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AUTHOR Boggs, Minnie E., Ed.; Lee, George, Ed.  
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IDENTIFIERS \*Hawaii

## ABSTRACT

The report describes an institute whose purpose was to produce specific recommendations to facilitate student transition from one school to another within and between the secondary and postsecondary levels in the four vocational education subject areas of agriculture, auto body repair and painting, carpentry, and distributive education. For each of the four subject areas, the report describes goals and objectives; analyzes both horizontal and vertical articulation with respect to recommendations, implementation procedures, cost factors, and implications/benefits; and provides course equivalencies among the various participating secondary and postsecondary institutions. Three-fourths of the document consists of appendixes. The first appendix is a third party evaluation of the institute which considers background of respondents, goals/purposes of the institute, institute methods and materials, institute organization, and summary and recommendations. Four other appendixes provide various information for the four subject areas such as task force budgets, student flow charts, courses, requirements, and course descriptions at the various high schools and community colleges, and employment opportunities. The final appendix lists institute participants. (JR)

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A FINAL REPORT  
ON A PROJECT CONDUCTED UNDER  
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ARTICULATION OF SECONDARY AND POST-SECONDARY  
VOCATIONAL EDUCATION PROGRAMS

A Report from the Third Institute  
Agriculture  
Auto Body Repair & Painting  
Carpentry  
Distributive Education

U.S. DEPARTMENT OF HEALTH,  
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A Report from the Third Institute

Agriculture  
Auto Body Repair & Painting  
Carpentry  
Distributive Education

Edited by:

DR. MINNIE E. BOGGS, Project Director

GEORGE LEE, Project Coordinator

Office of the State Director for Vocational Education  
Wist 209-C  
1776 University Avenue  
Honolulu, Hawaii 96822

May, 1975

## FOREWORD

This articulation study represents the third EPDA Part F, Section 553 project designed to improve the horizontal and vertical articulation of secondary and post-secondary programs in auto body repair and painting, carpentry, agriculture, and distributive education. Much experience and knowledge have been gained from the previous projects, and greater success in the implementation of the recommendations is expected.

Students were again invited to identify problems they had encountered when making the transition between institutions or from one program to another. Also included in the discussions and considerations were syntheses of articulation problems which vocational educators from both the high schools and community colleges agreed were important. The project staff, team leaders, and instructors spent innumerable hours seeking alternatives to the solutions of the problems. The expertise of administrators from the Department of Education and the University of Hawaii Community Colleges was also solicited, and the discussions involving teachers and administrators proved invaluable.

An undertaking of this scope can be accomplished only with the assistance and cooperation of numerous individuals. Sincere thanks and appreciation are extended to the participating students, instructors, administrators, and team leaders for their dedication, cooperation, and hard work. Special acknowledgment is extended to Mrs. Emiko Kudo, Dr. Minnie Boggs, and Mr. George Lee for their extensive involvement and support.

Samson S. Shigetomi  
April 14, 1975

## ACKNOWLEDGMENTS

Articulation recommendations which will truly facilitate the student's transition from one program to another need input from students, educators, representatives from business/industry/union, administrators and policy makers.

We wish to thank the following people for their help in the formulation of this year's recommendations.

The following students, who helped us identify some problems of articulation:

David Fuertes - Agriculture  
Earl Ikeda - Auto Body Repair and Painting  
Dennis Kunishige - Auto Body Repair and Painting  
Stanford Tomita - Auto Body Repair and Painting  
Terry Ewart - Carpentry  
Joe Lohmeirer - Carpentry  
Barry Kim - Distributive Education  
George Okihiro - Distributive Education

The administrators of the Department of Education and of the University of Hawaii Community Colleges, whose input led to recommendations which were more realistic.

Members of business/industry/union who helped make the recommendations relevant to the world of work:

Roger Nishimura - Owner, Roger's Repair  
Morris Unten - Owner, Assurance Fender Works  
Masayuki Yamamoto - Administrator, Carpenters Training Office

William Kea, for his keynote speech in which he pointed out the need to (1) set priorities and realistic deadlines for the recommendations, (2) substantiate the existence and importance of the problems which need to be solved, and (3) involve the decision makers in the articulation process in order to ensure that the recommendations can and will be implemented.

Members of the State Legislature, Board of Regents, Board of Education and the Commission on Manpower and Full Employment for giving a broader perspective on the need for articulation.

To the members of the Executive Committee to the project, for their direction and advice:

Dr. Sam Shigetomi - State Director for Vocational Education  
Emiko Kudo - Administrator, Vocational-Technical Section, Department of Education  
Dr. George Ikeda - Executive Secretary of the Commission on Manpower and Full Employment  
Mitsugu Sumada - Provost, Hawaii Community College  
Clyde Yoshioka - Provost, Honolulu Community College

To the team leaders and their assistant team leaders for their leadership and diligence throughout the project.

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David Ikeda (Hawaii)  
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Toshio Seki and George Sano (Maui)

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And lastly to the participants of the Articulation Institute for giving up their vacations and holidays to help improve Hawaii's educational system for the students.

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## INTRODUCTION

The Third Articulation Institute brought together educators from four vocational education subject areas in Hawaii: agriculture, auto body repair and painting, carpentry, and distributive education.

The intent of the Institute was to produce specific recommendations to facilitate student transition from one school to another within and between the secondary and post-secondary levels of education. As such, the intent of the Institute was closely related to the goal of articulation, as stated in the 1974 Revised State Master Plan for Vocational Education:

To ensure that Vocational Education curricula will be designed so that work at lower levels adequately prepares the individual for higher levels, eliminating unnecessary repetition and providing maximum options for continuing education and transfer to other campuses.

The recommendations from this Institute are also consonant not only with the fourteen objectives which the Plan delineates, but also with recommendations on articulation made for the past five years by the State Advisory Council for Vocational and Technical Education in its Annual Evaluation Reports.

Educators from the four subject areas studied this year met during three workshops held between November, 1974, and March, 1975, to specify problems and make recommendations to improve the articulation of their respective program areas. The problems and recommendations were reviewed by community college provosts and deans of instruction, and Department of Education district superintendents and/or deputy district superintendents, and curriculum specialists. On the basis of their input, the recommendations were revised by the educators in the Institute. These revised recommendations were presented to the administrators on the last day of the Institute and finalized on the basis of their suggestions.

The following report constitutes final recommendations made, after much discussion and thought, by vocational educators in agriculture, auto body repair and painting, carpentry, and distributive education.



AGRICULTURE REPORT

March, 1975

Team Leader: Thomas Hatakeyama  
Department of Education

Assistants: Dr. Shosuke Goto  
University of Hawaii

Ted Kunimitsu  
Department of Education

## INTRODUCTION

This report is the result of cooperative effort among agriculture educators from the three levels of education in Hawaii: the Department of Education, the community colleges, and the four-year colleges of the University of Hawaii.

The following goal and objectives were established.

### Goal

To establish a continuum of educational experiences to effectively and efficiently enable all agriculture students to achieve their educational and vocational aspirations.

### Objectives

1. To provide a progressive continuity of educational experiences for each agriculture student by minimizing duplication.
2. To establish a system of disseminating information on trends in agriculture, state agriculture projects, and employment and manpower projections to all students at all levels of agricultural instruction.
3. To stimulate student interest in the agriculture program by increasing their awareness of and knowledge about the agriculture program.

Although the following are not articulation problems, the group feels they do impede the effective delivery of the agriculture program:

1. The need for additional or more up-to-date instructional facilities and equipment at the high schools and colleges in order to meet program objectives.
2. The need for a comprehensive inservice training program.

3. The need for an appropriate preservice teacher education program in Hawaii.

4. The need for an updated evaluation of the agricultural instructors' job description.

The realization of the full benefits of any articulation effort will depend to a large degree on the alleviation of these problems.

AGRICULTURE

Problem	Recommendations	Implementation Procedure	Cost Factors	Implications
<p><u>HORIZONTAL ARTICULATION - D.O.E.</u></p> <p>There is a need to establish uniformity in proficiency criteria and levels expected for students in the various vocational agriculture courses in the high schools.</p>	<p>Identify and develop performance criteria for Agriculture Technology I and II, and Ornamental Horticulture I and II.</p>	<p>Vocational-Technical Section, D.O.E.: Secure funds, obtain clearance to contract a task force to establish performance criteria for each course listed.</p>	<p>\$12,770 (See Appendix II-A for detailed budget.)</p>	<p>1. Improved facilities and equipment may be necessary for student attainment of performance criteria.</p> <p>2. An inservice education program for agriculture teachers may be necessary for them to facilitate student achievement according to the performance criteria.</p>
<p><u>VERTICAL ARTICULATION</u></p> <p>1. Most students are not aware of the course offerings in the agricultural education program at the various levels: high schools, community college, and four-year college.</p>	<p>1. Establish formal communication channels among those concerned with agriculture education through agriculture advisory committees.</p>	<p>Establish agriculture advisory committees to include counselors, industry representatives, students, administrators, agriculture extension agents and other government agriculture agency representatives.</p>	<p>None</p>	<p>Vocational guidance in agriculture may improve, as counselors' knowledge of agriculture programs and opportunities increases. Handbook on roles and responsibilities of the advisory committee may be needed.</p>
	<p>2. Make available informational materials on agriculture education to counselors, teachers, and students.</p>	<p>1. UH College of Tropical Agriculture: Develop, publish and disseminate brochures describing all agriculture program offerings at the various levels.</p> <p>2. High Schools: Use resource speakers, exhibit agriculture course offerings, and contribute to vocational resource centers at the high schools.</p>	<p>Developing, printing and mailing brochures.</p> <p>None</p>	<p>Vocational guidance in agriculture may improve, as counselors' knowledge of agriculture programs and opportunities increases.</p>

Problem	Recommendations	Implementation Procedure	Cost Factors	Implications
<p>2. Students are not adequately informed about career opportunities in agriculture.</p>	<p>Inform students about the spectrum of career opportunities available in agriculture.</p>	<p>1. Agriculture instructors: Take the leadership in incorporating information about career opportunities into the agricultural curriculum.</p> <p>2. Agriculture instructors: Take every opportunity to inform students about career opportunities in agriculture through personal contact and dissemination of brochures. Brochures should be disseminated not only to high school students but also to intermediate school students as well.</p> <p>3. D.O.E. Vocational-Technical Section and Student Affairs: Work with the Career Information Center in providing in-service training on career opportunities in agriculture for counseling and guidance personnel.</p> <p>4. D.O.E. Vocational-Technical Section: Take the leadership to see that careers in agriculture are included in the career development continuum curriculum guide. (Include experiences such as visitations and field trips.)</p> <p>5. Secondary schools: Purchase instructional packets related to careers in agriculture.</p>	<p>None</p> <p>Costs of developing and printing brochures.</p> <p>Costs of workshop (materials, instructor)</p> <p>Cost of adding material to guide.</p> <p>Cost of packets.</p>	

## AGRICULTURE PARTICIPANTS

Hatakeyama, Thomas G.\*\*  
DOE, Vocational-Technical  
Section

Kudo, Emiko I.  
DOE, Vocational-Technical  
Section

Goto, Shosuke\*  
University of Hawaii

Okamoto, Matsuo  
Kailua High School

Kunimitsu, Ted\*  
Kahuku High School

Ono, Champ S.  
Kauai District DOE

Capellas, Laurence J.  
Hawaii District DOE

Saiki, Glenn T.  
Waianae High School

Fuertes, David  
Kohala High School

Sasaki, Richard I.  
Ka'u High School

Fukamizu, Raymond H.  
University of Hawaii, Hilo

Shikada, Ichiro  
Konawaena High School

Ikeda, David T.  
Hawaii Community College

Uyehara, Stefan S.  
Lanai High School

Kawamura, Theodore M.  
Lahainaluna High School

White, Edward  
Kauai Community College

Keala, David  
Molokai High School

Yoshimoto, Stanley H.  
Maui High School

The following people also assisted in the formulation of this report:

Bezona, Norman C.  
Hawaii Community College

Henderson, Robert R.  
Kohala High School

\*\*Team Leader

\*Assistant Team Leaders

AUTO BODY REPAIR AND PAINTING REPORT

March, 1975

Team Leader: James Yoshino  
Honolulu Community College

Assistants: Bert Azama  
Department of Education

Dr. Peter Kessinger  
Honolulu Community College

Sydney Sakamaki  
Department of Education

Sam Uchida  
Honolulu Community College

AUTO BODY REPAIR AND PAINTING

Problem	Recommendations	Implementation Procedure	Cost Factors	Benefits
<p><u>HORIZONTAL ARTICULATION: DOE</u></p> <p>Students entering auto body repair and painting in industry or community college do not leave all high school vocational/technical automotive programs with similar basic skills, work habits or attitudes relating to auto body repair and painting. These "basics" must be identified and stressed before students are instructed in specialized skills (Department of Education, <u>Analysis of Job Tasks</u>, 1973; Honolulu Community College, <u>Manpower Survey Project: A Survey of Industry Opinion</u>, 1973). There is a need to specify for the ABRP segment of the vocational automotive program the basic technical skills and work habits essential for entry level employment in industry or continued education in ABRP in the community colleges.</p> <p>Objective: To train and prepare high school vocational/technical automotive graduates with the necessary basic skills, positive attitudes, and productive work habits to succeed in industry or the community college ABRP program.</p>	<p>1. In the ABRP segment of the high school vocational/technical automotive program, students should develop the basic skills of:</p> <p style="padding-left: 20px;">a. Basic metalwork</p> <ol style="list-style-type: none"> <li>1) Bumping</li> <li>2) Dinging</li> <li>3) Picking</li> <li>4) Filing</li> <li>5) Disc grinding</li> <li>6) Plastic filling</li> <li>7) Soldering</li> <li>8) Shrinking</li> <li>9) Welding</li> </ol> <p style="padding-left: 20px;">b. Basic painting</p> <ol style="list-style-type: none"> <li>1) Sanding</li> <li>2) Feather-edging</li> <li>3) Priming</li> <li>4) Masking</li> <li>5) Glazing putty</li> <li>6) Painting application</li> </ol> <p>Included with these basic skills are nomenclature, terminology, materials of the trade, and care and use of tools and equipment. Students should be encouraged toward achievement of the highest skill levels in keeping with their abilities. This recommendation attempts to specify only the minimal skill levels.</p> <p>2. Teaching of appropriate safety, work habits, and attitudes should be integrated into all high school vocational/technical automotive programs. Appropriate work habits should include safe attire, promptness, cooperation, courtesy, respect, and regular attendance.</p>	<p>Vocational automotive program instructors should work with their principals to determine necessary equipment, supplies, and instructional materials for inclusion in the school budget request for FY 1977. Principals may want to consult their district superintendent on alternative means of obtaining necessary resources.</p> <p>Hawaii Automotive Teachers Association and high school vocational/technical automotive instructors will emphasize the teaching of appropriate work habits in the existing curriculum as soon as possible.</p>	<p>Supplies and equipment to accommodate the range of student abilities in ABRP (see approved list for industrial education programs.)</p> <p>None</p>	<p>Greater equality of opportunity in ABRP for students leaving high school vocational/technical automotive programs.</p> <p>Students will be aware of the realistic conditions under which they will work in industry or study at the community colleges. Acquisition of appropriate work habits will better prepare students to succeed in employment.</p>



HORIZONTAL ARTICULATION: COMMUNITY COLLEGES

Presently at the community colleges horizontal articulation in the auto body repair and painting program is difficult.

The program at Maui Community College is being changed from a one-year to a two-year program. The curriculum has not yet been fully developed. At Kauai Community College, in order to meet the needs of students who wish to finish a two-year program in one year by going to classes all day for that year, the program is structured differently from those at Honolulu and Hawaii Community Colleges. The number of potential students at both Kauai and Maui is not viewed as sufficient to justify an additional instructor.

The present situation at the four community colleges is shown on the following pages. A careful study of the chart on the next page makes it clear that at present it is impossible for a student to transfer from either Kauai or Maui to Honolulu after completing one year without repeating a significant number of courses after transfer. The recommendations of this portion of the report are designed to attack this problem. The catalog descriptions of the courses presently developed are listed in Appendix III.

Problem	Recommendations	Implementation Procedure	Cost Factors	Benefits
<p>Students transferring between community colleges often must repeat courses or portions of courses to meet scheduling requirements of the campus to which they are transferring.</p> <p>Objective: To permit easier transfer of ABRP students between community colleges.</p>	<p>The recommendations are sequential in nature. That is, each recommendation depends in some fashion on the implementation of all previous recommendations for successful implementation.</p> <p>1. Each community college should identify performance objectives for each course in its ABRP program.</p>	<p>Each community college ABRP department will compile a document identifying performance objectives for each course in the ABRP program. Each dean of instruction, by September, 1975, will distribute the document from his college to the other community colleges so that each ABRP instructor knows the performance objectives for each course of every community college ABRP program.</p>	<p>None</p>	<p>All community college ABRP instructors will know the performance objectives specified for all community college ABRP courses.</p>
	<p>2. Community college ABRP instructors should identify similarities and differences, at the performance objective level, in community college ABRP programs.</p>	<p>Office of the Chancellor for Community Colleges should conduct a one-day workshop to bring ABRP department chairmen together to discuss similarities and differences in community college ABRP programs. As a result of the workshop, an equivalency chart will be prepared by spring, 1976, illustrating performance objective commonalities and differences in community college ABRP programs.</p> <p>Alternate Procedure: One community college ABRP chairman will be asked by the Chancellor to prepare the equivalency chart.</p>	<p>Air fare for three neighbor island ABRP instructors to attend workshop.</p> <p>Overload compensation.</p>	<p>Information will be available to assess scope of particular college program for distribution to DOE and to community colleges.</p>

ABRP COURSE SEQUENCE CHART  
Community College

	HAWAII CC	HONOLULU CC	KAUAI CC	MAUI CC
Basic Metal	Fall  ABRP 21 (12 cr.)	Fall  ABRP 21 (4 cr.) 22 (4 cr.) 23 (2 cr.)	Fall  ABRP 20 (7 cr.)	Fall  ABRP 60B (7 cr.)  ABRP 60C (3 cr.)
Painting	Spring  ABRP 22 (12 cr.)	Spring  ABRP 24 (2 cr.) 25 (4 cr.) 26 (4 cr.)	Fall  ABRP 40 (7 cr.)	Spring Basic 61B (7 cr.)  61C (3 cr.)  Fall Advanced 65B (7 cr.)  65C (3 cr.)
Auto Body I	Fall  ABRP 41 (12 cr.)	Fall  ABRP 41 (4 cr.) 42 (3 cr.) 43 (3 cr.)	Spring  ABRP 21 (7 cr.)	Spring Basic 61B (7 cr.)  61C (3 cr.)  Fall Advanced 65B (5 cr.)  65C (3 cr.)
Auto Body II	Spring  ABRP 42 (12 cr.)	Spring  ABRP 44 (3 cr.) 45 (1 cr.) 46 (3 cr.) 47 (3 cr.)	Spring  ABRP 41 (7 cr.)	Spring 66B (5 cr.)  66C (3 cr.)  All C courses arranged ac- cording to stu- dent schedule.

Problem	Recommendations	Implementation Procedure	Cost Factors	Benefits
	<p>3. Community college ABRP instructors should coordinate the ABRP curricula at the community colleges so that the order in which groups of performance objectives are to be achieved is consistent.</p> <p>NOTE: The Performance objectives may not be uniform among all community colleges since the basic criteria for these performance objectives is relevancy to the needs of the community.</p>	<p>Office of the Chancellor for Community Colleges should conduct a one-day workshop for ABRP department chairmen to discuss and recommend specific changes in ABRP programs at particular community colleges by summer or fall, 1976.</p>	<p>Transportation for three neighbor island instructors to attend workshop.</p>	<p>All students graduating from any community college ABRP program will have equal employment opportunities statewide.</p>

VERTICAL ARTICULATION

At present, there are two programs within the high schools that deal with auto body repair and painting: (1) the industrial arts automotive program, and (2) the vocational/technical automotive program. The objectives and scope of these programs are significantly different. Community college personnel are, to a large extent, unaware of the differences in the two programs as they might relate to admission of students to the community colleges. The following recommendations are made to improve articulation between the community college auto body repair and painting program and the ABRP portion of the vocational/technical automotive program at the secondary level.

<p>1. The scope and objectives of ABRP content in the DOE vocational/technical automotive program need to be communicated to the community colleges. The content of the community college ABRP programs needs to be communicated to high schools with vocational/technical automotive programs containing an ABRP emphasis.</p> <p>Objective: To identify the scope of the high school vocational/technical automotive course and content as they relate to the ABRP program in the community colleges.</p>	<p>1. Specific performance objectives as related to the auto body repair and painting unit should be developed for high school vocational/technical automotive courses by sub units. This information should be distributed to community colleges.</p>	<p>1. High school vocational/technical automotive instructors should cooperatively list, by sub units, performance objectives for their vocational/technical courses that relate to ABRP beginning in fall, 1975.</p> <p>2. The DOE program specialist for industrial/technical education should initiate the development of performance objectives in the ABRP portion of the vocational/technical automotive program, as well as a list of the schools with this program. The school list should be distributed to the community college ABRP departments by fall, 1976.</p>	<p>1. Possible funding for a workshop to identify specific performance objectives.</p> <p>2. Reproduction and postage for dissemination.</p>	<p>Community colleges will be informed as to the scope and sequencing of high school vocational/technical automotive program content in ABRP.</p>
	<p>2. The performance objective chart developed by community colleges (see recommendation 1 under Horizontal Articulation - Community Colleges) should be disseminated to high schools with vocational/technical automotive programs having an ABRP emphasis.</p>	<p>Completed and mutually approved final copy of performance objectives (by course) will be submitted by January, 1976, to the Office of the Chancellor for Community Colleges for duplication</p>	<p>Duplication and distribution costs.</p>	<p>High school instructors teaching ABRP in the automotive program and high school counselors will be better informed concerning community college ABRP programs,</p>



Problem	Recommendations	Implementation Procedure	Cost Factors	Benefits
		<p>and transmittal to the DOE Superintendent for distribution to each high school in Hawaii, especially those with ABRP in the vocational/technical automotive program, for dissemination to appropriate teachers and counselors.</p>		<p>enabling them to more effectively help students plan an articulated program in ABRP.</p>
	<p>3. Disseminate equivalency chart prepared by ABRP instructors at the community colleges (see recommendation 2, Horizontal Articulation - Community Colleges) to high schools with vocational/technical automotive programs containing an ABRP emphasis.</p>	<p>The completed and approved equivalency chart will be submitted by Spring, 1976 to the Office of the Chancellor for Community Colleges for duplication and transmittal to the Superintendent of Education for distribution to each high school in Hawaii, especially those with vocational/technical automotive programs with an ABRP emphasis, for dissemination to appropriate teachers and counselors.</p>	<p>Duplication and distribution costs.</p>	<p>Secondary school instructors and counselors will be better informed concerning community college ABRP programs, enabling them to more effectively help students plan an articulated ABRP program.</p>
<p>2. Automotive instructors teaching ABRP in high schools and community colleges must have more opportunities for inservice education to upgrade their skills.</p> <p>Objective: To upgrade automotive instructors' current ABRP skills and knowledge for more comprehensive instruction which would allow faster student progression on the job or in the ABRP program of the community colleges.</p>	<p>1. Provide inservice courses and workshops for all automotive ABRP instructors.</p>	<p>1. Membership of Hawaii Automotive Teachers Association should work with the DOE Vocational-Technical Education Section to formulate by spring, 1976, a long-range plan for inservice training in ABRP.</p> <p>2. The State Director for Vocational Education should coordinate this plan with community college needs for ABRP inservice education which have been communicated to the Chancellor for Community Colleges.</p>	<p>Instructor fees for courses and workshops.</p>	<p>Students will have greater opportunities for exposure to up-to-date techniques and methods used in ABRP.</p>
	<p>2. University of Hawaii should include in their automotive teacher training program courses which expose future high school and community college instructors to the fundamentals of ABRP.</p>	<p>Hawaii Automotive Teachers Association and the UH Teacher Education Committee on Practical Arts and Vocational Education, or representatives therefrom, will, beginning in fall, 1975, suggest changes in Bachelor or Education requirements for automotive teachers' training program at UH, Manoa.</p>	<p>None</p>	<p>1. Better opportunities in ABRP for high school and community college students.</p> <p>2. Facilitation of student success in ABRP progression in industry and higher education.</p>



Problem	Recommendations	Implementation Procedure	Cost Factors	Benefits
<p>There is a need to establish more coordination among industry, high schools with vocational/technical automotive programs with emphasis in ABRP, and the community college ABRP programs.</p> <p>Objective: To obtain input and support from industry toward improving the high school vocational/technical automotive curriculum, especially with reference to ABRP, on necessary supplies, training aids and equipment, and personnel for instruction of inservice workshops.</p>	<p>Add a representative from Hawaii Automotive Teachers Association to the community college ABRP advisory committees.</p>	<ol style="list-style-type: none"> <li>1. Provost of Honolulu Community College should initiate action to include a representative from H.A.T.A. to participate on the ABRP advisory committee by September, 1975.</li> <li>2. Provosts of Hawaii, Kauai, and Maui Community Colleges should initiate action to include a high school instructor of a vocational/technical automotive program with an ABRP emphasis on the ABRP advisory committee of their college by September, 1975.</li> </ol>	<p>None</p>	

AUTO BODY REPAIR & PAINTING PARTICIPANTS

Yoshino, Jimmy\*\*  
Honolulu Community College

Azama, Bert S.\*  
Waianae High School

Kessinger, Peter\*  
Honolulu Community College

Sakamaki, Sydney\*  
Farrington High School

Uchida, Sam\*  
Honolulu Community College

Ah Sam, Henry  
Kohala High School

Hirata, Gary M.  
Campbell High School

Kanzaki, Frank  
DOE, Vocational-Technical  
Section

Minami, Glenn T.  
Kaiser High School

Miura, Derek  
Waianae High School

Miura, Walter K.  
Kaimuki High School

Oganeku, Stanley H.  
Honolulu Community College

Oishi, Robert  
Maui Community College

Parsons, Francis  
Kamehameha School

Shimokawa, Minoru  
Kauai Community College

Taniguchi, Ron  
Hawaii Community College

The following people also assisted in the formulation of this report:

Nishimura, Roger  
Roger's Repair

Stibbard, Louis  
Job Corps

Unten, Morris M.  
Assurance Fender Works

Young, Randall  
Job Corps

\*\*Team Leader

\*Assistant Team Leaders

CARPENTRY REPORT

March, 1975

Team Leader: Dr. Lawrence Inaba  
Department of Education

Assistants: Harvey Chun  
Honolulu Community College

Kazukiyo Kuboyama  
Honolulu Community College

Noboru Miyamoto  
Department of Education

Ralph Murakami  
Department of Education

## INTRODUCTION

This articulation study is concerned, primarily, with the intra- and inter-relationships of three organized programs of carpentry instruction in Hawaii: (1) the high school program, (2) the community college program, and (3) the apprenticeship program.

### Statement of the Problem

Students pursuing carpentry training in Hawaii encounter the following problems in their training programs: (1) High school and community college students have difficulty transferring to other schools within their respective systems because of a lack of uniformity of terminology, course offerings, and course content within each system; (2) Students moving from one program level to another often are required to duplicate coursework received in a previously completed training program; (3) Some students receive insufficient training to meet the entry-level requirements established for subsequent training programs in carpentry.

### Purpose of the Study

To offer an effective and efficient carpentry program for students, there is a need for ongoing horizontal and vertical articulation procedures to be established in our educational system. This conference constitutes the first official attempt to articulate the carpentry program in the public high schools and community colleges, with the involvement of the Carpenter Trades. Instructors of the carpentry programs have assessed their present programs and developed clear articulation procedures that will benefit the students because of stated definitive expectations and the minimizing or



eliminating of duplication.

The participants in the carpentry articulation conference have tried to be realistic in their recommendations for identified articulation problems and alternatives. Some of the recommendations will need the approval and support of other administrators to bring them to fruition.

The recommendations contained in this document pertain primarily to carpentry as a vocational major. Though not within the scope of an articulation study, a program for non-majors should be considered for further study at a future workshop, because of inherent problems that exist for students in this category.

CARPENTRY

Horizontal articulation problems that exist among high schools and among the community colleges must first be adequately minimized before any effective articulation between these institutions can be achieved. Therefore, the major horizontal articulation problems among the secondary schools and the community colleges are identified and subsequent recommendations to resolve the problems are presented in the following pages.

Problem	Recommendations	Implementation Procedure	Cost Factors	Implications
<u>HORIZONTAL ARTICULATION - D.O.E.</u>				
<p>The high school construction programs are not uniform in coverage and content:</p> <ol style="list-style-type: none"> <li>1. Students have difficulty transferring from one school to another within the system.</li> <li>2. There is no consistent base from which the high school program may be articulated with the community colleges and the carpentry trade.</li> </ol> <p>Objective: Provide uniform content coverage among high school construction programs.</p>	<ol style="list-style-type: none"> <li>1. Develop a state guide for construction technology.</li> <li>2. Have a workshop for construction teachers to discuss and implement the new State Guide.</li> <li>3. Develop a statewide test covering each area of construction.</li> </ol>	<p>The DOE Vocational-Technical Section will take the leadership in implementing this recommendation by June 1975.</p> <p>The DOE Voc-Tech Section will take the leadership in implementing this recommendation by Fall, 1975.</p> <p>The DOE Voc-Tech Section will take the leadership in implementing this recommendation as soon as possible.</p>	<p>Printing cost (DOE).</p> <p>None (DOE resource person to conduct workshop in each district.)</p> <p>Transportation and per diem costs for neighbor island instructors to attend workshop.</p>	
<u>HORIZONTAL ARTICULATION - COMMUNITY COLLEGES</u>				
<p>The community college carpentry programs are not uniform in content, coverage, and course titles:</p> <ol style="list-style-type: none"> <li>1. Students have difficulty changing schools within the system.</li> <li>2. There is no consistent base from which the community college carpentry program may be articulated with the carpentry trade.</li> </ol> <p>Objective. Establish course equivalencies and uniformity in course offerings among community college carpentry programs.</p>	<ol style="list-style-type: none"> <li>1. Agree upon and adopt current course equivalencies for student transfers as proposed on the next page.</li> <li>2. Establish uniformity in course offerings among community colleges for smoother student transition into the apprenticeship program as proposed in Appendix IV-C, p. 116.</li> </ol>	<p>All community colleges shall adopt this recommendation. Its effectiveness shall be determined by the facility with which student inter-college transfer can be effected without any loss of time and anxiety to the student.</p> <p>The proposal for statewide uniformity of courses in carpentry shall be presented to the Chancellor for Community Colleges and through established curriculum committee procedures on each campus as soon as possible as a long range goal.</p>	<p>None</p> <p>Schools with 25 hour programs will have no additional cost factors. Schools with 20 hour programs will have a cost factor for 3 credits of instruction each semester (\$960 under new 1975 contract). Kauai Community College will need another full-time instructor: Estimated cost - \$15,000.</p>	<p>There will be a need to articulate with the other departments which will be offering support courses, i.e., Blueprint Reading, Math, etc.</p>



CHART I: COMMUNITY COLLEGE COURSE EQUIVALENCIES

COURSE TITLES	Kauai Community College	Hawaii Community College	Honolulu Community College	Maui Community College
Hand and Power Tools	020	21	21	21
Concrete Form and Layout	021	41	22	23
Introduction to Carpentry	020	21	23	20
Material and Hardware	041	21	24	22
Industrial Safety	020	21	25	24
Advanced Concrete Form and Layout	021	41	26	30
Heavy Concrete Form Construction			27	31
Rough Framing	040	41	41	40
Exterior Framing	041	42	42	41
Interior Finish	041	42	43	51
Surveying and Blueprint Reading	040	22	44	21
Building Codes	021	41	45	42
Advanced Blueprint and Estimating	BP 010	BP 45	46	50
Blueprint Reading	BP 010	BP 25	BP 41	BP 21
Construction Drawing	BP 021		BP 22	BP 22

Note: See Appendix IV-A for course descriptions.

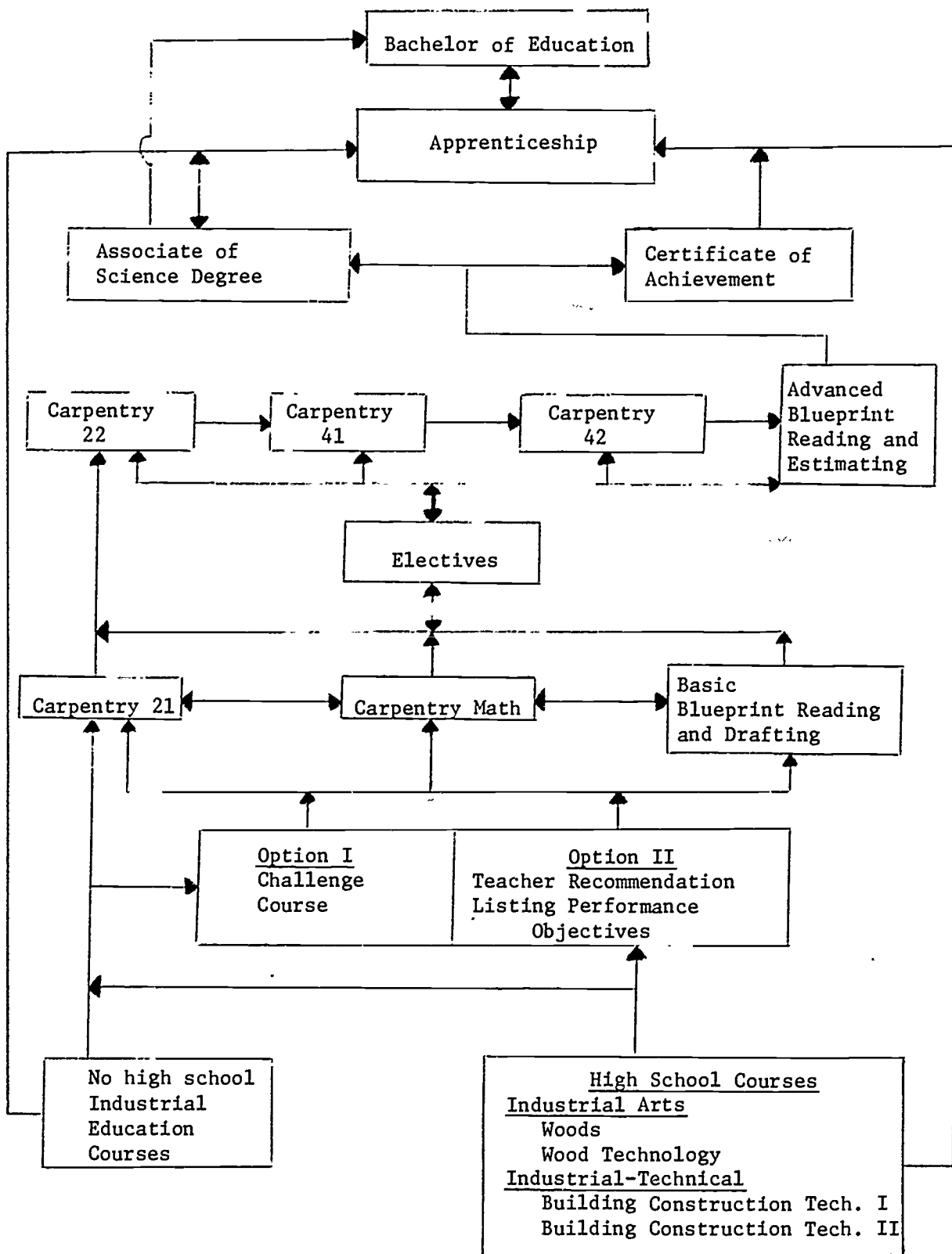
VERTICAL ARTICULATION

Vertical articulation is needed between the different levels of educational institutions because students differ in ability and progress at different rates. In order to effectively help carpentry students progress toward their educational goals with a minimum of delay, the following suggested articulation agreements between the high schools and community college carpentry programs are presented.

Problem	Recommendations	Implementation Procedure	Cost Factors	Implications
<p>1. There is insufficient coordination and articulation between the trades, community colleges, and the high schools with the result that many students find themselves repeating courses they have had in previous educational programs.</p> <p>Objective: Provide advanced placement avenues for exceptional students.</p>	<p>1. The following options for advanced placement should be provided for exceptional students who enroll in the Carpentry program (see Chart II, p. 21).</p> <p>a. Students may challenge courses.</p> <p>b. Community college teachers may accept high school teacher's recommendation based on performance objectives.</p>	<p>The responsible faculty for each community college may exercise any option for advanced placement that is deemed feasible as soon as possible.</p>	<p>None.</p>	
	<p>2. Develop instruments for evaluating student performance (written and performance) for advanced placement purposes; standardize the evaluation procedures among community colleges</p>	<p>Test package including instrument, method of testing, procedures, etc. to be developed under the sponsorship of the Office of the State Director for Vocational Education as soon as possible.</p>	<p>1. Cost of developing test package under the sponsorship of the State Director's Office.</p> <p>2. Cost of administering exams as determined by a committee working with and through the sponsorship of the State Director's Office.</p>	
<p>2. Students at all levels are deficient in construction-oriented mathematics.</p> <p>Objective: Provide ways to help students to become proficient in construction-oriented mathematics.</p>	<p>1. In addition to the one-year math requirement in high school, recommend that students take construction-oriented math courses.</p>	<p>All construction instructors will take the initiative to implement the above recommendations in their schools immediately.</p>	<p>None</p>	
	<p>2. Offer a separate trade math course in the high schools and community colleges and/or teach construction math as part of the construction and woods class.</p>	<p>All construction instructors will take the initiative to implement the above recommendations in their schools immediately.</p>	<p>None</p>	
	<p>3. Community colleges will develop appropriate math courses to meet needs of incoming students (based upon placement test).</p> <p>a. Remedial math for students with sub-standard math skills.</p> <p>b. Construction-oriented math for those students demonstrating satisfactory general math skills.</p>	<p>A system-wide committee consisting of representatives from the math and carpentry departments, assisted by a representative from the apprenticeship program, will develop appropriate tests for the proper placement of incoming students. This committee will also create courses to meet the needs of these students as identified in the</p>	<p>None</p>	

CHART II

PROPOSED STUDENT FLOW CHART



Problem	Recommendations	Implementation Procedure	Cost Factors	Implications
		<p>testing procedures. The Office of the State Director for Vocational Education will take the leadership in implementing this recommendation as soon as possible.</p>		
<p>3. High school instructors need upgrading of skills in carpentry.</p> <p>Objective: Provide opportunities for upgrading carpentry skills for instructors in the program.</p>	<ol style="list-style-type: none"> <li>1. Make available inservice training opportunities in carpentry for all instructors in carpentry programs.</li> <li>2. College of Education offer in-depth courses in carpentry.</li> <li>3. Work with unions, general contractor association, and the Home Builders Association to offer facilities and services for inservice training.</li> <li>4. Instructors enroll in work experience programs.</li> </ol>	<ol style="list-style-type: none"> <li>1. The Vocational-Technical Section of the DOE shall conduct a survey of possible areas of interest for advanced courses in carpentry. The results of this survey shall be submitted to the State Director for Vocational Education with a request to offer the needed courses.</li> <li>2. The State Director for Vocational Education shall work with the unions, general contractor association, and the Home Builders Association to implement the recommendation by Spring 1976.</li> </ol>	<p>Instructor costs.</p>	
<p>4. Necessary equipment and adequate supplies are needed to upgrade carpentry training within the high schools and community college system.</p> <p>Objective: Emphasize the need to upgrade and replace major equipment.</p>	<ol style="list-style-type: none"> <li>1. Give the replacement program and needed basic equipment a higher priority for major equipment.</li> <li>2. Review and upgrade the "Educational Development Plan."</li> </ol> <p>The instructors should strongly justify their request for replacement equipment as well as present a stronger statement in the philosophical justification for the program.</p>	<p>DOE administrators and community college provosts should strongly consider these recommendations for implementation through the regular channels.</p>	<p>DOE - no cost.</p> <p><del>COMMUNITY COLLEGE-</del> The two lists of tools and equipment located in Appendix IV-D and E include items <u>necessary</u> for instruction in carpentry at the community college level. The current inventory of tools and equipment varies from college to college. Consequently, it is impossible to present a cost figure applicable equally to all schools. It is recommended that these lists be used as guides to purchase equipment at each college, and that each provost give priority to completing this equipment inventory as soon as possible.</p>	

CARPENTRY PARTICIPANTS

Inaba, Larry\*\*  
DOE, Vocational-Technical  
Section

Chun, Harvey\*  
Honolulu Community College

Kuboyama, Kazukiyo\*  
Honolulu Community College

Miyamoto, Noboru\*  
Kaiser High School

Murakami, Ralph\*  
Roosevelt High School

Furutani, Francis  
Leeward Community College

Kamimura, Kenichi  
Leeward Community College

Kawakami, Sueo  
Honolulu Community College

Kawakami, Yoshito  
Kauai Community College

Kim, Bomani J.  
Maui Community College

Kodama, Thomas T.  
Castle High School

Lindbo, William  
Waimea High School

Matsuda, Wallace  
Maui Community College

Nishimura, Harold A.  
Hawaii Community College

Park, Rodney K.  
Molokai High School

Reed, Robert L.  
Kailua High School

Sakai, Edward  
Windward District DOE

Sano, George K.  
Maui Community College

Schumann, George R.  
Kohala High School

Takaki, Larry S.  
Honokaa High School

Tanimoto, Tom  
Hawaii Community College

Yonan, Alan M.  
Honolulu Community College

Special recognition is also given to Mr. Masayuki Yamamoto, Administrator, Carpenter's Training Program, for his full participation and invaluable assistance throughout the conference.

\*\*Team Leader

\*Assistant Team Leaders

DISTRIBUTIVE EDUCATION REPORT

March, 1975

Team Leader: Dr. James Morris  
University of Hawaii

Assistants: Frank Ramos  
Department of Education

Bessie Taniguchi  
Department of Education



## INTRODUCTION

To help students achieve their career objectives as quickly as possible, the members of the Institute focused on the following distributive education problems. The community college educators dealt with inconsistencies in course titles, numbers, descriptions, and credits. The high school educators dealt with the existence of unequal opportunities in D.E. occupations due to lack of student information and inadequate facilities, staff, and program availability (See Appendix V for Business Education courses).

Because participants found that horizontal articulation was necessary before vertical articulation could be effectively accomplished, they concentrated on improving horizontal articulation within the secondary and post-secondary levels. They strongly recommend that vertical articulation be focused on in a follow-up meeting.

Problems presented here are not all inclusive and may not be encountered in entirety by all students. Solutions are limited to those the participants felt could be implemented expediently.

DISTRIBUTIVE EDUCATION

Problem	Recommendation	Implementation Procedure	Cost Factor
<p><u>HORIZONTAL ARTICULATION - D.O.E.</u></p> <p>1. Because of inadequate information about business/industry needs and student interest in D.E. and because some high schools do not have the D.E. program, students are not receiving equal opportunities in D.E. Some high schools do not have the D.E. program because of inadequate facilities and equipment and/or qualified D.E. teachers.</p>	<p>High schools should increase D.E. programs to meet business/industry needs and student interests.</p>	<p>1. Business education department of each school: Conduct a survey by fall semester, 1975, to ascertain business/industry needs for personnel trained in D.E. and to ascertain student desire for D.E. courses.</p> <p>2. Based on the results of this survey, business education staff and school administrators will evaluate existing facilities to determine whether program needs are met. If program needs are not met, business education staff will submit recommendations to principal.</p> <p>3. Principal and business education staff: By spring, 1976, determine feasibility of offering specific D.E. courses, in light of established student interest, business/industry needs, and availability of qualified teachers.</p> <p>4. To keep up with business/industry needs and student interest, each school will develop long-range plans, taking into consideration funding, staffing, scheduling and facility requirements.</p>	<p>None for survey and long-range plans.</p>
<p>2. Students need more information and guidance in preparing for entry-level jobs or further education in D.E.</p>	<p>Provide educators and students with adequate information on D.E. occupations and provide students with career guidance in D.E.</p>	<p>1. D.O.E. and/or the University of Hawaii: In summer, 1976, hold a two-week workshop to gather and develop materials about career opportunities and the current D.E. programs for dissemination to appropriate audiences, to include the Parent-Student-Teacher Association, faculty, community organizations, and students. Workshop participants should include business education teachers and counselors.</p> <p>2. D.O.E.: Sponsor a conference for counselors and administrators to be informed about the D.E. program and career opportunities in D.E. to more effectively provide information and guidance for students.</p> <p>3. Business education teachers and counselors: Provide information and guidance in D.E. occupations in business and/or guidance classes through school bulletin board displays, or other means, by fall, 1975.</p> <p>4. Under the supervision of the D.O.E., participants in the summer workshop should develop, with assistance from the Teacher Assist Center, appropriate and necessary materials.</p> <p>5. Business education teachers and counselors, with the help of principals and district offices: Develop, collect, and disseminate materials to inform students about the D.E. program and occupations (examples: film, slide/tape, etc.) by fall, 1976. These materials should be presented to appropriate audiences.</p>	<p>\$2,000.00</p> <p>Visual display materials.</p> <p>\$500 for duplicating materials.</p>

Problem

Recommendation

Implementation Procedure

Cost Factor

HORIZONTAL ARTICULATION: COMMUNITY COLLEGE

Different D.E. course titles, goals, and descriptions in the community college programs result in horizontal transfer problems for students.

Establish equivalency of D.E. courses among the community colleges, and formulate and adopt common course titles, goals and descriptions.

D.E. personnel in the Articulation Institute established course equivalencies among the community colleges and recommended common titles, goals, and descriptions for equivalent courses.

The attached course equivalencies, titles, and descriptions should be communicated in proposal form through the appropriate curriculum procedure on each campus. Upon official authorization from the Provost, the course equivalencies will be communicated by the Dean of Instruction to the Dean of Students, the registrar, and counselor, as well as other appropriate parties in the form of an addendum to the catalog by September 1, 1975.

Common course titles for equipment courses to be incorporated into catalogs no later than July 1, 1975. Where necessary, common course descriptions are to be implemented by July 1, 1976 also.

DISTRIBUTIVE EDUCATION: EQUIVALENCY CHART

College	Course #	Title As of 7/1/75	New Title As Of 7/1/76
MCC LCC HCC KAU KCC	Bus 46 ----- Merch 49 Bus 15 B Merch 20	*Advertising ----- **Advertising & Display *Advertising **Advertising & Display	
MCC LCC HCC KAU KCC	Bus 52 ----- Bus 15 D -----	Principles of Display ----- Display & Sales Promotion -----	Display & Sales Promotion
MCC LCC HCC KAU  KCC	Bus 20 Bus 21 GBus 20 Bus 14 B  Bus 14 C  Gen Bus 21	Introduction to Business Introduction to Business Basic Business Concepts Business Environment  Functions of Business  Introduction to Business	Introduction to Business Introduction to Business (Environment) Introduction to Business (Functions)
MCC LCC HCC KAU KCC	Bus 43 Bus 24 Merch 31 Bus 15 C Merch 21	Salesmanship Salesmanship Salesmanship Personal Selling Principles & Methods of Salesmanship	Personal Selling Personal Selling Personal Selling ----- Personal Selling

\*A transfer from HCC or KCC to Maui or Kauai must take display course for 2 credits or challenge the course.

\*\*A transfer from Maui or Kauai to HCC or KCC must take a 2 credit elective.

College	Course #	Title As of 7/1/75	New Title As of 7/1/76
MCC LCC HCC KAU	Bus 23 Bus 23 ----- Bus 13 B	Business Mathematics Business Mathematics ----- Math of Finance	Business Mathematics (Finance) Business Mathematics (Merchandising) Business Mathematics (Accounting) Business Mathematics
	13 C	Math of Merchandising	
	13 D	Math of Accounting	
KCC	Gen Bus 25	Applied Math	
MCC LCC HCC KAU KCC	Bus 49 Mgmt 21 ----- ----- Gen Bus 30	Supervision & Human Relations in Business Introduction to Management ----- ----- Principles of Management	Supervisory Management Supervisory Management Supervisory Management
MCC LCC HCC KAU KCC	----- Mgmt 22 G Bus 21 Bus 30 G Bus 23	----- Human Relations in Management Human Relations in the World of Work Human Relations in Business Human Relations in Business	Human Relations in Business Human Relations in Business
MCC LCC HCC KAU KCC	Bus 44 Bus 30 Merch 47 Bus 18 B Bus 18 C Merch 31	Marketing Principles of Marketing Research & Decision Making for Marketing & Management Determining Target Marketing Developing Marketing Mix Principles of Marketing	Marketing Marketing Marketing Marketing

Certain other courses, although giving the appearance of being similar, are in fact unique to their respective community colleges and therefore are not included in this list. (For example, Retailing courses.)

## COURSE DESCRIPTIONS

Course descriptions for most of the courses mentioned in the preceding table are similar enough so as not to need material changes. The following course descriptions apply to courses identified as needing material changes in order to be similar enough so as to minimize student confusion. It is recommended that, where necessary, community college campuses adopt the following description by July 1, 1976.

### MARKETING

An introduction to marketing principles including: channels of distribution; pricing; government regulations; consumer behavior; marketing functions & organization; product analysis; and promotional activity.

### ADVERTISING

The principles of advertising methods and applications. The creation of advertising layout and copy. Management of media selection. Legal and social aspects of advertising. Development of an advertising campaign.

### HUMAN RELATIONS IN BUSINESS

How to deal more effectively with supervisory problems in areas such as motivation, communication skills, discipline, leadership, resistance to change, and labor relations.

DISTRIBUTIVE EDUCATION PARTICIPANTS

Morris, James\*\*  
University of Hawaii

Ramos, Frank Jr.\*  
Campbell High School

Taniguchi, Bessie\*  
Kaimuki High School

Aguinaldo, Debra A.  
Baldwin High School

Arimoto, Jane Y.  
Aiea High School

Balada, Marsha M. O.  
Hawaii Community College

Coconate, Joseph J.  
Honokaa High School

Ferrell, Guy G.  
Leilehua High School

Hew-Len, Helen  
Windward Community College

Kasahara, Fumie  
Pearl City High School

Lai, Walter S. Y.  
Maui Community College

Mitcham, George P.  
Maui Community College

Miyahira, Jean H.  
Waipahu High School

Nakamura, Harold H.  
Kauai Community College

Ogawa, Janet  
Pearl City High School

Okihiro, George  
University of Hawaii

Palma, Ronald L.  
Leeward Community College

Sayegusa, Patrick Y.  
Molokai High School

Seki, Toshio  
Maui District DOE

Simmons, Abe L.  
Konawaena High School

Yoshida, Reuben Y.  
Kauai High School

Yoshimura, Arleen E.  
Hilo High School

The following people also assisted in the formulation of this report:

Albro, Lysle  
Maui High School

Boyne, Thomas W.  
Kapiolani Community College

Dung, Jade  
Jop Corps

Hazama, Michael  
Maui District DOE

Sakai, Florence  
DOE, Vocational-Technical  
Section

Shimazu, Lawrence M.  
Kapiolani Community College

\*\*Team Leader

\*Assistant Team Leaders

APPENDIX I

EVALUATION REPORT

Prepared by:

Cheryl H. Lee  
University of Hawaii  
April 14, 1975



## INTRODUCTION

This report presents the third party evaluation of the 1974-75 EPDA Institute for Advanced Study in Vocational-Technical Education. It is based on Institute participant confidential responses to a 43-item questionnaire (see Appendix A for sample questionnaire). The questionnaire was distributed to all participants present the last day of the Institute, March 27, 1975. Institute staff allocated a period of time during which the questionnaire was distributed, completed, and immediately returned to the third party evaluator who was in attendance for this purpose. Of the 72 people enrolled in the Institute, 46 completed the questionnaire for a response rate of 63.8%.

This report is divided into five major sections: I. Background of Respondents, II. Goals/Purposes of the Institute, III. Institute Methods/Materials, IV. Institute Organization, and V. Summary and Recommendations. It should be noted that responses to the questions do not always appear in the same order as the questions were listed on the questionnaire. For example, responses to questions 9, 10, 11, 12, 36a, 36b, 36c, and 36d from the questionnaire are placed together here (in Section II) as they are concerned with various aspects of articulation.

In Section I, Background of Respondents, statements are made summarizing the responses to the questions appearing in Section I of the questionnaire. All "Number" and "Percentage" figures listed are based on participant responses to the questionnaire. Each statement is followed by participant responses, and the recommendation made by the third party evaluator.

Sections II, III, and IV give the mean responses of respondents. Each question or statement is followed by the mean responses of participant groups and the recommendation of the third party evaluator. In addition, Sections II and IV contain the verbatim comments of respondents to those questions which elicited comments.

Section V includes a brief summary and a listing of recommendations of the third party evaluator.

## I. BACKGROUND OF RESPONDENTS

1. The respondents represented a cross-section of the different educational levels in Hawaii, with public high schools most heavily represented.

<u>Present Employer</u>	<u>Number Responding</u>	<u>Percentage of Respondents</u>
Public High School	25	54.3%
Community College	13	28.2%
DOE-District Level	3	6.5%
DOE-State Level	2	4.4%
University of Hawaii	2	4.4%
Private High School	1	2.2%
Private College	0	---

RECOMMENDATION:\* In future institutes, planners should consider involving more private high school and college personnel.

2. The greatest percentage of respondents were teachers with 2 or more years of teaching experience.

<u>A. Primary Duty</u>	<u>Number Responding</u>	<u>Percentage of Respondents</u>		
High School Teaching	23	50.0%		
Administration	11	23.9%		
Community College Teaching	11	23.9%		
Dept./Div. Chairman	1	2.2%		
Counseling	0	---		
<u>B. Number of years at present duties:</u>				
	<u>1 year or less</u>	<u>2-3 years</u>	<u>5 years</u>	<u>6 or more years</u>
High School Teachers	26%	17%	17%	40%
Administrators	--	33%	25%	42%
Comm. College Instructors	9%	27%	18%	46%
All Respondents	15%	24%	19%	42%

RECOMMENDATION: Planners should involve some counselors in future institutes.

\*Throughout this report the reference "RECOMMENDATION" denotes the recommendation of the third party evaluator.

3. The four vocational fields were approximately equally represented with Auto Body Repair and Painting somewhat lower than the other areas.

	<u>High School Teachers</u>	<u>Comm. Coll. Instructors</u>	<u>Adminis-trators</u>	<u>All Res-pondents</u>
Agriculture	19%	9%	31%	20%
Auto Body Repair/ Painting	9%	18%	23%	16%
Carpentry	22%	64%	23%	32%
Distributive Education	50%	9%	23%	32%

RECOMMENDATION: Follow same procedure.

4. Respondents represented the four islands in roughly the same proportion as the population of the state.

	<u>High School Teachers</u>	<u>Comm. Coll. Instructors</u>	<u>Adminis-trators</u>	<u>All Res-pondents</u>
Oahu	49%	27%	50%	44%
Hawaii	30%	36%	25%	30%
Maui	17%	10%	8%	13%
Kauai	4%	27%	17%	13%

RECOMMENDATION: Continue selection on same basis.

5. Over one-half the respondents had no previous conference experience on formal articulation, and over three-fourths had no or little previous experience of this nature; thus the Institute provided most of them with their first such experience.

<u>Number of articu-lation conferences previously attended</u>	<u>High School Teachers</u>	<u>Comm. Coll. Instructors</u>	<u>Adminis-trators</u>	<u>All Res-pondents</u>
None	69%	46%	42%	54%
1-2	29%	18%	50%	30%
3-4	2%	27%	8%	13%
5 or more	--	9%	--	3%

RECOMMENDATION: Continue selection on same basis.

## II. GOALS/PURPOSES OF THE INSTITUTE

The mean ratings given to the goals or purposes of the Institute are as follows.

1. Meeting and sharing program content in respondents' respective subject areas. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S. Teachers	Comm.Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.6	3.5	4.4	4.2	4.3	4.6	4.0	4.2

RECOMMENDATION: Continue as is. All groups of respondents perceived this to have been successfully achieved.

2. Preparing written articulation agreements between the community colleges and the State Department of Education. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
4.0	3.0	4.4	3.3	3.7	4.3	3.6	3.8

RECOMMENDATION: Continue as is. Goal was achieved in the perceptions of the respondents.

3. Encouraging the ratification and implementation of agreements of articulation. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.6	3.0	4.2	3.8	3.1	3.6	4.1	4.1

RECOMMENDATION: Goal should be retained. Most respondents indicated this goal was of considerable value/help to them.

4. (a) Encouraging intra-institutional articulation. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.6	2.5	2.8	3.4	3.1	3.7	4.5	3.6

- (b) Increase/improve methods/techniques for communicating with another department in school. (Scale: 1.0=low 4.0=high)

2.8	3.0	3.5	2.6	2.9	2.8	3.1	2.9
-----	-----	-----	-----	-----	-----	-----	-----

RECOMMENDATION: Retain goal. Most respondents indicated this goal was of sufficient value to be worth the time spent on it. Most also indicated they had increased "some" their ability to communicate

with other departments in their school. Although there is some discrepancy between responses to the two questions (e.g., high school Auto Body Repair and Painting teachers responded fairly low to the general question of intra-institutional articulation, but their mean response was significantly higher to the more specific question of method and techniques for communicating), most respondents indicated they had achieved this goal.

5. (a) Encouraging inter-institutional articulation. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.8	4.0	3.6	3.5	3.7	4.2	4.5	3.9

(b) Increase/improve methods/techniques for communicating with another high school/community college. (Scale: 1.0=low 4.0=high)

3.5	3.5	3.6	3.2	3.4	3.5	3.4	3.4
-----	-----	-----	-----	-----	-----	-----	-----

RECOMMENDATION: Keep as an Institute goal. High ratings were given to these two questions. Respondents indicated this goal was of great value to them.

6. (a) Encouraging vertical articulation. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
4.0	4.5	4.6	3.1	4.0	4.4	4.5	4.1

(b) Increase/improve methods/techniques for communicating with others in respondents' subject area at different level. (Scale: 1.0=low 4.0=high)

3.2	3.5	4.0	2.8	3.1	3.3	3.1	3.4
-----	-----	-----	-----	-----	-----	-----	-----

RECOMMENDATION: Keep as a goal. Respondents indicated this goal was well-received and was of considerable value to them.

7. (a) Encouraging horizontal articulation. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
4.8	4.0	3.6	4.3	4.2	4.5	4.6	4.4

(b) Increase/improve methods/techniques for communicating with others in the respondent's subject area at the same level. (Scale: 1.0=low 4.0=high)

3.2	3.5	4.0	3.6	3.5	3.3	3.2	3.4
-----	-----	-----	-----	-----	-----	-----	-----

RECOMMENDATION: Keep goal as is. It appears this goal was very successfully achieved and seen to be very worthwhile by most respondents.

8. Encouraging the appropriate involvement of personnel for effective articulation. (Scale: 1.0=low 5.0=high)

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis-trators	All Res-pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
3.6	4.0	4.6	3.6	3.9	4.6	4.4	4.1

RECOMMENDATION: Keep goal as is. Although the Agriculture and Distributive Education High School teachers rated this goal somewhat lower than other groups, their responses indicate they felt this goal was of value and was achieved.

9. Achieving the ability to better provide educational counseling as a result of participation in this Institute. (Scale: 1.0=low 4.0=high)

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis-trators	All Res-pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
3.4	3.0	3.2	3.4	3.4	3.1	3.0	3.2

RECOMMENDATION: Keep as a goal. Most respondents indicated they had improved their ability to provide educational counseling "some."

10. Respondents modification of present work as a result of participation in the Institute.

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis-trators	All Res-pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
Yes	60%	50%	100%	73%	73%	70%	72%
No	40%	50%	---	27%	27%	30%	28%

Nature of the most important modifications and the activities which will be affected:

- a. Comments of High School Auto Body Repair and Painting Teachers:

"Curriculum of existing programs in content matter in subject area."

- b. Comments of High School Agriculture Teachers:

"Vocational counseling which I used to give as the need arose would now be an ongoing daily part of the student's classroom activity."

"While speaking with other teachers in the same field, gave me more exposure as well as a new idea to incorporate a little in my program."

"Revival of inactive teacher association groups."

c. Comments of High School Carpentry Teachers:

"Changes in basic construction program, that is course content."

"Counseling of students."

"Tried to gear instructions of goal of articulation."

d. Comments of High School Distributive Education Teachers:

"Closely related: Will offer DE program in the fall as a result of what was learned at this institute."

"Will try to incorporate ideas into my program."

"Improve course offerings for next school year; got a better idea as to what to cover in several courses."

"Improve my awareness of DE programs and will be able to help students in a better manner."

"Begin to correlate teacher plans with program needs."

e. Comments of Community College Instructors:

"Will be making course changes."

"We are following Honolulu Community College's second semester more closely to have a systematic sequence between colleges."

"To make the course objective 'in line' with the state articulation effort."

"Anticipate a change in curriculum scheduling or sequence of instruction."

"Began work in modular system so that high school student can be given credit for courses taken and successfully completed."

f. Comments of Administrators:

"Probably we will add 4 hrs. per week of carpentry instruction."

"The importance of articulation has been reinforced."

"Prepare more articulation materials for distribution to high schools and community colleges."

"Plan to get out into the field more. Need to keep in contact with instructors on a face-to-face basis."

"Planning for in-service workshops."

"Articulating with rest of staff on importance of awareness of programs."

"Additional information on possible alternatives for students."

RECOMMENDATION: There should be follow-up to ascertain the extent to which planned changes are implemented.

11. Participants establishing a means of exchanging information as a result of contacts with the participants and leaders at the Institute.

	High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
	<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
Yes	60%	100%	100%	82%	81%	80%	80%	81%
No	40%	---	---	18%	19%	20%	20%	19%

Type of information being exchanged and how it contributes to work of respondents:

a. Comments of High School Agriculture Teachers:

"U.H. - mailing list and other publications; made aware of work shops at all levels."

"Information on materials and methods of teaching will help in modifying the existing facets of my program to insure a motivation-oriented program."

b. Comments of High School Auto Body Repair and Painting Teachers:

"Curriculum, contacts to industry."

c. Comments of High School Carpentry Teachers:

"Exchange ideas, share materials, exchange shop projects."

"Learned of resources available from OSHA, the unions, and community college staffs."

"Methods of instructions, class projects."

d. Comments of High School Distributive Education Teachers:

"I wish something could have been set up for a formal channel of dissemination."

"We now have concentrated efforts in spreading the information in my area."

"Able to contact community colleges for better information."



"Course offering to be given in other schools. What to cover. Preparation for DECA convention. Course offerings at the CC level. People to contact for help."

"Exchanged ideas and information that will help my students."

"I now know who the key people in business education are."

"What we as teachers can contribute in the area of DE and other business areas."

"The various ways a subject can be taught. The contents covered at CC level to prepare high school students."

e. Comments of Community College Instructors:

"We have talked to the high school instructor on our Island to make a reference or call us up for additional information regarding students."

"Course outlines; upgrading my courses."

"Brochures on professional career presentations; projects of ways of accomplishing tasks."

"Informal information."

"Any new or unusual instructional results, resource material, new technology, methodology to be exchanged, updated, etc., will benefit the program, student, instructor, college, state, industry."

"Exchange ideas on instructional method and exchange instructional materials."

"Standardization of courses; developing proper sequences; deleting obsolescence from courses; improve numbering of courses."

f. Comments of Administrators:

"It has become easier to communicate with them now that we have gone through this articulation project."

"In-service workshop information such as resources, time for planning considerations."

"Have information on each course or program of each level. Have other information which can be disseminated to other teachers."

"Programs that can be offered."

"Additional information with other high schools and community colleges regarding programs, data, etc."

RECOMMENDATION: Continue present activities in this area. Respondents indicated contacts with others, formally and informally, were valuable and worthwhile.

### III. INSTITUTE METHODS/MATERIALS

The mean responses of the groups to questions regarding Institute methods and materials are as follows. (Scale: 1.0=low 4.0=high)

#### 1. Presentations by speakers.

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
2.8	2.5	2.7	2.5	2.6	2.8	2.7	2.7

RECOMMENDATION: Although presentations by speakers were a proportionately small part of the Institute, planners of future sessions should consider whether or not speakers are of sufficient value to be included.

#### 2. To facilitate good group discussions within the respondent's area.

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.8	3.5	3.6	3.8	3.7	4.0	3.7	3.8

RECOMMENDATION: Continue on same basis. High rating, good activity.

#### 3. Group discussions across boundaries.

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.4	3.0	3.6	2.8	3.0	3.6	3.5	3.3

RECOMMENDATION: Continue having group discussions as an integral part of the Institute. They appeared to be very effective and useful to respondents.

#### 4. Island workshops.

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
2.8	1.0	3.2	2.7	2.7	3.2	3.1	2.3

RECOMMENDATION: Future planners should study the current island workshops in order to make needed improvements. (It should also be noted there were only two responses in the Auto Body group although they were from different islands.)

(Scale: 1.0=low 4.0=high)

5. Informal Discussions.

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
3.6	3.5	3.8	3.5	3.6	3.9	3.4	3.8

RECOMMENDATION: Informal discussions appear to be very important and worthwhile to respondents and time should be provided for this purpose at future institutes.

6. Presentations by students.

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
2.7	2.5	3.2	2.2	2.5	3.0	3.2	2.8

RECOMMENDATION: As with outside speakers, student presentations constituted a small part of the Institute and were rated relatively low. Planners need to more carefully select students who will give presentations at future institutes.

7. Preparing articulation agreements.

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
3.8	2.0	3.4	3.5	3.4	3.9	3.4	3.5

RECOMMENDATION: Continue as is.

#### IV. INSTITUTE ORGANIZATION

(Scale 1.0=low 4.0=high)

The mean responses of the groups to questions regarding organization of the Institute are as follows.

1. How satisfactory was participant selection?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.4	2.0	4.0	3.0	3.2	3.4	3.1	3.2

RECOMMENDATION: Continue on same basis. Most respondents indicated selection was "good." Again, there were only two respondents in the High School Auto Body Repair and Painting Group. Carpentry group felt selection was "excellent."

2. How adequate was pre-Institute information for making preparations to attend?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.2	2.0	3.4	2.6	2.8	2.9	3.4	2.9

RECOMMENDATION: Institute planners need to make available more information about the institute to participants prior to the institute.

3. How satisfactory was the location (city) of the Institute?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.6	3.0	3.6	3.4	3.4	3.2	3.4	3.3

RECOMMENDATION: Continue on same basis. The majority of respondents indicated the location of the Institute was "good."

4. How satisfactory was meeting space?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.8	3.0	3.4	3.4	3.5	3.0	3.4	3.4

RECOMMENDATION: Similar arrangements should be made for future institutes. Good rating.

(Scale 1.0=low 4.0=high)

5. How satisfactory was working space?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.8	3.0	3.6	3.4	3.5	3.3	3.4	3.3

RECOMMENDATION: Similar arrangements should be made in the future. Facilities utilized were good.

6. How satisfactory were qualifications and competencies of Institute staff?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.8	3.0	3.8	3.3	3.5	3.7	3.4	3.5

RECOMMENDATION: Similar arrangements should be made in the future. Respondents gave Institute staff an overall rating of "good" to "excellent."

7. How satisfactory were qualifications and competencies of resource personnel (speakers, students)?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.2	3.0	3.6	3.1	3.2	3.0	3.2	3.1

RECOMMENDATION: Staff need to reconsider the role of resource people, especially outside speakers and students, as to the role they will play in future institutes, and their qualifications. Although respondents gave a "good" rating here, they previously gave a lower rating (see questions III. 1 and III. 6).

8. How satisfactory was allocation of time for group activities?

High School Teachers				All H.S.	Comm. Coll.	Adminis-	All Res-
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>	<u>Teachers</u>	<u>Instructors</u>	<u>trators</u>	<u>pondents</u>
3.4	2.5	3.8	2.9	3.2	3.1	3.1	3.1

RECOMMENDATIONS: Continue as is.

(Scale: 1.0=low 4.0=high)

9. How satisfactory was the length of the Institute?

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
3.2	2.5	3.6	2.9	3.1	3.1	3.3	3.1

RECOMMENDATION: Continue as is. Most respondents gave a "good" rating to the length of the Institute.

10. Interest in attending another institute conducted by the Office of the State Director for Vocational Education.

High School Teachers				All H.S. Teachers	Comm. Coll. Instructors	Adminis- trators	All Res- pondents
<u>Agric.</u>	<u>Auto.</u>	<u>Carp.</u>	<u>D.E.</u>				
3.6	2.5	3.8	3.1	3.3	3.5	3.1	3.2

RECOMMENDATION: Similar institutes should be held in the future. Overall mean rating is "good." High school agriculture and carpentry groups indicated very high interest.

11. What was/were the major strength(s) of the Institute?

a. Comments of High School Agriculture Teachers:

"Better communication at all levels."

"Gathering in one room of people really interested in the Ag. student and his program."

"Providing much opportunity for dialogue. Providing participants with opportunity to re-examine their philosophy of education."

"Having different professions (administrator, instructor, program specialist, community and 4-year representatives) participating in committee. All these different inputs gave strength to articulation."

"To have administrators of all levels being informed of the importance of the group's concerns to improve delivery to students."

b. Comments of High School Auto Body Repair and Painting Teachers:

"To articulate problems of the students in Hawaii through all of the systems of public education."

"It got a group of people with the same interest together."

c. Comments of High School Carpentry Teachers:

"In the carpentry group-strengths-every member of the group shared the same problems."

"People, from all levels."

"The group was able to decide on the common problem. We were able to function as a group."

"Unity as a group."

d. Comments of High School Distributive Education Teachers:

"Representation from various schools."

"Were given guidelines all along. George Lee was good leader, sharp, gave good input."

"Qualifications and dedication of most of the participants."

"Getting together and sharing concerns and recommendations."

"The opportunity to work on our hangups in DE. Now we're more aware of what is offered in a few schools."

"Obtaining information about DE from other teachers, especially in the same area of CDE."

"Group interactions were valuable."

"Combined articulation of several vocational areas."

"Meeting teachers."

"Participants learned to listen and respond to each other."

"Time with others to communicate horizontally. Input of articulation implementation staff."

"Understanding the DE program on DOE/CC levels. What to do/not do in implementing DE program."

e. Comments of Community College Instructors:

"Getting to meet other instructors from the various schools and exchanging ideas was very important."

"The team leaders were very well chosen. Each one knew their specific jobs which they have carried out very well."

"The major strength of this institute was the willingness of the instructors' participation. As well as the assigned team leaders."



"Getting to meet people in same discipline."

"Instructors from all levels were able to express problems, relating to students."

"Curriculum exchange."

"Participants."

"Having all the community college carpentry instructors participating and to come to agreement."

"Strong and continuous drive towards goal of articulation with good leadership."

"To help students not to repeat courses."

f. Comments of Administrators:

"Getting to know others in Distributive Education."

"Good group leadership (Larry Inaba)."

"The camaraderie formed through the session with those at different levels in solving a common problem."

"The opportunity to exchange ideas with people involved in the same field."

"The exchange of information and the team effort."

"Face-to-face interchange of ideas and concerns."

"Good representation group. Leaders or chairman of the group."

"Meeting with other groups."

"Exchange of ideas. Willingness of participants to share ideas, to compromise, to work towards goals for benefit of students."

RECOMMENDATION: The major strength, according to the respondents, seems to be that the Institute brought together people from different educational levels and different schools and provided the opportunity and direction to discuss problems, subject matter, concerns more than they would be able to do on their own. Similar patterns should be followed in the future.

12. What was/were the major weakness(es) of the Institute?

a. Comments of High School Agriculture Teachers:

"Need for more industry participation."

"Changes of formats in attacking problems."

"Insufficient preparation on the part of team leader, appeared to be groping 'in the dark'. As a result, too much time was spent on semantics instead of substantive matters."

"Lack of examples of completed work; comments to keep discussions on the right track; role playing meeting was irrelevant, should have been held early in the Institute."

"No set goals or direction of the needs of the articulation workshop; too many changes of forms."

b. Comments of High School Auto Body Repair and Painting Teachers:

"Lack of groundwork information, poor communication as to instructions and what needs to be done."

"Poor organization, poor selection of institute chairmen."

c. Comments of High School Carpentry Teachers:

"Some not understanding others' problems for implementation."

"Providing a solution that everyone could agree on without contradiction."

"Little interaction between groups. Too little student participation."

"Should have more student participation voicing their experience going through the transition."

d. Comments of High School Distributive Education Teachers:

"Not enough input from all teachers for better representation."

"Input of articulation coordination staff weakly communicated."

"Lack of structure in workshop and brainstorming problems. You brainstorm solutions, not problems."

"Some of the teachers chosen. Immediate feedback on problem statements."

"Poor direction, constant changing of format that delayed time of Institute, without changes institute could have ended earlier."

"Lack of some specific guidelines."

"Poor directions as to the purpose of the articulation problem."

"The correct or expected direction of our group. Suggestions or corrections were made too late during the session. More guidelines needed before starting the workshop."

"DE is fairly new and hard to get down to basic things because each program at a high school level went on its own tangent. Articulation problems were hard to define because there were more other important problems."

"Directions due to subject matter (probably) were not clear from the start. Seems as though we were getting different directions from different administrators."

"Many participants did not contribute much--couldn't care less."

"Members who are committed to attend should be present at all times--to keep other appointments at other times."

"Not enough input from all teachers for better representation."

e. Comments of Community College Instructors:

"The major weakness fell on one particular individual who tried to make input to areas that concern administration more than instruction."

"Institute was too long."

"Not enough student involvement; confusion as to what articulation is."

"Combination of vertical and horizontal."

"Directions; procedures."

"Need community participation also."

"Not enough time; some scheduling of events other than during vacation time; per diem too little."

f. Comments of Administrators:

"People who were absent from certain meetings causing the group to retrace steps at later meetings."

"While it was not possible to control the minds of participants in the individual group, I had hoped for more participants (agriculture instructors) in our group."

"The 9:30 to 11:30 interaction group was very poorly organized and not at all profitable on 3/27/75."

"Planning and organization of programs."

"Chairman of group not strong enough or was not too versed in leading group."

"Getting started, diverse ideas on subject content."

"Island workshops; inadequate motivation for non-participants to attend and get involved."

"Lack of leadership and direction in areas; lack of high school teacher participation; 9:30 - 11:00 last day, absolutely a waste, need revision."

"Not being able to know others in another group. We met others only on the last day."

RECOMMENDATION: Each group listed weaknesses which seemed to apply directly to only their group. There were no overall weaknesses which applied to all groups. Planners should note comments of each group and attempt to insure that these same weaknesses do not appear at future sessions.

13. Changes or suggestions recommended by respondents for future institutes of a similar nature.

a. Changes suggested by High School Agriculture Teachers:

"Make a stronger effort to have industry people involved."

"Have role-playing early in the institute. Bring people who have sources of dollars. Bring top VIP's in state government to give us a direction in ag. policy, e.g., land use, imports."

"Thorough preparation by team leader and assistants so they they'll have concrete proposals and alternatives for participants to examine and act upon from the first day."

b. Changes suggested by High School Auto Body Repair and Painting Teachers:

"Organization of Institute should be made by members to give them a better idea of the Institute."

c. Changes suggested by High School Carpentry Teachers:

"The contact with others has been extremely beneficial. It seems that more interaction between other groups would be of great help, like the business and agriculture groups sharing same ideas, etc."

"May not have it too long."

"Possibly some activities that would make it necessary to talk with other levels of administration, in particular."

d. Changes suggested by High School Distributive Education Teachers:

"Better cross-section of teachers from all islands."

"Allot only one teacher from a school so that there is greater representation."

"Be more selective as to participants. Be more organized as to what participants must do."

"All key administrators give participants an idea of what they are looking for as a product at the beginning of the institute."

"The format of the institutes were alright - it depends on subject matter - if subject matter has no guidelines it becomes difficult."

"Get business leader inputs (such as carpentry group did)."

"Mixes in different vocational areas so we know what they are involved in. Include other vocational areas such as homemaking, health services."

"More exact examples so participants are not misled as to what objectives are."

"Keynote or master teachers or educators to lay the foundation for the workshop by presentation of lectures and/or classes."

e. Changes suggested by Community College Instructors:

"Would like to see more participants from the high school level concerning the county of Hawaii."

"More students should have been involved."

"Sessions were too lengthy in terms of hours and days."

"Hold it during school hours."

"Have more local student participation - in our articulation both students were graduates of mainland high schools."

"Shorter work sessions."

"More students, describe tasks."

"Separation of DOE and CC."

"All of the problems of every program should be compiled and passed out. Some programs may miss a very important point."

"A pre-institute workshop in each island to prepare participants beforehand."

"Wider participation of educators."

"Need more time to think of ideas for improvement. Basically, project well planned."

f. Changes suggested by Administrators:

"Select group leaders for leadership ability, not just subject matter knowledge. Our group functioned well. Comments from members of other groups, however, indicated that better leadership was necessary."

"Information on articulation institute should have gone out much earlier so that plans by participants could be better effected."

"Pre-conference meeting on each island on a Saturday for briefing and orientation."

"More involvement by potential participants in the planning."

"Get mission clear to each member. Get format decided at the very beginning, changing at intervals confuses people."

"Ground rules as to assisting committees."

"Clear, concise statements on goals of institute; process to follow; end product."

"Invite students, graduates, students in attendance, potential students. Team leaders need definite guidelines and instruction."

"More active participation by administrators."

RECOMMENDATION: Planners of future institutes should consider providing more opportunities for interaction among subject matter groups as well as among the different educational levels.

14. Additional comments or suggestions..

a. Comments of High School Auto Body Repair and Painting Teachers:

"Members of the articulation has really tried hard to articulate problems."

b. Comments of High School Agriculture Teachers:

"Recommending is good but implementing is another story. I fear no one will take this report seriously. The general comment, as it usually is, will be: Have the teachers do their best with what they got!"

"Speakers for ways in which to scrounge for financing should be arranged! Sources of federal and state funding. Names and addresses of VIP's we may write to with no fear of discrimination."

"I regret that more of my colleagues did not participate in this Institute."

"This has been a most worthwhile experience. I could see real changes taking place in participants' philosophy."

"A lot of fun, exposure to different profession related to teaching agriculture. Made new friends. Hope our problems can be solved soon!"

c. Comments of High School Carpentry Teachers:

"I would like to participate in other kinds of educational efforts designed to help students set broad educational goals at a younger age as they could benefit from the efforts of these "top heavy" institutes."

"May help to have student participants."

"It has been personally rewarding for me to meet with and talk to many people with whom I'd never possibly have a chance of meeting under ordinary circumstances."

"I'm glad I attended this institution. My first reaction was not to attend - I'm glad I did."

d. Comments of High School Distributive Education Teachers:

"Time was too short due to members not reporting at designated time."

"Maybe could reject participants who are known to cut out and not contribute."

"Possibly more direction could have been given and more coordinated efforts through scheduled meetings with institute people and team leaders rather than having to change things at a later date when institute people finally sat in with group and discovered inconsistency, etc."

"Better selection of participants so that you have well-rounded ideas, firm commitment of participants (don't pay them for time not at workshop)."

"Enjoyed the institute very much."

"My comments are in regard to DE not articulation, but certain guidelines like performance objectives should be written down so DE would not be the way it is today - so unequal or different in every school."

"Participants should be told of their responsibility right from the start and not allowed to participate at their convenience (come and go as you please.)"

"Roll should be taken - not pass around papers. In this way all members will be present (not take half a day off)."

e. Comments of Community College Instructors:

"It was a very worthwhile workshop and will look forward to another workshop for evaluation of the progress made after the first articulation."

"Progressive ideas. Easier to communicate with other instructors at this time."

"A periodic workshop to discuss ideas and the progress of this articulation (strengths and problems)."

"Thank you for a job well done. The tip of the iceberg has been touched. Continue the good work. Much needs to be done."

f. Comments of Administrators:

"Institute should have had more people in the field as participants."

"The secretarial help afforded us has been of tremendous help in getting our work done."

"I believe that we should continue these articulation conferences until we get all areas covered."

"Make participants feel more the importance of the mission. Raise the per diem to \$30 or more, hotel rooms are costing too much."

"Reception committee is to be commended for this session."

"There was not enough interest shown by administrators in the island workshops."

RECOMMENDATION: Planners of future institutes should keep the above comments and suggestions in mind.



## V. SUMMARY AND RECOMMENDATIONS

The most significant recommendations which the third party evaluator finds in order include (and are not listed in rank order):

1. It is recommended that present participation selection procedures be continued as is; however, in future institutes planners should consider involving some counselors and private school personnel.
2. It is recommended that each of the present institute goals be retained. They appear to be well-received by and worthwhile and valuable to respondents.
3. It is recommended that activities, materials, and methods employed at island workshops be closely examined and needed modifications made for improvement.
4. It is recommended that outside speakers be more carefully selected, if they are to play an effective role in future institutes.
5. It is recommended that present activities which involve formal as well as informal contacts among different subject area groups and levels be continued. Group and informal discussions are especially important and present practices in these areas should be continued.
6. It is recommended that similar locations and facilities as were utilized in this Institute be considered for future institutes.
7. It is recommended that more information be given to future participants regarding what the institute will cover, what the goals are, what will be expected of each participant, what arrangements each must make, etc., prior to the first day of the institute.
8. It is recommended that current staff or staff with equally high qualifications and competencies conduct future institutes.
9. It is recommended that similar institutes be held in the future.
10. It is recommended that future planners consider the suggestions and comments listed herein which were made by participants of this Institute.
11. It is recommended that a follow-up evaluation be made 6 months or 1 year from now to determine long-term outcomes of this Institute.

Based on participant responses to the questionnaire, it is apparent the 1974-75 EPDA Institute for Advanced Study in Vocational-Technical Education was very much a success. Each of the four islands, the four subject areas, and the different educational levels were well represented. The goals of the Institute were rated very high by respondents as being helpful and of value. Most (72%) of the respondents indicated they have modified their present work and gave specific examples. Also, most (81%) respondents, as a result of contacts with others at the Institute, established new means

of exchanging information. It is apparent respondents increased their knowledge of and ability to apply articulation techniques as a result of participation in the Institute.

Although some modifications are called for (see recommendations in each section), Institute staff are to be commended for the fine job they did in conducting the Institute and helping respondents achieve the overall goals and purposes of the Institute.

1975 EPDA INSTITUTE FOR ADVANCED STUDY IN VOCATIONAL-TECHNICAL EDUCATION

Evaluation Form

The purpose of this questionnaire is to gather information concerning the effectiveness of this EPDA Institute for Advanced Study in Vocational-Technical Education. Your responses are strictly CONFIDENTIAL, thus we are not asking you to identify yourself personally, however, we are interested in the degree of agreement or disagreement among and between various groups so we are asking for some background information in addition to the questions directly concerning the Institute. Your cooperation is appreciated. Mahalo.

Cheryl H. Lee  
Evaluator for the 1975  
EPDA Institute for Advanced  
Study in Vocational-  
Technical Education

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I. BACKGROUND INFORMATION

Please check the appropriate blank.

1. Present Employer:

- |  |  |
|--|--|
| a. <input type="checkbox"/> Private high school        | e. <input type="checkbox"/> Private college        |
| b. <input type="checkbox"/> Public high school         | f. <input type="checkbox"/> DOE - State level      |
| c. <input type="checkbox"/> Community college          | g. <input type="checkbox"/> DOE - District level   |
| d. <input type="checkbox"/> University of Hawaii-Manoa | h. <input type="checkbox"/> Other (Please specify) |
- 

2. Primary Duty:

- |  |   |
|--|---|
| a. <input type="checkbox"/> Teaching   | c. <input type="checkbox"/> Dept./Div. Chairman |
| b. <input type="checkbox"/> Counseling | c. <input type="checkbox"/> Administration      |

3. Please indicate the number of years you have spent at your present duties.

- |  |   |
|--|---|
| a. <input type="checkbox"/> 1 year or less | c. <input type="checkbox"/> 4-5 years       |
| b. <input type="checkbox"/> 2-3 years      | d. <input type="checkbox"/> 6 or more years |

4. Primary vocational field of interest:

- |   |  |
|---|--|
| a. <input type="checkbox"/> Agriculture                 | c. <input type="checkbox"/> Carpentry              |
| b. <input type="checkbox"/> Auto Body Repair & Painting | d. <input type="checkbox"/> Distributive Education |

5. Island where you work:

- |                                    |                                  |
|------------------------------------|----------------------------------|
| a. <input type="checkbox"/> Hawaii | c. <input type="checkbox"/> Maui |
| b. <input type="checkbox"/> Kauai  | d. <input type="checkbox"/> Oahu |

6. Number of conferences you have attended in formal articulation prior to this Institute:

- |                                  |                                       |
|----------------------------------|---------------------------------------|
| a. <input type="checkbox"/> none | c. <input type="checkbox"/> 3-4       |
| b. <input type="checkbox"/> 1-2  | d. <input type="checkbox"/> 5 or more |

II. INSTITUTE GOALS/PURPOSES

Listed below are the goals or purposes of this Institute. Please indicate your evaluation of each by checking the appropriate blank in the right-hand column.

RATING KEY: 1 = of no value/help to me  
 2 = of little value/help to me  
 3 = of sufficient value/help to be worth time spent  
 4 = of considerable value/help to me  
 5 = of very great value/help to me

	1	2	3	4	5
7. Meeting and sharing program content in your subject area . . . . .	_____	_____	_____	_____	_____
8. Preparing written articulation agreements between the community colleges and the State Department of Education . . . . .	_____	_____	_____	_____	_____
9. Encouraging <u>intra-institutional</u> articulation (e.g., between your department and another department within your school) . . . . .	_____	_____	_____	_____	_____
10. Encouraging <u>inter-institutional</u> articulation (e.g., between your high school or community college and another high school or community college . . . . .	_____	_____	_____	_____	_____
11. Encouraging <u>vertical</u> articulation (e.g., all carpentry instructors from the high schools and community colleges meeting together) . . . . .	_____	_____	_____	_____	_____
12. Encouraging <u>horizontal</u> articulation (e.g., all agriculture instructors from all community colleges meeting together) . . . . .	_____	_____	_____	_____	_____
13. Encouraging the appropriate involvement of personnel (e.g., those necessary for effective articulation, such as teachers, department chairman, principals, provosts, etc.) . . . . .	_____	_____	_____	_____	_____
14. Encouraging the ratification and implementation of agreements of articulation . . . . .	_____	_____	_____	_____	_____
15. Comments:					

III. INSTITUTE METHODS/MATERIALS

Please rate the following to indicate their value to you.

	<u>Not</u> <u>Worthwhile</u>	<u>Slightly</u> <u>Worthwhile</u>	<u>Moderately</u> <u>Worthwhile</u>	<u>Extremely</u> <u>Worthwhile</u>
16. Presentations by speakers . . . . .	_____	_____	_____	_____
17. Group discussions within your own area . . . . .	_____	_____	_____	_____
18. Group discussions across boundaries . . . . .	_____	_____	_____	_____
19. Island workshops . . . . .	_____	_____	_____	_____
20. Informal discussions . . . . .	_____	_____	_____	_____
21. Presentations by students	_____	_____	_____	_____
22. Preparing articulation agreement(s) . . . . .	_____	_____	_____	_____

23. Many of the Institute activities were conducted in groups. Please estimate the number of members in each group listed below that you "knew well," "knew casually," and "did not know" prior to the Institute and now at the conclusion of the Institute. (For example, in your vocational group of 15 persons, you may have known 5 of the group "well" before the Institute and know 8 "well" now.)

	<u>Prior</u>	<u>Now</u>
a. Geographical Group:		
1. Knew well	_____	_____
2. Knew casually	_____	_____
3. Did (do) not know	_____	_____
b. Vocational Group:		
1. Knew well	_____	_____
2. Knew casually	_____	_____
3. Did (do) not know	_____	_____
c. High School/Community College-Level Groups:		
1. Knew well	_____	_____
2. Knew casually	_____	_____
3. Did (do) not know	_____	_____
d. Teaching-Administration Group:		
1. Knew well	_____	_____
2. Knew casually	_____	_____
3. Did (do) not know	_____	_____

24. Comments:

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IV. INSTITUTE ORGANIZATION

The following questions refer to the organization and administration of the Institute. Please indicate your evaluation of each by checking the appropriate blank in the right-hand column.

	<u>Excellent</u>	<u>Good</u>	<u>Poor</u>	<u>Very Poor</u>
25. How satisfactory was participant selection . . . . .	_____	_____	_____	_____
26. How adequate was pre-Institute information for making preparations to attend . . . . .	_____	_____	_____	_____
27. How satisfactory was the location (city) for the Institute . . . . .	_____	_____	_____	_____
28. How satisfactory was meeting space . . . . .	_____	_____	_____	_____
29. How satisfactory was working space . . . . .	_____	_____	_____	_____
30. How satisfactory were qualifications and competencies of Institute staff . . . . .	_____	_____	_____	_____
31. How satisfactory were qualifications and competencies of resource personnel (speakers, students) . . . . .	_____	_____	_____	_____
32. How satisfactory was allocation of time for group activities . . . . .	_____	_____	_____	_____
33. How satisfactory was the length of the Institute . . . . .	_____	_____	_____	_____
34. My interest in attending another Institute conducted by the Office of the State Director for Vocational Education is . . . . .	_____	_____	_____	_____
35. Comments:	<hr/> <hr/> <hr/> <hr/>			

V. EFFECTS OF INSTITUTE PARTICIPATION

Please check the appropriate blank.

- |   | <u>None</u> | <u>Very<br/>Little</u> | <u>Some</u> | <u>Very<br/>Much</u> |
|---|-------------|------------------------|-------------|----------------------|
| 36. To what extent do you feel you increased and/or improved methods and techniques for communicating with:                           |             |                        |             |                      |
| a. another department in your school . . . . .  | _____       | _____                  | _____       | _____                |
| b. another high school/community college . . . . .  | _____       | _____                  | _____       | _____                |
| c. others in your subject area at the same level . . . . .  | _____       | _____                  | _____       | _____                |
| d. others in your subject area at a different level . . . . .   | _____       | _____                  | _____       | _____                |
| 37. To what extent do you feel you can better provide educational counseling as a result of participation in this Institute . . . . . | _____       | _____                  | _____       | _____                |
| 38. As a result of your participation in this Institute have you modified your present work?  |             |                        |             |                      |

\_\_\_\_\_ Yes      \_\_\_\_\_ No

If yes, please briefly describe the nature of the most important of such modifications and the activities which will be affected.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

39. As a result of your contacts with the participants and leaders at the Institute have you established a means of exchanging information with any of them?

\_\_\_\_\_ Yes      \_\_\_\_\_ No

If yes, please briefly state the types of information being exchanged and how it contributes to your work.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

40. In your opinion, what was/were the major strength(s) of the Institute?

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41. In your opinion, what was/were the major weakness(es) of the Institute?

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42. What changes or suggestions would you recommend for future institutes of a similar nature?

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43. Additional comments or suggestions.

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Again, thank you for your confidential answers in evaluating various aspects of this Institute.

Cheryl H. Lee



APPENDIX II

AGRICULTURE

A. TASK FORCE BUDGET - 1975 - 77  
 (5 meetings of Task Force)

Four Meetings in 1975-76  
 (Christmas, Easter and Summer Vacations)

Agricultural Technology Group

Ornamental Horticulture Group

1. Plane fare, 3 off island  
 instructors:  
 3 x \$50 x 4 mtgs. - - - - \$ 600.00
2. Per diem  
 3 x \$30 x 4 mtgs. x 5 dist. \$1800.00  
 4 x \$10 x 4 mtgs. x 5 dist. \$ 800.00

1. Plane Fare  
 4 x \$50 x 4 mtg. \$ 800.00
2. Per diem  
 4 x \$30 x 4 x 5 dist. \$2400.00  
 4 x \$10 x 4 x 5 dist. \$ 600.00

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TOTALS	\$3200.00	\$3800.00
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Printing of drafts and postage	\$ 200.00	\$ 200.00
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Chairman's and Vice-Chairman's travel and per diem to three neighbor  
 islands:

2 x \$50.00 x 3 islands

Ag. Tech. Group

Ornamental Hort. Group

\$480.00

\$480.00

---

Total Cost for 1975-76

Agricultural Technology Group

Ornamental Horticulture Group

\$3,200.00  
 200.00  
480.00

\$3,880.00

\$3,800.00  
 200.00  
480.00

\$4,480.00

TASK FORCE BUDGET - Cont'd.

1977 Easter Wrap-Up of Input:

Ag. Tech.	\$875.00
Orn. Hort.	\$875.00

Summer 1977 - General Meeting

25 instructors  
13 others  
38 participants

19 participants from neighbor islands

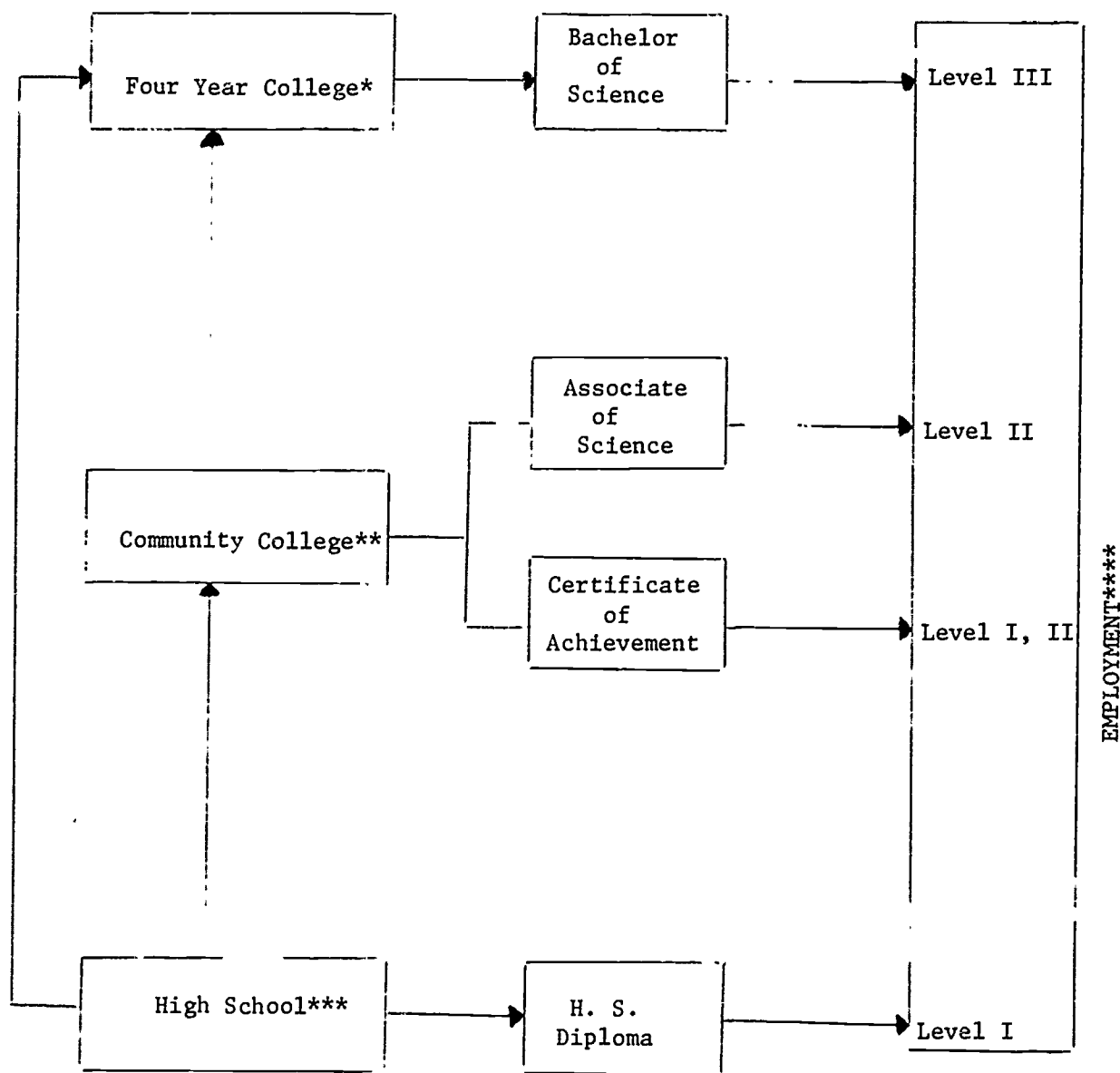
Plane fare, per diem	\$2,280.00
19 Oahu participants - mileage	<u>380.00</u>
TOTAL	\$2,660.00

SUMMARY:

1975-76

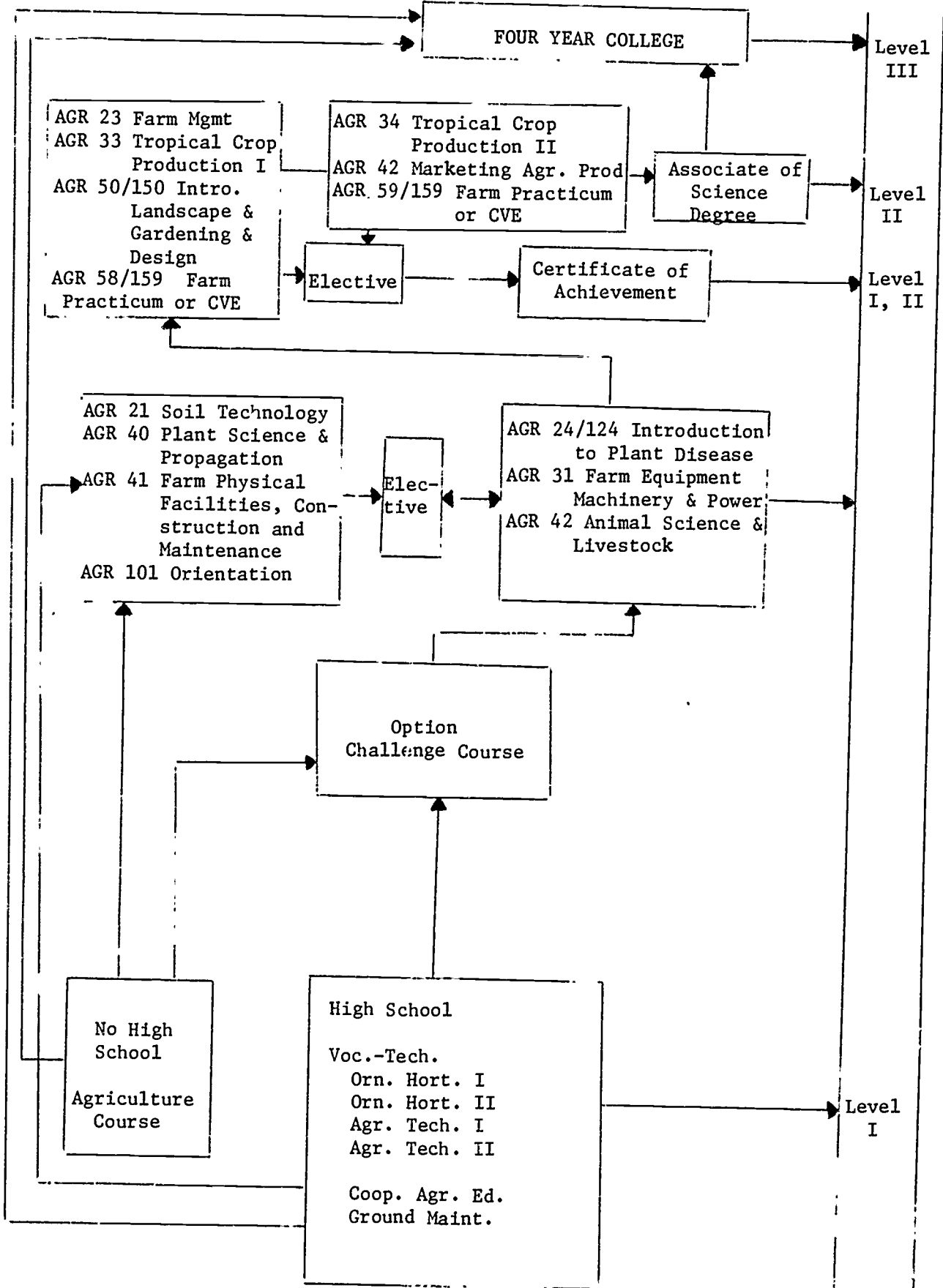
Ag. Technology Group	\$3,880.00
Orn. Horticulture Group	4,480.00
1977 Easter Meeting	1,750.00
1977 Summer General Meeting	<u>2,660.00</u>
TOTAL COST	\$12,770.00

B. CURRENT STUDENT FLOW CHART  
(Simplified)



- \* See Details in Appendix H
- \*\* See Details in Appendix G
- \*\*\* See Details in Appendix E
- \*\*\*\* See Details in Appendix K

C. CURRENT STUDENT FLOW CHART  
(Detailed)



EMPLOYMENT

D. CURRENT STATUS OF AGRICULTURAL PROGRAMS  
IN THE STATE OF HAWAII

I. Current Status of the Agricultural Program on the Secondary Level

Of the thirty-seven public high schools and one special school (Olomana) in the State, twenty-four offer vocational education in agriculture. Student enrollment during the 1973-1974 school year was 1,220 in Agriculture Technology and 1,033 in Ornamental Horticulture. Fourteen high schools and five intermediate schools offer Agricultural Arts, a practical arts course in agriculture. A total of 981 students were enrolled in this course during the last school year.

Formerly, the agricultural education curriculum concentrated heavily on crop and livestock production. Emphasis now includes off-farm and related occupational fields. Curriculum additions include instruction in processing, marketing and distribution, agricultural entrepreneurship and financing, and Ornamental Horticulture. Efforts have been made to strengthen the Ornamental Horticulture program to give students career opportunities in urban as well as the rural areas.

The following vocational-technical courses are offered in the public secondary schools of Hawaii:\*

A. Ornamental Horticulture

Ornamental Horticulture I  
Ornamental Horticulture II

B. Agriculture Technology

Agriculture Technology I  
Agriculture Technology II

C. Cooperative Agricultural Education

D. Ground Maintenance Service (Occupational Skills Program Only)

\*See Appendix E.

## E. AGRICULTURE COURSE DESCRIPTIONS AT THE HIGH SCHOOL

### 1002 ORNAMENTAL HORTICULTURE I

#### Objectives:

1. Develop entry level competencies needed by individuals preparing to engage in ornamental horticulture occupations.
2. Acquire and apply conceptual knowledge in propagating, nurturing and protecting plants.

#### Description:

A vocational course designed to provide skills and technical information in ornamental horticulture. The main areas of study include plant identification, propagation, cultural practices, plant nutrition and insect, weed and disease control. Consideration is given to alleviating chemical pollution through judicious use of agricultural chemicals. Classroom study is combined with greenhouse and outdoor laboratory activities. The FFA organization is an integral part of this course of study.

### 1003 ORNAMENTAL HORTICULTURE II

#### Objectives:

1. Develop entry level competencies to a higher proficiency for those preparing for ornamental horticulture occupations.
2. Acquire and apply conceptual knowledge in management of turf, nursery, and florist; floriculture; landscape gardening; and processing and distribution of plant and floral products.

#### Description:

A vocational course in ornamental horticulture with heavy emphasis on landscape gardening, turf management, nursery management, florist and floral products. Included in the course are conservation principles and practices. Classroom study is combined with greenhouse and outdoor laboratory activities. The learning environment may include the site of private enterprise as an extension of the classroom. The FFA organization is an integral part of this course of study.

### 1004 AGRICULTURAL TECHNOLOGY I

#### Objectives:

1. Develop entry level competencies for those preparing to enter agricultural technology occupations.

2. Acquire and apply conceptual knowledge in plant science, animal science, agricultural mechanics, and safety.

Description:

A vocational course designed to provide a wide variety of technical information and experiences in agriculture. The main areas of study include cropping techniques, animal husbandry, agricultural equipment and machinery usage, soil and water management, agricultural pest control and agricultural safety. The utilization of agricultural chemicals, intensive cropping practices and the concentration of animals in a given acreage are taught with ecological implications. The course combines classroom study, outdoor laboratory activities and farm shop practices. The FFA organization is an integral part of the course.

1005 AGRICULTURAL TECHNOLOGY II

Objectives:

1. Develop entry level competencies to a higher proficiency for those preparing to enter agricultural technology occupations.
2. Acquire and apply conceptual knowledge of maintenance and repair of agricultural machinery; agricultural construction; processing and distribution; and farm management.

Description:

An advanced course in agriculture with emphasis on maintenance and repair of agricultural machinery and equipment, agricultural construction, processing and distribution of agricultural products and farm management. New developments in crop and animal production and land utilization are studied with regard to ecological implications. Classroom study, outdoor laboratory activities and farm shop practices are utilized. On site experiences are also included. The FFA organization is an integral part of the course.

1020 COOPERATIVE AGRICULTURAL EDUCATION

Objectives:

1. Develop entry level competencies in ornamental horticulture and/or agricultural technology occupations through on-the-job training.
2. Acquire and apply conceptual knowledge in ornamental horticulture and agricultural technology occupations.



Description:

A course designed to give students on-the-job training in Agricultural Technology and/or Ornamental Horticulture. Students spend part of their school day at a job station in addition to taking the regular courses required for graduation. Students receive related instruction in the area for which they are training. The FFA organization is an integral part of the course.

F. CURRENT STATUS OF THE AGRICULTURAL PROGRAM  
AT THE HAWAII COMMUNITY COLLEGE

History

Hawaii Community College began offering agriculture courses in September, 1971. The program was approved in September, 1972, by the Board of Regents. Its first graduating class was comprised of six students (June, 1973).

In 1974, a Certificate of Achievement program was instituted to complement the Associate of Science Degree awarded. At the present time, Hawaii Community College is the only community college which awards these diplomas.

Objectives

The present objectives of the Agriculture program are two-fold:

1. To prepare students with agricultural competencies for employment in the following agriculturally related industries: a) sugar, b) horticultural industry - specifically nursery, fruits and nuts, and landscape gardening, and c) livestock industry.
2. To prepare students with agri-business management competencies for the agricultural spectrum.

The expected competencies of students are as follows:

1. Demonstrate basic knowledge of plant science; i.e. general physiology of plants, common diseases, propagation, nutrient needs.
2. Demonstrate a basic knowledge of soils, their composition, characteristics, and best use.
3. Identify common plants of the state, and their best growth conditions.
4. Be able to calibrate insecticides, herbicides, and fungicides and make proper applications with safety.

5. Select, manage, and be able to safely operate some farm machinery and equipment.

6. Have an understanding of the operation, adjustment and servicing of gasoline engines.

7. Be able to read landscape plot plans and general planning for best vegetative and color effect.

8. Be able to demonstrate principles of basic economics, management, personnel relationships and marketing.

9. Be able to maintain farm records.

10. Be familiar with the construction of farm fences, a greenhouse, sara house, small work shed, and small animal shelter.

The degree of competency will vary with the degree program which the student is pursuing.

Credit hours to complete the program\*

Certificate of Achievement

General Education	9
Agriculture	<u>23</u>
Total	32

Associate of Science

General Education	18
Agriculture	<u>44</u>
Total	62

\*See Appendix G.

G. COURSES AT HAWAII COMMUNITY COLLEGE

FIRST SEMESTER

		Cl. Hrs.	Lab. Hrs.	Cr.	Cert.	A.S.
AGR 21	Soil Technology	2	4	3	3	3
AGR 40	Plant Science and Propagation	2	6	4	4	4
AGR 101	Orientation to Agriculture	2	3	3	3	3
ENG <sup>2</sup>	English	3		3	3	3
AGR <sup>3</sup>	Elective	<u>3</u>	—	—	<u>3</u>	<u>3</u>
		12	13	13	16	16

SECOND SEMESTER

AGR 24/124	Intro to Plant Disease and Pest Control	2	3	3	3	3
AGR 42	Animal Science and Livestock	2	6	4	4	4
MATH <sup>1</sup>	Math	3		3	3	3
SP	Speech	3		3	3	3
AGR <sup>3</sup>	Elective	—	—	—	<u>3</u>	<u>3</u>
		10	9	13	16	16

THIRD SEMESTER

AGR 23	Farm Management	2	2	3		3
AGR 33	Tropical Crop Production 1	2	3	3		3
AGR 50/150	Intro to Landscape Gardening and Design	2	4	3		3
*AGR 58/158	Farm Practicum and/or Agriculture Elective	<u>1</u>	<u>18</u>	<u>3</u>		<u>3</u>
		7	27	12		15

FOURTH SEMESTER

AGR 34	Tropical Crop Production II	2	3	3		3
AGR 52	Marketing of Agricultural Products	2	2	3		3
*AGR 59/159	Farm Practicum or Agriculture Elective	1	18	3		3
	Elective	—	—	—		<u>3</u>
	Total	5	24	10	32	15 62

\*May be substituted with CVE 58/158 and/or CVE 59/159.

1. Math 20 or higher for Associate of Science Degree.  
Math 10 or higher for Certificate of Achievement.

2. English 20 or higher.

3. AGRICULTURE ELECTIVES INCLUDE

AG 31 Farm Equipment, Machinery and Power  
AG 41 Farm Physical Facilities, Construction and Maintenance  
ACC 20 or higher - Accounting Fundamentals  
MERCH 47 Research & Decision Making for Marketing and Management

### COURSE DESCRIPTIONS

#### AGRICULTURE (AGR)

#### AGR 21 Soil Technology (2 cl. hrs., 4 lab. hrs.) (3 cr.)

Topics to be covered include properties of soils, soil surveys, land layout, soil formation, classification, soil testing, fertilization practices, soil and water relationships, use of time, soil protection, and irrigation practices.

#### AGR 23 Farm Management (2 cl. hrs., 2 lab. hrs.) (3 cr.)

This course emphasizes the basic business principles upon which the farm is organized and operated.

#### AGR 24/124 Plant Disease and Pest Control (2 cl. hrs., 4 lab hrs.) (3 cr.)

This course surveys the principles involved in controlling plant diseases and pests. It includes the study of bacteria, fungi, nematodes, insects, weeds, proper and safe methods in mixing of sprays and dusts, and the legal aspect of the use of plant disease and pest control.

#### AGR 31 Farm Equipment, Machinery, and Power (2 cl. hrs., 4 lab hrs.) (3 cr.)

Farm equipment and machinery; their selection, management, principles of operation; the course will also cover the principles of operation; testing, adjustment and servicing of gasoline engines; engine components.

#### AGR 33 Tropical Crop Production 1 (2 cl. hrs., 4 lab. hrs.) (3 cr.)

This course stresses vegetable crops and includes fruits and ornamentals. Practical experiences include propagation, controlling the environment, use of growth regulators, pruning, spraying, fertilization and sanitation.

#### AGR 34 Tropical Crop Production 11 (2 cl. hrs., 4 lab hrs.) (3 cr.)

This course stresses ornamentals and includes fruits and vegetables. Practical experiences include propagation, controlling the environment, use of growth regulators, pruning, spraying, fertilization and sanitation.

AGR 40 Plant Science/Plant Propagation (2 cl. hrs., 6 lab hrs.)(4 cr.)

AGR 40 is concerned primarily with the study of plant science, and especially plant propagation. During the first portion of the semester, there will be extensive studies into Botany. Plant morphology, anatomy, physiology, and classification will be covered. The laboratory portion of the class will concern practical field work and some laboratory work.

AGR 41 Farm Physical Facilities, Construction and Maintenance (1 cl. hr., 5 lab hrs.)(3 cr.)

Practice in planning the layout of physical facilities common on the farm; practice in the construction and maintenance of simple structures.

AGR 42 Animal Science and Livestock (2 cl. hrs., 6 lab hrs.) (4 cr.)

Terminology, technology, and specializations of the animal science curriculum; different classifications and breeds of animals, future employment possibilities; basic scientific concepts pertaining to agriculture.

AGR 050/150 Landscape, Gardening and Design (2 cl. hrs., 4 lab hrs.)(3 cr.)

Elements of landscape design; identification and selection of plant materials, reading of landscape plans; functional and designing based on human needs, plant needs and aesthetics; development and implementation of plans and maintenance practices.

AGR 52 Marketing of Agriculture Products (2 cl. hrs., 2 lab hrs.)(3 cr.)

A course in the principles and practices of marketing of agricultural products; with particular emphasis in the agencies of channels of trade, and problems of distribution.

AGR 58/158 Agriculture Practicum I (1 cl. hr., 18 lab hrs.)(variable credit)

Agriculture Practicum may be selected to provide the student with practical experience in the career area which the student has chosen. The student and instructor will mutually formulate a project which will aid the student in achieving his career objectives.

AGR 59/159 Agriculture Practicum II (1 cl. hr., 18 lab hrs.)(variable credit)

Agriculture Practicum may be selected to provide the student with practical experience in the career area which the student has chosen. The student and instructor will mutually formulate a project which will aid the student in achieving his career objectives.

AGR 101 Orientation to Agriculture (2 cl. hrs., 3 lab hrs.)(3 cr.)

A study of agriculture careers, the opportunities and the problems. Guest speakers, discussions and visitations.

### III. CURRENT STATUS OF THE FOUR YEAR AGRICULTURAL COLLEGES AT MANOA AND HILO /1

#### FOUR-YEAR AGRICULTURAL COLLEGES IN HAWAII

The College of Tropical Agriculture on the Manoa Campus includes the Hawaii Agricultural Experiment Station; the Cooperative Extension Service and Instructional Divisions in (a) Agriculture and (b) Human Resources Development.

The Instructional Division in Agriculture has nine departments which provide undergraduate and/or graduate courses leading to the BS, MS and Ph.D degrees. In Spring 1975, there were over 350 undergraduate and 200 graduates in the agricultural programs on the Manoa Campus.

The Hilo College presently offers twelve agricultural courses, equivalent in material and in credits to similarly numbered courses at the Manoa Campus. By September 1975, the College of Agriculture at Hilo, will start a four year program leading to the BS degree.

#### THE AGRICULTURAL PROGRAM AT MANOA

Students may study food production, the beautification of the environment, the preservation of natural resources, the recycling of wastes, the prevention of pollution, in the courses offered by the nine departments of the College of Tropical Agriculture at Manoa.

Some of these are: animal science which deals with the contribution of farm animals to man; the breeding, feeding of poultry, cattle, horses, and swine, pre-veterinary preparation; soil science covering natural resources, fertility of land, prevention of erosion; entomology, the study of insects, and their chemical, biological and cultural control; horticulture, the study of plants useful to man, the breeding and growing of ornamentals, vegetables, fruits; landscaping, weed control; plant pathology, the study of diseases of plants caused by bacteria, fungi, viruses, and the methods of disease control.

Agricultural economics, agronomy, agricultural engineering, and food science and technology offer more areas of interest and specialization.

The College of Tropical Agriculture provides opportunities for students to gain practical experience in relating their classroom studies to the world of work through (a) The Pearl City Instructional Facility, a 24 acre, student operated farm with projects at several levels of responsibility and (b) The Waialeale Animal Research Farm where students can become acquainted with animal management.

#### BACCALAUREATE CURRICULA OFFERED AT MANOA

The B.S. degree can be earned through any one of three curricula: (1) Agricultural Technology (2) Agricultural Science and (3) Agricultural Economics. The requirements of the three curricula are the same for the freshman and sophomore years.

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Agricultural Technology usually is the choice of students who want to start working after obtaining the B.S. degree after 4 years. They fill positions in agricultural industry, animal and crop production, distribution; with federal and Hawaii State work such as quarantine, inspection and soil conservation; as agricultural teachers after obtaining State or College of Education certification; as entrepreneurs in agriculture services such as landscaping, turf, nursery, garden shops, etc.

Agricultural Science attracts students who wish to go on to graduate and advanced work for the Master's and Doctor's degrees. They become agronomists, economists, entomologists, pathologists, biochemists, olericulturists, pomologists, animal breeders, etc. They will work in universities, government and private research labs, federal and state specialist jobs.

Agricultural Economics involves students moving into federal and state government at all three levels of degree.

#### JOB OBJECTIVE FOR STUDENTS

The number and percentage of agricultural graduates from 1961 to 1974, now employed in agricultural environment, agricultural production, agricultural research and agricultural service are shown in Appendix K, Table 1, "Employment of University of Hawaii Agricultural Graduates 1961-62, 1973-74" and Appendix K, Table 2, "Comparison of Jobs held by University of Hawaii Graduates 1948-1963 and 1961-1974."

The "Agricultural Job Mart", started in January, 1975, will be printed at intervals of 3-5 weeks for distribution to students, advisors, and to community and industry people. It will give samplings of available jobs, scholarship opportunities and listings of seniors, available for employment. (Appendix K)

#### COURSE REQUIREMENTS

The University's "general core requirements" include introductory courses in communications, quantitative reasoning, world civilizations, humanities, natural sciences and social sciences. These are offered in the College of Arts and Sciences and in Community Colleges.

The College of Tropical Agriculture's core includes courses in local agricultural orientation, animal science, plant sciences, economics, entomology and soils. These provide a good base for the core courses and technology electives in the three agricultural curricula.

The details of the requirements of the three curricula are shown in Appendix I, "Student Advising in the College of Tropical Agriculture." The descriptions of the agricultural courses, together with credits, time of offering and names of instructors are published in the general catalog of the University of Hawaii.



## UNIVERSITY COURSES ON THE MANOA CAMPUS RECOMMENDED FOR ARTICULATION WITH THE COMMUNITY COLLEGES

Students in Community Colleges located on Oahu may, through concurrent registration, take certain exploratory courses in agriculture on the Manoa Campus.

1. Ag 100, Background of Agriculture. On Friday afternoons during the Fall semester, students are introduced to various factors of agriculture in the community. They visit such places as hydroponic farms, waste disposal plants, automated poultry plants, state quarantine facilities, dairy farms, beef feeding operations, botanic gardens, food processors, etc.
2. Ag 200 and 201, Agricultural Practice. The student operated farm at Pearl City gives students a chance to become acquainted with crops and soil through their own projects in growing rice, taro, bananas, papayas, vegetables; in irrigation systems, in organic gardens; in composting operations; in beekeeping; in machinery operation; in nursery organization. They relate courses and professors to field projects.
3. Animal Science 341, Livestock Management Laboratory. An exciting 6 weeks during the summer at the Waialeale Animal Science Research Farm where experience is gained in working with poultry, swine, beef and dairy. There is housing on the farm. Alternatively, students can attend on week ends until they have completed an equivalent number of work-hours.
4. Horticulture 101, Plants are for People. For students not in the College of Tropical Agriculture to become acquainted with Hawaiian flowers, fruits, trees and vegetables.

## ARTICULATION MATERIAL FOR STUDENTS OF HIGH SCHOOLS AND COMMUNITY COLLEGES

Brochures on agricultural careers, curricula, display materials, are available upon request to the Assistant Dean for Resident Instruction and Student Services, College of Tropical Agriculture, Bilger 235, University of Hawaii, Manoa Campus.

Portable 8 x 8 folding displays and speakers from the Collegiate Chapter FFA can be provided for career week programs on Oahu.

COLLEGE OF TROPICAL AGRICULTURE  
UNIVERSITY OF HAWAII

1968 May  
1969 Jan, July, Oct  
1970 March, June  
1971 Jan, July  
1972 Jan, June  
1973 July, Dec  
1974 August

STUDENT ADVISING IN THE COLLEGE OF TROPICAL AGRICULTURE

Agriculture students should be familiar with the many counseling and advising services of the University and the College which are at their disposal. The details of these services are described in the General Catalog of the University. Some of the most important are as follows:

1. ACADEMIC ADVICE relating to course work and curricula.
  2. PROFESSIONAL ADVICE relating to professional objectives.
  3. PERSONAL COUNSELING relating to unusual problems.
  4. FINANCIAL AIDS--scholarships, loans, undergraduate jobs.
  5. HEALTH SERVICE--medical care program.
  6. FOREIGN STUDENT ADVICE--immigration, etc.
  7. UNDERGRADUATE EMPLOYMENT on campus.
  8. EMPLOYMENT AFTER GRADUATION and preparation of resumes.
  9. HONORS ADVICE--Selected Studies and Honors Program.
- And, of course, general advice from the office of the Assistant Dean.

\* \* \* \* \*

1. ACADEMIC ADVICE

The scientific staff of the Hawaii Agricultural Experiment Station and the specialists of the Cooperative Extension Service provide the instructors for your agricultural courses. In addition, they will give you advice regarding your curriculum and information regarding their profession. But make an appointment by phone first!

Three curricula are available. The agricultural economics and agricultural science curricula will prepare you for advanced work in graduate school. The agricultural technology curriculum is designed for those who desire immediate employment after graduation in the agricultural services, industry, teaching, and production.

The three agricultural curricula and their options have several advisors at your service as follows:

AGRICULTURAL ECONOMICS

- (a) Agricultural Economics--Dr. Heinz Spielmann, Keller 115, Phone 8420.

AGRICULTURAL SCIENCE

- (a) Agronomy and Soil Science--Dr. James Silva, Krauss 113, Phone 7568  
 (b) Animal Science--Dr. Raymond Herrick, Henke 130, Phone 8334.  
 (Pre-vet)--Dr. Allen Miyahara, Henke 135, Phone 8217, 8334.  
Dr. Robert Nakamura, Henke 141, Phone 8217, 8334.  
 (c) Entomology--Dr. Frank Haramoto, Krauss 4, Phone 8261.  
 (d) Hort Science--Dr. Richard Hartmann, St. John 110A, Phone 8351.

AGRICULTURAL TECHNOLOGY

- (a) General Tropical Agriculture--Assistant Dean Shosuke Goto, Bilger 235  
 Phone 8140.  
 (b) Mechanized Agricultural Production (MAP)--Dr. M. Ray Smith, Al'i 101,  
 Phone 8154.  
 (c) Horticultural Technology--Dr. Richard Hartmann, St. John 110A,  
 Phone 8351.  
 (d) Animal Technology--Dr. Raymond Herrick, Henke 130, Phone 8334.

Students with satisfactory records desiring academic and professional objectives in other areas such as agricultural education, plant pathology, food science and technology, extension service, will be assigned to appropriate advisors through this office. They will help you plan a course of study acceptable for graduate work in their areas.

Curriculum worksheets for (1) each of the three curricula (2) worksheet for class schedule forms and (3) worksheet for registration are attached. More copies are available in Bilger 235 or from your advisor.

### SOME HINTS ON EARLY ACADEMIC ADVISING

Advising is a continuous process throughout the year. See you dean or advisor before registration week! They will welcome you, provided you make an appointment, anytime during the year. You can save time, however, by doing some advanced work such as:

- (a) Checking courses you have credits for on the curriculum worksheet (attached).
- (b) Circling courses you wish to take during the coming semester.
- (c) Filling in your class schedule with the courses that can be fitted in (attached).
- (d) Filling in worksheet for registration (attached). THEN VISIT YOUR ADVISOR.

## 2. PROFESSIONAL ADVICE

Information on professional objectives can be obtained from brochures in Bilger 235 and from the scientists, instructors, and extension specialists of the agricultural departments. Mrs. Leong will help you make an appointment with persons in the profession you are interested in. Or you can meet them through the Ag 100 orientation, or the Ag 200/201 practical experience courses.

## 3. PERSONAL COUNSELING

The Counseling and Testing Center has a staff of professional psychologists and psychiatrists to help you with problems which are beyond the competence of the academic advisor. Educational, vocational, and personal counseling is available. Phone 7927 for an appointment.

## 4. FINANCIAL AIDS

Information about scholarships, grants, loans, and student employment is available from the Office of Financial Aids, Phone 7251.

## 5. HEALTH

The Student Health Service offers a medical care program through its dispensary and infirmary. Phone 8966 for an appointment.

## 6. FOREIGN STUDENTS AND FOREIGN STUDY

- (a) East-West Center undergraduate students are assigned to program advisors who work closely with our office in providing academic and other advice.
- (b) The International Student Office, 1755-A Pope Road (Electrical Engineering Quadrangle), advises all other foreign students. It helps with problems regarding immigration, financial matters, living arrangements, etc.
- (c) American students wishing advice about opportunities in overseas study, service, and travel can also obtain help from the ISO, 1755-A Pope Road.

## 7. UNDERGRADUATE EMPLOYMENT ON CAMPUS

Undergraduates must be cleared with the University Personnel and the Financial Aids Offices before they can be hired. More information can be obtained from the Office of Financial Aids. In addition, they must sign the work agreement forms per semester. The minimum rate is \$1.60 per hour. Work agreement forms and further information may be obtained from Mrs. Leong in Bilger 235.

## 8. EMPLOYMENT AFTER GRADUATION

Advice on careers and job opportunities, references, employment contacts, can be obtained from the University Placement Officer. Help is given to seniors in preparing their personal resumes. Phone 8136 for an appointment.

Watch the "recruiting and career schedules" on Keller bulletin boards and investigate the opportunities for both ag students AND those for liberal arts.

## 9. HONORS PROGRAM

Students in the Selected Studies and Honors Program have their own publication, reading room, and lounge. More information can be obtained from Dr. Judson Ihrig, College of Arts and Sciences, and Director of Honors Program (Phone 8391) or Dean Shosuke Goto, College of Tropical Agriculture representative (Phone 8140). The College offers IS 221-222 International Agriculture under this program.

COLLEGE OF TROPICAL AGRICULTURE  
UNIVERSITY OF HAWAII

REQUIREMENTS--1974

1968 July, Dec  
1969 Jan, July, Oct  
1970 March, June, Sept  
1971 Jan, July  
1972 Jan, June  
1973 July, Dec  
1974 August

CURRICULUM: AGRICULTURAL TECHNOLOGY

MAJOR: (1) General Tropical Agriculture (2) Mechanized Agricultural Production  
(3) Horticultural Technology (4) Animal Technology

STUDENT . . . . . ADVISOR . . . . . DATE . . . . .  
REQUIRED HAVE NEED

I. UNIVERSITY CORE

COMMUNICATIONS--Eng 100 3  
 QUANTITATIVE REASONING--Math or Phil 210. 3  
 WORLD CIVILIZATIONS--History 151-152, 241-242; Honors 161-162; Asian St. 241-242. 6  
 HUMANITIES 9  
 (a) Eng 251-252, 253-254, 255-256; Drama 160; Literature courses offered by language departments.  
 (b) Phil 100, 200, 201; Rel 150, 151.  
 (c) Art 101, 270, 280; Music 160, 170, 180; Am St 201, 202; Asian St 310.  
 NATURAL SCIENCES 9  
 (a) Geog 101; Geology and Geophysics 101, 102; Meteorology 101.  
 (b) Ocean 201; Phys 100, 102, 151, 152, 170; Bot 101, 201; Genet 451; Micro 130; Zool 101; Biol 220; Biochem 441.  
 (c) Gen Sc 121, 122, 124; Inf Sc 301, 302.  
 SOCIAL SCIENCES 9  
 (a) Anth 150, 200; Psych 100, 110; Soc 100, 200; Am St 201, 202, 301, 302; Asian St 312; Bot 105.  
 (b) Econ 120, 150, 151; Geog 102, 151; Pol Sc 110; Gen Eng 203.

II. COLLEGE OF TROPICAL AGRICULTURE CORE 27

Chem 113, 113L, 114, 114L; Ag 100; AnSc 141; Hort 262 or Agron 201; Ag Econ 220; Ento 261; and Soils 304.

III. AGRICULTURAL TECHNOLOGY CORE--Six courses from the following: 20+

Ag Eng 351, 351L; AnSc 244; Ento 374; Hort 450; PPath 401, 401L; Soils 350; Fd Sc 201.

IV. MAJORS

(1) General Tropical Agriculture 18  
 (a) 18 Electives in Agriculture including Ag 201.  
 (b) 18 credits of non-agriculture electives, and additional credits to make 128 credits. TOTAL 128

	REQUIRED	HAVE	NEED
<p>(2) <u>Mechanized Agricultural Production</u>: 15 credits in Agricultural Engineering courses including Ag Eng 499; and 27 credits from the following: Ag Ec 428; Agron 411, 412; An Sc 244; Fd Sc 401; Soils 350, 460; Acc 201, 202; BAS 301, 302; Bot 470; Math 205, 206, 231, 232; Phys 170, 171, 272, 272L; CE 270, 271, 320, 421; EE 311, 311L; ME 311, 312, 424; and additional credits to make 128 credits.</p> <p style="text-align: right;">TOTAL</p>	128		
<p>(3) <u>Horticultural Technology</u>: Summer Practicum, 3 credits of Hort 499; 25 credits from the following: Agriculture, Botany, Geog 300, 314; or Acc 201, 202 that have not been used to satisfy other requirements; and additional credits to make 128 credits. A minimum of 15 horticulture credits overall is required.</p> <p style="text-align: right;">TOTAL</p>	128		
<p>(4) <u>Animal Technology</u>: AnSc 244, 251, 321; 21 credits from: Agron 201, 413; AgBio 402; Ag Econ 321, 322, 427, 430; AgEng 351, 351L, 435; AnSc 342, 351, 352, 353, 354, 362, 445, 451-452, 453; FdSc 201, 401; Hort 453, 481; Soils 340, 440, 460, 461, 470; Geog 300, 314; Acc 201, 202; and additional credits to make 128 credits. A minimum of 18 Animal Science credits overall are also required.</p> <p style="text-align: right;">TOTAL</p>	128		

COLLEGE OF TROPICAL AGRICULTURE  
UNIVERSITY OF HAWAII

REQUIREMENTS--1974

1968 July, Dec  
1969 Jan, July, Oct  
1970 March, June, Sept  
1971 Jan, July  
1972 Jan, June  
1973 July, Dec  
1974 August

CURRICULUM: AGRICULTURAL ECONOMICS

MAJOR: (1) Economics

STUDENT . . . . . ADVISOR . . . . . DATE . . . . .

I. UNIVERSITY CORE

- COMMUNICATIONS--Eng 100. 3  
 QUANTITATIVE REASONING--Math or Phil 210. 3  
 WORLD CIVILIZATIONS--History 151-152, 241-242; Honors 161-162; Asian St 241-242. 6  
 HUMANITIES 9  
 (a) Eng 251-252, 253-254, 255-256; Drama 160; Literature courses offered by language departments.  
 (b) Phil 100, 200, 201; Rel 150, 151.  
 (c) Art 101, 270, 280; Music 160, 170, 180; Am St 201, 202; Asian St 310.  
 NATURAL SCIENCES 9  
 (a) Geog 101; Geology and Geophysics 101, 102; Meteorology 101.  
 (b) Ocean 201; Phys 100, 102, 151, 152, 170; Bot 101, 201; Genet 451; Micro 130; Zool 101; Biol 220; Biochem 441.  
 (c) Gen Sc 121, 122, 124; Inf Sc 301, 302.  
 SOCIAL SCIENCES 9  
 (a) Anth 150, 200; Psych 100, 110; Soc 100, 200; Am St 201, 202, 301, 302; Asian St 312; Bot 105.  
 (b) Econ 120, 150, 151; Geog 102, 151; Pol Sc 110; Gen Eng 203.

II. COLLEGE OF TROPICAL AGRICULTURE CORE

Chem 113, 113L, 114, 114L; Ag 100; AnSc 141; Hort 262 or Agron 201; AgEcon 220; Ento 261; and Soils 304. 27

III. AGRICULTURAL ECONOMICS CORE

- (a) Econ 150, 151, 300, 301; Ag Econ 321, 322, 428, 432, 434. 24<sup>+</sup>  
 (b) Electives totalling 33 credit hours, none of which may overlap with courses taken to satisfy the various core requirements and distributed so as to have at least six credit hours from each of the following groups: 33  
 (1) Ag Econ 427, 429, 430, 480, 481.  
 (2) Econ 310, 340, 399, 400, 404, 405, 410, 411, 412, 414, 415, 425, 426, 430, 440, 450, 452, 460, 461, 470, 480, 490, 492, 496.

AGRICULTURAL ECONOMICS

(3) Pol Sc 110; Law 300, 311; Acc 201, 202, 305, 307, 361, 365;  
RE 300; BEc 342, 361, 362; Mgt 301, 341, 344, 345; Mkt 315,  
321, 381, 397; PIR 361, 365, 367.

(4) Ag 200-201; Ag Bio 402, 402L; Ag Eng 351, 351L, 435; Agron  
201, 310, 411, 412, 413; Soils 340, 440, 460, 461, 470;  
An Sc 244, 321, 341, 342, 351, 352, 353, 354, 445, 453;  
Ento 374, 376; Fd Sc 201, 401; Hort 350, 450, 453, 471, 481;  
PPath 401, 401L; Bot 105.

	REQUIRED	HAVE	NEED
(3)			
(4)			
TOTAL	128		



COLLEGE OF TROPICAL AGRICULTURE  
UNIVERSITY OF HAWAII

1968 July, Dec  
1969 Jan, July, Oct  
1970 March, June, Sept  
1971 Jan, July  
1972 Jan, June  
1973 July, Dec  
1974 August

REQUIREMENTS--1974

CURRICULUM: AGRICULTURAL SCIENCE

MAJOR: (1) Animal Science (2) Entomology (3) Agronomy & Soil Science (4) Hort Science

STUDENT . . . . . ADVISOR . . . . . DATE . . . . .

I. UNIVERSITY CORE

COMMUNICATIONS--Eng 100.

QUANTITATIVE REASONING--Math or Phil 210.

WORLD CIVILIZATIONS--History 151-152, 241-242; Honors 161-162; Asian St 241-242.

HUMANITIES

(a) Eng 251-252, 253-254, 255-256; Drama 160; Literature courses offered by language departments.

(b) Phil 100, 200, 201; Rel 150, 151.

(c) Art 101, 270, 280; Music 160, 170, 180; Am St 201, 202; Asian St 310.

NATURAL SCIENCES

(a) Geog 101; Geology and Geophysics 101, 102; Meteorology 101.

(b) Ocean 201; Phys 100, 102, 151, 152, 170; Bot 101, 201; Genet 451; Micro 130; Zool 101; Biol 220; Biochem 441.

(c) Gen Sc 121, 122, 124; Inf. Sc 301, 302.

SOCIAL SCIENCES

(a) Anth 150, 200; Psych 100, 110; Soc 100, 200; Am St 201, 202, 301, 302; Asian St 312; Bot 105.

(b) Econ 120, 150, 151; Geog 102, 151; Pol Sc 110; Gen Eng 203.

REQUIRED | HAVE | NEED

3

3

6

9

9

9

27

23

II. COLLEGE OF TROPICAL AGRICULTURE CORE

Chem 113, 113L, 114, 114L; Ag 100; An Sc 141; Hort 262 or Agron 201; Ag Econ 220; Ento 261; and Soils 304.

III. AGRICULTURAL SCIENCE CORE

Chem 243, 243L; Chem 244, 244L or Ag Bio 402, 402L; Genet 451, 451L; Phys 151, 152L; and Micro 130.

IV. MAJORS

(1) Animal Science Major: An Sc 244, 321; 9 credits from AnSc 251, 342, 351, 352, 353, 354, 362; Zool 320; 16 credits from AgBio 402, 402L; Ag Eng 351, 351L; Agron 201, 413; An Sc 445, 451-452, 453; Chem 133; Econ 150; Ento 374, 374L; Zool 340, 416, 417, 430.

AGRICULTURAL SCIENCE MAJORS

REQUIRED HAVE NEE

(1) continued: Pre-Veterinary Medicine Option: Biol 250; Bot 101; Chem 113, 113L, 114, 114L, 133, 133L, 243, 244L; BioChem 441, 442 or 605, 606 can be substituted for Ag BioChem 402, 403; Eng 100, 251 or 315; Genet 451, 451L; Math 134 and 150 or 205; Phys 151, 151L, 152, 152L; Zool 101, 420; Micro 351 can be substituted for Micro 130; and 4 credits each of Humanities and Social Sciences.

TOTAL 128

(2) Entomology Major: Ento 361, 362, 374, 374L; one year of a foreign language approved by advisor; 15 credits from AgEng 351, 351L; Bot 105, 461, 470; Chem 133; Geog 300; Hort 450, 453; Phil 210; PPath 401, 401L; Soils 340, 350; Zool 330, 340, 416, 417, 430, 631, 632.

TOTAL 128

(3) Agronomy and Soil Science Major:  
 With emphasis on crops--Agron 310, 499; Ag Bio 402; Bot 470 and 18 credits from the courses listed below.  
 With emphasis on soils--Chem 133, 133L; Soils 340, 350, 499, and 18 credits from the courses listed below.  
 Agron 201, 310, 402, 411, 412, 413;  
 Ag Econ 327, 434, 481;  
 Ag Eng 351, 351L, 435;  
 AnSc 244;  
 Bot 160, 201, 410, 412, 430, 453, 461, 470;  
 Chem 133, 133L, 243, 244, 351, 352, 422;  
 Geog 101, 300, 314, 400, 406;  
 GG 101, 102, 301, 302, 424;  
 Hort 450, 453, 481;  
 Math 205, 206, 231, 232;  
 Phil 210;  
 PPath 401, 401L;  
 Soils 340, 350, 404, 440, 460, 461, 470;  
 Zool 631, 632;  
 One year of an approved foreign language

TOTAL 128

(4) Tropical Horticulture Major: Hort 450 and 28 credits from the following:  
 Ag Bio 402, 402L;  
 AgEng 351, 351L, 435;  
 Agron 310, 402, 412;  
 Biol 220, 250, 401, 440;  
 Bot 105, 130, 160, 201, 410, 412, 421, 430, 436, 450, 453, 454, 461, 470, 480;  
 Chem 133, 133L;  
 Ento 374, 374L;  
 Hort 350, 420, 453, 460, 471, 481, 499;  
 Math 205, 206;  
 PPath 401, 401L, 405;  
 Soils 340, 350, 404; or  
 One year of a foreign language approved by advisor.

TOTAL 128

# THE AG JOB MART

Dr. S. Goto  
Resident Instruction and Student Services  
College of Tropical Agriculture  
Bilger 235, Univ. of Hawaii, Manoa Campus

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April 2, 1975

## SPECIAL SCHOLARSHIP ISSUE

30. THE FREDERICK K.T. TOM SCHOLARSHIP 1975-76 - \$500 per year for a maximum of four years. Criteria: graduate of high school in Hawaii; first preference to undergraduate student from Kauai, second to undergraduate from Maui, majoring in agriculture; financial need and satisfactory progress towards degree.  
Applications available at the Financial Aids Office, Bachman Annex 2-A (below old bookstore). See Ms. Shirley Taniguchi, counselor, before April 15, 1975.
31. THE RALSTON-PURINA SCHOLARSHIP 1975-76 - \$650 award for outstanding senior or junior for Fall, 1975. Objective: to give recognition and assistance to outstanding undergraduate students in agriculture who have unlimited growth potential and limited financial resources; to establish leadership in curricular and extracurricular pursuits as a goal for all young people in agricultural colleges. Criteria: upper 25% of class; leadership in special activities; sincerity of purpose in agriculture as a chosen field. Financial need: apply by a letter with reference to criteria to Assistant Dean S. Goto, Bilger 235, before June 13, 1975.
32. THE HAWAII STATE MERIT AND STUDENT INSTRUCTOR SCHOLARSHIPS, FALL 1975 - (24) for undergraduates in good academic standing in an option of the Agricultural Technology, Agricultural Science or Agricultural Economics curricula. The objective is to encourage young people into professions involved in increasing the agricultural production of Hawaii.  
Criteria for selection include (1) Applicants must be legal residents of Hawaii for the previous 5 years. (2) Recipients must assist instructors in scheduled agricultural classes or laboratories in Fall, 1975. (Suggested number of hours per semester - 100)  
Value of award is \$225 per semester.  
Special application forms available in Bilger 235 to qualified instructors. Students may apply directly to instructor. Target date: August 29, 1975.
33. THE ALONZO GAPTLEY STUDENT INSTRUCTOR AWARDS 1975-76 - (Number-variable) An award valued at \$200 for undergraduates in good standing in an option of the Agricultural Technology, Agricultural Science or Agricultural Economics curricula.  
The award involves assisting instructors in scheduled agricultural classes or laboratories for about 100 hours during the Fall 1975 semester.  
Criteria for selection include (a) leadership (b) contribution to the college instructional program (c) need.  
Special application forms available to qualified instructors in Bilger 235. Students should apply directly to class instructor. Target date: August 29, 1975.
34. THE ZERA FOSTER SOIL SCIENCE AWARD 1975-76 - Offered when the income from the trust fund permits an award of \$50 to be made to an outstanding student in soil science. It is available in May, 1975 and December, 1975. The award will be based on a paper about a soil science subject presented to the Zera Foster Soil Science Committee. See Dr. Bartholomew. Target date: April 30, 1975.
35. 4-H SCHOLARSHIPS - Several scholarships are available to college students, present or former 4-H members, in the 50 States and Puerto Rico. They include:  
Four (4) "Homelite" forestry scholarships, \$1600 each, (incoming juniors).  
Four (4) "De Kalb Ag Research, Inc.", Ag Business scholarships, \$600 each, (incoming juniors).  
One (1) "Alpha Gamma Rho" Educational scholarship, \$800 each, (incoming juniors).  
Two (2) "Allied Mills" Animal Science scholarship, \$800 each, (incoming juniors).  
Two (2) "Chevron Chemical Co." Increasing Food Production scholarship, \$800 each, (incoming freshman or sophmores).  
More information may be obtained from Mrs. Betty Zane Shimabukuro, Associate State Leader, 4-H and Youth, CES, College of Tropical Agriculture, Bilger 246.
36. AMERICAN SOCIETY OF ANIMAL SCIENCE SCHOLARSHIP MEDALS - Open to students majoring in the Department of Animal Sciences,  
(a) Gold scholarship medal - senior  
(b) Silver scholarship medal - junior  
(c) Bronze scholarship medal - sophomore  
Nominations by the members of ASAS, the chairman of the department and the Dean or Director of Resident Instruction. Dr. Ray Herrick, committee chairman.
37. UNIVERSAL SCHOLARSHIP - (1) Sponsored by Financial Aids Policy Committee, University of Hawaii. Open to undergraduates in Tropical Agriculture, Business Administration, Education, Engineering and Health Sciences. GPA 3.5 or better. Minimum of 24 credits earned in letter grades. Award valued \$300-350, depending on trust income. Target date: February 28, 1976. Colleges will recommend applicants.
38. WATAMULL SCHOLARSHIPS - (3) Scholarships for full-time students in each of the College of Arts and Sciences, Business Administration and Tropical Agriculture. Amount of award depends upon the trust income. Recommendations to be made by the deans of student services. Target date March 31, 1976.

# ● THE AG JOB MART

Dr. S. Goto  
Resident Instruction and Student Services  
College of Tropical Agriculture  
Bilger 235, Univ. of Hawaii, Manoa Campus

April 11, 1975

Listed below are examples of agricultural job offers that have come to my attention. Many other offers go directly to your ag professors, departments of the college, the University employment office and to the graduate placement office. Some jobs listed may have been filled before being listed here. Current offerings will be posted outside of Bilger 235.

When applying for a position, you should have a properly prepared resume of your background, education and experience. Mr. Roy McArdle, Director of Placement and Career Planning, old bookstore, will help you to prepare this.

To "THE FRIENDS OF THE AGRICULTURAL STUDENTS (unorganized)": If you know of any jobs for ag students, please write or phone me (phone 948-8140) the details for posting in the "JOB MART".

## URGENT NOTICE TO GRADUATING SENIORS, MAY, 1975

- (a) Check with your advisors regarding fulfillment of requirements.
- (b) Send in applications for degree (forms in Bilger 235).
- (c) Pick up information on "Commencement Exercises" May 18, 1975 in Bilger 235.

GET YOUR COPY IN BILGER 235

53. WANTED, PRODUCTION MANAGER TRAINEE by "Mahalo Farms" of Waimanalo. Agricultural graduate or graduating senior, start work immediately on part-time basis, proficient in machinery operation; work with banana and vegetable crops. Salary open; if satisfactory, bonus incentive and quarters later. Phone Mrs. Fred Wong, 259-9683, evenings, between 6-11 P.M.
54. WANTED, PRODUCTION WORKERS (2) by "Mahalo Farms", Waimanalo. Full-time immediately; but can arrange part-time until end of semester: harvesting, clearing operations. Salary open. Phone Mrs. Fred Wong at 259-9683, evenings, 6-11 P.M.
55. WANTED, COUNTY EXTENSION AGENT IN HORTICULTURE ON OAHU, UNIVERSITY OF HAWAII COOPERATIVE EXTENSION SERVICE - Wanted immediately. BA degree in agriculture; salary commensurate with work experiences and academic achievement. For more information, see Mr. George Nakasato, Assistant Director CES, Bilger 245B. (Also see par 46, April 4th Job Mart, re Extension Technician APT-1).
56. WANTED, COUNTY EXTENSION AGENT, KAMUELA, BIG ISLAND for University of Hawaii Cooperative Extension Service. To work on ornamental horticulture, BA degree in Tropical Agriculture. Opening must wait for clearance from central administration. Salary commensurate with work experience and academic achievement. For more information, see Mr. George Nakasato, Bilger 245B.
57. WANTED, COUNTY EXTENSION AGENT, HILO University of Hawaii CES: agronomic and ornamental work. BS degree in Tropical Agriculture: opening upon clearance from central administration. Salary commensurate with work experience and academic achievement. For more information see Mr. George Nakasato, Bilger 245B.
58. WANTED, FARM AND CONSTRUCTION WORKERS (4) for new enterprises on Molokai: general field construction, work will start in June and extend to end of year. If interested, see me for details.
59. WANTED, TRAINEE OPERATIONS MANAGER for farming enterprise being developed on Guam. Qualifications: practical tropical farm experience and mechanical equipment knowledge; willing to work hard in developing all phases of an existing tree orchard of various tropical fruits; expand fruit and vegetable production; concentrate preparation, assist in erection and operation of initial two hydroponic units; manage foreign labor, assist in marketing. If interested, see me for details.
60. WANTED, AGRICULTURAL INSTRUCTORS (4) - College of Agriculture, Hilo campus; start Fall, 1975, pending availability of funds. Ph.D or MS degrees with three (3) years of teaching at the college/university level in (a) horticulture (b) food science (c) agronomy (d) animal nutrition. Direct inquiries to Acting Dean, College of Agriculture, University of Hawaii at Hilo, P.O. Box 1357, Hilo, Hawaii, 96720. Deadline May 15, 1975.
61. WANTED, AGRICULTURAL LECTURERS (3) College of Agriculture, Hilo campus: lecturers to teach one or two sections at standard college lecturer salary scale (a) animal production (b) agricultural economics (c) crop production. Appointments are on a one-semester basis and are subject to BOR approval. Applicants should have a minimum of a MA degree or equivalent in subject area. Direct inquiries to Acting Dean, College of Agriculture, University of Hawaii at Hilo, P.O. Box 1357, Hilo, Hawaii, 96720. Deadline May 15, 1975.

# THE AG JOB MART

Dr. S. Goto, Assistant Dean  
Resident Instruction and Student Services  
College of Tropical Agriculture  
Bilger 235, Univ. of Hawaii, Manoa Campus

April 4, 1975

Listed below are examples of agricultural job offers that have come to my attention. Many other offers go directly to your ag professors, departments of the college, the University employment office and to the graduate placement office. Some jobs listed may have been filled before these listed here. Current offerings will be posted outside of Bilger 235.

When applying for a position, you should have a properly prepared resume of your background, education and experience. Mr. Roy McArdle, Director of Placement and Career Planning, old bookstore, will help you to prepare this.

To "THE FRIENDS OF THE AGRICULTURAL STUDENTS (unorganized)": If you know of any jobs for ag students, please write or phone me (phone 948-8140) the details for posting in the "JOB MART".

GET YOUR COPY IN BILGER 235

39. WANTED, AG GRADUATE - Landscaping construction, needed immediately, salary \$8-9,000/yr., depending on experience. Phone 833-1891.
40. WANTED, NURSERY assistant to manager; recent agricultural graduate preferred. Salary \$8-9,000/yr., depending on experience. Phone 833-1891.
41. WANTED, students interested in researching food uses of limu (algae), in a summer workshop on the Big Island. Work will include gathering and testing of limu recipes, collection of Hawaiian algae and preparation of manuscript for publication. FNS students preferred. Phone Heather Fortner at 988-7213 or Francis Oishi at 948-8433, 8444.
42. WANTED, RESEARCH STATISTICIAN III - Oahu employment only. For research studies in health, agriculture, and economics. Education required; BS degree with 3 semester hours in statistics and 15 semester hours in an appropriate field such as agriculture, etc. Experience: 1 1/2 years of research statistical survey work, or equivalent graduate work. Salary, \$844/mo. (SR-18). Apply to State Department Personnel Services, 825 Mililani Street, Honolulu, Hawaii. Information only. Last day was 3/4/75.
43. WANTED, RESEARCH STATISTICIAN V - Oahu employment only: to supervise research statistical studies. Education: BS degree with 3 semester hours in statistics and 15 additional semester hours in an appropriate field such as agriculture, etc. Salary \$1,130-1,442/mo. (SR-24). Apply to State Department Personnel Services, 825 Mililani Street, Honolulu, Hawaii. Information only, Last day was 3/4/75.
44. WANTED, RESEARCH STATISTICIAN VI - In addition to requirements of Research Statistician VI, must possess one year of experience supervising others in conducting research projects. Salary, \$1,247-1,590/mo. (SR-26). Apply to State Department Personnel Services, 825 Mililani Street, Honolulu, Hawaii. Information only. Last day was 3/4/75.
45. WANTED, HIGH SCHOOL VOCATIONAL AGRICULTURE TEACHERS (possibly two) starting fall 1975. Temporary status to graduates with BS degree in Tropical Agriculture. Higher grade after obtaining (a) State certification (b) College Education 5th year certificate. Interested seniors should talk to Mr. Hatakeyama, State Specialist, Agriculture. Phone 548-6445 for appointment.
46. WANTED, EXTENSION TECHNICIAN, HORTICULTURE APT-1, COOPERATIVE EXTENSION SERVICE- To provide homeowners with practical advice on culture, pest control, etc. in the care of plants. Eligibility requirements: BS in horticultural related fields; teaching and business experience helpful. Send resume and letter of application to Dale Goodell, Associate Director CES, Bilger 241, Honolulu, Hawaii, 96822.
47. WANTED, NURSERYMAN (3) Kohala Nursery, Big Island. BS graduates in horticulture or agriculture. (These three jobs were taken by UH graduates last week, but are listed for information).
48. WANTED, STATISTICIAN - For Oahu; gathering data for Crop and Livestock Service. Salary, \$700/mo. (SR-12) BS in agriculture: must have at least one course in statistics. See Dr. Paul Wallrabenstein, State Department of Agriculture. (This job has just been filled).
49. WANTED, STUDENT TRAINEE FOR CAREER WORK, USDA - Junior preferred; start as GS4, \$7,496/yr. plus 15% COL: may work part-time during school year; full-time during summer. Student should plan to have 15 hours of math and statistics by graduation time. For more information, make appointment with Dr. Paul Wallrabenstein, State Department of Agriculture, phone 941-3071.
50. WANTED, QUALITY CONTROL TECHNICIAN by orchard on Big Island. BS in agriculture, specialty in food technology. For more information see Professor Cavalletto, Department of Food Science. (This job has just been filled).
51. WANTED, PART-TIME OR FULL-TIME - All round worker; job includes landscaping, propagating, store salesman, etc. Excellent opportunity for varied experiences. If interested see Mr. Kalfred Yee, Garden City, Kahala Mall for more information. Phone 727-9858 for appointment.
52. WANTED, YARDMAN - Experienced agricultural student for 8-10 hours a week in Waialae-Iki; \$3/hr. if qualified and interested, see me.



TABLE 1  
EMPLOYMENT OF UNIVERSITY OF HAWAII AGRICULTURAL GRADUATES

1961-62 to 1973-74 <sup>1</sup>

JOB GROUP	YEAR												TOTALS
	1961 - 62	1962 - 63	1963 - 64	1964 - 65	1965 - 66	1966 - 67	1967 - 68	1968 - 69	1969 - 70	1970 - 71	1971 - 72	1972 - 73	
<b>I. AGRICULTURAL ENVIRONMENT &amp; BEAUTIFICATION</b>													
Landscaping; sprinkler irrigation, maintenance													
(a) Management or staff	1	-	-	-	-	-	3	1	1	5	1	3	2
(b) Entrepreneurial	-	1	1	-	-	-	1+	-	2	1	-	3	1
SUB-TOTAL	1	1	1	-	-	-	4	1	3	6	1	6	3
<b>II. AGRICULTURAL PRODUCTION (Include Managerial)</b>													
<u>Animal Industry, Aquaculture</u>													
(a) Professional, Corporate, manager	-	-	-	-	-	-	-	-	3+	-	-	-	2
(b) Entrepreneurial: rancher (dairy, poultry)	-	-	-	-	-	-	-	-	-	-	-	-	0
<u>Plant Industry</u>													
(a) Professional, Corporate, plantation	-	-	1	2	1	3+	5+	5**	2	2+	3+	2+	2
(b) Entrepreneurial; farmer (nursery, veg. crops)	1	-	1	1	1	1	1	1	-	-	2+	3*	1
SUB-TOTAL	1	-	2	3	2	4	6	6	5	2	5	5	4
<b>III. AGRICULTURAL RECREATION</b>													
<u>Government &amp; private</u>													
(a) Parks, zoos, recreational gardening, golf courses, fish ponds, dude ranches	-	-	-	-	-	-	-	-	-	-	-	-	0
(b) Agricultural therapeutics	-	-	-	-	-	-	-	-	-	-	-	1	-
SUB-TOTAL	-	-	-	-	-	-	-	-	-	-	-	1	-
<b>IV. AGRICULTURAL RESEARCH AND POST GRADUATE WORK</b>													
(a) Graduate School Agr (Hawaii)	-	-	-	-	-	1	1	-	2	3	12	9	6
(b) Graduate School Agr (other)	-	-	-	-	-	-	1	-	-	1	-	2	2
(c) Graduate School-vet school (mainland USA, Philippine)	-	-	-	-	-	-	1	2	-	1	-	-	3
(d) Research-Gov't, Univ, Private (incl. Foreign)	4**	3++	3+	8+++	4++	2+	2+	3++	2*	-	-	1	-
SUB-TOTAL	4	3	3	8	4	3	5	5	4	5	12	12	11
<b>V. AGRICULTURAL SERVICE (Incl. administrative)</b>													
<u>Government</u>													
(a) State Depts. of Agr; Health (incl. municipal)	5++	2	4+	4	3	5+	7+	3	3+	4	3+	3	2
(b) U.S. Dept. of Agr; Interior (conservation)	3	2+	3+	5	-	1	4	3	3+	4+	2	3	2
(c) Foreign Depts. of Agriculture	1	-	-	-	-	2	3	3	4	3	2	3	1
(d) University agr. service, (incl. Coop ext serv)	-	-	1	1	-	-	2+	-	1	1	-	-	6
<u>Private</u>													
(a) Banking, credit, land development, real estate	2	-	-	1	-	1	2	-	-	2**	1+	-	2
(b) Sales; feed, garden shop, pest control, agriculture equipment	-	-	-	-	-	-	2	-	1	1	1	-	6
(c) Service; coop manager, veterinarians	2**	-	-	2+	-	-	-	-	1	-	-	-	1
<u>Educational (teaching or administrative)</u>													
(a) Peace Corps; VISTA; agr missionary, manager	-	-	-	-	-	1	1	-	1	2	1	-	1
(b) University or college agr. teaching	-	-	-	-	1	-	1	-	-	-	1	-	3
(c) Foreign agr. college	-	-	-	-	1	-	-	-	6	3	1	1	-
(d) Teacher; voc agr.; ag arts; gio science; in-training	2	1	1	-	-	1	-	-	1	3+	1	1	-
SUB-TOTAL	15	5	9	13	5	11	22	9	21	23	13	12	9
<b>VI. NON-AGRICULTURAL WORK</b>													
(a) Business, service, medicine, insurance	1	1	1	2	2+	1	1	1	-	4**	1	3+	4*
(b) Government, other than in agr. or health	1+	-	1	2	3	-	1	-	-	-	-	1	-
(c) Teaching, administration, other than in agr.	1	-	2	-	-	-	2**	1+	-	-	-	2	-
(d) Research & education, other than in agr.	-	-	-	1+	-	-	-	-	-	1	-	-	1
(e) Housewife	-	-	-	-	-	-	-	-	-	-	-	-	3
(f) Deceased	-	-	-	-	-	1+	2**	-	-	1*	-	-	4
(g) Military service	-	-	-	-	-	-	-	-	1	-	-	-	1
(h) Unemployed	-	-	1	-	2	1	-	2	1	2	-	-	2
SUB-TOTAL	3	1	5	5	7	3	6	4	2	8	1	6	7
<b>VII. NOT KNOWN</b>													
(a) U.S.	-	-	1	2	-	1	5	4	1	1	2	3	3
(b) Returned to foreign countries	-	-	-	2	-	1	-	1	-	2	2	1	1
SUB-TOTAL	-	-	-	2	-	1	-	1	-	2	2	1	1

NUMBER OF STUDENTS IN GRADUATING CLASS

24 10 21 33 18 23 48 30 36 47 36 46 39 411

<sup>1</sup> as of August 1, 1974

\* includes one foreign per asterick

+ mainland USA, US Pacific Islands--incl. Guam, Trust, Western Samoa

o US citizen in England

TABLE 2

## COMPARISON OF JOBS HELD BY UNIVERSITY OF HAWAII AGRICULTURAL GRADUATES

1948 - 1963/1 and 1961 - 1974/2

EMPLOYMENT GROUP	1948 - 1963		1961-62 to 1973-74	
	NUMBER	%age	NUMBER	%age
<b>I. AGRICULTURAL ENVIRONMENT AND BEAUTIFICATION</b>				
<u>Landscaping, sprinkler, irrigation, maintenance</u>				
(a) Management or staff	4	1.0	17	4.1
(b) Entrepreneurial	0	-	10	2.4
SUB-TOTAL	4	1.0	27	6.5
<b>II. AGRICULTURAL PRODUCTION (Include Managerial)</b>				
<u>Animal Industry, aquaculture</u>				
Plant Industry	2	0.5	5	1.2
(a) Professional, corporate, plantations	27	6.7	28	6.8
(b) Entrepreneurial; farmer, nurserymen, vegetable growers	4	1.0	13	3.2
SUB-TOTAL	33	8.2	46	11.2
<b>III. AGRICULTURAL RECREATION (Government &amp; Private)</b>				
<u>(a) Parks, zoos, fish ponds, golf courses recreational gardens, dude ranches</u>				
(b) Agricultural therapeutics	-	-	1	0.2
SUB-TOTAL	1	0.2	1	0.2
<b>IV. AGRICULTURAL RESEARCH AND POST GRADUATE WORK</b>				
(a) Graduate school (Hawaii)	17	4.2	34	8.3
(b) Graduate school (Other)	11	2.7	6	1.5
(c) Graduate school (Veterinary college)	2	0.4	7	1.7
(d) Research; gov't, univ., private (incl. foreign)	25	6.2	32	7.8
SUB-TOTAL	55	13.6	79	19.3
<b>V. AGRICULTURAL AND RELATED SERVICES (incl. Administrative)</b>				
<u>Government</u>				
(a) State or municipal dept. - Agriculture, Health	(78)	(19.3)	(111)	(27.0)
(b) US Depts. - Agriculture, Interior	37	9.2	48	11.7
(c) Foreign Depts. of Agriculture	29	7.2	35	8.5
(d) Foreign Depts. of Agriculture	-	-	22	5.4
(d) University Agr. service, CES	12	3.0	6	1.5
<u>Private</u>				
(a) Banking, credit, land development, real estate	(26)	(6.4)	(23)	(5.6)
(b) Agr. sales: feed, equipment, garden	11	2.7	11	2.7
(c) Agr. services: coop manager, veterinarians	10	2.5	6	1.5
(c) Agr. services: coop manager, veterinarians	5	1.2	6	1.5
<u>Educational (incl. teaching, agr. administration)</u>				
(a) Peace Corps, VISTA	(47)	(11.6)	(33)	(8.0)
(b) University or college agr. teaching	2	.5	7	1.7
(c) University or college agr. teaching	0	-	3	.7
(c) Foreign agricultural college	0	-	12	2.9
(d) Teacher, voc agr., agr. arts, biosciences	45	11.1	11	2.7
SUB-TOTAL	151	37.4	167	40.4
<b>VI. NON AGRICULTURAL WORK</b>				
(a) Business, service, medicine, dentistry	35	8.7	22	5.4
(b) Government, other than agr. or health	11	2.7	9	2.2
(c) Teaching and administration, public schools	33	8.2	8	2.0
(d) Research, high education, other than agr.	5	1.2	3	0.7
(e) Housewife	1	0.2	4	1.0
(f) Deceased	1	0.2	1	0.2
(g) Military service	33	8.2	11	2.7
(h) Unemployed	1	0.2	0	-
SUB-TOTAL	120	30.0	58	14.1
<b>VII. NOT KNOWN</b>				
(a) U.S.	38	9.4	23	5.6
(b) Returned to foreign country	2	0.5	10	2.4
SUB-TOTAL	40	9.9	33	8.0
<b>TOTAL NUMBER OF GRADUATES</b>				
	404		411	

/1 as of March 1963

/2 as of August 1, 1974

APPENDIX III

AUTO BODY REPAIR AND PAINTING



A. ABRP COURSE SEQUENCE CHART  
Community College

	HAWAII CC	HONOLULU CC	KAUAI CC	MAUI CC
Basic Metal	Fall ABRP 21 (12 cr.)	Fall ABRP 21 (4 cr.) 22 (4 cr.) 23 (2 cr.)	Fall ABRP 20 (7 cr.)	Fall ABRP 60B (7 cr.) ABRP 60C (3 cr.)
Painting	Spring ABRP 22 (12 cr.)	Spring ABRP 24 (2 cr.) 25 (4 cr.) 26 (4 cr.)	Fall ABRP 40 (7 cr.)	Spring Basic 61B (7 cr.) 61C (3 cr.) Fall Advanced 65B (7 cr.) 65C (3 cr.)
Auto Body I	Fall ABRP 41 (12 cr.)	Fall ABRP 41 (4 cr.) 42 (3 cr.) 43 (3 cr.)	Spring ABRP 21 (7 cr.)	Spring Basic 61B (7 cr.) 61C (3 cr.) Fall Advanced 65B (5 cr.) 65C (3 cr.)
Auto Body II	Spring ABRP 42 (12 cr.)	Spring ABRP 44 (3 cr.) 45 (1 cr.) 46 (3 cr.) 47 (3 cr.)	Spring ABRP 41 (7 cr.)	Spring 66B (5 cr.) 66C (3 cr.) All C courses arranged ac- cording to stu- dent schedule.

B. ABRP COURSE EQUIVALENCY CHART - COMMUNITY COLLEGES

Using the Honolulu Community College course numbering scheme as a guide, course equivalencies at the Community Colleges are as follows:

<u>Hawaii CC</u>			<u>Honolulu CC</u>		
<u>Course # &amp; Name</u>	<u>Cr</u>	<u>Hrs/Wk</u>	<u>Course # &amp; Name</u>	<u>Cr</u>	<u>Hrs/Wk</u>
ABRP 21-Basic Metal	12	25	ABRP 21-Basic Metal Work	4	15
			ABRP 22-Fender Repairing	4	10
			ABRP 23-Steel & Auto Sheet Metal	2	2
ABRP 22-Refin. & Fender Repair	12	25	ABRP 24-Special Body Tls, Equip., Parts & Material	2	4
			ABRP 25-Basic Fundamentals of Painting	4	8
			ABRP 26-Spot Painting	4	8
ABRP 41 Auto Body Repair	12	25	ABRP 43-Radiator Repair	3	5
			ABRP 46-Front Suspension & Wheel Alignment	3	7
			ABRP 47-Fund. of Hardware, Trim, Upholstery & Wind. Service	3	5

Hawaii CCHonolulu CC

ABRP 42	12	25
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ABRP 41-Frame Repair	4	8
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ABRP 42-Body Panel Adjust. & Alignment	3	7
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ABRP 44-Body Panel Replacement	3	5
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ABRP 45-Estm., Shop Management, & Industrial Rel.	1	1
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TOTAL	48	
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TOTAL	40
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<u>MAUI</u>	<u>Cr</u>	<u>Hrs/Wk</u>
ABRP 60B	7	12
60C	3	9
ABRP 61B	7	12
61C	3	9
ABRP 65B	7	12
65C	3	9
ABRP 66B	5	8
66C	<u>3</u>	9
TOTAL	38	.

Equivalencies being worked out during 1974-75 academic year.

Kauai CC

<u>Course # &amp; Name</u>	<u>Cr</u>	<u>Hrs/Wk</u>
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ABRP 20-Fender Repair	7	15
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ABRP 21-Auto Body Repair	7	15
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ABRP 40-Auto Finishing	7	15
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ABRP 41-Chassis Straightening	7	15
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TOTAL	28	
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FRONT SUSPENSION & WHEEL  
ALIGNMENT PART OF AUTO  
MECHANICS PROGRAM

Honolulu CC

<u>Course # &amp; Name</u>	<u>Cr</u>	<u>Hrs/Wk</u>
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ABRP 21-Basic Metal Work	4	8
--------------------------	---	---

ABRP 22-Fender Repairing	4	10
--------------------------	---	----

ABRP 23-Steel & Auto Sheet Metal	2	2
----------------------------------	---	---

ABRP 24-Special Body Tools, Equip. Parts & Materials	2	4
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ABRP 42-Body Panel Adjust. & Alignment	3	7
--	---	---

ABRP 47-Fund. of Hdwe., Trim, Upholst. & Window Service	3	5
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ABRP 44-Body Panel Replacement	3	5
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ABRP 25-Basic Fund. of Paint.	4	8
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ABRP 26-Spot Painting	4	8
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ABRP 41-Frame Repair	4	8
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ABRP 43-Radiator Repair	3	5
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ABRP 45-Estim., Shop Mgmt., & Industrial Rel.	1	1
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ABRP 46-Front Susp. & Wheel Align.	3	7
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C. HAWAII COMMUNITY COLLEGE  
COURSE DESCRIPTIONS

ABRP 21-21L Basic Metal Work (12)

Designed to give instruction in the areas of employment opportunities and expectations, body shop safety, types of chassis and frame construction, hand and power tool operation, basic measurements, chassis and tool nomenclature, trim and hardware replacement, lead and plastic filling, and metal alloy characteristics. Emphasis is placed on providing practical experience in oxyacetylene welding and cutting, soldering and leading, electric arc welding, patchwork spot welding, roughing-out, dinging and picking, metal shrinking, filling and grinding, and basic metal finishing.  
(5 hrs. lect.; 20 hrs. lab.)

ABRP 22-22L Refinishing and Fender Repair (12)

Various processes in analyzing collision damage, basic body panel and fender straightening and finishing, spray painting equipment operation and care, sanding procedures, masking and priming procedures, spray painting procedures with lacquer and enamel, color matching and blending techniques, dash and garnish moulding refinishing, and surface buffing and polishing.  
(5 hrs. lect.; 20 hrs. lab.)

ABRP 41-41L Automotive Body Repair (12)

Auto body section removal, repair, replacement, and align. Emphasis is placed on service to fender, door, hood, trunk, cowl, roof, and rocker panels; includes repair and installation of seat adjusters, door locks and handles, and window regulators; experience in repairing and testing radiators.  
(5 hrs. lect.; 20 hrs. lab.)

ABRP 42-42L Automotive Body Repair II (12)

Instruction and practical experience in the areas of body and frame straightening and alignment, glass removal and replacement, upholstery and trim removal and replacement, front and basic alignment, job estimation, and auto insurance appraisal and claims.  
(5 hrs. lect.; 20 hrs. lab.)

D. HONOLULU COMMUNITY COLLEGE  
COURSE DESCRIPTIONS

ABRP 21 Basic Metal Work (4) Co-Requisite - ABRP 22, 23

The principles and practices of roughing out, dinging, picking, filing, disc sanding, soldering, shrinking and welding. Safe operation of sander and welding equipment.  
(2 hrs. lect.; 6 hrs. lab.)

ABRP 22 Fender Repairing (4) Co-Requisite - ABRP 21, 23

Theory and practice in dinging and metal finishing, patching rust holes and lining up fender. Safe operation of foot shear and bending brake.  
(1 hr. lect.; 9 hrs. lab.)

ABRP 23 Steel and Automobile Sheet Metal (2) Co-Requisite ABRP 21, 22

Introduction to general and specific subject of steel and sheet metal; basic shapes and reinforcements; elasticity of sheet metal; stress and strain of sheet metal; and expansion and contraction of metal.  
(2 hrs. lect.)

ABRP 24 Special Body Tools, Equipment, Parts and Materials (2)  
Co-Requisite - ABRP 25, 26

Training in safety, care and use of tools and equipment; also includes body and chassis nomenclature; materials and terms of the trade.  
(1 hr. lect.; 3 hrs. lab.)

ABRP 25 Basic Fundamentals of Painting (4) Co-Requisite ABRP 24, 25

Training in safety, care and use of tools and equipment; preparation for re-finishing; application of acrylic, enamel, and acrylic enamel.  
(2 hrs. lect.; 6 hrs. lab.)

ABRP 26 Spot Painting (4) Co-Requisite ABRP 24, 25

Advanced course in mixing, matching, and blending; use of color formula and mixing machine.  
(2 hrs. lect.; 6 hrs. lab.)

ABRP 41 Frame Repairing (4) Prerequisite: ABRP 21, 22, 23;  
Co-Requisite - ABRP 42, 43

Theory and practice of straightening and aligning frames, both conventional and unitized; use of tram-track and centering gauges; removing and replacing fenders and grilles; aligning front end sheet metal, and straightening bumpers and brackets.  
(2 hrs. lect.; 6 hrs. lab.)

ABRP 42 Body Panel Adjustment and Alignment (3) Co-Requisite - ABRP 41, 43

Training in adjustment and alignment of door, hood, decklid, and front fender; also includes repairing of these panels.  
(1 hr. lect.; 6 hrs. lab.)

ABRP 43 Radiator Repairing (3) Co-Requisite - ABRP 41, 42

Basic principles and practice in radiator repairing, recoring, and rodding; also includes care and use of radiator repairing and testing equipment.  
(2 hrs. lect.; 3 hrs. lab.)

ABRP 44 Body Panel Replacement (3) Prerequisite: ABRP 21, 22, 23;  
Co-Requisite - ABRP 45, 46, 47

Training in replacing body panels, such as door panel, quarter panel, rocker panel, center pillar, and turret top; also includes repairing and testing equipment.  
(2 hrs. lect.; 3 hrs. lab.)

ABRP 45 Estimating, Shop Management, and Industrial Relations (1)  
Co-Requisite - ABRP 44, 46, 47

Theory and practice on everyday business transactions; proper procedures and methods of estimating; and the problems facing potential service managers, foremen, and shop owners in areas of industrial relations.  
(1 hr. lect.)

ABRP 46 Front Suspension and Wheel Alignment (3) Co-Requisite - ABRP 44,  
45, 47

Corrective and repair procedures on front suspension and wheel alignment damage.  
(1 hr. lect.; 6 hrs. lab.)

ABRP 47 Fundamentals of Hardware, Trim, Upholstery and Window Servicing (3)  
Co-Requisite - ABRP 44, 45, 46

Theory and practice on basic procedures for removing and replacing trim, glass, upholstery and weather-stripping.  
(2 hrs. lect.; 3 hrs. lab.)

E. KAUAI COMMUNITY COLLEGE  
COURSE DESCRIPTIONS

ABRP 20 Fender Repair (7) Prerequisite: Approval of instructor.

Introductory course in theory and practice in basic metal work and fender repair.  
(3 hrs. lecture; 12 hrs. lab.)

ABRP 21 Automobile Body Repair (7) Prerequisite: ABRP 20

Repair and replacement of body panels, such as door panels, rocker panels, trunk lids, tops and hoods. Body adjustment and realignment. Installation and repair of such mechanisms as door regulators, seat adjusters, door handles, and door locks.  
(3 hrs. lect.; 12 hrs. lab.)

ABRP 40 Automobile Refinishing (7) Prerequisite: ABRP 20 or approval of instructor

The care and proper use of paint equipment and the fundamental operations in painting.  
(3 hrs. lect.; 12 hrs. lab.)

ABRP 41 Chassis Straightening (7) Prerequisite: ABRP 20

Theory and practice of aligning frames and the proper use of frame correctional equipment and gauges. Instruction in shop management, analyzing and estimating.  
(3 hrs. lect.; 12 hrs. lab.)

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F. MAUI COMMUNITY COLLEGE

Course descriptions being developed for:

ABRP 60B  
60C

ABRP 65B  
65C

ABRP 61B  
61C

ABRP 66B  
66C



APPENDIX IV

CARPENTRY

A. COMMUNITY COLLEGE COURSE DESCRIPTIONS

1. CARPENTRY 020 - Hand & Power Tools (Kauai C.C.)

3 hours lecture ----- 12 hours lab ----- 3 credits

Care and use of hand tools, industrial type portable electric tools, and heavy industrial power equipment. The study and use of the various kinds of building materials. Safety precautions stressed.

2. CARPENTRY 20 - Introduction to Carpentry (Maui C.C.)

1 hour lecture ----- 1 credit

Carpentry and apprenticeship make up, ethics, and history of the trade.

3. CARPENTRY 21 - Basic Carpentry (Hawaii C.C.)

5 class hours ----- 20 hours lab ----- 12 credits

Carpentry occupational information, shop safety and first aid, care and use of hand and power tools, basic layout and measurements, basic building materials hardware and fastening materials, practical mathematic applications for carpentry and principles of cabinetmaking; emphasis on practical application.

4. CARPENTRY 21 - Hand and Power Tools (Honolulu C.C.)

2 hours lecture ----- 6 hours lab ----- 4 credits

The selection, care, safety, and use of carpentry tools are covered. Proper care of tools and methods of renewing workworn and abused tools are stressed. Types of operations and safety for each power tool are included.

5. CARPENTRY 21 - Hand and Power Tools (Maui C.C.)

2 hours lecture ----- 3 hours lab ----- 4 credits

Nomenclature, care, safe use, and proper handling of hand tools, portable power tools, and stationary machines. Set up, care, and use of builders level and transit.

6. CARPENTRY 21 - Concrete Forms and Foundations (Kauai C.C.)
- 3 hours lecture ----- 12 hours lab ----- 7 credits
- Blueprint reading and the fundamentals of stock billing and the estimation of materials. Theory and practice in the use of the builder's transit level for the layout of building foundations. Training in erecting walls and columns, construction of beam and decking concrete forms and the laying of hollow tiles. Safety precautions stressed.
7. CARPENTRY 22 - Advanced Cabinetmaking and Elementary Construction (Hawaii C.C.)
- 5 class hours ----- 20 hours lab ----- 12 credits
- Advanced principles of cabinetmaking and machine operations and maintenance; advanced care and use of hand and power tools; introduction to surveyor's transit and builder's level.
8. CARPENTRY 22 - Concrete Forms & Layout (Honolulu C.C.)
- 3 hours lecture ----- 9 hours lab ----- 6 credits
- This course is elementary in presentation and basic for understanding concrete form construction. It covers terms, materials and methods used in constructing footing, stern, pier and floor.
9. CARPENTRY 22 - Building Materials (Maui C.C.)
- 1 hour lecture ----- 1 credit
- Quality and use of materials, fasteners, and adhesives.
10. CARPENTRY 23 - Introduction to Carpentry (Honolulu C.C.)
- 1 hour lecture ----- 1 credit
- This course provides information regarding unions as well as an understanding of the goals, background, and methods of the trade movement. Included in the offerings are: historical background, labor and management problems, collective bargaining, labor laws & management operations.
11. CARPENTRY 23 - Concrete Form Construction & Layout (Maui C.C.)
- 2 hours lecture ----- 6 hours lab ----- 4 credits
- Materials and methods used in constructing concrete forms, and study of soil conditions.

12. CARPENTRY 24 - Materials and Hardware (Honolulu C.C.)

2 hours lecture ----- 2 credits

This course is designed to introduce to a student the kinds of materials that are available and used in the construction industry. It covers the manufacture, uses, grades, working properties, and application of the various products.

13. CARPENTRY 24 - Safety & First Aid (Maui C.C.)

1 hour lecture ----- 1 credit

The development of safe work habits. Emergency treatment given to an ill or injured person prior to regular medical assistance.

14. CARPENTRY 25 - Industrial Safety (Honolulu C.C.)

2 hours lecture ----- 2 credits

Safe practices in performing the work of a carpenter are stressed; first aid treatment for injuries that might occur on a construction job is also covered.

15. CARPENTRY 26 - Advanced Concrete Form & Layout (Honolulu C.C.)

5 hours lecture ----- 9 hours lab ----- 8 credits

This course is an advanced presentation for students to understand concrete form construction. It covers the work terms, materials and methods used in constructing wall, column, buck, anchor bolts, intersecting beam, wall beam, slab, bulkheads, screen, and stair forms.

16. CARPENTRY 27 - Heavy Concrete Construction (Honolulu C.C.)

2 hours lecture ----- 3 hours lab ----- 3 credits

This course is designed to provide the student with an understanding of the basic method of heavy concrete construction. It covers the work terms, materials, and methods used in pre-stressing and post-stressing, in addition to the methods used in constructing walls, floors, bridges, tunnels, and manholes.

17. CARPENTRY 30 - Advanced Concrete & Layout (Maui C.C.)

2 hours lecture ----- 6 hours lab ----- 4 credits

The layout of property lines, stake out batter boards, and to erect concrete forms for foundations, walls, and stairs.

18. CARPENTRY 31 - Heavy Concrete Construction (Maui C.C.)

2 hours lecture ----- 3 hours lab ----- 3 credits

Study of heavy concrete structures, systems of form work, cost analysis, methods of shoring and scaffolding, form design, loads, and pressure.

19. CARPENTRY 40 - Rough Framing (Maui C.C.)

2 hours lecture ----- 5 hours lab ----- 4 credits

Layout building lines, erecting batter boards, foundation construction, framing, rafter and stair layout.

20. CARPENTRY 040 - Framing, Sheathing, and Insulation (Kauai C.C.)

3 hours lecture ----- 12 hours lab ----- 7 credits

Theory and practice in the construction of foundations, framing walls, partitions, rough openings, floors, exterior and interior wall coverings, and ceilings. Instruction and practice in truss design, roof load distribution, nailing of purlins and roof sheathing, the use of various roofing materials, complete roof framing, framing square applications for rafter lengths, and estimation of roofing materials. Safety precautions stressed.

21. CARPENTRY 41 - Framing (Hawaii C.C.)

5 class hours ----- 20 hours lab ----- 12 credits

Form construction, methods of form building, construction surveying with the transit level, practical use of special tools characteristics of concrete and techniques of mixing and placing of concrete.

22. CARPENTRY 41 - Rough Framing (Honolulu C.C.)

3 hours lecture ----- 9 hours lab ----- 6 credits

This course covers the essential details of good construction in building footings, girders, floor joists, floor openings, sub-flooring, and wall frames of balloon and platform types and stair framing. Roof framing which covers work terms, layout, and construction, and installations of exterior stairs--concrete and wood.

23. CARPENTRY 41 - Exterior Finish (Maui C.C.)

2 hours lecture ----- 5 hours lab ----- 4 credits

Sheathing with different materials on walls and roof, application of various roofing materials, flashing, types of windows and exterior doors, garage doors, and types of exterior wall finish.

24. CARPENTRY 041 - Interior & Exterior Finishing (Kauai C.C.)

3 hours lecture ----- 12 hours lab ----- 7 credits

Principles of finishing carpentry and hardware installation, window frame layout and construction, fitting window construction. Construction of built-in cabinets, installation of laminated plastics. The calculation and construction of stair rise and run, and all finishing involved in the construction of homes related to wood.

25. CARPENTRY 42 - Exterior and Interior Finishing Paneling (Hawaii C.C.)

5 class hours ----- 20 hours lab ----- 12 credits

Installation of roof coverings, window frames, exterior wall sheathing, interior wall and ceiling coverings, floor coverings, interior stairs, bathroom and kitchen cabinets, mouldings and trimmings, and finish hardware. Practical application by building a model home.

26. CARPENTRY 42 - Exterior Finish (Honolulu C.C.)

2 hours lecture ----- 6 hours lab ----- 4 credits

This course covers roof and exterior wall sheathings, applications of various roofings, and wall coverings, layout, construction and installation of various window and door frames, application of exterior trims, layout, construction, and installation of exterior stairs--concrete and wood.

27. CARPENTRY 42 - Building Codes (Maui C.C.)

1 hour lecture ----- 1 credit

Building codes related to their effects on safety and health, construction materials, plumbing, heating and electricity.

28. CARPENTRY 43 - Interior Finish (Honolulu C.C.)

2 hours lecture ----- 6 hours lab ----- 4 credits

This course covers laying out and application of finish floors, various wall and ceiling panels, hanging doors and windows, laying out and building cabinets; closets, application of mouldings and trims, and installation of finishing hardware.

29. CARPENTRY 44 - Surveying and Building Layout (Honolulu C.C.)

1 hour lecture ----- 3 hours lab ----- 2 credits

This course covers the essential uses of the builder's transit-level for leveling, setting grade lines, laying building lines, sighting overhead points, plumbing columns, aligning, and measuring angles.

30. CARPENTRY 45 - Building Codes (Honolulu C.C.)

1 hour lecture ----- 1 credit

This course covers the rules and regulations set up by the City and County of Honolulu and the Uniform Code. Emphasis is placed on the code which applies to site preparation, construction, occupancy, and health and safety of homes and apartments.

31. CARPENTRY 46 - Advanced Blueprint Reading and Estimating (Honolulu C.C.)

3 hours lecture ----- 9 hours lab ----- 6 credits

This course covers the reading of residential and commercial building plans, symbols, specifications; and to estimate for the necessary kinds and quantity of materials used to complete the building.

32. CARPENTRY 50 - Advanced Blueprint Reading & Estimating (Maui C.C.)

3 hours lecture ----- 3 hours lab ----- 4 credits

Reading of blueprint, complete take off on labor and related work.

33. CARPENTRY 51 - Interior Finish (Maui C.C.)

2 hours lecture ----- 6 hours lab ----- 4 credits

Finish material for walls, ceilings, and flooring; mill work, hanging doors and windows; cabinet making.

34. BLUEPRINT 010 - Blueprint Reading (Kauai C.C.)

3 credits

Basic techniques of mechanical drawing including freehand sketching, orthographic projections, use of measuring devices, geometric construction, and sectional views.

35. BLUEPRINT 011 - Advanced Blueprint Reading & Specifications (Kauai C.C.)

3 credits

Practice in reading residential drawings. Construction relationships between architectural, structural, electrical, and mechanical drawings. General and specialized specifications and their relation to building codes.

36. BLUEPRINT 21 - Blueprint Reading and Sketching (Maui C.C.)

3 credits ----- 3 hours lecture

Principles of pictorial and architectural drawings, interpretation of drafting practices, reading and interpreting working drawings and specifications.

37. BLUEPRINT 22 - Residential and Commercial Blueprint Reading (Maui C.C.)

3 credits ----- 3 hours lecture

Blueprint reading of a residence and a commercial structure, specifications.

38. BLUEPRINT 25 - Graphics for the Construction Trades (Hawaii C.C.)

3 credits ----- 3 hours lecture

The use of mechanical drawing instruments to make shop drawings which includes orthographic projection, dimensioning, and full section. Freehand sketching of shop drawing, isometric and oblique projections sketching. Reading blueprint of simple structures.

39. BLUEPRINT 41 - Construction Drawing Interpretation (Honolulu C.C.)

3 credits ----- 3 hours lecture

A basic course designed for students in the construction trades. Principles of graphic presentation used in architectural drafting; interpretation of working drawings and building specifications will be emphasized.



40. BLUEPRINT 44 - Construction Drawing (Honolulu C.C.)

4 credits ----- 3 hours lecture

The course is designed to give a student a deeper understanding of the blueprint and the specifications. The student draws a floor plan, elevations, details, sections and schedules.

41. BLUEPRINT 45 - Architectural Graphics (Hawaii C.C.)

3 credits ----- 3 hours lecture

Advanced principles of graphic presentation used in construction. Reading of elevations, floor plans, sectionals, detail drawings, and plot plans of single and double wall structures.

## B. SECONDARY SCHOOLS COURSE DESCRIPTIONS

### Industrial Arts Courses

#### 1165 WOODS

##### Objectives:

1. Develop basic knowledge and skills of the wood products industries.
2. Explore and solve common technical problems utilizing wood products.

##### Description

An introductory course in the study of the tools, materials, and processes used in the woods industries. Learning experiences include experimenting with, designing and constructing wood products, and evaluating woods and wood products, using the tools, materials and processes related to these industries. The study of techniques, economics, and consumer information related to these industries is emphasized.

#### 1166 WOODS TECHNOLOGY

##### Objectives:

1. Develop knowledge and skills of woods technology.
2. Identify and solve technical problems in the use and care of wood and wood products.

##### Description:

The study of the wood industries, with emphasis on the problems and technologies involved in the construction of buildings and the manufacturing of articles made from wood and wood products. Learning experiences include experimenting, designing, construction, operating, and evaluating industrial tools, processes, forest products, and related synthetic materials.

### Industrial-Technical Courses

#### 2003 BUILDING AND CONSTRUCTION TECHNOLOGY I

##### Objectives:

1. Develop basic entry level skills in the Building Construction occupations.
2. Acquire and apply knowledge for the installing, maintaining, and the repairing of buildings and structures.

##### Description:

Classroom and laboratory experiences that deal with the erection, installation, maintenance, or repair of buildings and structures.

2004 BUILDING AND CONSTRUCTION TECHNOLOGY II

Objectives:

1. Develop basic entry level skills to a higher level of proficiency in the Building Construction occupations.
2. Acquire and apply knowledge of layout, fabrication, assembly, and installation of structured units.

Description:

Advanced learning experiences in the Building Construction industry. Classroom and shop experiences in layout, fabrication, assembly, and installation of structural units. Simulated class experiences and on-the-job experiences are included.

C. PROPOSED CARPENTRY TECHNOLOGY PROGRAM  
FOR THE COMMUNITY COLLEGES

CURRENT CONTACT HOURS FOR CARPENTRY PROGRAM

<u>College</u>	<u>Lecture</u>	<u>Lab</u>	<u>Total</u>
Hawaii Community College	5	20	25
Honolulu Community College	5	15	20
Leeward Community College	-	--	--
Maui Community College	5	15	20
Kapiolani Community College	-	--	--
Kauai Community College	5	10	15
Windward Community College	-	--	--

PROPOSED NEW CARPENTRY CURRICULUM

<u>Course Number</u>	<u>Hrs.</u>	<u>Course Title</u>	<u>Practical Work Done in Shop</u>
Carpentry 1	80	Carpentry Tools and Equipment	Saw horse, Miter box, Tool box, Black & Decker work shop, Hilti power actuated tools, First Aid.
Carpentry 2	40	Mathematics for Carpentry	Do practical calculation by taking measurements from buildings.
Carpentry 10	40	Surveying and Guilding Layout	Use and care of builder's transit for leveling, setting grade lines, laying building lines, sighting overhead points, plumbing columns, aligning, and measuring angles.
Carpentry 3	80	Blueprint Reading & Drafting	Visit construction site and also HCC model house.
Carpentry 4	80	Concrete Form Construction	Make footing, column, wall, beam forms, decking, and stair forms.
Carpentry 7	80	Rough Framing	Structural framing from foundation to rafters, including rough openings for doors and windows.
Carpentry 8	80	Finishing 1	Exterior and interior finishing, window and door jambs, hanging doors and hardwares and interior trim.
Carpentry 8	40	Finishing 2	Cabinetmaking and installation (Mill built and job site), and plastic laminates.
Carpentry 9	40	Blueprint Reading & Estimating	Reading of residential and commercial building plans, symbols, specifications; and to estimate kinds and materials used to complete the building.

Other recommended courses: Journeyman Training (40 hrs.)

1. Welding (Gas and Arc)
2. Plastic Welding
3. Supervision
4. Advanced Blueprint Reading & Estimating
5. Advanced Mathematics (Metric system)
6. Roof Framing
7. OSHA
8. Advanced Finishing

PROPOSED CARPENTRY TECHNOLOGY PROGRAM FOR COMMUNITY COLLEGES

<u>Courses</u>	<u>Credits for A. S. Degree</u>	<u>Credits for Certificate of Achievement</u>
<u>First Semester</u>		
Carp. 21	12	12
Mathematics	3	3
Basic Blueprint Reading & Drafting	3	3
<u>Second Semester</u>		
Carp. 22	12	12
Advanced Blueprint Reading & Estimating	3	3
Mathematics (Elective)	3	
<u>Third Semester</u>		
Carp. 41	12	12
Elective	3	
Elective	3	
<u>Fourth Semester</u>		
Carp. 42	12	12
Elective	3	
Elective	3	
	—	—
TOTAL	72	57

All Carpentry Technology Courses are 5 hours lecture per week and 20 hours of lecture-lab.



PROPOSED COURSE TITLES, NUMBERS AND CREDITS FOR CARPENTRY TECHNOLOGY

<u>Credit Hrs.</u>	<u>Course No.</u>	<u>Course Title</u>
12	Carp. 21	Basic Carpentry
12	Carp. 22	Concrete Form Construction
12	Carp. 41	Rough Framing and Exterior Finish
12	Carp. 42	Finishing
3	Blueprint Reading	Basic Blueprint Reading and Drafting
3	Mathematics	Mathematics for Carpenters
3		Advanced Blueprint Reading and Estimating

Carpentry Course Description

Carp. 21 - Basic Carpentry

This course is designed to introduce students to basic occupational information in Carpentry; the care, use, operation and maintenance of hand and power tools; basic materials; and hardware and fastening materials. Safety and first aid will be stressed within each of the topics throughout the course.

Carp. 22 - Concrete Form Construction

This course is designed to familiarize students with concrete form construction. It covers the construction terms, materials, and the methods used in construction and also special techniques in heavy concrete construction.

Carp. 41 - Rough Framing and Exterior Finish

This course covers the materials and the essentials of good construction techniques involved in footing and foundations, sill and floor framing, wall and partition framing, roof framing, sheathing, roofing, window and door frame construction, and installation and application of siding and trims.

Carp. 42 - Finishing

This course covers application of finish flooring, wall and ceiling panels; hanging doors and windows; construction and installation of cabinets and closets; application of mouldings and trims; bathroom materials and finishing hardwares.

Blprt \_\_\_ - Basic Blueprint Reading and Drafting

The interpretation of symbols; conventions; legends; abbreviations; dimensioning techniques; visualization of subject project; technique and procedure for extraction from a set of construction drawings, information for accurate construction and the preparations of necessary drawings and sketches as required by a carpenter.

Blprt \_\_\_ - Advanced Blueprint Reading and Drafting

The development of advanced blueprint reading skill and preparation of a material quantity take off from selected construction plans and documents currently used by the construction industry.

Math \_\_\_ - Mathematics for Carpenters

Topics in this course are: review of arithmetic operations with fractions; decimals and percentage; ratio and proportion; powers; roots; mensuration; geometric construction and material measurements; and special formulas for carpenters.

NOTE: No numbers are given to Blueprint Reading and Math courses. Courses will be taught by respective department.

D. NECESSARY STATIONARY EQUIPMENT FOR ALL  
COMMUNITY COLLEGE CARPENTRY PROGRAMS

Equipment	Number Needed
1. Planer - 24" Surfacer 12"	2
2. Table saw - 16" <sup>2</sup> / <sub>12</sub> <sup>1</sup> / <sub>10</sub>	4
3. Radial Arm Saw - 16" <sup>2</sup> / <sub>12</sub> <sup>1</sup> / <sub>10</sub>	4
4. Jointer - 26" <sup>1</sup> / <sub>8</sub> <sup>1</sup> / <sub>12</sub>	4
5. Band saw - 36" 20"	2
6. Sharper	1
7. Belt Sander	2
8. Disk Sander	2
9. Drill Press	1
10. Bench Grinder	2
11. Stroke Sander	1
12. Drum Sander	1
13. Mortiser	1
14. Wood lathe - 12" - bed 5'	2
15. Dowel Machine	1
16. Panel saw	1
17. Scroll saw	1
18. Saw re-toother	1
19. Saw sharpener	1
20. Welder	1
21. Dust collector	1
22. Air compressor	1
23. Work bench	10
24. Tenor Machine	1



E. NECESSARY PORTABLE POWER TOOLS FOR ALL COMMUNITY COLLEGE  
CARPENTRY PROGRAMS

Electric

Saws - worm and direct

6 1/2      7 1/4

Drills

1/4      3/8      1/2

Hammer drill - 1/2" - 3/4"

Router

1 - 1 1/2 HP

Jointer - 3"

Sander

Belt - 3 x 24      4 x 24

Orbital

Disc

Trimmer - commercial

Jig saw - commercial

Reciprocating - commercial

Pneumatic

Nailers

Spray gun

Regulator

Power

Fasteners

Electric chainsaw

Chipping gun

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APPENDIX V

DISTRIBUTIVE EDUCATION

## DISTRIBUTIVE EDUCATION PROGRAM ON THE HIGH SCHOOL LEVEL

Distributive education is a program which provides students with the opportunity to explore the field of marketing and distribution, and to build a foundation for continuing education related to distribution. A cooperative effort requiring the joint interest and efforts of the school and the distributive businesses in the community is provided through a cooperative education plan. The classroom instruction is planned around the competencies required in the field of marketing and distribution.\*

Distributive Education program consists of the following courses:

Advertising  
Introduction to Sales and Marketing  
Business Law  
Salesmanship  
Business Principles and Management  
Related Sales Services  
Cooperative Distributive Education

### 0901 ADVERTISING

#### Objectives:

1. Identify the role of advertising in sales and marketing.
2. Apply promotional methods and media used in sales and marketing.

#### Description:

The course is designed to give students an appreciation of the role advertising plays in distributing goods and services. It acquaints the student with a basic understanding of marketing and sales promotion and their effect on our total economy. It provides learning experiences in the use of accepted tools, plans, and procedures, including the principles and fundamental techniques of advertising and layout methods. The student explores vocational opportunities available in the field of advertising.

### 0912 BUSINESS LAW

#### Objectives:

1. Identify legal rights and obligations.
2. Indicate the effect of legislation on business practices.
3. Identify the elements of contracts, sales transactions, and negotiable instruments.

\*"Introduction to Vocation Program Handbook," Vocational-Technical Education Office of Instructional Services, Department of Education, State of Hawaii, June 1973.

Description:

Business Law deals with the elements of law as the legal foundations of our democracy. It covers the legal bases which are common to everyday business activities in which an individual is likely to become involved. Topics included are contracts, buying and renting property, bailments, installment buying, insurance, buyer and seller relationships, employer-employee relationships, negotiable instruments, wills and the legal relationships of one individual to another.

0925 BUSINESS PRINCIPLES AND MANAGEMENT

Objectives:

1. Identify the concept and structure of business organizations.
2. Relate the role of business, government, labor, and the consumer in our economic system.
3. Explain the forces that affect the producer, distributor, and consumer of goods and services.
4. Explain the functions of management: Planning, organizing, staffing, directing, controlling, and decision making.

Description:

Business Principles and Management develops an understanding of the American business system, its organization, and some basic management principles. The role and importance of marketing in our business system is explored. Profit, costs, overhead, and general and administrative expense as factors for business decisions are covered. Financial, production, and personnel management areas of business enterprise, as well as the role of government in business, are also included.

0922 COOPERATIVE DISTRIBUTIVE EDUCATION

Objectives:

1. Acquire work experience in marketing and distributive occupations.
2. Develop attitude, personality, and work habits acceptable in the business world.
3. Acquire and apply knowledge and skills relating to marketing and distribution.

Description:

Cooperative Distributive Education provides exploratory experiences on which to build a foundation for continuing education in the field of marketing and distribution. Cooperative part-time work experience in business firms in the afternoons and weekends provides on-the-job training. The related classroom instruction of one period daily is planned around the competencies required in the field of marketing and distribution which are: (1) a marketing competency--selling, sales promotion, buying, operation, market



research, and market management; (2) technology competency--product or service; (3) a basic skill competency--application of communication and mathematical skills; (4) a social competency--human relationships; and (5) an economic competency--understanding the environment for the economy.

A national youth organization, Distributive Education Clubs or America, serves as an integral part of the instructional program.

0944 INTRODUCTION TO SALES AND MARKETING

Objectives:

1. Explore the field of marketing and distribution.
2. Acquire a foundation for continuing education related to distribution.

Description:

This phase of the distributive education program introduces the field of selling and marketing as a career. The entire marketing process from marketing research and product planning to promotion and consumer service activities is covered. It includes whole-sale and retail selling, buying and merchandise control, pricing for profit, merchandising, and technological changes affecting marketing.

0934 SALESMANSHIP

Objectives:

1. Explore the field of selling as a career.
2. Acquire basic knowledge and skills of effective salesmanship.

Description:

Salesmanship is designed for students who are interested in considering selling as a career. A practical background in retailing is developed, including the role of selling in marketing, channels of distribution from manufacturer to consumer, techniques and methods of selling, and knowledge of products. Emphasis is on the fundamentals of the selling process common to all types of selling.

0950 RELATED SALES SERVICES (FOR OCCUPATIONAL SKILLS PROGRAM ONLY)

Objectives:

1. Explore sales related occupations.
2. Acquire basic skills for related sales services.
3. Acquire work habits that are acceptable in the business world.

Description:

Included in the course are series of instructional units relating to sales services that are routine and performed under supervision. Students learn to be employable in jobs such as a stacker in a warehouse, package wrapper, courtesy boy, stock boy, cashier, and sales clerk.

APPENDIX VI

ISLAND MEETING PARTICIPANTS

<u>Hawaii</u>	<u>Kauai</u>	<u>Maui</u>
John Beck	Sharon Brown	Frank Chester
Bruce Bikle	Bud Carter	William Davis
Tony Costa	Guy Fujiuchi	Mike Hazama
Al Goto	Takashi Kajihara	Stephen Kameda
Lloyd Hara	Dorothy Kohashi	Kaz Kawabara
Nobuaki Ikeda	Ivan Longmore	Lillian Ko ayashi
Tsukasa Inoue	Barton Nagata	Koe Kong
Yaeko Kunishige	Mary Nakashima	Harold Luntey
George Miyamoto	Earl Nishiguchi	Frank Martin
Sadao Miyasato	Kameichi Sakamoto	Sanae Moikeha
Kiyoto Mizuba		Ralph Murakami
Guy Sasaki		Hideo Niibu
Mits Sumada		Howard Omura
Yoshiichi Tanaka	<u>Oahu</u>	Ernie Rezents
Peggy Yorita	Bob Hirayama	Clyde Sakamoto
	Randolph Iwasaki	Evelyn Sano
	Lincoln Kumai	Takeshi Shizuma
	Lester Sakamoto	Marian Snyder
		Bernard Tokunaga
		Ethel Young
		Larry Zane