F I N A L R E P O R T

VOCATIONAL EDUCATION AND ARTICULATION SUBCOMMITTEE

OF THE HIGHER EDUCATION TASK FORCE

January 1989

The Seventy-second General Assembly of the state of Iowa in Senate File 2278 requested that the Legislative Council establish a committee to make a comprehensive study of the vocational education courses for secondary school students. The study was to include, but not be limited to, vocational education requirements proposed by the State Board of Education, the courses offered at K-12 districts, the costs of offering the various areas of vocational education courses, enrollment trends, and the feasibility of alternative means of vocational education courses, including but not limited to, requiring that secondary school vocational education courses be provided by the area schools in either the high school or area school or an alternative setting.

The study committee was instructed to report to the General Assembly by February 1, 1989, and also to a task force studying postsecondary education if one were established. A Legislative Task Force on Higher Education was established in Senate File 2312 with the mission to study higher education needs of the state twenty years in the future and the Legislative Council added the vocational education study to the mission of that Task Force. Since the Task Force at its meeting January 26, 1989, included in its list of study issues a definition of higher education (when does higher education begin and how does it interface with secondary?) and the result of that study, due the end of 1989, may have bearing on the recommendations of the Vocational Education and Articulation Subcommittee, the Task Force strongly recommends that no action be taken on these recommendations in this Session. Such action may have the effect of closing doors behind which the Task Force has not yet looked.

The Task Force consists of two co-chairpersons who are citizens, four legislators and five other citizens. Five subcommittees were established, each being chaired by one of the five citizen-members of the Task Force. They were each assigned a study area which included Governance, Quality and Capacity, Access and Affordability, Finance, and Vocational Education and Articulation. Resource people were selected by the Task Force to serve on the five subcommittees. Those serving on the Vocational Education and Articulation Subcommittee are:

The Honorable Arthur Neu, Carroll
Mr. Phil Burmeister, Mt. Ayr
Dr. Frances Disselhorst, Burlington
Mr. Jack Neuzil, Solon
Mr. Mark Smith, Des Moines
Mr. Don Buryanak, Le Mars
Ms. Barbara Crittenden, Creston
Ms. B.J. Furgerson, Waterloo
Mr. Mark Schantz, Des Moines
Ms. Marilyn Stamp, Clinton
Mr. Gary Thomas, Des Moines

MEETINGS

The subcommittee held seven meetings and heard testimony from educators and representatives of various industries. Public hearings were not held because of the short time available. On November 3, 1988, the subcommittee heard presentations from Dr. William Chance, consultant to the subcommittee, Mr. Roger Foelske, Bureau of Vocational Education, Department of Education, Ms. Phyllis Herriage, Bureau Chief, Bureau of Vocational Education, Dr. Virginia Loftus, Des Moines Area Community College, and Mr. Harlan Geise, Iowa Vocational Education Advisory Council. Dr. Chance reviewed the work schedule with the subcommittee and gave some general perspective on history and future of vocational education. Mr. Foelske and Ms. Herriage spoke to the variety of vehicles by which vocational education is offered in Iowa and to funding where shared programs are involved. Dr. Loftus explained the various sources of funding for Merged Area Schools and Mr. Geise spoke advocating an increase in secondary vocational programs.

At the second meeting, November 16, 1988, the subcommittee heard presentations by Ms. Jan Huss and Mr. Roger Foelske, Bureau of Career and Vocational Education, Iowa Department of Education, Mr. Dwight Carlson, Bureau of Administration and Accreditation, Iowa Department of Education, and subcommittee members Mr. Phil Burmeister and Mr. Jack Neuzil. Ms. Huss explained some of the terms used to discuss vocational education concepts. Mr. Foelske responded to a request for information concerning the costs of and reimbursement procedures associated with offering various vocational classes. Mr. Carlson discussed the implication of various terms used in the vocational education standard proposed by the Department of Education. Mr. Burmeister was joined by Mr. David Neas and Dr. David Clinefelter, colleagues in the Area Planning Council, to explain how several small local school districts provide vocational programs cooperatively. Mr. Neuzil explained how educational technology is employed in the welding program at Kirkwood Community College.

At the third meeting, December 1, the subcommittee heard from Ms. Mary McGee, Iowa State Occupational Information Coordinating Committee, Mr. Ron Rath, Cedar Rapids, Area Planning Council, Mr. Howard Hammond, consultant to the Bureau of Teacher Education and Certification, Mr. Farnsley Peters, Iowa Association of Business and Industry, and Mr. Bob Jaffarian, New York State Department of Education. Ms. McGee introduced the subcommittee to the information which is available with regard to labor market projections. Mr. Rath reviewed with the subcommittee the results of a survey of businesses regarding their requirements for entry-level positions. Mr. Hammond emphasized the importance of quality personnel in delivering a quality program. Mr. Peters stressed that businesses preferred "trainable" employees rather than "trained" ones. Mr. Jaffarian discussed major restructuring of the vocational education program in New York secondary schools which has been recently implemented.

Dr. James Jess, Alden Community School District, Mr. William Keck, Keck Parking Systems, and Ms. Sandy Pennington, Assistant Director of Nursing, Lutheran Home, made presentations at the meeting December 14, 1988. Dr. Jess shared the findings of the 1984 F.I.N.E. Committee. Mr. Keck and Ms. Pennington discussed what attributes small business people and health care administrators require of entry-level employees. At the meeting December 19, Ms. Mary Sherer of Partners in Vocational and Technical Education advocated the increased standard proposed by the Department of Education, Dr. Donald Darrow and colleagues from University of Northern Iowa and Iowa State University presented an overview of "technology education" and Dr. Gerald Manning of Des Moines Area Community College advocated sales education in grades 11 and twelve.

The meetings on January 11 and 25 were devoted to debate on the language of the report.

This report confines itself for the most part to comment on the adequacy of the vocational education standards which exist as Iowa Code section 256.11(6)"h" and the proposal of the State Board of Education to raise that standard. The current standard requires that a total of five units of vocational education be offered. A unit represents a course which meets one class period, five days a week for thirty-six weeks. Those units must be offered in the six traditional areas of office and clerical, trade and industrial, consumer and homemaking, agriculture, distributive, and health occupations. The State Board of Education proposed that the standard be raised to require ten units of vocational education and that at least one unit be offered in each of four of the six areas listed. The proposed change had two aspects: the increased number of units required, and the requirement that four content areas be offered.

At each meeting members of the subcommittee engaged in frank and probing discussion of the presentations and materials made available to them. The subcommittee included diverse points of view of vocational education ranging from forthright advocacy to a severe skepticism. What follows represents a consensus which is the product of that democratic process.

REPORT OF THE SUBCOMMITTEE ON VOCATIONAL EDUCATION AND ARTICULATION

The Vocational Education and Articulation Subcommittee has a considered commitment to the educational needs of all high school students. Whether immediately college-bound, headed for vocational programs, or starting out in the workplace, the graduate needs and is entitled to a basic set of competencies. The 1984 report of the Iowa Excellence in Education Task Force (The F.I.N.E. Report) lists those competencies as: reading, writing, communication, mathematics, science, reasoning, and economic and computer literacy. It continues that all students must have the ability to get along with others, understand the importance of regular attendance and punctuality and be willing to assume responsibility for general good citizenship. This report will refer to this list as the "basic skills".

In the wake of the national "A Nation at Risk" report, school boards, state legislatures and college entrance committees raised the number of units of English, mathematics, science, and foreign languages required for high school graduation or college entrance. Pressure put on both the local school budgets and the students' time have lessened resources for vocational education.

In Iowa 60 percent of the high school graduates either do not go on to any postsecondary education or do not complete it. These include those who will build and maintain our houses, office towers and roads, repair our air conditioners and deliver our products to market. It is both unfair and counterproductive for the state to fail to invest in education which meets the needs of this constituency.

The traditional distinction between "academic" and "vocational" courses, programs or tracks is both misleading as a tool for analysis and dangerous as a guide to policy. The basic competencies required for success in life, whether that includes further education or immediate entry into the workplace, are remarkably similar.

We do not advocate a separate track which defines a "vocational" student and takes him or her so far from the college-prep program that there is no return. Neither do we believe in beginning specialized training toward a particular vocation before a broad foundation of basic skills has been laid. The state interest in secondary education is not training for jobs. It is to ensure an

electorate which can understand complex issues facing society. It is to open doors for those who have no one else to open those doors for them. In the end these educated citizens make economic contributions to the society which are greater than they would have made without adequate education.

Programs labeled "vocational" have frequently succeeded in "reaching" or motivating students who have fared poorly in "academic" courses. This may be in part because some students find the content of the course more absorbing. But more important reasons are the active mode of learning, the individual attention, the more prompt feedback and the sense of "succeeding" that frequently accompany effective instruction in the vocational educational setting. Vocational courses can offer science, mathematics, and language arts in a context which is less abstract, but no less academic. They can give the student some understanding of how the basic skills are used in a variety of occupations as well as the basic skills themselves. Because different students respond to different learning styles, those different styles should be an option.

The vocational classes we advocate will have significant academic content and will combine theory and practice. The content will be presented in a very practical, concrete context. The purpose is to give the student meaningful experiences which will lead to better understanding of basic science, communication, mathematics and problem solving. These will be useful in an employment situation in the immediate future and in the days when continued education is needed.

There are industrial, social and political products and arrangements being created today and in years to come which we do not even know about. All students must be prepared for things to change and to outgrow their original understanding. Continuing education will be a part of everyone's life, so the fact that some graduates may enter the workplace directly from high school does not mean they need not have basic concepts and learning skills necessary for further education.

This subcommittee did not examine the content of courses at over 400 K-12 districts or the 15 Merged Area Schools as to their adequacy and relevance. There is no central repository of K-12 curriculum guides nor are there standards by which to make that content assessment. Given our deadline, the task is beyond the resources of this subcommittee. We do propose that the Department of Education be charged with the responsibility to develop a minimum set of competencies to be included in each vocational program and to establish the scope and sequence of the course offerings. The courses must be based on new and emerging technologies, include basic skills instruction, reflect labor market need, and contain practices that are current with industry standards. The Department shall establish criteria for approval

and evaluate the quality of the programs in at least 20 percent of the school districts annually.

The current standard concerning vocational education requires that five units be offered and taught which prepare students for employment in office, clerical, trade and industrial, consumer and homemaking, agriculture, distributive and health occupations. In February 1988, the Iowa State Board of Education proposed that the requirement be raised to ten units offered and taught, and that, in order to provide access and diversity, a minimum of one unit would be required to be offered and taught in each of four content areas to be chosen from the following six areas: industrial education; business and office; home economics; agriculture science and technology; health occupations and marketing education. The remaining six units could be offered and taught in any of the six areas.

This subcommittee was charged to examine the adequacy of the requirements proposed by the State Board and also the feasibility of alternative ways of delivering vocational education. It was established that only 12 local school districts in the state are delivering fewer than ten units of vocational education. The diversity requirement is not met by 103 districts serving about 15 percent of the students in the state. However, 100 of those districts do offer three content areas.

The count of offerings used above is based on course titles. No examination of the content has been made to see if the courses would meet the criteria we propose be established for approval. Clearly, a large number of districts will have to make changes in order to bring access to that last 15 percent of students. Those changes shall generally involve cooperative arrangements with nearby K-12 districts or Merged Area Schools. As the state continues to expand the highways of fiber optics, program sharing across greater distance becomes a possibility. The hardware is not free. New definitions of "teacher" may have to be established. New accounting arrangements will have to be invented and approved. Nonetheless, emerging technologies will allow access where there was none before, and the state must continue to invest in the required infrastructure.

Bringing adequate programs to all Iowa students will require increased investment. Initial costs will include logistical planning, program development, staff development, facilities modification and modernization, equipment and materials. Existing Merged Area Schools, satellite vocational centers, and high school buildings can be used, so that few new buildings should be required. Those should be built only with approval of the Department of Education, except where built with local levies. On an annual basis there will be student and/or teacher transportation and the utilities and maintenance of laboratories. In response to changing labor market needs, curriculum and equipment must be

updated. This will entail costs on a continuing basis for equipment and materials, curriculum development and staff development.

The magnitude of the investment cannot be measured until it is determined which areas are needed. Some examples of course costs are included as Appendix I. The investment must be made to make a variety of these programs available to students in every district in the state. Schools will have to work closely to develop co-operative plans which provide maximum opportunity for students and efficient use of the educational dollar.

Iowa needs to invest more heavily in technologically sophisticated vocational education. Equipment, materials and teachers for the more broadly based exploratory courses could be shared by several districts and possibly a Merged Area School through arrangements worked out through regional planning processes such as Area Planning Councils.

Recognizing the importance of preparing all of Iowa's youth to be productive citizens and with particular interest in reaching and preparing those who will be entering the workplace directly from high school, we make the following recommendations:

1. As part of a general education for all students, K-12 schools should assure mastery of those competencies necessary for success in the workplace and in later continuing education. These competencies are the same as those reported in the F.I.N.E. report: command of the English language; reasoning and problem solving; reading; writing; computation; science and technology; oral communication; interpersonal relationships; social and economic studies; and personal work habits and attitudes.

2. K-12 schools should be required by standards to provide all students with core competencies, some of which are best provided through what have been labeled vocational courses. This should be done through foundation courses which impart broadly transferable vocational knowledge and skills.

3. The number of units to be required is less important than the content. This subcommittee cannot stress strongly enough that meeting the standard of any number of units should require more than course titles. We are most concerned that the vocational education standard has requirements not only for number of units and number of areas, but in addition, it should require that the contents meet minimal requirements which are to be set by the Department of Education. We propose that any amendment of Iowa Code section 256.11(6)"h" or Iowa Administrative Code 281-subrule 12.5(5), paragraph "i" include that the Department of Education be charged with the responsibility to develop a minimum set of competencies to be included in each vocational program and to establish the scope and sequence of the course offerings. The

courses must be based on new and emerging technologies, include basic skills instruction, reflect labor market need, and contain practices that are current with industry standards. The Department shall establish criteria for approval and evaluate the quality of the programs in at least 20 percent of the school districts annually.

4. To ensure diversity and equal opportunity for access, the legislature should consider as a target a standard requiring that a minimum of four vocational programs should be offered and taught from the following six areas: agriculture, business and office occupations, health occupations, consumer and home economics, industrial and technical education, and marketing. In each content area there shall be offered and taught at least three units of credit which are competency-based, articulated with the area schools and approved by the Department of Education. Each sequence shall culminate in a preparatory program offered to students in the twelfth grade. The preparatory program is in excess of the twelve exploratory units required. Preparatory classes are usually two or three units. Preparatory classes in four areas would add eight to twelve more units to be offered. This proposal differs from that proposed in 1988 in that it requires more total units, more units in each area and, most importantly, the courses must meet Department of Education guidelines. THE TASK FORCE BELIEVES THAT THE CONTENT REQUIREMENT AND THE DIVERSITY REQUIREMENT ARE ESSENTIAL. THE PARTICULAR NUMBER OF CONTENT AREAS AND UNITS IS OF LESSER IMPORTANCE.

5. Preparatory programs may be offered at the area schools, at local K-12 district locations or at vocational centers organized and financed through the cooperation of several state-approved educational units.

6. The Department of Education shall develop a process to be implemented regionally for planning, delivery, and articulation of preparatory programs which reflect local needs.

7. The legislature must be willing to assist local school districts with the cost of logistical planning, program development, staff development, facilities modification and modernization as well as equipment and materials required to meet this new standard. The legislature must be willing to assist local school districts with the costs associated with meeting this new standard. The 100 school districts which do not meet the diversity requirement are apt to be the same ones which are having financial trouble meeting other new standards.

8. Both admission to and counseling for all classes must be without regard to race, religion, color, sex, national origin or handicap.

Investment in education has multifaceted dividends. Thomas Jefferson saw them in terms of maintaining the democracy. Only an informed electorate can be trusted to govern itself. Others see education as the vehicle of equal opportunity--the guarantor of class mobility. The developmental economist will state that returns on investment in human capital are greater than those on the other factors of production. The recent American incremental investment in higher education, the G.I. Bill, certainly had dramatic payoffs in all those areas. Half the recipients of that aid used it for vocational education. The state of Iowa has an impressive record in support of education. We propose that high-quality vocational education has a significant role to play in the educational portfolio of Iowans.

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VOCATIONAL EDUCATION SUBCOMMITTEE'S
PROPOSED STANDARD FOR
VOCATIONAL EDUCATION (9-12)

To assure that all students in the state of Iowa shall have access to a diversity of quality vocational education programs that are responsive to the labor market needs of the state, the subcommittee recommends the following standards for vocational education.

Vocational Education (12 units)

Vocational education shall prepare students for employment upon graduation and for post-secondary education. A minimum of three sequential units shall be offered and taught in at least four of the following six vocational service areas: Agriculture/Agribusiness, business and office, health occupations, home economics, industrial, and marketing education.

Instruction shall be competency-based, articulated with post-secondary programs of study, and include field, laboratory or on-the-job training. Each program sequence shall include instruction in minimum set competencies established by the Department of Education that address the following: new and emerging technologies; job-seeking, job-keeping, job-adaptability, and other employability skills; strengthening of the basic academic skills; and job-specific skills that reflect current industry standards and labor-market needs.

State of Iowa
IOWA DEPARTMENT OF EDUCATION
Bureau of Career and Vocational Education
Grimes State Office Building
Des Moines, Iowa 50319-0146

DEFINITIONS

[1]Vocational education is defined as:

> organized educational programs which are directly related to the preparation of individuals with employability and specific job skills required for paid or unpaid employment for for additional preparation for a career. Skill development is provided by educational programs where the requirements of a baccalaureate degree are not necessary for initial employment and/or further specialized training.
>
> exploratory--the provision of learning experiences through which the student continues to develop and assess personal characteristics, values, interests, and potentials in relation to a wide range of occupations; develops an understanding of the nature of the change with the work force, the contribution of the individual to work in society, benefits of paid and non-paid work, and the need for the development of life skills including general employability and specific job skills.
>
> preparatory--programs through which students develop general employability and specific job skills.

[2]"(31) The term "vocational education means organized educational programs which are directly related to the preparation of individuals in paid and unpaid employment in such fields as agriculture, business occupations, home economics, health occupations, marketing and distributive occupations, technical and emerging occupations, modern industrial and agriculture arts, and trades and industrial occupations, or for additional preparation for a career in such fields, and in other occupations, requiring other than a baccalaureate or advanced degree and vocational student organization activities as an integral part of the program."

[3]Career education is defined as:

> a sequence of planned school and community activities designed to provide experience in decision making; exploration of employment opportunities; and the development of positive attitudes, values, knowledge, and skills in relation to self and the "world of work" that will contribute to personal fulfillment in present and future life opportunities as well as potential economic independence.

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[1]Iowa Two-Year State Plan for Vocational Education Within Career Education -- Fiscal Years 1989-90, p. 6-7
[2]Public Law 98-524, p. 52
[3]An Overview — Leaders' Guide — Career Information System of Iowa (CISI), p. 1

1. Articulation—A planned process within an educational system that coordinates instructional programs—enabling students to move from one instructional level to another, without unnecessary duplication, or gaps in the instructional program. Systematic planning between secondary schools and postsecondary schools is necessary to ensure that students will not have to repeat courses at the higher level. Advanced placement credit may be allowed by the postsecondary institution.

2. Competencies—Student outcomes which are stated as specific tasks determined to be critical in effective job performance.

3. Competency-Based Instruction—Learning activities are built around the specific skills, knowledges and abilities (competencies) which have been determined to be required for proficient performance in an occupational area. Instruction is targeted toward mastery of those tasks or skills.

4. Sequence of Courses—A planned scheduling of courses within an instructional program area, e.g., Business and Office Education, which function as systematic stair-steps of instruction to enable students to develop proficiency and skill in their chosen occupational area. The sequence will begin in a broad-based course leads to more specific courses in the continuum.

APPENDIX I

PRINCIPLES OF TECHNOLOGY - EXAMPLE PROGRAM COST

Title: Principles of Technology is a program for vocational students interested in technical careers and other secondary students wishing to further their understanding of the physical principles underlying modern technology.

CIP Number: 15 99 99 01 02 - Type of Program: Exploratory
Instructional Level: Secondary, grades 10-12
Method of Instruction: Classroom and laboratory
Program Lenght: 72 weeks - Contact Hours: 1 per day
Number of Students: 16 students year one; 16 students year two = 32 students per program

PROGRAM COST

	TOTAL	PER STUDENT	CONTACT HOUR
Program Start-Up Costs			
Equipment for units 1-14, video and teacher/student text materials.....	$29,000.00	$906.25	$ 5.04

Note: Costs shown are for a one year implementation. The real cost to a school would depend on the number of students served in a multi-year period determined by the anticipated life of the equipment (six years suggested for PT).

Instructional Costs per year			
Salary .....$28,000 Extended Contract..$1,200 Teacher time is 50% of total shown	$14,000.00	$437.50	$ 2.43
Modernization per year			
Upgrading/replacement of Equipment; text materials and supplies; staff development; curriculum development	$ 5,316.30	$166.10	$ 0.92

Note: An estimate of the ongoing (moderization) costs, per year, can be figured based on the cost of start-up divided by the life of the equipment with a factor of 10% added to cover increased costs relating to future expenditures. This figure for PT is $29,000 divided by 6 years - equaling $4,833. This times the 10% gives a figure per year of $5,316.30.

Total Annual Costs - 32 students in two sections (one section of year one; one section of year two)			
Costs include salary, materials, and equipment.....	$19,316.30	$603.63	$ 3.35

Note: Costs for multi-sections would reduce total costs somewhat in that the equipment costs would remain about the same for a greater number of students.

INDUSTRIAL TECHNOLOGY
GRAPHIC COMMUNICATIONS - EXAMPLE PROGRAM COST

Title: Graphic Communications. Industrial Technology is a program that includes courses in traditional drafting, computer aided drafting, and all other modes of visual communications such as photography, video, and design. A broad-based introductory course must be a part of this program of instruction.

CIP Number:	21. 01 06 00 00 - Type of Program: Exploratory
Instructional Level:	Secondary, grades 7-12
Method of Instruction:	Classroom and Laboratory
Program Length:	Four courses typical, each course 18 weeks = 72 weeks - Contact hours: 1 hour per day
Number of Students:	16 students per section (semester or 90 hours), 4 sections = 64 students or 32 students, equivalent, for 180 hours per year.

PROGRAM COST

		TOTAL	PER STUDENT	CONTACT HOUR
Program Start-Up Costs				
Equipment could include computer aided drafting hardware/software, photography/video, printing an other equipment.....		$22,000	$687.50	$ 3.82

Note: Costs shown are for a one year implementation. The real cost to a school would depend on the number of students served in a multi-year period determined by the anticipated life of the equipment (six years suggested for Graphic Communications).

Instructional Costs per year				
Salary.....	$28,000.00			
Extended Contract	600.00			
Teacher time for the GC program is 40%		$11,440.00	$357.50	$ 1.99
Modernization per year				
Upgrading/replacement of Equipment; text materials and supplies; staff development; curriculum development...		$4,033.33	$126.04	$ 0.70

Note: An estimate of the ongoing (moderization) costs, per year, can be computed based on the cost of start-up divided by the life of the equipment (six years) with a factor of 10% added to cover increased costs relating to future expenitures.

Total Annual Costs - 64 students in 4 semester sections			
Costs include salary, materials, and equipment....	$15,473.33	$483.54	$ 2.69

AUTO MECHANICS - T & I

Title: Auto Mechanics is an instructional program that prepares individuals to engage in the servicing and maintenance of all types of automobiles.

CIP Number: 47 06 04 00 00 - Type of Program: Preparatory
Instructional Level: Secondary, grades 11-12
Method of Instruction: Laboratory and classroom
Program Length: 36 weeks - 3 hours per day
Number of Students: 12 students per section: two sections per day = 24 students

PROGRAM COST

	TOTAL	PER STUDENT	CONTACT HOUR
Program Start-Up Costs			
Equipment to diagnosis and repair automobiles. Instructional equipment, text, and materials...	$250,000.00	$10,412.00	$19.28

Note: The cost shown is for a one year implementation. The real cost to a school would depend on the number of students served in a multi-year period determined by the anticipated life of the equipment (eight years suggested for auto mechanics).

Instructional Costs per year			
Salary ..... $28,000 Extended Contract 2,000 Teacher time is 100%.....	$ 30,000.00	$ 1,250.00	$ 2.32
Modernization per year			
Upgrading/replacement of equipment; text materials and supplies, staff development; curriculum development.....	$ 34,375.00	$ 1,432.29	$ 2.65
Total Annual Costs - 24 students in two sections			
Costs include Salary, materials, and equipment, text.....	$ 64,375.00	$ 2,682.39	$ 4.97

Title: Child Care Aide/Assistant

CIP#: 20.02010000
Instructional Level: Secondary
Type of Program: Preparatory
Methods of Instruction: Laboratory and classroom
Program Length: 3 hours per day for 1 year; 540 contact hours per student
Number of students: 20 per section; two sections may be conducted per teacher and facility

PROGRAM COST

		Total	Per Student	Per Contact Hr
I	Start up cost			
	Equipment, materials and supplies	$8,500.00	$425.00	$ .79
II	Instructional Cost	$28,450.00	$1,422.00	$ 2.63
	Includes salary - $28,000.00			
	Instructor travel 50.00			
	Materials & supplies $200.00			
	Equipment $ 200.00			
III	Modernization Cost	$ 3,500.00	$ 175.00	$ .32
	Equipment replacement $2,750.00			
	Staff development $ 750.00			
IV	Total Annual Costs	$40,450.00	$2,022.00	$ 3.74
	Includes instruction and modernization costs			

Title: Consumer and Homemaking

CIP Number: 20.0100000000
Types of Program: Preparatory
Instructional Level: Secondary (9-12)
Methods of Instruction: Discussion, demonstration, laboratory
Length of Program - 1 hour per day/for 4 years or 720 contact hours per student
Program composed of six or more elective subject offerings, each of which is 18 weeks in length and/or elective comprehensive offerings each of which is 36 weeks in length.
Number of students: 100 students (20 students per section, 5 sections per day). Dependent upon number that laboratory facilities can accommodate - average 16 to 24 students - More students can be accommodated in lecture/discussion type offerings.

I. Program Start-up Costs

	Total	Per Student	Per Contact Hr
Equipment, materials and supplies	$11,975.00	$ 120.00	$ .67
II Instructional Cost Includes-salary $28,000.00 instructor travel $400.00 materials and supplies $1,100.00 maintenance of equip $500.00	$30,000.00	$ 300.00	$ 1.67
III Modernization Cost Equipment replacement $2,300.00 Staff development $2,000.00 Curriculum development $5,000.00	$ 9,300.00	$ 93.00	$ .52
IV Total Annual Costs Includes Instruction and Modernization costs	$39,300.00	$ 393.00	$ 2.19

Title: Model Office - Programs that prepare to record, duplicate, and retrieve data, including classifying, sorting, and filing correspondence, records, and other data.

Cip. #: 0707010000 Type of Program: Exploratory

Instructional Level: Secondary

Method of Instruction: Model Office and Classroom

Length: 36 weeks Contact Hours Per Student: 2 Hours Per Day

Number of Students: 20

PROGRAM COST

			TOTAL	PER STUDENT	PER CONTACT HR
STARTUP	COST	Computer terminals, printers, software and installation for 20 students	$64,000	$3,200	$8.49 (2hrs. per day 180 days for 20 students)
INSTRUCTIONAL	COST	Includes 25% of salary, plus travel and extended contract Contract salary $28,000 Travel $1,500 Extended contract $2,400	$7,975	$398.75	$1.11 (2hrs. per day 180 days for 20 students)
MODERNIZATION	COST	Upgrading replacement of equipment, $12,800 Staff development, $1,000 Curriculum development, $1,000	$14,800	$740	$2.06 (2hrs. per day 180 days for 20 student)

Title: Business and Office - Programs that prepare for planning, organizing, directing, and controlling all business office systems and procedures.

Cip. #: 0700000000 Type of Program: Preparatory

Instructional Level: Secondary

Method of Instruction: Cooperative and Classroom

Length: 36 weeks Contact Hours Per Student: 4 Hours Per Day

Number of Students: 20

PROGRAM COST

			TOTAL	PER STUDENT	PER CONTACT HR
STARTUP	COST	Computer terminals, printers, software and installation for 20 students	$64,000	$3,200	$4.44 (4hrs. per day 180 days for 20 students)
INSTRUCTIONAL	COST	Includes 50% of salary, plus travel and extended contract Contract salary $28,000 Travel $1,500 Extended contract $2,400	$17,900	$895	$1.24 (4hrs. per day 180 days for 20 students)
MODERNIZATION	COST	Upgrading replacement of equipment, $12,800 Staff development, $1,000 Curriculum development, $1,000	$14,800	$740	$1.03 (4hrs. per day 180 days for 20 student)