OAKLAND COMMUNITY COLLEGE

COLLEGE CURRICULUM REVIEW COMMITTEE

WELCOME TO THE CURRICULUM REVIEW SELF-STUDY PROCESS

Discipline/Program _Welding_____ Coordinator(s) Tahir Khan

_____

CRC Mentor__Gail Mays_____ Review Date: 6/02/06_____

Thank you for agreeing to coordinate the Curriculum Review in your area. As Discipline/Program Review Coordinator, it is your responsibility to make sure the steps detailed below are completed by the Review Date. Your packet includes instructions and forms for completing the Review. If needed, a CRC mentor is available to you. Your Dean will also be able to provide meaningful assistance in completing this important task.

In the Part I-Core Review, the College asks your discipline/program to analyze its curriculum from a variety of perspectives. These include course offerings and contents, enrollment/retention, transfer trends, and plans for the future. An additional section of activities is contained in Part II. The nature of these review activities will depend on whether you are a member of a Discipline or a Program.

Included in this document to help you work on your review are: 1) Data Collection forms to distribute to your Discipline/Program colleagues and 2) Data Analysis forms with summary sections to help you complete your review. After filling out these forms, you will finalize your review by re-printing all of the summary sections on one Summary Report Form for submission.

Once again, thank you for agreeing to work on this very important process with your colleagues. Together we will constantly strive to ensure the excellence of instruction at OCC.

College Curriculum Review Membership
2005-2006

Lin Armitage (HL)	Diane Hill (OR)	Janet Peart (AH)
Thomas Boozer (AH)	Tony Ingram (OR)	Letyna Roberts (ex-officio)
Nadia Boulos (HL)	Shelley Larson (RO/SF)	Karen Robinson (HL)
Charlott Couch (RO/SF)	David Mathews (RO/SF)	Beverly Stanbrough (RO/SF)
Jennifer Craft (AH)	Gail Mays (AH)-Chair	Bob Zemke (OR)

CURRICULUM REVIEW SELF-STUDY PROCESS
FOR
DISCIPLINE/PROGRAM COORDINATORS

Coordinator: The bold type below indicates forms that appear on the CRC disk.

Step 1—Request that the Office of Assessment and Effectiveness (contact information available on InfoMart) send you the Dashboard data for your Discipline/Program.

Step 2—Send the **Data Collection forms** to all the full-time faculty and/or adjunct members of your Discipline/Program, as specified on each form.

Step 3—Collect syllabi from all adjuncts and full-time faculty for every course they are teaching, and complete the **Data Collection forms** for each course.

Step 4—After collecting the above data, complete the **Data Analysis forms** to help you organize and analyze the information you've gathered.

Step 5—Create a "Summary Report" by compiling all the summary paragraphs from the Data Analysis forms.

Step 6—Forward a DRAFT copy of your compiled Discipline/Program Summary Report along with a **Faculty Sign-off form** to all faculty participating in the review at least four weeks prior to your review appointment. NOTE: As part of the official CRC Review Document, please include the returned Faculty Sign-Off Forms.

Step 7—Send an electronic copy of your Summary Report to the Chairperson of the Curriculum Review Committee at least two weeks prior to your review and provide two hard copies of the full report, including the **Data Collection and Data Analysis forms,** to your mentor.

Step 8—Present the Discipline/Program Self-Study to the Curriculum Review Committee on the appointed date.

The Curriculum Review Committee will then provide your Discipline/Program with recommendations and suggestions and share the results of your review with the College Academic Senate.

CRC
PART I-CORE REVIEW

Coordinator: Data Collection and Data Analysis forms for the following review areas are attached.

A. CATALOG COURSE DESCRIPTIONS

- Please reproduce copies of all your Discipline/Program course catalog descriptions, and distribute them to the full-time members of the Discipline/Program with the Data Collection form asking the faculty to comment on whether the catalog course descriptions are accurate, clear, and current.

- Analyze the responses in order to determine where there is a need for revision.

B. SYLLABI

- Collect all syllabi from all full-time and adjunct faculty for all sections of all courses listed in the catalog under your Discipline/Program.

- Analyze where there are inconsistencies or omissions in the syllabi.

C. ENROLLMENT TRENDS AND STUDENT RETENTION

- Collect the Dashboard enrollment and retention data for the current and last academic year (available from the Office of Assessment and Effectiveness).

- Analyze areas of strength and weakness. Discuss, where applicable, student recruitment and student retention strategies that your Discipline/Program participates in currently or intends to implement in the future.

D. DISCLIPLINE/PROGRAM NEEDS AND RESOURCES

- Collect information on the Discipline/Program's current and anticipated needs and resources by distributing the Data Collection form to all full and adjunct faculty.

- Discuss what resources and staff development activities your Discipline/Program needs and also indicate necessary curriculum changes/revisions where appropriate.

Welding Technology (WEL.CT)
Certificate Program Auburn Hills

This program, leading to a Certificate in Welding, prepares the student to enter the occupational area of welding. The program will provide the student with the knowledge and skills needed to gain job entry into a wide variety of welding occupations. Some courses in this program prepare the student for State Certification testing.

Requirements		Credits
ATW 1120	Introduction to Gas/Arc/MIG/TIG Welding	3
ATW 8110	Arc Welding, Flat and Horizontal Positions	3
ATW 8120	Arc Welding, Vertical, Up and Overhead Positions	3
ATW 8210	Introduction to Gas Welding	3
ATW 8220	Adv. Gas Welding Applications, Gas and Plasma Cutting	3
ATW 8310	Metal Inert Gas Welding (MIG)	3
ATW 8320	Tungsten Inert Gas Welding (TIG)	3
ATW 8410	Pipe Welding, all Positions	3
ROB 1640	Interpolated/Welding Robotic Applications	4
	Total Credits	**28**

(ATW) WELDING TECHNOLOGY

ATW 1120 ..... 3 Credits
Introduction to Gas/Arc/MIG/TIG Welding The student will be introduced to the four basic welding processes: gas (oxyacetylene), arc (shielded metal arc welding), MIG (gas metal arc) and TIG (gas tungsten arc) welding. The student will learn proper set up and operating procedures through classroom demonstrations. Special emphasis is placed on safety principles. Course/lab fees.

ATW 8110 ..... 3 Credits
Arc Welding, Flat and Horizontal Positions The student will be introduced to the skill area of arc welding. Related theory of arc welding as well as demonstrations of various techniques will be included. The student will perform several types of arc welding objectives and will become familiar with various types of rod as well as different types of welding machines. The student will gain limited arc welding experience. Course/lab fees.

ATW 8120 ..... 3 Credits
Arc Welding, Vertical, Up and Overhead Positions
Prerequisite: ATW 8110.
The student will be introduced to various shapes of structural steel and their applications. A basic knowledge of arc welding is required for the student to perform welding operations on various types of structural members and several types of welding applications. The student will develop limited skill levels of structural welding as well as limited welding experience. Course/lab fees.

ATW 8210 ..... 3 Credits
Introduction to Gas Welding
The student will be introduced to several types of gas welding as well as all related gas welding equipment. The student will perform several types of welds using the oxygen/acetylene torch and related equipment. Textbook, films, movies and demonstrations will serve as the related instruction to gain limited gas welding abilities. Course/lab fees.

ATW 8220 ..... 3 Credits
Advanced Gas Welding Applications, Gas and Plasma Cutting

Prerequisite: ATW 8210.
The student will gain a working knowledge of gas welding and burning equipment and techniques. Several performance objectives will be executed by the student with the aid of the related instruction from textbooks, films, movies and demonstrations. The student will gain limited welding and burning abilities as well as a limited amount of work experience. All performances will be executed in a safe and proper manner. Course/lab fees.

ATW 8310 ..... 3 Credits
Metal Inert Gas Welding (MIG)
The student will be introduced to the inert gas arc welding technique as well as the concept of flux free arc welding. Theory of machine operation and joining techniques will be introduced through textbooks, films, movies and demonstrations. The student will perform several objectives and thereby gain valuable work experience and abilities on ferrous and nonferrous metals. Safe and proper work habits and procedures will be practiced. Course/lab fees.

8320 ..... 3 Credits
Tungsten Inert Gas Welding (TIG)
The student will display a working knowledge of T.I.G. welding including the related theory involved with inert gas arc welding. Many welding techniques are involved for proper fusion and joining of ferrous and, primarily, nonferrous metals. Proper identification of parent metals as well as filler wire and rods will be displayed by the student. Safe and proper work habits and procedures will be insisted upon by the instructor. Course/lab fees.

ATW 8410 ..... 3 Credits
Pipe Welding, All Positions
Prerequisites: ATW 8110, ATW 8120.
The student will perform cutting, beveling, fitting, clamping and welding operations on steel pipe. Various types of welding operations will be performed to include oxyacetylene, arc and metal inert gas (M.I.G.) welding. Sectioning and testing operations as well as grain analysis and fatigue calculations will be done by the student.Course/lab fees.

ROB 1640 4 Credits
Interpolated/Welding Robotic Applications
Prerequisites: ROB 1620
The student will program and operate robotic welding systems using resitance and arc welding technologies. The course will include laboratory hands-on experience in basic welding fundamentals. Robotic weld schedules will be used to enable robot welding applications using Gas Metal Arc Welding. Resistance welding programs will also be studied by the student. Students will use robotic simulation for complex motions and welding applications. Course/lab fees.

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATW 1120
Course Number

Coordinator: Distribute this form to all full-time members of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	___
Clear	✓	___
Current	✓	___

NUMBER OF CREDITS:

Appropriate	1	___

Please explain any No answer:

Please return to T. Kitan ***at*** AH ***by*** 1/5/06
Name Campus Date

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATH 8110
Course Number

Coordinator: Distribute this form to all full-time members of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	
Clear	✓	
Current	✓	

NUMBER OF CREDITS:

Appropriate	✓	

Please explain any No answer:

Please return to T. Kuhn ***at*** AH ***by*** 1/5/06
Name Campus Date

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATM 8120
Course Number

Coordinator: Distribute this form to all full-time members of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	
Clear	✓	
Current	✓	

NUMBER OF CREDITS:

Appropriate	✓	

Please explain any No answer:

Please return to T. KHAN ***at*** AH ***by*** 1/5/06
Name Campus Date

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATW 8210
Course Number

Coordinator: Distribute this form to <u>all full-time members</u> of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	
Clear	✓	
Current	✓	

NUMBER OF CREDITS:

Appropriate	✓	

Please explain any No answer:

Please return to T. Kuhn ***at*** AH ***by*** 1/5/06
Name Campus Date

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATW 8220
Course Number

Coordinator: Distribute this form to all full-time members of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	
Clear	✓	
Current	✓	

NUMBER OF CREDITS:

Appropriate	✓	

Please explain any No answer:

Please return to T. Kitan ***at*** Att ***by*** 1/5/06
Name Campus Date

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATW 8310
Course Number

Coordinator: Distribute this form to all full-time members of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	
Clear	✓	
Current	✓	

NUMBER OF CREDITS:

Appropriate	✓	

Please explain any No answer:

Please return to T. Kuhn ***at*** AH ***by*** 1/5/06
Name Campus Date

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATW 8320
Course Number

Coordinator: Distribute this form to all full-time members of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	___
Clear	✓	___
Current	✓	___

NUMBER OF CREDITS:

Appropriate	✓	___

Please explain any No answer:

Please return to T. Kuhnat AH ***by*** 1/15/06
Name Campus Date

DATA COLLECTION

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

FOR: ATE 8410
Course Number

Coordinator: Distribute this form to <u>all full-time members</u> of the Discipline/Program for every course listed in the Catalog.

CATALOG COURSE DESCRIPTION:

	Yes	No
Accurate	✓	
Clear	✓	
Current	~~✓~~	
NUMBER OF CREDITS:		
Appropriate	✓	

Please explain any No answer:

Please return to T. Kilian ***at*** ~~All~~ ***by*** 1/5/06
Name Campus Date

DATA ANALYSIS

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

Coordinator: Complete this form after reviewing the Course Catalog Data Collection forms from members of your Discipline/Program on all of the courses listed in the Catalog.

List every course that is listed in the catalog. Check where revision is indicated or no revisions seem necessary. Please, add lines where needed.

	Revision needed	No Revision necessary
Course Number ATW 1120	___	✓
Course Number ATW 8110	___	✓
Course Number ATW 8120	___	✓
Course Number ATW 8210	___	✓
Course Number ATW 8220	___	✓
Course Number ATW 8310	___	✓
Course Number ATW 8320	___	✓
Course Number ATW 8410	___	✓
Course Number_____	___	___
Course Number_____	___	___

COURSE CATALOG DESCRIPTION REVIEW SUMMARY:

DATA ANALYSIS

CORE REVIEW
A. COURSE CATALOG DESCRIPTION

Coordinator: Complete this form after reviewing the Course Catalog Data Collection forms from members of your Discipline/Program on all of the courses listed in the Catalog.

List every course that is listed in the catalog. Check where revision is indicated or no revisions seem necessary. Please, add lines where needed.

	Revision needed	No Revision necessary
Course Number ATW 1120	___	✓
Course Number ATW 8110	___	✓
Course Number ATW 8120	___	✓
Course Number ATW 8210	___	✓
Course Number ATW 8220	___	✓
Course Number ATW 8310	___	✓
Course Number ATW 8320	___	✓
Course Number ATW 8410	___	✓
Course Number_____	___	___
Course Number_____	___	___

COURSE CATALOG DESCRIPTION REVIEW SUMMARY:

Information listed in the college catalog on these eight courses is accurate and up to date.

CORE REVIEW

DATA COLLECTION

B. SYLLABUS REVIEW

FOR: ATW 1120
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	BOB SLEVA								
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓								
Course Goals	✓								
Grading Standards and Practices	✓								
Tentative Schedule of Assignments and Tests	✓								
Recommended Items (per Academic Senate)									
Course Name and Number	✓								
Instructor, Office Location, Method of Contact	✓								
Office Hours	✓								
Available Assistance	✓								
Course Catalog Description with Prerequisites	✓								
General Education Attributes (where pertinent)	–								
Required Books and Supplies	✓								
List of Supportive Materials (where available)	–								
Evaluation/Testing System & Policies	✓								
Attendance Policy	✓								
Safety Instructions	✓								
Disclaimer Allowing for Reasonable Revisions	–								
Optional Items									
Semester Meeting Times & Room	✓								
Teaching/Learning Strategies	–								
Applicable Forms Pertinent to Course	–								
Reference to Student Policies in OCC Catalog	–								
Policy on Use of Computing Resources	–								
Description of Required Computing Skills	–								
Policy on Plagiarism	–								
Student Bill of Responsibilities	–								

Instructor: Bob Sleva Day Class Meets: Fri morning Room A219
Section: A1501 Time Class Meets: 9:00 –11:55 a.m.
Phone: 248-232-4105 Office Hours:
E-mail: RSSLEVA@oaklandcc.edu
Dept Office Number: A 365 Dept Office Phone: 248-232-4118
Counseling Phone: 248-232-4350 IIC Phone: 248-232-4435
Pass Office Phone: 248-232-4080 Pass Office Location: B 112

Class Starting date 1/13/06 Ending Date 4/28/06

OAKLAND COMMUNITY COLLEGE

ATW 1120 COURSE SYLLABUS

IINTRODUCTION TO GAS,ARC,MIG & TIG

3 Credit Hours 45 Contract Hour

The student will be introduced to the four basic welding processes: Gas (oxyacetylene), Arc(shielded metal arc welding), Mig (gas metal arc welding) and Tig (gas tungsten arc) welding. The student will learn proper set up and operating procedures through classroom demonstrations. Special emphasis is placed on safety principles.

Course topics include:

- Puddles
- Lap Joints
- Beads
- Tee Joints
- Electrodes
- AC / DC Current
- Amps
- Stringer beads
- Butt Joints

Course Competencies:

Upon completion of this course participants should be able to:

- Have the ability to problem solve.
- Be able to determine the best welding process for given materials.
- Understand the difference between brazing and soldering.

Text: Welding Principles & Applications by Larry Jeffus

Homework: Chapters 1, 2, 3, 10, 15 and 25. First 20 questions

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	15 Points
Homework	30 Points
Quizzes	30 Points
Daily Tasks	25 Points

A	93 - 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made.
You will lose one full grade for two absences.

ADA Notification: Students requiring special assistance should contact the PASS office, Room # B112. Phone # (248) 232-4080.

Students needing academic support may contact the Individualized Instruction Center, Room B110 or by phone at 248-232-4435.

Tentative Course Schedule

Session 1 **Introduction**
1. Background of Class
2. Arc Safety Film
3. Gas Safety Film
4. Safety Overview

Session 2 **Demo O. A. W.**
1. Set Up
2. Shut Down
3. Puddles
4. Puddles w/Rod
5. Lab Practice

Session 3 **Demo O. A. W.**
1. Lap Joint
2. Lab Practice

Session 4 **Demo Brazing**
1. Beads
2. Tee Joint
3. Lab Practice

Session 5 **Performance Test O. A. W.**
1. Puddles
2. Puddles w/Rod
3. Brazing / Beads
4. Brazing Tee Joint

Session 6 **Demo S. M. A. W.**
1. Electrodes
2. AC / DC Current
3. Amps
4. Stringer Beads E 6013
5. Lab Practice

Session 7 **Demo S. M. A. W.**
1. Stringer Bead E 0714 & E 6010
2. Lab Practice

Session 8 **Demo S. M. A. W.**
1. Stringer Bead E 0714 & E 6010
2. Lab Practice

Session 9 **Performance Test S. M. A. W.**

1. Stringer Beads E 6010, E 7018, E 7014, E 6013

Session 10 **Demo G. M. A. W.**

1. Set Up
2. Gases
3. Stringer Beads
4. Lab Practice

Session 11 **Demo G. M. A. W.**

1. Tee Joint
2. Lap Joint
3. Lab Practice

Session 12 **Performance Test G. M. A. W.**

1. Stringer Beads
2. Lap Joint
3. Tee Joint

Session 13 **Demo G. T. A. W.**

1. Set Up
2. Tungstens
3. Puddles
4. Puddles w/Rod

Session 14 **Demo G. T. A. W.**

1. Lap Joint
2. Butt Joint
3. Lab Practice

Session 15 **Performance Test G. T. A. W.**

1. Puddles
2. Puddles w/Rod
3. Butt Joint
4. Lap Joint

CORE REVIEW

DATA COLLECTION

B. SYLLABUS REVIEW

FOR: ATW 8110
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	Bob Sleva	B. Zelinski							
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓	✓							
Course Goals	✓	✓							
Grading Standards and Practices	✓	✓							
Tentative Schedule of Assignments and Tests	✓	✓							
Recommended Items (per Academic Senate)									
Course Name and Number	✓	✓							
Instructor, Office Location, Method of Contact	✓	✓							
Office Hours	✓	✓							
Available Assistance	✓	✓							
Course Catalog Description with Prerequisites	✓	✓							
General Education Attributes (where pertinent)		✓							
Required Books and Supplies	✓	✓							
List of Supportive Materials (where available)		—							
Evaluation/Testing System & Policies	✓	✓							
Attendance Policy	✓	✓							
Safety Instructions	✓	✓							
Disclaimer Allowing for Reasonable Revisions	—	—							
Optional Items									
Semester Meeting Times & Room	✓	✓							
Teaching/Learning Strategies	—	—							
Applicable Forms Pertinent to Course	—	—							
Reference to Student Policies in OCC Catalog	—	—							
Policy on Use of Computing Resources	—	—							
Description of Required Computing Skills	—	—							
Policy on Plagiarism	—	—							
Student Bill of Responsibilities	—	—							

Instructor: B. Sleva B. Zelinski Day Class Meets :Tues Room A219
Section: A1504 Time Class Meets: 5:00 – 7:55 p.m.
Phone: 248-232-4105 Office Hours:
Email: RSLEVA@oaklandcc.edu

Dept Office Number: A 365 Dept Office Phone: 248-232-4118
Counseling Phone: 248-232-4350 IIC Phone: 248-232-4435
Pass Office Phone: 248-232-4080 Pass Office Location: B 112
Class Dates 01/10/06 to 04/25/06 Text book Welding Principles and practices
By Jeffus

Oakland Community College

ATW 8110 COURSE SYLLABUS

Arc Welding Flat and Horizontal
3 Credit Hours 45 Contact Hours

The student will be introduced to the skill area of arc welding. Related theory of arc welding as well as the demonstration of various techniques will be included. The student will perform several types of arc welding objectives and will become familiar with various rods as well as different types of welding machines. The student will gain limited arc welding experience.

There are no prerequisites for this class.

Course topic include
Puddles
Lap Joints
Beads
Tee Joints
Electrodes
AC/Dc Current
Amps
Stringer Joints
Butt Joints

Course Competencies:

Upon completion of this course participants should be able to:

- Have the ability to problem solve.
- Be able to determine the best welding process for given materials.
- Understand the difference between brazing and soldering.

Text: Welding Principles & Applications by Larry Jeffus

Homework: Chapters 1, 2, 3, 4

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	15 Points
Homework	30 Points
Quizzes	30 Points
Daily Tasks	25 Points

A	93 - 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made.
You will lose one full grade for two absences.

ADA Notification: Students requiring special assistance should contact the PASS Office, Room # B112 Phone # (248) 232-4080.

Students needing academic support may contact the Individualized Instruction Center, Room B110 or by phone at 248-232-4435.

Tentative Course Schedule

Session 1 **Introduction**
1. Background of Class
2. Arc Safety Film
3. Safety Overview

Session 2 **Demo S.M.A.W.**
1. Set Up
2. Shut Down
3. AC/DC Current
4. Lab Practice

Session 3 **Demo Butt**
1. Butt Joint
2. Lab Practice

Session 4 **Demo Brazing**
1. Beads
2. Butts
3. Lab Practice

Session 5 **Performance Test S.M.A.W**
1. Prior work

Session 6 **Demo S. M. A. W.**
1. Electrodes
2. AC / DC Current
3. Amps
4. Tee joints
5. Lab Practice

Session 7 **Demo S. M. A. W.**
1. Tee joints
2. Lab Practice

Session 8 **Demo S. M. A. W.**
1. Stringer Bead E 0714 & E 6010
2. Lab Practice

Session 9 **Performance Test S. M. A. W.**

1. Tees joints 6010, E 7018, E 7014, E 6013

Session 10 **DemoA. M. A. W.**

1. Set Up
2. Laps
3. Stringer Beads
4. Lab Practice

Session 11 **Demo**

1. Lap Joint
2. Lab Practice

Session 12 **Performance Test S.M.A.W.**

1. Stringer Beads
2. Lap Joint
3. Tee Joint

Session 13 **Demo S. M. A. W.**

1. Set Up
2. Horizontal butts
3. Practice

Session 14 **Demo S. M. A. W.**

1. Lap Joint
2. Butt Joint
3. Lab Practice

Session 15 **Performance Test S. M. A. W.**

1. All Prior welds

CORE REVIEW

B. SYLLABUS REVIEW

DATA COLLECTION

FOR: ATW 8120
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	BOB SLEVA	B. ZELINSKI							
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓	✓							
Course Goals	✓	✓							
Grading Standards and Practices	✓	✓							
Tentative Schedule of Assignments and Tests	✓	✓							
Recommended Items (per Academic Senate)									
Course Name and Number	✓	✓							
Instructor, Office Location, Method of Contact	✓	✓							
Office Hours	✓	✓							
Available Assistance	✓	✓							
Course Catalog Description with Prerequisites	✓	✓							
General Education Attributes (where pertinent)	–	–							
Required Books and Supplies	✓	✓							
List of Supportive Materials (where available)	–								
Evaluation/Testing System & Policies	✓	✓							
Attendance Policy	✓	✓							
Safety Instructions	✓	✓							
Disclaimer Allowing for Reasonable Revisions	–	–							
Optional Items									
Semester Meeting Times & Room	✓	✓							
Teaching/Learning Strategies	–	–							
Applicable Forms Pertinent to Course	–	–							
Reference to Student Policies in OCC Catalog	–	–							
Policy on Use of Computing Resources	–	–							
Description of Required Computing Skills	–	–							
Policy on Plagiarism	–	–							
Student Bill of Responsibilities	–	–							

Instructor: B Sleva & B. Zelinski Day Class Meets: Tuesday Room A219
Section: A1505 Time Class Meets: 5:00 – 7:55 p.m.
Phone: 248-232-4105 Office Hours:
E-mail: RSSLEVA@oaklandcc.edu
Dept Office Number: A 365 Dept Office Phone: 248-232-4118
Counseling Phone: 248-232-4350 IIC Phone: 248-232-4435
Pass Office Phone: 248-232-4080 Pass Office Location: B 112

Starting date 01/10/06 Finish date 04/25/06

OAKLAND COMMUNITY COLLEGE

ATW 8120 COURSE SYLLABUS

ARC WELDING VERTICAL UP AND OVER

3 Credit Hours 45 Contract Hour

The student will be introduced to various shapes of structural steel and their applications. A basic knowledge of arc welding is required for the student to perform welding operations on various types of structural members and several types of welding applications. The student will develop limited skill levels of structural welding as well as limited welding experience.

There prerequisites for this class is ATW 8110

Course topics include:

- Puddles
- Lap Joints
- Beads
- Tee Joints
- Electrodes
- AC / DC Current
- Amps
- Stringer beads
- Butt Joints

Course Competencies:

Upon completion of this course participants should be able to:

- Have the ability to problem solve.
- Be able to determine the best welding process for given materials.
- Understand the difference between brazing and soldering.

Text: Welding Principles & Applications by Larry Jeffus

Homework: Chapters 18, 19,20, and 24 First 20 Questions

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	15 Points
Homework	30 Points
Quizzes	30 Points
Daily Tasks	25 Points

A	93 - 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made.
You will lose one full grade for two absences.

ADA Notification: Students requiring special assistance should contact the PASS office, Room # B112 Phone # (248) 232-4080.

Students needing academic support may contact the Individualized Instruction Center, Room B110 or by phone at 248-232-4435.

ARC WELDING, VERTICAL, UP AND OVERHEAD POSITIONS

CLASS ASSIGNMENTS AND SCHEDULE

SESSION 1	ADMINISTRATION AND ORIENTATION READ CHAPT. 4 AND 15
SESSION 2	TEE JOINT, VERT. 3 PASS, E7018 TEXT REF. NO. 20-J45 AND 20-J46
SESSION 3	TEE JOINT VERT. CONT.
SESSION 4	TEE JOINT, OVERHEAD, 6 PASS, E7018 NO TEXT REF. NO.
SESSION 5	TEE JOINT, OVERHEAD, CONT.
SESSION 6	PERFORMANCE TEST 1
SESSION 7	SINGLE VEE GROOVE, HORIZ. 2G, E6010, E7018 TEXT REF. NO. 20-J60 READ CHAPT. 7 AND 12
SESSION 8	SINGLE VEE GROOVE, VERT. 3G, E6010, E7018 TEXT REF. NO. 20-J52
SESSION 9	SINGLE VEE GROOVE, OVERHEAD. 4G, E6010, E7018 TEXT REF. NO. 20-J65
SESSION 10	DIRECTED WELDING PRACTICE
SESSION 11	DIRECTED WELDING PRACTICE
SESSION 12	DIRECTED WELDING PRACTICE
SESSION 13	DIRECTED WELDING PRACTICE
SESSION 14	PERFORMANCE TEST 2
SESSION 15	FINAL WRITTEN EXAMINATION

NOTE: LATE PERFORMANCE TESTS -50 POINTS

CORE REVIEW

DATA COLLECTION

B. SYLLABUS REVIEW

FOR: ATW 8210
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	BOB SLEVA								
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓								
Course Goals	✓								
Grading Standards and Practices	✓								
Tentative Schedule of Assignments and Tests	✓								
Recommended Items (per Academic Senate)									
Course Name and Number	✓								
Instructor, Office Location, Method of Contact	✓								
Office Hours	✓								
Available Assistance	✓								
Course Catalog Description with Prerequisites	✓								
General Education Attributes (where pertinent)	—								
Required Books and Supplies	✓								
List of Supportive Materials (where available)	—								
Evaluation/Testing System & Policies	✓								
Attendance Policy	✓								
Safety Instructions	✓								
Disclaimer Allowing for Reasonable Revisions	—								
Optional Items									
Semester Meeting Times & Room	✓								
Teaching/Learning Strategies	—								
Applicable Forms Pertinent to Course	—								
Reference to Student Policies in OCC Catalog	—								
Policy on Use of Computing Resources	—								
Description of Required Computing Skills	—								
Policy on Plagiarism	—								
Student Bill of Responsibilities	—								

Instructor: Bob Sleva
Section: A1505
Phone: 248-232-4105
Day Class Meets: Tues Evening Room A219
Time Class Meets: 5:00 – 7:55 p.m.
Office Hours:
E-mail: rssleva@oaklandcc.edu

Dept Office Number: A 352
Counseling Phone: 248-232-4350
Pass Office Phone: 248-232-4080
Dept Office Phone: 248-232-4118
IIC Phone: 248-232-4435
Pass Office Location: B 112

Oakland Community College

ATW-8210 COURSE SYLLABUS

Introduction to Gas Welding

3 Credit hours 45 Contact hours

The student will be introduced to several types of gas welding as well as related gas welding equipment. The student will perform several types of welds using the oxygen/acetylene torch and related equipment. Textbook, films, movies and demonstrations will serve as the related instruction to gain limited gas welding abilities.

Credit hrs 3 Contact hours 45 3hours for 15 weeks

Book Welding Principles and Applications Author Jeffus

Homework chapter1, 28, 29, 30, 31

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	15 Points
Homework	30 Points
Quizzes	30 Points
Daily Tasks	25 Points

A	93 – 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made. (2) Absences =one drop grade.

ATW821
(248) [illegible]
INTRODUCTION TO GAS WELDING

SESSION 1	INTRO TO GAS WELDING 1. SET UP 2. SHUT DOWN 3. SAFETY 4. HOMEWORK ASSIGNMENT, CHAPTERS [illegible]
SESSION 2	DEMO 1. PUDDLES 2. PUDDLES WITH FILLER ROD
SESSION 3	DEMO 1. BUTT JOINT
SESSION 4	LAB PRACTICE 1. PUDDLES 2. PUDDLES WITH FILLER ROD 3. BUTT JOINT
SESSION 5	PERFORMANCE TEST 1. PUDDLES 2. PUDDLES WITH FILLER ROD 3. BUTT JOINT
SESSION 6	DEMO 1. LAP JOINT 2. TEE JOINT
SESSION 7	DEMO 1. BRAZING
SESSION 8	DEMO 1. BRAZING BUTT 2. LAP & TEE JOINTS
SESSION 9	LAB PRACTICE 1. BRAZING BUTT JOINT 2. BRAZING LAP JOINT 3. BRAZING TEE JOINT
SESSION 10	PERFORMANCE TEST 1. BRAZING 2. BRAZING BUTT, LAP, TEE JOINTS 3. HOMEWORK DUE

ATW821

INTRODUCTION TO GAS WELDING

(CONTINUED)

SESSION 11	DEMO 1. CUTTING 2. SET UP 3. STRAIGHT CUT 4. BEVEL CUT 5. HOLE CUT
SESSION 12	LAB PRACTICE 1. CUTTING
SESSION 13	LAB PRACTICE
SESSION 14	LAB PRACTICE
SESSION 15	PERFORMANCE EXAM 1. GAS WELDING 2. BRAZING 3. CUTTING

CORE REVIEW

DATA COLLECTION

B. SYLLABUS REVIEW

FOR: ATW 8220
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	Bob Sievin	B. Zerwinski							
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓	✓							
Course Goals	✓	✓							
Grading Standards and Practices	✓	✓							
Tentative Schedule of Assignments and Tests	✓	✓							
Recommended Items (per Academic Senate)									
Course Name and Number	✓	✓							
Instructor, Office Location, Method of Contact	✓	✓							
Office Hours	✓	✓							
Available Assistance	✓	✓							
Course Catalog Description with Prerequisites	✓	✓							
General Education Attributes (where pertinent)	–								
Required Books and Supplies	✓	✓							
List of Supportive Materials (where available)	–	–							
Evaluation/Testing System & Policies	✓	✓							
Attendance Policy	✓	✓							
Safety Instructions	✓	✓							
Disclaimer Allowing for Reasonable Revisions	–	–							
Optional Items									
Semester Meeting Times & Room	✓	✓							
Teaching/Learning Strategies	–	–							
Applicable Forms Pertinent to Course	–	–							
Reference to Student Policies in OCC Catalog	–	–							
Policy on Use of Computing Resources	–	–							
Description of Required Computing Skills	–	–							
Policy on Plagiarism	–	✓							
Student Bill of Responsibilities									

Instructor: B Sleva & B Zelinski Day Class Meets: Tue Evening Room A219
Section: A1506 Time Class Meets: 5:00 – 7:55 p.m.
Phone: 248-232-4105 Office Hours:
E-mail: RSSLEVA@oaklandcc.edu
Dept Office Number: A 365 Dept Office Phone: 248-232-4118
Counseling Phone: 248-232-4350 IIC Phone: 248-232-4435
Pass Office Phone: 248-232-4080 Pass Office Location: B 112

Starting Date 01/10/06 Finish Date 04/25/06

OAKLAND COMMUNITY COLLEGE

ATW 8220 COURSE SYLLABUS

ADVANCED GAS WELD APPLICATIONS GAS AND PLASMA

3 Credit Hours 45 Contract Hour

The student will gain a working knowledge of gas welding and burning equipment and techniques. Several performance objectives will be executed by the student with the aid of the related instruction from text books, films and demonstrations. The student will gain limited welding and burning abilities as well as a limited amount of work experience. All performances will be executed in a safe and proper manner.

There prerequisites for this class is ATW 8210

Course topics include:

- Puddles
- Cutting
- Beads
- Tee Joints
- Amps
- Stringer beads
- Butt Joints

Course Competencies:

Upon completion of this course participants should be able to:

- Have the ability to problem solve.
- Be able to determine the best welding process for given materials.
- Understand the difference between brazing and soldering.

Text: Welding Principles & Applications by Larry Jeffus

Homework: Chapters 7, 28, 30 and 31 First 20 Questions

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	15 Points
Homework	30 Points
Quizzes	30 Points
Daily Tasks	25 Points

A	93 - 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made.
You will lose one full grade for two absences.

ADA Notification: Students requiring special assistance should contact the PASS Office, Room # B112 Phone # (248) 232-4080.

Students needing academic support may contact the Individualized Instruction Center, Room B110 or by phone at 248-232-4435.

ADVANCED GAS WELDING APPLICATIONS, GAS AND PLASMA CUTTING

SESSION 1	INTRO TO GAS WELDING 1. SET UP 2. SHUT DOWN 3. SAFETY 4. HOMEWORK ASSIGNMENT
SESSION 2	DEMO 1. BUTT JOINT HORIZONTAL POSITION
SESSION 3	DEMO 1. LAP JOINT HORIZONTAL POSITION
SESSION 4	DEMO 1. TEE JOINT HORIZONTAL POSITION
SESSION 5	PERFORMANCE TEST BUTT, LAP, TEE JOINTS HORIZONTAL POSITION
SESSION 6	DEMO 1. LAP JOINT - VERTICAL POSITION 2. TEE JOINT - VERTICAL POSITION
SESSION 7	DEMO 1. BUTT JOINT VERTICAL POSITION
SESSION 8	DEMO 1. LAP JOINT - OVERHEAD POSITION 2. TEE JOINT - OVERHEAD POSITION 3. BUTT JOINT - OVERHEAD POSITION
SESSION 9	LAB PRACTICE 1. BUTT, LAP, TEE JOINTS - VERTICAL 2. BUTT, LAP, TEE JOINTS - OVERHEAD
SESSION 10	PERFORMANCE TEST 1. BUTT, LAP, TEE JOINTS - VERTICAL 2. BUTT, LAP, TEE JOINTS - OVERHEAD
SESSION 11	DEMO - BRAZING BUTT, LAP, TEE JOINTS VERTICAL
SESSION 12	DEMO - BRAZING BUTT, LAP, TEE JOINTS OVERHEAD
SESSION 13	DEMO CUTTING 1. PROPANE FUEL 2. GAUGING 3. PLASMA CUTTING

ATW 822

ADVANCED GAS WELDING APPLICATIONS, GAS AND PLASMA CUTTING

(CONTINUED)

SESSION 14	PERFORMANCE EXAM 1. GAS WELDING, HORIZONTAL, VERTICAL & OVERHEAD 2. BRAZING, VERTICAL & OVERHEAD
SESSION 15	WRITTEN EXAM

CORE REVIEW

DATA COLLECTION

B. SYLLABUS REVIEW

FOR: ATW 8310
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	Bob Slevin								
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓								
Course Goals	✓								
Grading Standards and Practices	✓								
Tentative Schedule of Assignments and Tests	✓								
Recommended Items (per Academic Senate)									
Course Name and Number	✓								
Instructor, Office Location, Method of Contact	✓								
Office Hours	✓								
Available Assistance	✓								
Course Catalog Description with Prerequisites	✓								
General Education Attributes (where pertinent)	–								
Required Books and Supplies	✓								
List of Supportive Materials (where available)	–								
Evaluation/Testing System & Policies	✓								
Attendance Policy	✓								
Safety Instructions	✓								
Disclaimer Allowing for Reasonable Revisions	–								
Optional Items									
Semester Meeting Times & Room	✓								
Teaching/Learning Strategies	–								
Applicable Forms Pertinent to Course	–								
Reference to Student Policies in OCC Catalog	–								
Policy on Use of Computing Resources	–								
Description of Required Computing Skills	–								
Policy on Plagiarism	–								
Student Bill of Responsibilities	–								

Instructor: Bob Sleva Day Class Meets: Thur Evening Room A219
Section: A1507 Time Class Meets: 5:00 – 8:55 p.m.
Phone: 248-232-4105 Office Hours:

Dept Office Number: A 365 Dept Office Phone: 248-232-4118
Counseling Phone: 248-232-4350 IIC Phone: 248-232-4435
Pass Office Phone: 248-232-4080 Pass Office Location: B 112

Class dates Starting 1/12/06 Finish Date 4/27/06

OAKLAND COMMUNITY COLLEGE

ATW 8310 COURSE SYLLABUS

METAL INERT GAS WELDING (MIG)

3 Credit Hours 60 Contract Hour

The student will be introduced to the inert gas arc welding techniques as well as the concept of flux free arc welding. Theory of machine operation and joining techniques will be introduced through text books, films and demonstrations. The student will perform several objectives and thereby gain valuable work experience and abilities on ferrous and nonferrous metals. Safe and proper work habits and procedures will be practiced.

There are no prerequisites for this class

Course topics include:

- Puddles in
- Lap Joints
- Beads
- Tee Joints
- AC / DC Current
- Amps
- Stringer beads
- Butt Joints

Course Competencies:

Upon completion of this course participants should be able to:

- Have the ability to problem solve.
- Be able to determine the best welding process for given materials.
- Understand the difference between brazing and soldering.

Text: Welding Principles & Applications by Larry Jeffus

Homework: Chapters 10, 11, 12, and 13 First 20 Questions

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	15 Points
Homework	30 Points
Quizzes	30 Points
Daily Tasks	25 Points

A	93 - 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made.
You will lose one full grade for two absences.

ADA Notification: Students requiring special assistance should contact the PASS Office, Room # B112 Phone # (248) 232-4080.

Students needing academic support may contact the Individualized Instruction Center, Room B110 or by phone at 248-232-4435.

ATW 831

METAL INERT GAS WELDING (MIG)

SESSION 1

INTRO TO MIG WELDING
1. SAFETY
2. SET UP
3. GASES
4. NOTES AND AMPS

SESSION 2

DEMO
1. SET UP
2. STRAIGHT BEADS
3. WEAVE BEADS

SESSION 3

DEMO
1. BUTT JOINT - FLAT POSITION
2. LAP JOINT - FLAT POSITION
3. TEE JOINT - FLAT POSITION

SESSION 4

LAB PRACTICE
1. STRAIGHT AND WEAVE BEADS
2. BUTT, LAP, TEE JOINTS (FLAT POSITION)

SESSION 5

PERFORMANCE TEST
1. STRAIGHT AND WEAVE BEADS
2. BUTT, LAP, TEE JOINTS (FLAT POSITION)

SESSION 6

DEMO - HORIZONTAL POSITION
1. BUTT JOINTS
2. LAP JOINTS
3. TEE JOINTS

SESSION 7

DEMO - VERTICAL POSITION
1. BUTT JOINTS
2. LAP JOINTS
3. TEE JOINTS

SESSION 8

PERFORMANCE TEST
1. HORIZONTAL BUTT, LAP, TEE JOINTS
2. VERTICAL BUTT, LAP, TEE JOINTS

SESSION 9

DEMO OVERHEAD POSITION
1. BUTT JOINTS..
2. LAP JOINTS
3. TEE JOINTS

SESSION 10

DEMO MIG ALUMINUM
1. BUTT JOINTS
2. LAP JOINTS
3. TEE JOINTS

ATW 831

METAL INERT GAS WELDING (MIG)

(CONTINUED)

SESSION 11	DEMO FLUX CORE 1. BUTT JOINTS 2. LAP JOINTS 3. TEE JOINTS
SESSION 12	LAB PRACTICE
SESSION 13	LAB PRACTICE
SESSION 14	PERFORMANCE EXAM 1. BUTT JOINTS - ALL POSITIONS 2. LAP JOINTS - ALL POSITIONS 3. TEE JOINTS - ALL POSITIONS 4. FLUX CORE 5. MIG ALUMINUM
SESSION 15	WRITTEN TEST

CORE REVIEW

DATA COLLECTION

B. SYLLABUS REVIEW

FOR: ATW 8320
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	BOB SLEVA								
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓								
Course Goals	✓								
Grading Standards and Practices	✓								
Tentative Schedule of Assignments and Tests	✓								
Recommended Items (per Academic Senate)									
Course Name and Number	✓								
Instructor, Office Location, Method of Contact	✓								
Office Hours	✓								
Available Assistance	✓								
Course Catalog Description with Prerequisites	✓								
General Education Attributes (where pertinent)	—								
Required Books and Supplies	✓								
List of Supportive Materials (where available)	—								
Evaluation/Testing System & Policies	✓								
Attendance Policy	✓								
Safety Instructions	✓								
Disclaimer Allowing for Reasonable Revisions	—								
Optional Items									
Semester Meeting Times & Room	✓								
Teaching/Learning Strategies	—								
Applicable Forms Pertinent to Course	—								
Reference to Student Policies in OCC Catalog	—								
Policy on Use of Computing Resources	—								
Description of Required Computing Skills	—								
Policy on Plagiarism	—								
Student Bill of Responsibilities	—								

Instructor: Bob Sleva
Day Class Meets: Tues & Thurs Evening Room A219
Section: A8103
Time Class Meets: 5:00 – 8:55 p.m.
Phone: 248-232-4105
Office Hours:
E-mail: rssleva@oaklandcc.edu

Dept Office Number: A 352
Dept Office Phone: 248-232-4118
Counseling Phone: 248-232-4350
IIC Phone: 248-232-4435
Pass Office Phone: 248-232-4080
Pass Office Location: B 112

Starting Date 1/12/06 Finish Date 4/27/06

OAKLAND COMMUNITY COLLEGE

ATW 8320 COURSE SYLLABUS

TUNGSTEN INERT GAS WELDING (TIG)

3 Credit Hours **60 Contract Hours**

The student will display a working knowledge of T.I.G. welding including the related theory with inert gas arc welding. Many welding techniques are involved for proper fusion and joining of ferrous and nonferrous and primarily nonferrous metals. Proper identification of parent metals as well as filler wire and rods will be displayed by the student Safe and proper work habits and procedures will be insisted upon by the instructor

There are no prerequisites for this class

Course topics include:

- Puddles in
- Lap Joints
- Beads
- Tee Joints
- AC / DC Current
- Amps
- Stringer beads
- Butt Joints

Course Competencies:

Upon completion of this course participants should be able to:

- Have the ability to problem solve.
- Be able to determine the best welding process for given materials.
- Understand the difference between brazing and soldering.

Text: Welding Principles & Applications by Larry Jeffus

Homework: Chapters 14, 15, 16 and 17 First 20 Questions

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	15 Points
Homework	30 Points
Quizzes	30 Points
Daily Tasks	25 Points

A	93 - 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made. You will lose one full grade for two absences.

ADA Notification:

Students requiring special assistance should contact the PASS Office, Room # B112 Phone # (248) 232-4080.

Students needing academic support may contact the Individualized Instruction Center, Room B110 or by phone at 248-232-4435.

TENTATIVE COURSE SCHEDULE

Session 1 **Introduction**

1. Background of Class
2. Arc Safety Film
3. Gas Safety Film
4. Safety Overview

Session 2 **Demo O. A. W.**

1. Set Up
2. Shut Down
3. Puddles
4. Puddles w/Rod
5. Lab Practice

Session 3 **Demo O. A. W.**

1. Lap Joint
2. Lab Practice

Session 4 **Demo Brazing**

1. Beads
2. Tee Joint
3. Lab Practice

Session 5 **Performance Test O. A. W.**

1. Puddles
2. Puddles w/Rod
3. Brazing / Beads
4. Brazing Tee Joint

Session 6 **Demo S. M. A. W.**

1. Electrodes
2. AC / DC Current
3. Amps
4. Stringer Beads E 6013
5. Lab Practice

Session 7 **Demo S. M. A. W.**

1. Stringer Bead E 0714 & E 6010
2. Lab Practice

Session 8 **Demo S. M. A. W.**

1. Stringer Bead E 0714 & E 6010
2. Lab Practice

Session 9 **Performance Test S. M. A. W.**

1. Stringer Beads E 6010, E 7018, E 7014, E 6013

Session 10 **Demo G. M. A. W.**

1. Set Up
2. Gases
3. Stringer Beads
4. Lab Practice

Session 11 **Demo G. M. A. W.**

1. Tee Joint
2. Lap Joint
3. Lab Practice

Session 12 **Performance Test G. M. A. W.**

1. Stringer Beads
2. Lap Joint
3. Tee Joint

Session 13 **Demo G. T. A. W.**

1. Set Up
2. Tungstens
3. Puddles
4. Puddles w/Rod

Session 14 **Demo G. T. A. W.**

1. Lap Joint
2. Butt Joint
3. Lab Practice

Session 15 **Performance Test G. T. A. W.**

1. Puddles
2. Puddles w/Rod
3. Butt Joint
4. Lap Joint

CORE REVIEW

DATA COLLECTION

B. SYLLABUS REVIEW

FOR: ATW 8410
Course Number

Coordinator: Ask all full-time and adjunct faculty to send you the syllabi for all of their courses by a given date. Use this form to collect information about their syllabi.

INSTRUCTORS ⇨	B. Zezulski								
Mandatory Items (per FMA and Federal Law)									
ADA Notification	✓								
Course Goals	✓								
Grading Standards and Practices	✓								
Tentative Schedule of Assignments and Tests	✓								
Recommended Items (per Academic Senate)									
Course Name and Number	✓								
Instructor, Office Location, Method of Contact	✓								
Office Hours	✓								
Available Assistance	✓								
Course Catalog Description with Prerequisites	✓								
General Education Attributes (where pertinent)	—								
Required Books and Supplies	✓								
List of Supportive Materials (where available)	—								
Evaluation/Testing System & Policies	✓								
Attendance Policy	✓								
Safety Instructions	✓								
Disclaimer Allowing for Reasonable Revisions	—								
Optional Items									
Semester Meeting Times & Room	✓								
Teaching/Learning Strategies									
Applicable Forms Pertinent to Course									
Reference to Student Policies in OCC Catalog									
Policy on Use of Computing Resources									
Description of Required Computing Skills									
Policy on Plagiarism									
Student Bill of Responsibilities									

Instructor B. Zelinski Day Class Meets: Mon & Weds Evening Room A219
Section: A8104 Time Class Meets: 5:00 – 8:55 p.m.
Phone: 248-232-4106 Office Hours:

Dept Office Number: A 352 Dept Office Phone: 248-232-4118
Counseling Phone: 248-232-4350 IIC Phone: 248-232-4435
Pass Office Phone: 248-232-4080 Pass Office Location: B 112

Starting date 05/08/06 Finish date 06/28/06

OAKLAND COMMUNITY COLLEGE

ATW 8410 COURSE SYLLABUS

Pipe Welding All Position

3 Credit hours and 60 Contact hours

The student will perform cutting, beveling, fitting, clamping and welding operations on steel pipe. Various types of welding operations will be performed to include oxyacetylene, arc and metal inert gas (M.I.G) welding. Sectioning and testing operations as well as grain analysis and fatigue calculations will be done by the student.

The prerequisites for this class is ATW8110, ATW 8120

Course topics include

Puddles
Beads
Fitting
Beveling
Cutting
Rod selection
Positions

Course Competencies:

Upon completion of this course participants should be able to:

Have the ability to problem solve.
Be able to determine the best welding process for given materials.
Understand the difference between brazing and soldering.

Text: Welding Principles & Applications by Larry Jeffus

Homework: Chapters 14, 15, 16 and 17 First 20 Questions

Grading: Grades in this course will be based on attendance, homework, quizzes, and completion of daily tasks.

Attendance	**15 Points**
Homework	**30 Points**
Quizzes	**30 Points**
Daily Tasks	**25 Points**

A	93 - 100	D	69 - 77
B	87 - 92	F	68 or Below
C	78 - 86		

Attendance is mandatory unless prior arrangement is made.
You will lose one full grade for two absences.

ADA Notification:
Students requiring special assistance should contact the PASS Office, Room # B112 Phone # (248) 232-4080.

Students needing academic support may contact the Individualized Instruction Center, Room B110 or by phone at 248-232-4435.

ATW 841

PIPE WELDING ALL POSITIONS

CLASS ASSIGNMENTS AND SCHEDULE

SESSION 1	ADMINISTRATION AND ORIENTATION READ CHAPTER 23, 25, AND 28. REVIEW CHAPTER 15
SESSION 2	SINGLE VEE GROOVE WELD, VERT. 3G. E6010, E7018 NO TEXT REF. NO.
SESSION 3	SINGLE VEE GROOVE WELD CONT.
SESSION 4	ROLL WELD, 1G, E6010, E7018 TEXT REF. P. 754 FIG. 23-55 AND 23-56
SESSION 5	ROLL WELD CONT.
SESSION 6	PERFORMANCE TEST 1
SESSION 7	VERTICAL PIPE, HORIZ. WELD 2G, E6010, E7018 TEXT REF. NO 23-J3 READ CHAPTER 12
SESSION 8	VERT. PIPE 2G CONT.
SESSION 9	HORIZ. PIPE, VERT. WELD 5G, E6010, E7018 TEXT REF. NO. 26-J5
SESSION 10	HORIZ. PIPE 5G CONT.
SESSION 11	DIRECTED WELDING PRACTICE
SESSION 12	DIRECTED WELDING PRACTICE
SESSION 13	DIRECTED WELDING PRACTICE
SESSION 14	PERFORMANCE TEST 2
SESSION 15	FINAL [illegible] EXAMINATION

NOTE: LATE PERFORMANCE TESTS - 50 POINTS

A/ATW841.PIPE

CORE REVIEW

DATA ANALYSIS

B. SYLLABUS REVIEW

Coordinator: Use a separate sheet for each course. ATW 8410

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100
Course Goals	100
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	—
Required Books and Supplies	100
List of Supportive Materials (where available)	—
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	0
Optional Items	—
Semester Meeting Times & Room	100
Teaching/Learning Strategies	—
Applicable Forms Pertinent to Course	—
Reference to Student Policies in OCC Catalog	—
Policy on Use of Computing Resources	—
Description of Required Computing Skills	—
Policy on Plagiarism	—
Student Bill of Responsibilities	—

CORE REVIEW

DATA ANALYSIS

B. SYLLABUS REVIEW

Coordinator: Use a separate sheet for each course. ATW 1120

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100
Course Goals	100
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	–
Required Books and Supplies	100
List of Supportive Materials (where available)	–
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	0
Optional Items	
Semester Meeting Times & Room	100
Teaching/Learning Strategies	–
Applicable Forms Pertinent to Course	–
Reference to Student Policies in OCC Catalog	–
Policy on Use of Computing Resources	–
Description of Required Computing Skills	–
Policy on Plagiarism	–
Student Bill of Responsibilities	–

CORE REVIEW

DATA ANALYSIS

B. SYLLABUS REVIEW

Coordinator: Use a separate sheet for each course. ATW 8110

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100
Course Goals	100
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	–
Required Books and Supplies	100
List of Supportive Materials (where available)	–
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	0
Optional Items	
Semester Meeting Times & Room	100
Teaching/Learning Strategies	–
Applicable Forms Pertinent to Course	–
Reference to Student Policies in OCC Catalog	–
Policy on Use of Computing Resources	–
Description of Required Computing Skills	–
Policy on Plagiarism	–
Student Bill of Responsibilities	–

CORE REVIEW
B. SYLLABUS REVIEW

DATA ANALYSIS

Coordinator: Use a separate sheet for each course. ATW 8120

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100
Course Goals	100
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	—
Required Books and Supplies	100
List of Supportive Materials (where available)	—
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	0%
Optional Items	
Semester Meeting Times & Room	100
Teaching/Learning Strategies	—
Applicable Forms Pertinent to Course	—
Reference to Student Policies in OCC Catalog	—
Policy on Use of Computing Resources	
Description of Required Computing Skills	—
Policy on Plagiarism	—
Student Bill of Responsibilities	—

CORE REVIEW
B. SYLLABUS REVIEW

DATA ANALYSIS

Coordinator: Use a separate sheet for each course. ATW 8210

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100%
Course Goals	100%
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	—
Required Books and Supplies	100
List of Supportive Materials (where available)	—
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	— 0
Optional Items	
Semester Meeting Times & Room	100
Teaching/Learning Strategies	—
Applicable Forms Pertinent to Course	—
Reference to Student Policies in OCC Catalog	—
Policy on Use of Computing Resources	—
Description of Required Computing Skills	—
Policy on Plagiarism	—
Student Bill of Responsibilities	—

CORE REVIEW
B. SYLLABUS REVIEW

DATA ANALYSIS

Coordinator: Use a separate sheet for each course. ATW 8220

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100
Course Goals	100
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	–
Required Books and Supplies	100
List of Supportive Materials (where available)	–
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	–
Optional Items	
Semester Meeting Times & Room	100
Teaching/Learning Strategies	–
Applicable Forms Pertinent to Course	–
Reference to Student Policies in OCC Catalog	–
Policy on Use of Computing Resources	–
Description of Required Computing Skills	–
Policy on Plagiarism	–
Student Bill of Responsibilities	–

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CORE REVIEW
B. SYLLABUS REVIEW

DATA ANALYSIS

Coordinator: Use a separate sheet for each course. ATW 8310

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100
Course Goals	100
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	–
Required Books and Supplies	100
List of Supportive Materials (where available)	–
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	0
Optional Items	
Semester Meeting Times & Room	100
Teaching/Learning Strategies	–
Applicable Forms Pertinent to Course	–
Reference to Student Policies in OCC Catalog	–
Policy on Use of Computing Resources	–
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Student Bill of Responsibilities	–

CORE REVIEW
B. SYLLABUS REVIEW

DATA ANALYSIS

Coordinator: Use a separate sheet for each course. ATW 8320

	Percent of Inclusion
Mandatory Items (per FMA and Federal Law)	
ADA Notification	100%
Course Goals	100%
Grading Standards and Practices	100
Tentative Schedule of Assignments and Tests	100
Recommended Items (per Academic Senate)	
Course Name and Number	100
Instructor, Office Location, Method of Contact	100
Office Hours	100
Available Assistance	100
Course Catalog Description with Prerequisites	100
General Education Attributes (where pertinent)	—
Required Books and Supplies	100
List of Supportive Materials (where available)	—
Evaluation/Testing System & Policies	100
Attendance Policy	100
Safety Instructions	100
Disclaimer Allowing for Reasonable Revisions	— 0
Optional Items	
Semester Meeting Times & Room	100
Teaching/Learning Strategies	—
Applicable Forms Pertinent to Course	—
Reference to Student Policies in OCC Catalog	—
Policy on Use of Computing Resources	—
Description of Required Computing Skills	—
Policy on Plagiarism	—
Student Bill of Responsibilities	—

CORE REVIEW
B. SYLLABUS REVIEW, CONTINUED

Coordinator: After reviewing the Data Analysis forms on all the courses in the Discipline/Program, please summarize your analysis of whether or not there are course syllabi in your Discipline/Program that need revision due to inconsistencies or omissions, or other issues.

SYLLABUS REVIEW SUMMARY:

- **All adjuncts in the welding program follow the course syllabus put together by the discipline, therefore there is no discrepancy in course syllabus from one adjunct to another.**
- **All mandatory items (per FMA and Federal Law) are listed in all eight course syllabi.**
- **All recommended items (per Academic Senate) are included, except " Disclaimer Allowing for Reasonable Revisions". This has a 0% inclusion.**
- **In the list of optional items all course syllabi list only one out of eight items i.e. "Semester Meeting Times & Room. The other seven items are missing**
- **All course syllabi will updated to include all recommended items and the discipline will be advised on the inclusion of missing seven optional items**

DATA ANALYSIS

CORE REVIEW
C. ENROLLMENT TRENDS AND STUDENT RETENTION

Coordinator: The Dashboard report on your Discipline/Program will collect the necessary data in regard to Enrollment Trends and Student Retention. Use this form to review that data in the following areas:

Enrollment (Use the Dashboard data on Average Section Size, Sections Filled to Capacity, Percent of Completed Sections, Percent Change in Headcount, and Percent Change in Credit Hours to discuss this area.)

The average section size is 12.5 because the maximum class size is 20 students due to the nature of these courses. Sections filled to capacity are 97.6% versus 88.4 % college-wide. Also, the percent of completed sections are 100% versus 89.1% college- wide. The percent change in the head count is 1.5% versus 3.5% college-wide and percent change in credit hours is 1.4% versus 3.0% college wide. The last two i.e. change in head count and change in credit hours is comparatively less than college-wide, due to limited offerings in this program because of the facility and equipment.

Minority Students (Use the Dashboard data on Minority Students to discuss this area.)

The percent of minority students is 8.4% versus 27.1% college wide and 17.2% county-wide. The hazardous nature of the program and the work environment discourages most female students, which to some extent contributes to low minority percent. This issue can be addressed with the help of college recruiters and our marketing department.

Student and Course Success (Use the Dashboard data on Percent of Withdrawals, Percent of Incompletes, and Student Course Completion Rate to discuss this area.)

The percent of withdrawals are 9.1% as compared to 16.5% college-wide. The percent of incompletes are 0% compared to 1.6 college-wide and the student course completion rate is 90.9% as compared to 64.8% college-wide. Based on these three criteria it seems that the student success within the program is higher when compared to college-wide programs and courses. The reasons are student motivation, quality of instruction, and job opportunities in the field.

ENROLLMENT TRENDS AND STUDENT RETENTION REVIEW SUMMARY:

The increase in enrollment within the program over the last ten year is a total of 58.1%. The enrollment has been fairly consistent for the past three years and based on facility and equipment limitations the enrollment will in all probability stay consistent with this trend. The student course completion rate of 90.9% and the steady enrollment for the last three years could be indication of a high student retention rate.

DATA COLLECTION

CORE REVIEW
D. DISCIPLINE/PROGRAM NEEDS AND RESOURCES

Coordinator: Distribute this form to all full-time and adjunct faculty.

What resources or services does the Discipline/Program need in order to improve instruction? Please explain the reason you are requesting each resource.

The Discipline/ Program Needs and Resources data collection form was completed by two faculty members and the comments are as follows:

- **Enlarge the facility to accommodate more students**
- **Upgrade equipment to bring it up to industry standards**

- **Improve lighting**
- **Large work areas to give demos and for students to do welding projects**
- **New inverter welding equipment to keep up with the technology**

What curriculum revisions or development would enhance instruction in your Discipline/Program?

- **There should be an advanced Tig class to go more in-depth with different materials**
- **There should be an advanced Mig class to go more into different types of equipment and to have more time and experience with aluminum**
- **Investigate the possibility of an associate degree and transfer credits**

Please return to T. Khan at AH by 5-1--06

DATA ANALYSIS

CORE REVIEW
D. DISCIPLINE/PROGRAM NEEDS AND RESOURCES

Coordinator: Please summarize the needs, resources, and curriculum actions indicated on the Data Collection forms.

What resources or services does your Discipline/Program need?

- **Larger facility**
- **Better lighting**
- **Full-time faculty for the welding discipline**
- **New inverter welding equipment**

What curriculum revisions or development does your Discipline/Program see as beneficial to instruction?

The curriculum revisions or development that our Discipline/ Program sees as beneficial to instruction is as follows:

- **Two new courses in advanced Mig and Tig welding**
- **Associate degree program**
- **Articulation agreements for transfer students**

DISCIPLINE/PROGRAM NEEDS AND RESOURCES REVIEW SUMMARY:

The welding program would benefit from a larger facility with better lighting and more up-to-date equipment. Full-time faculty responsible for the program will definitely help in keeping the program current and will enhance the enrollment. On the curriculum side, it

would be beneficial to develop an associate degree program that would transfer to other institutions.

If the plan to build the new technology building is realized, then perhaps the welding program could be housed in a larger and more modern facility. This would also justify the development of an associate degree program and the hiring of full-time faculty for the welding program.

Program Dashboard
Detail Report

Prefix ATW
Title Welding Technology

Dashboard Score 9.01

	Program	College Wide
Average Section Size	12.5	23.3
Sections Filled to Capacity	97.6%	88.4%
Percent of Completed Sections	100.0%	89.1%
Weighted Percent Change in Headcount	1.5%	3.5%
Weighted Percent Change in Credit Hours	1.4%	3.0%
Percent of Minority Students	8.4%	27.1%
Percent of Withdrawals	9.1%	16.5%
Percent of Incompletes	0.0%	1.6%
Student Course Completion Rate	90.9%	64.8%

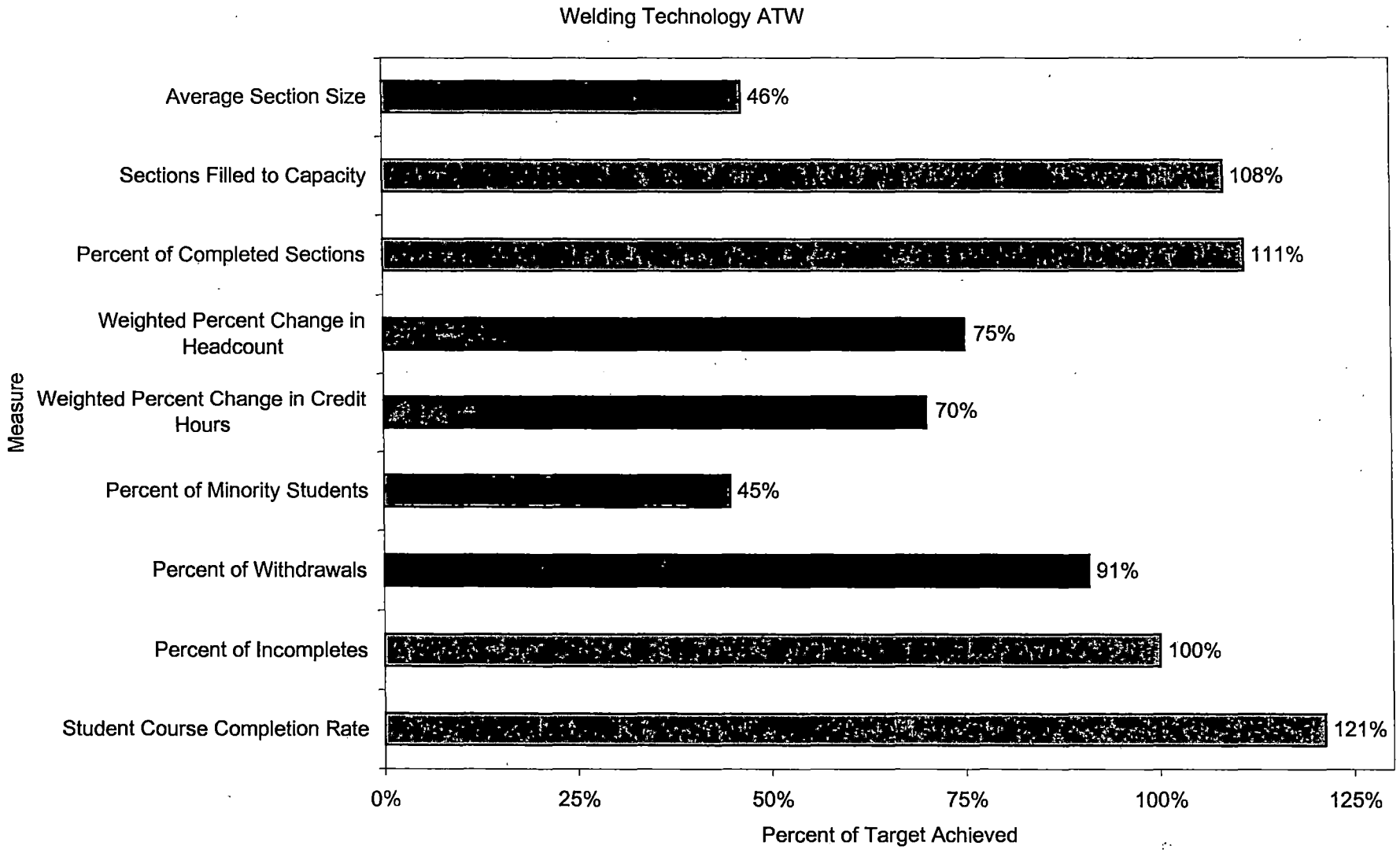
Oakland Community College
Program Dashboard Report
2003-04

Welding Technology ATW
Dashboard Score: 9.01

Measures	Current Score	Benchmarks: Trouble Score	Benchmarks: Target	Percent of Target Achieved	Weight	Weighted Score
Average Section Size	12.5	22.5	27.0	46.3%	8.3%	0.38
Sections Filled to Capacity	97.6%	75.0%	90.0%	108.4%	7.9%	0.86
Percent of Completed Sections	100.0%	75.0%	90.0%	111.1%	8.8%	0.98
Weighted Percent Change in Headcount	1.5%	0.5%	2.0%	75.0%	12.7%	0.95
Weighted Percent Change in Credit Hours	1.4%	0.5%	2.0%	70.0%	10.8%	0.76
Percent of Minority Students	8.4%	16.9%	18.8%	44.7%	6.9%	0.31
Percent of Withdrawals	9.1%	15.0%	0.0%	90.9%	16.2%	1.47
Percent of Incompletes	0.0%	3.0%	0.0%	100.0%	6.8%	0.68
Student Course Completion Rate	90.9%	60.0%	75.0%	121.2%	21.6%	2.62

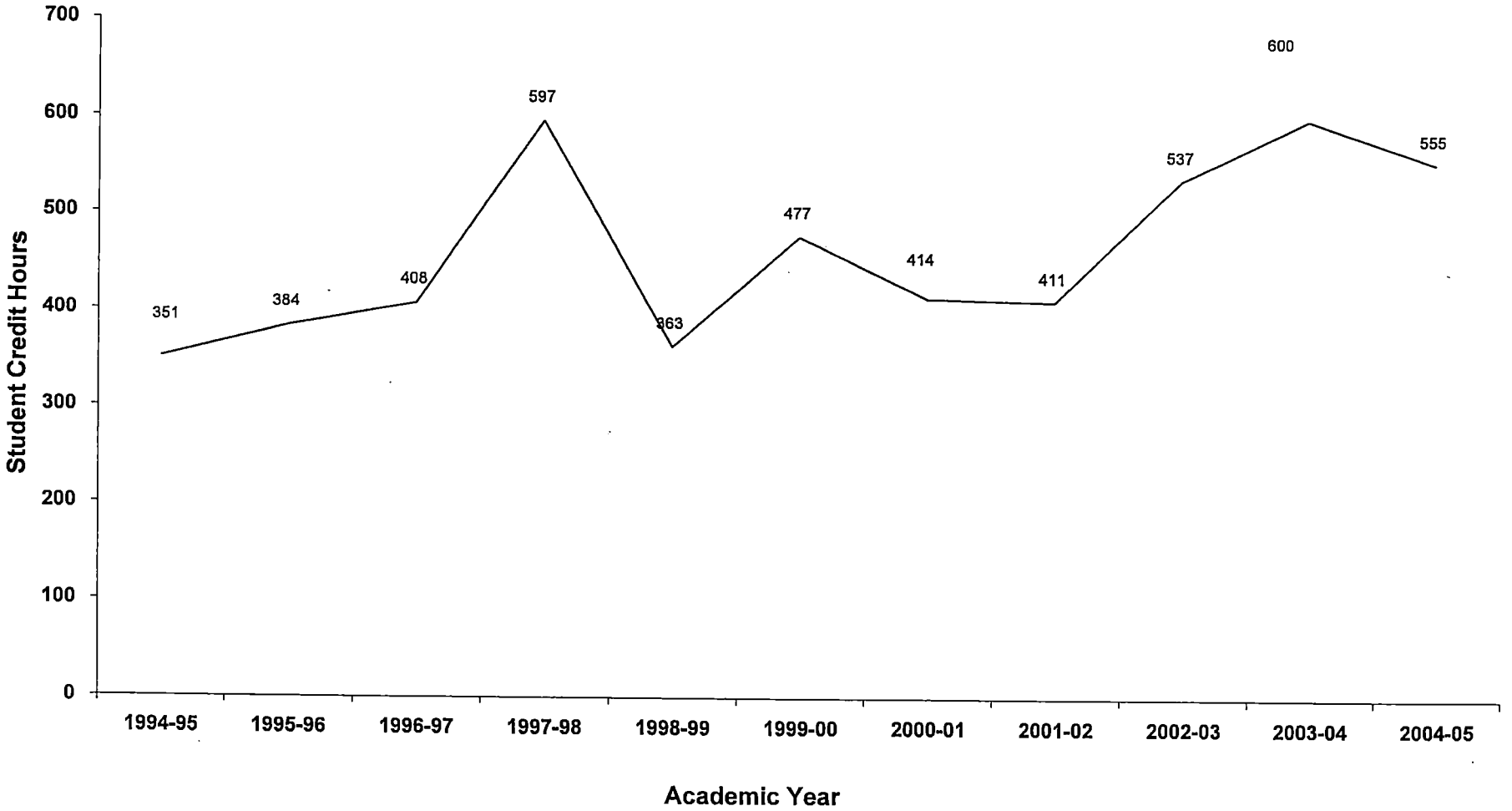
Source: Office of Assessment and Effectiveness
Updated On: 2/24/2006

Oakland Community College
Percent of Target Achieved
2003-04



Oakland Community College
Ten-Year Trend in Student Credit Hours
Welding/Fabrication Tech
1994-95 through 2004-05

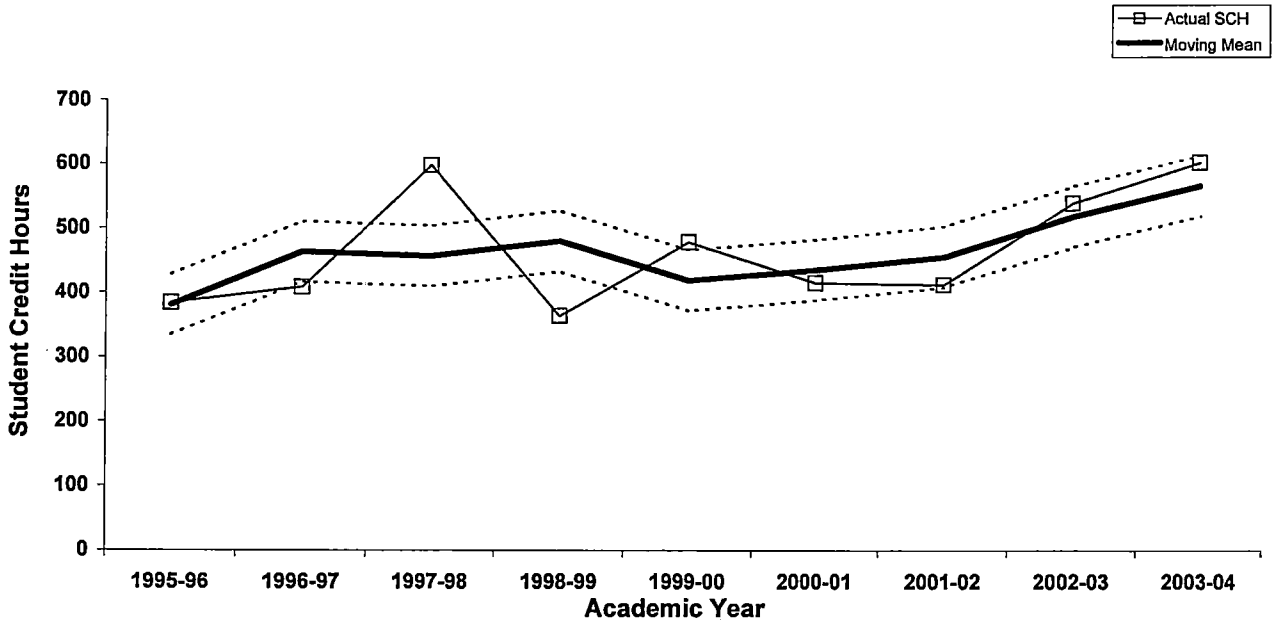
	1994-95 SCH	1995-96 SCH	1996-97 SCH	1997-98 SCH	1998-99 SCH	1999-00 SCH	2000-01 SCH	2001-02 SCH	2002-03 SCH	2003-04 SCH	2004-05 SCH	5-Year % Change	10-Year % Change
Welding/Fabrication Tech	351	384	408	597	363	477	414	411	537	600	555	16.4	58.1
College Wide Totals	471,593	451,159	443,471	431,521	440,448	438,997	453,054	447,928	478,827	468,777	472,892	7.7	0.3



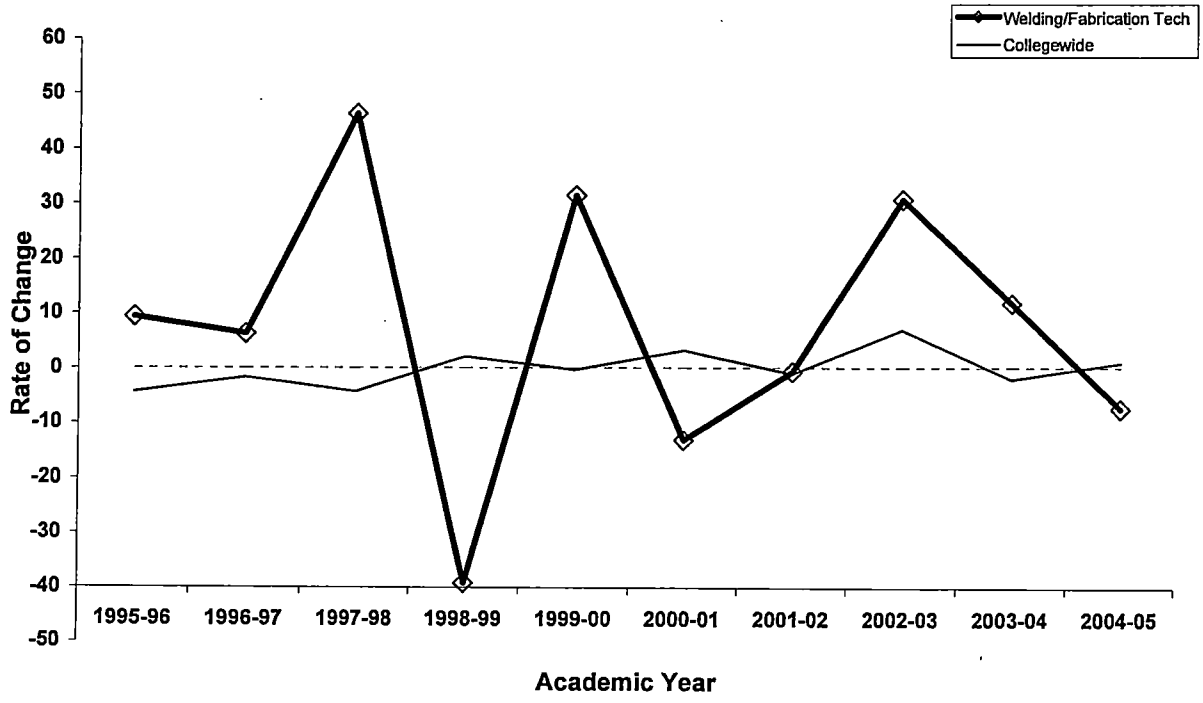
Source: OCC, Office of Institutional Research

3/14/2006

Oakland Community College
Three-Year Moving Mean
Welding/Fabrication Tech
1995-96 through 2003-04



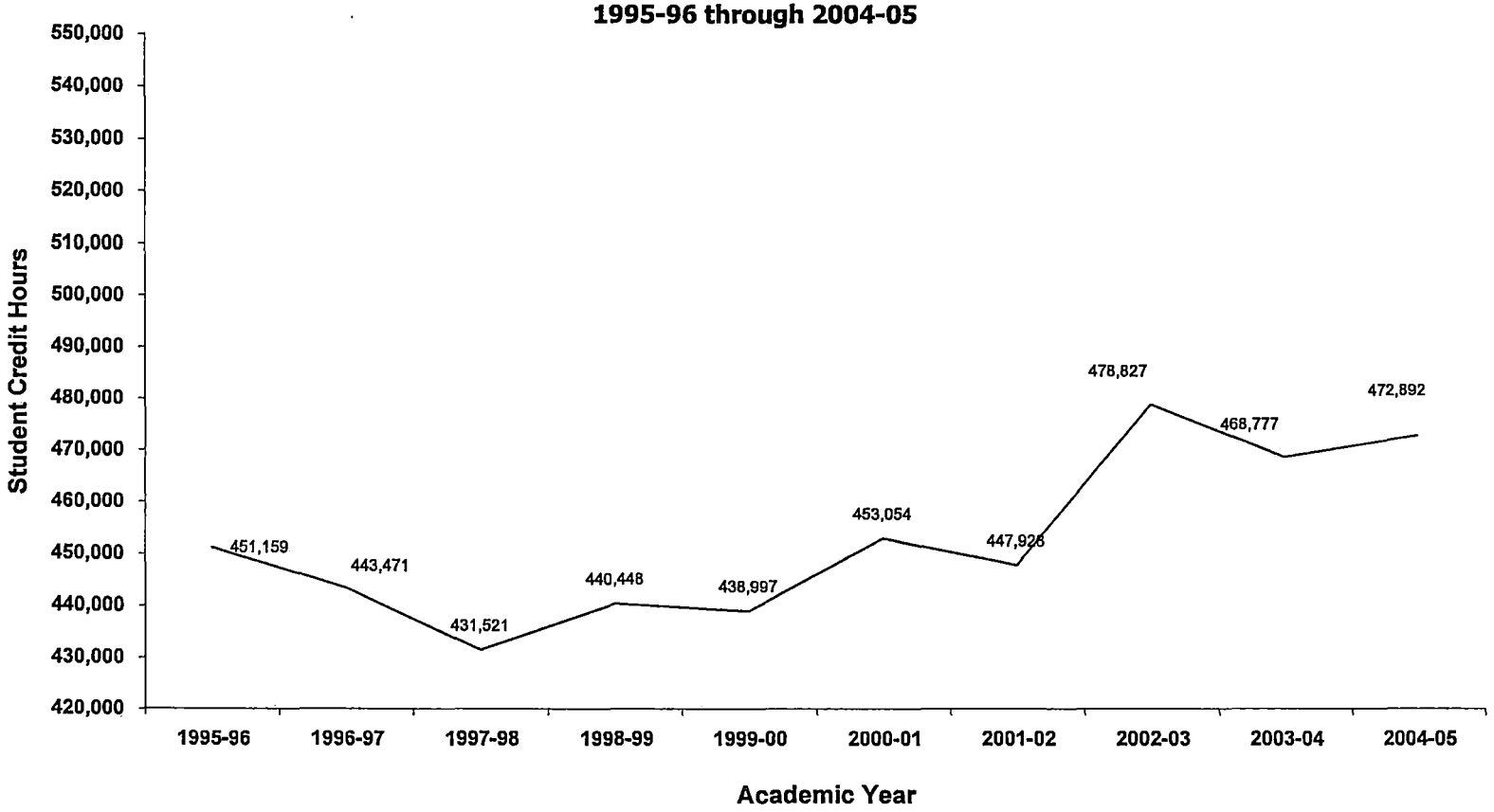
Rate of Change in Student Credit Hours 1995-96 through 2004-05



Source: OCC, Office of Institutional Research

3/14/2006

Oakland Community College
Ten-Year Trend in Student Credit Hours
College-Wide
1995-96 through 2004-05



1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
451,159	443,471	431,521	440,448	438,997	453,054	447,928	478,827	468,777	472,892

Source: OCC, Office of Institutional Research

3/14/2006

Welding Technology Related Occupations (2004 - 2014)

SOC Detail Group

SOC Code	Name	Base Year	Five Year	Ten Year	New Jobs	Rplmnt Jobs	% New Jobs	% Rplmnt	% New & Rplmnt	Earnings
51-4121	Welders, cutters, solderers, and brazers	9,535	10,288	10,776	1,241	2,604	13.0%	27.3%	40.3%	$111,391
51-4122	Welding, soldering, and brazing machine setters, operators, and tenders	3,173	2,892	2,761	-412	1,007	-13.0%	31.7%	18.8%	$96,147
51-4191	Heat treating equipment setters, operators, and tenders, metal and plastic	915	787	734	-181	324	-19.8%	35.4%	15.6%	$69,889
Totals:		13,623	13,967	14,271	648	3,935				

Source: OCC, Office of Assessment & Effectivenes (CCSP)

U.S. Department of Labor
Welding Technology Related Occupations
SOC Code Descriptions

51-4121 Welders, Cutters, Solderers, and Brazers

Use hand-welding, flame-cutting, hand soldering, or brazing equipment to weld or join metal components or to fill holes, indentations, or seams of fabricated metal products.

51-4122 Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders

Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. Include workers who operate laser cutters or laser-beam machines.

51-4191 Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic

Set up, operate, or tend heating equipment, such as heat-treating furnaces, flame-hardening machines, induction machines, soaking pits, or vacuum equipment to temper, harden, anneal, or heat-treat metal or plastic objects.

CRC
PART II- PROGRAM REVIEW and PROGRAM REVIEW OF OCCCUPATIONAL EVALUATION (PROE)

Under the provisions of the Carl D. Perkins Vocational and Technical Education Act/Public Law 105-332, if a Discipline/Program is of an occupational nature, a Program Review in Occupational Education (PROE) report is required by the State of Michigan every five (5) years and can be used for the purposes of the Curriculum Review process.

Coordinator: Data Collection and Data Analysis forms for the following review areas are attached.

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

- Collect information from faculty, students and external community (e.g., advisory committees and accrediting agencies) on your Program curriculum. It is recommended that you send or personally distribute these survey forms in your classes, during your advisory committee meetings, and/or at your departmental/staff meetings. Return these survey forms to the Office of State and Federal Programs.

  Required survey forms:

  - ☐ Individual Faculty Perceptions of Occupational Programs & Disciplines Forms
  - ☐ Individual Student Perceptions of Occupational Programs & Disciplines Forms
  - ☐ Individual Advisory Committee/Industry Perceptions of Occupational Programs & Disciplines Forms

- Analyze the data you have received from the internal and external community surveys. Record your findings on the PROE Data Analysis form and Final Review Summary

F. COMPARABLE COURSES/PROGRAMS AND TRENDS

- Collect information on transferability and articulation from the Counseling Department. Obtain labor market trends from the Office of Assessment & Effectiveness. Identify the job performance requirements with the aid of advisory committees, professional journals, along with student and employer feedback.

- Analyze and summarize these findings.

G. OUTCOMES ASSESSMENT

- Analyze the results of your most recent Program Assessment, particularly evidence regarding the quality of student learning, and recommended action plans.

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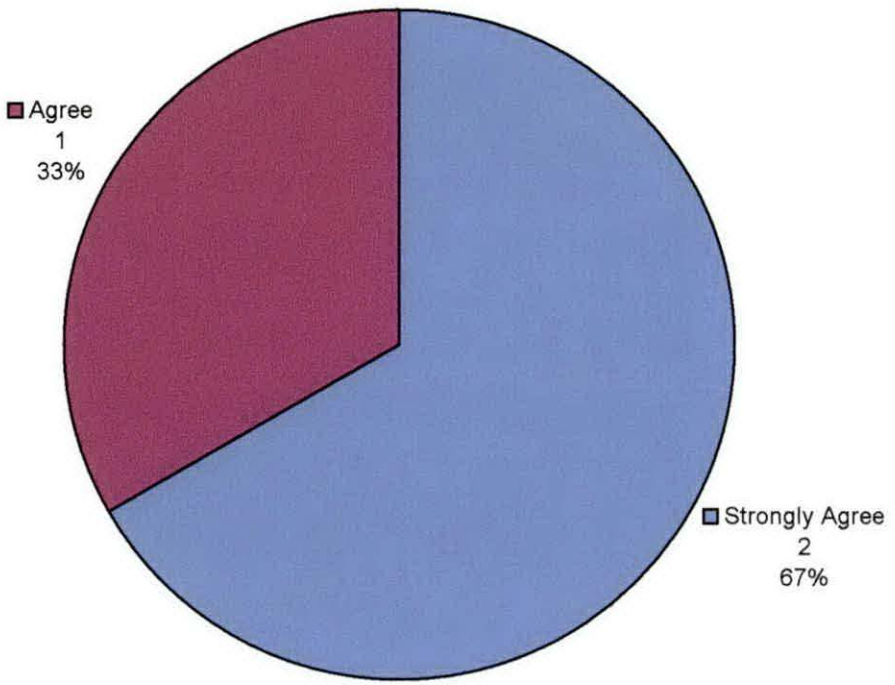
G. OUTCOMES ASSESSMENT

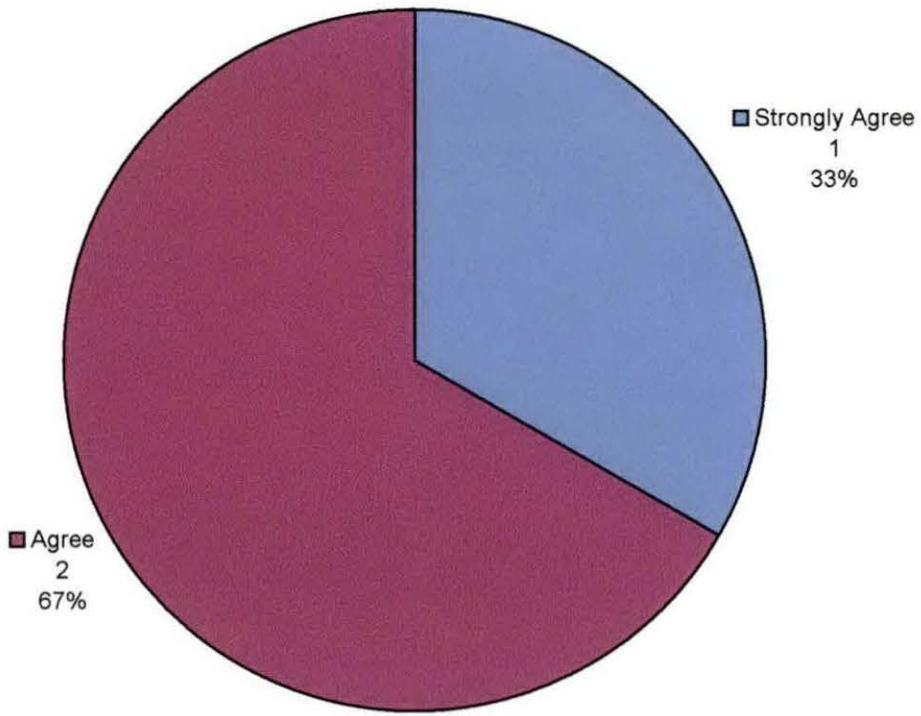
- Analyze the results of your most recent Program Assessment, particularly evidence regarding the quality of student learning, and recommended action plans.

Individual Faculty Perceptions of Occupational Programs .

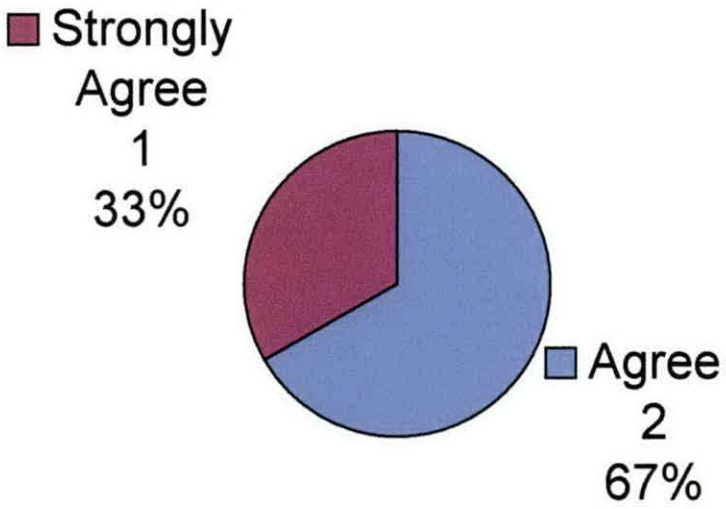
The program of study in which I teach at Oakland Community College is meeting my expectations as a faculty member.



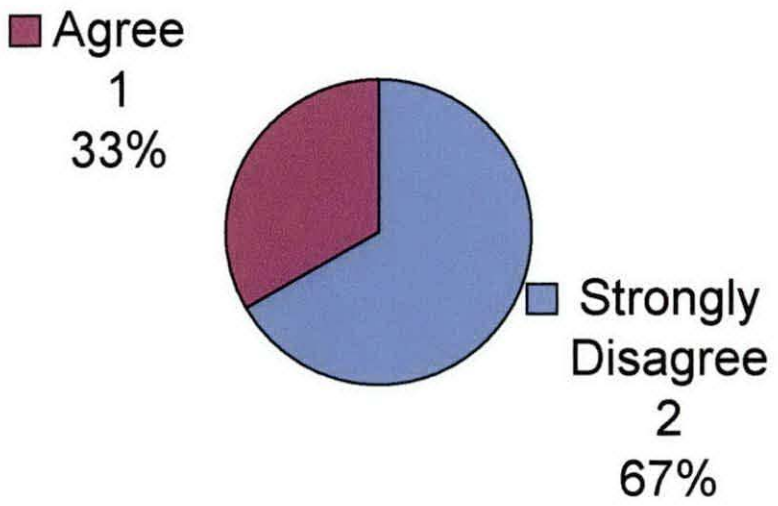
Courses offered in the program are preparing the students for the work force.



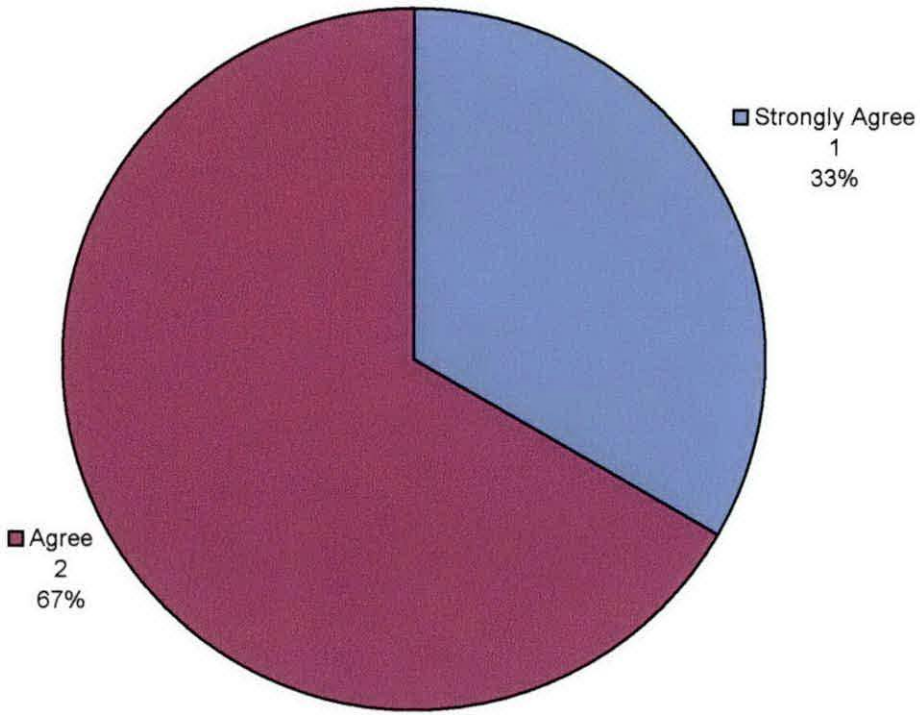
The program can be more challenging academically for the students.



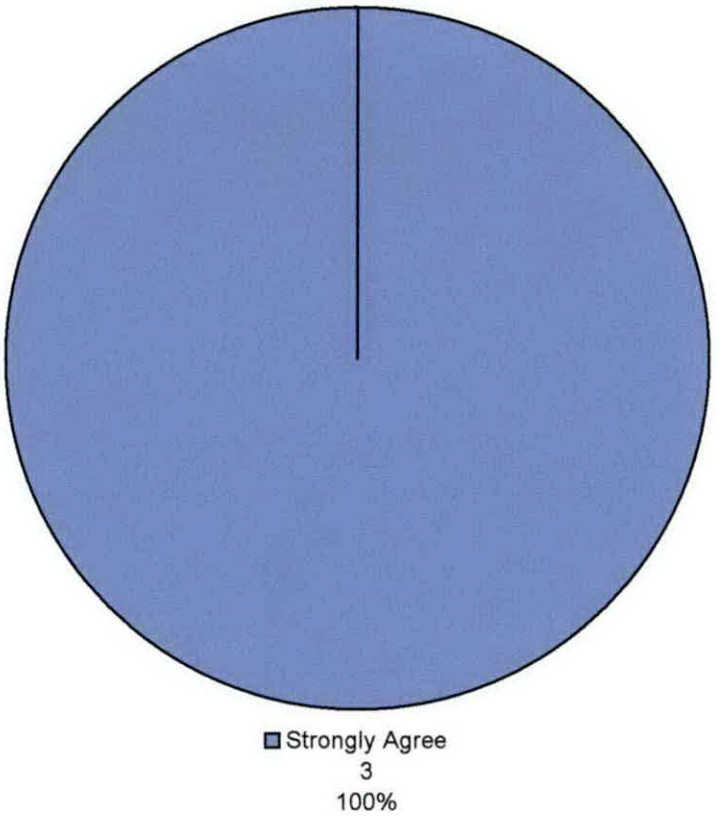
The program can be more competitive with other institutions that offer similar programs.



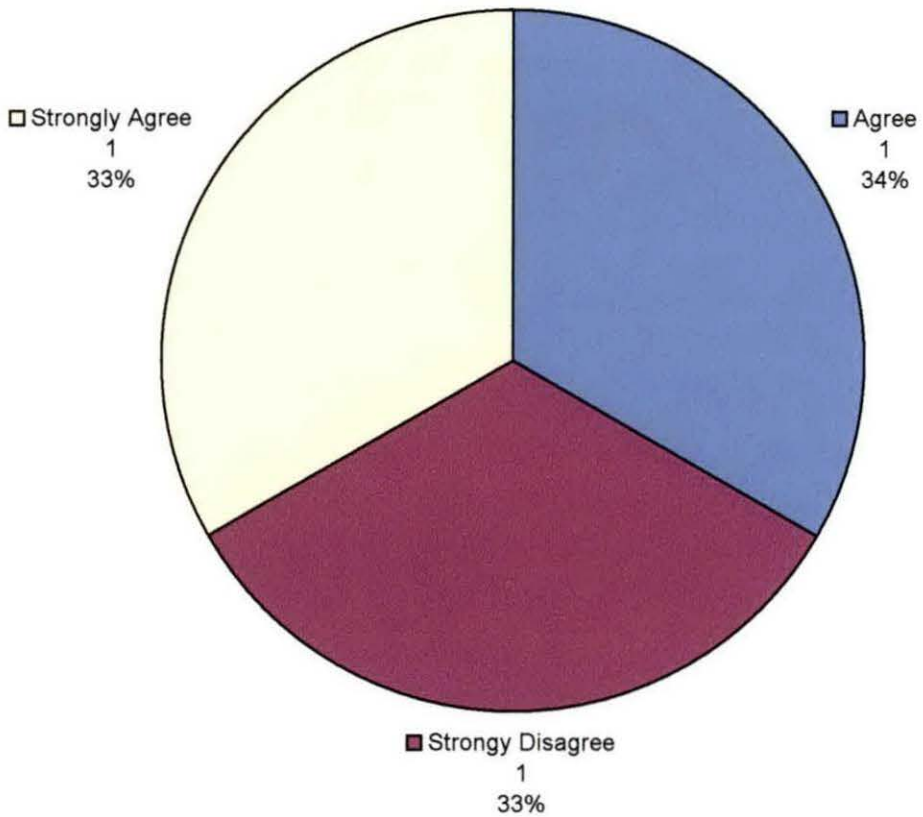
I am satistfied with the quality of instruction provided to the students in this program.



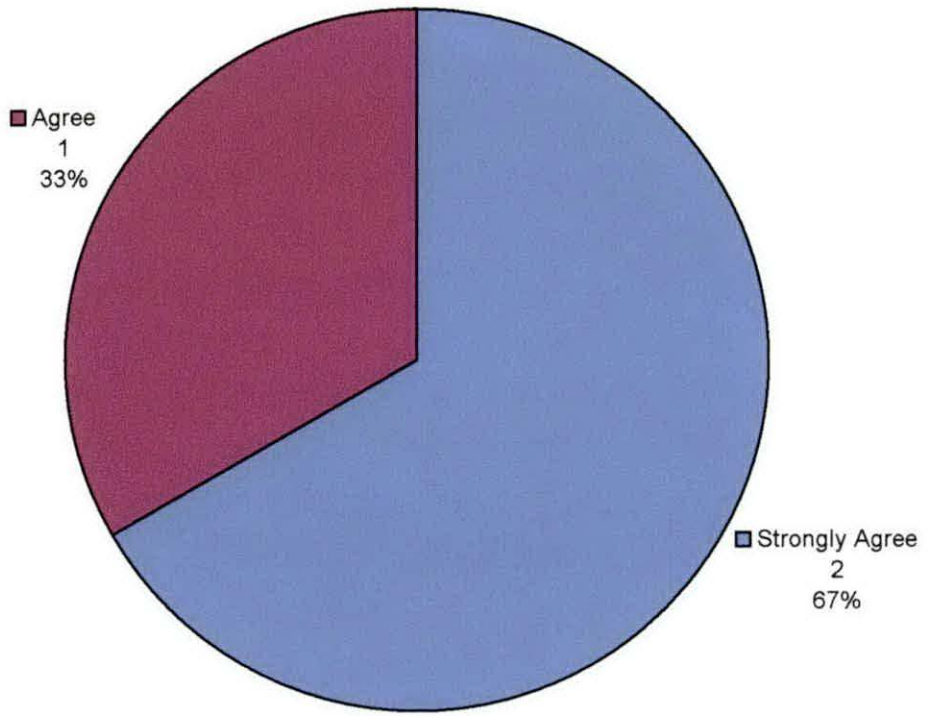
My fellow faculty members in the programs are knowledgeable about the course subject matter.



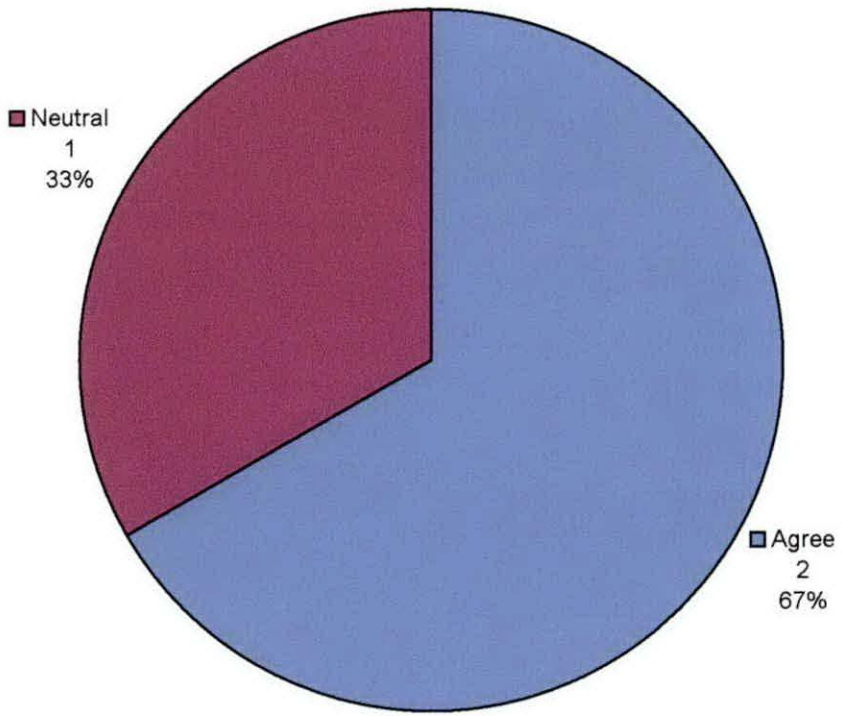
I am satisfied with the course offerings in this program.



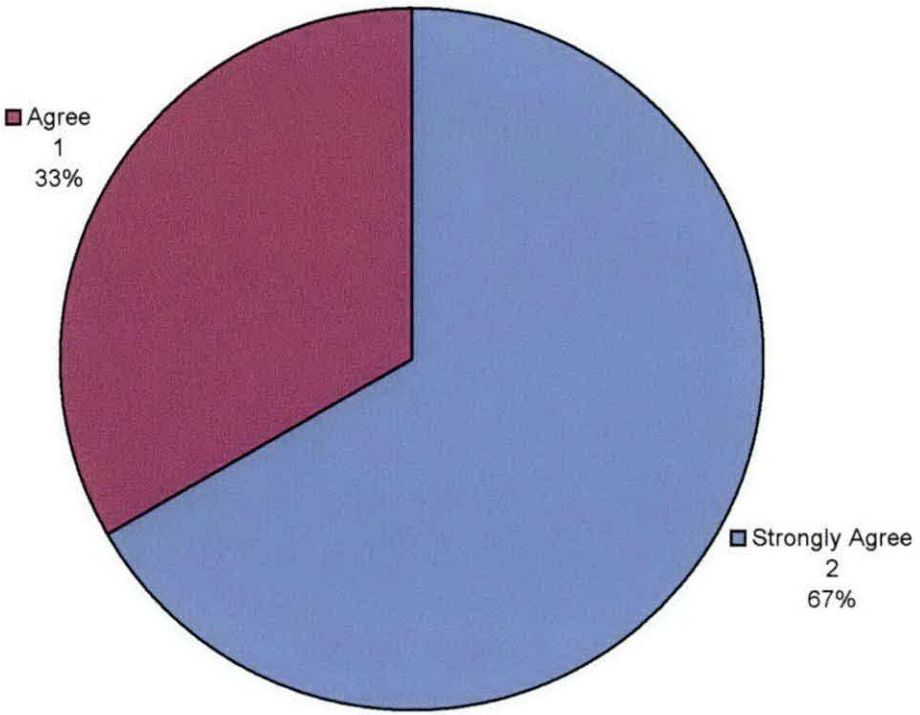
I feel that the program has a focus real-world application.



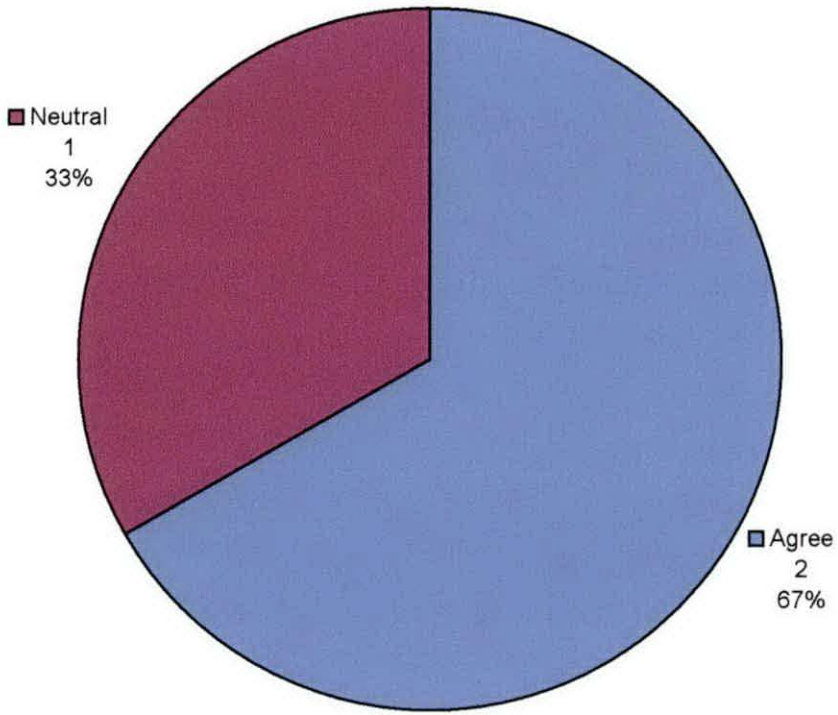
I feel that the students are prepared for the rigors of the program.



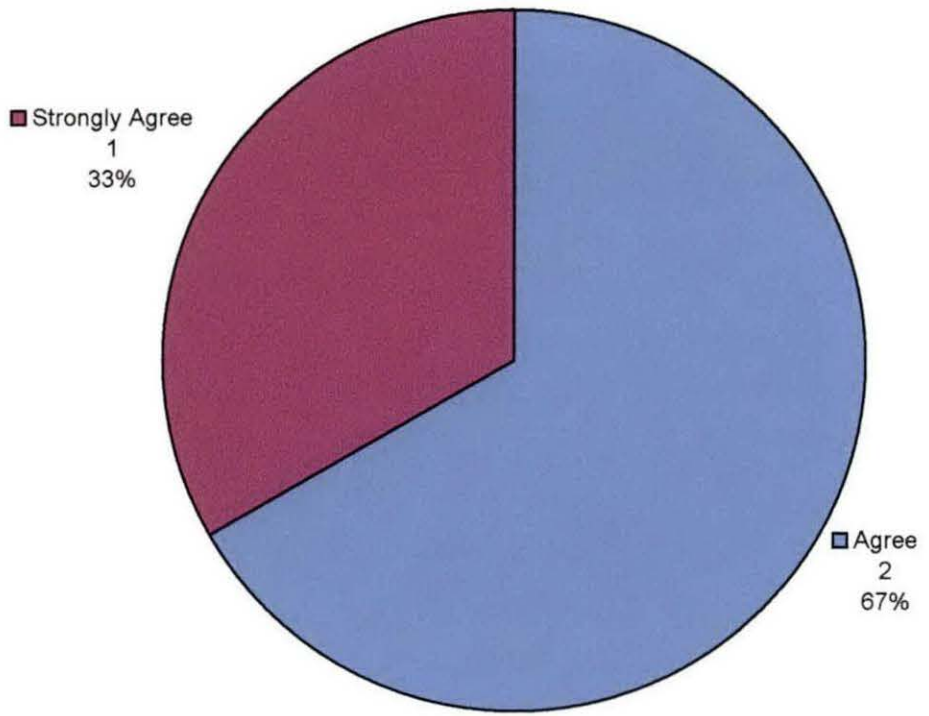
I am informed about what is happening in this program.



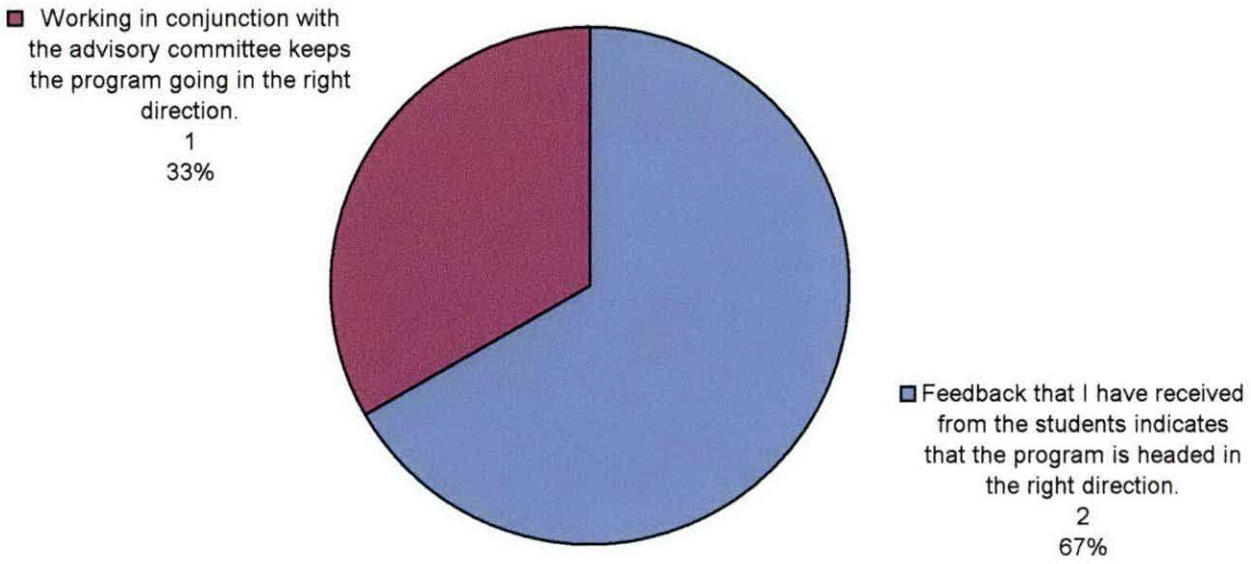
Opportunities are available for me to make suggestions for improvements in this program.



I think the department has a commitment to student success in the program.

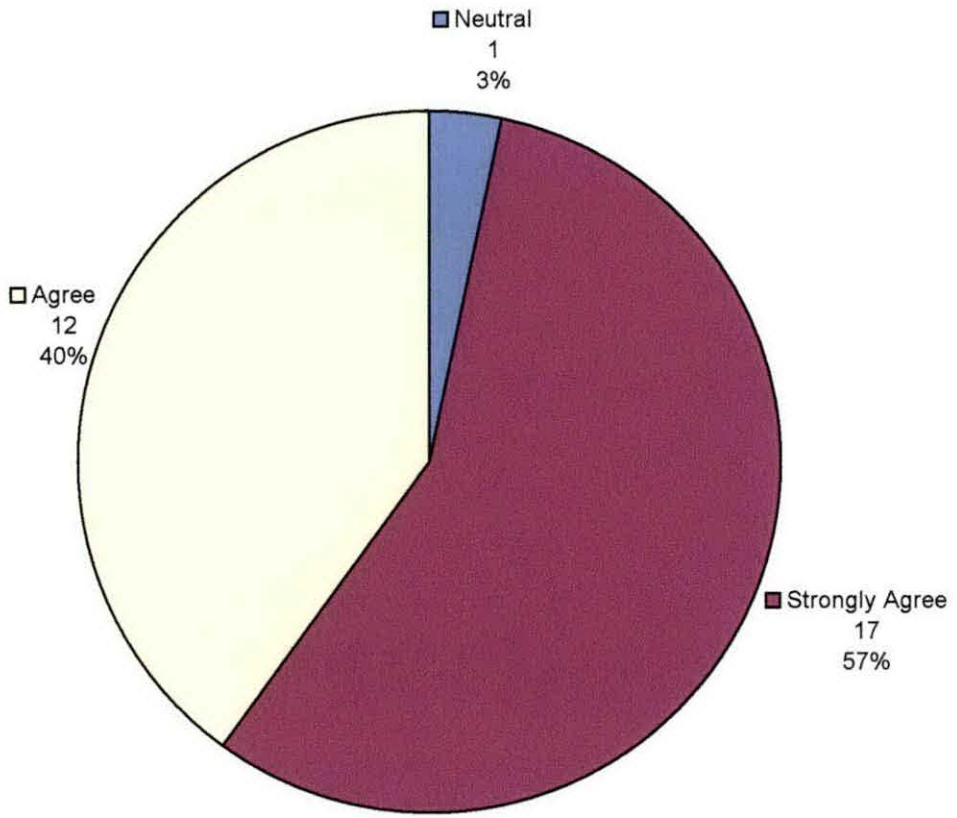


I am satisfied with the direction of this program because:

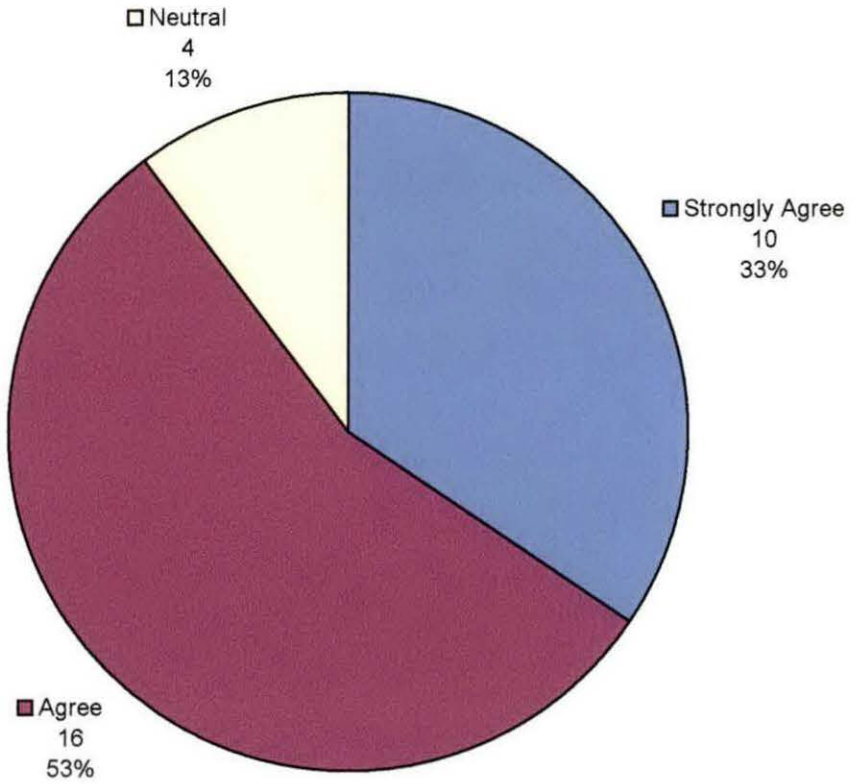


Individual Students Perceptions of Occupational Programs .

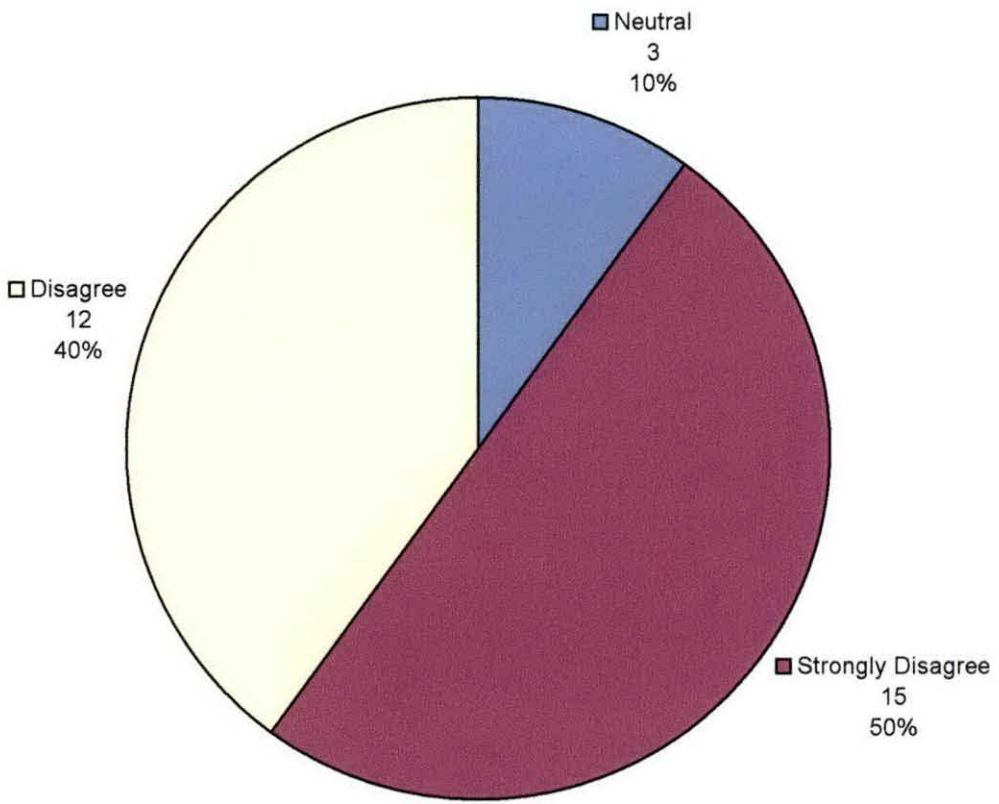
My program of study at Oakland Community College is meeting my expectations.



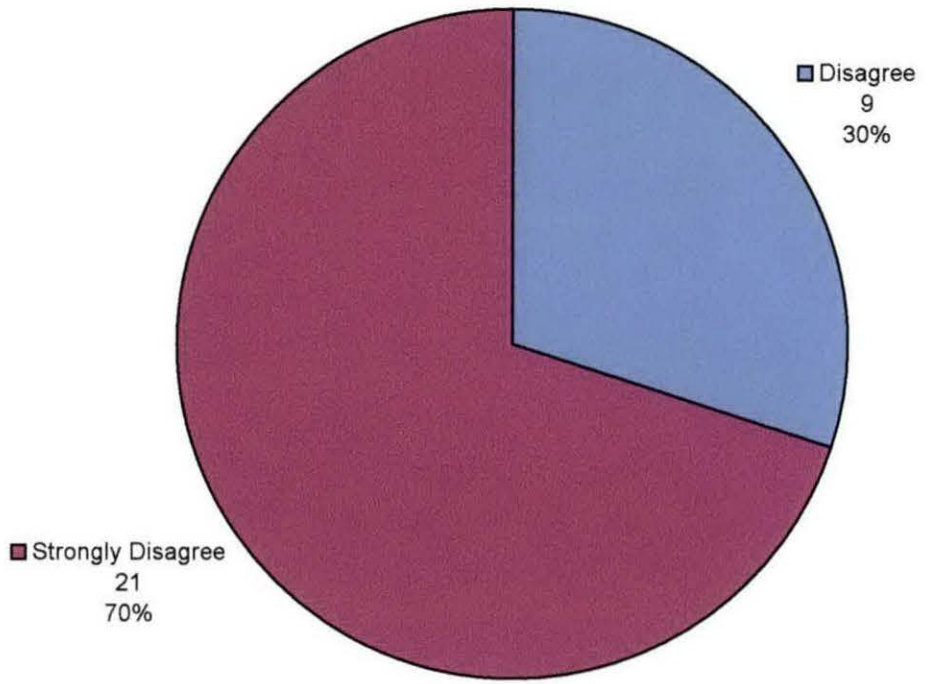
The courses offered in my program of study are preparing me for the workforce.



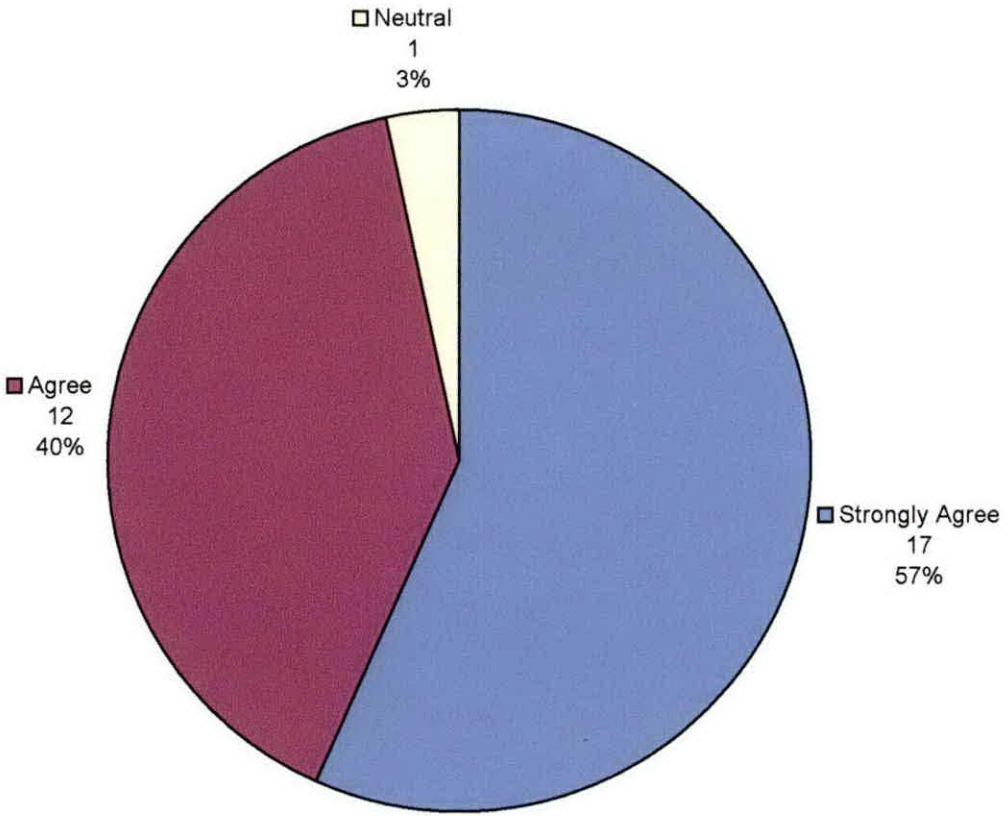
I would like to change my current program of study because of academic reasons



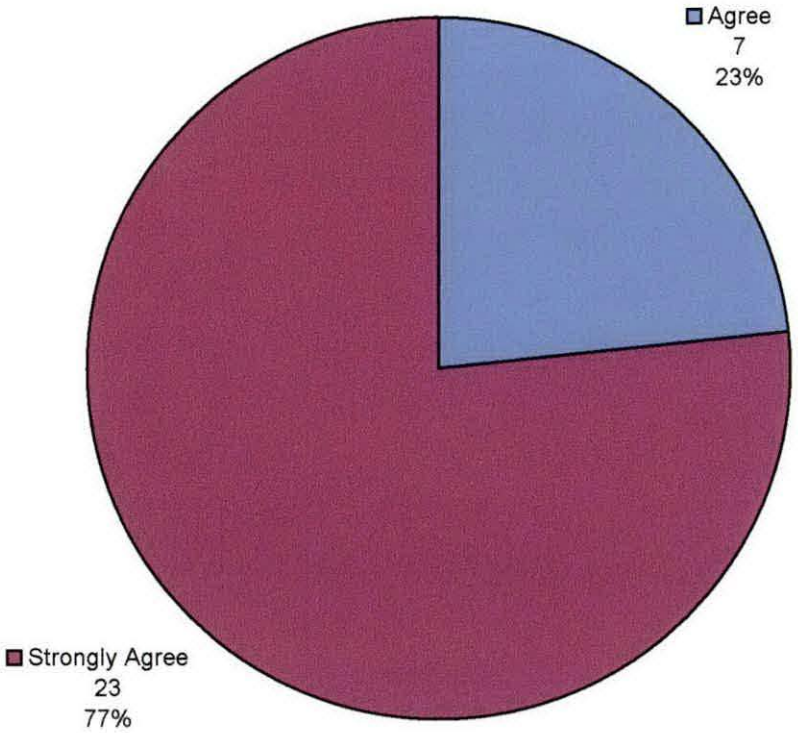
I would like to attend another institution because of dissatisfaction with my current program of study at Oakland Community College



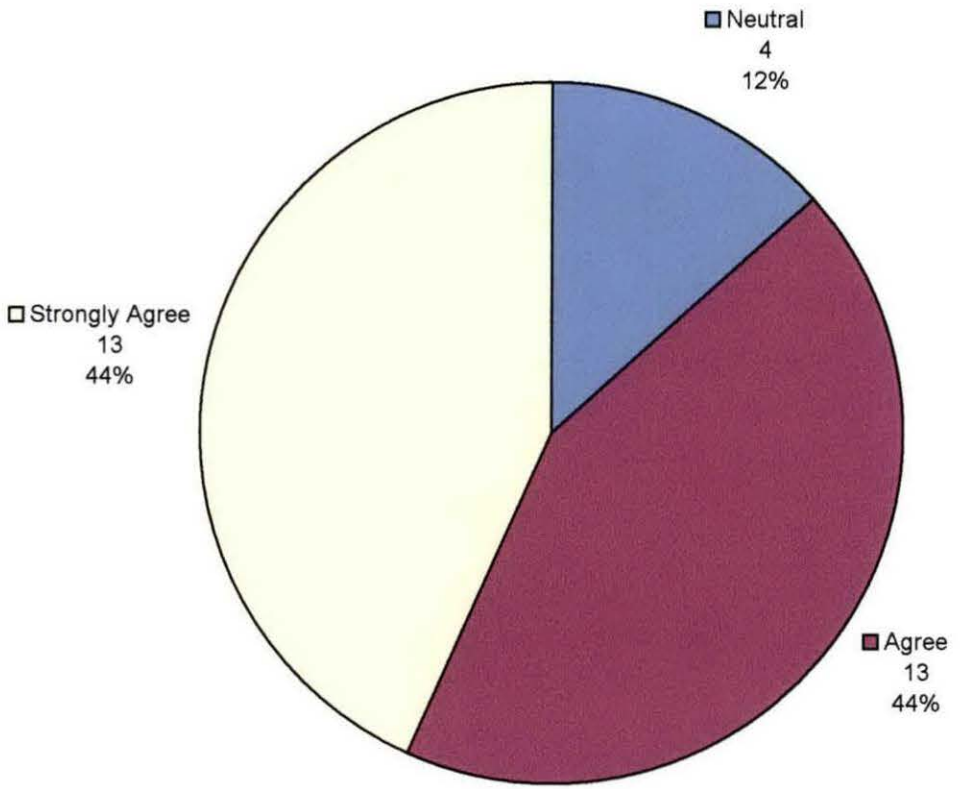
I am satisfied with the quality of the instructors in my program of study.



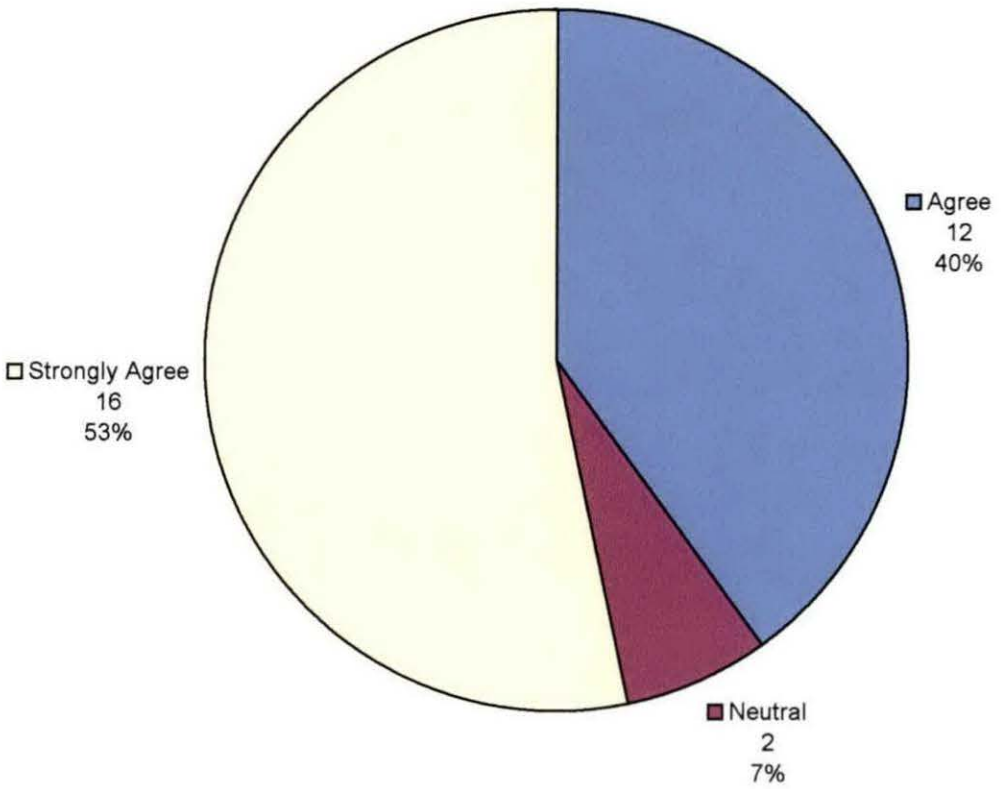
I feel that the instructors are knowledgeable about the course subject matter.



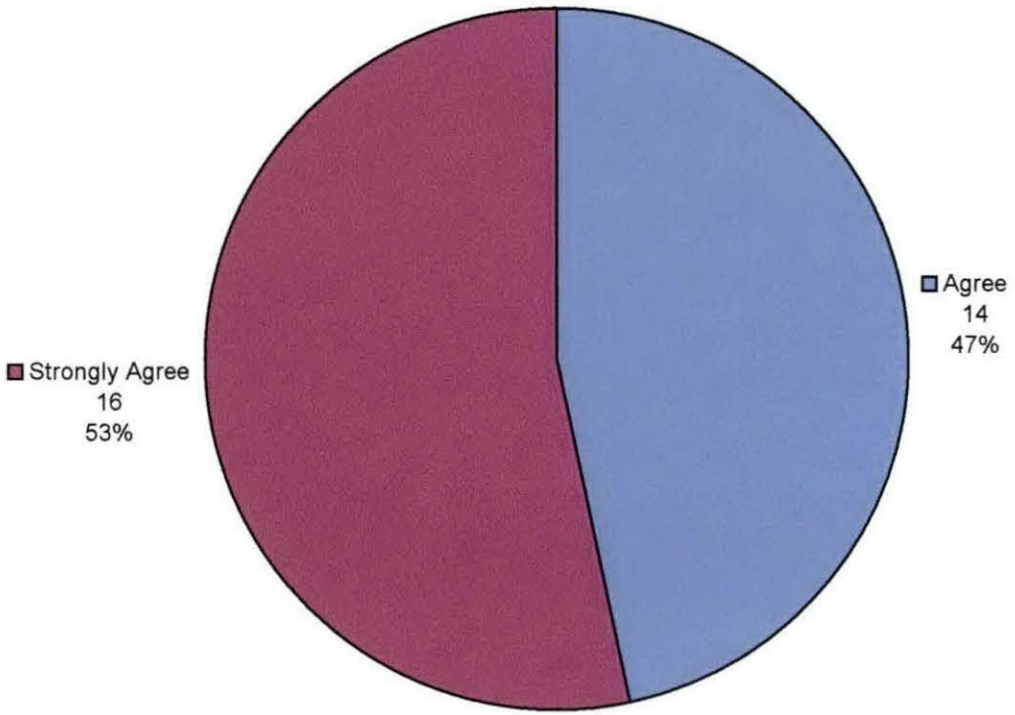
I am satisfied with the course offerings in my current program of study at Oakland Community College.



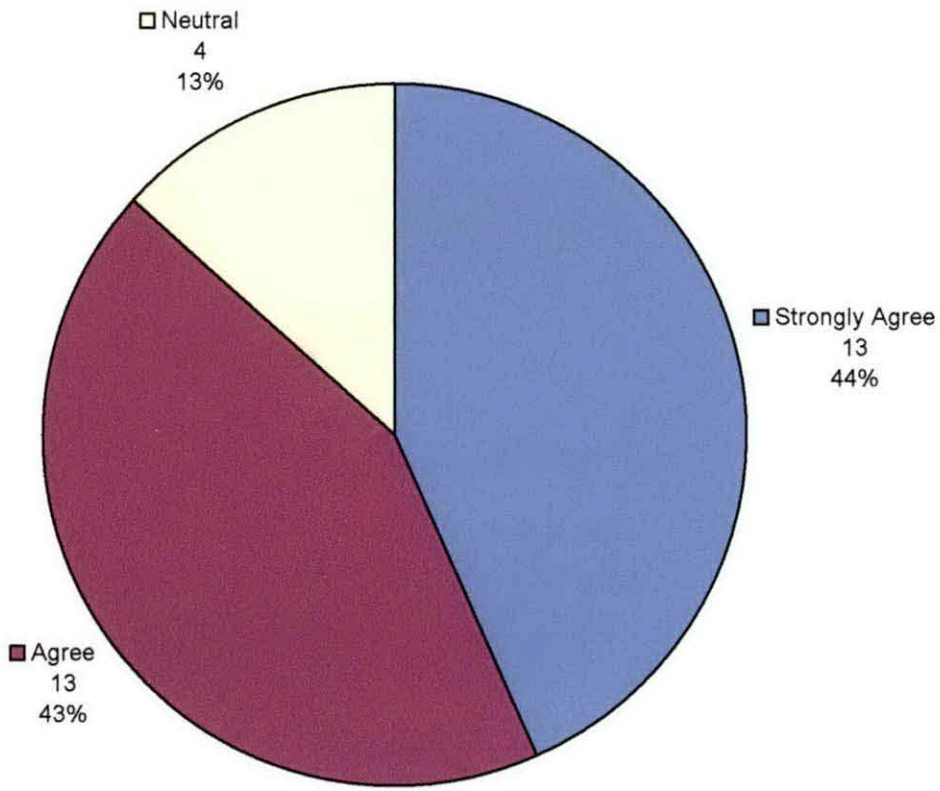
My instructors help me to understand how useful my program of study can be in the real world.



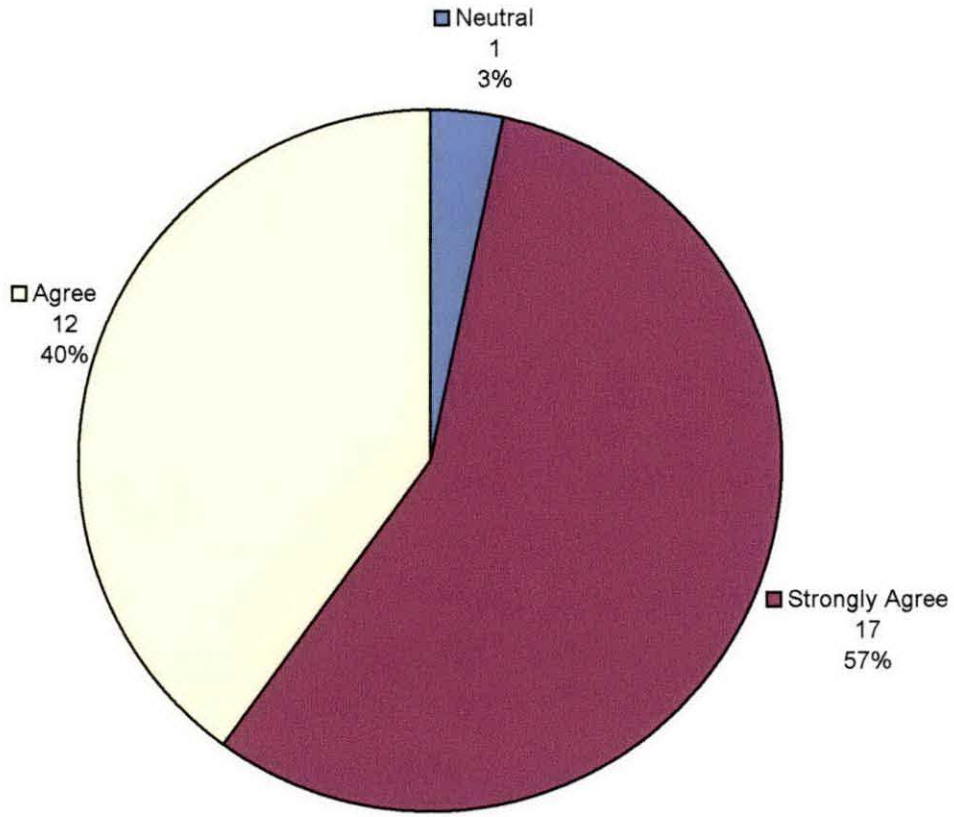
My instructors make the course subject matter seem interesting.



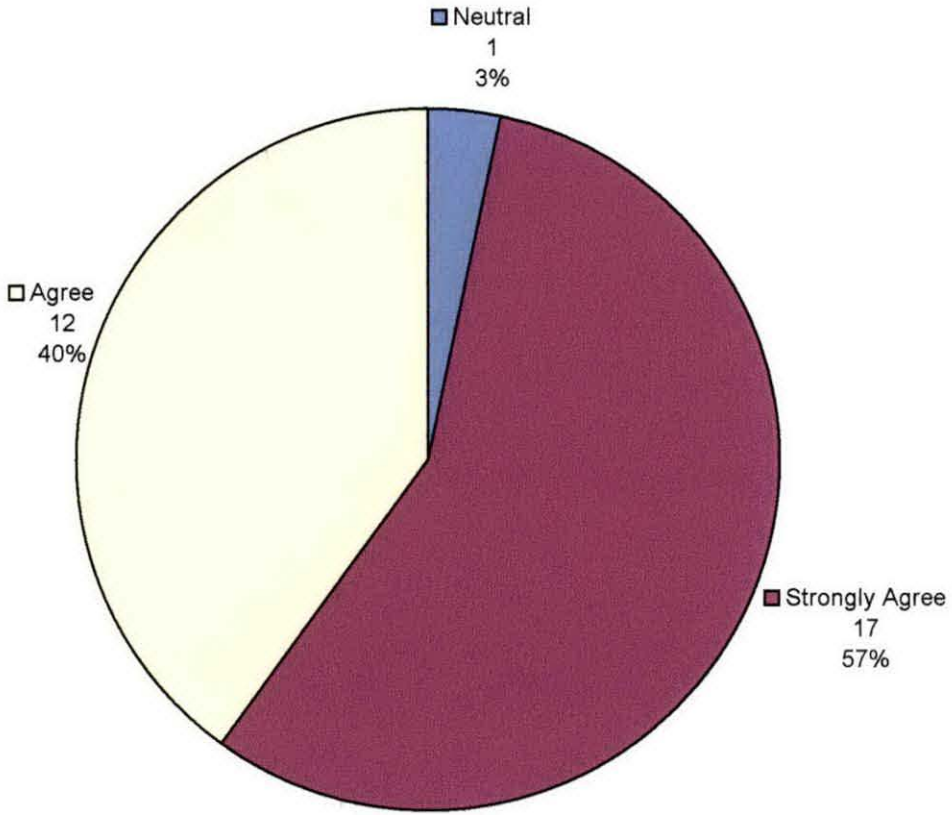
I am informed about what is happening in my program.



I think the department is commited to student success in the program.



I am staisfied with my program of study.



STUDENTS

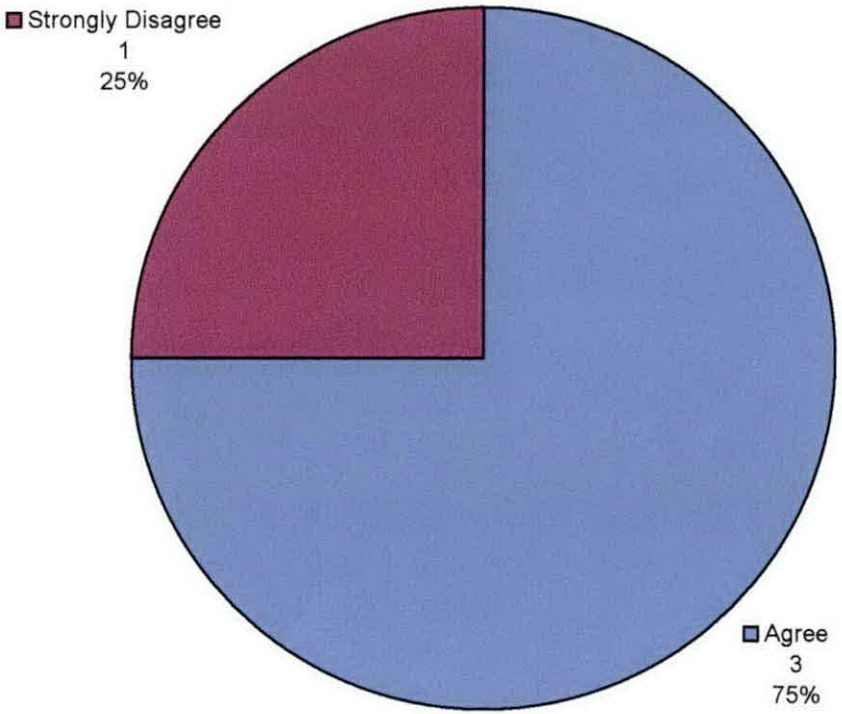
OPEN-ENDED RESPONSES:

If there were one thing you would like to change about the program, then explain what it is and how it would enhance the program.

- I would like to see more theory to reinforce what is learned from the book. This would make it easier to understand direct cause and effect of what I am doing hands-on.
- Larger facility would allow us to have larger workstations and more machines. We would not be bumping into each other. Some of the machines are out-dated.
- I would like to see more spaces in welding classes. They fill up so quickly, I think more seats would be good.
- Offer aviation-welding classes in conjunction with the welding program. Also, do not drop my classes. That would help a lot.
- Increase lab size for better knowledge to perform larger projects
- Increase lab size to accommodate more students.
- We should have metal fabrication class.
- We should have a metal fabrication class.
- Force the math teachers to learn and teach the concept of "real world" math.
- As a pipe fitter, I feel the need for more courses dealing with pipefitting (code, material, and layout).
- The lab area needs to be much larger. It is hard to see demo sometimes because there is not enough room. There is not enough room for large projects. The addition of another TIG class would be nice.
- More "real world" welding instead of just cut metal.
- More real world welding situations.

Individual Advisory Committee/Industry Perceptions of Occupational Programs .

The program at Oakland Community College is meeting the expectations of the advisory commitee.



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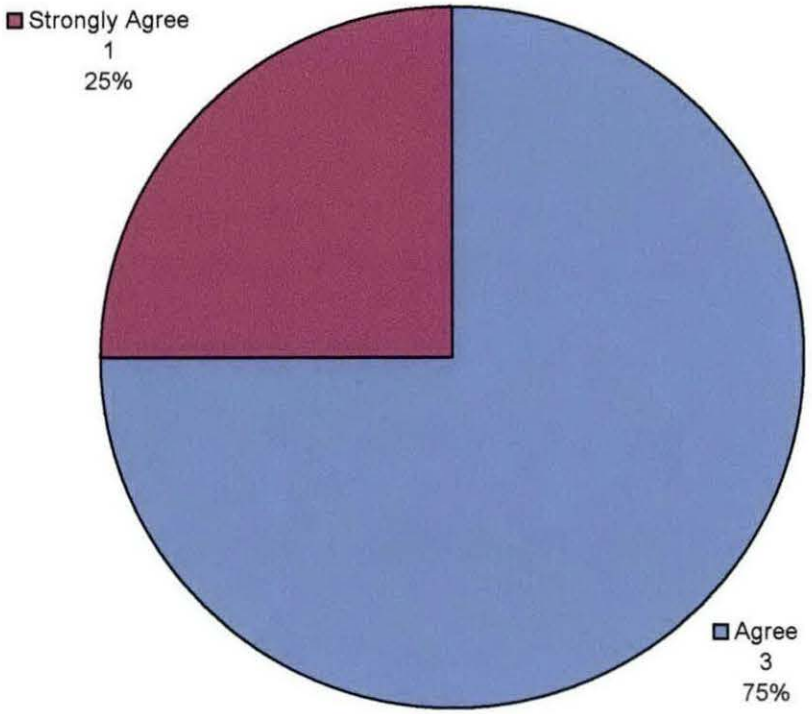
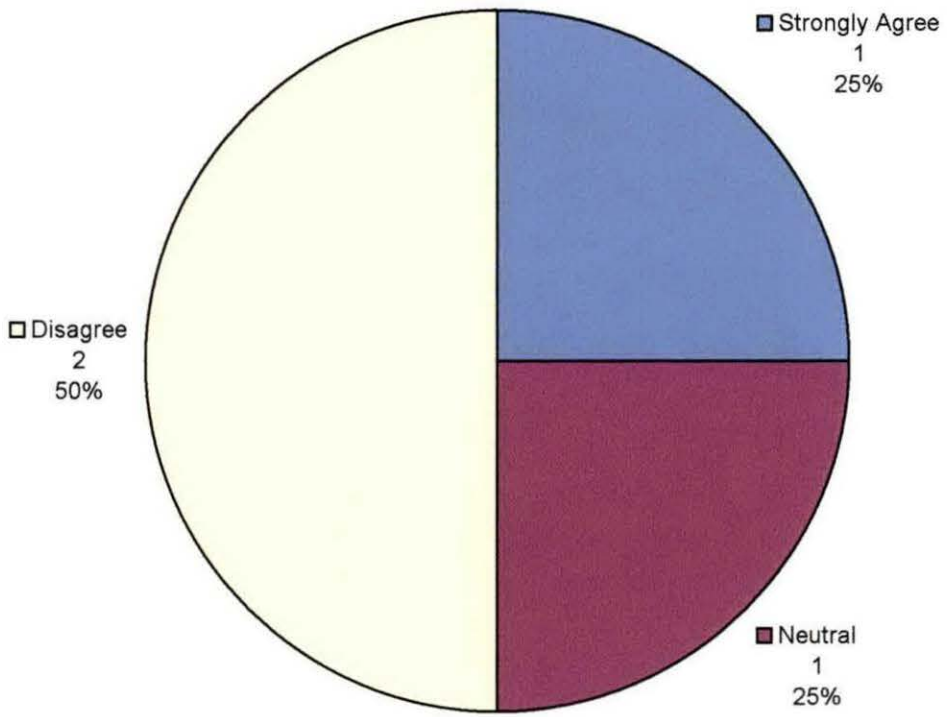
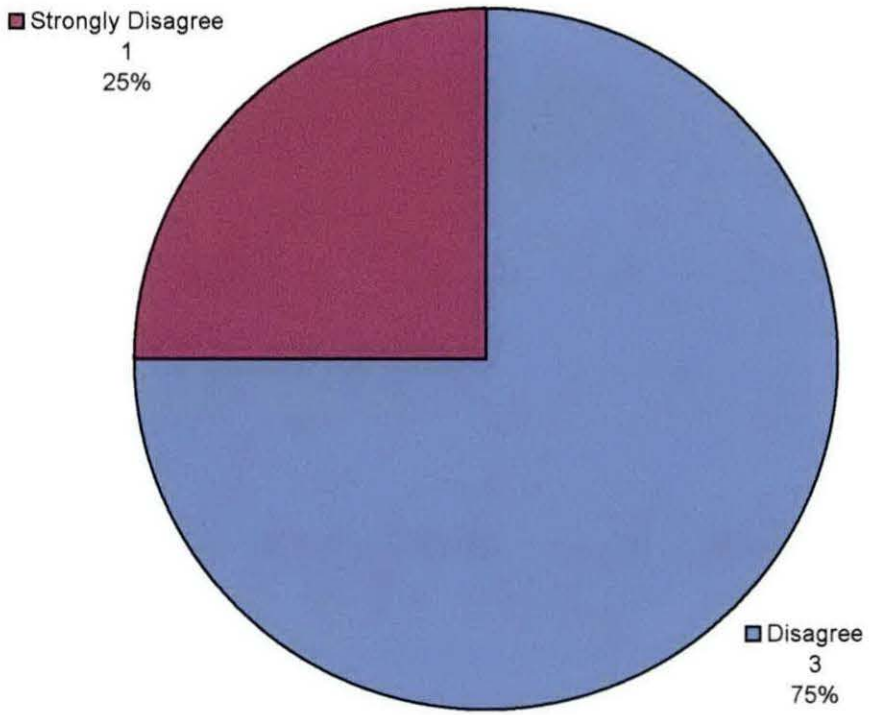
The courses offered are preparing the students for the workforce.



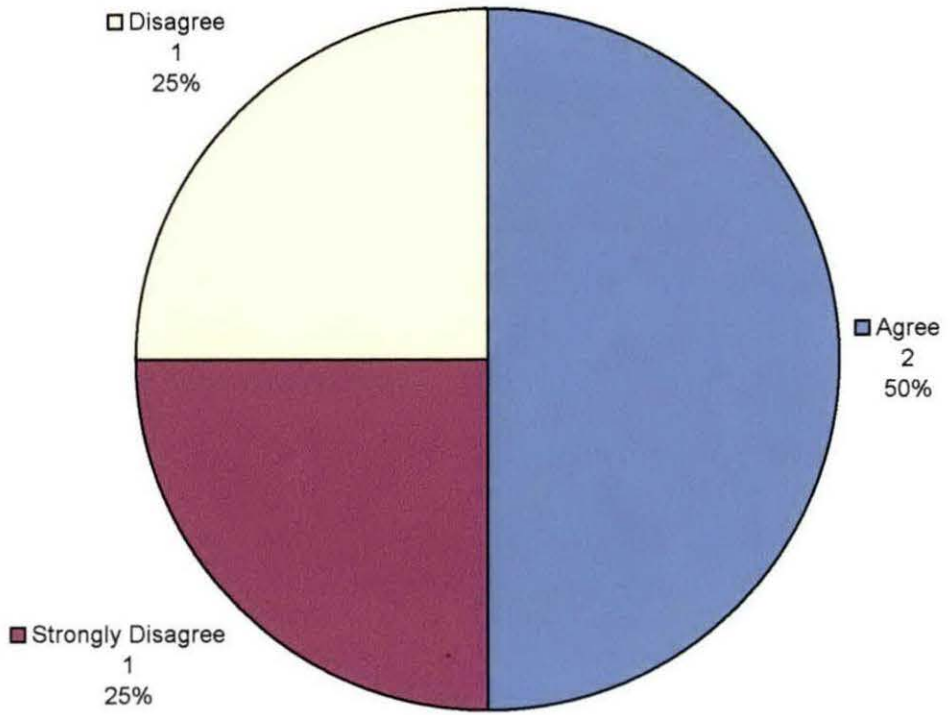
The advisory commitee is informed about the program.



The advisory commitee has substantial input into decision making within the program.



The advisory commitee is satisfied with the direction of the program



ADVISORY COMMITTEE

OPEN-ENDED RESPONSES:

If there were one thing you would like to change about the program, then explain what it is and how it would enhance the program.

- Change to a larger facility
- Improve on facility lighting and size. Students would have more room to work on larger projects
- The facility should be enlarged and updated
- Make larger facility

E. INPUT FROM INTERNAL & EXTERNAL COMMUNITY

Coordinator: After reviewing the Data Collection forms on all the courses in the Discipline/Program, along with the collated data summary, please analyze and summarize these findings.

Faculty Perceptions of Occupational Programs and Disciplines Analysis

90% + of the responses from three faculty members surveyed are very favorable displaying their satisfaction of the program and its future directions.

Student Perception of Occupational Programs and Disciplines Analysis

90% + of the favorable responses from the thirty students surveyed display satisfaction with the program

Advisory Committee/Industry Perceptions of Occupational Programs/Disciplines Analysis

Four advisory committee members were surveyed. The results are as follows:

- **75% of the advisory committee agreed with the college meeting expectations**
- **75% agreed that the courses offered are preparing the students for the work force**
- **50% disagree that the advisory committee is informed about the program. 25% were in agreement and the remaining 25% were neutral.**
- **75% disagree that the advisory committee has substantial input into the decision making within the program. The other 25% strongly agree.**
- **50% of the advisory committee agree to be satisfied with the direction of the program and 25% disagree, and the other 25% strongly disagree**

INPUT FROM THE INTERNAL AND EXTERNAL COMMUNITY REVIEW SUMMARY

It seems that the majority of the advisory committee members agree about the college meeting the expectations and the current course offerings. There also seems to be a concern from the majority about receiving current information on the program in a

timely fashion. The majority of the advisory committee members are of the opinion that they don't have a substantial input into the decision making process.

It would be advisable to meet the advisory committee members on a more frequent basis and to clarify their role as an external input source. It would be beneficial to clarify the fact that the college does take their advice seriously and that the advisory members understand that it is not always possible to implement all of their suggestions.

F. COMPARABLE COURSES/PROGRAMS AND TRENDS

Coordinator: Answer the following questions.

1. List three institutions to which the courses in your Program transfer, and list the specific courses for each institution. (Consult with the Counseling Department)

Wayne County Community College.

Schoolcraft College

Monroe County Community College.

According to Counseling Department no specific transfer history exists. However the above institutions are open to accept individual courses based on their nature of similarity.

2. List the institutions with which articulation agreements exist that include the courses in your Program. (Consult with the Counseling Department)

None.

3. Provide information regarding labor market trends in your field. (Consult with the Office of Assessment & Effectiveness)

In the period 2004-2014 new jobs created will total 648 and replacement jobs will be 3935. Occupations associated with Welding Technology are expected to experience varying degree of growth and decline over the next 8 years. The majority of future job opportunities will result from replacement of current workers.

Schools in Michigan

Click on a school name to learn more

You selected: Welding Technology/Welder

Name of School	All Types	City
Bay de Noc Community College	2-Year	Escanaba, MI
Delta College	2-Year	University Center, MI
Ferris State University	4-Year	Big Rapids, MI
Grand Rapids Community College	2-Year	Grand Rapids, MI
Henry Ford Community College	2-Year	Dearborn, MI
Kalamazoo Valley Community College	2-Year	Kalamazoo, MI
Kellogg Community College	2-Year	Battle Creek, MI
Kirtland Community College	2-Year	Roscommon, MI
Lansing Community College	2-Year	Lansing, MI
Macomb Community College	2-Year	Warren, MI
Mid Michigan Community College	2-Year	Harrison, MI
Monroe County Community College	2-Year	Monroe, MI
Montcalm Community College	2-Year	Sidney, MI
Mott Community College	2-Year	Flint, MI
Muskegon Community College	2-Year	Muskegon, MI
Oakland Community College	2-Year	Bloomfield Hills, MI
Schoolcraft College	2-Year	Livonia, MI
Southwestern Michigan College	2-Year	Dowagiac, MI
St. Clair County Community College	2-Year	Port Huron, MI
Washtenaw Community College	2-Year	Ann Arbor, MI
Wayne County Community College District	2-Year	Detroit, MI
West Shore Community College	2-Year	Scottville, MI

Schools in Michigan

Click on a school name to learn more

You selected: Welding Technology/Welder

Name of School	All Types	City
Bay de Noc Community College	2-Year	Escanaba, MI
Delta College	2-Year	University Center, MI
Ferris State University	4-Year	Big Rapids, MI
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Kellogg Community College	2-Year	Battle Creek, MI
Kirtland Community College	2-Year	Roscommon, MI
Lansing Community College	2-Year	Lansing, MI
Macomb Community College	2-Year	Warren, MI
Mid Michigan Community College	2-Year	Harrison, MI
Monroe County Community College	2-Year	Monroe, MI
Montcalm Community College	2-Year	Sidney, MI
Mott Community College	2-Year	Flint, MI
Muskegon Community College	2-Year	Muskegon, MI
Oakland Community College	2-Year	Bloomfield Hills, MI
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Southwestern Michigan College	2-Year	Dowagiac, MI
St. Clair County Community College	2-Year	Port Huron, MI
Washtenaw Community College	2-Year	Ann Arbor, MI
Wayne County Community College District	2-Year	Detroit, MI
West Shore Community College	2-Year	Scottville, MI

Username: OCC
PW: auburnhills

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Wayne County Community College District

LATEST NEWS

WCCCD presents Saving our Babies...Community Awareness and Resource Fair
more>>

Academic Programs

Welding Technology Program

WELDING TECHNOLOGY PROGRAM
1-800-300-2118

- College Certificate
- Associate of Applied Science

About The Program

The Welding Technology Program emphasizes hands-on training and the mastery of welding techniques with manual and semi-automatic welding processes. Students develop their technical knowledge of blueprint reading, layout, metal fabrication, metallurgy and manipulative welding skills for potential qualification or certification in oxy-fuel, stick-electrode, gas-metal arc, flux-cored arc and gas-tungsten arc processes in all positions on plate and pipe. Welders and metal fabricators layout, shape, form, tack and weld metal assemblies or products according to various welding codes and procedures. They produce fabricated assemblies, perform repair and maintenance welding, and work on construction projects.

Admission Requirements

Students are required to fulfill the following requirements:

- Fulfill all WCCCD admission requirements.
- Declare intent to enter Welding Technology Program on the WCCCD admission application or change intent at the campus admission office.
- Fulfill course placement requirements based on COMPASS test.
- Students must complete WCCCD Program admission applications during the semester they are enrolled in the WLT course and submit them to the Campus Academic & Student Services Officer.

Career Potential

- Maintenance Welder
- Welding and Fabrication Technician
- Product Test Technician
- Structural Welder

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Above & Beyond

- Foreman
- Self Employed Technician
- Sales and Marketing Engineer

College Certificate Requirements

CAREER COURSES		CR
DRT 101	Blueprint Reading	3
DRT 102	Fundamental of Mechanical Drawing	4
MAN 100	Shop and Tool Equipment	3
MAN 120	Survey of Material Science	3
WLT 101	Welding and Fabrication I	3
WLT 102	Welding and Fabrication II	4
ENG 110	English I	3
MAT 121	Technical Mathematics I	3
MAT 122	Technical Mathematics II	3
	Elective	3

CERTIFICATE TOTAL CREDITS **32**

** Certificate totals may not include prerequisite work.*

Associate of Applied Science Degree Requirements

GENERAL EDUCATION COURSES		
ENG 110	English I	3
ENG 134	Technical Communications	3
	Humanities Requirement	
	- OR -	
	Natural Science Requirement	3
MAT 121	Technical Mathematics I	3
MAT 122	Technical Mathematics II	3
PS 101	American Government	3

CAREER COURSES		
DRT 101	Blueprint Reading	3
DRT 102	Fundamental of Mechanical Drawing	4
LS 204	Occupational Health & Safety	3
MAN 100	Shop and Tool Equipment	3
MAN 120	Survey of Material Science	3
WLT 101	Welding and Fabrication I	3
WLT 102	Welding and Fabrication II	4
WLT 103	Welding and Fabrication III	4
WLT 208	Pipe Welding	4
WLT 210	Certificate Welding Practices	4
	Electives	7

PROGRAM TOTAL CREDITS **60**

** Program totals may not include prerequisite work.*

campus choices style campus choices style campus choices style campus choices style campus

Discover

Schoolcraft College

Livonia Garden City Online Livonia Garden City Online Livonia Garden City Online Livonia Online Livonia Garden City Online Livonia Garden City Online

Welding Technology

Admit it. You love the idea of handling a torch, working at temperatures so hot they can make metal melt in a flash of light and sparks. Creator, destroyer, and skilled tradesperson, all wrapped up in one—that's what you want to be. And Schoolcraft College can help you get there.

Our certificate program in Welding-Fabrication introduces you to the fine art of fabricating machinery components and other industrial equipment. MIG and TIG welding? You'll learn them here, as well as plasma, arc, and oxy-gas cutting technologies.

When you've finished your coursework, we'll even help you prepare for welding certification exams with special classes that expertly evaluate your skills.

FREQUENTLY ASKED QUESTIONS

What Does a WELDER Do?

Simply put, welders join metal parts: that is, they apply heat to metal pieces, melting and fusing them to form a permanent bond. They may work in a manual mode or in a semiautomatic mode, using machinery such as a wire feeder to help them perform tasks.

What Characteristics Do I Need To Work In This Field?

First and foremost, you need good eyesight, strength, and manual dexterity. You should also be able to concentrate on detailed work for long periods and be able to bend, stop, and weld in awkward positions. You may work outdoors, and you must wear special clothing—safety shoes, gloves, and goggles, face shields or hoods—to protect yourself from the intense light created by arcs, hazardous fumes, and spark burns.

Where Could I Find a Job?

Virtually every manufacturing industry needs welding expertise, especially aerospace, automotive, shipbuilding, heavy equipment, and industrial machinery. Construction firms that focus on buildings, bridges, and other structures and energy companies are also big employers. So are small firms that fabricate metal products and repair shops.

What Is My Employment Outlook?

Employment opportunities for Welders are expected to grow as fast as the average for all occupations through the year 2012.

Related Web Sites

American Welding Society: www.aws.org

Welding Jobs: www.weldingjobs.com

Welding Research Council: www.forengineers.org/wrc

For More Information

Visit www.schoolcraft.edu, where you can view course and program information, apply for admission, and register for courses.

In addition, you can request information and schedule a campus tour by contacting the Office of Admissions at 734-462-4426 or admissions@schoolcraft.edu.

employment

JOB TITLES & MEDIAN SALARIES OR HOURLY RATES

Welders, Cutters, Solderers, Brazers
$35,800 (Michigan)

discover schoolcraft

discover WELDING TECHNOLOGY

Program Requirements 2005-2006

WELDING—FABRICATION
ONE-YEAR CERTIFICATE

Schoolcraft program code # 1YC.00127

The Welding-Fabrication Program prepares students for employment under classifications such as welders and/or industrial fabrications. The program includes joining materials, using weldments, special techniques, equipment and other recognized fastening methods. Students acquire skills in the broad categories of welding and fabrication with added emphasis upon support technical subjects.

Students are required to purchase protective clothing, protective (safety) shoes and eye protection equipment.

All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. Students who satisfactorily complete the Program Courses qualify for a Certificate of Program completion.

Program Courses

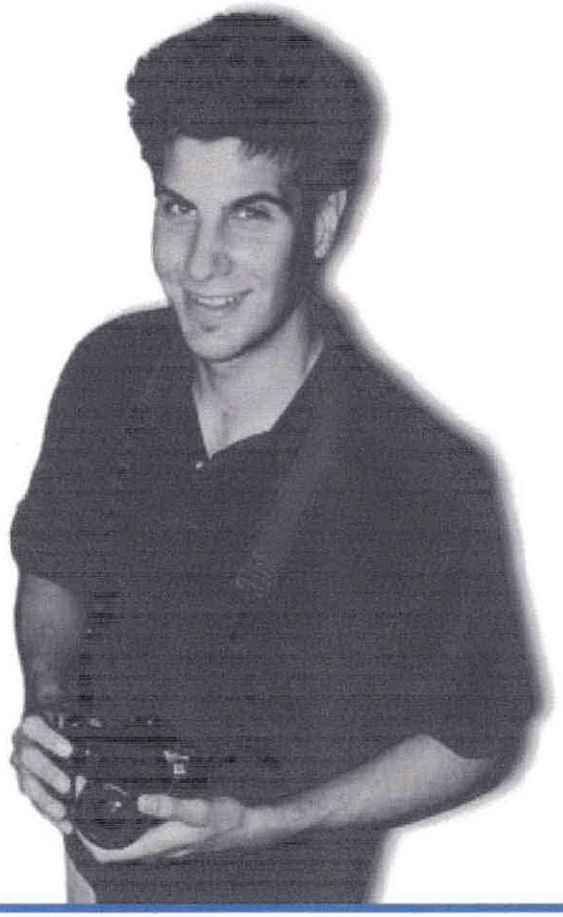
MET 102	Introduction to Materials Science	3
WELD 108	Shop Mathematics	2
WELD 109	Algebra	2
WELD 113	Shielded Metallic Arc Welding (S.M.A.W.)	3
WELD 115	Gas Metallic Arc Welding (G.M.A.W/M.I.G.)	3
WELD 119	Gas Tungsten-Inert Arc Welding (G.T.A.W/T.I.G.)	3
WELD 120	Advanced Processes-Stick Electrode/ M.I.G Welding	3
WELD 130	Advanced Processes-Gas Tungsten, Ceramic and Polymer Welding	3
WELD 205	Welder's Print Reading	2
WELD 206	Welding Inspection and Qualification	2
WELD 210-214	Exam Preparation *	3
WELD 223	Fabrication-Student Project	4

PROGRAM TOTAL 33 CREDITS

*** Exam Preparation: (Select one)**

WELD 210	Preparation for Welder Certification in Shielded Metallic Arc Welding (S.M.A.W)	3
WELD 211	Preparation for Welder Certification in Gas Metallic Arc Welding (G.M.A.W./M.I.G.)	3
WELD 212	Preparation for Welder Certification in G.T.A.W./T.I.G.	3
WELD 213	Preparation for Welder Certification in S.A.W.	3
WELD 214	Preparation for Welder Certification in Pipe Welding	3

Exams for above certificate will also be provided on an individual basis.



Schoolcraft College
18600 Haggerty Road
Livonia, MI 48152-2696

PROGRAM INFORMATION UPDATED 8-05

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MONROE COUNTY COMMUNITY COLLEGE

Programs & Courses

Welding Technology

Links

Division Home

Programs

Transfer Guides

Job Postings

Newsletter

Taste of Tech

Formula SAE

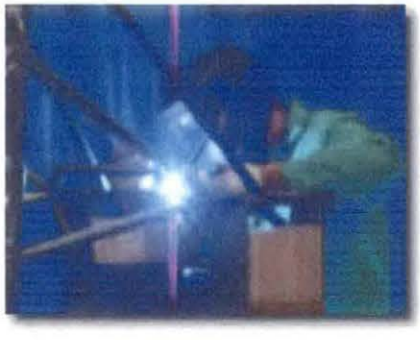
Campus Maps

Contact Us

The associate of applied science degree with specialization in welding technology parallels the highly technological demands of industry. The welding laboratory contains state of the art equipment for shielded me arc welding (SMAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW), gas tungsten arc welding (GTAW), submerged arc welding (SAW), plasma arc cutting (PAC), and oxy-fuel cutting (OFC). Virtually all modern production welding practices are covered.

Students graduating from this program will be prepared for entry-level employment in the following fields:

- Welder/fabricator
- Welding metallurgy technician
- Welding sales/service technician
- Engineering technician
- Pipefitter
- Weld inspector
- Production welder



Faculty

Curriculum

MDTC 160 Mechanical Drafting and C satisfies computer skills general education requirement

HENRY FORD COMMUNITY COLLEGE

1-800-585-HFCC www.hfcc.edu

Materials Join & Fab Gas Tung & Metal Arc Welding

Certificate of Achievement
Trade & Apprentice Division

2005-2006 Catalog
Program Code: TAEDMJGWLD.CMLT.2003

Technology Building
Kevin Ridge karidge@hfcc.edu
Room #: T-165C
313-317-4136

Technology Building
Robert Morrish rmorrish@hfcc.edu
Room #: T-115A
313-845-6436

The courses in this program extend the skills learned in the Materials Joining and Fabrication Basic Certificate to include one of the most advanced welding techniques required in the manufacture and repair of products made from materials requiring special fabricating procedures. The skills acquired will enable the student to pursue welding jobs that require advanced knowledge and skills and that offer higher pay.

120

Required Courses

Minimum Number Of Credits To Graduate (Including Options/Electives):

Required Core Courses

	Credit Hours	Fall *	Winter *	Spring *	Summ
Minimum Core Credit Hours:	**14**				
TADV 90 Print Reading Fundamentals	2	D/E	D/E	D/E	
TAMJ 110 Materials Joining and Fabrication Fundamentals	3	D/E	D/E	D/E	
TAMJ 115 Advanced Materials Joining and Fabrication	2	D/E	D/E	E	
TAMJ 145 MJ & F: Advanced Gas Torch Techniques	2	E	E		
TAMJ 120 Materials Joining and Fabrication: GTAW/GMAW Techniques	2	E	E	E	
TAFD 150 Applied Technology	3	D/E	D/E	D/E	

F. COMPARABLE COURSES/PROGRAMS AND TRENDS

Coordinator: Please use the data from the Comparable Courses/Programs and Trends Data Collection form to answer the following questions:

1. How does your program serve transferring students? Please discuss.

Not at this time

2. Are your articulation agreements current? Please discuss.

Don't exist.

3. Discuss employment opportunities for students in both the current and future job market.

Job opportunities in the field are favorable and will continue to be so. As per data there will be more jobs for Welders, Cutters, Solderes and Brazers as compared to Machine Setters, Operators and Heat Treating Equipment Setters.

4. Discuss the changes that will be made in your program in response to current/future employer expectations and market trends.

None at this time as the program is meeting the current industry requirements.

COMPARABLE COURSES/PROGRAMS AND TRANSFER REVIEW SUMMARY:

Most two year colleges that offer technical courses have welding certificate program. Transfer from one junior college to another is not common; therefore there was no real urgency to set up articulation agreements. Once Oakland Community College decides to offer an associate degree program it would be beneficial to develop transfer agreements.

4. Identify changes in job performance and employer expectations that have occurred within your industry in the past 5 years. (Consult with advisory committees, professional organizations)

The employee is expected to know more than just welding techniques. Knowledge of metallurgy ,fabrication and computer controlled welders is desirable.

G. OUTCOMES ASSESSMENT

Coordinator: Complete this form after reviewing your most recent Program Assessment Plan.

1. How have you used the findings from your Program Assessment to improve your program?

   Not at this point.

2. What revisions to your Program Assessment Plan would you suggest?

   The assessment plan as outlined seems to be working well.

3. Discuss the SAGE findings that apply to the instruction in your Program.
   Obtain these findings from the Office of Assessment and Effectiveness.

   Not applicable.

OUTCOMES ASSESSMENT REVIEW SUMMARY:

Coordinator: Obtain the most recent copy of your Program Assessment from the Office of Assessment and Effectiveness. Please attach it to your Summary Report.

Assessment results are available for the year 2003-2004.

Findings 1

Of 16 students, 100% achieved the benchmark level of 90% in MIG project.

Findings 2

Of 17 students, 100% achieved the benchmark level of 90% in TIG project.

Findings 3

Of 9 students, 100% achieved the benchmark level of 90% on pipe project.

Program Assessment Plan

Welding Technology Certificate

Catalog Description

This program, leading to a Certificate in Welding, prepares the student to enter the occupational area of welding. The program will provide the student with the knowledge and skills needed to gain job entry into a wide variety of welding occupations. Some courses in this program prepare the student for State Certification testing.

Statement of Purpose

The purpose of this program is to prepare students for careers in industry, to update student's education for an existing career, and/or to prepare students to transfer these credits to other educational institutions, and/or for individual enrichment. Students are provided with both a theoretical and practical knowledge base. The specific goal of the program is to graduate competent welding technicians.

Learning Outcomes

Acquisition of skills and abilities that meet or exceed needs for career or personal development growth.

Benchmark 1

80% of student respondents rate program beneficial to their career or personal development goals one to three years after program completion.

Assessment Method 1

Survey students returning to acquire additional skills one to three years later for perceptions of how certificate prepared them for the future.

Assessment Date 1 5/1/2005 **Findings Sent to OAE Date 1** 6/1/2005

Benchmark 2

80% of employer respondents rate the certificate content and student's resultant skill level as appropriate for their industry.

Assessment Method 2

PROE surveys and general comments from Advisory Committee employer-members regarding the skills obtained and appropriateness of the certificate content from an industry standpoint.

Assessment Date 2 5/1/2005 **Findings Sent to OAE Date 2** 6/1/2005

Learning Outcomes

Students will master problem analysis and solving skills in order to complete assigned projects given a variety of new situations and environments in the project setting.

Benchmark 1

Terminal Project components will be successfully completed at a level not less than 90%.

Assessment Method 1

Measures from each project focus on the students' ability to adapt knowledge/skills to new situations (i.e. various settings and/or design components, selecting appropriate codes/regulations, selecting appropriate equipment).

Assessment Date 1 5/1/2005 **Findings Sent to OAE Date 1** 6/1/2005

Learning Outcomes

Students will develop an understanding and appreciation for aesthetic qualities in their work.

Benchmark 1

All students will complete a paper detailing the importance of aesthetics to buyers/users of manufactured parts.

Assessment Method 1

Students will achieve 80% in evaluation by faculty.

Assessment Date 1 5/1/2005 **Findings Sent to OAE Date 1** 6/1/2005

Benchmark 2

Students will present two welds to classmates rated above 90% for aesthetic quality.

Assessment Method 2

Evaluation by classmates on: quality of weld, appropriateness of materials used, appropriateness of welding method used.

Assessment Date 2 5/1/2005 **Findings Sent to OAE Date 2** 6/1/2005

Learning Outcomes

Integrate theory, practical skills, knowledge of codes and regulations into basic industry welding applications.

Benchmark 1

The components within the three Terminal Projects (3) will be successfully completed by 100% of students at a level not less than 90% for each project.

Assessment Method 1

Read, print and interpret welding symbols and positions to create welding fixture in ATW 8210, Metal Inert Gas, Final Project.

Assessment Date 1 5/1/2005 **Findings Sent to OAE Date 1** 6/1/2005

Benchmark 2

The components within the three Terminal Projects (3) will be successfully completed by 100% of the students at a level not less than 90% for each project.

Assessment Method 2

Read, print and interpret welding symbols and positions to create welding fixture in various alloys in ATW 8320, Tungsten Inert Gas, Final Project.

Assessment Date 2 5/1/2005 **Findings Sent to OAE Date 2** 6/1/2005

Benchmark 3

The components within the three Terminal Projects (3) will be successfully completed by 100% of the students at a level not less than 90% for each project.

Assessment Method 3

Read print and interpret welding symbols and positions to create appropriate pipe design in ATW 8410, Pipe Welding, Final Project.

Assessment Date 3 5/1/2005 **Findings Sent to OAE Date 3** 6/1/2005

Summary of Program Assessment Results
Welding Technology Certificate

Catalog Description
This program, leading to a Certificate in Welding, prepares the student to enter the occupational area of welding. The program will provide the student with the knowledge and skills needed to gain job entry into a wide variety of welding occupations. Some courses in this program prepare the student for State Certification testing.

Program Statement of Purpose
The purpose of this program is to prepare students for careers in industry, to update student's education for an existing career, and/or to prepare students to transfer these credits to other educational institutions, and/or for individual enrichment. Students are provided with both a theoretical and practical knowledge base. The specific goal of the program is to graduate competent welding technicians.

Learning Outcome
Students will master problem analysis and solving skills in order to complete assigned projects given a variety of new situations and environments in the project setting.

Benchmark 1
Terminal Project components will be successfully completed at a level not less than 90%.

Assessment Method 1
Measures from each project focus on the students' ability to adapt knowledge/skills to new situations (i.e. various settings and/or design components, selecting appropriate codes/regulations, selecting appropriate equipment).

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings 1
Assessment not implemented.

Learning Outcome
Students will develop an understanding and appreciation for aesthetic qualities in their work.

Benchmark 1
All students will complete a paper detailing the importance of aesthetics to buyers/users of manufactured parts.

Assessment Method 1
Students will achieve 80% in evaluation by faculty.

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings 1
Assessment not implemented.

Benchmark 2
Students will present two welds to classmates rated above 90% for aesthetic quality.

Assessment Method 2
Evaluation by classmates on: quality of weld, appropriateness of materials used, appropriateness of welding method used.

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings 2
Assessment not implemented.

Learning Outcome
Integrate theory, practical skills, knowledge of codes and regulations into basic industry welding applications.

Benchmark 1
The components within the three Terminal Projects (3) will be successfully completed by 100% of students at a level not less than 90% for each project.

Assessment Method 1
Read, print and interpret welding symbols and positions to create welding fixture in ATW 8210, Metal Inert Gas, Final Project.

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings 1
2003-2004 Of 16 Students, 100% achieved the benchmark level of 90% on MIG project. Analysis in May, results available in June of each academic year beginning June 2005.

Will other steps be taken as a result of these findings? Yes

If Yes, specifically what steps will be taken?
Benchmarks were met in each area, however, we have identified a few areas of concern throughout this process: Additional equipment is needed to meet demand; Lack of qualified (in this very specialized field) Adjunct faculty available to cover additional sections.

When will this be completed? 2/14/2005

Benchmark 2
The components within the three Terminal Projects (3) will be successfully completed by 100% of the students at a level not less than 90% for each project.

Assessment Method 2
Read, print and interpret welding symbols and positions to create welding fixture in various alloys in ATW 8320, Tungsten Inert Gas, Final Project.

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings 2
2003-2004 Of 17 students, 100% achieved the benchmark level of 90% on TIG project. Analysis in May, results available in June of each academic year beginning June 2005.

Will other steps be taken as a result of these findings? Yes

If Yes, specifically what steps will be taken?
Benchmarks were met in each area, however, we have identified a few areas of concern throughout this process: Additional equipment is needed to meet demand; Lack of qualified (in this very specialized field) Adjunct faculty available to cover additional sections.

When will this be completed? 2/14/2005

Benchmark 3
The components within the three Terminal Projects (3) will be successfully completed by 100% of the studetns at a level not less than 90% for each project.

Assessment Method 3
Read print and interpret welding symbols and positions to create appropriate pipe design in ATW 8410, Pipe Welding, Final Project.

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings

2003-2004 Of 9 students, 100% achieved the benchmark level of 90% on Pipe project. Analysis in May, results available in June of each academic year beginning June 2005.

Will other steps be taken as a result of these findings? Yes

If Yes, specifically what steps will be taken?
Benchmarks were met in each area, however, we have identified a few areas of concern throughout this process: Additional equipment is needed to meet demand; Lack of qualified (in this very specialized field) Adjunct faculty available to cover additional sections.

When will this be completed? 2/14/2005

Learning Outcome
Acquisition of skills and abilities that meet or exceed needs for career or personal development growth.

Benchmark 1
80% of student respondents rate program beneficial to their career or personal development goals one to three years after program completion.

Assessment Method 1
Survey students returning to acquire additional skills one to three years later for perceptions of how certificate prepared them for the future.

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings 1
Assessment not implemented.

Benchmark 2
80% of employer respondents rate the certificate content and student's resultant skill level as appropriate for their industry.

Assessment Method 2
PROE surveys and general comments from Advisory Committee employer-members regarding the skills obtained and appropriateness of the certificate content from an industry standpoint.

Benchmark Scheduled To Be Assessed: 5/1/2004

Assessment Results Sent To Office of Assessment & Effectiveness: 6/1/2004

Findings 2
Assessment method was not implemented.