

Program Inventory Report 2015

Academic and Student Affairs

May 19, 2015



Minnesota
STATE COLLEGES
& UNIVERSITIES

Executive Summary

Board Policy 3.36, Part 5. Academic Program Approval, requires the chancellor to submit a report annually to the Board of Trustees on the status of the program inventory, the list of approved academic programs that the chancellor has approved to be offered by system colleges and universities. This report is comprised of two main sections: Part I is a snapshot of the current inventory of academic programs, while Part II discusses the dynamic nature of academic program planning to meet the workforce needs of the state.

The Program Inventory

There are 3,775 academic programs offered at MnSCU institutions, with colleges offering 2,781 programs and universities offering 994 programs. The number of programs at colleges has declined in the past decade, but has remained stable at universities. Certificate programs are the most numerous, followed by associate degree, diploma, and bachelor degree programs. Thirty-five percent of the programs offered by universities are at the graduate level.

The colleges and universities offer programs within their mission, so there is a wide variety of program offerings. The most commonly offered programs and the programs with the most completers are in the health professions, business, the liberal arts, law enforcement, and education. Online delivery of programs has increased; almost 15% of all programs are now available completely online. These 555 programs represent a 28% increase in online program offerings over the last decade.

Program Planning

The program inventory is dynamic; as new programs are developed, old programs are closed, and changes are made to existing programs daily. The system office provides a number of planning tools and data resources to help program planners make informed decisions. The Graduate Outcome Survey from 2013 suggests that MnSCU programs successfully prepare students for employment with most fields displaying an employment rate above 90%.

In the past year, 87 new programs were added to the inventory and 120 programs were closed, most of them at the colleges. This compares to an annual average of 98 new programs and 131 closures occurring over the past ten-year period. Many programs have also been revised in order to comply with the degree credit cap mandated by the legislature. In 2008, over 1,200 programs exceeded the 60/120 caps, but that number has been reduced to 333, with 59 programs left to be reviewed.

Colleges and universities have partnered to create new or revised programs that are shared programs, collaborative completion programs, or full programs with shared resources. Several efforts from previous years are prospering, while new models of collaboration are emerging, especially in high-tech fields.

Program Inventory Report to the Board of Trustees 2015

It is highly interesting to our country, and it is the duty of its functionaries, to provide that every citizen in it should receive an education proportioned to the condition and pursuits of his life.
Thomas Jefferson to Peter Carr, 1814. ME 19:213

These words have special significance to the people of Minnesota, whose representatives have sought to build a system of public higher education that can provide every citizen with an education that prepares her or him for the diverse needs of the state. As decreed by Minnesota Statutes 136F.05, the mission of the Minnesota State Colleges and Universities is to *provide programs of study that meet the needs of students for occupational, general, baccalaureate, and graduate education*. The 37 degree-granting colleges and universities in the system have developed academic programs in fields ranging from accounting to wood science, and they award undergraduate certificates, diplomas, and degrees ranging from the associate to doctoral level.

The Board of Trustees has recognized the need for an orderly development of academic programs and has mandated through Board Policy 3.36, Part 5, that *approval of the chancellor is required for new academic programs, changes to existing academic programs, suspension of academic programs, and closure of academic programs at system colleges and universities*. The chancellor is directed to maintain an inventory of approved academic programs, and system colleges and universities may only offer programs that are included in the program inventory.

This report has been prepared in order to comply with the requirement that the chancellor annually report to the Board of Trustees on the status of the inventory. This report includes data and analyses regarding the alignment of system college and university program offerings with the workforce needs of the state.

The Program Inventory

The program inventory is the official repository for all approved academic programs and is used for financial aid reporting, federal gainful employment accountability, awards conferred, the MnSCU Viewbook, and several websites. It is searchable online and can be filtered by institution or by program type, using the federal standard Classification of Instructional Program (CIP) code.

Each program entry in the inventory contains the name of the institution, a program name, the federal CIP code it has been assigned, the number of credits, the method of delivery, the award type, and other information that is used in various business processes.

The program inventory lists approximately 3,775 academic programs and is updated daily, so the numbers change as program requests are processed.

A program, for purposes of the inventory, is the separately identified group of courses and educational experiences associated with the award of a degree, diploma, or certificate. A

college or university department might have several programs associated with any given major field of study. So, for instance, a nursing department at a community college might offer a certificate program for nursing assistant and an associate in science degree in nursing for those seeking to be a registered nurse.

Over time, the number of programs offered by the colleges and universities changes as the workforce needs of the state and its students change. During the last decade, as shown in Figure 1, the number of programs has been reduced at system colleges, but has remained fairly consistent at the universities. In early 2015, system colleges offered 2,781 programs, while universities offered 994 programs for a total of 3,775 academic programs. These numbers are down from the peak of the last decade, occurring in 2009 when colleges offered 3,103 programs and universities offered 974 programs for a total of 4,077 programs available within the system. Colleges offer a greater number of programs because of the wide variety of technical offerings required to meet workforce needs.

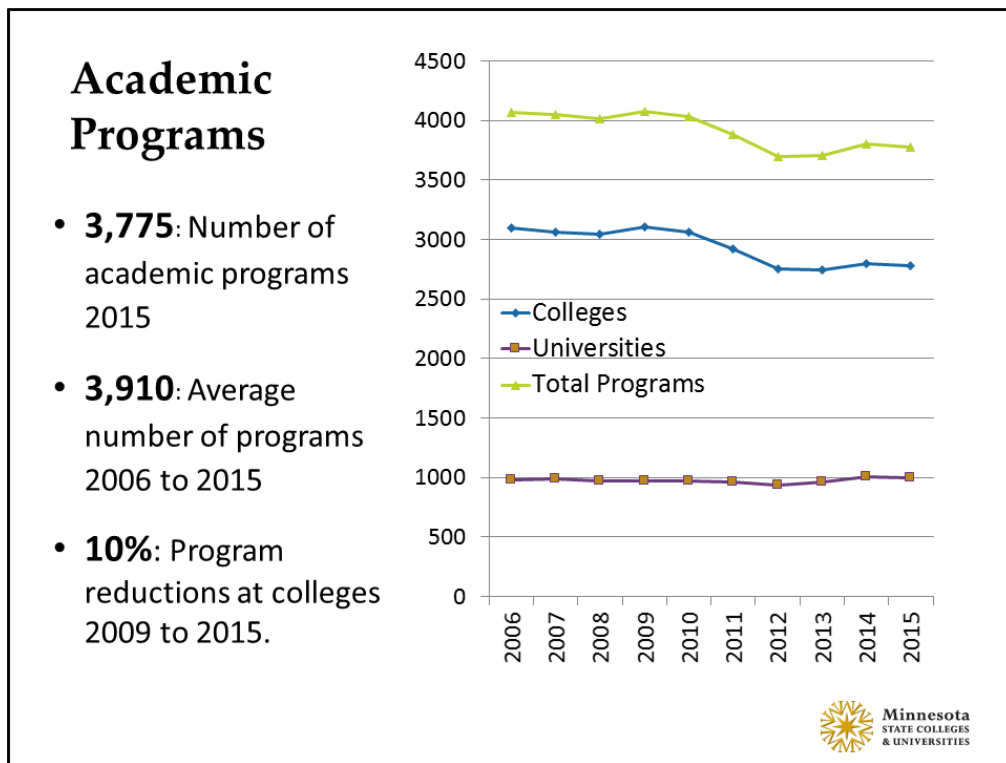


Figure 1: Academic Programs in Program Inventory 2015

Programs by Award Level

System colleges and universities offer a range of academic awards at the undergraduate and graduate levels. Undergraduate awards include certificates which may require as few as nine credits, diplomas, associate degrees and bachelor degrees. Graduate awards include graduate certificates, master’s degrees, specialist degrees, and doctorates.

System colleges may offer certificates, diplomas, and associate degrees. Of these, certificate programs outnumber associate degree programs 1,077 to 1,038, followed by 665 diploma programs. Universities offer a broader range of award levels, but most academic programs award the bachelor's degree, accounting for 59% of all programs at universities. See Figure 2.

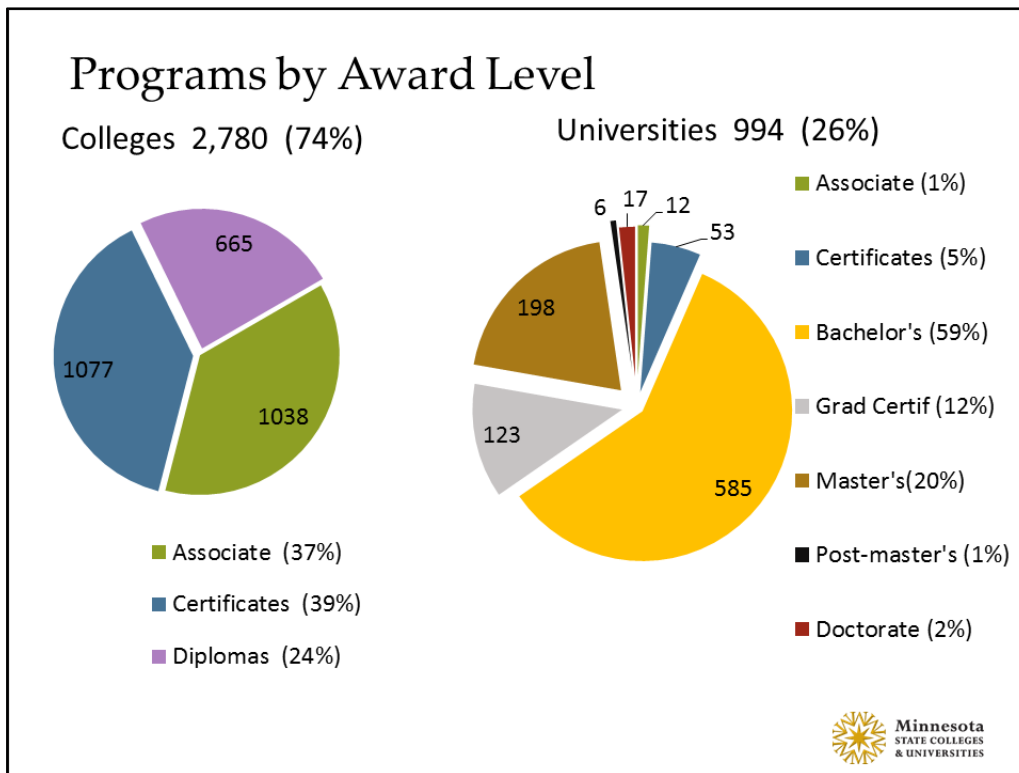


Figure 2: Academic Programs by Award Level 2015

Program Duplication

System colleges and universities have specific missions to serve the community and region in which they are located. This attention to local needs can be seen in the diverse array of programs that are designed by the faculty and administration at each institution to meet local needs. Most programs are offered at five or fewer institutions, and those that are offered at more than five colleges and universities are typically the most in-demand programs such as business, education, liberal arts, and health care. The state legislature delegated to the Board the responsibility to avoid duplicate program offerings, and the fact that few programs are duplicated across high numbers of institutions is reflected in Figure 3.

Program Appeal

The variety of skill preparation needed to support workforce needs throughout Minnesota and local differences in student interest causes system college and university programs to vary in size and number. The appeal of specific programs can be demonstrated as follows: a) programs offered at the most colleges or universities and b) numbers of program graduates and

completers in instructional program categories. The most commonly offered program is the associate degree in Liberal Arts and Sciences, which is offered at 31 institutions. Other most commonly offered programs in Table 1 include nursing, business, and automotive technology.

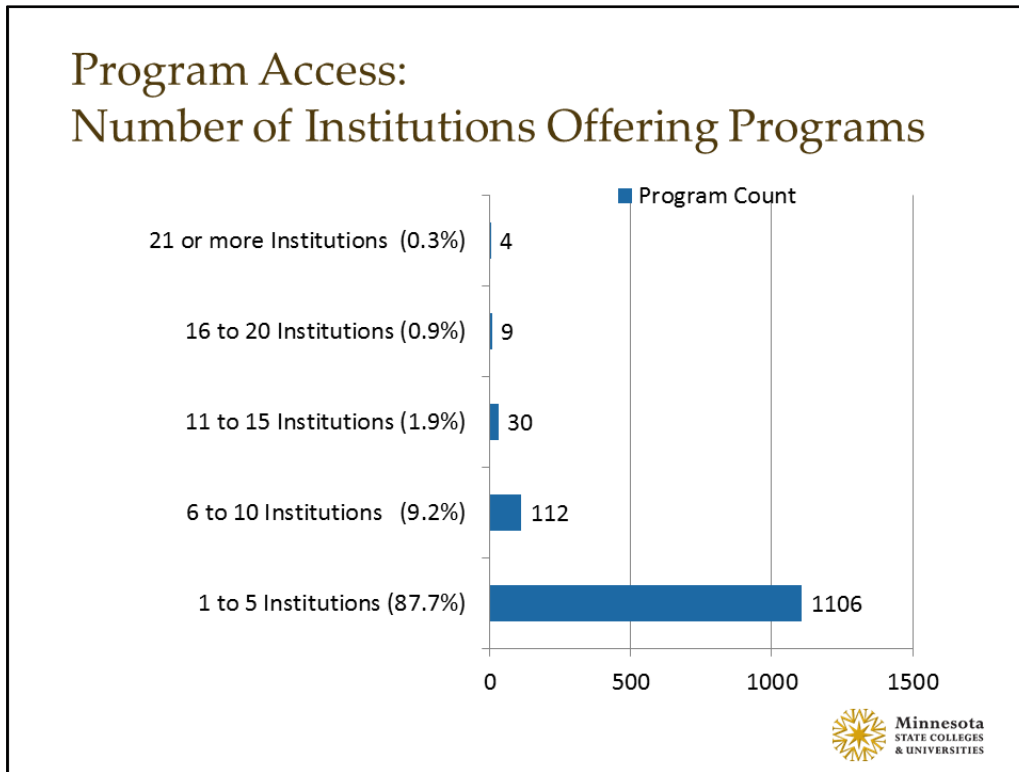


Figure 3: Program Variety and Lack of Duplication

**Program Groups Offered by 16 or More Institutions
Fiscal Year 2013***

Program Group			Number of Institutions Offering Programs within Program Group
CIP Code	CIP Code Description	Award	
520301	Accounting	AAS	17
520401	Administrative Assistant and Secretarial Science, General	AAS	18
470604	Automobile/Automotive Mechanics Technology/Technician	DIP	20
520201	Business Administration and Management, General	AS	17
190709	Child Care Provider/Assistant	CERT	17
520701	Entrepreneurship/Entrepreneurial Studies	CERT	16
510000	Health Services/Allied Health/Health Sciences, General	AS	16
240101	Liberal Arts and Sciences/Liberal Studies	AA	31
513901	Licensed Practical/Vocational Nurse Training	DIP	22
510716	Medical Administrative/Executive Assistant/Medical Secretary	AAS	16
513902	Nursing Assistant/Aide and Patient Care Assistant/Aide	CERT	26
513801	Registered Nursing/Registered Nurse	AS	22
480508	Welding Technology/Welder	CERT	17

Table 1: Most Commonly Offered Programs 2015

Perhaps not surprisingly, the top-ranked programs in terms of graduates and completion in recent years align with the most-frequently offered programs. Across all colleges and universities, instructional programs with the highest number of completers are those in the health professions, followed by the liberal arts, and then business programs. Table 2 shows the top ten educational fields ranked by number of completers as of 2013.

**Instructional Program Groups Ranked By Completers
Fiscal Year 2013***

Educational Field		
CIP Code	Category Description	Completers
51	Health Professions	10,987
24	Liberal Arts and Sciences/Liberal Studies	6,657
52	Business Management and Marketing	5,958
13	Education	2,297
43	Homeland Security, Law Enforcement, Firefighting	2,163
47	Mechanic and Repair Technologies	1,383
11	Engineering Technologies	1,223
15	Computer and Information Sciences	1,291
50	Visual and Performing Arts	1,038
46	Construction Trades	879

Table 2: Top Programs Ranked by Number of Completers

Programs by Occupational Field

Another way to analyze the programs listed in the program inventory is to examine the variety and breadth of occupational fields or disciplines represented. Of the 3,775 programs currently offered by system colleges and universities, 826, or 22%, are in the fields of science, technology, engineering and mathematics (STEM). Minnesota State Colleges and Universities are consistently at the forefront of new technologies and are preparing our students for the jobs of today and tomorrow. Other major fields include business and marketing with 571 programs, the health professions with 566 programs, and the trades, mechanics, and transportation areas with 497 programs. See Figure 4.

Programs by Group (Colleges & Universities)

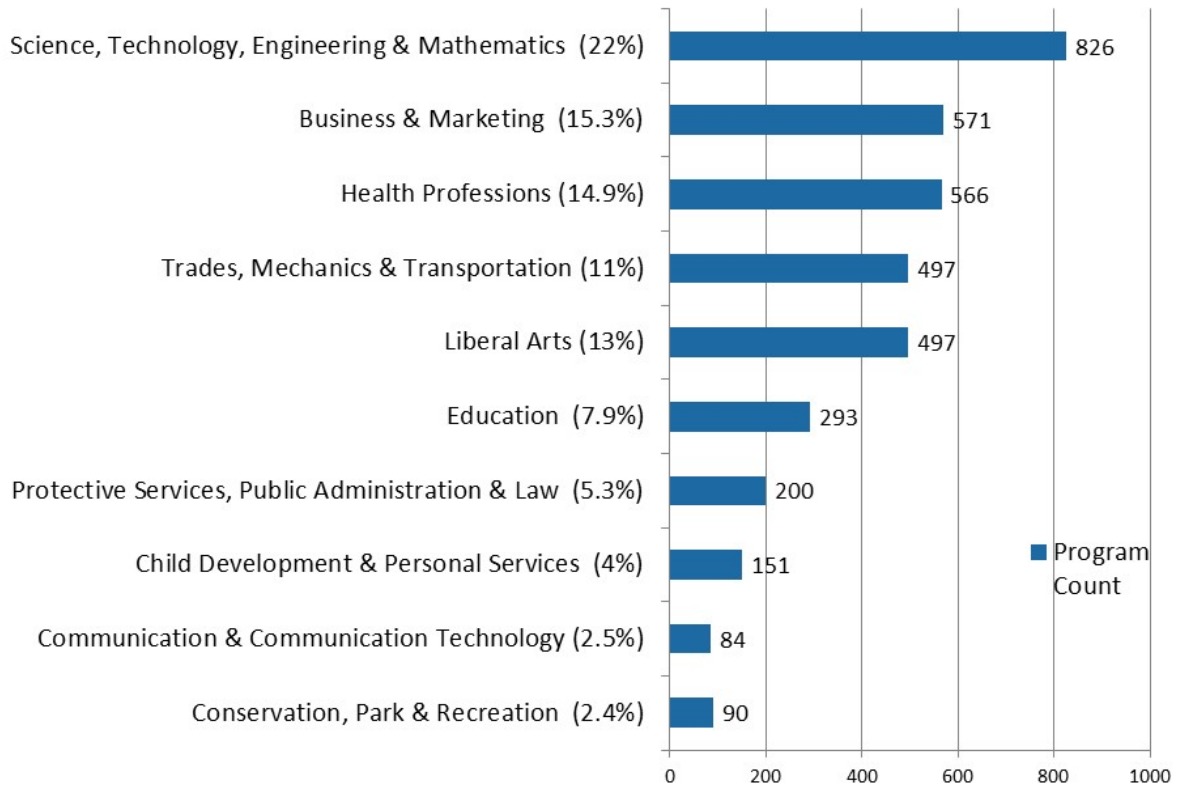


Figure 4: Program Appeal by Field of Study

Program Mode of Delivery

Mode of delivery refers to the way the classes in a program are taught. Minnesota State Colleges and Universities has defined three modes of program delivery. *Land* refers to programs delivered in face-to-face instructional settings. *Online Exclusive* refers to programs that are offered only online--no participation in face-to-face classes is available. *Online Plus* refers to an online program that is offered entirely online, but in which students may elect to take one or more classes through face-to-face delivery. The online delivery modes are especially beneficial to those students who face geographical or scheduling barriers to their education.

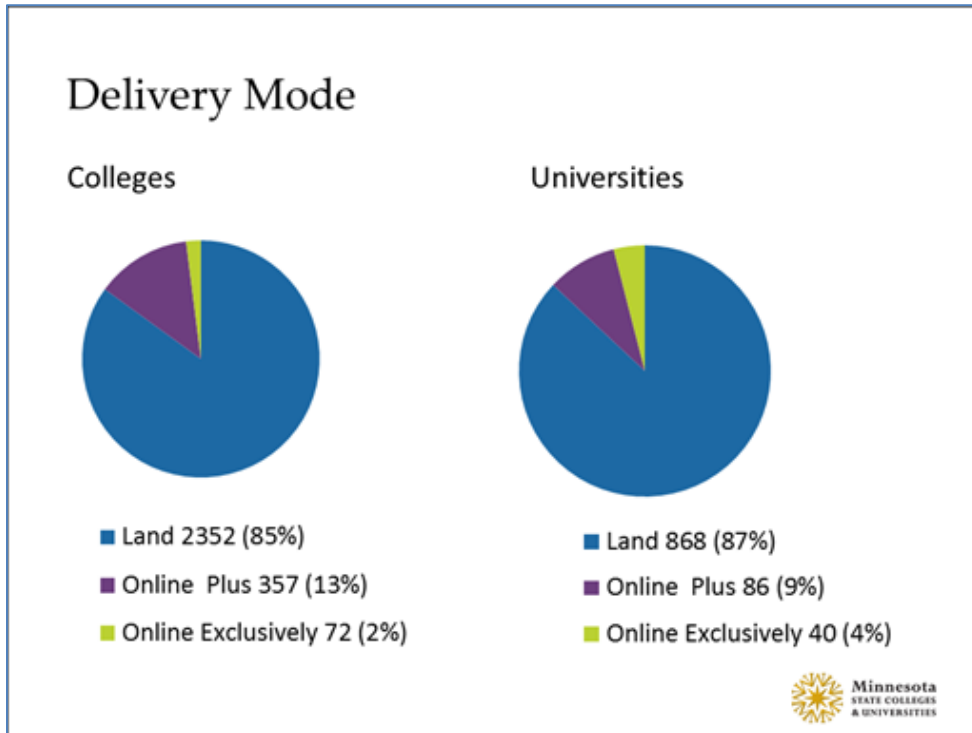


Figure 5: Programs by Delivery Mode 2015

As shown in Figure 5, approximately 85-87% of programs use the traditional mode of delivery, but a growing proportion of programs are delivered fully online at colleges and universities.

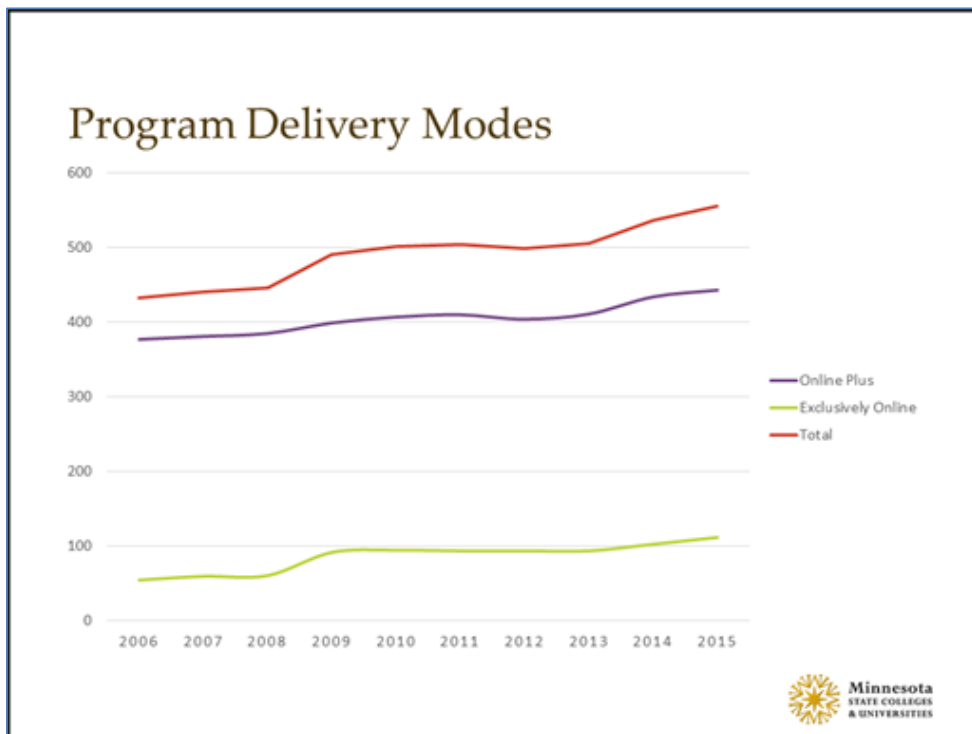


Figure 6: Growth of Online Programs 2006-2015

In 2015, almost 15% of all programs were available completely online, compared to 10.6% of programs only ten years ago in 2006. Figure 6 shows the growth of online programs over the past decade.

Use of Program Inventory

The Program Inventory is not a static data archive of academic programs, but is a dynamic representation of programs as they change, are opened, closed, or suspended. The Program Inventory is used by faculty, campus staff and leadership. Students also have access to the program inventory through the First Search website and the MnSCU Viewbook. If students are looking for programs offered by any system college or university, they can go to the MnSCU.edu web site and click on the link to *Find a Program or Major*. They may search by key word, program category, school, or zip code, or browse the programs by academic award, school, category, or delivery mode (Figure 7).

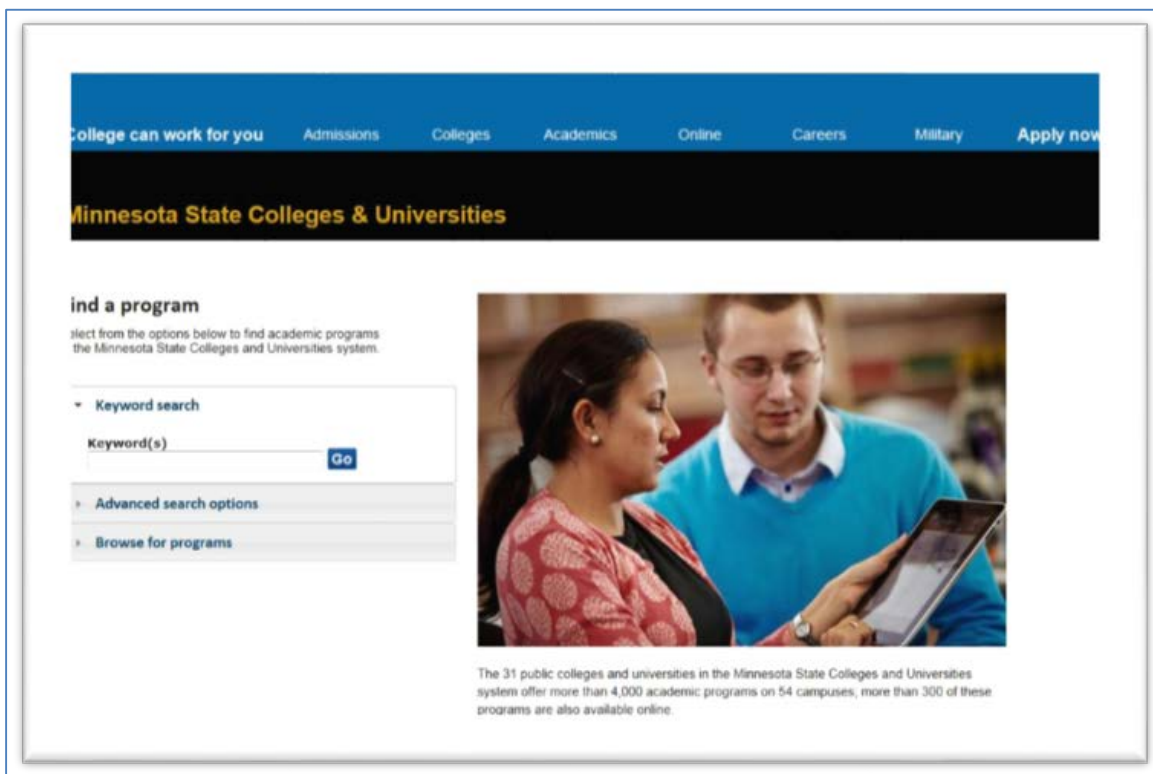


Figure 7: First Search Access to Program Inventory

Students and others can access the data in the program inventory through the MnSCU Viewbook (Figure 8). This online and print publication provides an overview of the Minnesota State Colleges and Universities, information on tuition, financial aid, student assistance, study abroad opportunities, transfer policies, and institution demographics. The Viewbook also lists programs organized by region and subject category.



Figure 8: MnSCU Viewbook Includes Program Inventory Data

Faculty and staff at system colleges and universities have access to the online First Search catalog and MnSCU Viewbook but they can also access the program inventory in a more

Program Inventory Dashboard

PROGRAM INVENTORY - Active Programs Only

Select institution(s) and/or CIP(s) then click "View Report". Reports can be sorted by institution, CIP, or career pathway.

Multi-select: HOLD the CTRL key to select individual values or hold SHIFT to select multiple adjacent values.

Institution Name:

- Institution Short Formal Name --
- Group --
- Alexandria Technical and Community College
- Anoka Technical College
- Anoka-Ramsey Community College
- Bemidji State University

CIP & Digit:

- Group --
- 01 0000 Agriculture, General
- 01 0120 Architecture/Architectural Business Operations
- 01 0400 Business Administration and Management
- 01 0500 Business Administration and Management
- 01 0500 Agricultural Farm Supplies Retailing and Interrelated

Advanced Filters:

Advanced filters allow you to select particular programs based on award, credit length, delivery mode, and other values.

[Click here to go to Advanced Filters](#)

Faculty and staff can access Program Inventory through a custom dashboard

Figure 9: Program Inventory Dashboard for Faculty and Staff Access

detailed environment. Oracle's Enterprise Performance Management System provides a customized Program Inventory dashboard (Figure 9) that allows faculty and staff to search the inventory by CIP (classification of instructional program), by career pathway, by award level, by institution, by delivery mode, and more. This tool is very helpful when colleges and universities are engaged in academic planning in that it helps them to avoid unnecessary duplication of programs, and to find opportunities for collaboration in program offerings.

Aligning Program Offerings to Workforce Needs

Most of the system's programs are intended to prepare students directly for joining the state's workforce. The concept of workforce alignment includes four specific dimensions:

1. Understanding the workforce needs of business and industry. The system provides up-to-date information to college and university program planners that helps them identify current and changing employment markets, including predicted openings and wage levels.
2. Aligning supply of graduates with employers' needs: In proposing new programs, colleges and universities consider whether there is currently (or is likely to be in the future) a substantial difference between the supply and demand for program graduates. Supply/demand also considerations also include:
 - a. *Geography*: Are programs offered in the appropriate locations?
 - b. *Educational Level*: Are graduates prepared with the appropriate degree (certificate, associate, baccalaureate, or graduate)?
3. Aligning the skills and knowledge in programs: Program planners provide evidence about how curricula (e.g., learning outcomes, soft skills, tools, and technology) meet industry needs. Program evaluation at colleges and universities assesses whether program graduates are adequately prepared for jobs related to their training.
4. Developing awareness of employment markets: System campuses must constantly promote and explain to current and prospective students the occupational opportunities and requirements in each of their programs.

In addition, as system colleges and universities consider whether to add, close, or revise programs, they are expected to address a number of factors, including program demand, curricular content, possibilities of collaboration or unnecessary duplication, the college or university mission, and resources. In order to assist program planners in making decisions that benefit the students and increase program efficiencies, the system office provides and maintains useful tools on the Academic Programs web site.

Program Planning Tools

LMIwise, using data provided by the Minnesota Department of Employment and Economic Development (DEED) and Minnesota State Colleges and Universities, allows users to easily access labor market supply and demand data. Program planners, using program or occupation titles and descriptions, or by browsing career clusters or occupation-program sets, can view a wide variety of occupational demand indicators, including current employment, wages, and projected growth. They can also view the supply of recent graduates from Minnesota and

neighboring states. A comprehensive interpretation guide walks users through the process of compiling and analyzing these data.

Other tools made available to campus program planners include a Student Interest Handbook compiled for MnSCU by Hanover Research, a link to the national Economic Development and Employer Planning System (EDEPS), an analytical tool for business, education, workforce and economic planners, a link to the O*NET program, which is the nation's primary source of occupational information, and more.

Within Program Navigator, the database management system custom designed for Minnesota State Colleges and Universities, program planners submit information concerning their program plans. For new programs, they submit a Notice of Intent that is published online for statewide review and comment by other colleges or universities. The system office's Academic Programs staff review comments and work with campus leadership to resolve any concerns. For all proposals, staff offer advice on policy requirements and application completeness, and when compliance with policy is ensured, the program is added to the program inventory.

Program Effectiveness

The United States Department of Education requires postsecondary institutions to report data on the employment of its graduates as an indicator of program effectiveness. For the Minnesota State Colleges and Universities as a whole, the evidence on this key indicator is strong. The employment rate for program graduates is typically quite high, indicating that the programs completed by the student are well-matched for the workforce needs of the state. Table 3 lists the top ten educational fields as ranked by the number of student completers and the corresponding employment rate.

**Completers' Employment Rates by Educational Field
Fiscal Year 2013***

Program Group			
CIP Code	Category Description	Employment Rate	Completers
51	Health Professions	92%	10,987
24	Liberal Arts and Sciences/Liberal Studies	91%	6,657
52	Business Management and Marketing	92%	5,958
13	Education	93%	2,297
43	Homeland Security, Law Enforcement, Firefighting	88%	2,163
47	Mechanic and Repair Technologies	94%	1,383
11	Engineering Technologies	94%	1,223
15	Computer and Information Sciences	90%	1,291
50	Visual and Performing Arts	90%	1,038
46	Construction Trades	93%	879

Table 3: Employment Rate of Completers in Top Programs

Annual Program Change

The number of academic programs regularly increases or decreases slightly over time. Changes reflect the state's occupational needs and student demand, as well as attention to program efficiencies, available resources, and program costs.

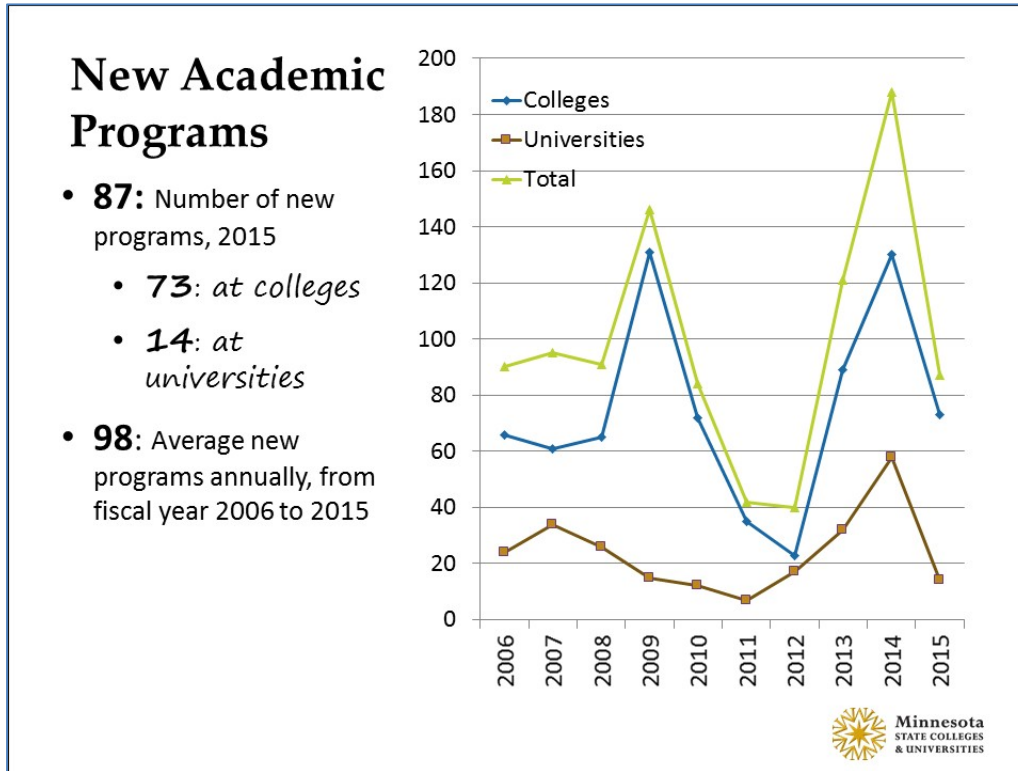


Figure 10: New Academic Programs Approved in Past Year

In the past year, 87 new programs were added to the program inventory, as shown in Figure 10, most of them coming from system colleges. This number was lower than the average of 98 new programs annually over the previous decade, but reflects the recent upturn in the economy. When jobs are plentiful, student enrollment tends to decrease, and programs created for displaced workers are phased out. During poor economic periods, enrollments increase, and colleges and universities tend to increase the number of programs designed to meet the needs of the students and employers.

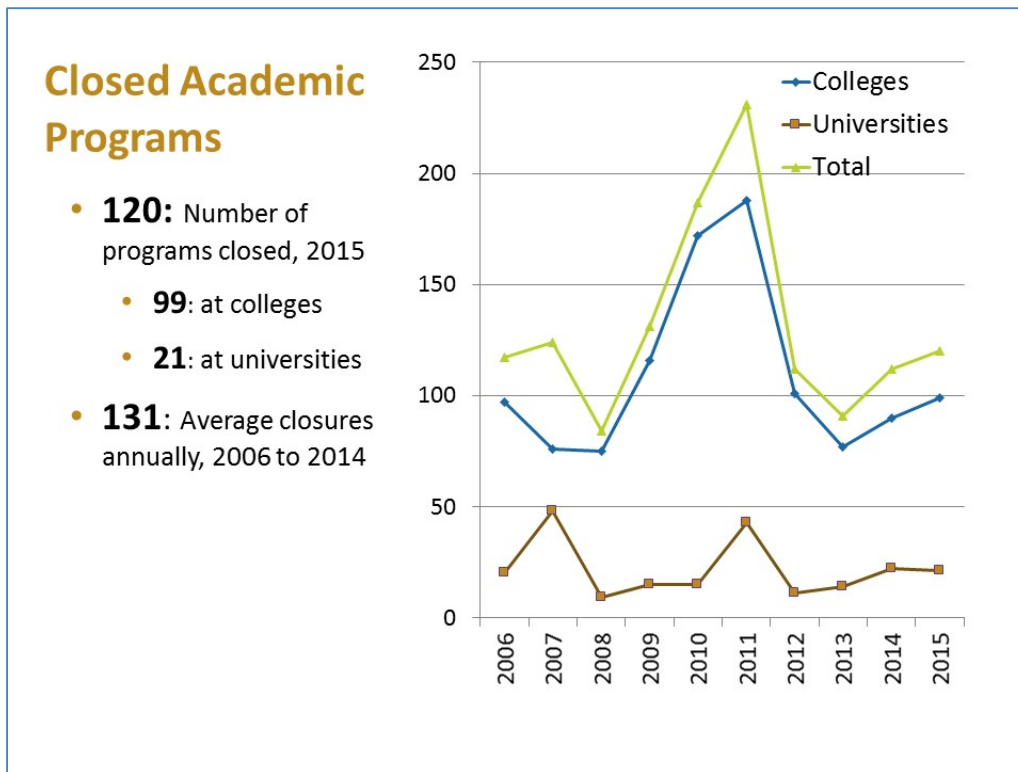


Figure 11: Existing Programs Closed in Past Year

Figure 11 shows that the number of programs that were closed in the past year is also lower than the yearly average during the last decade. Of the 120 programs closed, nearly 100 were at system colleges. Although the numbers vary from year to year, this number of closures is only about ten fewer than expected. Overall, it's important to note how stable the numbers are in closures and openings, with approximately two to three percent of all programs added and closed each year.

Credit Waivers

Session law in 2007 directed the Minnesota State Colleges and Universities Board of trustees to set the maximum number of semester credits required for a baccalaureate degree at 120 credits, and for an associate degree at 60 credits. The law permits the Board of Trustees to grant waivers for specific degree programs in which industry or professional accreditation standards require a greater number of credits.

Compliance: Degree Credit Length

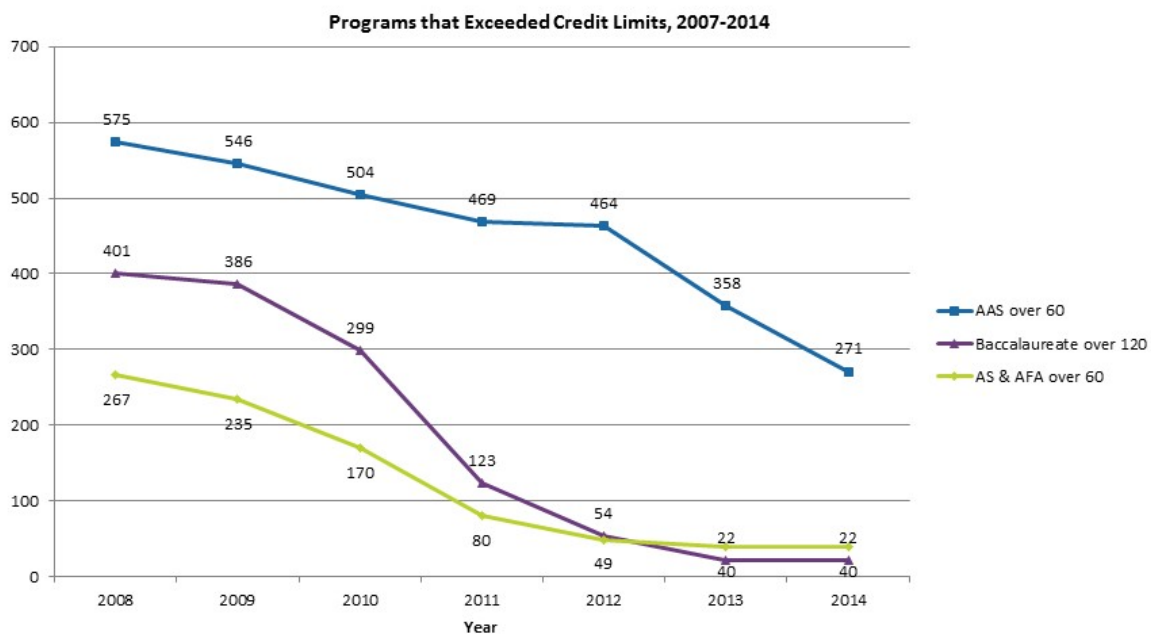


Figure 12: Degree Cap Credit Waivers October 2014

Nearly all programs that exceeded the 60/120 credit cap have reduced their requirements or have received a waiver. The annual reports required by the legislature have also been shared with the board and are available on the MnSCU website.

Figure 12, from the October 2014 Degree Credit Caps report to the Legislature, illustrates the significant reduction in program credit lengths at system colleges and universities from 2008 through 2014. Seven years ago, over 1,200 programs (30% of all programs) exceeded the credit length cap. By September, 2014, that number had been reduced to 333 programs (10% of all programs). The review of the fifty-nine remaining waiver requests will be completed by July, 2015.

Collaboration

System colleges and universities are encouraged to use strategic planning processes to create collaborative and coordinated academic programs that advance affordability, transferability, and access across the state. New models of collaboration are especially emergent among the high tech programs offered at system colleges and universities. These programs have high

instructional costs and relatively low enrollment, but they are essential to meet the workforce needs of the state. Collaboration among state colleges is a way to overcome those barriers and prepare our students for jobs of the future.

Some notable achievements in collaborative programs are in the areas of health information technology, the development and growth of the Minnesota Alliance for Nursing Education, collaboration among colleges in early childhood/child development, development of the Professional Science Master's degree, and creation of broad field articulation agreements in engineering and the health sciences.

Recent innovations in collaboration involve high technology and high-need, low-enrollment programs. Dakota County Technical College has created a partnership with several other colleges to offer nanotechnology at several locations. Students will take the general education core and other required classes at their home institution, and be taught in the "nano" classes from DCTC faculty, in some cases using telepresence technology. Normandale Community College is collaborating with South Central College to offer its vacuum and thin film technology program with several colleges and the University of Minnesota to advance development of these highly sought tech professionals throughout the state. These efforts will serve as models for further collaboration among colleges and universities in Minnesota.

Conclusion

The academic programs of the Minnesota State Colleges and Universities should prepare graduates for work, life, and citizenship. Academic programs should create graduates who are creative, innovative, and able to respond with agility to new ideas, new technologies, and new global relationships. Graduates should be able to lead their professions and adapt to the multiple careers they will have over their lifetimes.

--MnSCU Board Policy 3.36 Academic Programs

The MnSCU Program Inventory in 2015 continues to reflect a vibrant academic culture among faculty and administrators on our campuses who are working to offer programs designed to meet the workforce needs of the State of Minnesota, as well as the individual needs of the students. The breadth of program offerings at system colleges and universities provides ample opportunity for Minnesota citizens to learn a trade or occupation, to gain an education, to develop maturity and character, and to contribute back to society.

Appendix

This appendix was prepared at the request of the Board of Trustees to provide a comparison between career and technical programs (CTE) and liberal arts and sciences programs (non-CTE), and to provide further information on the reasons for closures of academic programs. This analysis is based on a review of all program applications processed between July 1, 2014 and June 8, 2015 and does not correspond with the totals included in the original Program Inventory Report of May 19, 2015.

Career and Technical Programs vs. Liberal Arts Programs 7/1/2014 – 6/8/2015

Program Change	CTE Programs	Non-CTE Programs	Total Programs
New Program Proposals	136	10	146
Requests to Close Program	99	3	102

Reasons Provided for Program Closures

Colleges and universities submit proposals for new programs and requests for program closures through Program Navigator, a database management system that links to the Program Inventory. When a program initiator submits an application to close a program, he or she is presented with a series of questions about the program and the action requested. One set of questions concerns “Closure Rationale” and includes a drop-down menu for “Reason(s) for Closure.” The college or university can choose more than one reason, so the totals do not correspond with the number of program closures.

Career and Technical Programs vs. Liberal Arts Programs 7/1/2014 – 6/8/2015

Reasons for Program Closure	Number of Programs
Availability of internship sites	0
Availability of qualified faculty	4
Limitations of facilities	0
Limited financial resources	14
Low program enrollment	47
Program duplicates another in close proximity	3
Program was not accredited	1
Projected employment opportunities for graduates is low	2
Recommendation of advisory committee or employer group	8
Related employment rate for graduates has been less than 60%	0
Will be offered as customized training	0
Other	40
No answer	5

In addition to the pull-down menu of rationale, program initiators are provided with an opportunity to explain the rationale for the closure. A review of these open-ended answers reveals a complexity to the decision-making not captured by the drop-down menu. An analysis of the narrative explanations suggests that the primary reason for closing a program is in one of three categories. Almost half of the proposed program closures are related to program redesign or restructuring at the campus, and although the specific program is being closed, there is either another program opening, or students are being directed into a similar or related program. For example, at Rochester Technical and Community College, the Intensive Care Paramedic program was slated to be closed because it was replaced with the Emergency Medicine Paramedic AS degree. The closure was submitted to “clean up” the Program Inventory. The other most common reasons for closure are Low Enrollment and Limited Resources.

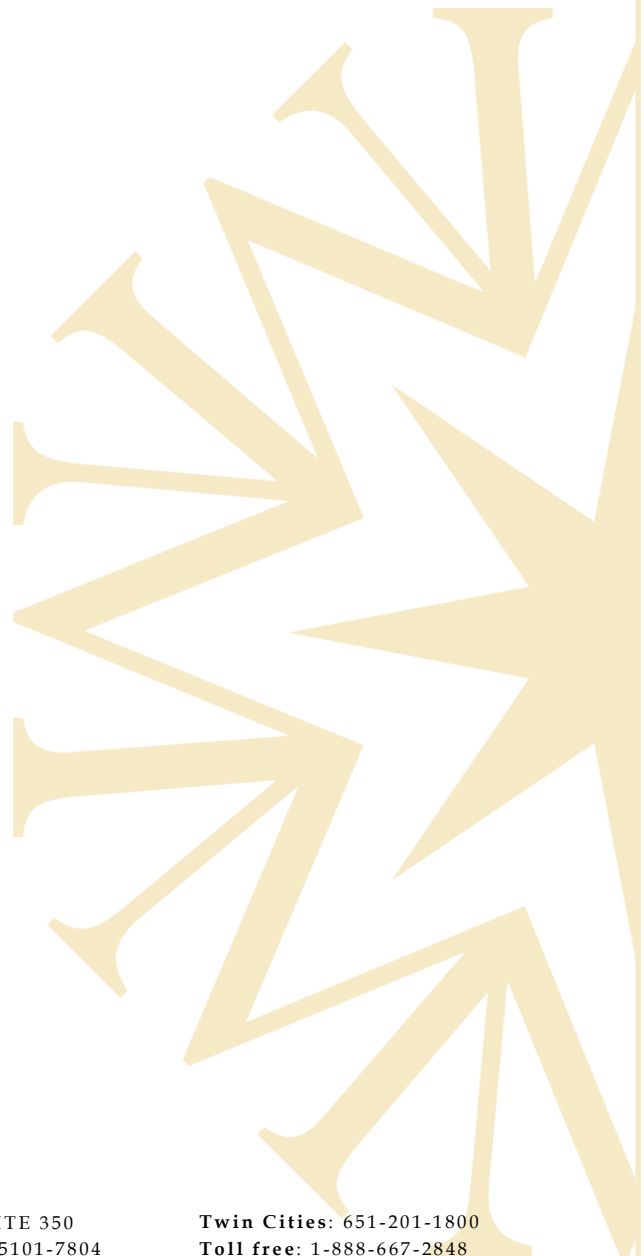
Program Redesign/ Reorganization	Low Enrollment	Limited Resources
47	47	8



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