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ABSTRACT

In order to identify transfer agreements which are now operational or under study, inquiries were sent to the state higher education agencies, both for junior and senior institutions, in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North and South Carolina, Tennessee, Texas, Virginia, and West Virginia. Over 50 types of coordinated programs were identified through which students might move from community colleges to senior institutions in technical and career-oriented fields. Highlights of the study include the following: (1) though there was little uniformity in the specifics of joint arrangements, most were made on a basis of "two plus two" years; (2) the states with the greatest number of specific arrangements were those where the state higher education agencies played an important role in their development; (3) there was little consistency in the baccalaureate degree designations for the completion of technical programs of instruction; (4) for the most part, courses taken at state vocational schools have not been transferable; and (5) there was a wider acceptance of "inverted programs" through which technical students from community colleges may complete their general education work at the university. The specific arrangements of numerous individual institutions are described as well as statewide historical developments. (AYC)

Cooperative Curricular Planning Between Community Colleges and Senior Institutions in Technical and Career-Oriented Instruction

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Expanded Opportunity

A Staff Report

1979

Southern Regional Education Board
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FOREWORD

In a society as technological as ours, it is not surprising to learn that technical instruction in a wide variety of fields is being extended beyond the community college into senior colleges and universities. Many traditional barriers to the transfer of credits in technical courses from two-year to four-year institutions are being reviewed and modified. State agencies for higher education in several states are encouraging the joint planning of course sequences between community colleges and universities to facilitate student progress in paraprofessional and middle-level technological fields.

These developments are contributing to the expansion of opportunity in postsecondary education for many students both for those who transfer directly upon completion of community college work and for those adults who desire to advance their career capabilities. These trends have been accelerating in the past decade and undoubtedly will have an effect on the claim that the technical programs in two-year institutions are "terminal" in the sense of bringing a student's postsecondary education to an end.

This report is a sampling of coordinated planning activities now taking place in the South. It is believed that the information will be of interest both to state agencies in postsecondary education and to institutions where conditions are favorable for joint planning between two-year and four-year institutions to coordinate course sequences leading to baccalaureate degrees in technical fields.

Winfred L. Godwin
President

With the development of public two-year community and junior colleges in most of the Southern states, it soon became apparent that articulation of instructional programs was essential for the smooth transfer of students from junior to senior institutions. Early articulation agreements were concerned primarily with general education requirements for the baccalaureate degree, differences often resulted in a loss of credit for the transfer student or in the necessity to take additional underclass courses.

For example, as early as 1959, an attempt was made in Florida to define statewide articulation patterns in public postsecondary institutions. Yet continuing transfer problems arose and, in 1967, the state initiated an effort to reach a unifying agreement. This work led to the establishment in 1971 of a statewide agreement which included the creating of an Articulation Coordinating Committee with a limited amount of legal authority for continuous evaluation and review and modification of the agreement. Both the state's Board of Regents for the university system and the Division of Community Colleges have representation on this committee.

For many years, however, a sharp distinction was made in Florida and many other states between general education courses, which were transferable, and vocational or technical courses which were regarded as "terminal" and non-transferable. The use of the word "terminal" has resulted in two meanings — one indicating that the program does lead to preparation for entering the labor market at the end of two years of training, and the other implying that the completion of a terminal program ends the student's postsecondary education.

In recent years it has become increasingly evident that our technological society requires a wide range of advanced technical training beyond the two-year level. In areas such as allied health professions, engineering technologies, and business administration, there is a need for competent middle-level personnel at the baccalaureate level or even beyond. It is, therefore, not surprising to discover that planning for articulation between two-year and four-year institutions in many states is now expanding to include a wide variety of technologies and career-oriented fields.

The purpose of this report is to identify transfer agreements which are now operational or under study in a number of the Southern states. Inquiries were sent to the state higher education agencies, both for senior institutions and for community colleges, in the 14 SREB states. The replies constitute the major source of information included in this report. The information is not comprehensive or inclusive, as there are probably other efforts under way which were not reported. However, over 50 types of coordinated programs through which students might move from community colleges into senior institutions in technical and career-oriented fields were discovered.

Most of the joint arrangements are made on a basis of "two plus two" years; but a number of four-year institutions, which also offer associate degrees, have included some "one plus one" programs through which the student may take the first year at the community college and the second at the university where the student receives the associate degree.

Many states reported planned course sequences in health-related fields, including the following career areas:

allied health	*health administration*
dental hygiene	*health education*

hearing and speech science
kinesiology science
medical technology
nursing
pharmacy
physical therapy
podiatry assistant
radiological technology

Business administration programs, in addition to the traditional general business majors, such as accounting and marketing, include articulation agreements in the following specific fields

banking
finance
hotel and restaurant management
information systems management
insurance
real estate
textiles marketing
transportation

In the area of social and human resources services, the following programs were cited:

criminal justice
early childhood education
police science
recreation management
social work technician

Course sequences for transfer were named in a wide variety of technological fields:

agricultural technology
architecture technologies
aviation maintenance technology
building construction
cartography technology
chemical technology
civil engineering technology
climate control technology
computer science technologies
dietetics
fire sciences
forestry and wood technology
housing and interior design
industrial arts
industrial engineering technology
library technology
machine shop technology
manufacturing technology
mass media
mechanical drawing and design technology
mining technology

At both the state agency level and among institutions, the agreements showed a far greater flexibility for the transfer of credit than was visible ten years ago. For example, many technical courses which in the past would not have been transferable are now accepted as elective credit for a baccalaureate degree.

There is wider acceptance of "inverted programs" through which technical students from the community college may complete their general education at the university, in addition to some additional work in the major field. This change is due in part to a move away from the position that general education must be taken at a specified time in the first two years of college education. Another trend for assisting technical students who transfer is the provision of credit by competency examination in basic courses involving skills.

In 1975, the **University of Alabama** published its first *Guide to Equivalence and Transfer of Junior College Credits.* A second edition appeared in 1977, and a supplement to that edition was issued in 1978. The document lists each course taught in Alabama junior colleges; indicates in which institutions each such course is offered; gives the University of Alabama equivalent course number; and defines the applicability of each course to a degree in each of nine schools or divisions of the university. There are many courses not offered by the university which are accepted as elective credits in a number of schools and divisions. For example,

such courses as *materials science* and *mechanics of materials* are accepted as elective credit in all divisions except home economics.

Other examples in Alabama include accepting credits in *introduction to law enforcement* and in *juvenile justice process* as elective credit in all divisions. *Corrections process* is given elective credit in most divisions, and this course as well as *police report writing* are accepted as electives by the School of Nursing. Three courses in *advanced medical record science* are assigned elective credit by the School of Nursing. Data processing courses in *Fortran programming* are given credit as electives by all divisions of the university and allowed as credit on a major in the Schools of Education and Engineering. In these cases, the courses do not substitute for required courses in the major field but are acceptable as elective credit for meeting the total hour requirements in the major.

Similar flexibility was reported in Kentucky, Maryland, North Carolina, and Florida. In addition, some vocational courses taken in state area vocational schools are accepted for credit on transfer to community colleges and to senior universities offering the associate in science degree.

There is little uniformity in the joint arrangements. For example, in Kentucky, *radiological technology* is primarily a "one plus one" agreement culminating in an associate degree at the university, in Maryland, the program is usually a "two plus two" agreement leading to a baccalaureate.

The greatest number of specific agreements between community colleges and senior institutions was reported in those states in which the state higher education agencies have played an important role by encouraging their development and by providing a frame of reference in terms of broad policies applicable to such agreements.

For example, in March of 1978, the **Kentucky** Council on Higher Education, assisted by the Kentucky Higher Education Assistance Authority and by the Council of Independent Kentucky Colleges and Universities, published a *Transfer Guide for Students Moving Between or Into Kentucky Colleges and Universities.* This guide includes information on existing articulation agreements between junior and senior institutions in 19 of the technical fields listed above, and the agreements also include transfer understandings established with a number of private institutions.

A 1976 mandate by the Governor of Kentucky calling for **articulation between vocational and college programs** gave added impetus to the process. Through its Statewide Articulation Committee, the state is now working to encourage additional program articulation agreements, to publish course equivalency guides, to improve mechanisms at each institution to deal with transfer problems, and to facilitate the overall transferring process. The committee is also studying how some courses taken at the state's vocational technical schools can be converted from clock hours into credit hours for courses which may be transferable to the receiving institution.

In Maryland, the State Board for Higher Education and the State Board for Community Colleges indicated that **a wide range of technical and career-oriented programs have been articulated between the 16 community colleges and each of the four campuses of the University of Maryland.** Each community college publishes an outline of its agreements with each of the four campuses, showing which courses, in addition to general education courses, may be

taken at the community college for transfer to university curricular programs. Where a student can remain at a community college for two years without risk of delaying his graduation, a two-year program is outlined. Where a student should not remain more than one year at the community college, a one-year outline of courses is suggested.

A unique feature of the Maryland planning is the assignment of a particular upper level technical program for transfer to only one of the four campuses, making it possible for the state to provide a diversity of opportunities for transfer in technical fields and to minimize duplication. For example, at the College Park campus, transfer arrangements with the community colleges include programs in *computer sciences, criminology, fire science, engineering technology, allied health, hearing and speech sciences, housing and interior design, information systems and management, mass media, kinesiological sciences, library science, recreation management, textiles, marketing,* and *vocational-industrial education.*

At the Baltimore City campus, the transfer programs are in the health sciences and include *dental hygiene, medical technology, nursing, pharmacy, physical therapy,* and *radiologic technique.* At the Baltimore County campus, transfer programs in *early childhood education, social work,* and *visual and performing arts* are listed. At the University of Maryland-Eastern Shore, *building construction* and *industrial arts* are identified. The curricular roles of the Eastern Shore campus are under review, and it is likely that additional articulated programs in technical fields may emerge.

As stated above, the **Florida Articulation Agreement** of 1971 is administered by the Articulation Coordinating Committee. The efforts of this committee have not stifled local initiative in the formation of agreements between the individual universities and feeder community colleges; but it **has provided a frame of reference in the formation of general policies used in projecting joint arrangements and a mechanism for statewide review of proposed joint agreements.** The following list of transfer programs illustrates the wide diversity of programs for movement from community colleges to senior institutions:

Florida A&M University, in cooperation with Miami-Dade, Hillsborough, and St. Petersburg Community Colleges, has provided a jointly planned sequence providing for movement of students to the university in *architecture.* Planning is now under way for a similar arrangement with Miami-Dade in *building construction technology.*

The University of Florida, with feeder community colleges, provides programs leading to a baccalaureate degree in *technology* and to degrees in *allied health* and *nursing.*

Florida Atlantic University, the University of South Florida, and the University of West Florida have programs with feeder community colleges in *computer sciences, criminal justice, nursing,* and *allied health.*

The University of West Florida has arrangements with feeder community colleges in *industrial arts, home economics, business education,* and *industrial technology.*

The University of South Florida has agreements with St. Petersburg, Polk, and Hillsborough Community Colleges in *fire sciences,* leading to a degree in *political science* or in *human resources.*

Florida Central University's program includes agreements with the state's community colleges in *nursing care, engineering technology*, with options in *design, electronics, environmental control*, and *operations technology*.

The University of North Florida, working with Florida Junior College in Jacksonville, lists joint programs in *insurance, real estate, transportation*, and *finance*.

The Southeast Florida Educational Consortium, consisting of Florida International University, Broward Community College, and Miami-Dade Community College, has a highly sophisticated interinstitutional arrangement for transfer which includes a wide range of technological and career transfer programs. This operation will be described in more detail later in this report.

The Department of Community Colleges of the **North Carolina** State Board of Education works with the community colleges and the two-year technical institutes, both of which are included in articulation agreements with senior institutions in technical fields of instruction. The department provided information on transfer agreements which exist between most of the campuses of the University of North Carolina system and community colleges and technical institutes as well as formal agreements of these institutions with four independent senior colleges—Mars Hill College, Campbell College, Elon College, and North Carolina Wesleyan College. **Policies related to transfer credit and the identification of technical programs for which transfer is allowed are set by each institution.** In most cases, the technical programs lead to an associate degree in applied science in the two-year institution, and the bachelor of technology or the bachelor of science degree in the senior institutions. Most of the arrangements with the private colleges are in the allied health fields.

The articulation agreements in technical fields are, for the most part, between a senior institution and any of the state's community colleges or technical institutes. However, two cluster arrangements with selected feeder institutions will be described later in this report.

In 1972, the **South Carolina** Commission on Higher Education approved a transfer **program by which graduates of the state's technical institutes and colleges could transfer credit to South Carolina State College** as candidates for the bachelor of science degree in engineering technology. The primary fields in which this work is offered are *civil engineering technology, mechanical engineering technology, electrical engineering technology*, and *industrial education*.

A study of the graduates shows that most of the students were transfers from four of the state's two-year technical colleges and from a number of senior colleges in South Carolina and in other Southern states. In the state's only historically black public institution, South Carolina State College, it is of note that about one-third of the graduates in the technology program have been white students. Records also show a high rate of placement of graduates in positions with industry.

In addition, a 1979 study by the South Carolina Technical Education System indicates that five technical two-year colleges have developed formal transfer agreements with senior institutions both in South Carolina and in a number of other states. In addition to transfer in engineering technology fields, there are some transfer arrangements for students studying *criminal justice*.

Each four-year public college in Virginia has been mandated by the legislature to develop articulation agreements with the Virginia Community College System. Some of the agreements reported by the Virginia Community College System include arrangements with senior institutions in such fields as *accounting, engineering technology, nursing, police science, fire science,* and *business administration.* As a part of Virginia's plan submitted to the Office for Civil Rights of the Department of Health, Education, and Welfare, special efforts are being made for its two historically black institutions to structure transfer agreements with the community colleges in their geographical regions.

For the past ten years the Coordinating Board of the Texas College and University System has been giving attention to the transfer of credit from the community and junior colleges to the senior institutions. The Association of Texas Colleges and Universities has been assisting in this project. Extensive work has been accomplished in the study of core curricular patterns, not just in general terms but in terms of specific program areas, such as *criminal justice.* A survey is now being made to identify specific sequential degree program arrangements which may exist in different locations in the state.

A number of the public universities offer the bachelor of applied arts and science degree and enroll students who have completed the associate of applied science programs in *occupational education* in community colleges. The plan is reported to be working well, and the question has been raised as to whether some of the other public universities might initiate similar programs.

In 1978, the Coordinating Board's Division of Community Colleges and Continuing Education developed a proposed study plan for core curriculum and transfer of credit. While institutional initiative in developing cooperative arrangements between senior and junior institutions in particular locations is encouraged, it is felt that such planning should be within a framework of policies approved by the Coordinating Board. The plan envisions the publication of a document on core curricula for wide distribution. It is recognized that core curricula might differ among the various specialities which students would enter at the senior college level. The plan also recommends continuing monitoring and evaluation.

The statewide development of community colleges in Arkansas, Tennessee, and West Virginia has taken place comparatively recently.

The **Arkansas** Department of Higher Education reports that it has been working on the transfer problem between community colleges and senior institutions during the past few years. No statewide agreements have been reached. It is possible that transfer agreements in technical fields of instruction may be emerging in local areas of the state.

In **Tennessee**, interest in arrangements for articulation of community college programs with senior universities has been strong, and an articulation study was completed in the fall of 1978. At present the focus is upon articulation of general education requirements, but it is anticipated that coordination of instruction in technological fields will be reviewed in the near future. Meanwhile Tennessee Technological University and Shelby State Community College have instituted a *"live and learn" plan* by which students in *engineering* and *business administration* may begin their work at Shelby State and transfer to Tennessee Technological University in a number of specific areas in these two divisions. An unusual feature of the plan is that it covers a

five-year period with intermittent periods when the student has a work experience in an industry or business appropriate to his or her major field of interest. Several other community colleges may also participate in this procedure.

In **West Virginia**, according to the Board of Regents, community college components were established within some of the senior institutions. No specific transfer agreements between community colleges and senior institutions in technological fields were reported.

In **Georgia**, the Board of Regents has established the outline of a basic core curriculum which students may take in planning to transfer to any of the state's public universities or colleges.

Each community college in **Mississippi** has its own governing board. Public universities work closely with the two-year institutions, and any transfer arrangements between community colleges and senior institutions are developed by the institutions rather than through state planning. For example, the University of Southern Mississippi has a "two plus two" transfer plan with Gulf Coast Junior College in such fields as *computer science technology*, *real estate*, *construction technology*, *criminal justice*, and *industrial technology*. It is quite possible that similar arrangements may exist in other parts of the state.

In **Louisiana**, there is no system of community colleges statewide, but Delgado Junior College in New Orleans is a fully comprehensive community college. Delgado has been working with Southern University in New Orleans since 1977 in exploring and establishing joint programs leading to the bachelor of technology degree to be awarded by Southern University in New Orleans. As a part of the state's recently developed master plan for its institutions, the Board of Regents has approved awarding of the bachelor of technology degree by Southern University in New Orleans, and these two institutions expect to have joint programs in operation by 1981.

Delgado Junior College also has a formal agreement with Our Lady of Holy Cross College, one purpose of which is "to develop areas of cooperation in academic and vocational and technical curricula, and to promote career education." The joint program has been in operation since 1974. At present 58 students from Holy Cross are taking work at Delgado, and 72 Delgado students are taking work at Holy Cross. The fact that one of the Delgado campuses is near to Our Lady of Holy Cross has facilitated this development.

For the most part courses taken at state vocational schools have not been transferable. Examples of this form of transfer have, however, appeared in Kentucky and in Alabama. Northern Kentucky University is now developing an articulation agreement with Northern Kentucky State Vocational-Technical School. The planning is being carried out by a joint council from the two institutions. In a recent statement the council reports:

> The growing trend points to the need to recognize occupational competency measures as a means of granting advanced standing for credit toward an associate degree. Competency assessment provides evidence to establish standards on a broad basis and remove some of the barriers that currently make it extremely difficult for vocational graduates to pursue advanced studies and earn degrees. Furthermore, it provides the evidence necessary to encourage qualified persons to strive for professional development.

The council has chosen *machine shop* and *manufacturing technology* as the programs for the initial phase of the articulation process. A complete four-year package in *industrial education* has been presented to the Kentucky Council on Higher Education for review and acceptance as a baccalaureate degree program at Northern Kentucky University, with some of the credits being validated from the technical school.

A "one plus one" arrangement has been established between Alexander State Junior College and Nunnelley State Technical College in Alabama so that technical courses at the latter are accepted for an associate degree in the junior college. Bishop State Junior College and Southwest Technical College have a similar arrangement.

A number of unique programs at the local level were reported. The Regional Technical Institute of the University of Alabama School of Applied Health in Birmingham has a statewide agreement with community and junior colleges in Alabama whereby a student receives one year of general education at a local junior college and then attends the Regional Technical Institute for a calendar year to receive specialized training in one of 13 distinct programs in allied health. The junior college awards the associate degree, and the Institute prepares the student to take state licensure examinations in the specific field of training. This arrangement has been extended to include some private institutions in Alabama and to include some similar arrangements with institutions outside of Alabama.

Two campuses of the University of North Carolina System have established articulation programs with unusual features. Appalachian State University is working closely with two-year institutions, both community colleges and technical institutes, in its service area located within 100 miles of the campus. Its bachelor of technology degree is described as **"an inverted degree program"** through which the student from the two-year institution completes a major part of his technical training there and completes general education course requirements at Appalachian State while also taking some upper level courses related to the major field. The unusual feature is that the transfer student must take a 10-credit-hour program in a teaching internship. The practicum takes place in a community college or a technical institute on a full-time basis. It is reported that a substantial number of graduates find employment as full- or part-time instructors in technical institutes and community colleges and also in business and industry where their competencies in training persons in technical skills prove to be a valuable asset.

Administrators of Western Carolina University believe that there is an obligation to the people in surrounding counties to make available certain academic programs which enable working adults to upgrade their employment status and eventually earn a bachelor of science degree through continuing education classes. Four two-year institutions participate with the university in this program: Western Piedmont Community College, Wilkes Community College, Caldwell Community College and Technical Institute, and Catawba Valley Technical Institute. For the most part participants are graduates of one of these four institutions. The university offers the upper-level courses on the centrally located campus of Western Piedmont Community College. The work offered is in the fields of *industrial technology* and *business administration*.

Perhaps the most sophisticated program at a local level among those reported is administered by the Southeast Florida Educational Consortium. The members are Florida International University, Broward Community College, and Miami-Dade Community College. A comprehensive articulation plan has been established in all major fields and includes a wide variety of technical and career-oriented programs. The Consortium is governed by an interinstitutional steering committee which holds meetings frequently, often attended by the presidents, and which sets up working committees for the purpose of developing joint programs and guidelines for their administration. The Consortium has an office with a director and staff.

Associate degree programs offered by the community colleges which transfer to the university for baccalaureate degrees include the following:

hospital accounting
computer systems science
banking and savings and loan careers
insurance
real estate
small business administration
recreation management
preschool and day care centers
tourism industries
motel-restaurant management
law enforcement
corrections
crime science technology
court reporting
civil engineering technology
building construction
architectural technology
dietetic technician
laboratory technician
emergency medical technology

Regular workshops for faculty and administrators are conducted by the Consortium in curriculum planning, instructional techniques, and especially in counseling and advisement. Through an inter-campus computer system arrangement, transcripts and other information can be instantly communicated from one campus to another, facilitating transfer and augmenting counseling and advisement processes.

The Consortium office states that "there is an increasing need for the public and private postsecondary institutions in Southeast Florida . . . to coordinate their planning and cooperatively offer educational programs and services." The Consortium, therefore, is inviting other public and private institutions into full membership and cooperation. A special effort is to be made to serve the area "in coordinated, nonduplicative, and continuous manners."

The importance of providing information about joint programs in technical education to high school students, college freshmen, and especially to high school and college counselors is widely recognized. Every time a new joint program is designed, the Consortium prepares a brochure about it and distributes it widely. Guides to equivalency of transfer credits, such as developed by the University of Alabama and the Kentucky Council on Higher Education, enable students at an early time to know about the varied options open to them. Institutional guides about joint programs, such as those published by junior and senior colleges in Kentucky and Maryland, serve a similar purpose.

It is particularly important that minority students have information about technical and career-oriented programs which may be initiated at the community college and completed at the senior institution. It is, therefore, of considerable interest that eleven historically black public colleges and universities are among the institutions listed by the states as participants in articulated technical instructional programs with community colleges. In some cases, these arrangements are evolving as a part of state planning to increase desegregation in public postsecondary education.

The rapid development of structured agreements between two-year and four-year institutions to facilitate transfer of students in technical and career-oriented fields has raised three issues to which attention should be given.

First, **there is little consistency in the baccalaureate degree designations for the completion of technical programs of instruction.** The bachelor of arts degree is seldom used. The two most common degrees are the bachelor of science and the bachelor of technology. However, many institutions accompany these degrees by the designation of the field in which the student majored, such as "bachelor of science in nursing" or "bachelor of technology in civil engineering technology." A similar lack of consistency in associate degrees given by community colleges was found in a national study of general education and associate degrees recently published by the American Council on Education.* ***How important is the attainment of consistency?*** Are there in fact any basic distinctions among these various designations? Would an effort to standardize degree designations lead to excess rigidity and less flexibility?

The second problem arising from the rapid expansion of offerings such as those described in this exploratory report will certainly raise a traditional issue: **the question of a proper balance between vocational courses and general education in undergraduate education.** In most of the arrangements reported there is an awareness that the upper level instruction should include general education as well as advanced training in the major field. Cultural development is an important ingredient in preparation for any career. The degree to which general education should be specified in rigid terms or allowed some flexibility will be debated.

Since many of these articulated programs are relatively new, **there is a need for evaluation of results.** Does the completion of such programs really expand opportunity for advancement in the chosen field? It would seem that longitudinal studies of individuals completing programs would provide the desired information as well as furnishing a basis for improving the instructional patterns.

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* Sullivan, E. J. and Suritz, J. S. *General Education and Associate Degrees*, American Council on Education, Washington, D.C., 1978.