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 ¹	7-8 credits	7-8 credits	3-4 credits
Social & Behavioral Science ²	6 credits	6 credits	3 credits
Arts and Humanities ³	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

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

² From two disciplines

³ From two disciplines

Program Information Report

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).

Construction Supervision (APCNSP)

Associate in Applied Science Degree

Program Effective Term: Fall 2018

High Demand Occupation High Skill Occupation High Wage Occupation

Program is also available online

This program gives apprentice and journey-level members of the articulated union building trade apprenticeship programs the opportunity to apply their apprenticeship training and trade-related experience toward an associate's degree in Construction Supervision. In addition to the courses in Construction Supervision, students will complete general education courses and receive prior learning credit for their work experience and apprenticeship.

Students must complete an apprenticeship program concentration in plumbing, pipefitting, HVAC, sprinkler fitting, ironworking, bricklaying, tile setting or other approved union building trade. Upon completion of this, students should apply for non-traditional credit evaluation of their apprenticeship experiences to meet the apprentice program concentration requirement (19-26 credits).

Architectural and Ornamental Ironworker (AOIW) IWA 120 IWA 122 IWA 131 IWA 161 IWA 201 IWA 224 IWA 265

Brick and Block Laying Apprenticeship (BBLA) BAC 100 BAC 101 BAC 102 BAC 110 BAC 111 BAC 112 BAC 210 BAC 211 BAC 211 BAC 212 BAC 213

HVAC Specialty (HVTC) UAE 140 UAE 142 UAE 144 UAE 146 UAE 146 UAE 148 UAE 150 UAE 152 UAE 154 UAE 156 UAE 158

Monday, June 25, 2018 10:24:47 a.m.

Journeyman Ironworker (JMIW) IWA 120 IWA 122 IWA 131 IWA 141 IWA 155 IWA 161 IWA 172 IWA 201 IWA 224 IWA 272 Metal Building Erector (MTBE) IWA 120 IWA 122 IWA 131 IWA 161 IWA 172 IWA 201 IWA 224 IWA 235 Pipefitter Specialty (PIPE) UAF 102 UAF 120 UAF 122 UAF 124 UAF 126 UAF 128 UAF 130 UAF 132 UAF 134 UAF 136 Plumber Specialty (PLUM) **UAP 100** UAP 102 UAP 104 UAP 106 UAP 108 UAP 110 UAP 112 UAP 114 **UAP 116** UAP 118 Reinforcing Ironworker (REIW) IWA 120 IWA 122 IWA 141 IWA 201 IWA 224 IWA 241 Rigger/Machinery Mover (RGMM) IWA 120 IWA 122 IWA 151 IWA 155 IWA 191 IWA 201 IWA 224 Sprinkler Fitter Specialty (SPRF) UAR 160

Monday, June 25, 2018 10:24:47 a.m.

Program Information Report

UAR 162 UAR 164 UAR 166 UAR 168 UAR 170 UAR 172 UAR 174 UAR 176 UAR 178

Tile Mechanics (TILM) BAC 100 BAC 101 BAC 102 BAC 120 BAC 120 BAC 121 BAC 122 BAC 220 BAC 221 BAC 222 BAC 223

Articulation:

Eastern Michigan University, several BS degrees

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:

The program is only open to active members of articulated union building trade apprenticeship programs.

First Semes	ter	(15 credits)
UAS 111	Construction Supervision I: Motivating Employees	3
	Math Elective(s)*	3
	Writing Elective(s)	4
	Union Approved Apprenticeship	5
Second Sem	nester	(15 credits)
UAS 122	Construction Supervision II: Supervisory Skills	3
UAS 210	Construction Supervision III: Legal and Personnel Aspects	3
	Arts/Human. Elective(s)	3
	Speech/Comp. Elective(s)**	3
	Union Approved Apprenticeship	3
Third Semes	ster	(15 credits)
UAS 222	Construction Supervision IV: The Construction Project	3
	Nat. Sci. Elective(s)***	3
	Soc. Sci. Elective(s)	3
	Union Approved Apprenticeship	6
Fourth Sem	ester	(15 credits)
UAS 230	Construction Supervision V: Scheduling and Project Management	3
	Elective to reach 60 credit minimum	3
	Union Approved Apprenticeship	9
Minimum Cr	edits Required for the Program:	60

Notes:

* UA students may use APP 113 Math for Pipe Trades (3 credits)

**UA students may use UAT 210 Public Speaking (1.5 credits) and UAT 213 Planning and Presenting Lessons (1.5 credits)

*** UA students may use SCI 102 Applied Science (3 credits)

WASHTENAW COMMUNITY COLLEGE

Done /10/18

GENERAL EDUCATION REVISION AAS PROGRAM CHANGE FORM 2018-2019

Program Code: $APCNSP$	Program Name: Construction Supervision
Division Code:	Department: UA

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 Mathematics	3 credits 3 - 4 credits	2 nd Course in English Composition or one course in Communication	3 - 4 credits	
Natural Sciences	3 - 4 credits	Mathematics	3 - 4 credits	
Social & Behavioral Sciences	3 credits	Natural Sciences	3 - 5 credits	
Arts & Humanities	3 credits	Social & Behavioral Sciences	3 credits	
Critical Thinking	0 credits	Arts & Humanities from	3 credits	
Computer & Information Literacy	3 credits	Total	18 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.

Gener	al Education Area
	Composition – The requirement for one writing/English composition course remains the same. No es will be made unless specifically requested below. (Use Writing Elective or ENG 111)
Optior	al Change:
WCC p option 1. 2.	Allow students to select any course that meets composition/writing or communication (<i>recommended</i>).

Option	hal Change:
Natur unless	al Sciences - The requirement for one natural science course remains the same. No changes will be made specifically requested below.
Option	nal Change:
Social same.	& Behavioral Sciences – The requirement for one social and behavioral science course remains the No changes will be made unless specifically requested below.
Option	nal Change:
be ma	Humanities – The requirement for one arts and humanities course remains the same. No changes will de unless specifically requested below. (Note: A department can designate a COM course as a ement here. The same course cannot be counted in two areas.)
	nal Change:
The re 1. 2.	uter and Information Literacy equirement for computer and information literacy has been removed. Your options are: Continue to require a specific computer course. If a specific course is required in your program, we wil 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. Remove the computer and information literacy course if the program will still meet the minimum of 60 credit hours. 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.

Reviewer	Print Name	Signature	Date
Initiator			
Department Chair			
Division Dean/ Administrator			
Vice President for Instruction	Kimberly Hurns	Han het	1/9/18
Office use only	· /		1710

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C&A Database

🖵 Log File

http://www.wccnet.ed	lu/departments/curriculum
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Program Code: APCNSP Program Name: Construction Supervision (AAS)

Effective Term: Fall 2013

WASHTENAW COMMUNITY COLLEGE

Division Code: UASD Department: Union Approved Supervision (UAS)

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:				
Review Remove course(s): Add course(s): Program title (title was) Description Type of award Advisors Articulation information Show all changes on the attached page from the catalog.	 Program admission requirements Continuing eligibility requirements Program outcomes Accreditation information Discontinuation (attach program discontinuation plan that includes transition of students and timetable for phasing out courses) Other 			
Show an changes on the <u>attached page from the catalog</u> .				
Rationale for proposed changes or discontinuation: Upon completion of the Fall 2012 program assessment, there were some weaknesses in the assessment plan that needed to be corrected.				
Financial/staffing/equipment/space implications: N/A				

List departments that have been consulted regarding their use of this program. Union Approved Supervision (UAS)

Signatures:			
Reviewer	Print Name Signature		Date
Initiator	Cheryl Byrne		S-11.2013
Department Chair	0 1	$\int \int dx$	
Division Dean/Administrator	JAMES (EGAN)	mang 2	3/13/2017
Vice President for Instruction	William Abernethy	1. ALC	3/29/13
President	1		

Do not write in shaded area. Entered in: Banner_____ C&A Database 3/29/13 Log File 3/29/13 Board Approval _____ Please submit completed form to the Office of Curriculum and Assessment and email an electronic copy to sjohn@wccnet.edu for posting on the website.

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AGADEMICS

Construction Supervision (APCNSP)

Associate in Applied Science Degree

Description

IWA 120

This program gives apprentice and journey-level members of the articulated union building trade apprenticeship programs the opportunity to apply their apprenticeship training and trade-related experience toward an associate's degree in Construction Supervision. In addition to the courses in Construction Supervision, students will complete general education courses and receive nontraditional credit for their work experience and apprenticeship.

Students must complete an apprenticeship program concentration in plumbing, pipefitting, HVAC, sprinkler fitting, ironworking, bricklaying, tile setting or other approved union building trade. Upon completion of this, students should apply for non-traditional credit evaluation of their apprenticeship experiences to meet the apprentice program concentration requirement (19-26 credits).

Architectural and Ornamental Ironworker (AOIW)

IWA 122 IWA 131 IWA 161 IWA 201 IWA 224 IWA 265 Brick and Block Laying Apprenticeship (BBLA) **BAC 100** BAC 101 **BAC 102** BAC 110 **BAC 111 BAC 112 BAC 210** BAC 211 BAC 212 BAC 213 HVAC Specialty (HVTC) **UAE 140 UAE 142** UAE 144 **UAE 146 UAE 148 UAE 150 UAE 152 UAE 154 UAE 156 UAE 158** Journeyman Ironworker (JMIW) IWA 120 IWA 122 IWA 131 IWA 141 IWA 155 IWA 161 IWA 172 IWA 201 IWA 224 IWA 272 Metal Building Erector (MTBE) IWA 120 IWA 122

2/26/13,	
· * IWA 131	
IWA 161	
IWA 172	
IWA 201	
IWA 224	
IWA 235	
Pipefitter Specialty (PIPE)	
UAF 102	
UAF 120	
UAF 122	
UAF 124	
UAF 126	
UAF 128	
UAF 130	
UAF 132	
UAF 134	
UAF 136	
Plumber Specialty (PLUM)	
UAP 100	
UAP 102	
UAP 104	
UAP 106	
UAP 108	
UAP 110	
UAP 112	
UAP 114 UAP 116	
UAP 118	
Reinforcing Ironworker (REIW)	
IWA 120	
IWA 122 IWA 141	
IWA 141 IWA 201	
IWA 224	
IWA 241	
Discon (Marchinese Marine (DOMMA)	
Rigger/Machinery Mover (RGMM) IWA 120	
IWA 120 IWA 122	
IWA 151	
IWA 155	
IWA 191	
IWA 201	
IWA 224	
Sprinkler Fitter Specialty (SPRF)	
UAR 160	
UAR 162	
UAR 164	
UAR 166	
UAR 168	
UAR 170	
UAR 172 UAR 174	
UAR 174 UAR 176	
UAR 178	
Tile Mechanics (TILM)	
BAC 100 BAC 101	
BAC 101 BAC 102	
BAC 102 BAC 120	
BAC 121	
BAC 122	
BAC 220	

BAC 220

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BAC 221 **BAC 222** BAC 223

Articulation

Davenport University, Bachelor degree; Eastern Michigan University, several BS degrees; 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: www.wccnet.edu/departments/curriculum/articulation.php?levelone=colleges.

Admissions Requirements

The program is only open to active members of articulated union building trade apprenticeship programs.

Contact Information

contract rigo	nutron.	A Area a intion	Rea area made	and CARVILES	(UASD)
Division:	Adv Tech/Public Serv Careers	United Association	Trograms		
Department:	United Association Dept				
Advisors:	Mike Griffith, Scott Klappe r				

Requirements

Class	Title	Credits
UAS 111	Construction Supervision I: Molivating Employees	3
Elective(s)	Computer and Information Literacy	3
Elective(s)	Math*	3
	Union Approved Apprenticeship	5
Total		14

Class	Title	Credits
	Union Approved Apprenticeship	3
UAS 122	Construction Supervision II: Supervisory Skills	3
UAS 210	Construction Supervision III: Legal and Personnel Aspects	3
Elective(s)	Speech**	3
Elective(s)	Arts and Humanities	3
Total		15

Credits
C. I. C. C. I. C. I

Class	Title	Credits
UAS 222	Construction Supervision IV: The Construction Project	3
Elective(s)	Natural Sciences***	3
Elective(s)	Social and Behavioral Science	3
	Union Approved Apprenticeship	6
Total		15

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Class	Title	Credit	.s
	Union Approved Apprenticeship	1	9
Elective(s)	Writing		4
UAS 230	Construction Supervision V: Scheduling and Project Management		3
Total		1	6

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Footnotes

* UA students may use APP 113 Math for Pipe Trades (3 credits)

**UA students may use UAT 210 Public Speaking (1.5 credits) and UAT 213 Planning and Presenting Lessons (1.5 credits)

*** UA students may use SCI 102 Applied Science (3 credits)

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PROGRAM CHANGE OR DISCONTINUATION FORM

Program Code: APCNSP	Program Name: Construction Sup Applied Science Degree)	ervision (Associate in	Effective Term: SS08
Division Code: HAT	Department: UAS		
Directions:			
1. Attach the current prog	gram listing from the WCC catalog or We	eb site and indicate any change	es to be made.
	v text that should be deleted and write in		
new courses as part of	for each type of change being proposed the proposed program change, must be a the same time as the program change for	pproved separately using a Ma	nuing a course, or adding ster Syllabus form, but
Requested Changes:			
Add course(s):)) on	 Program admission requipied Continuing eligibility requipied Program outcomes Accreditation information Discontinuation (attach point that includes transitient for phasing out courses) Other <u>Concentration</u> 	uirements n program discontinuation ion of students and timetable
Show all changes on the atta	ched page from the catalog.		
	AS courses are now available for ot pment/space implications:		
List departments that h	ave been consulted regarding their us		
N/A	ave been consulted regarding their us	e of this program.	
Signatures:			
Reviewer	Print Name	Signature	Date
Initiator	Gloria Eccleston	Beccleston	3/10/08
Department Chair			/ /
Division Dean/Administra	tor Cheryl Byrne	Q571	3-10.08.
Vice President for Instructi	on Roger M. Falay	Reer M. Valu	5- 4/3/08
President		" / JP1 /	
Do not write in shaded area. 1 Please submit completed for posting on the website.	Entered in: Banner C&A Database_44 orm to the Office of Curriculum and Asse	Uan	-

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Program Information Report

School of Apprenticeship Studies

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

Construction Supervision (APCNSP)

Associate in Applied Science Degree

Program Effective Term: Fall 2008

This program gives apprentice and journey-level members of the United Association of Plumbers and Pipefitting and the International Union of Bricklayers and Allied Craftworkers the opportunity to apply their apprenticeship training and trade-related experience toward an associate's degree in Construction Supervision. In addition to the courses in Construction Supervision, students will complete general education courses and receive non-traditional credit for their work experience and apprenticeship.

Articulation:

Davenport University, Bachelor degree Eastern Michigan University, several BS degrees

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:

The program is only open to active members of the United Association of Plumbers and Pipefitters and the International Union of Bricklayers and Allied Craftworkers.

General Educa Writing Speech	tion Requirements Elective(s) Elective(s)	its) 3-4 3	
APP 113	Math for Pipe Trades*	3	
SCI 102	Applied Science*	3	
Soc. Sci.	Elective(s)	3	
Arts/Human.	Elective(s)	3	
	science courses are included in the apprentice program concentration.	()+»()	
Major/Area Ri	Construction Supervision I: Motivating Employees	ک ۲۰۳۶	
UAS 111		2	
UAS 122	Construction Supervision II: Supervisory Skills	2	
UAS 210	Construction Supervision III: Legal and Personnel Aspects	ר י	
UAS 222	Construction Supervision IV: The Construction Project	נ ר	
UAS 230	Construction Supervision V: Scheduling and Project Management	2	
26 Complete an apprenticeship program concentration in plumbing, pipefitting, HVAC, or sprinkler fitting. Upon completion of this, students should apply for non-traditional credit evaluation of their apprenticeship experiences to meet the apprentice program			

Construction Supervision Options

concentration requirement.

14/16/50/2016 UAE 142 UAE 144 UAE 146 UAE 146 UAE 148 UAE 150 UAE 152 UAE 154	y (HVTC) Introduction to HVACR Service Soldering and Brazing Refrigeration Air Conditioning Electrical Controls DC Electronics Advanced Electrical Controls and Pneumatic Controls Advanced Air Conditioning and Refrigeration	3 3 2 2 2 2 3 3
UAE 156 UAE 158	Air and Water Balancing and Motor Alignment Advanced HVACR Practices	3 3
UAF 102 UAF 120 UAF 120 UAF 122 UAF 124 UAF 126	Introduction to Arc Welding, Soldering, and Brazing Introduction to Pipefitter Practices Drawing Interpretation and Plan Reading Oxy Fuel Cutting and Shielded Arc Welding Hydronic Heating and Steam Systems	3 3 2 2 2 2

Thursday, April 3, 2008 1:47:29 p.m.

Program Information Report

Notes:		
Minimum Cr	edits Required for the Program:	59
UAR 178	Technical Writing	3
UAR 176	Human Relations	3
UAR 174	Special Application Sprinkler Systems and Hydraulics	3
UAR 172	Types of Fire Protection Systems and Alarms	3
UAR 170	Sprinkler Water Supply and The Automatic Sprinkler	2
UAR 168	Architectural Working Drawings and Blueprint Reading for Sprinkler Fitters	2
UAR 166	Installation of Sprinkler Systems	2
UAR 164	Reading Automatic Sprinkler Piping Drawings	2
UAR 162	Basic Drawing and Introduction to Automatic Sprinklers	د ۲
UAR 160	tter Specialty (SPRF) Introduction to Sprinkler Fitter Practices	(26 credits)
UAF 110	Auvanced Flumbing Fractices	3
UAP 116 UAP 118	Medical Gas and Backflow Prevention Techniques Advanced Plumbing Practices	3
UAP 114 UAP 116	Plumbing Codes and Regulations	3
UAP 112	Plumbing Fixtures and Appliances	3
UAP 110	Customer Service Techniques	2
UAP 108	Water Supply and Drainage	2
UAP 106	Oxy Fuel Cutting and Shielded Arc Welding	2
UAP 104	Drawing Interpretation and Plan Reading	2
UAP 102	Introduction to Arc Welding, Soldering, and Brazing	3
UAP 100	Introduction to Plumbing Practices	3
	ecialty (PLUM)	න (වර්ගයෝරිය)
UAF 136	GTAW Welding	3
UAF 134	Controls and Instrumentation	- 3
UAF 132	Advanced Pipefitter Topics	3
UAF 130	Advanced SMAW Welding	
UAF 128	Refrigeration and Electrical Controls	7

Students must meet the Computer and Information Literacy Graduation Requirement. See General Education Graduation Requirements in the WCC Bulletin.

WASHTENAW COMMUNITY COLLEGE

TANOR OF DISCONSTRUCTION FORM

	JISCONTINUATION FORM		
Program Code:	Program Name: Construction	Supervision Eff	ective Term:
APCNSP			W'07
Division Code: HAT	Department: UAS		SS107
Directions:		· · · · · · · · · · · · · · · · · · ·	
	am listing from the WCC catalog or We		
2. Draw lines through any t a separate sheet.	text that should be deleted and write in a	dditions. Extensive narrative ch	anges can be included on
3. Check the boxes below i	for each type of change being proposed.	Changes to courses, discontinui	ng a course, or adding
new courses as part of the	he proposed program change, must be at he same time as the program change for	oproved separately using a Maste	r Syllabus form, but
Requested Changes:	Te same time as the program change for		
	5 211: Construction Supervision]		- on to
$\square Review \qquad \qquad UHC \\ \blacksquare Remove course(s): UA$	S 226: Legal Aspects of Construction	Program admission requirer	
Add course(s):		Program outcomes	
Program title (title was		Accreditation information	
Description	UAS 210: Construction Supervision III Legal & Personnel Aspects	Discontinuation (attach proplan that includes transition	gram discontinuation
Type of award Advisors	Legal & Personnel Aspects	for phasing out courses)	. Of students and unetable
Articulation information	UAS 23D: Constriction Supervision V n Scheduling & Project Manageme	^{xt} Other	
Show all changes on the attac			
Rationale for proposed c	hanges or discontinuation:		
Financial/staffing/equi	pment/space implications:		
List departments that ha	ave been consulted regarding their us	se of this program.	
Signatures: Reviewer	Print Name	Signature	Date
Initiator	C Byrne	28)	» ⊅ 1-0)
Department Chair			
Division Dean/Administra	tor	A	
Vice President for Instruct	lon	Mexis M. Valan	- 3/28/07
		Harris Chity lost	3/29/07

President LARRY WHITWORTH TWW WITWORTH 3/29/07 Do not write in shaded area. Entered in: Banner 2014 C&A Database 2012, 10g rik 30, Board Approval Please submit completed form to the Office of Curriculum and Assessment and email an electronic copy to sjohn@wccnet.edu for

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Construction Supervision (CTCNS)

Certificate

Major/Area Requirements	(15 Credits)
UAS 111: Construction Supervision I: Motivating Employees UAS 122: Construction Supervision II: Supervisory Skills UAS 210: Construction Supervision III: Legal and Personnel Aspects UAS 222: Construction Supervision IV: The Construction Project UAS 230: Construction Supervision V: Scheduling and Project Management	3 3 3 3 3 3

Construction Supervision (APCNSP)

Minimum Credits Required for the Program:

General Education Requirements		(18 Credits)
Writing	Elective(s)	3-4
Speech	Elective(s)	3
APP 113 *	Math and Science for Plumbers and Pipefitters	3
SCI 102 *	Applied Science	3
Soc. Sci.	Elective(s)	3
Arts/Human.	Elective(s)	3

*The math and science courses are included in the specialization.

(15 Credits) Major/Area Requirements 3 iAS 111: Construction Supervision I: Motivating Employees 3 JAS 122: Construction Supervision II: Supervisory Skills 3 JAS 210: Construction Supervision III: Legal and Personnel Aspects IAS 222: Construction Supervision IV: The Construction Project 3 IAS 230: Construction Supervision V: Scheduling and Project Management 3

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. See specializations on the following pages.

Minimum Credits Required for the Program:

15 Credits

Associate in Applied Science Degree

Construction Supervision (CTCNS) This Construction and the vision Certificate program analities apprendices and journey-ment to enter the discovered with knowl-edge and skills the clanning organizing, and supervising construction projects This certificate provides an approximation of those who want to all all all provides approximation in the son-struction field and for those desiring to start their own companies

Program Admission Requirements: The program is only open to Emired Asso clation of Plunibers Appentices, journey

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PROGRAM APPROVAL DOCUMENT

FOR

ASSOCIATE IN APPLIED SCIENCE DEGREE

IN

CONSTRUCTION MANAGEMENT

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Washtenaw Community College

December 1991

PROGRAM APPROVAL DOCUMENT

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ASSOCIATE IN APPLIED SCIENCE DEGREE

IN

CONSTRUCTION MANAGEMENT

A. PROGRAM DESCRIPTION

1. Background

a. <u>Historical Data</u>

The Construction Industry in the WCC service area is composed of three sectors. The commercial business is primarily serviced by organized labor. The residential component is represented largely by the Homebuilders Association. A third component consists of remodelling contractors represented by their local association. In 1980, a program review was conducted to assess the need for continuing a Construction Technology Associates Degree Program at the College. During this assessment period, the Industry was experiencing its lowest activity level in over twenty years. The Economic climate did not support this as a growth industry. As a result the Construction Technology program was discontinued at Washtenaw Community College. It is important to note that WCC was the last school in Southeastern Michigan to decommission its Construction-related program.

b. Origin of Program idea

In 1988, the Industry was experiencing a "boom". The economic climate had reversed itself. Construction starts were at an all-time high. The cost of borrowing money had dropped dramatically and the industry could barely staff the jobs in the area. The college determined that it needed to provide service for this industry that took into consideration its cyclical nature. It was determined that Secondary Schools in the area had a successful entry level program in Homebuilding Industries. The need for technical skills at the postsecondary level were being addressed adequately by the organized labor groups in the area. The missing element was a program that could address the need for technical skill enhancement and provide much needed management and supervisory skills and knowledge.

- 2. Summary Statement
 - a. General Program Goals

The program will provide an opportunity for individuals in the construction field to enhance their technical skills and acquire management skills necessary to advance in the Construction management aspect of the industry. It will provide an opportunity for under-represented minorities and women to access the industry. Sufficient opportunities for technical skill acquisition for these constituencies will be accomplished through the development of several new courses at the college. In addition, field experience in the form of internships and cooperative work/study relationships with area employers will be an integral part of the program requirements. The opportunity for a unique articulation agreement with the secondary schools in the area presents itself. Up to 15 slots in the secondary schools Building Industries program could be made available to those persons who are unable to secure a work/study assignment in the industry.

b. Student Outcomes

Graduates of the program will articulate with both Eastern Michigan and Ferris State University construction programs. Those choosing not to pursue a baccalaureate degree will be able to compete for positions locally in construction management that require the technical skills and the management skills to be successful.

c. Community Impact

The community will experience a heightened level of quality in the management of construction projects. The graduates will experience the opportunity to command a higher wage, advance to management-level responsibilities, and enhance technical skills.

d. <u>Degree Designation</u>

The most appropriate degree designation for this program is the Associate in Applied Science Degree. This is primarily a career entry program with the possibility of transfer to selected 4-year colleges. It is anticipated that articulation agreements will be developed with Eastern Michigan University and Ferris State University.

e. <u>Core Curriculum Requirements</u>

The new policy of including the twenty-three core curriculum elements in associate degree programs was taken into consideration in the development of this program. Steps were taken to include courses which will potentially satisfy the core requirements when this program is reviewed for core implementation in 1993.

- 3. Justification
 - a. <u>Institutional Values and Mission</u> (see mission statement)
 - b. <u>Endorsements</u> The College can expect wholesale endorsement by leaders in the local Building Industries.
- 4. Advisory Committee(s)
 - a. The advisory committee will be a working committee comprised of representatives from the Contractors listed on the survey document, local Professional organizations and societies and organized labor.

B. PROGRAM OBJECTIVES

- 1. The list below represents the primary knowledge and skill areas that will be emphasized in the Construction Management program.
 - a. General Education:

The student will have knowledge of skills emphasizing written and oral communication that reflect the needs of the construction industry. Construction Management is concerned with people and interrelationships. The ability to communicate, both orally and in writing, and the understanding of human behavior are valuable assets to a person entering the construction management industry.

b. Mathematics and Science:

The student will have knowledge of basic scientific, qualitative and quantitative principles which provide a foundation for succeeding technical subjects. Every graduate should possess well developed concepts of mathematics and science. Construction Management is a technical process that is best controlled by applying principles of mathematics and science as it relates to the technical aspects of the industry.

c. Construction Design and Practice:

The student will have knowledge of skills which facilitate advancement of the individual in the construction profession. These skills should include architecture and construction fundamentals to facilitate communications with the design disciplines and solve practical construction problems. The development of both office skills and field experiences will be included.

d. Business and Management:

The student will have knowledge of how to manage people and financial resources. They will understand the free enterprise system, accounting, finance, business regulations as these topics apply to the construction industry.

e. Other requirements/options:

The student will have knowledge of the social disciplines that affect the management of people and resources. These will include exposure to the esthetics of the Humanities and our political systems.

C. NEEDS ASSESSMENTS (see Attachment)

D. ENROLLMENT PROJECTIONS

Program capacity will be limited to 50 part-time students and 20 fulltime students due to field placement constraints. Students will be admitted in such manner as to guarantee both gender and minority representation.

The likelihood of part-time students dominating this program is great. The College can expect the greatest student activity in this program to occur in the evening classes. It is expected that most enrollees will maintain regular fulltime employment while earning this degree.

Arrangements are being made with the Public Schools for intern placement in the Building Trades Programs for those students who are not actively involved in the construction industry, to acquire valuable field experiences necessary for advancement and to satisfy the field experience requirement of the program.

Annual credit hour generation based on an enrollment of twenty (20) students is:

Technical division credit hours	360
Business division credit hours	96
General education credit hours	<u>96</u>
Total	552

Annual tuition revenue based on 50 part-time and 20 full-time students (in-district \$38/cr hr.)

552 credits X \$38.00 =

\$20,976.00

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E. PROGRAM COST ANALYSIS

The program specific courses will be staffed by part-time teaching faculty. Students will register for existing sections of math, science, business and architectonics. Annual costs based upon required contact hours and the 1991-92 rates of pay are:

First Semester

8 contact hours per week for 15 weeks at approx. \$25.00 per hour	\$3000
Second Semester	
8 contact hours per week for 15 weeks at approx. \$25.00 per hour	\$3000
Third Semester	
8 contact hours per week for 15 weeks at approx. \$25.00 per hour	<u>\$3000</u>
Total	\$9000
Fringe Benefits (16%)	\$1440
Total personnel cost estimate	\$10440
Total non personnel cost estimate	\$5000
Total annual operating cost estimate	\$15440

In addition to the operational costs of the program, there will be costs for new equipment and the refurbishment of existing equipment. In an effort to reduce equipment costs, donations from area employers will be solicited. The College can expect to incur approximately \$5000 for equipment/maintenance. More than half of the students expected to enroll in this program will either own the hand tools or have access to them from their employer, thereby reducing the quantity that the College must maintain for other students. The equipment cost after the first year should reduce by 50%, anticipating only routine maintenance and periodic replacement thereafter.

First year equipment

\$5000

TOTAL OVERALL PROGRAM COST ESTIMATE - FIRST YEAR \$20440

F. PROGRAM REQUIREMENTS

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General Education Requirements:ENG 100Technical Writing460PLS 150State and Local Govt345HUM 101Intro to the Humanities345					
PLS 150State and Local Govt345					
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HUM 101Intro to the Humanities345	~				
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Math and Science Requirements:					
MTH 151 Technical Algebra 4 75					
PHY 110 Applied Physics 4 60					
CIS 111 Computer Concepts 3 45					
Construction Design and Practice:					
ARC 100 Specifications 1 15					
ARC 117Construction Materials345					
ARC 207 Estimating I 2 30					
ARC 208Estimating II230					
ARC 209 Surveying 3 45					
ARC 111 Architectural Drawing I 6 90	••				
ARC 199 OJT/Internship 1-8 15/1	20				
TRI 100Constr Theo and Prac I460					
TRI 200Constr Theo and Prac II460					
Business and Management:					
ACC 111 Prin. of Accounting 3 45					
BMG 140Intro to Business345					
BMG 200Hum Rel Bus Ind.345					
Program Options:					
Free Unrestricted Electives 5 75-					
Total Credits: 61-68					

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G. COURSE DESCRIPTIONS

(SEE CATALOGUE DESCRIPTIONS)

H. ANALYSIS OF AFFECTED INSTRUCTIONAL UNITS

The impact of this program is spread over three divisions at the College. This impact will manifest itself in increased enrollments in existing coursework in Technology, Business and General Education. There will be no competition for instructional space because the remaining 5000 sq ft. of the original Construction Technology laboratory will be brought in to use. Existing fulltime faculty are qualified to teach all coursework. Sufficient qualified adjunct faculty are readily available to support this program.

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I. ARTICULATIONS

Ferris State University and Eastern Michigan University are eager to review the approved program for transfer possibilities.

J. LICENSURE/ACCREDITATION

The Construction Management Associate in Applied Science Degree Program will be submitted to the Associated Post-Secondary Schools of Construction for approval.