# HAWAI`I COMMUNITY COLLEGE
# ANNUAL INSTRUCTIONAL
# PROGRAM REVIEW

## Auto Body Repair and Painting (ABRP)

## APRIL 2, 2007

**Lloyd Sanborn**
**Mike Saito**

**ANNUAL INSTRUCTIONAL PROGRAM REVIEW**
**Auto Body Repair and Painting**
**April 2, 2007**

## I. Narrative and Analysis of Data

**a. Statement on the mission or purpose of the program, including the target student population;**

The Auto Body Repair and Painting Program prepares the student for entry level employment in auto body repair and painting trade and related fields of work. Hands-on training is provided that reflects the current trends of the industry. Graduates have found that completion of the Auto Body Repair and Painting Program enables them to get better paying jobs and to advance faster once employed than others who do not have the benefit of the training.

The Program targets any student interested in Auto Body Painting and Repair since it does not have prerequisites. Students are recent high school graduates, working adults looking for a career change, and retired adults interested in auto body painting and repair.

**b. Information on external factors affecting the program;**

Students may only enter the program in the fall. The program traditionally has several students who apply but do not show up. This has occurred more frequently due to the low employment rate for the county of Hawaii.

The program's schedule of four days a week from 7:30am – 2:20pm requires a considerable time commitment from students. When students have family obligations, they often need to work full time and their work and school schedules conflict. Attrition also occurs because students are under prepared.

The graduation rate is low because students complete the program classes but do not pass the liberal arts classes, especially in English and Math. Both the certificate of achievement and A.A.S. degree require liberal arts classes.

**c. Attach PHI Report (CTE Programs only)** See attached.

**d. Required external measures, if applicable (e.g.) Nursing Cert.** None

**e. Analysis of data**

*The health of the program is cautionary due to the cyclical nature of enrollment – up one year, down the next.*

*Number of Majors:* The number of unduplicated majors is 40. This is more than the number of students actively taking classes. The program had 24.4 FTE students for the

academic year. The program lost 6 majors from fall 2005 to spring 2006. Some students changed majors, others had to work full time, and others dropped out.

*Average Class Fit & Student- Faculty Ratio:* Class caps are set at 18 students. The program's average class fit is 80.9%. New student enrollment appears to be cyclical; one year the number of new students entering the program is up and then the next year it is down. This has made the student-faculty ratio low: 6.17 students per FTE faculty.

*FTE Faculty:* The number of faculty assigned to the program is adequate. The FTE of BOR appointed program faculty is 2 and the number of FTE faculty based on contact hours is 2.29.

*GPA and Number of Graduates:* The program paid course (PPC) average GPA is 2.18 and the non-PPC average GPA is 1.37. This most likely is because the program has no entry requirements. Many students enter with very low Compass test scores. They manage to complete the ABRP classes but have a difficult time passing the liberal arts requirements. This is also why the graduation rate is low. Both the AAS and CA require liberal arts courses.

## II. Update or Create Your Action Plan including Budget Request with Justification, if needed.

Program goals for the next academic year include the following:

1. Finalize and adopt student learning outcomes for the program.
2. Develop course level student learning outcomes.
3. Begin development of assessment strategies that are directly tied to student learning outcomes
4. Participate in training for state-of-the art welding equipment recently approved for purchase
5. Investigate the feasibility of offering weekend classes for non-majors.
6. Continue recruitment efforts
7. Complete curriculum for certificates of completion
8. Identify and participate in vendor training – $3,000
9. Work with UH System as needed when contractors start the project to replace and relocate the spray booth and paint mixing room. This is being handled by the Department of Accounting and General Services (DAGS). The estimated cost is $1,125,000.
10. Work with UH System to replace Lab Bay Roll Up Door. The program has been told by the UH system that the door will be replaced.
11. Request funds for equipment replacements and purchases. Priority items are:

| | | |
|---|---|---|
| MIG Welder | The program currently has 7 working. It has 8 that were ruined in the 2000 flood. It is more expensive to repair than to replace. The program is requesting 5 @ $1,900 new MIG Welders. The first year students use this. If there are 18 students they have to take turns. | $9,500 |

| | | |
|---|---|---|
| Plasma cutter | The existing one cannot be repaired. | $2,000 |
| HVLP Paint Spray Gun | When paints change the spray guns change also. The program needs the paint spray gun to stay current. | $4,200 |
| Floor jacks | The program only has one working 2 ½ ton floor jack. Jacks are used daily. 3 @ $350 | $1,050 |
| 5" air grinders | Used daily 10 @ $180 | $1,800 |
| DA Sanders | Used daily 10 @ $210 | $2,100 |
| R/F Air Drills | Used daily 10 @ $180 | $1,800 |
| Angle Die Grinder | Used daily 10 @ $160 | $1,600 |
| Projector | Need for second classroom | $1,500 |
| Air Compressor with air dryer unit | Existing one is in constant need of repair; the majority of the program's tools are run by air so the compressor is needed daily plus air dryer unit | $11,000 |
| Frame machine with electronic measuring system | This is used in the last semester. It is the only major piece of equipment for the structural repair section of the program. It is essential. The existing one is obsolete, has a mechanical measuring system which is outdated, and wasn't designed for today's uni-body cars. | $75,000 |

Budget: The program realizes it is unlikely all items ($111,550) on the equipment priority list will be funded. They would like to request $25,000 be allotted for equipment replacement and professional development. There is a great need for professional development and new equipment due to changes in metal components and construction of new cars.

**Data Chart**

QUANTITATIVE TREND DATA CHART(as of 10-19-06)

Program Name: Auto Body Repair

| | Fall 2005 | Spring 2006 | AY |
|---|---|---|---|
| **#1 Number of Unduplicated Majors** | 38 | 32 | 40 |
| **#2 Total Student Semester Hours** | 398 | 334 | 732 |
| **#3 FTE Student Majors** | 26.53 | 22.27 | 24.40 |
| **#4 Number of Graduates** | | | 9 |
| **#5 Number of classes** | 12 | 11 | 23 |
| **#6 Avg Class size** | 16.08 | 12.91 | 14.57 |
| **#7 Avg Class fit** | 89.4% | 71.7% | 80.9% |
| **#8 FTE of BOR Appointed Program Faculty** | | | 2 |
| **#9 Number of FTE Faculty based on contact hours (FTE = 21)** | | | 2.29 |

| | | | |
|---|---|---|---|
| **#10 Student semester hours for all PPC class enrollments** | 349 | 286 | 635 |
| **#11 Student-Faculty Ratio** | | | 6.17 |
| **#12 PPC Credits Earned Ratio** | .90 | .91 | .90 |
| **#13 Non-PPC Credits Earned Ratio** | .43 | .47 | .45 |
| **#14 PPC Avg GPA** | 2.13 | 2.23 | 2.18 |
| **#15 Non-PPC Avg GPA** | 1.21 | 1.53 | 1.37 |
| **#16 Budget** | | | $11,507.38 |
| **#17 College Cost per SSH** | | | $162.50 |

The Program Health Indicators Review provides a comprehensive, empirically based review of academic programs. Major sections of the report provide descriptive information about the development and history of a program, goals, faculty and advisory committees, admission and degree requirements, and graphic representation of the program's standing. The major clusters of program health indicators are program demand, program efficiency and program outcomes. Hawai'i Community College uses five data elements to develop these clusters: number of applicants and majors (program demand), class fit and average class size (program efficiencies) and graduates (program outcomes).

Chancellor : Rockne Freitas
Vice Chancellor for Academic Affairs: Doug Dykstra
Division Chair: Clyde Kojiro

**CONTENTS**

## PROGRAM DESCRIPTION

The Auto Body Repair and Painting Program is placed in the Applied Technical Education Division's Transportation and Applied Technology Program of Hawai'i Community College. Other programs within this department include: Automotive Mechanics Technology, Diesel Mechanics, Electronics Technology, and Machine, Welding and Industrial Mechanics Technologies.

Students are accepted into the program each Fall Semester. They may earn the Certificate of Achievement upon completion of 42 credit hours of designated course work. The Associate in Applied Science Degree requires the completion of 63 credit hours of work.

The Auto Body Repair and Painting Program prepares the student for entry level employment in auto body repair and painting trade and related fields of work. Hands-on training is provided that reflects the current trends of the industry. Graduates have found that completion of the Auto Body Repair and Painting Program enables them to get better paying jobs and to advance faster once employed than others who do not have the benefit of the training.

## PROGRAM GOALS

The goals of the Auto Body Repair and Painting Program are as follows:

1. To provide vocational training to allow students to gain knowledge, salable skills, and attitudes that will qualify them for entry-level employment in the auto body repair and painting trade and related occupations.

2. To provide training for knowledge and competencies that will help graduates progress from entry-level work to a higher skill level in their trade.

3. To educate students in the knowledge and skills that will enable them to understand and appreciate their heritage and to be aware of the contributions of different cultures, to exercise good judgment as citizens, and to instill a desire for lifelong learning that will enable them to respond to changing technology.

4. To serve the community by providing job upgrading opportunities for professionals in the field.

5. To offer modular courses open to majors and non-majors.

## PROGRAM HEALTH INDICATORS

| INDICES | MINIMUM LEVEL | ACTUAL LEVEL | SATISFACTORY LEVEL |
|---|---|---|---|
| **PROGRAM DEMAND/CENTRALITY: Fall 2006** | | | |
| Number of Applicants | 30 | 39 | 45 |
| Number of Majors | 40 | 31 | 60 |
| Student Semester Hours | 240 | 273 | 360 |
| Class Credit Hours | 24 | 24 | 24 |
| Number of Classes Taught | 2 | 12 | 2 |
| **PROGRAM EFFICIENCY: Fall 2006** | | | |
| Average Class Size | 10 | 11 | 15 |
| Student Semester Hours per FTE Faculty | 120 | 136.5 | 180 |
| Equiv. Class Credit Hours per FTE Faculty | 12 | 12 | 12 |
| Percentage of Small Classes | 50% | 50% | 0% |
| **PROGRAM OUTCOMES: (See Perkins III Core Indicators on Page 5)** | | | |
| Credits Earned Ratio – General Education | | 00% | |
| Credits Earned Ratio – Vocational Education | | 00% | |
| Degrees and Certificates Awarded – AY 2001-2002 | | 00% | |
| Placement into further Education, Employ, or Military | | 00% | |
| Program Retention – Fall to Spring | | 00% | |
| Retention in Employment | | 00% | |
| Non-Traditional Program Participation – Females | | 00% | |
| Non-Traditional Program Completion – AY 2001-2002 | | 00% | |

**2005-2006 PERKINS III CORE INDICATORS**

| Core Indicators | # in Denominator | # in Numerator | Adjusted Level | Actual Level |
|---|---|---|---|---|
| | | | | |
| Academic Achievement | 14 | 6 | 81.92% | 42.86% |
| Vocational Skills | 18 | 13 | 90.00% | 72.22% |
| Degrees & Certificates | 18 | 4 | 37.33% | 22.22% |
| Placement/Employment | 8 | 6 | 71.72% | 75.00% |
| Retention/Employment | 6 | 6 | 92.00% | 100.00% |
| Nontraditional Participation | 35 | 7 | 14.60% | 20.00% |
| Nontraditional Completion | 8 | 0 | 12.73% | 0.00% |

**OCCUPATIONAL DEMAND**
**Hawai'i County - 1998-2011**

| Occupational Title | State 2005 | Hawaii County 2005 | Hawaii County New 2005-2011 | State Replacement 2005-2011 | Hawaii County Replacement 2005-2011 |
|---|---|---|---|---|---|
| Auto Body and Related Repairers | 899 | 125 | -2 | 106 | 14 |
| Maintenance & Repair Workers General | 8123 | 880 | 135 | 908 | 98 |
| Welding, Soldering, and Brazing Workers | 237 | 42 | -2 | 39 | 7 |
| | 9259 | 1047 | 131 | 1053 | 119 |
| Total demand 2005-2011 = 250 | | | | | |

**Source:** EMSI Table for Hawaii County

# ANALYSIS OF THE PROGRAM

## Program Demand/Centrality

The program meets or exceeds the minimum level in all categories except number of majors. The program admits a maximum of 18 students a year. Since it has no entry requirements, students may usually enter the program their first semester if there are open seats. Students may only enter the program in the fall. The program traditionally has several students who apply but do not show up. This has occurred more frequently due to the low employment rate for the county of Hawaii.

## Program Efficiency

The program meets or exceeds the minimum level in all categories. The program often has a drop in students from first year to second year; often times this is related to students having financial difficulties or changing their mind about their major. The program's schedule of four days a week from 7:30am – 2:20pm requires a considerable time commitment from students. When students have family obligations, they often need to work full time and their work and school schedules conflict. Attrition also occurs because students are under prepared.

## Program Outcomes

The program's academic and vocational skills achievement indicators are below the desired level. The program's lack of entry requirements at times makes it the program of choice for students placing low on the Compass placement test. These students may start the program while they take development English and math classes. Their low reading ability makes it difficult for them to learn the subject area and even more difficult to stay motivated to stay in school.

The program's graduation rate is below the desired level. There were 15 students who started the fall 2005 semester. Of that number there are six who will earn either a certificate or degree. The nine students who stopped participation did so for a variety reason; the main reason being the need to work full time and a decision to change majors.

The graduation rate is low because students complete the program classes but do not pass the liberal arts classes, especially in English and Math. Both the certificate of achievement and A.A.S. degree require liberal arts classes. Instructors believe it is better to let the students stay and work on the auto body program even if they are unwilling to take the liberal arts requirements. If they are not forced to take the liberal arts classes they are less likely to stay in school; at least if they stay in the program they are learning soft skills and technical skills that make them employable for entry level jobs.

## Plan of Action 2005-2006

To regain previous enrollment levels the Auto Body Program will keep expanding its recruitment efforts at the primary education levels, and continue to enlist the assistance of their graduates and advisory council members in marketing the program to a wider audience in the community and industry.

As a long-range plan process the Auto Body Program will continue to upgrade the programs offerings, maintain program viability and satisfy industry demands. Seek monies to upgrade equipment to meet industries current standards.

The program will implement a Certificate of Completion for students wanting a viable option. The program will continue to expand its recruitment efforts with help from students and past graduates to market our program in the community and industry.

**Responses to last year's Plan of Action**

The program has actively participated in recruitment events at local high schools and in the community. It completed a comprehensive program review fall 2006. The program applied and received Perkins funds to purchase state-of-the-art welding equipment. The program has not completed curriculum proposals for the certificate of completion.

**Plan of Action for 2007-2008**

12. Finalize and adopt student learning outcomes for the program.
13. Develop course level student learning outcomes.
14. Begin development of assessment strategies that are directly tied to student learning outcomes
15. Participate in training for state-of-the art welding equipment recently approved for purchase
16. Investigate the feasibility of offering weekend classes for non-majors.
17. Continue recruitment efforts
18. Complete curriculum for certificates of completion
19. Identify and participate in vendor training
20. Work with UH System as needed when contractors start the project to replace and relocate the spray booth and paint mixing room. This is being handled by the Department of Accounting and General Services (DAGS). The estimated cost is $1,125,000.
21. Work with UH System to replace Lab Bay Roll Up Door. The program has been told by the UH system that the door will be replaced.
22. Request funds for equipment replacements and purchases. Priority items are:

| | | |
|---|---|---|
| MIG Welder | The program currently has 7 working. It has 8 that were ruined in the 2000 flood. It is more expensive to repair than to replace. The program is requesting 5 @ $1,900 new MIG Welders. The first year students use this. If there are 18 students they have to take turns. | $9,500 |
| Plasma cutter | The existing one cannot be repaired. | $2,000 |
| HVLP Paint Spray Gun | When paints change the spray guns change also. The program needs the paint spray gun to stay current. | $4,200 |
| Floor jacks | The program only has one working 2 ½ ton floor jack. Jacks are used daily. 3 @ $350 | $1,050 |
| 5" air grinders | Used daily 10 @ $180 | $1,800 |
| DA Sanders | Used daily 10 @ $210 | $2,100 |
| R/F Air Drills | Used daily 10 @ $180 | $1,800 |
| Angle Die Grinder | Used daily 10 @ $160 | $1,600 |
| Projector | Need for second classroom | $1,500 |
| Air Compressor with air dryer unit | Existing one is in constant need of repair; the majority of the program's tools are run by air so the compressor is needed daily plus air dryer unit | $11,000 |

| | | |
|---|---|---|
| Frame machine with electronic measuring system | This is used in the last semester. It is the only major piece of equipment for the structural repair section of the program. It is essential. The existing one is obsolete, has a mechanical measuring system which is outdated, and wasn't designed for today's uni-body cars. | $75,000 |

## Appendix A: History and Admission Requirements

### Program History

The Hawai‘i Community College Auto Body Repair and Painting Program began in 1966 in order to help meet the employment demands of the community. It was housed in a temporary facility located at 1175 Manono Street in Hilo with twelve students and one instructor. Since that time, the program has grown to include two full-time instructors and is housed in a modem facility completed in 1981.

### Program Admission Requirements

This section describes the requirements for admission, including semester(s) in which students are admitted, basis for admission, minimum qualifications, and other requisites for admission.

The Auto Body Repair and Painting program follows the College's "open door admission" policy for all students entering the program. The program is open to any high school graduate or anyone 18 years of age or older.

The admission standards will be reviewed with personnel from the Office of the State Director of Vocational Education to determine whether giving preference to students who have higher placement scores is permitted under the federal regulations for vocational programs. At the same time, curriculum reinforcement through alternative delivery modes and special tutoring will be continued and other methods for enhancing the performance of students with poor academic skills will be explored.

## Appendix B: Degree Requirements

| | | | CA | AAS |
|---|---|---|---|---|
| **First Semester** | | | | |
| | ABRP 50 | Intro to Auto Body Repair & Painting | 1 | 1 |
| | ABRP 51 | Oxyacetylene Welding & Cutting | 2 | 2 |
| | ABRP 52 | Gas Metal Arc Welding Techniques | 3 | 3 |
| | ABRP 53 | Advanced Welding Techniques | 1 | 1 |
| | ABRP 54 | Rust Repair & Corrosion Protection | 2 | 2 |
| | ABRP 55 | Metal Straightening Techniques | 3 | 3 |
| ** | Eng | Eng 21, 51, or 22 or higher | 3 | 3 |
| ** | Math 50 | Technical Math or higher | 3 | 3 |
| | | **TOTAL** | **18** | **18** |
| **Second Semester** | | | | |
| | ABRP 61 | Preparation & Refinish Safety | 3 | 3 |
| | ABRP 62 | Refinish Equipment & Preparation | 1 | 1 |
| | ABRP 63 | Refinish Application & Color Matching | 2 | 2 |
| | ABRP 64 | Paint Problems | 2 | 2 |
| | ABRP 65 | Color Blending | 3 | 3 |
| | ABRP 66 | Plastic Repair & Refinishing | 1 | 1 |
| | Elective | Social, Natural, & Cultural Env. | - | 6 |
| | | **TOTAL** | **12** | **18** |
| **Third Semester** | | | | |
| | ABRP 70 | Collision Damage Appraisal | 2 | 2 |
| | ABRP 71 | Panel Replacement & Alignment | 3 | 3 |
| | ABRP 72 | Door & Quarter Panel Replacement | 3 | 3 |
| | ABRP 73 | Movable Glass Service | 2 | 2 |
| | ABRP 74 | Windshield & Stationary Glass Repairs | 1 | 1 |
| | ABRP 75 | Servicing Electrical Components | 1 | 1 |
| | Elective | Social, Natural, & Cultural Env. | - | 3 |
| | | **TOTAL** | **12** | **15** |
| **Fourth Semester** | | | | |
| | ABRP 80 | Structural Damage Analysis | - | 3 |
| | ABRP 81 | Strengthening Structural Components | - | 3 |
| | ABRP 82 | Structural Replacements | - | 3 |
| | ABRP 83 | Steering & Suspension | - | 2 |
| | ABRP 84 | Heating & Cooling Systems | - | 1 |
| | ABRP 93V | CVE (optional) | - | - |
| | | **TOTAL** | **-** | **12** |
| | | **TOTAL** | **42** | **63** |

## Appendix C: Faculty

### Regular Faculty

| Name | Tenure Status and date | Degrees Held | Rank |
|---|---|---|---|
| Sanford Sanborn | Tenured, 1991 | A.S. | C-4 |
| Michael Saito | Tenured, 2001 | A.S. | C-4 |

### Part-time Faculty

| Name | Tenure Status and date | Degrees Held | Rank |
|---|---|---|---|
| none | | | |

## Appendix D: Advisory Committee

Alfredo Avelino, Jr., Supervisor, Senior Sales/Marketing Executive, Automotive Supply Center

Elton Kaku, Owner, Big Isle Auto Care

Dale Matsumoto, Manager, Auto Body Hawai'i

Debbie Omori, Owner, Bob's Fender Shop, Inc.

Warren Tanigawa, Appraiser/Adjuster, Mountain View Claims Service

## Appendix E: Definitions of Data Elements (All data includes West Hawai‘i)

### A. Program Demand/Centrality:

1. Number of Applications: Total number of applications received complete and incomplete.

2. Number of Majors: Major declared/on file during the semester.

3. Student Semester Hours: Total number of semester hours based upon class credits and student enrollment. Sum of all class credits multiplied by the enrollment for each class. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes cancelled, 99V, 199V, 299V, and all CVE classes.

4. Class Credit Hours: Sum of credits of all classes offered within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes cancelled, 99V, 199V, 299V, and all CVE classes.

5. Number of Classes Taught: Total number of classes conducted/run within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 1 99V, 299V, and all CVE classes.

### B. Program Efficiency:

1. Average Class Size: Average class size of all classes conducted/run within the program/with the program/major code/alpha. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses. Total enrollment in each class excludes students with "DR" and/or "W" grades.

2. Student Semester Hours per FTE Faculty: Total student semester hours from A.3. divided by analytical FTE Faculty.

    a. Analytical FTE Faculty: Teaching based upon a full load (15 or 12 credits depending upon the contact hours.) Division Chairpersons are assigned an analytical FTE Faculty equivalent of 0.70 FTE.

    b. Each full-time faculty within a program is considered to be 1 FTE. FTE based upon lecturers are calculated by the number of credits each are assigned to teach.

    c. Assigned time is to be extracted from FTE calculations… similar to calculating the FTE for a Division Chair. For example, if a Full-time faculty received 3 credits assigned time (out of a regular 15-credit load) it would be considered a .8 FTE rather than 1.

3. Equivalent Class Credit Hours per FTE Faculty: Total class credit hours from A.4. divided by total analytical FTE Faculty.

4. Percentage of Small Classes: Percent of classes within the program/with the program/major code/alpha that had less than 10 students. Includes practica and other classes where 5 students = 1 semester (credit) hour; however, these classes are considered to be Low-enrolled only if there are less than 5 students or between 6 and 9 students. Excludes 99V, 199V, 299V, and all CVE classes.

**C. Program Outcomes:**

1. Credits Earned Ratio (Remedial/Developmental): Percentage of program majors enrolled in ESL 9, ESL 13, ENG 20R, ENG 20W, ENG 51, LSK 51, MATH 22, and MATH 50 who passed with a grade of A, B, C, D or CR.

2. Credits Earned Ratio (General Education): Percentage of program majors enrolled in all LBART courses (excluding those in C.1.) who passed with a grade of A, B, C, D or CR. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses.

3. Credits Earned Ratio (Vocational Education): Percentage of students enrolled in vocational courses who passed with a grade of A, B, C, D or CR. Includes practica and other classes where 5 students = 1 semester (credit) hour. Excludes 99V, 199V, 299V, and all CVE courses.

4. Credits Earned Ratio (Overall): Combination of C.1., C.2., and C.3. above.

5. Graduate Placement Rate: Students who graduated with a certificate/degree in the PAST academic year and found work in that field.

6. Degrees Awarded: The number of certificates and degrees awarded during the PAST academic year.

7. Retention Rate: New students within a program/major continuing or retained in that program/major from the past two or more terms. (Students registered in Fall 2000 who started in Spring 2000 or Fall 1999. Students registered in Fail 2001 who started in Spring 2001 or Fall 2000.)