REPORT OF THE
STATE COUNCIL OF HIGHER EDUCATION AND THE
VIRGINIA COMMUNITY COLLEGE SYSTEM ON

THE TRANSFER OF ACADEMIC CREDIT

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 26

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PREFACE

Senate Joint Resolution (SJR) No. 182, sponsored by Senator Benjamin J. Lambert, III, requested the State Council of Higher Education, the Virginia Community College System, and the Joint Subcommittee Studying the Status of and Need for Academic, Financial Assistance, and Incentive Programs to Encourage Minorities to Pursue Postsecondary Education and Training (otherwise known as the Minorities and Higher Education subcommittee) to study the transfer of academic credit. This study addresses each of the study resolution's specific requests in turn, with the findings summarized in the executive summary.

The study was completed by Genene M. Pavlidis, senior academic affairs coordinator at the Council, with help from staff members from the Council and the Virginia Community College System. Special thanks is extended to the Honorable Marian Van Landingham, chair of the Minorities and Higher Education subcommittee, and Brenda H. Edwards, senior research associate at the Division of Legislative Services, for their part in the design of the study.

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EXECUTIVE SUMMARY

Senate Joint Resolution No. 182, sponsored by Senator Lambert, requested the "State Council of Higher Education and the Virginia Community College System, in collaboration with the Joint Subcommittee Studying the Status of and Need for Academic, Financial Assistance, and Incentive Programs to Encourage Minorities to Pursue Postsecondary Education and Training, to study the transfer of academic credits." The study resolution asks that the report address a series of specific issues. Below are summarized the major recommendations with respect to each of those issues and the findings that support them.

Recommendations

- Since the Commonwealth of Virginia wishes to increase the accessibility of higher education for all qualified students; and
- since one way to do so is to increase the ease of transfer from two-to-four year institutions; and
- since the private-college contract program promises to make Virginia's private colleges full participants in the state transfer program; and
- since African-American students presently transfer in small percentages than their general representation in the higher-education community; and
- since most students who transfer, because they are not enrolled in transfer programs, are often uncertain of their direction and likely to be self-advised; and
- since African American students are more likely than others to transfer from occupational/technical programs;

the State Council of Higher Education recommends the following:

1) that all senior institutions be in compliance with the *State Transfer Policy* by 1996;

2) that the State Committee on Transfer broaden its membership to include a representative from one of the private colleges involved in the independent college-contract program, and that the committee help chief transfer officers at private institutions;

3) that the State Committee on Transfer continue to develop the transfer module so that students undecided about their field of study can take courses that they know will transfer;

4) that the Virginia Community College System develop and publish a list of 2 + 2 programs (occupational-technical programs that transfer to specific four-year programs) in the state, including those with private four-year institutions, and that the State Committee on Transfer encourage the further development of such programs;

5) that the Virginia Community College System work to ensure that general-education courses in the occupational-technical programs are acceptable for

transfer to the senior institutions and inform students when specific courses are not transferrable;

6)   that the Virginia Community College System and the Council develop a 1996 budget request for a centralized student-information database that would help students plan their academic programs; and

7)   that as quickly as possible, the Council make available electronically transfer guides from the public and private institutions that are now in electronic form.

The Council will continue to monitor transfer and graduation rates of community-college students in general and of African-American students in particular in order to ascertain the effectiveness of these actions in encouraging the transfer and baccalaureate graduation of community-college students.

The analysis of transfer requested by the General Assembly supports these recommendations. Answers to each of the questions posed in Senate Joint Resolution No. 182 are summarized below.

PART ONE: Determine the percentage of minority transfers

Four general findings emerged from the analysis:

- At least 65 percent of the students enrolled in a community college between 1989 and 1992 were not enrolled in any higher-education institution in Virginia in the fall of 1992. This pattern was the same regardless of ethnicity or gender. Most of those who did transfer into four-year public institutions did not first enroll in a transfer-degree program.
- The ethnicity and gender of community-college students in this study who were found at public four-year institutions in 1992 mirrored the overall pattern of enrollment at Virginia's public institutions: approximately 20 percent were minority and 56 percent were female.
- Unlike the pattern for other minority groups, the percentage of students enrolled at community colleges and subsequently at a senior institution who were black was smaller than the percentage of all students enrolled in Virginia's institutions who were black.
- This may be in part because a lower percentage of black community-college students in transfer programs actually transfer, compared to those in other ethnic categories. Black students tended to transfer from occupational-technical programs more often than did members of other ethnic groups.

This analysis of transfer patterns has set a baseline for studying how community-college students, and minority students in particular, choose to complete the baccalaureate degree. As more years of senior-institution data become available, the Council will study cohort groups that have been developed for 1990, 1991, and 1992 to learn more about community-college students' course-taking behavior, college performance, and graduation rates.

PART TWO: Monitor the implementation of the transfer policy

The State Committee on Transfer has overseen the implementation of the *State Transfer Policy*. A report on the committee's past and future activities comprises this section of the report.

In 1994, the committee

- reviewed reports submitted by the two- and four-year institutions on how they have dealt with the directives of the policy. The committee found that 11 institutions were in compliance with the policy, three were generally in compliance, and one was not in compliance. The committee thought that at the two-year colleges, curricular review should be accelerated in order to ensure consistency of content and comparability of rigor in courses presumably similar to those at four-year institutions. The VCCS also needs to implement its electronic master course file in order to facilitate the process of course review, revision, and elimination.
- developed a uniform job description for chief transfer officers at two- and four-year institution and sponsored several meetings of chief transfer officers from the two- and four-year institutions.
- drafted a policy on whether four-year institutions should accept the D grade when it is part of an associate degree: while each institution has the autonomy to determine whether it credits D work, each is expected to do so in such a way as to ensure associate-degree graduates who transfer junior standing.
- drafted a proposal for a statewide electronic transfer assistance system. That proposal, substantially modified by the Council staff, constitutes Part Five of this report.

A final activity on transfer to promote the transfer policy was sponsored through a Funds for Excellence project granted to Virginia Commonwealth University. Two- and four-year faculty in English, math, and business met with the aim of discussing transfer issues. The disciplinary discussions resulted in suggestions for curricular improvement, enhanced faculty interaction, and improved transferability of courses.

In the next year, the State Committee on Transfer will

- encourage four- and two-year institutions to use assessment data in support of effective transfer. For its part, the transfer committee will assess the effectiveness of the transfer module.
- encourage four-year institutions to develop, publish, and (if possible) make available electronically transfer guides that incorporate information about essential support services. The Council will broaden student access to any guides that are in electronic form by making them available on the electronic "information superhighway."
- determine whether any problems have occurred in the system, such as four-year institutions moving some courses from the lower to the upper level or refusing to credit dual-enrollment courses.

- provide a seat on the transfer committee to a private institution that is involved in the independent college-contract program.
- try to find support for future cross-level disciplinary meetings.
- assist the community colleges in exploring opportunities for the articulation with baccalaureate programs of both the applied-science and the general-studies degrees. When such agreements are in electronic format, the Council will make them too accessible via the electronic information superhighway.

PART THREE: Encourage special articulation agreements between two- and four-year programs

In order to describe better the current status of articulation agreements for this study, the VCCS staff has developed a typology of articulation agreements that categorizes five major types of articulation agreements:

Type I: Limited statewide agreements between a senior institution and all VCCS colleges (e.g., acceptance of general education for graduates and junior standing). The provisions of the transfer policy now supersede these agreements, and none have been signed since 1990.

Type II: Generous statewide agreements between a senior institution and all VCCS colleges (e.g., acceptance of general education for graduates, junior standing for graduates, and guaranteed admission for students who meet certain standards).

Type III: Agreements between a single school or program within a senior institution and specific programs within all VCCS colleges (e.g., a school of engineering accepts credits for all graduates of transfer engineering programs).

Type IV: General agreements between a senior institution and a single VCCS college (e.g., guaranteed acceptance for graduates, availability of student services in advance of transfer).

Type V: A single school or program within a senior institution with a program within a single community college (e.g., standard 2+2 agreements that cover graduates of occupational-technical programs).

The VCCS is in the process of refining this typology. When it is complete, the system office will conduct a survey to identify existing agreements that fall into these categories in order to identify specific problems and areas that require attention. The VCCS will also conduct further analyses of the data reported in Part One to see if there are particular occupational-technical programs that appear most likely to lead to transfer.

PART FOUR: Ensure the dissemination of information related to transfer

Some communication strategies are described in Part Two. Additional projects to disseminate information about transfer are

- The Better Information Project. These are pre-collegiate programs administered by the Council of Higher Education and the Department of Education, designed to provide information about college preparation and admission requirements, financial aid, and career opportunities to minority middle- and high-school students, their parents, and secondary-education personnel. A new section for the project's publication includes information about ways to obtain college credit while in high school and information on transfer.
- The transfer newsletter. This will reach a broad audience with information on transfer, including high-school counselors, admissions officers, academic officers, and policy-makers such as state legislators. It will inform its readers about the work that institutions have done in implementing the state transfer policy.

PART FIVE: Monitor the development of an on-line computer database to inform students and their families about transfer policies

Many students will continue to transfer without having completed the associate degree or transfer module. Course-by-course equivalencies are necessary for students who want all of their courses to be credited. But paper transfer guides go quickly out of date. One solution to this problem is an electronic database of transfer information which could be kept current and would not require mail distribution. An interactive system could also allow students to compare their educational progress with the prerequisites for different programs at various four-year institutions. Finally, an electronic system would enable on-line access to all articulated AAS transfer agreements.

Such a system should have the following capabilities:

- It should be tied in to the VCCS information system and be available at two-year colleges and, eventually, high schools, libraries, four-year institutions throughout the Commonwealth, and in students' homes via Internet.
- Using statewide standards for the consistent entry and display of information, the system should be "user-friendly," easily accessible by students and others who are not familiar with the system.
- The system should have text search or hypertext indexing capacity to allow students to compare the courses that they have completed to the requirements of various curricula at various institutions.
- A central coordinating office should oversee the updating of information, applications of new technology, access to the information, and other aspects of the implementation of the *State Policy on Transfer*. The State Transfer Committee recommended that this be the State Council for Higher Education, but the Council staff thinks that a more logical location for it would be at the Virginia Community College System office or at an institution. Wherever it is located, the function would require staffing and funding.
- Each of the four-year and two-year institutions should give one individual overall responsibility for updating institutional transfer information, preferably the transfer officer.

- The information should be comprehensive and presented in a format that can be duplicated so that paper copies of popular programs can be easily received by students. It should express program equivalents in terms of community-college degrees so that students are encouraged to obtain degrees.

Implementation

Some suggestions in this section can be implemented immediately, some will require minimal resources, and some will require substantial resources.

- The State Council will immediately make available, through the electronic information superhighway, any institutional transfer guides that are now in electronic form, as well as other transfer information such as articulation agreements.
- Using current technology, institutions that have not yet done so could make their transfer guides available electronically with minimal additional staffing and resources.
- If a centralized, user-friendly database is to be developed and maintained, additional staff and funding both at the central and campus levels will be required to update the files and to enhance the retrieval and cross-reference capacity of off-the-shelf software packages. Several issues relating to the scope and composition of the system and the resource requirements for the particular technologies adopted need further clarification before a request for funding the online course analysis system can be developed. The VCCS and the Council staffs will clarify equipment and staffing needs once they analyze how the system will interact with existing and emerging computer applications and how existing equipment and staff might be used for this purpose.

THE TRANSFER OF ACADEMIC CREDIT

Senate Joint Resolution No. 182

Introduction

In 1989 *A Case for Change*, the report of the Commission on the University for the 21st Century, recommended that transfer from VCCS colleges to public four-year colleges be simplified to enable Virginia to meet the enrollment challenges facing it. In 1990 the Joint Legislative Audit and Review Commission (JLARC) report on the VCCS recommended that the VCCS and the Council facilitate formal articulation agreements with all public senior institutions in Virginia and that a standard format be adopted for reporting achievement data on former VCCS students. The *State Policy on Transfer* and a standard format were developed in part to respond to those recommendations.

That Virginia's students have access to an affordable collegiate education continues to be a concern of the public and their representatives in the legislature. Accordingly, the 1994 General Assembly requested that the State Council, the VCCS, and the Joint Subcommittee studying the Status of and Need for Academic, Financial Assistance, and Incentive Programs to Encourage Minorities to Pursue Postsecondary Education and Training (also known as the Minorities and Higher Education subcommittee) study the transfer of academic credits. Specifically, Senate Joint Resolution No.182 asked that the Council and the VCCS

- determine the percentage of minority students enrolling in two-year institutions and subsequently transferring to four-year institutions,

- monitor the implementation of the state transfer policy,

- encourage special articulation agreements between two- and four-year programs,

- ensure the dissemination of information related to transfer, and

- monitor the development of an on-line computer database to inform students and their families about transfer policies.

The Minorities and Higher Education subcommittee expressed concern that transfer, especially for minority students, remains problematic. In order to address this concern, the Council staff matched community-college enrollment data with course enrollment from all of Virginia's colleges and universities for an initial look at transfer patterns. The findings, presented in Part One of the report, represent the first step in an on-going study.

In addition, the 1994 JLARC report on the State Council of Higher Education recently commended the Council on the "substantial progress" it has made "in addressing complex

student transfer issues." Its capacity to do so largely has largely resulted, in JLARC's judgment, from its establishment, first, of the Joint Commission on Transfer Students and more recently, of the State Committee on Transfer. It is to this committee -- a coalition of representatives from two- and four-year institutions, both public and private, and staffed by the Council and the VCCS -- that the task of monitoring the implementation of the state transfer policy has largely devolved. A report on the committee's past and future activities, therefore, comprises Part Two of the report.

Viable articulation agreements have the potential to ensure better access to higher education for students whose original intention was not to transfer. In Part Three of the report, the VCCS categorizes five major types of articulation agreements, describes the purpose of each, lists an example of each, and defines the next steps necessary for the continued development of such agreements.

Activities that should enhance the dissemination of transfer information are identified in Part Four. Part Five presents a proposal for an on-line computer database to inform students and their families about transfer policies. This section outlines the rationale for an electronic database, components for a basic system, and steps for its implementation.

The report that follows addresses each of the Minorities and Higher Education subcommittee's concerns in turn, with attention to what needs to be done next to facilitate transfer in the Commonwealth.

PART ONE: Determine the percentage of minority transfers

Senate Joint Resolution No. 182 asked that the State Council of Higher Education and the Virginia Community College System "determine the percentage of minority students enrolling in two-year institutions and subsequently choosing to transfer to four-year institutions." The Council staff has developed a snapshot of transfer patterns in the Commonwealth as the first step in what will be an on-going study. The Council staff matched its fall 1992 course enrollment file from all of Virginia's colleges and universities with 1989-1992 annual enrollment data from the community colleges for its initial look at transfer patterns.

Summary results

Four general findings emerged from the analysis:

1. At least 65 percent of the students enrolled in a community college between 1989 and 1992 were not enrolled in any higher-education institution in Virginia in the fall of 1992. This pattern was the same regardless of ethnicity or gender. Most of those who did transfer into four-year public institutions did not first enroll in a transfer-degree program.

2. The ethnicity and gender of community-college students in this study who were found at public, four-year institutions in 1992 mirrored the overall pattern of enrollment at Virginia's public institutions: approximately 20 percent were minority and 56 percent were female.

3. Unlike the pattern for other minority groups, the percentage of students enrolled at community colleges and subsequently at a senior institution who were black was smaller than the percentage of all students enrolled in Virginia's institutions who were black.

4. This may be in part because a lower percentage of black community-college students in transfer programs actually transfer, compared to those in other ethnic categories. Black community-college students tended to transfer from occupational-technical programs more often than did members of other ethnic groups.

1. Enrollment patterns

Table 1 (p. 9) shows that most students enrolled at a community college between 1989 and 1992 were not enrolled in any Virginia institution in fall 1992. This pattern held true regardless of ethnicity or gender. However, those who had not persisted in college were older than most students: at least two-thirds were over 30. Of those who had continued their education, 11 to 27 percent (depending on the year studied) did so at the same community college, while only 6 percent enrolled at a public four-year institution. The remaining students enrolled in private colleges, other two-year colleges, or for-profit colleges.

As the second part of the table shows, about half of the community-college students who attended one of Virginia's community colleges between 1989 and 1992 were not formally enrolled in a program (i.e. were "unclassified"). Of the remaining students, an equal proportion

enrolled in either transfer or occupational-technical degree programs. A very small percentage of students enrolled in developmental programs.

Table 1 1989-92 Community-College Students by Program Level and Educational Disposition in 1992			
	1989-90	1990-91	1991-92
Total No. of Students*	223,508	130,844	112,064
Students Who Continue			
Not Enrolled	80%	76%	65%
Same Community College	11	16	27
Public, Four-Year	6	6	6
Private, Nonprofit	1	1	1
Private, For-Profit	< 1	< 1	< 1
Other CC or RBC	1	1	1
Total	100%	100%	100%
2-Yr Program Type			
Unclassified	49%	58%	55%
Transfer	21	18	21
Occupational-Technical	28	21	21
Developmental	2	3	3
Total	100%	100%	100%
*Note: The difference in headcount was due to students enrolled in 1989-90 who were not counted if enrolled in subsequent years. The same was true for students enrolled in 1990-91 and 1991-92.			

Table 2 sorts the 1989-90 students who were no longer at a Virginia college or university in fall 1992 by student type and class level.

Table 2 1989-90 Community-College Students Who Were Not Found Enrolled at an Institution in Fall 1992	
Total No. of Students	178,247
Student Type and Class Level	
Developmental	2%
Certificate/Diploma	9
Occupational-Technical Freshmen	13
Occupational-Technical Sophomore	7
Transfer-Program Freshmen	14
Transfer-Program Sophomores	5
Unclassified	50
Total	100%

This classification helps explain why some of these students did not show up in Virginia's colleges and universities in fall 1992. Over 15,000 of them were enrolled in one- or two-year

certificate or diploma programs, which are developed in response to employment opportunities identified by local curriculum advisory committees. Students who enroll in these programs generally do so in order to get a job and do not intend to continue their education, at least immediately. Similarly, most students who enroll in occupational/technical programs do not originally intend to transfer but mean instead to complete their training and find a job using their skills.

Nevertheless, as is seen in Table 3, eight to thirteen percent (depending on the year studied) of the students enrolled at Virginia's four-year institutions in fall 1992 had been in an associate of applied science degree program at a community college. Transfer from an occupational/technical program is an unusually strong pattern among black students, one which we will discuss later. Finally, some of the sophomores in the transfer programs may have graduated with a baccalaureate degree by 1992.

Table 3 Program Level of 1989-92 Community College Students Who Were Found at Four-Year Public Institutions in Fall 1992			
	1989-90	1990-91	1991-92
Total No. of Students	14,341	8,230	6,601
2-Yr Program Level Developmental Transfer Occupational-Technical Unclassified	3% 41 13 _43 100%	2% 28 8 _62 100%	<1% 22 8 _70 100%

An unclassified community-college student is one who is not formally admitted to one of the regular curricula or to a developmental-studies program. There are many reasons community-college students choose not to enter programs, some of which explain why they did not attend a Virginia institution in fall 1992. Some unclassified students want only to take courses to upgrade their skills for a present job, develop skills for a new job, or obtain personal satisfaction or general knowledge. Others have not yet settled on an occupation; many of these are similarly undecided about which educational program to enroll in. These first two groups may well not persist in their educations by choice or through indecision. Still other students are transients whose primary enrollment is with another postsecondary institution but who take occasional classes at a community college. Finally, some students enroll in community-college courses while still in high school. These last two groups may or may not complete their educations at a Virginia college or university; they may also go out of state.

The remarkable thing about unclassified students is that so many find their way from community colleges to Virginia four-year institutions. Site visits to the community colleges revealed that half of the colleges visited do not test the entering skills of their unclassified students in order to place them at the appropriate course level, and students not formally enrolled in community-college programs typically do not receive advising. Yet, depending on the year

studied, 40 to 70 percent of all community-college students who later transferred were unclassified (Table 3, p.10).

2. Demographics and performance

Table 4 illustrates other characteristics of community-college students who had transferred to one of the four-year public institutions by fall 1992. Generally, their ethnicity and gender mirrored those of all students at Virginia's two- and four-year colleges and universities: approximately 20 percent were minority and 56 percent were female (depending on the year studied). About fifty percent of the students were between 18 and 22 years old.

Table 4 Demographics of 1989-92 Community College Students Who Were Enrolled in Four-Year Public Institutions in Fall 1992			
	1989-90	**1990-91**	**1991-92**
Total No. of Students	14,341	8,230	6,601
Gender Female Male	53% 47	56% 44	56% 44
Age in 1992 < 18 18-22 23-29 30-39 40+	<1% 22 52 17 9 100%	<1% 46 32 13 9 100%	<1% 58 23 11 8 100%
Ethnicity American Indian Asian Black Hispanic White	<1% 6 9 2 83 100%	<1% 6 10 1 83 100%	<1% 7 12 1 80 100%

Table 5 (p. 12) shows how transfer students performed. Once they got to a four-year institution in fall 1992, the great majority of the transfer students were enrolled in an undergraduate or a graduate program. About half of the students attended the four-year institutions full time, and at least two-thirds of them were in good academic standing.

Table 5 Programs and Performance of the 1989-92 Community-College Students Who Were Found at Four-Year Public Institutions in Fall 1992			
	1989-90	**1990-91**	**1991-92**
Total No. of Students	14,341	8,230	6,601
4-Yr Program Remedial Baccalaureate Occupational-Technical Graduate Level Unclassified	< 1% 80 < 1 10 _9_ 100%	< 1% 77 < 1 10 _12_ 100%	< 1% 77 < 1 9 _12_ 100%
Grade-point Average Non-graded credit less than 1.00 1.00-2.00 2.00-3.00 3.00-4.00	10% 3 13 36 _38_ 100%	11% 3 13 35 _38_ 100%	10% 3 14 37 _36_ 100%
Credit Hours Taken Non-graded credit 0-6 7-12 13-18 > 18	<1% 21 26 50 _2_ 100%	<1% 19 21 57 _3_ 100%	<1% 18 16 63 _3_ 100%

Of those 1989-90 community-college students enrolled in an undergraduate program in fall 1992, more than one-third were classified as juniors and an additional 42 percent of the students were classified as seniors (Table 6). And of those community-college students classified by the four-year institutions as seniors, approximately 50 percent graduated in spring 1993. Further data is needed to determine what percentage of the remaining students in this cohort graduate and how long it takes them.

Table 6 1989-90 Community-College Students Enrolled in Baccalaureate Programs at Four-Year Institutions in Fall 1992	
Total No. of Students	11,529
Baccalaureate Students Freshmen Sophomore Junior Senior	4% 15 39 _42_ 100%

3. Minority transfer students

As mentioned earlier, of the community-college students who enrolled at a senior institution in fall 1992, approximately 20 percent were minority students, a statistic which reflects the total enrollment of minority students in Virginia's public institutions. However, as Table 7 illustrates, unlike other minority groups, the percentage of black community-college students who later enrolled at a four-year institution is smaller than their percentage in the total college population (9 percent compared to 14 percent). Equally important, though, is the increased rate in which black community-college students transferred from 1989 to 1992: a rise from nine to twelve percent (Table 4, p. 11).

Table 7 Comparison of 1989-90 VCCS Cohort to Total Enrollment by Race			
	1989-90 VCCS Students	1993 Total Enrollment	
Total No. of Students	Enrolled at 4-Yr Publics 14,341	4-Yr Publics 164,696	VCCS 138,363
Ethnicity American Indian Asian Black Hispanic White	<1% 6 9 2 83 100%	<1% 5 14 2 78 100%	<1% 4 14 2 79 100%

4. Patterns of transfer for black students

As Table 8 (p. 14) shows, black community-college students enroll at senior institutions less often from transfer programs than other ethnic groups (29 percent compared to 41 to 51 percent). In fact, an almost equal proportion of black students transferred from transfer programs as they did from occupational-technical programs (29 and 21 percent respectively). This large proportion of black students who transfer from occupational-technical programs suggests that articulation agreements have the potential for improving transfer from the community colleges to the four-year institutions.

Table 8					
1989-90 Community College Enrollment at Four-Year Institutions					
by Ethnicity and Program Level					
Total No. of Students	White 11,877	Black 1,326	Asian 867	Hispanic 234	Am. Indian 37
2-Yr Program Level					
Transfer	41%	29%	49%	51%	49%
Occupational-Technical	13	21	13	15	8
Developmental	2	5	3	1	11
Unclassified	44	45	35	33	32
Total	100%	100%	100%	100%	100%

This analysis of transfer patterns has set a baseline for studying how community-college students, and minority students in particular, choose to complete the baccalaureate degree. As more years of senior-institution data become available, the Council will study cohort groups that have been developed for 1990, 1991, and 1992 to learn more about community-college students' course-taking behavior, college performance, and graduation rates.

PART TWO: Monitor the implementation of the transfer policy

The Joint Legislative Audit and Review Commission (JLARC) recently commended the Council on the "substantial progress" it has made "in addressing complex student transfer issues." In JLARC's judgment, its capacity to do so largely has largely resulted from its working with two- and four-year institutional representatives, first through the Joint Commission on Transfer Students and more recently through the State Committee on Transfer. The commission developed the state transfer policy and the committee has overseen its implementation. A report on the committee's past and future activities comprises this section of the report.

The 1994 activities of the State Committee on Transfer

In 1994, the transfer committee initiated a number of projects to facilitate transfer. Its most important activity was to review reports submitted by the four-year institutions, Richard Bland College, and the Virginia Community College System (VCCS) on how they have dealt with the directives of the transfer policy. Because of the breadth of the policy and the diversity of Virginia's senior institutions, the original transfer committee predicted that institutions would need three years to comply fully with the policy. The transferability of the associate degree and the transfer module constitutes the heart of the state policy. At the end of the three-year implementation period, almost all senior institutions have accepted the associate degree as the equivalent of their lower-division general-education requirements, and they admit students who have earned that degree as juniors. In addition, almost all senior institutions accept the transfer module as a transferable program of courses

In October 1994, the State Committee on Transfer judged 11 of the 15 four-year institutions to be in compliance with the transfer policy. They include Clinch Valley College, Christopher Newport University, George Mason University, Longwood College, Norfolk State University, Old Dominion University, Radford University, University of Virginia, Virginia Commonwealth University, Virginia State University, and the College of William and Mary. The committee considered three other institutions -- James Madison University, Virginia Tech, and Virginia Military Institute -- to be generally in compliance but with more serious or more extensive actions to undertake. The committee found only Mary Washington College not to be in compliance. The committee thought that this constituted significant progress: in 1992, it found only one institution to be in compliance

This was the first year in which the committee asked the community colleges and Richard Bland College to assess their progress in implementing the transfer policy. Much work has been done and much is in progress. The committee believes that the two-year colleges' curricular review should be accelerated in order to ensure consistency of content and comparability of rigor in courses presumably similar to those at four-year institutions. The VCCS also needs to implement its electronic master course file in order to facilitate the process of course review, revision, and elimination.

Other 1994 activities of the State Committee on Transfer pertained to communication and

the dissemination of information. The appointment of a chief transfer officer at each two- and four-year institution has helped in the transmission of transfer information, as well as in the translation of policy into practice at the institutional level. JLARC commended the committee for its development of a uniform job description for those transfer officers. The transfer committee has sponsored several meetings of chief transfer officers from the two- and four-year institutions. The cooperative efforts of the officers should help demythologize the transfer process for the student and extend across institutions what is already visible within the transfer committee: a collegial, cooperative spirit among two- and four-year institutions.

Another example of partnership can be found in the response of the transfer committee to the question of whether four-year institutions should accept the D grade when it is part of an associate degree. Two- and four-year representatives on the transfer committee drafted a response that both honors the autonomy of the four-year institutions in making academic decisions and supports the integrity of the associate degree: while each institution has the autonomy to determine whether it credits D work, each is expected to do so in such a way as to ensure associate-degree graduates who transfer junior standing. .

A more collegial spirit among personnel at two- and four-year institutions also developed during the past two years when two- and four-year faculty in English, math, and business met with the aim of discussing transfer issues. The meetings were sponsored by a Funds for Excellence project, "A Statewide Initiative to Facilitate Transfer," granted to Virginia Commonwealth University and cited by JLARC as a particularly effective activity sponsored by the Council in support of transfer. The disciplinary discussions resulted in suggestions for curricular improvement, enhanced faculty interaction, and improved transferability of courses.

Finally, the transfer committee has drafted a proposal for a statewide electronic transfer assistance system. That proposal, substantially modified by the Council staff, comprises Part Five of this report.

Next steps

As the transfer committee moves into its fourth year of work, it will continue to provide assistance to institutions in implementing the state policy. A number of issues have emerged that the four- and two-year institutions need to address by working together.

The first is how to use assessment data in support of effective transfer. Some community colleges report that certain four-year institutions either have not shared transfer data or have not done so consistently. Others report that when data are received, they may not be timely, or the data elements are reported in a format that is not consistent with those of other institutions. This problem should be alleviated when the Council and the VCCS begin to tap the research capacities of the Council's new student-unit record system. The assessment reports of the community colleges show that when they have received such information, community colleges have used it to change course content, program structure, transfer student advising, and program-

placement procedures, as well as to determine where they needed to develop articulation agreements with four-year institutions. The committee will work with four-year institutions to encourage their transfer and assessment officers to communicate with each other. For its part, the committee will also conduct an annual assessment of the effectiveness of the transfer module, especially important now that the community-college system has developed a way to indicate on the transcript when students have successfully completed it.

Second, in order to support the independent college-contract program involving graduates of two-year college transfer programs and three private four-year colleges, the committee will expand its membership to include representation from one of the private colleges-- Averett, St. Paul's, or Bluefield -- involved in the pilot program. In addition, the committee will help the private colleges transmit transfer information by helping their chief transfer officers.

Third, better and more consistent development and publication of transfer guides will be an important step for those institutions still struggling with how to disseminate transfer information. The committee will work with the public and private colleges and universities to develop transfer guides incorporating information that transfer students need about essential support services, such as access to campus housing, financial aid, orientation, registration, and counseling. And the committee will encourage dissemination of the guides electronically wherever possible, so that the Council can make them accessible via the electronic information superhighway.

Fourth, there are indications that some programs in the four-year institutions are moving some courses from the lower to the upper level, which results in transfer students having to repeat them. Over time, this might threaten the ease of transfer. The committee needs to determine if and the degree to which this problem exists.

Over time too, some programs have increased the credit hours required for graduation to the point that two-year college graduates cannot complete degrees in two years, even when granted junior standing. In this respect, programs leading to teacher certification present a special problem. However, in their restructuring reports, virtually all senior institutions pledged to reduce the number of hours required for graduation to between 120 and 122. The committee will monitor the implementation of these changes to see if they resolve the problem.

Fifth, the committee is concerned that some dual-enrollment courses are not being granted college credit at some four-year institutions, due to doubts about the credentials of faculty who teach those courses and about the courses' rigor. The committee also has the impression that, particularly if the course is taught at a high school, transfer credit are not awarded by some four-year institutions, irrespective of the credentials of the faculty assigned to that course. This suggests the importance of the community colleges' ensuring that those courses are as rigorous as similar courses taught on campus and that comparable student learning results from them. This done, the committee will encourage four-year institutions to award credit for those courses.

The committee strongly believes that two-year and four-year colleges share an obligation to facilitate transfer and must continue to communicate with one another in order to do so. Faculty especially must communicate. To that end, the committee will try to find support for future cross-level disciplinary meetings.

Finally, in its report on the Council's work, JLARC urged the Council to continue to support the development of articulation agreements. The committee will assist the community colleges in exploring opportunities for the articulation with baccalaureate programs of both the applied-science and the general-studies degrees. Community colleges, for their part, should assist occupational-technical students who are interested in transfer to choose appropriate courses. They should disseminate the articulation agreements between technical programs at the two-and four-year colleges, ensure that general-education courses in the occupational-technical programs are acceptable to the senior institutions as transfer courses, identify any courses in the programs that are not transferrable, and encourage minority students to pursue the bachelor's degree. Articulation agreements should be included in the electronic database described in Part Five of this report. They are discussed further in the next section of this report.

PART THREE: Encourage special articulation agreements between two- and four-year programs

Articulation agreements between senior colleges and universities and the VCCS are one avenue by which student transfer problems can be addressed. With the adoption of the *State Policy on Transfer*, the need for certain types of articulation agreements has lessened somewhat, since many provisions of the policy are intended to standardize the acceptance of transfer credits statewide. The transfer policy, for instance, supersedes the several articulation agreements signed between senior institutions and the VCCS which promised junior status and full acceptance of general-education credits for associate-degree graduates.

Nevertheless, other types of articulation agreements are needed to smooth the transfer of students and acceptance of the credits they have earned at a community college. Several attempts have been made at the state level to collect data on existing articulation agreements, but these attempts have always had less-than-satisfactory results. Because there are dozens of articulation agreements in effect, requests to have colleges report on these agreements results in inconsistent answers.

In order to describe better the current status of articulation agreements for this study, the VCCS staff has developed a typology of articulation agreements that categorizes five major types of articulation agreements, describes the purpose of each, and includes an example of each.

Type I: Limited statewide agreements between a senior institution and all VCCS colleges (e.g., acceptance of general education for graduates and junior standing)

Approximately four such agreements were signed between the VCCS and public, four-year institutions prior to adoption of the more generous *State Policy on Transfer*. Some guarantee admission but not junior standing, while others waive general-education requirements for graduates but do not guarantee admission. The provisions of the transfer policy now supersede these agreements, and none have been signed since 1990.

Type II: Generous statewide agreements between a senior institution and all VCCS colleges (e.g., acceptance of general education for graduates, junior standing for graduates, and guaranteed admission for students who meet certain standards).

The most prominent example of this type is a long-standing articulation arrangement between George Mason University (GMU) and Northern Virginia Community College that has been generalized to all community colleges. GMU guarantees admission to the university for any Virginia community-college student who has earned a transfer degree and has achieved at least a 2.0 grade point average. Students accepted under this agreement are given full credit for their general-education programs. Other public and private colleges that have signed similar agreements with the VCCS include Virginia Commonwealth University and St. Paul's College.

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<u>Type III: Agreements between a single school or program within a senior institution and specific programs within all VCCS colleges</u> (e.g., a school of engineering accepts credits for all graduates of transfer engineering programs)

Virginia Polytechnic Institute and State University's College of Engineering assures associate-degree holders that they will not be subject to special requirements beyond those specified for native students and defines specific community-college courses that will apply for full credit toward baccalaureate requirements. Those who meet all specified criteria are guaranteed admission on a space-available basis.

<u>Type IV: General agreements between a senior institution and a single VCCS college</u> (e.g., guaranteed acceptance for graduates, availability of student services in advance of transfer)

Most prominent in this category is an effort undertaken recently by Old Dominion University, beginning with Tidewater Community College in 1992. Under the rubric of Guaranteed Articulation Agreements (GAAs), a student's program of study is guaranteed for acceptance at ODU at the time the student enters the program at the community college. The student receives junior status upon matriculation at ODU. Further, students have access to services such as advising and student activities prior to enrollment as an ODU student. To date, ODU has extended the GAA to five other community colleges.

<u>Type V: A single school or program within a senior institution with a program within a single community college</u> (e.g., standard 2+2 agreements that cover graduates of AAS [occupational-technical] programs)

There are many such agreements Typically, they ensure that transfer students who graduate from a particular AAS program receive junior standing, credit for required general-education courses, and credit toward the major for program core requirements. Programs that typically make such agreements are administration of justice/criminal justice, engineering technology/engineering, accounting, and nursing

The VCCS is in the process of refining this typology. When it is complete, the system office will conduct a survey to identify existing agreements that fall into these categories at both public and private institutions in order to identify specific problems and areas that require attention

One finding reported in Part One of this report -- that a large proportion of black students who transfer have been enrolled in occupational-technical programs at community colleges -- suggests that occupational-technical students in the VCCS are an important potential pool of transfers. The VCCS will conduct further analyses of the data reported in Part One to see if there are particular occupational-technical programs that appear most likely to lead to transfer.

As with all transfer issues, the findings and conclusions reached by this survey and data analysis will be taken before the State Committee on Transfer for its review and comment.

PART FOUR: Ensure the dissemination of information related to transfer

Two-year and four-year colleges share an obligation to facilitate transfer and must continue to communicate with one another in order to do so. Some communication strategies are described in Part Two. Additional projects to disseminate information about transfer are described below.

Better Information Project

The pre-collegiate programs administered by the Council of Higher Education and the Department of Education are designed to provide information about college preparation and admission requirements, financial aid, and career opportunities to minority middle- and high-school students, their parents, and secondary-education personnel. The ultimate goal is to increase the proportion of minority students who are academically prepared for Virginia's institutions of higher education. One component of the pre-collegiate programs, the Better Information Project, includes three-week summer programs and academic-year enrichment activities conducted on five college campuses across the state.

A new section for the Better Information publication, *Smart Moves to a Better Future: High School Guidebook to College,* includes information about ways to obtain college credit while in high school, such as taking Advanced Placement, dual-enrollment, and Tech Prep courses. The section also includes information on community-college transfer programs, the transfer module, and a list of two- and four-year chief transfer officers' phone numbers. A copy of this section of the publication is provided in Appendix 2.

Annual Transfer Newsletter

Another vehicle by which to disseminate transfer information is the transfer newsletter. Representatives from the institutions and the committee have contributed variety of articles and Council and VCCS staff members have gathered data for the first issue, which will be published in January 1995. The newsletter will reach a broad audience with information on transfer, including high-school counselors, admissions officers, academic officers, and policy-makers such as state legislators. It will highlight the good work that institutions have done and inform its readers about the progress the public and private colleges and universities have made in implementing the state transfer policy

PART FIVE: Monitor the development of an on-line computer database to inform students and their families about transfer policies

During the development of the state transfer policy, the Joint Commission on Transfer held campus meetings at which students stressed the importance of good advising to successful transfer and suggested that community colleges could do a better job of advising, especially by being better informed about university requirements. A summary report by the Council and the VCCS, *Campus Hearings of the Joint Committee on Transfer*, noted in defense of community-college counselors that "students are notorious for self-advising." Nevertheless, whether students self-advise or are advised by a faculty member or a counselor, detailed current information is essential to successful preparation for efficient transfer.

In response to this observation, community-college transfer counselors have made it clear that the senior institutions' paper transfer guides, while generally good and certainly crucial to their work, often arrive too late to be helpful in planning students' schedules and are frequently out-of-date. One solution to this problem is an electronic database of transfer information which could be kept current and would not require mail distribution. The Council and the Virginia Community College System Board first made this recommendation in Section IV. D. of the Virginia *State Policy on Transfer*:

> The current transfer guides do not make use of available technology for the efficient transmission of information. Therefore, the State should establish an online electronic database in an interactive format that assists prospective students in making course selections in such a way as to maximize transferrable credits to the other institutions.

Rationale for an electronic database

Electronic transfer information has advantages other than its currency:

1. Electronic delivery of information is expanding in all aspects of our society. As clients become used to receiving information electronically in other parts of their lives, they will expect to have electronic access to information about higher education. Maryland has had an on-line transfer information system since the mid-1980s.

2. VCCS counselors report that many students seek the same transfer information from four-year institutions that they have already received from VCCS sources. The widespread use of a single system will add accuracy and credibility to the information provided. It would also provide a consistent format for the input of transfer information.

3. While the *State Policy on Transfer* emphasizes the importance of transferring an associate of arts or associate of science degree as a total package, many students will continue to transfer without the associate degree. In fact, the majority of students who have transferred in the past have not earned an associate degree, and most did not enroll in a program while at the community college. This trend is likely to continue.

Course-by-course equivalencies are necessary for students who want all of their courses to be credited. With increased access to up-to-date information, students would be able to make more informed decisions and take fewer unnecessary or non-transferrable courses, for savings both to them and to the Commonwealth.

4.   A significant percentage of VCCS students plan to transfer to technical baccalaureate programs throughout the Commonwealth. Transfer in professional programs often leaves little flexibility in the choice of courses. For example, a nursing program may require anatomy and physiology and a business program may require a specific math course. Not having those courses could mean that a student is denied admission or takes extra time to earn a degree at the four-year institution. For example, one four-year institution reported that a third of the VCCS transfers into its business program had to attend during the summer in order to fulfill program prerequisites. An interactive system could allow students to compare their educational progress with the prerequisites for different programs at various four-year institutions.

5.   The *State Policy on Transfer* encourages community colleges to facilitate transfer in some AAS programs and to counsel carefully those occupational-technical students who express an interest in transfer. This is particularly important for black students, since almost as many black students transfer from technical programs as do from transfer programs. An electronic system would enable the VCCS to place on-line all articulated AAS transfer agreements. This would significantly increase student access to the various agreements that have been completed and will be made in the future.

Components of a Basic System

The system that is developed should have the following capabilities:

1.   It should be tied in to the VCCS information system and should be part of the academic information available through the two-year colleges' libraries, counseling centers, etc. If there is sufficient demand for access, the system could eventually be made available at high schools, libraries, and four-year institutions throughout the Commonwealth. It should also be available, eventually, in students' homes via Internet. (Maryland claims it will have this capacity within the next 12 months by funding access charges from private homes to the appropriate networks via Bell Atlantic.)

2.   Using statewide standards for the consistent entry and display of information, the system should be "user-friendly," easily accessible by students and others who are not familiar with the system.

3.   Since many students start their academic careers at the VCCS without a clear idea of a major or to which four-year institutions they will transfer, the system should have text search or hypertext indexing capacity, which would allow students to compare the

courses that they have completed to the requirements of various curricula at various institutions.

4. A central coordinating office should oversee the updating of information, applications of new technology, access to the information, and other aspects of the implementation of the *State Policy on Transfer*. The State Transfer Committee recommended that this be the State Council for Higher Education, but the Council staff thinks that a more logical location for it might be at the Virginia Community College System office, since most students seeking transfer are community-college students and the VCCS already maintains their records, or at an institution. This will require further discussion between the two staffs. Wherever it is located, this function would require staffing and funding. The staff would develop, install, and maintain the software, the database, and the security system. It would continually ensure the accuracy of, expand, and update the information on the system. It would refine the system to keep it as "user friendly" as possible, soliciting suggestions and comments from students, faculty, counselors, and the State Committee on Transfer on how the system could be improved.

5. Each of the four-year and two-year institutions should give one individual overall responsibility for updating institutional transfer information. The most appropriate person is the transfer officer from each institution. The system's security should provide for read-write access by designated officials and read-only access from clients.

6. The information provided should be comprehensive. In addition to course and program equivalents, there should be information on four-year institutions' policies on transfer, including guaranteed admission and special articulation agreements, and on applications, including deadlines, procedures, contact persons, and instructions for applying for financial aid.

7. The information should be presented in a format that can be duplicated so that paper copies of popular programs can be easily received by students. It is especially important to express program equivalents in terms of community-college degrees so that students are encouraged to obtain degrees.

Implementation

Some suggestions in this section can be implemented immediately, some will require minimal resources, and some will require significant resources. The State Council will immediately make available, through the electronic information superhighway, any institutional transfer guides that are now in electronic form. Using current technology, institutions that have not yet done so could make their transfer guides available electronically with minimal additional staffing and resources. But if a centralized, user-friendly database is to be developed and maintained, additional staff and funding both at the central and campus levels will be required to update the files and to enhance the retrieval and cross-reference capacity of off-the-shelf software packages.

Several issues relating to the scope and composition of the system and the resource requirements for the particular technologies adopted need further clarification before a request for funding the online course analysis system can be developed. The VCCS and the Council staffs, working together, will be able to clarify equipment and staffing needs once they analyze how the system will interact with existing and emerging computer applications and how existing equipment and staff can be used for this purpose.

CONCLUSION

Transfer is a significant issue for the Commonwealth. The substantial numbers of new students expected to enter higher education by the end of the decade will need various routes by which to enter the system. By completing some or all of their lower-division work at a community college, they can minimize the costs to themselves and to Virginia of obtaining a college education. The relatively low tolls on the community-college route makes it particularly appealing for economically disadvantaged students, and the community colleges' focus on underprepared students means that academically disadvantaged can find there an environment that is optimally supportive of their educational progress. But to enable such students to follow the route to its end at a reasonable speed, it should have no roadblocks.

The State Council of Higher Education is responsible for coordinating an effective and efficient system of higher education in the Commonwealth. The Virginia Community College System governs the 23 community colleges. Both have a responsibility to remove any barriers to transfer that may have inadvertently arisen. Both will continue to fulfill that responsibility by studying transfer patterns and problems and facilitating transfer, with the advice and support of the General Assembly.

Appendix 1

Text of Senate Joint Resolution No. 182

LD2323693

1   **SENATE JOINT RESOLUTION NO. 182**
2   **AMENDMENT IN THE NATURE OF A SUBSTITUTE**
3   **(Proposed by the Senate Committee on Rules**
4   **on February 10, 1994)**
5   **(Patron Prior to Substitute—Senator Lambert)**
6 *Requesting the State Council of Higher Education and the Virginia Community College*
7   *System, in collaboration with the Joint Subcommittee Studying the Status of and Need*
8   *for Academic, Financial Assistance, and Incentive Programs to Encourage Minorities to*
9   *Pursue Postsecondary Education and Training, to study the transfer of academic*
10   *credits.*
11   WHEREAS, the Joint Subcommittee Studying the Status of and Need for Academic,
12 Financial Assistance, and Incentive Programs to Encourage Minorities to Pursue
13 Postsecondary Education and Training has determined that many high school graduates
14 have not earned an advanced studies diploma; and
15   WHEREAS, such students frequently require additional academic support because of a
16 lack of requisite coursework in high school that would have prepared them for success in
17 college; and
18   WHEREAS, some students may enroll in two-year institutions for additional coursework
19 to meet four-year college admissions standards; and
20   WHEREAS, such students, and those enrolled for the associate degree, certification,
21 enrichment, or retraining for second careers, often choose to transfer course credits to
22 four-year institutions as a step toward earning the baccalaureate degree; and
23   WHEREAS, the lack of uniformity in transfer policies may cause unnecessary delays in
24 completing degree requirements and increased costs to students and their families,
25 including those who can least afford such costs; and
26   WHEREAS, the implementation of a statewide computer network developed to provide
27 students and their families greater access to college admissions criteria, financial aid
28 opportunities, degree offerings and requirements at institutions across the nation could
29 result in tremendous savings in time, energy, and educational costs to students, their
30 families, and the state; and
31   WHEREAS, the State Council and the Virginia Community College System have
32 promulgated a State transfer policy, and the Virginia Community College System is
33 developing a pilot on-line computer database that will provide students immediate access to
34 essential information; now, therefore, be it
35   RESOLVED by the Senate, the House of Delegates concurring, That the State Council of
36 Higher Education and the Virginia Community College System, in collaboration with the
37 Joint Subcommittee Studying the Status of and Need for Academic, Financial Assistance,
38 and Incentive Programs to Encourage Minorities to Pursue Postsecondary Education and
39 Training, be requested to study the transfer of academic credits.
40   The Council and the Virginia Community College System are requested to (i) determine
41 the percentage of minority students enrolling in two-year institutions and subsequently
42 choosing to transfer to four-year institutions; (ii) monitor the implementation of the State
43 transfer policy; (iii) encourage special articulation agreements between two- and four-year
44 programs; (iv) ensure the dissemination of information related to transfer; and (v) monitor
45 the development of an on-line computer database to inform students and their families
46 about transfer policies.
47   All agencies of the Commonwealth shall provide assistance, upon request, to the Council,
48 the Virginia Community College System and the Joint Subcommittee.
49   The State Council of Higher Education and the Virginia Community College System shall
50 complete their work in time to submit their findings and recommendations to the Joint
51 Subcommittee, the Senate Education and Health Committee, and the House Education
52 Committee by December 1, 1994, and to the Governor and the 1995 Session of the General
53 Assembly as provided in the procedures of the Division of Legislative Automated Systems
54 for the processing of legislative documents.

Appendix 2

"From High School to Colleges: Your Choices and Options," from
Smart Moves to a Better Future: High School Guidebook to College

From High School to College: Your Choices and Options

Advanced Studies Program: College-Preparatory Courses

Each high school has the Advanced Studies Program. If you take these classes, you will improve your chances of getting into the college of your choice. In addition, taking college-preparatory classes in high school will eliminate having to take costly remedial, or high school classes, once you get into college. Remember, these college-preparatory classes are free in high school and you earn credit for them, but in college you will need to pay for them and you get no credit.

Dual-Credit Programs

It is possible to take college courses while you are in high school. There are several ways this can be done:

A. Advanced Placement Classes

These are subjects that prepare students to take national examinations in various academic subjects. At the end of one of these courses, you will have the opportunity to take the national examination. If you make a score on the national examination which is acceptable to the college you wish to attend, you may receive college credit for the course. Although there is a fee for taking the national exam, students who can document need may have this fee waived.

B. Dual-Enrollment Course

Beginning in the middle school years, you will have opportunities for beginning your college education, prior to high school graduation. Students who take advantage of such opportunities can still participate in school activities for which they are eligible. Although the courses are offered by the community college, most of these classes are taught on the high school campus. Wherever possible, students are encouraged and afforded opportunities to take college courses simultaneously for high school graduation and college degree credit, under the following conditions:

1. Prior written approval of the high school principal for the cross-registration must be obtained;
2. The college must accept the student for admission to the course(s); and
3. The course(s) must be given by the college for degree credits (no remedial courses will be accepted).

Note: Not every high school offers dual-enrollment courses. Also, although school systems are encouraged to offer courses at no cost to students, some students are required to pay all or part of the expenses.

C. Four-Year College Programs

Several four-year Virginia institutions offer college courses to high school students for credit that is fully accepted at these institutions and credit can be transferred to other institutions the student may choose to attend instead.

Tech Prep

A secondary/postsecondary career path that is linked to business, industry, labor, government, and the community that leads to further education and employment. A four-year (two in high school and two in an occupational/technical program in a community college) coordinated curriculum with a strong emphasis on academic skills, designed to prepare students for technical occupations. The components of Tech Prep include: a comprehensive career development plan; courses designed for a specific career cluster that integrate academic and occupational preparation; a learning environment with application emphasis on mathematics, communication, science, and technologies; and a smooth transition from secondary to postsecondary opportunities, including four-year colleges, and employment.

It's your Choice

Advanced Studies Diploma	→	**4-year College**
Dual-Enrollment →	**2-year college** →	**4-year College**
Tech-Prep →	**2-year college** →	**4-year College**
Regular Diploma →	**2-year college** →	**4-year College**

4-Year Colleges Bachelor's Degree

2-Year Colleges Associate's Degree

High School Diploma

Transfer to 4-year colleges

Transfer to 4-year colleges

Advanced Studies 23 Unit diploma College-Preparatory Courses

Tech Prep

Regular 21 Unit Diploma

Dual-Credit Programs

Aeronautical Engineer
Architect
Biomedical Engineer
Civil Engineer
Geologist
Mathematician
Meteorologist
Pharmacist
Teacher special education
Chemist
Economist
Registered Nurse

Airline Pilot
Auto Mechanic
Computer Programmer
Dental Hygienist
Electrician
Fire Fighter
Nurse, Licensed Pr.
Police Officer
Civil Engineering Technician
Manager, hotel or motel
Surgical Technician
Television Technician
Veterinary Technician

Barber
Carpenter
Florist
Home Health Aide
Pest Controller
Cosmetologist
Auto Mechanic
Clerk
Bill Collector
Construction Worker
Truck Driver
Flight Attendant
Appraiser, real estate
Salesperson, retail
Guard, security
Locomotive Engineer
Mail Carrier
Private Investigator
Cashier
Teacher's Aide

*For further information about potential career options contact:: VA VIEW Career Hunt, Virginia Tech, 205 W Roanoke St., Blacksburg, VA 24061-0527 / 1-800-542-5870

Virginia's 23 community colleges are designed to meet the vocational and educational needs of those who seek skill development and enrichment for employment or continued academic growth. Many students start their college studies at one of these institutions and later get credit for the courses when they enroll in a senior (four-year) college or university. This simply means,

classes in approved transfer degree programs taken at a community college can be used later to meet the graduation requirements at a four-year college at which the student has been accepted. The process of using courses taken at one institution and later having these credits accepted at another institution is called "transfer".

COLLEGE TRANSFER
(AA. AS. AA&S)

	Assoc. in Arts			Associate in Science							Associate in Arts and Sciences							
	FINE ARTS	LIBERAL ARTS	MUSIC	ART EDUCATION	BUSINESS ADMINISTRATION	COMPUTER SCIENCE	EDUCATION	ENGINEERING	GENERAL STUDIES	SCIENCE	ARTS AND SCIENCES	BUSINESS ADMINISTRATION	EDUCATION	ENGINEERING	GENERAL STUDIES	LIBERAL ARTS	MUSIC	SCIENCE
BLUE RIDGE											●							
CENTRAL VIRGINIA											●	●		●	●	●		●
DABNEY S. LANCASTER											●	●	●		●	●	●	●
DANVILLE											●	●	●			●	●	●
EASTERN SHORE											●	●	●		●	●		●
GERMANNA											●	●	●		●	●	●	●
J. SARGEANT REYNOLDS	●				●	●	●			●								
JOHN TYLER											●							
LORD FAIRFAX											●	●	●		●	●	●	●
MOUNTAIN EMPIRE											●	●		●	●	●		●
NEW RIVER											●	●	●		●	●	●	●
NORTHERN VIRGINIA	●	●	●	●	●	●		●	●	●								
PATRICK HENRY											●	●	●		●	●	●	●
PAUL D. CAMP											●	●	●		●	●	●	●
PIEDMONT VIRGINIA	●	●			●	●	●		●	●								
RAPPAHANNOCK											●				●	●		●
SOUTHSIDE VIRGINIA											●	●	●		●	●	●	●
SOUTHWEST VIRGINIA											●	●	●	●	●	●	●	●
THOMAS NELSON	●			●			●	●	●									
TIDEWATER	●	●		●		●	●	●	●									
VIRGINIA HIGHLANDS											●	●	●		●	●	●	●
VIRGINIA WESTERN	●			●		●	●	●	●	●								
WYTHEVILLE											●	●	●		●	●	●	●

Transfer Module

Although community colleges typically recommend that students complete the associate degree prior to transfer, many students choose to transfer before graduating. Therefore, the State Committee on Transfer developed a module that provides a recommended set of courses for students who begin at community colleges without a clear sense of their future educational goals. The transfer module is available from a community-college or senior transfer office. Some occupational-technical programs (the Associate of Applied Science and the Associate of Applied Arts) have counterparts in senior institutions (e.g., nursing, engineering technology, hotel and restaurant management). For further information contact a two-year or four-year chief transfer officer.

Chief Transfer Officers: 2-year Institutions

Dr. E. B. Cox
Counselor
Blue Ridge Community College
(703) 234-9261

Mr. David J. Hofmann
Coordinator of Student Activities & Recruitment
Central Virginia Community College
(804) 386-4500

Ms. Anne Marie Mooney
Advisor for Transfer Programs
Dabney S. Lancaster Community College
(703) 862-4246

Dr. Edward Polhamus
Division Chair, Arts & Sciences
Danville Community College
(804) 797-3553

Mr. Richard Jenkins
Dean of Student Services
Eastern Shore Community College
(804) 787-5900

Dr. Charles Sieracki
Dean of Instruction and Student Services
Germanna Community College
(703) 423-1333

Ms. Suzan Marshall
Director of Admissions and Records
J. Sargeant Reynolds Community College
(804) 371-3000

Dr. Carol Hollins
Coordinator of Institutional Research
John Tyler Community College
(804) 796-4000

Dr. George D. Edwards
Dean of Instruction & Student Services
Lord Fairfax Community College
(703) 869-1120

Ms. Janet Lester
Counselor
Mountain Empire Community College
(703) 523-2400

Dr. Charles White
Division Chairman, Arts & Sciences
New River Community College
(703) 674-3600

Dr. Gary E. Bartmann
Associate Dean for Curriculum Services
Northern Virginia Community College
(703) 323-3198

Mr. Graham Valentine
Admissions Counselor
Patrick Henry Community College
(703) 638-8777

Dr. Nancy Sandberg
Dean of Instruction and Student Services
Paul D. Camp Community College
(804) 562-2171

Ms. Bobbie A. Potter
Counselor
Piedmont Virginia Community College
(804) 977-3900

Mr. Roger S. Griffin
Glenns Campus Director
Rappahannock Community College
(804) 758-5324

Dr. John D. Sykes, Jr.
Director of Admissions, Records, and Institutional Research
Southside Virginia Community College
(804) 736-8484

Mr. James Farris
Counselor
Southwest Virginia Community College
(703) 964-2555

Dr. Ann B. Dolgin
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