Advanced Placement Programs Subcommittee Final Report to the Interim Joint Committee on Education

2001 SCR 2

Research Memorandum No. 494

LEGISLATIVE RESEARCH COMMISSION

Frankfort, Kentucky April 2002

Advanced Placement Programs Subcommittee Final Report to the Interim Joint Committee on Education 2001 SCR 2

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TO: Senator Lindy Casebier, Co-Chair

Representative Frank Rasche, Co-Chair Interim Joint Committee on Education

FROM: Senator Brett Guthrie, Co-Chair

Representative Frank Rasche, Co-Chair

Subcommittee on Advanced Placement Programs

DATE: February 20, 2002

RE: Recommendations on Advanced Placement Program in Kentucky Public Schools

Pursuant to Senate Concurrent Resolution 2, the Subcommittee on Advanced Placement Programs in Kentucky public schools respectfully submits its report and the following recommendations:

Recommendations

Enact legislation – 2002 Regular Session to:

- ? Define "advanced placement," "dual enrollment," and "dual credit";
- ? Appropriate funds to the Kentucky Department of Education and the Council on Postsecondary Education for developing information about and providing professional development which demonstrates the Kentucky Virtual High School and the Kentucky Virtual University.

Require the Kentucky Department of Education to:

- ? Standardize advanced placement core curriculum content, teaching methods, data collection, and reporting by developing the "Kentucky Virtual AP Academy" prior to the 2003 Regular Session;
- ? Identify current and future funding sources and other resources that can be directed toward advanced placement, dual enrollment, or dual credit programs prior to the 2003 Regular Session;
- ? Compare costs of offering advanced placement courses through traditional classroom instruction, the Kentucky Virtual High School, and other methods and assist school districts in analyzing how they can most cost-effectively offer advanced placement courses prior to the 2003 Regular Session;

- ? Expand advanced placement teacher institutes and other professional development for these courses prior to the 2003 Regular Session;
- ? Define or modify existing definitions of "dual enrollment" and "dual credit" to reflect statutory definitions and work with the Council on Postsecondary Education and the Education Professional Standards Board to develop guidelines for content knowledge and teacher training in dual enrollment or dual credit programs offered in Kentucky, prior to the 2003 Regular Session.

Require local school districts to:

- ? Offer credit toward high school graduation to non-high school students who complete high school courses at the same level of performance as required of high school students when non-high school students take those courses before enrolling in high school, prior to the 2003 Regular Session;
- ? Provide credit for all Kentucky Virtual High School courses taken by students from their district for credit and to use those grades in the calculation of student grade point averages, making no differentiation between courses taken via KVHS or on-site, prior to the 2003 Regular Session;
- ? Pay tuition for students from their district who are enrolled in Kentucky Virtual High School courses for credit through some proportionate sharing of Average Daily Attendance funds or other funding sources, prior to the 2003 Regular Session;
- ? Provide the Kentucky Department of Education with information about the number of students participating in advanced placement courses; the race, gender, and economic status of advanced placement students; the number of faculty members teaching advanced placement courses; the types of advanced placement courses being taught; testing outcomes for participating students; the methods used to teach these courses; and the methods used to advise students and parents about the availability of these courses.

Require school-based decision-making councils to:

? Offer a core advanced placement curriculum, dual enrollment, dual credit program using either traditional on-site instruction or electronic instruction through the Kentucky Virtual High School or other sources, or both, prior to the 2003 Regular Session.

Require the Council on Postsecondary Education to:

- ? Develop administrative regulations that require public postsecondary educational institutions to grant credit to students who score a "3" or better on a College Board Advanced Placement examination, prior to the 2003 Regular Session;
- Publish information in print or electronic format about scores required on College Board advanced placement examinations for credit or advanced standing to be received at Kentucky postsecondary institutions, prior to the 2003 Regular Session;
- ? Define "dual enrollment" and "dual credit" in accordance with the new statutory definition and work with the Kentucky Department of Education and the Education Professional Standards Board to develop guidelines for content knowledge and teacher training in dual enrollment or dual credit programs offered in Kentucky, prior to the 2003 Regular Session.

Require the Education Professional Standards Board to:

? Define "dual enrollment" and "dual credit" in accordance with the new statutory definition and work with the Kentucky Department of Education and the Council on Postsecondary Education to develop guidelines for content knowledge and teacher training in dual enrollment or dual credit programs offered in Kentucky, prior to the 2003 Regular Session.

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INTRODUCTION

Kentucky adopted a bold plan to improve its system of public education in the Kentucky Educational Reform Act of 1990. The plan reflected the belief that all students can learn, and nearly all, at high levels. The plan established high educational goals for Kentucky students and directed state and local school officials to create an environment for student achievement and success.

To carry out this plan, the Kentucky Department of Education developed a program of studies designed to challenge Kentucky students to achieve at high levels by engaging in higher level thinking, analysis, and synthesis skills in all courses. In addition, schools were directed to provide gifted and talented students, as well as those with special needs, appropriate and challenging educational experiences. The Kentucky General Assembly also directed the Kentucky Board of Education to adopt administrative regulations for a Commonwealth Diploma to encourage high academic achievement in Kentucky high schools. Requirements for this diploma include the successful completion of at least four advanced placement or international baccalaureate courses. However, data collected by the Educational Professional Standards Board indicates that in the 2000 academic year only sixty percent of Kentucky high schools offered even one advanced placement course, creating substantial barriers to completing the Commonwealth Diploma for students in those schools where advanced placement courses are not taught.

In response to concerns about the lack of advanced placement courses in many Kentucky high schools, the Kentucky General Assembly enacted SCR 2 during the 2001 Regular Session. SCR 2 directed the Interim Joint Committee on Education to appoint a subcommittee that would review the current status of advanced placement programs in schools throughout the Commonwealth. It underscored the need for students throughout the state to have access to advanced placement courses in order for those students to have an opportunity to complete the Commonwealth diploma. SCR 2 also directed the Advanced Placement Programs Subcommittee to recommend:

- ? An implementation plan for providing advanced placement study opportunities to qualified students throughout the state;
- ? A reasonable timeline for implementing advanced placement study opportunities; and

? An outline of the necessary resources needed for full implementation of the plan.

The Subcommittee included four senators and four representatives, plus the Senate Education Committee Chair as an ex-officio member. Staff support to the Subcommittee was provided by Sandy Deaton, Evelyn Gibson, Lisa Moore, Kelley McQuerry, and Jessica Graves. Staff members from the Kentucky Department of Education, the Education Professional Standards Board, the Council on Postsecondary Education, and the Association of Independent Kentucky Universities and Colleges were very helpful in providing input to the study as were students, teachers, counselors, and school administrators currently involved in advanced placement programs.

BACKGROUND

Students in urban and rural public schools in every state now participate in the **Advanced Placement** Program in large numbers and go to a variety of postsecondary institutions. The College **Board also provides** grants to states that have fewer students taking AP classes and exams in order to increase access to advanced learning opportunities for students in these states.

Development of the College Board Advanced Placement (AP) program began in 1951 when the Ford Foundation funded a study designed to determine if high school juniors and seniors would be better prepared for college if they were taught with a more challenging high school curriculum. The university and college preparatory high school officials involved in the study concluded that a set of achievement exams which would enable colleges to give enterprising students advanced placement were needed. Although prior to the development of the College Board Advanced Placement Program some colleges and universities had programs granting early admission or advanced standing to talented students, many educators felt that a large percentage of able students were not being sufficiently challenged in high school or in initial college courses.

At the same time, the School and College Study of Admissions with Advanced Standing (SCSAAS) selected eleven subjects and appointed committees to write course descriptions in English composition, literature, physics, chemistry, biology, math, Latin, French, German, Spanish, and history. Each subject's committee had five faculty members from colleges and two from secondary schools. Some or all of these courses were offered by eighteen secondary schools in a College Board experiment conducted to determine if participating students were better prepared to begin college after taking these advanced courses. The SCSAAS then turned to the Educational Testing Service for help in developing the course examinations to determine how much these students had learned. Shortly after that time, the College Board was selected as the body to develop and administer the advanced placement testing program.

Currently, the College Board offers preparatory courses and exams in thirty-three different subject areas (Table 1). In May 1998, the College Board administered more than one million AP exams. In Kentucky in 2000, 11,830 students took AP examinations offered by the College Board.

TABLE 1 2001 College Board Advanced Placement Courses

Art History
Biology
Calculus AB/BC
Chemistry
Computer Science A/AB
Economics
English Composition
English Literature
Environmental Science
European History
French Language

French Literature
German
Government and Politics
Human Geography
Intl. English Language
Latin Literature
Latin: Vergil
Macroeconomics
Microeconomics
Music Theory
Physics – Electricity

Physics – Magnetism
Physics – Mechanics
Psychology
Spanish Language
Spanish Literature
Statistics
Studio Art – General
Studio Art – Drawing
U.S. Govt. and Politics
U.S. History
World History

KDE has received federal funding to expand advanced placement professional development. Training teachers how to prepare students to successfully take AP exams is expected to increase the numbers of students who enroll in AP courses, take College Board AP exams, and score high enough on those exams to receive advanced standing at postsecondary institutions.

In the early years of the AP Program, participating students were largely from independent, selective college preparatory schools or suburban high schools in the Northeast, according to the College Board. The students from these schools tended to go on to attend highly selective northeastern liberal arts colleges. Now, students in urban and rural public schools in every state participate in the AP Program in large numbers and go to a variety of postsecondary institutions.

College Board AP courses and examinations are standardized through a rigorous professional peer-review process conducted by college and high school faculty with content area expertise. The process of developing a course takes a minimum of two years. Courses and examinations are continually monitored and updated. New subject areas are also being added each year.

The College Board offers professional development for middle and high school teachers to help them understand the information and testing methods that will be used on AP examinations. Although the College Board offers summer training institutes, year-round workshops, and interactive support in developing course outlines, materials, and teaching strategies, teachers are not required to meet specific requirements or to complete specific training prior to teaching AP courses. In Kentucky, the College Board has teamed up with the Kentucky Department of Education (KDE) to offer summer AP teacher training institutes at Western Kentucky University, Morehead State University, and other locations. KDE has received federal funding to expand advanced placement professional development. Training teachers how to prepare students to successfully take AP exams is expected to increase the numbers of students who enroll in AP courses, take College Board AP exams, and score high enough on those exams to receive advanced standing at postsecondary institutions.

LEGISLATIVE DIRECTIVE

During the 2001 Regular Session, through the passage of SCR 2, the Kentucky General Assembly directed the Interim Joint Committee on Education (IJCE) to appoint a subcommittee that would review the current status of advanced placement programs in schools throughout the Commonwealth.

SCR 2 underscored the need for students throughout the state to have access to advanced placement courses in order for those students to have an opportunity to complete the Commonwealth diploma, the state's highest level of secondary education achievement, and to better prepare for postsecondary study.

SCR 2 also directed the Advanced Placement Programs Subcommittee to recommend:

- ? An implementation plan for providing advanced placement study opportunities to qualified students throughout the state;
- ? A reasonable timeline for implementing advanced placement study opportunities; and
- ? An outline of the necessary resources needed for full implementation of the plan.

Members of the Advanced Placement Programs Subcommittee also agreed to examine dual credit and dual enrollment programs used by students to obtain advanced standing or college credit prior to full-time enrollment at a postsecondary institution.

METHODOLOGY

Interviews with representatives of the various groups involved in providing teacher training or advanced placement classes and other preparation for College Board Advanced Placement examinations were the primary source of information included in this report.

Data used to develop this research memorandum were collected through structured interviews with staff from the Kentucky Department of Education, the Education Professional Standards Board, the Council on Postsecondary Education, and the Gifted and Talented Teacher Education Program of Western Kentucky University. In addition, interviews and follow-up interviews with officials from the College Board and with school personnel, including superintendents, principals, assistant principals, counselors, and teachers, from school districts in western, central, northern, and eastern Kentucky were conducted. Schools were selected in an attempt to balance urban and rural settings. Students participating in advanced placement courses and their parents from these schools and from those currently enrolled in the Kentucky Virtual High School also were interviewed for this study.

FINDINGS

The Subcommittee found that inconsistency in the types of advanced placement courses available, access to those courses, and the postsecondary credit given for scores achieved on College Board **Advanced Placement** exams, coupled with inadequate school-level data about advanced placement courses, affected the degree to which students were willing to pursue advanced placement opportunities.

The absence of a statutory definition for "advanced placement" has led to a variety of courses being given that label. Some of the courses labeled "AP" in Kentucky do not meet the quality or rigor that are required for students to achieve passing scores on College Board Advanced Placement examinations.

The Advanced Placement (AP) Programs Subcommittee held a series of hearings to review the current status of Kentucky's advanced placement programs. In addition, the Subcommittee interviewed administrators, teachers, counselors, parents, and students from school districts throughout the state to obtain additional perspectives on Kentucky's advanced placement programs. The Subcommittee also contacted numerous advocacy groups to determine if they or their constituents had particular concerns about or suggestions for Kentucky's advanced placement program. From this information, the Subcommittee found generally that problems with AP programs exist in three areas—the consistency of programs and postsecondary acceptance of AP exam scores, access to College Board AP programs, and inadequate resources or use of resources for providing AP programs. Specifically, the Subcommittee found AP programs statewide:

? Lack consistency in the content and teaching methods used in advanced placement programs. This inconsistency contributes to uncertain and frequently disappointing performance on College Board AP examinations.

Kentucky has no statutory definition of "advanced placement" and has conflicting definitions of "advanced placement" in regulation. Although regulations governing issuance of KEES scholarships require schools to follow College Board AP curriculum or teaching methodologies when they offer advanced placement programs, information collected from school districts indicates that some districts are not following the College Board program in offering those programs. Therefore, student preparation for College Board AP exams and the level of challenge those students encounter in advanced placement courses differ in most school districts throughout the state. This inconsistency is important not only from the perspective of students attempting to obtain advanced standing by taking College Board AP exams, according to counselors, teachers, and students interviewed for this study, but also in the award of Kentucky Educational Excellence Scholarships (KEES). Grades in AP courses are adjusted to ensure students who attempt more difficult coursework are not penalized in obtaining KEES monies for college. But students in some school districts may be getting the benefit of the adjusted AP grade schedule without facing the same level of difficulty that students taking College Board AP courses in other school districts face.

In Kentucky, failure to have standardized information sent to a single agency makes analysis of trends in AP enrollment or evaluation of school, teacher, and student performance in AP programs extremely difficult.

Kentucky postsecondary institutions grant advanced standing for a wide array of College Board AP exam scores. ranging from a "3" to a "5". Even within a single institution, various schools or departments may have different scores at which advanced standing will be granted. To complicate matters further, information about what scores are acceptable at specific institutions or in specific programs is not available from a single, comprehensive source.

? Keep inadequate records and information about advanced placement programs offered in Kentucky schools. Data is often inconsistent and not in a format that permits easy comparison or analysis.

Information about advanced placement programs offered in Kentucky schools is scattered among different agencies at the state level. In addition, school districts are not required to keep standardized information about the advanced placement programs they offer or the students who participate in AP courses. Many districts even fail to record whether a student takes a College Board AP exam or how well students who did take the exam have done. Those school districts that do keep the data may not keep it in a computerized database that facilitates effective analysis. This failure to have standardized information sent to a single agency makes analysis of trends in AP enrollment or evaluation of school, teacher, and student performance in AP programs extremely difficult. This lack of information also hampers the development of communications and teaching strategies for improving student performance on College Board AP exams or increasing the number of students enrolled in AP courses.

? Have no uniform score on AP examinations at which credit is granted. High schools and postsecondary institutions also offer students little information about the scores that are required on AP examinations to receive credit or advanced standing from postsecondary institutions. This inconsistency and lack of information results in confusion among students, parents, teachers, and counselors involved in AP programs and possibly additional expense.

Unlike Florida, Wisconsin, and West Virginia, Kentucky has no uniform score on College Board AP exams at which statesupported or state-accredited postsecondary institutions must grant advanced standing. In addition, the state has no mechanism by which the Council on Postsecondary Education (CPE) or any other body sets uniform scores at which credit or advanced standing is granted. As a result, Kentucky postsecondary institutions grant advanced standing for a wide array of College Board AP exam scores, ranging from a "3" to a "5". Even within a single institution, various schools or departments may have different scores at which advanced standing will be granted. To complicate matters further, information about what scores are acceptable at specific institutions or in specific programs is not available from a single, comprehensive source. According to testimony from representatives of the Kentucky Department of Education and local school districts, this inconsistency in granting credit or advanced

Recent reports by the College Board and the National Academies of Science and Engineering have found that many states, like Kentucky, have not removed significant financial. technological, selection, and educational preparation barriers that keep significant numbers of students in these states from taking College **Board Advanced** Placement examinations.

Although many school districts are attempting to expand the variety of AP courses offered to their students, many others view AP programs as simply one more special program they have to accommodate. Schools that view AP as a central part of the curriculum have a less difficult time finding sufficient numbers of students for AP classes, making assignment of teachers easier to justify from a funding and resource perspective.

standing to students who have passed AP exams with specific scores reduces the number of students who take AP courses to a degree that cannot be determined, results in additional expense for some students who have taken AP exams but do not receive credit or advanced standing, and causes some students to reconsider enrollment in particular postsecondary programs. Lack of information about the scores needed also may prevent students from preparing for and performing on exams at a level at which advanced standing will be granted.

? Create or fail to remove barriers for many Kentucky students that limit access to advanced placement programs.

Although the Kentucky Virtual High School (KVHS) appears to go far in ensuring most students in Kentucky have access to a wide array of well-taught advanced placement courses, KVHS is not a complete solution to access problems. Access issues that persist include:

- ? The cost of taking the courses and exams, particularly advanced placement courses offered through the Kentucky Virtual High School;
- ? School-level selection requirements that prevent some students from being able to take courses;
- ? Inadequate pre-AP course preparation that impedes students from successfully completing the courses and achieving exam scores that enable those students to receive college credit;
- ? Lack of access to computers and other technology used to provide AP courses and test preparation;
- ? Lack of time, supervision, and facilities for students to take online AP courses from KVHS during the school day; and
- ? Lack of awareness among administrators, teachers, counselors, parents, and students of the KVHS AP program option.

? Are not viewed as a central part of the curriculum and are not offered to all potentially eligible students.

Although many school districts are attempting to expand the variety of AP courses offered to their students, many others view AP programs as simply one more special program they have to accommodate. In addition, although most schools offer AP courses

to all students and allow individual students and their parents to decide if they will enroll in AP courses, other schools limit enrollment to students who are selected by administrators, counselors, or teachers. Those selection processes, coupled with inadequate pre-AP course preparation, may limit the numbers of minority or low-income students enrolled in AP courses, according to recent studies conducted by the College Board and the National Academies of Science and Engineering. The College Board and other organizations have developed several pre-AP programs that are designed to help students in elementary or middle school to develop critical thinking, reading, and mathematics skills needed to score well on College Board AP exams. In Kentucky, training for these programs is currently offered at Western Kentucky University's (WKU) Advanced Placement Institute to middle school teachers who come as a team with high school teachers from the same school district. In addition, according to those interviewed, students in alternative school programs also may not have access to AP program offerings even though some students in those programs may be capable of performing well in the courses and on the exams. Schools that view AP as a central part of the curriculum have a less difficult time finding sufficient numbers of students for AP classes, making assignment of teachers easier to justify from a funding and resource perspective.

The Subcommittee further found that in some cases, AP courses and exams were not a complete solution to preparing students for postsecondary education and may not alone be the strategy needed to increase the numbers of Kentucky students who pursue postsecondary education. The Subcommittee found:

? Dual credit or dual enrollment are alternatives to AP courses and exams that sometimes offer greater assurance of college credit or advanced standing, but credit obtained in those programs may be limited in applicability.

The uncertainty of success on and acceptance of AP exams for advanced standing has led many students and school districts to seek dual enrollment programs as a solution for helping high school juniors and seniors accrue credit before they enroll full time in a postsecondary educational institution. Dual enrollment programs allow students to take college or community college courses for credit at the postsecondary institution while they are still in high school. Dual credit courses allow students to receive credit from both the high school and postsecondary institution for taking a single course. Postsecondary institutions offering these programs frequently accommodate high school students by

Dual credit or dual enrollment programs offer many Kentucky students an important option for obtaining college credit prior to their graduation from high school.

allowing the courses to be taught at the high school. While this option generally ensures participating students credit with the postsecondary institution offering the course, it does not ensure the student will receive credit or advanced standing from the postsecondary institution in which the student eventually enrolls. Many postsecondary institutions, particularly research universities, may be skeptical about the quality of coursework performed in dual enrollment courses, particularly when those courses are not taught by college or community college faculty, according to testimony from the Council on Postsecondary Education. Some of those institutions do not offer credit or course waivers for the work completed in dual enrollment programs.

The National Commission on the High School Senior Year found that middle school and high school curricula must change to reflect the learning needs of today's students. These findings indicate that some students may need to begin study of advanced math, science, language, and social science before high school and that postsecondary education may need to begin as early as the second year of high school.

? In order for Kentucky's student population to pursue postsecondary education in greater numbers, communication and cooperation among secondary and postsecondary institutions must increase. In addition, Kentucky may need to restructure middle school and high school in order to create a better bridge between secondary and postsecondary programs.

The findings of the National Commission on the High School Senior Year underscore the need for changing middle school and high school programs to more clearly reflect the needs and abilities of students in the 21st century. These findings indicate that some students may need to begin study of advanced math, science, language, and social science before high school and that postsecondary education may need to begin as early as the second year of high school. Some programs, such as "middle colleges," are attempting to balance the need for greater educational challenge with the need to provide direction and externallyimposed discipline for high school students by creating high school campus-based programs that teach college level courses and bridge the separation between high school and college. AP and dual enrollment programs will be important pathways that bridge existing gaps. The Kentucky Department of Education and the Council on Postsecondary Education, through the state P-16 Council, are working on programmatic changes to ensure students are adequately prepared for postsecondary study. Local P-16 councils also will be important in making sure Kentucky students and parents readily accept postsecondary education as a normal and expected part of the educational process.

RECOMMENDATIONS

The Subcommittee recommends the following changes to improve consistency in advanced placement and dual enrollment programs, to expand and increase student access to AP or dual enrollment programs, and to maximize the use of existing and future resources in the delivery of AP or dual enrollment programs.

To improve consistency:

- ? Define "advanced placement" in statute and require administrative regulations to be amended to incorporate the definition, programs, and examinations of students in advanced placement courses offered by the College Board;
- ? Require the Kentucky Department of Education to standardize advanced placement curriculum content, teaching methods, and data collection and reporting;
- ? Require school districts to accept all Kentucky Virtual High School courses for credit and to use those grades in the calculation of student grade point averages, making no differentiation between courses taken via KVHS or on-site;
- ? Direct school districts to accept advanced placement courses taken by middle school students for high school credit when those students attain performance levels expected of high school students in that district;
- ? Direct the Council on Postsecondary Education to develop administrative regulations that will require public postsecondary educational institutions to grant credit to students who score a "3" or better on a College Board Advanced Placement examination;
- ? Direct the Council on Postsecondary Education to publish information in print and electronic format about the scores required on College Board AP examinations for a grant of advanced standing at all Kentucky public and private postsecondary institutions;
- ? Define "dual enrollment" and "dual credit" in statute and direct the Council on Postsecondary Education, the Kentucky Department of Education, and the Education Professional Standards Board to develop guidelines for content knowledge and teacher training in dual enrollment or dual credit programs offered in Kentucky;

To expand access:

? Require each school-based decision making council to offer a core AP curriculum, dual enrollment, or dual credit program using either traditional on-site instruction or electronic instruction through the Kentucky Virtual High

- School or other online alternatives, or both, within the next two years;
- ? Require each school district to pay tuition for students from their district who are enrolled in Kentucky Virtual High School courses for credit through some proportionate sharing of Average Daily Attendance funds or other funding sources;
- ? Direct the Kentucky Department of Education to expand advanced placement teacher training institutes, including offering AP teacher development online via the Kentucky Virtual High School or the Kentucky Virtual University and to require service commitments from teachers receiving the training;
- ? Direct the Kentucky Department of Education to develop within the next two years the "Kentucky Virtual AP Academy" to provide a core AP curriculum through the Kentucky Virtual High School (KVHS) and direct the Council on Postsecondary Education to develop a core dual enrollment or dual credit program through the Kentucky Virtual University;
- ? Require the Kentucky Department of Education and the Council on Postsecondary Education to identify resources at both the secondary and postsecondary level that can be directed toward AP or dual enrollment programs;
- ? Require the Kentucky Department of Education within the next year to compare the costs of taking advanced placement courses through traditional instruction, the Kentucky Virtual High School, or other methods and to offer school districts assistance in analyzing how they can most cost-effectively offer the most advanced placement classes;
- ? Require the Kentucky Department of Education to identify current funding sources and the amount of funds available for advanced placement or dual enrollment programs;
- ? Require the Kentucky Department of Education to identify future funding sources and amounts of funding that can be anticipated from those sources;
- ? Appropriate funds to the Kentucky Department of Education and the Council on Postsecondary Education for developing information about and providing professional development which demonstrates the Kentucky Virtual High School and Kentucky Virtual University.

DISCUSSION

Data Collection Issues

Obtaining information about Kentucky's advanced placement (AP) programs was difficult because of the lack of information available about offered programs, teacher training, and student success. Currently, school districts do not collect data about advanced placement courses in a comprehensive manner. School districts are not required to submit specific data about their advanced placement programs to the Kentucky Department of Education or any other agency.

Obtaining information about Kentucky's advanced placement (AP) programs was difficult because of the lack of information available about offered programs, teacher training, and student success. Both the Kentucky Department of Education and each school district interviewed were asked to provide numerical data that indicated the number of students enrolled in advanced placement courses, the number of students who took College Board Advanced Placement examinations after completing advanced placement courses, and the scores achieved by students taking the College Board examinations.

Although the Kentucky Department of Education (KDE) collects some data about the success of Kentucky students on College Board advanced placement examinations, including some historic trend data, the information is generally collected from the College Board, rather than school districts. Since students can take College Board advanced placement examinations without taking advanced placement courses, KDE may not know if Kentucky students taking College Board advanced placement examinations took advanced placement prepatory courses offered in the school district in which they are enrolled, especially since not all school districts maintain this information and transmit it to KDE.

In addition, neither KDE nor the College Board mandates a specific curriculum for advanced placement courses. Therefore, school districts who offer courses they describe as "advanced placement" may not be following the curriculum and teaching methods recommended by the College Board to maximize the chance students have for scoring at a level "3" or above, the score levels generally required for a student to be granted advanced standing or college credit for AP examination performance.

Interviews with local school districts provided no greater access to data about Kentucky students enrolled in advanced placement courses. Some schools do identify which students are in advanced placement courses, but most school officials interviewed said the data were not routinely collected in a manner that would allow comparison of student performance on College Board advanced placement examinations or permit comparison of the number of students who receive credit or advanced standing from postsecondary institutions. Information about advanced placement

programs in Kentucky schools is generally available only through anecdotal reports from counselors or teachers who work with students taking those courses.

Currently, school districts do not collect data about advanced placement courses in a comprehensive manner. School districts are not required to submit specific data about their advanced placement programs to the Kentucky Department of Education or any other agency. School districts should be required to provide the Kentucky Department of Education with information about the number of students participating in advanced placement courses; the race, gender, and economic status of advanced placement students; the number of faculty members teaching advanced placement courses; the types of advanced placement courses being taught; testing outcomes for participating students; the methods used to teach these courses; and the methods used to advise students and parents about the availability of these courses. Currently, very little of this information is available to document or compare the success rates of schools in preparing AP students to take the College Board AP examinations. This lack of data also limits the degree to which KDE or other agencies can identify and compare the teaching methods or programs that result in the greatest student success on advanced placement examinations among Kentucky students.

Program Status

Lack of information about advanced placement courses and the lack of a consistent definition of "advanced placement" creates difficulties in definitively identifying all of the advanced placement courses being taught in Kentucky. However, data from the Educational **Professional Standards Board indicate that as** many as 40% of Kentucky's public high schools fail to offer even one advanced placement course.

The lack of information collected from school districts creates difficulties in definitively identifying all of the advanced placement courses being taught in school districts throughout the state. In addition, the lack of a consistent definition of "advanced placement" creates further confusion since some school districts may designate courses "advanced placement" even though those courses do not adhere to the recommendations of the College Board. The Educational Professional Standards Board (EPSB) did provide the Subcommittee with a list of courses, organized by district, that were identified by school districts as advanced placement courses being taught during the 2000-2001 academic year. However, no information about the course content, success rate, or teaching methods was provided on the reports from which the chart was derived. The data were collated from Professional Staff Data reports which are submitted to EPSB by school districts annually identifying what courses professional staff are teaching. This form is not specific to advanced placement courses or

Without advanced placement courses. students are unable to pursue Kentucky's highest level of high school diploma, the Commonwealth Diploma, since the award of that diploma is dependent upon students attaining proficiency in at least four Advanced Placement or International Baccalaureate courses. In addition, these students may not be able to compete fully for admission to Kentucky's most selective colleges and universities.

Officials interviewed from many districts explained that the lack of advanced placement course offerings are the result of limited numbers of students who are interested in taking the courses, limited numbers of teachers interested or capable of teaching the courses, or limited amounts of space and time in already crowded facilities or schedules. Officials from many of these districts also were unaware of the availability of AP courses and exam preparation through the Kentucky Virtual High School.

advanced placement teachers. The AP Classes by Districts chart (Appendix 1) shows that 150 school districts in Kentucky offer at least one AP course, representing sixty percent of the school districts in the state. A KDE summary indicates that 171 school districts, or sixty-eight percent of all Kentucky public schools, are offering at least one AP course, underscoring the lack of accurate information about advanced placement programs.

Despite the lack of information, interviews conducted with school districts throughout the state provided a snapshot of advanced placement programs in Kentucky. Overall, the following issues emerged in school district interviews and testimony or discussions before the Advanced Placement Programs Subcommittee.

Availability

Serious concerns about the availability of advanced placement courses for all students in Kentucky were identified. The AP Classes by District chart prepared by EPSB shows nearly half of the school districts in Kentucky do not offer their students any advanced placement courses. Without advanced placement courses, students are unable to pursue Kentucky's highest level of high school diploma, the Commonwealth Diploma, since the award of that diploma is dependent upon students attaining proficiency in at least four Advanced Placement or International Baccalaureate courses. In addition, students in these school districts are at a disadvantage in preparing for college compared to students who have had the opportunity to take advanced placement courses are, creating questions of equity in educational offerings for Kentucky's brightest students.

Officials interviewed from many districts explained that the lack of advanced placement course offerings are the result of limited numbers of students who are interested in taking the courses, limited numbers of teachers interested or capable of teaching the courses, or limited amounts of space and time in already crowded facilities or schedules. When asked about permitting students to take advanced placement courses through the Kentucky Virtual High School (KVHS), many of the interviewed officials indicated that they were unaware of the program, how it worked, how it affected school funding, or what it cost students. Those who were aware of the program cited inadequate numbers of computers to permit students to take KVHS advanced placement courses during the school day or a lack of sites within the school where a student could have access to a computer with an Internet connection and be supervised at the same time. Costs of the KVHS program also

were listed as a barrier for some students and school districts. Some school districts indicated that many of their students would be unable to pay the \$275 per semester/\$500 per year fee per course to access advanced placement courses on KVHS.

In addition, availability issues exist for other students even where sufficient advanced placement courses are available. Most of the school districts interviewed indicated that all students are allowed to sign up for advanced placement courses. Advanced placement courses are published in a school course offering guide as are all other courses in those schools. Students are allowed to sign up for any course they choose for which they meet prerequisites. Some students, including minority or low-income students, may not be able to meet prerequisite requirements because they have not been challenged to perform at high levels and take preparatory courses before they reach high school on in their freshman and sophomore years, eliminating them from eligibility for advanced placement courses. Other districts allow only students recommended by teachers, counselors, or administrators to register for advanced placement courses. This process also could exclude minority or low-income students whom school personnel may believe are incapable of handling advanced placement courses, according to recent equity and access studies conducted by the College Board and the National Academies of Science and Engineering.

The College Board has actively tried to address the disparity between the number of Caucasian and minority students who take College Board Advanced Placement courses and exams. Nationally, minority students account for only twenty-seven percent of the College Board advanced placement examination takers, according to the College Board. African American students represented approximately four percent of those who took AP examinations in 2000 while Latino students were about nine percent of test takers in 2000. Kentucky lacks general data identifying the ethnicity of students who take advanced placement courses in school districts to determine accurate percentages of minority students enrolled in these courses or taking the examinations. However, KVHS has collected that data for students enrolled in KVHS AP programs. Among KVHS advanced placement program participants, 10 of the 144 students were African American and 2 were Asian, compared with 117 Caucasians and 15 who did not respond to the ethnicity question. None were identified as Latinos.

The Kentucky Department of Education is currently involved in several initiatives designed to prepare students for a more

The Kentucky **Department of Education** and the Council on **Postsecondary Education** have received grants for a GEAR UP program, High Schools That Work, the gifted services plan, and the Kentucky Virtual High School that provide teacher development, instructional support for students who want to achieve at higher levels. and parental support for the parents of students targeted by these programs. These initiatives are designed to prepare students for a more challenging high school curriculum when those students are still in lower grades.

challenging high school curriculum when those students are in lower grades. KDE and the Council on Postsecondary Education have received grants for a GEAR UP program, High Schools That Work, the gifted services plan, and the Kentucky Virtual High School that provide teacher development, instructional support for students who want to achieve at higher levels, and parental support for the parents of students targeted by these programs. In addition, Western Kentucky University (WKU) and KDE have implemented Vertical Team Training, a professional development program designed to show teachers of upper elementary and middle school students the content, skills, and teaching methods needed to prepare students to take advanced placement courses in high school. The director of the WKU Advanced Placement Institute told the Subcommittee that early preparation for a college preparatory curriculum was the single most important step the state could take to increase the numbers of students enrolling in advanced placement courses. Without sufficient early foundational learning, the director stated, many students are inadequately prepared to take challenging advanced placement courses in high school.

The GEAR UP program, an acronym for Gaining Early Awareness and Readiness for Undergraduate Programs, is designed to help minority and low-income students understand what skills they will need to prepare for college and to develop better reading, composition, science, and mathematics skills that will enable these students to take college prep courses in high school. Programs like these may increase the access minority and low-income students have to college preparatory curricula, including advanced placement.

Other students who may have limited access to advanced placement courses are students who are placed in alternative programs due to behavioral problems or other issues that do not allow them to remain in traditional classrooms. Several of the schools interviewed indicated that they believe allowing students in these programs to take advanced placement courses could jeopardize the learning environment or safety of other students interested in the programs. However, these schools appear not to have explored alternative means of delivering advanced placement courses to these students, such as KVHS advanced placement courses. None of the schools interviewed had explored that method of delivering advanced placement courses to alternative program students. None of the school districts could identify specific options they provide these students to ensure they have access to advanced placement courses. Most school officials interviewed

expressed doubt that these students could complete advanced placement courses. KRS 157.195 requires the Commonwealth and school districts to provide adequate educational programs to all students, even students who have advanced academic capacity coupled with behavioral problems, and does not permit students in alternative programs who are capable of successfully completing advanced placement courses to be excluded from these offerings simply because of other problems.

Consistency

One of the biggest issues of concern to the Subcommittee and those who testified before it was the lack of consistency among the advanced placement courses offered in Kentucky's high schools. Neither the Kentucky Department of Education nor the College Board mandates a specific curriculum for advanced placement courses. Although both entities offer teacher training to help teachers understand and acquire the best methods of delivering the content and developing the skills students need to score well on College Board advanced placement examinations, neither has the authority to require teachers or schools to use those methods in advanced placement courses. Furthermore, no statutory or regulatory provision prevents school districts from labeling a course "advanced placement" when the course does not follow the College Board recommendations for advanced placement courses.

Several individuals who testified before the Subcommittee expressed concern about the lack of consistency in advanced placement programs. Poorly structured programs limit the ability of students to score well enough to receive credit or advanced standing when they take College Board advanced placement examinations. These students also are deceived into thinking they are taking courses that require college level work when those courses do not, resulting in poorer student performance in actual college courses than those students would have expected.

Another issue of consistency is the varying scores students must obtain to receive credit or advanced standing for College Board advanced placement examinations from Kentucky's postsecondary institutions or programs within those institutions. Many students believe that if they achieve a score of "3" on a College Board advanced placement exam, they will receive credit or advanced standing from postsecondary institutions. However, some schools or degree programs require a score of "4" or "5" before credit or advanced standing is granted. To further complicate the problem, no central source of the scores required is readily available to

Several individuals who testified before the **Subcommittee expressed** concern about the lack of consistency in advanced placement programs. **Poorly structured** programs limit the ability of students to score well enough to receive credit or advanced standing when they take College **Board Advanced** Placement examinations. These students also are deceived into thinking they are taking courses that require college level work when those courses do not.

students. Many postsecondary institutions list the scores required in their catalogs, but some do not provide much detail without individual student inquiry. Students may have to contact each campus or each program in which they have interest in order to get complete information about advanced placement credit, making comparisons difficult.

Postsecondary institutions and specific degree programs say that setting a specific score at which credit or advanced standing would be granted could result in students who are placed in courses where they will not have the skills or content knowledge they will need to succeed. However, some students and other observers believe the system creates uncertainty for students and may discourage students from taking advanced placement courses or exams. The Subcommittee requested the Council on Postsecondary Education (CPE) and the Association of Kentucky Independent Colleges and Universities (AIKCU) to collate information about the College Board AP examination scores for which each Kentucky post-secondary institution grants credit or advanced standing and the scores at which the credit or advanced standing is granted. (See Appendix 2.)

Barriers to Offering Advanced Placement Courses

Insufficient Numbers of Students Seeking AP Classes

The most frequently cited reason for not offering advanced placement courses was inadequate numbers of students wanting to take a particular advanced placement course. One solution offered to this problem was preparing more students for advanced placement study. Sufficient numbers of students then would be available to make the classes feasible from staffing and resource perspectives.

The school district officials interviewed for this study identified several barriers to offering advanced placement courses. The most frequently cited reason for not offering advanced placement courses was inadequate numbers of students wanting to take a particular advanced placement course. Without sufficient numbers of students, school officials found scheduling a teacher to teach an advanced placement course tied up too many resources personnel, facilities, and materials. In addition, some schools cited disinterest among faculty members in teaching these courses since advanced placement courses generally require greater teacher preparation and follow-up in the development of assignments, tests, and grading of those instruments. These concerns do have a financial impact on the school as well since teachers must be reassigned or additional teachers hired to teach other courses when a teacher is assigned to teach a small number of students in an advanced placement course. Multiplied times several advanced placement courses, the effect on available teaching staff in a given

school district can be high. The WKU Advanced Placement Institute director offered one solution to this problem: prepare more students for advanced placement study, then sufficient numbers of students will be available to make the classes feasible from staffing and resource perspectives.

Kentucky Virtual High School (KVHS)

When asked about using KVHS courses to supplement advanced placement course offerings, most school district officials said they were not aware of the program and were not sure how average daily attendance (ADA) funding would be affected by allowing students to take an advanced placement class via KVHS.

KVHS began operations in January 2000 with a \$500,000 general fund appropriation. The program was set up to operate on a modified cost-recovery basis. KVHS has offered advance placement courses since its inception, including eleven AP courses in 2001 and fifteen AP courses in 2002. However, KVHS serves as a supplement to, not a replacement of, local schools. In fact, KVHS does not grant credit, it simply serves as a course provider when schools do not have resources or student demand for offering a specific course. Credit for KVHS courses are provided through the school district where the KVHS student is enrolled. In 2002, KVHS also will begin offering an eighteen-month/two semester AP option that will give students additional time to master the content and skills needed to successfully take College Board AP examinations.

Students must pay a fee of \$275 for one semester per KVHS course taken (\$500 for two semesters) and must have access to an Internet-accessible computer to take courses. Students who take a KVHS course during the school day continue to be counted in the school's ADA if the student takes a class from the school prior to and after taking the KVHS course. Some school districts agree to share a portion of ADA funding to offset the student's costs for taking the KVHS course when the course is taken for credit and is unavailable from the school district. However, the decision to share funding is made by the local school district. Not all districts provide this financial offset. Many require students to pay the KVHS fees, limiting to a large degree the number of students able to take advantage of this option. However, KVHS does offer 100 scholarships per year. These scholarships will be available only as long as federal grant funding is available.

KVHS has offered advance placement courses since 2000 when it was begun, including 11 AP courses in 2001 and 15 AP courses in 2002. KVHS does not grant credit, it simply serves as a course provider when schools do not have resources or student demand for offering a specific course.

KVHS can offer well-taught advanced placement courses to students throughout the state with one-on-one teacher/student interaction although that interaction is limited to telephone or electronic communications. KVHS also offers schools districts access to courses, like foreign language and advanced math and science for which finding

KVHS has the advantage of offering students throughout the state access to well-taught advanced placement courses that provide one-on-one teacher/student interaction, although this interaction is limited to using electronic or telephone communications. Students also are able to interact with each other through electronic communications. KVHS also provides AP students with extensive exam review and pretests that enhance the students' capacity to score at high levels on College Board Advanced Placement examinations. KVHS also provides schools districts with important access to courses in which qualified teachers are difficult to find, such as foreign language and advanced math and science courses. KVHS' ability to amass students throughout the state into classes maximizes the use of teacher resources.

Some individuals who testified before the committee, including students and parents of students taking KVHS AP classes, pointed out that KVHS AP courses may not work for all students. These individuals told the committee that KVHS AP courses require about fifteen hours per course of work each week. In addition, students taking the courses must be largely self-directed since teachers are not constantly watching to see if the students are on track. KVHS teachers and administrators did note that the program tries to ensure KVHS AP teachers give weekly assignments that must be turned in, usually faxed or e-mailed, to monitor student understanding and performance. In addition, each student is assigned to a teacher or counselor at the student's local school so the school can monitor the student's progress as well.

Schools do continue to have technology concerns about the increased use of KVHS as a provider of supplemental courses for students seeking advanced placement courses or other courses for which local schools cannot find or afford on-site teachers. As mentioned previously in the report, school district officials interviewed suggested that many schools may not have enough computers to permit students to take AP classes during the school day or enough computers in classrooms or other locations where students can be monitored while they take KVHS courses. However, the Kentucky Department of Education has suggested that schools should have sufficient numbers of computers to permit the use of KVHS courses for advanced placement. KDE indicates that schools may need to plan better for making computers in supervised locations available for this purpose, rather than to acquire additional technology.

School district officials also were unfamiliar with how KVHS works. The program is staffed with four full-time employees to

Dual enrollment programs allow students to take college or community college courses for credit at a postsecondary institution while the student is still in high school. Dual credit courses allow students to receive credit from both the high school and a postsecondary institution when the student takes a single course.

establish procedures and curricula and to maintain service delivery. The KVHS staff has had little time to make visits to local school districts to demonstrate how the program works. KVHS officials indicate the program has had too few resources to develop brochures or other written materials that explain and promote the program and too little funding to contract out those projects.

Dual Enrollment or Dual Credit Options

Kentucky has a fairly extensive network of dual enrollment programs offering high school students the chance to begin earning college credit or occupational certifications prior to graduating from high school. The Kentucky Community and **Technical College System** (KCTCS) is actively involved in helping local community and technical colleges set up dual enrollment programs throughout the state.

Some school districts interviewed believe that dual enrollment or dual credit programs offer more students the opportunity to obtain college credit prior to full-time enrollment in postsecondary institutions than advanced placement programs. Dual enrollment programs allow students to take college or community college courses for credit at the postsecondary institution while the student is still in high school. Dual credit courses allow students to receive credit from both the high school and postsecondary institution when the student takes a single course. Many of the individuals interviewed also saw dual enrollment programs as a way to increase the number of Kentucky students who pursue postsecondary education. These individuals believed that AP courses are intended for only a limited number of students who plan to attend selective, four-year liberal arts colleges or research universities whether they get early credit or not. These courses are too difficult for students who earn Bs and Cs, according to some of those interviewed. In addition, these interviewees expressed concerns about the uncertainty of students attaining credit or advanced standing by taking College Board advanced placement examinations, making dual enrollment programs a more certain choice. On the other hand, representatives of the Association of Independent Kentucky College and Universities indicate that students may have a more difficult time transferring credit earned through dual enrollment or dual credit courses to Kentucky's private colleges and universities than those students would have in getting credit for advanced placement examination scores ranging from "4" to "5."

Kentucky has a fairly extensive network of programs offering high school students the chance to begin earning college credit or occupational certifications prior to graduating from high school. The Kentucky Community and Technical College System (KCTCS) is actively involved in helping local community and technical colleges set up dual enrollment programs throughout the state. In addition, KCTCS has seven districts that are in the

advanced or formative stages and nine districts in the preliminary stage of setting up and implementing Preschool through 16 (P-16) councils. These councils help elementary, middle, high schools, and postsecondary education institutions align curriculum and develop collaborative projects that will enhance the interest and ability of Kentucky students to pursue postsecondary education.

Discover College

Owensboro has been a leader in developing a model program, called Discover College, that provides students in the Daviess County, Hancock County, and Owensboro areas access to several postsecondary programs. This program is not intended to reach students who traditionally take advanced placement courses but to involve students who traditionally have not pursued postsecondary education in degree or certificate programs in postsecondary programs before they leave high school.

Discover College offers students developmental or college freshman courses in areas that will satisfy general education requirements, such as English, math, science, and social science. In addition, the program offers students the opportunity to obtain professional industry-recognized certifications, such as Microsoft Office User Specialist (MOUS), Cisco Networking, or Automotive Service Excellence (ASE), that will enable students to get entry level jobs paying on average \$30,000 to \$60,000 per year.

Discover College blends the "middle college" concept with off-campus programs that allow high school juniors and seniors to take courses at area colleges for credit. The program even provides transportation for students to those campuses. Students are able to take many of the courses free. But some courses require students to pay fees to the postsecondary institution. In 2002, Discover College will set up a more traditional version of a middle college by having both high school and college teachers available for instruction on high school campuses throughout the district and creating greater interaction between teachers from both instructional levels.

Middle colleges have been in existence in other parts of the United States since the 1970s. They provide high school and college courses on the same campus, allowing students to move between the programs and to satisfy both secondary and postsecondary educational requirements. Middle colleges have been used to successfully combat the "wasted senior year" syndrome described by the National Commission on the High School Senior Year

Discover College offers students developmental or college freshman courses in areas that will satisfy general education requirements such as English, math, science, and social science. In addition, the program offers students the opportunity to obtain professional industry-recognized certifications, such as Microsoft Office User Specialist (MOUS).

KDE has pointed to local barriers to some programs designed to move capable elementary and middle school students into advanced curricula, including higher mathematics and language courses. KDE indicates that some school districts will not give middle school students who take high school algebra or other courses credit for those courses toward high school graduation.

School districts worry about having sufficient funding to pay for pulling teachers out of class-rooms with larger numbers of students to serve a small number of advanced placement students and worry about the potential loss of ADA if those students take courses via KVHS or in dual enrollment programs.

(National Commission) by allowing students to complete as much as two years of credit toward a postsecondary degree before they graduate from high school. Creating programs that enable students to take challenging courses prior to graduation or to expedite graduation in order for students to pursue postsecondary education at an earlier age were among the recommendations of the National Commission. The National Commission also suggested that students in upper elementary grades and middle school be permitted to complete high school level courses, including algebra and calculus, in order to maintain academic challenge for those students and to prepare them for earlier entry into postsecondary programs.

KDE has pointed to local barriers to some programs designed to move capable elementary and middle school students into advanced curricula, including higher mathematics and language courses. KDE indicates that some school districts will not give middle school students who take high school algebra or other courses credit for those courses toward high school graduation. School district officials interviewed for this study said these policies are in place because the school districts do not have a sufficient array of advanced math courses for students in this situation to take four years of math if they receive credit for algebra or other courses prior to officially enrolling in high school. Other school officials said their districts believe students should not graduate early since the districts lose ADA funding when the student is no longer enrolled in public school.

Funding

Funding issues continue to percolate through the concerns expressed about advanced placement and dual enrollment programs. School districts worry about having sufficient funding to pay for pulling teachers out of classrooms with larger numbers of students to serve a small number of advanced placement students and worry about the potential loss of ADA if those students take courses via KVHS or in dual enrollment programs. Postsecondary institutions express concerns about the loss of full-time equivalent (FTE) funding when students enroll as part-time students while they are still in high school. Postsecondary institutions involved in dual enrollment programs hope they will be able to increase FTE enrollment over time by reaching students who normally would not have gone into postsecondary education without the dual enrollment outreach programs. KVHS also has expressed concerns about the viability of the program once grant funding is no longer available if it is not replaced by general fund support. In short,

policy makers may need to examine funding mechanisms to ensure they do not create disincentives in expanding options for students to perform at higher levels. To some degree, funding needs to follow the student, but decision makers may need to address the degree to which school districts will lose funding when educational services are delivered through alternative methods and the degree to which postsecondary institutions should have tuition waivers or non-FTE funded services offset by other funding sources.

TIMETABLE

The 2001 SCR 2 directed the Advanced Placement Programs Subcommittee to develop recommendations for improving advanced placement programs throughout Kentucky public schools and to suggest a timetable for implementing those recommendations. Listed below are the Subcommittee's recommendations and timetable.

Enactment of legislation – 2002 Regular Session to:

- ? Define "advanced placement," "dual enrollment," and "dual credit";
- ? Appropriate funds to the Kentucky Department of Education and the Council on Postsecondary Education for developing information about and providing professional development which demonstrates the Kentucky Virtual High School and the Kentucky Virtual University.

Require the Kentucky Department of Education to:

- ? Standardize advanced placement core curriculum content, teaching methods, data collection, and reporting by developing the "Kentucky Virtual AP Academy" prior to the 2003 Regular Session;
- ? Identify current and future funding sources and other resources that can be directed toward advanced placement, dual enrollment, or dual credit programs prior to the 2003 Regular Session;
- ? Compare costs of offering advanced placement courses through traditional classroom instruction, the Kentucky Virtual High School, and other methods and assist school districts in analyzing how they can most cost-effectively offer advanced placement courses prior to the 2003 Regular Session;
- ? Expand advanced placement teacher institutes and other professional development for these courses prior to the 2003 Regular Session;
- ? Define or modify existing definitions of "dual enrollment" and "dual credit" to reflect statutory definitions and work with the Council on Postsecondary Education and the Education Professional Standards Board to develop guidelines for content knowledge and teacher training in dual enrollment or dual

credit programs offered in Kentucky prior to the 2003 Regular Session.

Require local school districts to:

- ? Offer credit toward high school graduation to non-high school students who complete high school courses at the same level of performance as required of high school students when non-high school students take those courses before enrolling in high school prior to the 2003 Regular Session;
- Provide credit for all Kentucky Virtual High School courses taken by students from their district for credit and to use those grades in the calculation of student grade point averages, making no differentiation between courses taken via KVHS or on-site prior to the 2003 Regular Session;
- Pay tuition for students from their district who are enrolled in Kentucky Virtual High School courses for credit through some proportionate sharing of Average Daily Attendance funds or other funding sources prior to the 2003 Regular Session.

Require school-based decision-making councils to:

? Offer a core advanced placement curriculum, dual enrollment, dual credit program using either traditional on-site instruction or electronic instruction through the Kentucky Virtual High School or other sources, or both prior to the 2003 Regular Session.

Require the Council on Postsecondary Education to:

- ? Develop administrative regulations that require public postsecondary educational institutions to grant credit to students who score a "3" or better on a College Board Advanced Placement examination prior to the 2003 Regular Session:
- Publish information in print or electronic format about scores required on College Board advanced placement examinations for credit or advanced standing to be received at Kentucky postsecondary institutions prior to the 2003 Regular Session;
- ? Define "dual enrollment" and "dual credit" in accordance with the new statutory definition and work with the Kentucky Department of Education and the Education Professional Standards Board to develop guidelines for content knowledge

and teacher training in dual enrollment or dual credit programs offered in Kentucky prior to the 2003 Regular Session.

Require the Education Professional Standards Board to:

? Define "dual enrollment" and "dual credit" in accordance with the new statutory definition and work with the Kentucky Department of Education and the Council on Postsecondary Education to develop guidelines for content knowledge and teacher training in dual enrollment or dual credit programs offered in Kentucky prior to the 2003 Regular Session.

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APPENDIX A

Presenters to the Advanced Placement Programs Subcommittee

APPENDIX A

Presenters to the Subcommittee on Advanced Placement Programs

Agency and Institution Personnel

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Dr. Gordon K. Davies, President Council on Postsecondary Education

Dr. Michael B. McCall, President Kentucky Community and Technical College System

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Terri DeYoung, Counselor Kentucky Virtual High School

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Autumn Vanover, StudentJenkins High School (AP English)

Daryl Swartzentruber, Student Buckhorn High School (AP U.S.

APPENDIX B

Advanced Placement Classes by District

Prepared by Education P`rofessional Standards Board

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Grand Total

(AA)STUDIO ART GENERAL

DRIWARG

8

60%

28

4%

APPENDIX C

Advanced Placement Exam Scores at Which Kentucky Public Universities And Colleges Grant Credit

Prepared by Council on Postsecondary Education

Advanced Placement Minimum Acceptable Exam Scores

AP Course life	Min Sc Cr Hrs	CHRS	Min Sc Cr Hrs	_	Min Sc Cr Hrs	-	Min SC Cr Hrs	-	Min Sc Cr Hrs	200	Min Sc	200	S 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		200	1	MIN SC LT HTS
Art History	60	9	3	8	67	6	3	63			3	3	3	60	3	3	3	3
Art History															4	9		
Biology	60	4	3	3	3	6	3	4	3	4	4	2-6	3	4	3	3	4	9
Biology			4	4					4	0								
Calculus (AB)	3	4	3	2	m	4	9	4	3	10	60	4	4	4	3	4.5	3	4
Calculus (BC)	60	8	3	10	en	4	3	4	4	ın	6	4	4	8	3	4.5	m	80
Calculus (BC)							4,5	00							2	0		
Chemistry	m	4-9	m	4	3	4	3	4	3	4	3	9	3	7	3	S	3	3
Chemistry						4.5	4,5	80	4,5	4							4	9
Computer Science A	69	3			3	3			3	3	3	3			3	3	3	3
Computer Science AB	3	9							4,5	9	3	4			3	3	63	4
Economics (Micro)	60	8	3	63	3	63	3	63	3	60	3	63			3	3	63	00
Economics (Macro)	63	0	33	3	8	63	3	n	3	60	63	3			8	8	6	0
English Language	3	8	3	8	8	8	3	0	3	3	6	8	8	8	3	8	60	60
English Language			4	8	60	60	4	60					4	9	4	9		
English Language							2	8										
English Literature and Composition							6	60	3	9					63	9	3	60
English Literature and Composition							4	67							4	9		
English Literature and Composition							20	9										
European History	89	8			3	3	3	3	2	3	3	9	3	3	3	3	3	9
European History															4	9		
French Language	63	6	3	3	3	3	3	12	3	4	3	3	3	9	3	3	3	3
French Language	4,5	12	4	9			4,5	12			4	9			4	9	4	9
French Literature	3	3			3	3	3	3			3	3	3	9	3	3		
French Literature							4,5	8							4	9	1000	
German Language	3	6	3	3	3	3	3	12	3	4	3	3	3	9	3	3	69	က
German Language	4,5	12	4	9			4,5	12			4	9			4	9	4	9
German Literature	1														00	3		
German Literature			100				100					20.00			4	8	- 10	
Government & Politics (US)	3	3			3	3	3	3	2	3	4	0	4	3	3	3	4	0
Government & Politics (US)		100000									5	3	4	3			5	8
Government & Politics (Comparative)	60	3			3	3	3	3			4	0			3	3	4	0
Government & Politics (Comparative)											2	3	2				5	e
Human Geography												100000						
International English Language (APIEL)												1						
Latin	3	9			3	8			3	60	8	9	3	8	3	3		
Latin											4	6			4	9		
Music Theory	en	80			3	5	en	(C)	3	m					3	8		
Music Theory															4	9		
Music Listening/Literature	6	m			3	2									3	3		
Music Listening/Literature															4	9		

Advanced Placement Minimum Acceptable Exam Scores

		EKU	KSU	-	MoSU	0.0	Musu	ns	NKU	2	š		5	-	WKU	9	KCTCS	SS
AP Course Title	Min Sc	Min Sc Cr Hrs	Min Sc	Cr Hrs	Min So Cr Hrs	Cr Hrs	Min Sa	Cr Hrs	Min Sc	Cr Hrs								
Physics B	9	3	3	3	3	4	m	4	3	4	3	8	3	80	3	9	3	8
Physics B							4,5	80										
Physics C									6	4,5					3	8	1000	
Physics C									4,5	10								
Physics C/ Mechanics	e	2	0	2	8	4	3	4	53.7		3	4	es	4			60	4
Physics C/ Elec & Mag	e	co	m	so.			m	4			3	4	0	4			6	4
Psychology	m	3			0	m	8	3	3	3	4	4	3	3	3	65	4	4
Spanish	6	6	8	e	3	m	8	12	3	4	3	3	3	9	3	3	3	3
Spanish	4,5	12	4	9	3	e	4,5	12			4	3	8	9	4	8	4	4
Spanish											w	9						
Spanish (Literature)							3	3			3	3			3	3	3	3
Spanish (Literature)							4,5	9			4	3			4	9		
Spanish (Literature)											2	9		8				
Statistics									60	3	3	3	3	3			3	3
Studio Art							3	3							3	3		
Studio Art										0.7	10000				4	9		
Art, General									4	3			٥	3				
Art, Drawing							6	-	4	3	200		6	3				
US History	m	9	es	e			3	9	2	3	63	3	3	9			6	9
US History			4	9	3	60												

APPENDIX D

Advanced Placement Scores at Which Kentucky Independent Universities and Colleges Grant Credit

Prepared by Association of Independent Kentucky Colleges and Universities

SUBMITTED BY THE ASSOCIATION OF INDEPENDENT KY COLLEGES/UNIVERSITIES, SEPT. 24, 2001

if so, what policies are in place regarding acceptance of drial credit courses from obser institutions?	NIA Confact Georgia Busroe at georgiabusroedifisoimal.co	Reasonable academic duel credit courses that appear or this banacript of ecorrelistic harbinities often are transferred to abouty. Albury will not accept tanefor college credits taken more than two years prior to graduallon from high school. Contact: Timethy Thomas	If I would be on their transcript. Confact: John Oppelt Joppelt@bellarmine.edu
Daes your institution accept dust credit offsred by snother college or university?	2	in certein eilludlons	Yess
If so, approximal ely how many students are enrolled in your dual credit programs?	MM	ИКА	Адргож. 10.
if so, in what areas?	NA	NA	There are no restrictions by acedemic area.
Does your institution offer dain credit programs?	No	No.	Yos. It is called an early entry program.
If a student transfers in with AP credit, does your institution automatically agree with policies of originating institution?		No. Credit is only granted directly from original AP documents AP to our standards	Yes
Does AP centif count toward degree and graduation requirements?	ALC ewerds crodit if a student scores 3 or better on AP exams. The credits does count toward graduation, and it appropriate, toward degree requirements.	Students receive course eredit for AP work if they meet the minimum scores. AP credits count toward major enclor general education requirements.	At a minimum, students will gain. Yes elective credit - which is credited toward graduallon - for any AP exem with a score of 3 or befer. If the AP exim represents a 'major requirement,' it may count foward the major.
If so, what scores to you accept for AP credit?	Three or bellior	Varies from a 2 in Celtrulus BC to 3's and 4's and 6's in the majority of AP areas.	vr
Does your institution have on institution wide policy rehaling to Ap courses?	Yos	Yes	Yes
College or University	Alice Lloyd Colloge	Asbury College.	Befarmine University

Borea Coffege	Yes	3 or Above	AP credit counts toward gradualish. In more areas AP credits also counts toward the student's major requirements.	D.	Yes	#W	R	Yes	Accepted as any transfer course from a regionally accredited institution. Contact: Phil Schmidt Phil_Schmidt u.
Brescle University	> .	3 or Above	AP credits count toward graduation requirements.	No, we ask for the original scores	We have in the past, none currently	V IN	NVA	Yes, because we wouldn't know if it were dust credit.	If transcripted, they are accepted as transfer credits. Contact: Katistean McKee kettsleenm@kracia.edu
Campbellswife University	×u×	3 in some areas, higher in olliers		Yes	Yes	English, History, and Mailh	Approx. 200 par semester	Yes	Must most stato guidelines Contact Frank Cheoman frank@edmin.cempbellsv
Canto Cologa	, , , , , , , , , , , , , , , , , , ,	4 and 5 (and 3 for foreign languages and cattethes BC). Credit granted for foreign languages not distributed by withdred by hypropriette score on our placement tests in those present.	Any cradit granted for AP may be applied toward house required for gredelethan. Cradit is given it a accordance with the College's written AP Policies and or mpositive or most in the commentation from the opportunities. May substitute for mayor contribute and substitute for may exist the starter elective credit.	° N	No	NIA	NIA	£	NIA Contact: Tim Cuthan cuffran@centro.edu
College College	Yes	3-4-5	The final decision on whether an AP course is accepted, the course for which AP credit may						Contact: Joe Early

josrly@cc.cumber.edu	the NVA contact: Winnie Bratcher Winnia_bretcher@georg etowncolloga.edu	Deall on a case by case basis. Contact: Jim Estep provost@email.kcc.edu	Only for Elective Courses Contact: Mike Fegen mikefa@kws.ctu	Mormal transfer credit policies apply. Contact: Bill Julian julianw@kindaay.octu
	I'm not sure of the intent of the question The snewer is probably no.	Yes	Yes	Accepted only if transcripted by College or University,
	Five or loss	MA	NIA NIA	Varios, typically 5 - 15.
	Engineering Arts and Nursing Arts with UK: Regent's Park Oxford	NIA	NA	Varias, most typically English and Malh
	We participate in duel credit programs.	No O	2	No, not as programs. Individual courses are offered sported sp
	No. We must have copy of original acora report – usually student brings their own original copy.	Mo	No	92
be substituct, and the number of hours granted is made by the registrar in consultation with the appropriate department. Hours esemed intrough Ab work are semed intrough Ab work are graduation and a student's insign requirements.	AP credits and counted toward graduation and in the major or inition as needed.	Students who receive cracil for a particular course on the basis of AP results may use this credit just as if they had taken the course at KCC. A grade of the will be given for the course. Will be given for the course. This grade receptized the credit but does not affect the grade point average offher negatively or positively.	Up to 42 semester hours of credit may be earned by AP antifor CLEP hours count toward graduation and, if appropriate, major.	Receive credit in the appropriate discipline. AP credit is recorded as hours estrict and the hours are applied toward graduation.
	3 or abovo	Depending on the course, we recept scores ranging from 3 - 5.	3 or beller	3 or better
	8 %	Yes	Yes	5 8
	Georgetown	KY Christian Colloge	KY Westeyan College	Lindsey Wilson College

	We would accept credit. Contact: Willen Smithtek wernkelet@midway.edu	N/A Contact: Waily Campbell Campbell@pc.edu	Contact: Sharon Hoffman shoffman@spalding.edu	See Item 8. Contact: Dale Myers Dale.myors@thomatmor e.edu	We award the credit that has been awarded by the other regionally accredited insitution.
	Yes	£	Yes	if it is listed on branscript as college credit award.	Yes
	NA	K.N.	20 -30 per year	KN.	W/V
	NA	NA	Various	N.A.	NA
proference), or off- campus at the H.S. by a SACS certified instructor using syllebi and exems approved by relevent LWC faculty.	Not at present	No.	Yes	2	9
	Yes	Yes	Yas	No, requests original score sheet	₩
	AP courses may apply to graduation as electrons, may report degree requirements, and/or meter requirements	Can earn up to 15 hours credit. Scores of 4 or 5 is automatic credit. 3 requires consultation from appropriate instructions. AP credits do count toward graduation and/or a student/a major requirements.	Course credit is given. Counts lowerd graduation, and where appropriate, lowerd major requirements.	Credit is given toward major and therest arts core requirements. Departments defermine the courses that are equivalent to the AP offering.	Credits awarded for AP work count toward graduation requirements. Whether it fulfils major requirements is up to ecodemic dopartment.
	3 equals credit for course; 4 or 5 equals an "A" in the course	4 or 5 (3 in Consultation with faculty in discipling)	3-5, depending on subject area	55	4 and 5
	Yos	Yes	Yes	Accepts all AP courses	Yes
	Midwey College	Pikevile College	Spalding University	Thomas More College	Transylvenia University

The student must receive a minimum grade of "C" and must be an appropriate equivalent of one of our courses.	Contact: Kalby Webb kwebb@unionky.edu
Yes	
es	
Yes	
Yes	
Office of the Registrar will determine the credit endor placement to be awarded.	
3 or above	
Yos	
Union College	

APPENDIX E

School Report of Advanced Placement Examinations 2000-2001 (By State)

SCHOOL REPORT OF AP EXAMINATIONS 2000-2001 (BY STATE)

Mark		11TH & 12TH GRADE	AP STU	STUDENTS	APE	AP EXAMS	11TH & 12TH GRADERS	11TH & 12TH GRADERS	% OF GRADES 3 OR ABOVE	S 3 OR ABO
1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,	Alsbama	96.412	2000 S.645	5.728	8.416	8,778	2000	 2-2001	2000	2001
1,10,000 2,769 4,440 4,517 6,844 4,149 4	Alaska	18.243	1.648	1.655	2,842	2.783		40	01.070	00.000
1,000,000 1,1,1,167 1,4,	Arizona	110,602	7,505	8.480	12.137	14.049		35	65 466	64 300
1,000 1,1,000 1,1,000 1,2,74 1,0,000	Arkansas	60,730	3,766	4,142	5,871	6,848		15	51.5%	50.0%
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	California	819,652	131,361	146,922	229.310	259.901		23	R1 246	A0.364
March 1,550 1,144 1,14	Colorado	97,108	11.887	12.974	18,420	20.428		15	2K 48.	62 684
11,500 1,0	Connecticut	80,613	12.402	13.832	21.079	23.366		34	79.095	74 064
Fig. 10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	Delaware	17,510	2116	2387	3.639	4 130		200	20.030	67 350
1866 1	District of Columbia	6.663	2 007	2211	3 704	A 25.6		67	74 000	07.270
196.607 20,040 22,737 23,717 23,724 115 115 117	Florida	280 817	46 234	50.490	78.999	00000		70	88.17	98.7%
367-19 278-19<	Georgia	168.607	20.460	22 737	33 170	37 000		26	56.0%	95.4%
282, 202 273, 35 273, 35 273, 36 <	Hawaii	28.649	9.054	2 202	6 304	A 544			29.7%	90.276
136,270 10,370	daho	26.736	0,600	2636	2,304	0,014		4	67.4%	65.2%
1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0	Illipoie	200,400	201.00	2,001	0,440	3,740		4	64.1%	62.7%
11,252 11,252 12,254 1	and and	282,120	29,944	32,690	51,741	56,503		15	72.3%	70.8%
77,820 78,820 8,951 5,950 6,75 69 4 77,356 66 77.7 3,470 3,464 4,099 5,950 1,530 67,23 67 69 4 77,356 87 56 17 3,470 3,470 3,470 1,430 1,230 4,230 4,230 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,430 1,440 1,400 1,410 1,410 1,410 1,410	ndiana	138,521	10,292	10,704	15,804	16,352		9	52.8%	53.1%
69 277 3,473 3,666 4,589 6,204 62 3 67 2	Owa	79,820	3,844	4,089	5,591	5,995		4	71.3%	87.3%
89 202	Cansas	69,777	3,473	3,666	4,856	5,204		4	67.2%	87 1%
99,202. 3,428 3,672 4,524 6,531 44 66,586 67,686 110,196 19,600 2,348 3,672 4,524 6,534 44 66,586 76,786 110,196 19,600 2,130 2,130 2,130 2,130 2,130 7	Kentucky	87,951	7,575	8,028	11,930	12,853		18	51 265	ASO 036
131,766 3,350 2,820 2,820 2,869 244 180 160 100	Louisiana	98,202	3.458	3.672	5.234	5.531			24 Bat	0.4 000
118,796 118,670 21,200 22,234 32,750 23,46 23,46 23,47	Maine	31.756	3.248	3.830	4 839	5.488		100	04.000	04.070
1861 186 21 350 23 23 24 36 35 34 34 35 34 34 34 34	Maryland	119.796	19.680	21 923	32 Apr	37 366		000	20,000	00.00
253,518 21,406 25,078 35,074 9,339 4,40 1,40	Massachusetts	138 195	21 306	PLOTO	26.044	36 700		63	70.3%	968.936
144,178	Michigan	984 649	24 400	25,530	200,00	00,100		67	74.1%	71.2%
10,000 1,0	Minnesota	144 179	00000	44 650	10,00	20,330		15	65.4%	64.2%
131,409 2,279 2,249 2,386 64 6 64 6 64 6 6 64 6 6	Merico ou	194,170	13,010	14,639	119,5/7	23,015		20	62.1%	57.7%
14,147 6,276 1,564 10,03 1,156 10,03 1,564 10,03 1,564 10,03 1,564 10,03 1,566 10,03 1,566 10,03 1,566 10,03 1,566 10,03 <t< td=""><td>100000000000000000000000000000000000000</td><td>980'00</td><td>2,710</td><td>2,916</td><td>3,816</td><td>4,121</td><td></td><td>8</td><td>44.6%</td><td>42.9%</td></t<>	100000000000000000000000000000000000000	980'00	2,710	2,916	3,816	4,121		8	44.6%	42.9%
March Marc	Modern	131.407	6,275	7,034	10,003	11,757		13	71.9%	69.0%
46,201 1,684 1,786 2,348 2,485 47 6,29 6,24% 46,201 3,694 3,786 6,248 120 141 1 6,24% 47,142 3,596 4,271 6,205 150 141 1 6,00% 42,320 3,590 4,271 6,205 150 150 22 71 0% 42,320 2,590 4,271 4,200 13,488 2,209 260 27 71 0% 42,320 2,500 4,271 6,206 4,271 2,209 2,209 2,600 <t< td=""><td>montains attention</td><td>24,190</td><td>1,596</td><td>1,688</td><td>2,249</td><td>2,368</td><td></td><td>9</td><td>69.4%</td><td>85.2%</td></t<>	montains attention	24,190	1,596	1,688	2,249	2,368		9	69.4%	85.2%
41,152 3,091 3,569 4,574 6,056 1100 141 11 00.0% 14,174 11 11 00.0% 14,174 11 11 11 11 11,174 11,174 11	- COTOSKA	46,301	1,694	1,786	2,349	2,545		9	65.4%	62.6%
170,1456 3,390 3,500 4,521 5,205 190 158 9 69,9% 170,1456 3,390 3,500 4,376 4,501 5,205 114 139 26 69,9% 40,320 3,500 5,586 6,248 6,248 6,248 6,248 7,148 22 7,10% 40,320 2,187 7,486 12,307 1,148 29 31 22 7,10% 148,380 6,91 7,13 1,148 29 6,248 7,458	Vevada	41,152	3,091	3,369	5,474	990'9		11	80.6%	57.3%
170 A18 24,927 26,929 43,376 47,001 239 261 71,096 42,320 3,030 3,9260 6,376 47,001 239 24 71,096 374,327 7,467 7,836 12,163 236 236 24 57,166 316,320 21,371 41,880 236 236 316 26 64,396 18,326 61,386 10,730 11,732 41,880 236 31 65,796 57,896 57,996 <th< td=""><td>New Hampshire</td><td>31,498</td><td>3,390</td><td>3,508</td><td>4,921</td><td>5,205</td><td></td><td></td><td>89 0%</td><td>68.3%</td></th<>	New Hampshire	31,498	3,390	3,508	4,921	5,205			89 0%	68.3%
42,000 3,000 3,996 6,249 6,216 114 139 24 50.1% 42,000 2,00 3,00 3,996 6,249 6,216 114 139 24 50,1% 146,000 21,67 24,644 123,100 13,183 280 316 26 64,9% 146,000 21,67 24,644 1,030 4,183 246 34,64 4,530 48 54 74,5% 57,594 48 54 6,6% 56 68<	Vew Jersey	170,418	24,997	26,930	43,376	47,031		22	71.0%	89.8%
375,227 74,678 78,886 123,413 13,480 280 316 26 31 56,96 31 57,694 46,96 36,96 31 57,694 46,96 31 57,694 37,537 41,880 286 31 57,694 37,594 46,970 32,66 31 31 57,694 37,694 36,268 36,268 36,268 36,268 1,1037 119 66,574 66,574 37,277 41,880 38,289 110 7	Vew Mexico	42,320	3,303	3,996	5,249	6,216		24	53.1%	72 504
148 860 21871 24 044 37,337 41,880 236 6 31 57 6 % 148 860 21,874 24 044 37,337 41,880 236 6 31 54 6 6 57 6 % 206,396 22,288 26,326 26,386 36,389 36,389 113 119 6 6 6 86 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Vew York	375,257	74,578	78,856	123,103	131,438		36	Rd 954	83 264
18.356 10.30 10.03 1.093 1.093 48 54 6 74.5% 74.5% 10.05	Vorth Carolina	149,860	21,871	24,044	37,337	41,880		14	67 8W	5R 464
10,670 20,206 20,305 30,560 113 119 6 68.6% 80,680 20,305 20,305 30,560 110 110 126 21 58.6% 80,690 5,645 7,574 9,580 12,037 140 151 11 141	vorth Dakota	18,936	169	773	983	1,093			74 5%	87 564
Bay	Ohio	306,795	23,268	25,335	35.998	39.558			66 697	07.376
B1,070 5,032 5,724 7,237 6,326 82 93 11 70,0% 222,660 26,933 28,581 43,164 45,924 140 151 11 170,0% 20,547 1,314 1,410 1,549 2,102 68 99 11 56,7% 111,539 9,464 9,883 14,788 15,710 126 132 8 65,4% 444,228 60,405 9,883 14,788 15,710 126 132 8 65,4% 12,825 12,1289 19,641 20,044 242 242 243 313 68,9% 14,748 2,504 3,710 3,784 81 88 7 54,3% 14,748 2,378 2,504 3,710 3,784 81 88 7 54,3% 14,568 2,378 2,504 3,710 3,784 81 88 7 54,3% 14,568 2,378 2,504 3,710 3,784 81 88 7 54,3% 14,568 2,424,851 7,78,568 84,741 1,272,371 1,414,337 178,568 14,648 7,78,568 84,741 1,272,317 1,414,337 178,588 84,741 1,272,317 1,414,337 1,414,387 1	Oklahoma	83,968	6.475	7.619	0 950	12 087		75	60.079	04.73
282,660 26,933 28,581 43,164 45,924 140 151 11 70,196 4 21,919 2 241 2 349 3,501 3,699 150 160 161 11 70,196 4 20,547 1,314 1,410 1,588 1,570 160 160 170 7 56,7% 20,547 1,314 1,470 1,570 1,588 1,570 160 170 7 56,6% 444,528 6,464 3,883 14,788 15,710 120 140 170 7 56,6% 444,528 6,464 3,883 14,788 15,710 120 140 171 56,7% 72,525 12,185 13,289 14,724 20,044 242 254 17 56,3% 14,387 2,506 3,710 3,784 31 34 37 44,3% 14,58 2,506 1,111 50 72 22 51,5%	Shegon	81.670	5 032	5 784	7 237	R 326			20.00%	32.476
21,919 2.241 2.349 3.501 3,699 150 160 10 10 10 10 10 10 10 10 10 10 10 10 10	ennsylvania	282 660	25 933	28 581	43 564	46 924			10.076	60.279
a 60,636 10,300 10,470 46,570 16,570 16,570 150 190 190 17 56,9% 20,647 1,314 1,410 1,949 2,102 88 99 17 56,9% 11,539 9,464 1,314 1,410 1,949 2,102 88 99 17 59,2% 11,732 1,741 1,949 12,786 12,786 12,786 12,786 12,786 12,786 12,8% 12,8	Shode Island	21,919	2 244	95.6	9 504	9 800			00.7%	56.5%
20,547 1,314 1,410 1,949 2,102 86 99 11 56.7% 20,547 1,314 1,410 1,949 2,102 86 99 11 56.7% 111539 9,464 9,893 14,786 15,710 126 99 11 56.7% 444,742 6,424,851 788,586 844,741 1,203 2,530 1,245 81 81 84 81 81 84 68.8% 145,879 2,504 3,710 3,784 81 81 88 7 6.5% 144,589 14,197 15,594 1,321,41 50 140 154 140	South Carolina	80.636	10 300	10.470	46 870	0,000		0	70.1%	63.7%
11539 9,464 9,883 14,788 15,710 126 139 11 598 54,64 9,883 14,788 15,710 126 139 11 598 54,64 9,883 14,788 15,710 126 126 126 126 126 12,88 12,185 12,185 12,185 12,185 12,185 12,185 12,885 12,185 12,185 12,895 12,895 12,895 12,895 12,895 12,895 12,895 12,895 12,895 12,895 12,895 12,895 12,895 14,748 18,395 14,197 18,596 17,241 20,352 166 123 17 17,985 14,588 14,197 18,596 1,415 16,504 1,415 16,504 1,415	South Dakota	20.547	4 244	1.440	4 040	2,400			20.0%	35,6%
444.228 60,405 69,569 107,840 125,765 210 132 65,4% 72,525 12,185 12,289 19,641 20,044 242 254 12 68,9% 72,525 12,185 12,289 19,641 20,044 242 254 12 68,9% 147,732 1,741 1,903 2,500 13,89 15 15 68,9% 147,748 2,904 3,710 3,784 81 77 64,9% 143,489 14,187 13,589 17,241 20,352 106 128 68,9% 143,489 14,197 15,504 3,710 3,784 81 77 64,9% 144,568 2,504 3,710 3,784 81 72 22 81,6% 144,568 2,424,851 788,58 844,741 1,22,3,17 1,414,3,57 187 19 63,6% 14,44,748 2,344 1,127,317 1,414,3,57 187 19 63,6%	ennessee	111 530	0.464	2000	44 700	201.02			59.2%	54.7%
72,525 12,199 19,541 20,044 242 254 13 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 54 8% 56 8% 54 8% 54 8% 56 8% 54 8% 54 8% 56 8% 54 8% 54 8% 56 8% 54 8% 54 8% 54 8% 56 8% 54 8% 54 8% 56 8% 54 8% 56	exas	484 228	60.405	80.680	407.540	405 705		0	60.4%	65.0%
14,568	Itah	75 656	40 405	40 000	107,040	120,780		33	54.8%	51.0%
14,879 1,741 1,590 4,741 1,590 1,741 1,590 1,741 1,590 1,741 1,590 1,741 1,7	Vermoort	47.740	4 7 7 4 4	4 0003	18,04	20,044			69.0%	66.1%
152.93	Virginia	440 070	40000	200	2,000	2,509		2	68.9%	69.3%
41,748 2,376 2,564 3,710 3,784 81 88 7 63,0% 14,368 14,197 15,504 21,697 23,729 140 154 14 63,0% 14,568 14,197 15,504 21,697 23,729 140 154 14 63,0% 14,568 17,82 820,880 1,242,324 1,380,146 176 197 19 63,6% 1ERRICAN 5,424,851 788,588 84,741 1,272,317 1,414,357 187 187 187 183,60%	Mashinaton	152 011	44 407	000'10	51,275	00,144		82	62.7%	61.2%
143.496 14.349 2.304 2.470 2.474 81 88 7 54.3% 14.568 14.568 14.0 154 14 54.5% 14.568 14.0 156 14.0 156 14.0 156 14.0 156 156% 5.424.851 768.586 844.74 1.272.317 1.414.337 8.8 8.8 8.8 8.8 8.8 8.8 8.8 8.8 8.8 8.	Mest Virginia	44 748	949 0	20,038	0.040	20,332		17	87.7%	64.7%
14,558 528 738 768 1,111 50 104 172 22 61,6% 61,6% 172 22 61,6% 61,6% 172 20,664 22,861 29,963 34,241 6,424,851 788,588 844,741 1,272,317 1,414,387 6,424,851 788,588 844,741 1,272,317 1,414,387	Misconsin	143.499	14 197	16 604	21 807	28 730			54.3%	52.1%
6,424,851 788,586 844,741 1,272,347 1,414,397 5,428 1,414,397 1,41	Momina	14 559	508	250	300	4 4 4 4 4		4	68.8%	66.2%
6,424,851 747,922 820,890 1,242,324 1,380,146 178 197 19 63,6% 20,664 23,861 29,993 34,241 7,849,87 788,588 844,741 1,272,317 1,414,387 83,88		000'11	070	000	001	1,111	20	22	61.6%	65.2%
6,424,851 788,588 844,741 1,272,317 1,414,387 83,000	TOTAL (U.S.)	6,424,851	747,922	820,880	1,242,324	1,380,146		61	63.6%	61.3%
6,424,851 768,588 644,741 1,272,317 1,414,337	NON U.S./U.S. IERRICAN		20,664	23,861	29,993	34,241			75.0%	75.4%
00.00	3RAND TOTAL	6,424,851	768,586	844,741	1,272,317	1,414,337			63.00	61 696