3
UAE 144	Refrigeration	2
UAE 146	Air Conditioning	2
UAE 148	Electrical Controls	2
UAE 150	DC Electronics	2
UAE 152	Advanced Electrical Controls and Pneumatic Controls	3
UAE 154	Advanced Air Conditioning and Refrigeration	3
UAE 156	Air and Water Balancing and Motor Alignment	3
UAE 158	Advanced HVACR Practices	3

### Pipefitter Specialty (PIPE) (26 Credits)

UAF 102	Introduction to Arc Welding, Soldering, and Brazing	3
UAF 120	Introduction to Pipefitter Practices	3
UAF 122	Drawing Interpretation and Plan Reading	2
UAF 124	Oxy Fuel Cutting and Shielded Arc Welding	2
UAF 126	Hydronic Heating and Steam Systems	2
UAF 128	Refrigeration and Electrical Controls	2
UAF 130	Advanced SMAW Welding	3
UAF 132	Advanced Pipefitter Topics	3
UAF 134	Controls and Instrumentation	3
UAF 136	GTAW Welding	3

### Plumber Specialty (PLUM) (26 Credits)

UAP 100	Introduction to Plumbing Practices	3
UAP 102	Introduction to Arc Welding, Soldering, and Brazing	3
UAP 104	Drawing Interpretation and Plan Reading	2
UAP 106	Oxy Fuel Cutting and Shielded Arc Welding	2
UAP 108	Water Supply and Drainage	2
UAP 110	Customer Service Techniques	2
UAP 112	Plumbing Fixtures and Appliances	3
UAP 114	Plumbing Codes and Regulations	3
UAP 116	Medical Gas and Backflow Prevention Techniques	3
UAP 118	Advanced Plumbing Practices	3

**Sprinkler Fitter Specialty (SPRF) (26 Credits)**

UAR 160	Introduction to Sprinkler Fitter Practices	3
UAR 162	Basic Drawing and Introduction to Automatic Sprinklers	3
UAR 164	Reading Automatic Sprinkler Piping Drawings	2
UAR 166	Installation of Sprinkler Systems	2
UAR 168	Architectural Working Drawings and Blueprint Reading for Sprinkler Fitters	2
UAR 170	Sprinkler Water Supply and The Automatic Sprinkler	2
UAR 172	Types of Fire Protection Systems and Alarms	3
UAR 174	Special Application Sprinkler Systems and Hydraulics	3
UAR 176	Human Relations	3
UAR 178	Technical Writing	3