

Illinois Community College Board
Fiscal Year 2004

Accountability *And* Productivity

In The Community College System
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TABLE OF CONTENTS

	<u>Page</u>
Introduction	1
Analyses of the Results of Fiscal Year 2004 College Program Review	
Academic Program Review	1
Adult Education and Family Literacy, English as a Second Language, and Developmental Education Program Review	7
Career and Technical Education Program Review	9
Summaries of the Career and Technical Education Program Reviews	
General Business	11
Accounting Technology	11
Banking and Financial Services	12
Investments and Securities	13
Quality Control Technology	14
Mechanical Engineering Technology	15
Computer-Aided Design Technology	15
Surveying Technology	16
Medical Laboratory Technology	17
Optical Assisting	17
Ophthalmic Medical Technology	18
Interior Design	18
Library Assisting	20
Plumbing	21
HVACR Technology	22
Architectural Drafting	23
Electrical/Electronics Drafting	24
Mechanical Drafting	25
Graphic and Printing Technology	26
Mechanical Typesetting	26
Lithography and Platemaking	27
Desktop Publishing	27
Machining Technology / Machine Shop Assistant	28
Patternmaking	29

TABLE OF CONTENTS
(Continued)

	<u>Page</u>
Sheet Metal Technology	30
Tool and Die Making Technology	30
Welding Technology	31
Numerical Control Technology	32
Graphic Design and Visual Communications	33
Graphic Design, Commercial Art and Illustration	34
Photography	35
Summary of Analyses of Career and Technical Education Program Reviews and Recommendations	35
Summary and Conclusions	36
Appendix A - Community College Program Review Summary Tables	
Table A-1: List of Programs Reviewed by Community Colleges During FY 2004	40
Table A-2: Summary of FY 2004 Reviews of Occupational Programs by College	42
Table A-3: Occupational Programs Eliminated through Program Review in FY 2004	44

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**ACCOUNTABILITY AND PRODUCTIVITY
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Introduction

Analyses of the Results of Fiscal Year 2004 College Program Reviews

In 1983, the Illinois Community College System began a broad-based accountability initiative through regular review of instructional, administrative and support services programs. Today the process continues to be a major accountability effort proven to be flexible enough to address the constantly changing policy issues and priorities of the various community college districts. To ensure that programs continue to meet the needs of both students and employers, colleges conduct a review of programs once every five years. The review is based on three criteria: program need, program cost, and program quality.

This report summarizes the results of academic, career and technical education, adult education, and developmental education programs that were reviewed during Fiscal Year 2004. Summaries include both program strengths and the common challenges colleges face in keeping instruction relevant while maintaining cost-efficiency. Specific quality improvements at the local level are also highlighted. During Fiscal Year 2004, community colleges reviewed **170 academic, 732 career and technical education, and 50 adult and developmental education programs**. **A table illustrating this information by college can be found in Appendix Table 1.**

Academic Program Review

Community colleges review academic programs at least once every five years and each college determines when such reviews occur. **This year 170 academic programs were reviewed and all were recommended for continuation with minor improvements.** Every reporting year, an array of innovative program improvements are described. In fiscal year 2004 reports, certain topics could be found throughout the reviews of various disciplines. These include expanding methods of assessment and continuing to use the results to improve instruction, applying technology to improve teaching and learning, adding ethics courses across the curriculum, and the use of portfolios to showcase student learning.

Program Need. In general, the need for academic coursework is apparent, as it provides the foundation for all degrees, whether occupational or transfer. General education courses develop a breadth of knowledge essential to a greater understanding of the world in which we live—its presence in the universe, its peoples, its environment, and its complexities. Headcount enrollment, credit hours generated and retention data are typical methods of validating program need.

Program Cost. Community college program review reports provide evidence that costs are generally in line with state averages. Variations arise when numerous faculty are adjunct or long-tenured, when costly expenditures such as major technological upgrades occur at one time, and with particularly high or low enrollment numbers.

Program Quality in Communications: Twenty colleges elected to review the disciplines of English and Speech Communication. Courses in English composition and speech are the cornerstone of college curricula. A student who experiences difficulty in these courses is likely to be at a great disadvantage in other general education courses.

With student success in mind, **Parkland College** plans to implement a pre-college level speech course to better prepare at-risk students for more rigorous speech courses. The goal will be to improve students' retention, satisfaction, and exit skills. Assessment techniques to identify students who would benefit from the course are in the developmental stage. **Wilbur Wright College's** speech department recently set a prerequisite of English 101 eligibility so the students are better prepared. Student outcomes correlate with the College's cross curricular general education objectives and standard norms set forth by the National Communication Association. Criteria are reevaluated each semester and delineated in the learning objectives, proficiency exams and an oral exit exam. Workshops are provided to hone students' skills.

Lake Land College uses an online pilot course, ENG 100, Information Literacy, in conjunction with its speech courses to guide students through the research process. The course provides methods that will help students overcome weaknesses in searching, recording and citing evidence. **Parkland College** plans to offer in fall 2004, "jumpstart" Eng 101 classes. These four-credit hour classes offer additional support to students who scored low on the ENG 101 placement test. This initiative is funded by a Title III grant.

PowerPoint, a software program that integrates computer-based techniques in presentations has been fully implemented in the **Parkland College's** speech curriculum. The college expects that all students enrolled in beginning college level speech courses will develop the knowledge and skills to use digital presentation technology.

At **Prairie State College**, an introductory speech course (COMM 101) has been made a general education requirement for every credit program at the college—not just for transfer programs. Students in this course work with staff in the Career Counseling Center and the Library to explore careers that match their interests and abilities. The "Career Research and Presentation Project" culminates in a speech presentation about students' career choice.

Prairie State College's forensic team has achieved state (silver level) and national (bronze level) recognition for excellence of performance. In cooperation with a local high school teacher, the faculty began a Summer Speech Camp for high school students to refine their speaking skills and prepare for competition in the coming academic year.

At **Illinois Valley Community College**, all full-time and part-time communications faculty participated in a course competency revision process for freshmen level composition courses. Faculty reviewed and rewrote course competencies and instituted objective department exams based

upon these. **McHenry County College** reports that 82 percent of the students who successfully completed a remedial English course with a grade of C or above were successful in completing a college level English course in their first attempt. Of the students who enrolled directly in the college course without first completing the remedial course, only 62 percent of the students successfully completed the course. **John A. Logan College** is tracking three cohort groups in English 101 and 102 to determine areas for improvement in the developmental English courses.

Program Quality in Social and Behavioral Science: Students of the social sciences analyze social, political, cultural, historical, and economic institutions and relationships that both link and separate societies throughout the world. They study behavior, both individually and among groups and develop a sense of global responsibility for humans and the environment. Twenty colleges reported reviewing social science disciplines including sociology, psychology, human geography, economics, political science, history, and anthropology. **Shawnee Community College** reports partnering with SIU-Carbondale on the development of the Southern Illinois History and Culture Center website, a multi-diverse history/social science website. The College is now the physical host and its Instructional Technology department provides the technical support for the project.

Numerous colleges including **Lincoln Land Community College** administer identical pre and post-tests to students to determine their level of learning throughout the semester. Lincoln Land faculty randomly selected one section of Introduction to Psychology during the fall 2003 semester. Nine multiple-choice questions were used to assess one program/student learning outcome. The nine test questions, given the first day of class and also embedded in the final exam correlated with one of the critical learning objectives identified by the American Psychology Association. As a result of the assessment, changes in instruction will include active learning exercises directly involving students in further thinking about the scientific method.

Advances in technology frequently mean substantial costs to colleges. However, technology is enabling **CCC-Harold Washington College** to lower costs through the use of *Blackboard on Campus (BBOC)*. Handouts such as syllabi, course outlines, and class materials are posted online, and e-mail is used to communicate with students outside the classroom. As a result, copying expenses are no longer the department's largest budget expense. A conservative estimate of savings is approximately \$1400 per semester.

Program Quality in Physical and Life Science: Courses in this area fall into the categories of biology, botany, geology, chemistry, physics, earth science, astronomy, physical geography, and zoology. Study in these areas provides an understanding of the scientific principles in physical and life sciences, the methods of scientific inquiry, the formulation and testing of hypotheses and the ability to draw conclusions. Ten colleges reviewed the sciences during fiscal year 2004.

Dramatic enrollment increases were reported by several colleges. **College of DuPage's** enrollment figures increased 64.68 percent in the past five years in Anatomy and Physiology—courses which are critical to students pursuing health care occupations and reflect labor market demands. **Illinois Central College** reports an increase of 47 percent in credits generated in biology over the past four years, and similarly, **Morton College** reports an increase of 75 percent in credit hours generated in the past five years. **Oakton Community College** reports a 53 percent increase in biological and physical science course enrollments.

Lake Land College plans to secure National Science Foundation (NSF) funding through the Advanced Technology Education Program for a national or regional GIS Center and develop a national training program for large federal state and regional government organizations for GIS technology integration. The program would involve developing a regional cluster of GIS expertise within the Lake Land College district. In addition, **Oakton Community College's** Biological and Physical Science departments have been awarded a number of recent grants: The University of Illinois at Chicago and Community College Consortium for Excellence in Teacher Preparation grant, the Community College Consortium for Teaching with Chemistry Modules grant, and the Institution Reform Program grant to provide more flexibility in the allocation of resources.

Lake Land College's review of Earth Science includes formulating a fundamental understanding of ethical dilemmas in current environmental issues.

Richland Community College has a student club in the sciences whose members judge science fairs from some of the district's grade schools. At **Oakton Community College**, a Student Academic Assessment Team (SAAT) reviews each department's assessment findings and makes recommendations for future assessments. This process begins with science faculty examining data related to course success rates, prerequisite effectiveness and successful transition to the next level course in a sequence. In a survey conducted in the summer of 2003 of students that had exited Oakton for one year or five years, over 80 percent of respondents reported adequate preparation in their science courses.

Program Quality in Humanities and Fine Arts: Study in the humanities and fine arts focuses on intellectual and cultural expression approached through historical, hermeneutic, cultural, and aesthetic investigations. Students develop a sense of what it means to be human in relation to the natural world, to others, and to reflect on ideas and confront presuppositions from one's own and other cultures. Included in this broad discipline area are foreign language, literature, religious studies, philosophy, history, music and art. Thirty-eight colleges reported on these various disciplines.

William Rainey Harper College reports that enrollment growth is at 72 percent in the broad area of Humanities. **Heartland Community College** reports that every course in music, except for Introduction to Opera, has seen a steady increase in enrollment. **Rend Lake College** reported that enrollment in the music courses has increased by 39 percent over the past five years. Likewise, Music enrollment increased 30.3 percent from fiscal year 1999 to fiscal year 2003 at **Southwestern Illinois College**.

Harry S Truman College, Malcolm X College, and Harold Washington College are in various stages of implementing portfolio assessment for students. The portfolios include sample assignments, grading rubric, course objectives and their alignment to the General Education or Occupational standards, and samples of graded student work. The processes allow for better planning and allocation of college resources, ultimately leading to improved learning.

At **Harold Washington College** a new music technology certificate program is being offered for fall 2004. A new Associate in Fine Arts (AFA) degree in music education and performance is planned. The piano laboratory will have additional stations and computers in the fall of 2004 to

allow more students to practice and rehearse without rushing to allow other students to practice. A new music club was created for students to showcase their talents through performances. A multi-cultural ensemble and a choral class are recent additions to the music program

Highland Community College reports significant enrollment increases in World Religions, Introduction to Philosophy, and Ethics. As a result of its program review, faculty will explore the viability of several recommendations including enhancement of writing across the curriculum throughout the humanities and development of interdisciplinary courses for the community.

One aspect of the teaching and learning effort is the recognition that not all students learn alike. At **William Rainey Harper College**, several humanities instructors offer students the option of producing a multimedia midterm or final project. Student have responded with enthusiasm. Those who are uncomfortable with multimedia can choose more traditional project options.

Traditional music and art programs are sharing the stage with programs that resemble those in career and technical education. For example, **Prairie State College** has proposed a new program in digital music composition. It is a unique program in the Chicago region that is expected to attract music students with goals of becoming employed in the rapidly changing music recording industry. Furthermore, it is likely to appeal to students who do not intend to major in music, but are interested in careers in web design and other multimedia communications fields. The college reports the number of fine arts majors tends to be low because many students elect to major in Graphic Communication due to a greater certainty of labor market demand.

Prairie State College's interdisciplinary capstone Portfolio Seminar requires art majors to develop work for a graduate exhibition, an artistic statement of purpose, and a curriculum vitae. Students visit and review external exhibitions, develop skills in art reproduction and portfolio presentation, and attend lectures/workshops by visiting artists. The full-time faculty review the evaluations of graduates, assess their areas of strength and weakness, and meet to discuss curricular and extracurricular strategies to remedy any deficiencies. Last year's process revealed weaknesses in students' presentation skills. In response, instructors will dedicate a portion of two classes to instruction of matting artwork and presentation issues and will require more frequent oral presentations.

Malcolm X College states that quality of instruction has influenced enrollment increases. The professional experiences of both full-time and part-time instructors include continuously pursuing and exploring knowledge in the field; hosting solo or group exhibitions, publishing papers, and participating in art professional organization activities. All these have contributed positively to the teaching and learning process.

Wilbur Wright College reports student enrollment in literature has increased by roughly 40 percent. Goals include continuing to build cross curricular and extra curricular components such as bringing in important scholars for symposia; organizing field trips to plays, lectures related to required readings; and promoting students' scholarly publications.

Southeastern Illinois College reports that traditional methods of assessing student learning in philosophy have been replaced by longer argumentation assignments that require the students to

exercise critical thinking skills and rhetorical skills. The change requires the students to engage in philosophical thought and form philosophical arguments. It provides them with the opportunity to integrate their subjective thoughts with course materials—that is, join the academic conversation in this discipline.

Illinois Central College has several courses that are designed to promote ethics in particular professions. Included are Business Ethics, Medical Ethics, and a new course, Contemporary Ethical Issues in Agriculture. A member of the philosophy faculty and a member of the agriculture faculty collaborated to develop this course with the support of a USDA grant. This course will be a team taught course, initially by the individuals who developed it, and designed primarily to serve agricultural students. However this course should also be attractive to students with an interest in several areas including animal rights, genetically modified organisms and world hunger. The application of ethical theory to specific areas of endeavors and for areas that are of global importance make for unique opportunities for students to acquire critical thinking skills and a appreciation of very complex issues.

McHenry County College's philosophy department participates in extra-curricular activities for students and faculty, such as annual Ethics Bowl competition, weekly philosophy club, education forums both external(e.g.National Issues Forums) and internal (e.g.forums on terrorism, campus dialogue on race), offers programs to enhance instruction in other departments, including annual Ethics Across the Curriculum workshops, and is involved in community education programs such as providing Ethics Across the Curriculum workshops at area colleges. The department is active in developing innovative curricula such as the popular Heroes and Villains learning community course that integrates Composition II and Ethics. The Philosophy and Biology departments co-teach a new course in Heredity and Ethics, with a special topics course in Religion and Violence added in fall 2004.

William Rainey Harper College reports that through its innovative Socrates Café program, students are exposed to a variety of philosophic schools. Here, there are semi-informal discussions of philosophically relevant topics that take place three or four times per year and are open to the campus community at large as well as the community. They are usually hosted by a particular class and its teacher on a topic of that class's selection.

Program Quality in Mathematics: Eight colleges reported on mathematics programs. **Lewis & Clark Community College** reports "Mathematics courses are a part of the core instruction services at the college. Every degree program and many certificate programs require mathematics courses." The College boasts a new state-of-the art Mathematics Building in which every classroom is technology equipped. One classroom in particular is available on a reserve basis. It contains 24 laptop computers, a laser printer, Calculator-Based Laboratories (CBL), Calculator-Based Ranger (CBR) and various probes for data collection. Two new full-time faculty positions were added as a step toward satisfying recommendations of the American Mathematical Association of Two-Year College (AMATYC) that 70 percent of course sections should be taught by FT faculty.

Lewis & Clark's math department contributions include creating an Elementary Mathematical Modeling course, which was accepted by the IAI General Education Math Panel and added to the

list of courses in the panel's recommendation that could be used to satisfy general education requirements statewide.

At **Kishwaukee College**, the mathematics department began offering beginning algebra (MAT 096) and Intermediate Algebra (MAT 098) in eight week formats. This was designed to help qualified students complete their developmental math requirements in a quicker time frame. Since 1999, Kishwaukee College math faculty have offered a growing number of developmental courses in a collaborative project with NIU to remediate students on the university's campus. With an eye to student needs, the college also offers classes at 7:00 a.m. to attract people who worked the night shift or who want to take a math class before going to work.

Rock Valley College states that its Mathematics Department has experienced a 31.8percent growth in total credit hour enrollment from fiscal year 2001 to fiscal year 2004. Similar growth was noted in **Spoon River College's** program review report. At **Illinois Valley Community College**, college level enrollment in mathematics has decreased nearly 5 percent while developmental math enrollment has increased 17 percent .

Adult Education and Family Literacy, English as a Second Language, and Developmental Education Program Review

Colleges are required to review their Adult Education and Family Literacy, English as a Second Language (ESL) and Developmental Education programs at least once every five years, according to a schedule developed by each college. **This year 50 related programs were examined and all were recommended for continuation with minor improvements.**

Adult Education and Family Literacy and English as a Second Language Programs

Adult Education and Family Literacy programs serve students 16 years of age and older who have less than a high school education and are no longer enrolled, or have never been enrolled, in school. The programs provide education and support services for students wishing to improve their basic skills or to acquire a high school diploma or its equivalent - General Education Development (GED). These programs may also serve students who are determined to, through a skills assessment, lack the basic skills necessary to succeed in employment or further education and training. ESL programs serve non-native English speaking students by providing reading, writing and math instruction for gaining or improving English language skills. Students may take related instruction through programs offered by community colleges, community-based organizations, or other educational agencies. Sixteen colleges reported on programs in these categories.

Program Need: All colleges reporting indicated a need for Adult Education and Family Literacy programs. While enrollments fluctuated somewhat among the levels of Adult Basic Education (ABE) and Adult Secondary Education (ASE), overall enrollments remained stable or increased at all of the colleges. The college reports also confirmed a growing need for ESL programs. Colleges with the largest ESL programs reported stable enrollments, and pointed out that issues of capacity

prevent them from serving more students, as the need for ESL is growing. **According to the 2004 Data and Characteristics of the Illinois Community Colleges System, 54,460 students were enrolled statewide in ABE/ASE programs at community colleges during fiscal year 2003, and 77,369 students were enrolled in ESL programs at community colleges during the same period.**

Program Cost: All of the colleges reporting indicated their ABE/ASE and ESL programs were cost-effective, primarily due to the use of part-time instructors and staff and large enrollments. One college indicated that partnerships with local business and agencies also helped reduce program costs. The majority of the colleges reported program costs that compared favorably with the statewide or peer group average costs. Colleges with program costs that exceeded those averages still considered the programs to be cost-effective in relation to the needs of the populations served.

Program Quality: Colleges identified common program strengths as experienced and dedicated faculty and staff, flexible class schedules and formats, multiple instructional sites, access to student support services, and the availability of the GED on-line. Common program weaknesses include the need for additional instructors and staff to serve additional students and provide more intensive follow-up services, the need for more full-time staff, decreased or uncertain funding, and inadequate facilities, transportation and child care issues and the need for updated instructional materials.

Specific quality improvements in ABE/ASE and ESL programs include **Sauk Valley Community College** partnering with the Illinois Department of Human Services, the local Illinois Employment and Training Center, and the Tri-County Opportunities Council to offer a Job Skills class for local clientele at no cost. **John Wood Community College** plans to develop and implement a portfolio assessment system for its adult education and ESL students. **College of DuPage** has implemented intensive Quick-Start ESL and GED classes for their district. And, **Highland Community College** sent several adult education administrators to a The Center in Des Plaines for Best Practices training workshop. HCC staff plan to implement a Best Practices program for their adult education curricula which will include phonics, fluency, and comprehension.

Developmental Education Programs

Community college developmental education programs are essential to serve students whose skills in English, mathematics or reading are below college level in order to provide them with the opportunity to be successful in college. Community colleges provide the vast majority of the state's developmental education courses. **During fiscal year 2004, 23 colleges reviewed their developmental education programs.**

Program Need: All colleges reporting indicated stable or increasing enrollments in developmental education courses, with math being the area of greatest need. Several colleges reported that a substantial portion of all enrollments in math occur in developmental courses. Retention rates were generally lower for developmental courses than for college-level courses, however, a few college reports documented improvement in the rate at which students successfully completed developmental coursework. Colleges have also focused attention on student outcomes in subsequent college-level courses to inform efforts to improve programs and policies.

Program Cost: All colleges reporting indicated that developmental education programs are cost-effective. Colleges attributed lower-than-average program costs to large enrollment and heavy

reliance on adjunct faculty. Conversely, colleges attributed higher-than-average program costs to the use of full-time faculty and/or small class sizes, which they felt contributed to the quality and effectiveness of the programs. The colleges still considered these programs to be cost-effective in relation to the size and needs of the population served.

Program Quality: Colleges identified common program strengths as highly qualified and dedicated faculty and staff, flexible scheduling at multiple locations, the availability of student services, and the use of technology to provide access and supplemental self-paced tutorials. Weaknesses most commonly identified include lack of full-time faculty and the need for greater collaboration between part-time and full-time faculty to support transition of students to college-level courses.

Specific quality improvements cited by the colleges include **Southwestern Illinois College's** plans to expand access to the Internet for its developmental reading classrooms. **Lincoln Land Community College** is exploring implementation of the Learning Communities concept geared specifically towards developmental students. And, **Lewis & Clark Community College** now houses its math department in a brand new, state-of-the-art facility that is available to all math instructors/classes including developmental math. In addition, they have created new faculty positions based on guidelines established by the American Mathematical Association of Two-Year Colleges (AMATYC). **Triton College** has identified an increased need for bi-lingual Spanish and Polish instructors for developmental studies.

Career and Technical Education Program Review

All career and technical education programs are reviewed within a five-year period. Each year, community colleges review specific career and technical education programs and submit their findings to the Illinois Community College Board. **This year 732 career and technical education programs were reviewed at the colleges.**

Based on the analysis of their program review outcomes, colleges can elect to (1) continue programs with minor improvements, (2) continue programs with significant modifications, (3) discontinue or eliminate programs, or (4) schedule programs for further review. Reasons for modifying programs might include updating a curriculum to better suit the needs of local business, while elimination of programs might be based on low enrollments and high costs. Many colleges choose to address these concerns through further review of their programs. **According to the program review summaries provided by each college, 518 career and technical education programs were continued with minor improvements, 46 programs were significantly modified, 104 programs were identified for elimination, and 65 programs were scheduled for further review during the coming year. A table illustrating this information can be found in Appendix Table 2, and a list of curricula identified for elimination can be found in Appendix Table 3.**

Summaries of the Career and Technical Education Program Reviews conducted during Fiscal Year 2004

Please note: For all of the following career and technical education program summaries, the number of colleges offering training may not match the number of colleges that reported on the program status chart. This is because some programs are currently inactive, are too new to conduct

a meaningful review, colleges reported in the summary may offer more than one program in that specific program area, or colleges may have notified ICCB of circumstances that warrant postponing the review.

In program summaries where information from the Follow-Up Study of Career and Technical Education Program Graduates is “N/A” (Not Available), there were either too few respondents to the Follow-Up Survey for inclusion in the report or the specific program category is an Illinois-specific classification. This means that Follow-Up Survey data is not broken down by specific program category, but has been combined with its related national program category for which data is available.

Furthermore, for program areas where college reports were not submitted or information was insufficient, no statewide summary for that program areas has been provided.

General Business (CIP 52.0101)

Programs that prepare individuals for applying general business principles and techniques of buying, selling or producing in a broad spectrum of industry environments. Instruction includes general business organization, profit and not-for-profit business.

Number of Colleges Offering Training	6
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of this Year's Program Review: Two colleges reported plans to continue their programs in General Business with minor improvements.

Program Need: According to the Illinois Department of Employment Security (IDES), employment in "management and related occupations" is expected to grow at a rate of 11.96 percent between 2000 and 2010. The two colleges noted that the degree plan for this program is developed by the student and enables the college to tailor a curriculum to meet an individual's needs. However, both programs are new and therefore are not yet able to assess the district's demand for graduates.

Program Cost: These programs are very cost effective because they rely mainly on courses that exist for other programs and have very little additional direct costs.

Program Quality: The colleges reported that the greatest strength of these programs is the flexibility it provides students with a variety of interests. **Southeastern Illinois College** provides its students with the opportunity to earn college credit based on learning gained through years of work experience. **Parkland College** incorporates a portfolio stage that requires students to clarify their career goals.

The colleges noted the concern that there may be some confusion between this degree and the Associate in General Studies (A.G.S.) degree program.

Accounting Technology (CIP 52.0301 / 52.0302)

Programs that prepare individuals for providing technical administrative support in professional accounting environments. Instruction includes general accounting principles, record-keeping systems and accounting software operation.

Number of Colleges Offering Training	45
2003 Follow-up respondents employed or continuing education	84.8%
2003 Follow-up respondents working full-time	85.8%
2003 Follow-up respondents working in related jobs	73.5%

Results of this Year's Program Review: Thirty-four colleges reported plans to continue their programs in Accounting Technology with minor improvements, two colleges will significantly modify their programs, two colleges plan on discontinuing their programs, and one college has scheduled its accounting technology program for further review in the coming year.

Program Need: According to the Illinois Department of Employment Security (IDES), employment of “accountants and auditors” is expected to grow at a rate of 12.94 percent between 2000 and 2010. Many colleges report that due to the large number of stable jobs available to completers, these programs continue to be needed. Many students are placed in employment prior to graduation, highlighting the need for trained employees. However, across the state geography is beginning to affect program need. As banks and other financial institutions merge and consolidate resources, more and more accounting positions are being moved to the urban centers that house their corporate headquarters. This could help explain why several colleges are reporting double digit increases in enrollment over the past five years, while others are reporting double digit enrollment decreases.

Program Cost: The vast majority of colleges reported that their programs in accounting technology operated cost effectively. Reasons include the lack of expensive laboratory equipment required to administer these programs, and the ability to utilize existing computers. Those few colleges that did report higher unit costs cited that their enrollments were decreasing, but courses were still being offered by full-time tenured faculty members, which raised costs.

Program Quality: A strong core of well-qualified, experienced faculty members was cited by most colleges as a strength of these programs. Additionally, the high demand for program graduates and articulation with secondary schools also contributed to the overall feeling that these programs are successful. **Highland Community College** students are given the flexibility to enroll in short-term programs that quickly increase their skills, but can also dovetail into the A.A.S. plan. **Harper College** noted that its program is accredited by the Association of Collegiate Business Schools.

Cited often as a weakness of these programs was the fact that many students lacked adequate preparedness in terms of their math and reading skills. Several colleges also noted the need to infuse the use of computer applications into their accounting technology programs and offer courses in a computer lab to better address these content areas.

Banking and Financial Services (CIP 52.0803)

Programs that prepare individuals for providing a variety of customer services in banks, savings institutions, insurance companies and related financial businesses. Instruction includes communications and public relations skills, software applications, and marketing services.

Number of Colleges Offering Training	18
2003 Follow-up respondents employed or continuing education	90.9%
2003 Follow-up respondents working full-time	90.9%
2003 Follow-up respondents working in related jobs	81.8%

Results of this Year’s Program Review: Five colleges reported plans to continue their programs in Banking & Financial Support Services with minor improvements, while four colleges plan to discontinue their programs.

Program Need: According to the Illinois Department of Employment Security (IDES), employment projections for positions as “financial managers” are expected to grow at a rate of 16.01 percent between 2000 and 2010. Furthermore, the Illinois Job Outlook in Brief listed this as a “Best

Bet” occupation. Enrollments in several college programs are increasing thanks to references from local banks and credit unions, and a strong need for Real Estate courses. **Waubensee Community College** reported that 100 percent of its program completers who responded the Occupational Follow-Up Study were employed. The four colleges that are planning to discontinue their programs cited low enrollments and automation within the banking industry as the prime factors for their decisions.

Program Cost: The colleges seeking to continue these programs reported cost-effectiveness. This is due mainly to the fact that these programs incorporate specific courses that are shared with other programs in the Management spectrum.

Program Quality: A strong core of full-time and adjunct faculty members was cited numerous times as a strength of these programs. Additionally, many local banks and credit unions require entry-level employees to take introductory program courses. However, this is also a concern, as many colleges find it difficult to enroll students in follow-up courses. Colleges seeking to discontinue their programs reported that these programs no longer fill a local workforce need.

Investments and Securities (CIP 52.0807)

Programs that prepare individuals for managing international financial operations and related financial business. Instruction includes international banking, international monetary and fiscal policy, money and capital markets, foreign exchange, risk analysis and international cash flow.

Number of Colleges Offering Training	1
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of this Year’s Program Review: The college plans to continue its program in Investment and Securities with minor improvements.

Program Need: Although enrollments in this program have decreased in recent semesters, the college reports that this was due to the sluggish economy and they expect a rebound in the near future. The program’s projected graduation rates will fill approximately 10 percent of the industry demand, according to IDES projections.

Program Cost: The college considers this program cost-effective.

Program Quality: **Oakton Community College** notes that it’s former students are satisfied with the program courses, their class experiences, and their occupational preparation. Also cited as a program strength was their use of a highly qualified program advisory committee drawn from the Financial Services field. It was noted that the college could improve the marketing of the program to potential students.

Quality Control Technology (CIP 15.0702)

Programs that prepare individuals for developing and maintaining safe and consistent manufacturing, construction and related industrial standards. Includes instruction in quality control systems and management, technical standards, testing, inspection, instrumentation and reporting.

Number of Colleges offering training	15
2003 Follow-up respondents employed or continuing education	94.1%
2003 Follow-up respondents working full-time	93.8%
2003 Follow-up respondents working in related jobs	87.5%

Results of This Year's Program Review: Seven colleges reported plans to continue their programs in quality control with minor improvements, four colleges planned to discontinue their programs and three colleges have scheduled their programs for further review.

Program Need: About half of the colleges reporting indicated a continued need for their program(s) in quality control technology. These colleges were generally within districts containing a significant number of manufacturing employers. These colleges also indicated steady enrollments partially due to the strong relationship between the college and the local manufacturing company. The other half of the colleges reporting indicated that the need for their program(s) in quality control technology no longer existed. These colleges planned to either discontinue their programs or had scheduled them for further review. Several of these colleges indicated the declining economy had resulted in layoffs in manufacturing, which had increased community interest in postsecondary job training and educational programs in general, but had stifled interest in manufacturing related quality assurance programs.

Program Cost: The majority of colleges reported their programs in quality control technology as being cost-effective. These colleges indicated that their programs operated at below the statewide average unit cost for this program area. In contrast, colleges (including those who planned to continue and discontinue their programs) reported that these programs were not cost-effective due to low or no enrollments and higher materials costs.

Program Quality: Common program strengths reported by the colleges included updated curriculum, knowledgeable faculty, strong relationships with local manufacturing employers, good relationship with manufacturing technology programs offered by the college, and strong community support for professional development offerings. The most common weakness cited by colleges was the lack of student interest/low or no enrollments. This has been attributed partially to the declining economy which has resulted in layoffs throughout the community. Because of this several colleges mentioned discontinuing their credit programs, but instead offering them as non-credit training through their Workforce Development or Business and Industry Centers.

Quality improvements planned by the colleges included **Rock Valley College's** increased marketing of new transfer options for their quality control technology programs into the Bachelor of Science in Industrial Technology program at several state universities. RVC also plans to increase scholarship opportunities through the National Conference of Standards Laboratories International (NCSLI).

Mechanical Engineering Technology (CIP 15.0805)

Programs that prepare individuals for assisting in the design, development and construction of mechanical systems. Includes instruction in basic mechanics, mechanical design, prototype development, operational testing, instrumentation and reporting.

Number of Colleges offering training	16
2003 Follow-up respondents employed or continuing education	90.5%
2003 Follow-up respondents working full-time	77.8%
2003 Follow-up respondents working in related jobs	72.2%

Result's of This Year's Program Review: Seven colleges reported plans to continue their programs in mechanical engineering technology with minor improvements, one college planned to discontinue its program and two colleges have scheduled their programs for further review.

Program Need: According to the Illinois Department of Employment Security, employment of "mechanical engineering technicians" is expected to grow by 3.75 percent . While this is lower than the statewide average for all occupations, it is positive growth in employment. The majority of colleges reporting indicated a continued need for their programs in mechanical engineering technology. These colleges also reported steady enrollments and completions, as well as good placement rates for their graduates.

Program Cost: The majority of colleges reporting indicated their programs were cost-effective. While unit costs may be on par or slightly higher than the statewide average in this program area, these colleges reported that steady enrollments have kept the program fiscally stable. Both groups of colleges (those planning to continue and discontinue programs) indicated mechanical engineering technology programs are costly to maintain. They require expensive equipment, software and materials which do have an affect on the overall cost-effectiveness.

Program Quality: Common program strengths reported by the colleges included updated curriculum, knowledgeable and experienced faculty, flexibility of scheduling, and a strong relationship with local employers. Weaknesses reported by the colleges included the need for additional laboratory space, high maintenance costs associated with computers and software upgrades, and the decreased employment opportunities available in certain pockets of the state.

Oakton Community College reported on the progress of its new Art, Science and Technology Pavilion, located on the Skokie campus, which will increase the program's available lab space and allow for numerous technological updates. **Illinois Central College** faculty will be participating in the Project Lead the Way initiative, an engineering and technology curriculum for high school juniors and seniors, and **Triton College** is experimenting with transitioning ESL students into their certificate programs.

Computer-Aided Design Technology (CIP 15.0810)

Programs that prepare individuals for designing systems and structures using computer-aided design (CAD) software and related applications.

Number of Colleges offering training	36
2003 Follow-up respondents employed or continuing education	92.6%
2003 Follow-up respondents working full-time	83.3%
2003 Follow-up respondents working in related jobs	70.1%

Results of This Year's Program Review: Twenty-five colleges plan to continue their programs with minor improvements, one college plans to significantly modify its program, two colleges plan to discontinue their programs, and two colleges have scheduled their programs for further review.

Program Need: According to the Illinois Department of Employment Security, overall employment of drafters is expected to grow slightly slower than average over the next 10 years. Long-term outlook for drafters using computer-aided design technology varies by specialty. Architectural and civil drafters will experience the highest growth in employment, while electronic drafters will experience the least growth over the next 10 years. Locally, the majority of colleges reported their enrollments in CAD programs had decreased over the last five years. These colleges did, however, indicate that completions remained steady and placement rates for graduates remained high. A few colleges reported slightly increasing or steady enrollment trends since the last review cycle. All of the colleges indicated that where CAD-specific courses were utilized by more than one program area, for example in Manufacturing Technology or Construction Design/Management Technology, enrollments remained positive over the last five years. Several colleges indicated that local employers are no longer utilizing CAD programs for existing employees who have already been trained on new technology. However, there is still a need for CAD-related courses and programs to train individuals whose jobs use CAD-technology in areas outside of architecture and engineering.

Program Cost: Overall, the majority of colleges reported their programs in CAD technology were cost-effective. These colleges indicated unit costs below the statewide average for this program area, or at least comparable to the average. Cost-effectiveness was attributed to several factors at these colleges, including high enrollments, which offset the sizable expense of software licenses, maintenance fees for equipment and lab facilities. Several colleges did report their programs were not cost-effective. This was primarily due to the declining enrollments and/or increased costs for faculty. Some colleges also indicated that the efficiency of their programs was restricted in part by the capacity of their computer labs. While these colleges have full courses, they often have waiting lists for students to get in. Larger lab facilities would accommodate more students and drive the unit costs of the program down.

Program Quality: Common strengths cited by the colleges included updated curriculum and software, excellent computer equipment and lab facilities, knowledgeable and experienced faculty, strong support from local business and industry, cross-applicability of CAD technology courses to many programs, and regular advisory committee input. Common weaknesses identified by the colleges included lack of adequate laboratory space and the need for more computer stations, lack of student interest in CAD programs, and inactive advisory committees.

The most commonly cited quality improvements to CAD technology programs related to updated software and equipment. Other common recommendations included increased marketing to students at the high school level, and adding course offerings in more advanced technologies. Some colleges

suggested combining introductory courses from various CAD programs to prevent having to cancel low enrollment classes.

Faculty from **Illinois Central College** will participate in Project Lead the Way by offering a new engineering graphics course to local high school juniors and seniors for credit towards ICC programs. **Moraine Valley Community College** received a National Science Foundation Grant for 3D Parametric Modeling in 2002. The college has developed new courses, updated instructional materials and developed partnerships with national and local industry for developing and promoting CAD-related courses and programs. And, **Oakton Community College** is building a new Art, Science and Technology Pavilion on its Skokie Campus that will increase the programs available lab space and significantly update the technological capacity of teaching and learning.

Surveying Technology (CIP 15.1102)

Programs that prepare individuals for assisting engineers and related professionals in the delineation and positioning of land and water tracts and boundaries, map preparation, and analysis. Includes instruction in applied geodesy, basic cartography, software applications, photo interpretation, survey equipment and instrument calibration.

Number of Colleges offering training	5
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of This Year's Program Review: Four colleges reported plans to continue their programs in surveying, and one college reported plans to discontinue its programs.

Program Need: According to the Illinois Department of Employment Security, employment of "surveying technicians" is expected to increase by 19.46 percent, faster than the statewide average for all occupations. All of the colleges planning to continue their programs indicated a continued need. Several reported that student interest in courses is typically higher than for the program. Enrollments statewide have slightly decreased over the last three years, however, all of these colleges reported good placements for their graduates.

Program Cost: The majority of colleges reporting indicated their programs in surveying technology were cost-effective. However, high costs for survey instruments and software has contributed to the higher than average unit costs for this program area.

Program Quality: Common program strengths cited by the colleges included an updated and applied curriculum, knowledgeable and experienced faculty, and support from professional associations. The main weakness of this program area was the high cost of maintenance.

Parkland College faculty and students attended the 2004 Illinois Professional Land Surveyors Association conference. Students not only attended sessions but also assisted the Association in registering attendees and documenting continuing education credits. Students attending the conference have elected to form a chapter of this association at Parkland College in an effort to

promote their program and provide professional and academic development opportunities for surveying students.

Medical Laboratory Technology (CIP 51.1004)

Programs that prepare individuals for performing general laboratory procedures under the supervision of a physician or lab director. Includes instruction in medical lab procedures, software applications, equipment operation and maintenance, bacteriological, biological and chemical testing, sample inventory and storage, lab safety, and record-keeping.

Number of Colleges offering training	22
2003 Follow-up respondents employed or continuing education	93.2%
2003 Follow-up respondents working full-time	81.3%
2003 Follow-up respondents working in related jobs	76.6%

Results of This Year's Program Review: As a result of this year's program review, 13 colleges reported plans to continue their programs in Medical Laboratory Technology with minor improvements.

Program Need: According to the Illinois Department of Employment Security, job growth in medical laboratory technology is expected to increase at an average rate through 2010. However, data from the American Society for Clinical Pathology (ASCP) indicate a more significant need for medical laboratory technicians. The increase in the number of medical procedures will be offset by technological advances. Some colleges reported significant increases in enrollment, while others reported slight declines in enrollments. Completions remain steady and placement rates for graduates is good. All of the colleges concluded there is a continued need for the program.

Program Cost: **John A. Logan College, Southeastern Illinois College and Shawnee Community College** are able to maintain the program, despite its high cost, through a consortial arrangement. MLT programs are typically high-cost, low enrollment programs nationwide; however, most of the colleges reported that it was a cost-effective program. Several colleges reported that online instruction has helped to reduce costs.

Program Quality: Most colleges, in citing the need for increased enrollments in these programs, felt that the high course lab fees (typically \$100) were possible reasons for the low enrollments and high attrition rates. The number and quality of the clinical sites seemed an important indicator of program quality. Career ladders for this program area also were often included as a program strength. **Illinois Central College** developed a Hybrid Online Curriculum for the MLT Program, in collaboration with three other community colleges and a grant from ILCCO. Certification exam scores were a common method for end-of-program assessment

Optical Assisting (CIP 51.1802)

Programs that prepare individuals for assisting optometrists or ophthalmologists in providing diagnostic and treatment services.

Number of Colleges offering training	1
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of This Year's Program Review: As a result of this year's program review, Richard J. Daley College reported that both of its programs will be discontinued due to low enrollments.

Ophthalmic Medical Technology (CIP 51.1803)

Programs that prepare individuals for performing ophthalmic photography and related testing of the eye and vision under the supervision of an ophthalmologist.

Number of Colleges offering training	1
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of This Year's Program Review: As a result of this year's program review, the college reported plans to continue its Ophthalmic Medical Technology programs with minor improvements.

Program Need: This is a very small program area. According to the Illinois Department of Employment Security, employment of "ophthalmic technicians" is increasing faster than the statewide average. Enrollments and completions in these programs have been high and relatively steady over the last three years.

Program Cost: Despite strong enrollments and continued need for graduates, the college considers its programs to be high cost and indicates they generally operate at a loss.

Program Quality: Triton College reports that its programs have strong curricula, an active advisory committee, and qualified faculty with industry experience. However, students who are recruited for the programs are often in need of remediation.

Interior Design (CIP 20.0501)

Programs that prepare individuals for assisting in the design, decoration or functional analysis of interior settings both residential and commercial. Includes instruction in basic interior design, residential interior planning, room analysis, decorating, customer profiling, and product selection and purchase.

Number of Colleges offering training	5
2003 Follow-up respondents employed or continuing education	89.7%
2003 Follow-up respondents working full-time	73.1%
2003 Follow-up respondents working in related jobs	80.8%

Results of This Year's Program Review: Four colleges reported plans to continue their programs in Interior Design with minor improvements, while one college reported its programs were scheduled for further review.

Program Need: According to the Illinois Department of Employment Security, demand for "interior designers" is expected to grow at a lower rate than the average growth for all occupations through 2010. Despite lower than average growth statewide, locally, a majority of the colleges expressed an increase in enrollments, steady completions and good placement rates for graduates.

Program Cost: Colleges varied with respect to being higher or lower than the state average unit cost but overall, the programs are considered to be cost-effective.

Program Quality: Common strengths reported included strength of faculty, reputation in the community and with occupational professionals, and a strong core curriculum. **Joliet Junior College** students have designed a room for the American Society of Interior Designers (ASID) showcase home and have chartered the Interior Design Club and sponsored a local ASID chapter.

Common weaknesses included need for increased classroom space, better facilities, more advanced technological equipment, more full-time faculty, and problems with coordination of internship experiences.

Quality improvements at the colleges included recruitment of new companies for internships, more effectively integrating adjunct faculty into the department, improving facilities, and faculty development. Both **Harper College** and **Joliet Junior College** report striving for compliance with the Foundation for Interior Design Education and Research guidelines even though accreditation is limited to 4-year colleges and universities.

Library Assisting (CIP 25.0301)

Programs that prepare individuals for assisting professional librarians in performing various routine tasks of library operation. Includes instruction in library systems and operation, library resources and services, acquisition, cataloging, storage, management of books, periodical and other reference materials.

Number of Colleges offering training	8
2003 Follow-up respondents employed or continuing education	88.9%
2003 Follow-up respondents working full-time	77.4%
2003 Follow-up respondents working in related jobs	83.9%

Results of this Year's Program Review: As a result of this year's program review, three colleges reported plans to continue their Library Assistant programs implementing minor improvements, two colleges reported withdrawal of their programs. One college has scheduled its program for further review.

Program Need: The Illinois Department of Employment Security reports that the employment of "library technical assistants" should increase by 17.68 percent through 2010. Overall enrollments

have been steady, with only a few colleges reporting slight decreases in students. Likewise, completions have been constant over the last three years. However, many colleges indicated that the recent economic downturn has critically impacted local library employment opportunities in the state. As fewer new libraries are built, and less funding is available for expansion of existing libraries, fewer library staff are required. Districts offering these programs indicate that many of their students use this training for professional development or updating of skills. Online instruction has expanded the audience for these programs.

Program Cost: All colleges continuing their programs reported cost-effectiveness. The adaption of on-line course offerings has offset low enrollments in on-campus programs, which has helped the cost effectiveness of this program area.

Program Quality: Common program strengths include, flexibility provided by the on-line courses, highly-qualified staff and enthusiastic support of the library community. Several colleges cited a cooperative working arrangement with the Alliance Library System as a foundation for their successful program. Colleges reported lack of adequate recruitment and low student enrollments as weaknesses for the program.

Specific quality improvements for the library assistant programs include **Wilbur Wright College's** directives to increase marketing and improve professional development opportunities for their instructors.

Plumbing (CIP 46.0501)

Programs that prepare individuals for the lay out, assembly, installation and maintenance of pipes and piping systems for residential, commercial or industrial plumbing use.

Number of Colleges offering training	2
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of this Year's Program Review: As a result of this year's program review, one college reported plans to significantly modify its Plumbing and Pipefitting programs.

Program Need: This is a very small program area. The Illinois Department of Employment Security reports that the employment of "plumbers and pipefitters" should increase 10.67 percent through 2010. Locally, the college reported that this program meets a fairly specific need of local industry. Enrollments have been steady over the last three year period.

Program Cost: The college indicates its program is cost-effective. Because of the relationship with the local labor union the college is able to utilize updated equipment, materials, facilities and experienced, part-time faculty. This offsets most of the maintenance costs trades-related programs experience.

Program Quality: **Southwestern Illinois College** cited dedicated adjunct faculty, excellent facilities, state of the art equipment and industry support as the strengths of the program.

Heating, Ventilating, Air Conditioning & Refrigeration (HVA/CR) Technology (CIP 47.0201)
Programs that prepare individuals for repair, lay out, installation and maintenance of heating, ventilating, and cooling systems for residential, commercial or industrial use.

Number of Colleges offering training	28
2003 Follow-up respondents employed or continuing education	94.0%
2003 Follow-up respondents working full-time	90.2%
2003 Follow-up respondents working in related jobs	81.2%

Results of this Year's Program Review: As a result of this year's program review, twenty-four colleges reported plans to continue their programs in Heating, A/C and Refrigeration Technology, one college plans to significantly modify its programs, and three colleges plan to discontinue programs in this area.

Program Need: Nationally, the 2004-2005 Occupational Outlook Handbook states the employment opportunities for "heating, air-conditioning, and refrigeration technicians" is expected to grow faster than the average for all occupations through the year 2010. The Illinois Department of Employment Security (IDES) projects an increase of 15.73 percent for "HVA/CR technicians" through 2010. Overall enrollments have remained steady, completions have remained steady or slightly increased, and placement rates for graduates remain good. Colleges that plan to discontinue their programs cited high costs due to maintenance of equipment and low enrollments.

Program Cost: Several of the colleges indicated their programs are cost-effective, with the majority reporting unit costs for their programs were average for technical programs. Various colleges reported strong relationships with the manufacturers, suppliers, and local contractors who donate equipment annually to help reduce the cost. Colleges also cited the use of highly qualified adjunct faculty as a means to reduce cost.

Program Quality: Colleges reported donations from industry, highly qualified and experienced faculty, strong and supportive advisory committees, internship opportunities, and state of the art equipment as key strengths of their programs. Many colleges attribute the success and quality of their programs to alumni employability and support. Program weaknesses as reported by the colleges include high turnover in faculty, high cost of equipment, and a lack in promotion of the program.

Specific quality improvements reported by the colleges include **Heartland Community College's** plans for a new Workforce Development Center that will increase the ability to offer career and technical education courses in a variety of areas. **Richland Community College** is pursuing American Refrigeration Institute accreditation, and working toward increased dual credit efforts in their programs. **Kankakee Community College** is in the process of developing a new course assessment and purchasing new lab equipment. **Lincoln Land Community College** plans to implement the use of an Industry Competency Exam for program assessment.

Architectural Drafting (CIP 48.0102)

Programs that prepare individuals for planning and preparing scale pictorial interpretations (blueprints) of architectural design concepts for buildings and other structures.

Number of Colleges offering training	19
2003 Follow-up respondents employed or continuing education	89.3%
2003 Follow-up respondents working full-time	87.5%
2003 Follow-up respondents working in related jobs	65.2%

Results of This Year's Program Review: As a result of this year's program review, nine colleges reported plans to continue their programs in Architectural Drafting with minor improvements, one colleges plans to significantly modify its program, four colleges plan to discontinue their programs, and four colleges have scheduled their programs for further review.

Program Need: According to the Illinois Department of Employment Security, employment of "architectural drafters" is expected to increase about as fast as average through 2010. Locally, the majority of colleges reported steady enrollments. In general completions have also remained steady, although several colleges indicated declining or no completions over the last three years.

A variety of students are served by architectural drafting including those planning to obtain a degree or certificate, to improve their skills, and to transfer. Several college reports indicated that the trend in drafting is to require baccalaureate degrees as an entry-level requirement for employment, so the move to make more courses transferable is an important one. Transferability and internships are important aspects for colleges of certificate and two-year degree programs to consider in marketing their programs.

According to the 2003 Follow-up Study of Fiscal Year 2002 Career and Technical Education Program Graduates, the unemployment rate among Architectural Drafting graduates (17.2 percent) was among the highest for all the programs in the study, which includes those that are described in this report. This is in large part due to fluctuations in the economy and how they affect industries served by drafters. Construction, engineering and manufacturing industries all utilize drafters during planning and development. While the economy is in decline, overall employment in these industries tends to be adversely affected.

Program Cost: While the majority of colleges consider their programs to be cost-effective, the cost of architectural drafting programs are typically on the higher end. This is primarily due to the need for constant upgrades of equipment and software. Grant funding has enabled several colleges to keep costs down.

Program Quality: Common program strengths cited by the colleges include knowledgeable and experienced faculty, active advisory committees, strong links to local business and industry, relationship with professional associations, and recent updates to lab facilities, equipment and software. Common program weaknesses cited by the colleges include lack of local job opportunities, declining completions or students "jobbing out" midway through their curriculum, and the high cost of program maintenance.

Like many colleges, **William Rainey Harper College** lists its faculty as a strength of its program. The architectural drafting department has been asked to assist the college in such projects as the selection of the architects or construction managers for the Conference Center, the Performing Arts Center and the new Science, Health Careers and Emerging Technology buildings. **College of DuPage** faculty are working closely with faculty in Interior Design and Ornamental Horticulture to coordinate design and CAD curricula, as well as to explore service learning and field experiences, that can encourage cross disciplinary student efforts.

Several colleges offer Internet based AutoCAD courses that allow students to earn an architectural technology certificate online. At three points during its program, the National AutoCad Users' Group evaluation tool is used at **Waubensee Community College** to determine progress and proficiency so students and faculty can identify strengths and weaknesses.

College of Lake County is considering summer courses that focus on local architectural history and general architectural theory. **Oakton Community College** sponsors an annual regional drafting competition for high school students which helps promote the study of architecture as well as their architectural drafting program.

Electrical/Electronics Drafting (CIP 48.0104)

Programs that prepare individuals for planning and preparing scale pictorial interpretations (blueprints) of electrical systems or electronic wiring for use in equipment or systems.

Number of Colleges offering training	2
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of This Year's Program Review: As a result of this year's program review, two colleges reported plans to continue 13 programs with minor improvements and discontinue five programs in Electrical/Electronics Drafting.

Program Need: According to the Illinois Department of Employment Security, employment of "electrical/electronic drafters" while positive, is expected to increase at a rate much slower than the statewide average for all occupations. Locally, colleges maintain there is still a need for training programs in this area. Consequently, the overall emphasis of college programs address the needs and interests of students seeking short term certificates or courses to upgrade their skills. Overall enrollments have held steady over the past five years. Completions for both colleges remain good. Generally, colleges reported that local employers look more for individuals with electronics drafting experience, rather than a degree in this specialty. Demand for professionals with these skills seems to remain strong.

Program Cost: Cost-effectiveness of these programs vary by institution. One college reported lower than average unit cost for this program area, while another reported much higher than average unit cost. Factors that affect the cost of programs in electrical/electronics drafting include small class size, particularly those offering advanced instruction, and the expense of corresponding software and hardware in keeping with that which is offered in industry in the area served by the colleges.

Program Quality: College of Lake County offered students a new Rendering and Animation option, in which the software turns a CAD model into a picture fit for advertising or display. The College reports it has been very successful and there are plans to add new technologies in 3D Digitizing and Rapid Prototyping to existing classes. Kaskaskia College reports dual credit programs with area high schools are working well. Student internships and community projects facilitate the acquisition of work based learning skills and may result in direct employment opportunities.

Mechanical Drafting (CIP 48.0105)

Programs that prepare individuals for planning and preparing scale pictorial interpretations (blueprints) of mechanical devices or machinery, such as automobiles.

Number of Colleges offering training	19
2003 Follow-up respondents employed or continuing education	96.6%
2003 Follow-up respondents working full-time	88.9%
2003 Follow-up respondents working in related jobs	70.4%

Results of This Year's Program Review: As a result of this year's program review, eight colleges reported plans to continue their programs with only minor improvements, two colleges plan to discontinue their programs, and two colleges have scheduled their programs for further review.

Program Need: According to the Illinois Department of Employment Security, employment of "mechanical drafters" while positive, is expected to increase at a rate much slower than the statewide average for all occupations. Locally, the majority of colleges reported steady to slightly increasing enrollments over the last three-five years. Several colleges indicated slightly declining enrollments, but maintained a need for their program(s) based on their local job market. All of the colleges planning to continue their programs indicated steady completions and good placement rates for graduates. Colleges located in more rural districts indicated that while employment opportunities locally may have plateaued, opportunities in nearby metropolitan areas are still available.

Program Cost: Overall mechanical drafting programs statewide are considered cost-effective. The majority of colleges reported their program unit costs at or slightly below peer group or statewide average cost for this program area. Several colleges indicated an increase in unit cost for their programs, primarily due to the hiring of full-time faculty or the update of equipment. Most colleges indicated that sharing lab facilities and equipment, steady or increasing enrollments and the use of more part-time faculty contributed to the lower cost of these programs.

Program Quality: Commonly reported strengths of mechanical drafting programs include knowledgeable and experienced faculty, hands-on learning in all applied coursework, active advisory committees, updated lab facilities and equipment and the opportunities for employment following graduation. Commonly reported weaknesses include the high cost of maintaining these programs, the need for updated lab facilities, equipment or software, and the lack of student interest in the program area.

Specific quality improvements cited by the colleges include **Moraine Valley Community College** adding an internship course to their curriculum. And, **Morton College** has provided its mechanical

drafting faculty with funding for essential professional development activities that will ultimately aide in the update and revision of their existing programs.

Graphic & Printing Technology (CIP 48.0201)

Programs that prepare individuals for planning, preparing and printing text and graphical information into print format. Includes instruction in mechanical, electronic and digital equipment operation, pre-press, press and post-press operations.

Number of Colleges offering training	6
2003 Follow-up respondents employed or continuing education	79.3%
2003 Follow-up respondents working full-time	69.7%
2003 Follow-up respondents working in related jobs	57.8%

Results of This Year's Program Review: As a result of this year's program review, seven colleges reported programs continued with minor improvements, two colleges reported eight programs were significantly modified, one college discontinued a program, and one college scheduled two programs for further review.

Program Need: Labor market analysis reflects a slow growth in general for graphic designers and graphic technologists. Some programs have low enrollments and limited availability of employment opportunities in their districts. However, some colleges continue to offer these programs in anticipation of increased demand as the result of retirements and because the technological changes in the field will require new skills.

Program Cost: Program costs are generally high in graphic and printing technology due to the high cost of maintaining technology and instructional software.

Program Quality: Most of the colleges reported program strengths that included the credentials and work experience of their faculty, work-based learning opportunities, and support from their advisory committees. Weaknesses generally include lack of job opportunities and continual need to update technology. **Rock Valley College** is considering certification options for program revision and development as well as short-term training needs of local industry in printing and publishing.

Mechanical Typesetting (CIP 48.0205)

Programs that prepare individuals for the lay out, composition and make up typesetting by hand or machine.

Number of Colleges offering training	3
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of This Year's Program Review: As a result of this year's program review, one college indicates it will significantly modify its program. Triton College indicates that its programs in "Graphic Design and Production" and "Advanced Digital Imaging" have undergone radical

curricular changes based on local labor trends and job opportunities. Furthermore, enrollment has decreased by 25.8 percent over the last five years. With revisions in place, the college plans to continue these programs.

Lithography & Platemaking (CIP 48.0206)

Programs that prepare individuals for making prints from chemically prepared stone or metal surfaces, including lithography photography and silkscreening.

Number of Colleges offering training	5
2003 Follow-up respondents employed or continuing education	80.0%
2003 Follow-up respondents working full-time	82.4%
2003 Follow-up respondents working in related jobs	47.1%

Results of This Year's Program Review: As a result of this year's program review, two colleges reported four programs discontinued, two programs continued with minor improvements, and one program significantly modified.

Program Need: Both colleges reported a decline in enrollment in these program categories. Employment needs are uncertain although many of the skills developed can be utilized in other employment areas.

Program Cost: Costs of these programs remain high due to equipment upgrades and maintenance.

Program Quality: Program strengths are strong curricula and active advisory committees. High costs of maintaining equipment, declining enrollments are cited as negative factors affecting the programs.

Desktop Publishing (CIP 48.0212)

Programs that prepare individuals for planning and publishing text and visual information using computer software applications and related techniques.

Number of Colleges offering training	19
2003 Follow-up respondents employed or continuing education	79.1%
2003 Follow-up respondents working full-time	65.3%
2003 Follow-up respondents working in related jobs	61.7%

Results of This Year's Program Review: As a result of this year's program review, 12 colleges reported plans to continue their Desktop Publishing programs with minor improvements, one college plans to significantly modify its offerings and six colleges scheduled their programs for further review.

Program Need: At some colleges, enrollment in individual program courses remains steady, but completion rates are relatively low because students are taking the courses to develop the skills for other program areas. The Illinois Department of Employment Security projects a faster than average increase in demand for "desktop publishers" between 2000 and 2010. However, most of these

openings will be in the Chicago metropolitan area. Several colleges reported modest increases in enrollments and employability remains high.

Program Cost: The cost of desktop publishing programs varies greatly. Variations are due to faculty status, equipment expenditures and enrollments. Most colleges reporting, however, consider their programs to be cost-effective.

Program Quality: Dual credit, articulation agreements, and coordination with secondary schools are mentioned as common strengths of the desktop publishing programs. Active advisory committees are essential for this program area. The need to continually modify equipment and software in order to keep up with the industry is both a strength and a weakness. These constant modifications keep the programs current but can add significantly to their costs. A few colleges noted the difficulty in finding adequate internship sites for students. To address this need, **Moraine Valley Community College** has appointed an internship coordinator and developed an alliance with the Walt Disney Corporation to provide additional internship sites. Most of the colleges included faculty experience in the industry as a program strength.

Machining Technology (CIP 48.0501) / Machine Shop Assistant (CIP 48.0503)

Programs that prepare individuals for fabricating and modifying metal and metal parts using machinery such as lathes, milling machines, grinding/cutting machines, drill presses, automatic screw machines for industrial and manufacturing purposes.

Number of Colleges offering training	32
2003 Follow-up respondents employed or continuing education	84.6%
2003 Follow-up respondents working full-time	100%
2003 Follow-up respondents working in related jobs	90.9%

Results of This Year's Program Review: Fourteen colleges reported plans to continue their programs with minor improvements, four colleges plan to significantly modify their programs, eight colleges reported plans to discontinue their programs, and four colleges have scheduled their programs for further review.

Program Need: According to the Illinois Department of Employment Security, employment of "machinists" is expected to increase by 2.57 percent over the next ten years. While this is slower growth than the statewide average, it is a positive increase. Colleges reported enrollments as stable or decreasing, however local manufacturing industry needs have continued to support the training. In these districts, local industry look to their community colleges for professional development and skill upgrading for its existing workforce. Typically, course enrollments are higher than program enrollments. Colleges consistently report that because college-level certificates and degrees are not required for entry-level employment, many students "job out" of programs before completing the course sequence. Despite this, for students who do complete these programs, placement rates have remained high. Colleges maintain that local industry is generally unable to find qualified individuals for entry-level employment.

Program Cost: Colleges reported their machining technology and related programs as having average cost-effectiveness. While equipment and tools for these programs are typically expensive,

several colleges utilize instructional and laboratory facilities, as well as equipment supplied by local industry. This levels out the overall cost for maintaining these programs. Most colleges report higher than the statewide average unit cost, however those with steady enrollments maintain their programs continue to exhibit cost-effectiveness.

Program Quality: Common strengths of machining technology and related programs included updated curriculum and tools, strong advisory committee input, strong relationships with local industry, and good placement opportunities for graduates. The main weakness of this program area was identified as the affects of the declining economy on enrollments in manufacturing related training programs.

The most commonly cited quality improvements to machining technology and related programs were increased marketing at the high school level, updates to equipment and facilities, and increasing participation of advisory committee members.

Black Hawk College reported partnering with the Rock Island Arsenal for onsite instruction at their industrial shop and laboratory facilities. This provides students with exposure to up-to-date equipment and a real-world working environment. **Illinois Central College** recently modified its program and courses to be offered in an open entry/open exit format to better accommodate WIA clients.

Patternmaking (CIP 48.0505)

Programs that prepare individuals for wood, metal and plastics patternmaking. This is an Illinois-specific program area.

Number of Colleges offering training	1
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of This Year's Program Review: As a result of this year's program review, the college plans to continue its program with only minor improvements.

Program Need: This is a very small program area. According to the Illinois Department of Employment Security, employment of "metal and plastic patternmakers" is expected to decrease by -15.28 percent over the next ten years. Locally, a decrease in the employment of patternmakers is expected as well. The college indicates its program is offered in cooperation with a local union training program, and therefore enrollments have fluctuated only slightly over the past several years. Placement rates for graduates of the apprenticeship program remain good. Need for this training program does continue to exist within the college district. Several courses within the program are also offered to non-apprenticeship students. Enrollments in these courses have typically been higher than program enrollments.

Program Cost: The college indicates the program is cost-effective. Unit costs have decreased over the last several years due to changes in faculty.

Program Quality: Black Hawk College indicates that one strength of its program is its format, another is its relationship with the local union. The main weakness of the program is its audience size. The number of individuals that enroll in the program through the union apprenticeship program is steady but small.

Sheet Metal Technology (CIP 48.0506)

Programs that prepare individuals for fabricating sheet metal into new products by forming, shaping, bending or folding the material.

Number of Colleges offering training	8
2003 Follow-up respondents employed or continuing education	88.9%
2003 Follow-up respondents working full-time	100%
2003 Follow-up respondents working in related jobs	100%

Results of This Year's Program Review: Four colleges plan to continue their programs in sheet metalworking with minor improvements, one college plans to discontinue its program, and one college has scheduled its program for further review.

Program Need: According to the Illinois Department of Employment Security, employment of "sheet metal workers" is expected to increase by 21.22 percent over the next ten years. This is nearly twice as fast as the average growth for all occupations. Locally, colleges also reported a projected increase in employment for these workers. Enrollments for courses related to this program have typically been higher. Several colleges reported strong interest by students who are currently working full-time in a related construction occupation. These students are pursuing cross-training opportunities hoping to expand their employability skills. Despite the declining economy, the construction industry continues to thrive, thus supporting the need for related contractors, such as in sheet metal.

Program Cost: The majority of colleges reporting indicated their programs were cost-effective. These colleges reported their programs operated with lower than average unit cost, although the cost of consumable materials required for the program (i.e. steel) has a significant impact on the maintenance costs for these programs. Colleges cited shared instructional and laboratory facilities, as well as utilizing adjunct faculty for maintaining cost-effectiveness.

Program Quality: Common strengths identified by the colleges included updated curriculum, knowledgeable and experienced faculty, updated lab facilities, relationships with local labor unions, and job opportunities for graduates. Weaknesses of these programs included low completion rates for students and fluctuating cost of materials.

Tool & Die Making Technology (CIP 48.0508)

Programs that prepare individuals for operating machine tools that form metal components, tool and related products.

Number of Colleges offering training	13
2003 Follow-up respondents employed or continuing education	84.6%
2003 Follow-up respondents working full-time	81.0%
2003 Follow-up respondents working in related jobs	90.5%

Results of This Year's Program Review: Eight colleges reported plans to continue their programs in tool and die making with minor improvements, one college plans to discontinue its program, and one college has scheduled its program for further review.

Program Need: According to the Illinois Department of Employment Security, employment of "tool and die makers" is expected to decrease by -3.70 percent over the next ten years. Locally, employment trends suggest a decrease in the need for tool and die makers as well. Three colleges report steady enrollments, however those colleges benefit from a direct relationship with heavy manufacturing employers within their districts. Five colleges reported that enrollments have decreased over the years. Employment opportunities over the last three years have been fair. Placement rates for graduates remain acceptable for the colleges that plan to continue their programs.

Program Cost: The majority of the colleges reported that their programs in tool and die making were not cost-effective. Equipment upgrades and low enrollments contributed to the higher than average unit cost for this program area. While colleges have utilized shared instructional and laboratory space, as well as donations of equipment from local industry, maintenance costs combined with few credit hours continue to plague these programs.

Program Quality: Common program strengths identified by the colleges included updated and skills-based curriculum, excellent laboratory facilities, knowledgeable and experienced faculty, relationship with local industry, association with the Tool and Manufacturing Association (TMA), and dual enrollment/credit arrangements with secondary partnerships. The main weakness identified by the colleges for this program area was the effects of the declining economy on student interest in manufacturing related training programs.

The **College of Lake County** has been offering a National Institute for Metalworking Skills (NIMS) Certification program since 2002. This year they plan to institute a bridge course, NIMS Credentialing Level 1, that will lead students not only towards certification but also into the existing Machine Tool Trades certificate and degree programs.

Welding Technology (CIP 48.0508)

Programs that prepare individuals for using tools and equipment to join or separate metal parts through a variety of techniques such as brazing, arc or gas welding.

Number of Colleges offering training	31
2003 Follow-up respondents employed or continuing education	84.4%
2003 Follow-up respondents working full-time	89.9%
2003 Follow-up respondents working in related jobs	64.4%

Results of this Year's Program Review: As a result of this year's program review, twenty-seven colleges reported plans to continue their programs in Welding Technology, and four colleges

reported plans to schedule a review of their programs in the up coming year. Three colleges plan to discontinue their programs.

Program Need: Nationally, according to the Occupational Outlook Handbook, employment for “welding, soldering, and brazing workers” is expected to experience growth near the average of all occupations over the 2002-2012 period. The Occupational Outlook Handbook goes on to state that technology is improving welding by creating more use for welding skills in the workplace while expanding employment opportunities. The Illinois Department of Employment Security shows an increase of 15.86 percent for the welding occupations through 2010. The majority of the colleges believed, that because the manufacturing industry uses welding at several stages of production and maintenance, a strong economy will keep the demand for welding high. Overall enrollments have remained steady, as have completions, with several colleges reporting increases in graduates. Because welding skills are required or are beneficial to a variety of other program areas, course enrollments tend to be higher than program enrollments statewide.

Program Cost: Several of the colleges indicated their programs to be cost effective. The majority of colleges reported unit costs for their programs were average for technical programs. Colleges cited the use of highly qualified adjunct faculty, community support and stable enrollments as some variables which reduce cost. Colleges planning to discontinue their programs cited maintenance of equipment and low enrollments as reasons for high cost in this area.

Program Quality: Strengths of the welding programs include strong support from the community, relationships with industry, highly qualified and experienced faculty, and state of the art equipment. Several colleges attributed the success and quality of their programs to their supportive advisory committees. Numerous colleges reported plans to implement proactive maintenance programs to address equipment wear. Program weaknesses as reported by the colleges include a lack of full-time faculty, industry certification not being required for program completion and program completion rates.

Specific quality improvements reported by the colleges include **Kennedy-King College’s** plans to expand business partnerships, shorten the length of their program and incorporate industry certification as a requirement for program completion. **Richland Community College** plans to increase dual credit opportunities for students, and **Moraine Valley Community College** is anticipating the use of virtual technology to incorporate virtual welding as part of its program.

Numerical Control Technology (CIP 48.0520)

Number of Colleges Offering Training	2
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of this Year’s Program Review:

One college reported plans to discontinue its program due to lack of enrollments.

Graphic Design & Visual Communication (CIP 50.0401)

Programs that prepare individuals for designing products and materials that effectively present ideas for advertising or promotion. Includes instruction in graphic design principles, art and illustration, digital imagery, and format design for printed and electronic media uses using computer software applications.

Number of Colleges offering training	23
2003 Follow-up respondents employed or continuing education	94.0%
2003 Follow-up respondents working full-time	63.6%
2003 Follow-up respondents working in related jobs	61.5%

Results of This Year's Program Review: Nineteen colleges reported plans to continue their programs in Graphic Design & Visual Communications with minor improvements, two reported that their programs would be significantly modified, two reported discontinuation of programs, and two reported that their programs were scheduled for further review in the coming year.

Program Need: According to the State of Illinois Department of Employment Security, demand for "graphic designers" is expected to grow at double the rate than the average growth for all occupations through 2010. Illinois labor market information projects that this occupation will grow at a rate of 23.58 percent. Locally, most colleges have expressed very solid programs displaying a slow but steady increase in enrollments. A majority of colleges have also claimed very strong local market needs for graphic design positions.

Program Cost: Due to the need for constant upgrades on technological equipment, cost of programs in this area are typically on the higher end. However, with the high numbers of programs offered, reported cost-effectiveness varied greatly throughout the state. Reasons for the differences were often due to the stage of the program at the college, with early stage programs being the least cost-effective due to the need for equipment. Also, most colleges cite having programs taught primarily by part-time faculty as a way to keep costs lower.

Program Quality: Most of the colleges reported that a major strength was that their programs prepared students to immediately enter the workforce upon completion or continue on to a 4-year baccalaureate degree. Other strengths included excellent co-operative learning and internship situations, faculty expertise, quality equipment and facilities, development of student portfolios, student satisfaction, and the addition of new courses,. **Lewis & Clark Community College**, in particular, hosts a Computer Graphics Art Show and Competition which gives students the opportunity to create and display their work to the community. **Illinois Valley Community College** has created the "GraphX" organization, which is an in-school graphic design business that its students run.

One weakness commonly reported was the need for additional recruiting and marketing efforts. Programs that showed consistent growth almost always had faculty consistently involved in this area. Another weakness that all colleges claimed was funding. Other weaknesses included limited numbers of instructors or support staff, articulation into four-year programs, high cost of keeping up with technology, scheduling, technical support, and need for additional space.

Graphic Design, Commercial Art & Illustration (CIP 50.0402)

Programs that prepare individuals for communicating artistically ideas and information via printed and electronic media. Includes instruction in design, lay-out and paste-up techniques, as well as computer graphics software.

Number of Colleges offering training	5
2003 Follow-up respondents employed or continuing education	N/A
2003 Follow-up respondents working full-time	N/A
2003 Follow-up respondents working in related jobs	N/A

Results of This Year's Program Review: All colleges that reported plan to continue their programs in Graphic Design, Commercial Art & Illustration with minor improvements.

Program Need: According to the State of Illinois Department of Employment Security, demand for "graphic and commercial artists" is expected to grow at double the average growth rate for all occupations through 2010. Locally, colleges have expressed very solid programs displaying a steady increase in enrollments. All programs have also claimed very strong local market needs for graphic design positions.

Program Cost: While costs are generally higher than average due to the consistent update needs of software and computer packages, they have been declining with the increasing affordability of technology. Also, most colleges cite being able to utilize instructional services from part-time faculty as a way to keep costs low.

Program Quality: All colleges reported that a major strength was that students are prepared to immediately enter the workforce upon completion or continue on to a 4-year baccalaureate degree. Other strengths included excellent co-operative learning and internship situations, quality of faculty and feedback from area professionals in the industry. **Parkland College**, in particular, cited lab hardware or software that was current or more current than what students will encounter upon entering the job market.

One weakness commonly reported was that due to labor market need, colleges are noticing that completion rates are decreasing because students are opting to enter the workforce prior to completion of the program. Other weaknesses included duplicated courses, cost of technology, and the limited total numbers of instructors and the effects that this has on scheduling and students' exposure to multiple perspectives.

Quality improvements at the colleges included adding additional instructors, adding courses in additional graphics packages such as "Flash", and eliminating duplicate classes. **Parkland College** is in the process of adding a work ethic training component to the program as well as adding a transfer option in Graphic Design for Fall 2004. **Rend Lake College** is focusing on adding opportunities for students its program to participate in more co-oping within area businesses.

Photography (CIP 50.0406)

Programs that prepare individuals for capturing ideas, themes or moments visually through traditional or digital photographic methods for commercial use.

Number of Colleges Offering Training	6
2003 Follow-up respondents employed or continuing education	92.9%
2003 Follow-up respondents working full-time	70.0%
2003 Follow-up respondents working in related jobs	50.0%

Results of this Year's Program Review: One college reported plans to continue its program in Photography with minor improvements, one college plans to significantly modify its program, and one college has discontinued its program.

Program Need: According to the Illinois Department of Employment Security (IDES), employment projections for "photographers" are expected to grow at a rate of 7.6 percent between 2000 and 2010. Colleges reported growth in these programs due to the increased need for photography professionals with digital imaging skills. Furthermore, due to the increase in state-of-the-art technology in this field, more and more employers are seeking workers who possess more formalized credentials rather than offering on-the-job training. The college that will discontinue its program reported doing so specifically because the program did not currently incorporate digital imaging courses in the curriculum.

Program Cost: The majority of colleges reported costs for photography programs were above college-wide averages. This is due to the perpetual need to purchase new equipment and update technology in order to stay current with digital imaging trends. Many colleges indicated that they expect these programs to become more cost-effective in future semesters.

Program Quality: A strong core of full-time and adjunct faculty members was cited numerous times as a strength of these programs. Additionally, given the significant amount of funds colleges have invested into their lab facilities and digital imaging centers, the overall photography infrastructure was seen as a major strength. However, the need for constant upgrades was also noted as a program weakness, as was the lack of program visibility and student outreach.

Colleges plan to continue their increased focus on digital photography and equipment upgrades in order to stay current with the field.

Summary of Analyses of Career and Technical Education Program Reviews and Recommendations

During fiscal year 2004, the career and technical education programs reviewed by the colleges remain strong as evidenced by information related to program need, program cost-effectiveness, and program quality. Career and technical education program review summaries for this year provided strong evidence that the colleges are utilizing their resources as effectively as possible. Colleges consistently indicated that sharing faculty, instructional space, equipment and other resources as appropriate contributed to the quality and cost-effectiveness of their programs. Common strengths identified by many of the colleges in their career and technical areas included a highly knowledgeable and qualified faculty, connections to business and industry, and active and involved

advisory committees. Common weaknesses were lack of adequate instructional space, and out-of-date equipment and/or technology. One challenge identified by several colleges, specifically those with training programs leading students towards a credentialing exam, was inability to track student credential attainment. Several colleges used the ICCB Performance Enhancement Grant to supplement student tracking of credential attainment through improving their data and record-keeping systems, as well as maintenance policies and procedures.

From this year's review summaries it is easy to see how affected community college career and technical education programs are by their local labor market. In many instances programs continue to thrive with only minor improvements based on changes in local need. In others, colleges are being faced with reorganizing or eliminating programs that were anticipated to thrive under typical labor market conditions. As the economy continues to stall, our community colleges continue to strive towards meeting their communities' interests and needs, as well as offering new and emerging educational opportunities to students.

Summary and Conclusions

This report highlights and summarizes accountability activities and initiatives described by Illinois' 48 community colleges in their Accountability/Program Review Reports for fiscal year 2004. The reports submitted by the colleges provide evidence of the ongoing review processes that are in place to ensure that high levels of quality and productivity are achieved for programs and services that best support each college's mission. Through program review, the colleges examine targeted program areas and services to assess their ability to meet their intended purpose in a cost-effective, high-quality manner.

The Illinois Community College Board *Fiscal Year 2004 Accountability and Productivity Report* provides analyses of program reviews in **170 academic disciplines; 732 career and technical program areas; and 50 Adult Education and Family Literacy, English as a Second Language, and Developmental Education programs.** Highlights of the findings of the reports follow:

- Annual reporting of the results of program reviews is a major accountability effort by the colleges that began in 1983. The review is based on three criteria: program need, program cost, and program quality. Programs are reviewed at least once every five years.
- During fiscal year 2004, colleges reviewed a total of **170 academic disciplines, 50 adult and developmental education and English as a Second Language programs, and 732 career and technical programs.**
- Findings of the reviews of academic disciplines indicated adequate need and cost-effectiveness. Quality enhancements included expanding methods of assessment and continuing to use the results to improve instruction, applying technology to improve teaching and learning, adding ethics courses across the curriculum, and the use of portfolios to showcase student learning.
- Reviews of Adult Education and Family Literacy, English as a Second Language, and Developmental Education programs indicated that strong need for the programs continues, with particular growth noted in the need for ESL programs. Most colleges indicated these

programs are cost-effective due to the use of part-time instructors and staff and large enrollments. In cases where program costs exceeded the average, colleges still considered them to be cost-effective in relation to the needs of the populations served. Commonly noted program strengths included experienced and dedicated faculty and staff, flexible class schedules and formats, multiple instructional sites, and access to student support services. Commonly noted program concerns included the need for more full-time staff and the need for additional staff to provide more intensive follow-up services for students. A common focus for quality improvements was on providing support to transition students to college-level courses and track their success.

- As a result of reviews of career and technical programs, **518 programs were continued with minor improvements, 46 programs were significantly modified, 104 programs were identified for elimination, and 65 programs were scheduled for further review during the coming year.**
- The most commonly identified strengths for career and technical programs were well-qualified faculty, active advisory committees, external accreditation (where applicable), industry and local partnerships, and placement of program completers. The most common weaknesses were low enrollments, low completions, the need to continually upgrade and/or replace curricula and equipment to keep pace with changing technologies, and the need to provide more flexible scheduling options.

Program review has been the major accountability tool by which community colleges demonstrate the quality and effectiveness of the programs and services they offer to students. However, the demand for institutional accountability for student learning outcomes has intensified at the state and national level, leading to the development of external systems to measure the performance and effectiveness of postsecondary programs and services. For example, the Department of Education, Office of Vocational and Adult Education, requires colleges to report annual progress toward meeting performance goals for career and technical programs, and the Illinois Board of Higher Education has recently implemented a system of performance indicators as part of the annual *Performance Report* as well as a requirement that all academic programs systematically assess student learning and use the results to improve programs. Program review needs to be the mechanism that brings all of this information together for use in an evaluation of programs and services that leads to continuous improvement.

Status of Recommendations from 2003 Report: In Illinois community colleges, Program Review has been one of the most prominent and longest-running accountability reports in the system. The regular review of instructional, administrative and support services programs was implemented in 1983, and the process was last reviewed and revised in 1993. The intervening years have seen a number of significant changes, including an increasing emphasis on accountability and assessment of programs and student learning, changes in approaches to regional accreditation, and the development of performance indicators. A recommendation in the report *Accountability and Productivity in Illinois Community Colleges Fiscal Year 2003* stated that, **“To ensure that the program review process continues to be a major accountability tool for Illinois community colleges, during fiscal year 2004 ICCB staff should convene a work group to examine the process and make recommendations to enhance the process to provide increased accountability and to reduce duplicative reporting.”** To assist in this effort, ICCB has contracted

with a team of consultants (Kathleen Kelly, Ivan Lach, and Sharon Kristovich) to coordinate a comprehensive review of the existing process, make recommendations for a revised systemwide program review process, and assist with implementation of the recommendations. In consultation with ICCB staff, the consultants have researched program review models in other states, conducted a survey of community colleges regarding various aspects of program review, and convened a Working Group consisting of community college representatives to provide input at various stages of the review. They will seek additional input through focus groups and electronic discussions. **The consultants' recommendations are expected to be available early in 2005, after which ICCB staff will bring a proposal for a revised program review process before the Board for consideration.**

Conclusion. The report of *Accountability and Productivity in Illinois Community Colleges Fiscal Year 2004* provides evidence that Illinois' comprehensive community colleges play a vital role in the state's educational and workforce preparation. They provide access and opportunity to nearly one million diverse students annually, including those seeking assistance deciding on a new career or upgrading skills for their current occupation, persons interested in transferring to another college or university, and students who need to sharpen their basic skills. In addition, they are a valuable resource to businesses and industries and a partner in economic development in the districts they serve. The report also illustrates that the colleges are committed to continuous improvement of their programs and services. As enrollments increase and fiscal constraints continue, the colleges have implemented strategies to maintain their level of service to their districts. The content of the reports affirms that Illinois community colleges continue to play an essential role in preparing the well-educated, high-skilled citizenry the state must have to strengthen the economy and support a desirable living environment.

Appendix A

**COMMUNITY COLLEGE PROGRAM REVIEW
SUMMARY TABLES**

Illinois Community College Board Table A-1 LIST OF PROGRAMS REVIEWED BY COMMUNITY COLLEGES DURING FISCAL YEAR 2004			
College	# of Occupational Curricula Reviewed	# of Academic Disciplines Reviewed	# of Dev/Adult Education Programs Reviewed
Black Hawk	20	3	0
Chicago			
Daley	21	1	0
Kennedy-King	17	0	0
Malcolm X	6	7	1
Olive-Harvey	7	0	1
Truman	6	4	0
Washington	12	6	1
Wright	11	3	0
Danville	9	1	1
DuPage	35	9	3
Elgin	28	1	1
Harper	17	4	0
Heartland	15	3	1
Highland	8	1	4
IL Central	21	8	0
Illinois Eastern			
Frontier	5	1	0
Lincoln Trail	13	1	0
Olney	2	1	0
Wabash	2	1	0
IL Valley	12	8	2
Joliet	13	6	0
Kankakee	13	0	3
Kaskaskia	8	0	0
Kishwaukee	13	6	0
Lake County	42	1	0
Lake Land	9	6	5

Illinois Community College Board Table A-1 LIST OF PROGRAMS REVIEWED BY COMMUNITY COLLEGES DURING FISCAL YEAR 2004			
College	# of Occupational Curricula Reviewed	# of Academic Disciplines Reviewed	# of Dev/Adult Education Programs Reviewed
Lewis & Clark	16	3	1
Lincoln Land	11	9	2
Logan	12	6	0
McHenry	5	6	1
Moraine Valley	30	4	0
Morton	7	3	0
Oakton	32	2	3
Parkland	7	3	4
Prairie State	20	5	0
Rend Lake	12	4	0
Richland	13	4	2
Rock Valley	31	1	3
Sandburg	9	1	0
Sauk Valley	16	2	4
Shawnee	5	6	0
South Suburban	27	3	0
Southeastern	9	5	0
Southwestern	28	5	1
Spoon River	3	3	0
Triton	45	8	2
Waubonsee	25	3	1
Wood	4	2	3
TOTALS	732	170	50

Illinois Community College Board Table A-2 SUMMARY OF FISCAL YEAR 2004 REVIEWS OF OCCUPATIONAL PROGRAMS BY COLLEGE					
College	Number of Programs Reviewed	(1) Number Continued with Minor Improvements	(2) Number Significantly Modified	(3) Number Identified for Elimination	(4) Number Identified for Further Review
Black Hawk	20	12	0	2	6
Chicago					
Daley	21	9	0	12	0
Kennedy-King	17	11	3	0	3
Malcolm X	6	3	0	3	0
Olive-Harvey	7	4	1	2	0
Truman	6	6	0	0	0
Washington	12	10	2	1	0
Wright	11	8	0	0	3
Danville	9	8	0	1	0
DuPage	35	18	17	0	0
Elgin	28	27	0	0	1
Harper	17	15	0	0	2
Heartland	15	15	0	0	0
Highland	8	7	0	1	0
Illinois Central	21	19	0	0	2
Illinois Eastern					
Frontier	5	4	0	0	1
Lincoln Trail	13	1	0	0	12
Olney	2	2	0	0	0
Wabash Valley	2	2	0	0	0
Illinois Valley	12	11	0	1	0
Joliet	13	13	0	0	0
Kankakee	13	13	0	0	0
Kaskaskia	8	8	0	0	0
Kishwaukee	13	13	0	0	0
Lake County	42	34	0	6	2
Lake Land	9	9	0	0	0
Lewis & Clark	16	12	1	2	1
Lincoln Land	11	6	0	5	0

Illinois Community College Board Table A-2 SUMMARY OF FISCAL YEAR 2004 REVIEWS OF OCCUPATIONAL PROGRAMS BY COLLEGE					
College	Number of Programs Reviewed	(1) Number Continued with Minor Improvements	(2) Number Significantly Modified	(3) Number Identified for Elimination	(4) Number Identified for Further Review
Logan	12	12	0	0	0
McHenry	5	3	1	1	0
Moraine Valley	30	21	0	9	0
Morton	7	7	0	0	0
Oakton	32	27	4	1	0
Parkland	7	7	0	0	0
Prairie State	20	12	5	2	1
Rend Lake	12	10	0	2	0
Richland	13	6	4	1	2
Rock Valley	31	11	0	11	9
Sandburg	9	4	0	3	2
Sauk Valley	16	15	0	1	0
Shawnee	5	4	0	1	0
South Suburban	27	11	0	16	0
Southeastern	9	9	0	0	0
Southwestern	28	14	6	8	0
Spoon River	3	2	1	0	0
Triton	45	20	1	6	18
Waubensee	25	19	0	6	0
Wood	4	4	0	0	0
TOTALS	732	518	46	104	65

Illinois Community College Board Table A-3 OCCUPATIONAL PROGRAMS ELIMINATED THROUGH PROGRAM REVIEW IN FISCAL YEAR 2004		
District/College	Program Title	CIP
Black Hawk	Banking & Finance Certificate	520803
	Library Technical Assistant Certificate	250301
CCC-Richard J. Daley	Architectural Drafting AAS	480102
	Architectural Drafting Advanced Certificate	480102
	Architectural Drafting Basic Certificate	480102
	CAD/CAM Basic Certificate	480105
	CAD Technology AAS	150810
	Certified Optician/Contact Lens Basic Certificate	511802
	Certified Optician/Spectacle Dispensing Basic Certificate	511802
	Communications Arts AAS	500401
	Communications Arts Advanced Certificate	500401
	Communications Arts Photography Advanced Certificate	500406
	Drafting & Machine Design Advanced Certificate	480105
	Manufacturing Technology: Gear Machining Advanced Certificate	480503
	Manufacturing Technology: Gear Machining Certificate	480503
CCC-Malcolm X	Accounting AAS	520301
	Accounting Advanced Certificate	520301
	Accounting Basic Certificate	520301
CCC-Olive Harvey	Architectural Technology AAS	480102
	Architectural Technology Basic Certificate	480102
CCC-Harold Washington	Financial Service Basic Certificate	520803
Danville Area	Mechanical Draft Certificate	480105
Highland	Welding Certificate	480508
Illinois Valley	Graphic Communication & Promotion Certificate	480212
Lake County	CAD-Architecture AAS	480104
	CAD-Drafting General AAS	480104
	CAD-Drafting Systems Operations AAS	480104
	CAD-Electrical AAS	480104
	CAD-Surveying AAS	480104
	Library Technician Assistant	250301

Illinois Community College Board Table A-3 OCCUPATIONAL PROGRAMS ELIMINATED THROUGH PROGRAM REVIEW IN FISCAL YEAR 2004		
District/College	Program Title	CIP
Lewis & Clark	Machinist AAS	480503
	Machinist Certificate	480503
Lincoln Land	Architectural Drafting Certificate	480102
	HVACR Technology Certificate	470201
	Surveying AAS	151102
	Surveying Certificate	151102
	Welding Certificate	480508
McHenry County	Machining Tool Technology AAS	480503
Moraine Valley	Aircraft Inspection Certificate	150702
	Computer Numerical Control Machining AAS	480503
	Eddy Current Evaluation Certificate	150702
	Industrial Radiographic Certificate	150702
	Machinist Certificate	480503
	Surface Evaluation Specialist Certificate	150702
	Ultrasonic Evaluation Technology Certificate	150702
Oakton	HVAC AAS	470201
Prairie State	Tax Preparer Certificate	520302
	Tool & Die Making Apprentice AAS	480507
Rend Lake	HVACR AAS	470201
	HVACR Certificate	470201
Richland	Machine Tool Processes Certificate	480503
Rock Valley	Advanced Library Media Technical Assistant Certificate	250301
	Advanced Quality Certificate	150702
	Advanced Quality in Manufacturing Certificate	150702
	Basic Accounting I Certificate	520302
	Basic Accounting II Certificate	520302
	Basic Library Media Technical Assistant Certificate	250301
	Comprehensive Accounting II Certificate	520302
	Intermediate Accounting II Certificate	520302
	Library Media Technical Assistant AAS	250301

Illinois Community College Board Table A-3 OCCUPATIONAL PROGRAMS ELIMINATED THROUGH PROGRAM REVIEW IN FISCAL YEAR 2004		
District/College	Program Title	CIP
Rock Valley	Press Operations Certificate	480201
	Quality in Design Certificate	150702
Carl Sandburg	Machine Drafting & Design Certificate	150805
	Machine Tool Certificate	480503
	Numerical Control Certificate	480520
Sauk Valley	Banking Certificate	520803
Shawnee	Drafting Technology AAS	480102
South Suburban	Banking & Finance AAS	520803
	Banking & Finance Certificate	520803
	Basic Machine Tool Certificate	480503
	Business Skills Certificate	520101
	Desktop Publishing Certificate	480206
	Graphic Arts Certificate	480206
	Intermediate Machine Tool Certificate	480503
	Machine Tool Processes AAS	480503
	Machine Tool Processes Certificate	480503
	Prepress Certificate	480206
	Press Certificate	480206
	Printing Estimator Basic Certificate	480206
	Publishing & Printing Technology AAS	480206
	Publishing & Printing Technology Certificate	480206
	Web Publisher Basic Certificate	480206
Southwestern Illinois	Advertising Art Marketing AAS	500401
	Backing & Finance AAS	520803
	Industrial Blacksmith AAS	480502
	Industrial Blacksmith Certificate	480502
	Industrial Metalworking AAS	480506
	Industrial Metalworking Certificate	480506
	Industrial Rigger/Ironworker AAS	480501
	Industrial Rigger/Ironworker Certificate	480501

Illinois Community College Board Table A-3 OCCUPATIONAL PROGRAMS ELIMINATED THROUGH PROGRAM REVIEW IN FISCAL YEAR 2004		
District/College	Program Title	CIP
	Industrial Welder AAS	480508
	Industrial Welder Certificate	480508
Triton	Corporate Desktop Publications Certificate	480212
	Graphic Arts Printing AAS	480206
	Graphic Arts Printing Certificate	480206
	Press Operations: Sheetfed Web Press Certificate	480206
	Quality Management Certificate	150702
	Safety Coordinator Certificate	150702
Waubonsee	Advanced Machine Tool Ops Certificate	480503
	Machine Tool AAS	480503
	Machine Tool Operations Certificate	480503
	Quality Assurance AAS	150702
	Quality Control Certificate	150702
	Tool & Die Machinist Apprentice Certificate	480599