



**BOARD OF TRUSTEES STUDY SESSION
JANUARY 20, 2010
9:30 A.M.**

**HERITAGE HALL
INVER HILLS COMMUNITY COLLEGE
2500 E 80TH STREET EAST
INVER GROVE HEIGHTS, MN**

Please note: Committee/Board meeting times are tentative. Committee/Board meetings may begin up to 45 minutes earlier than the times listed below if the previous committee meeting concludes its business before the end of its allotted time slot.

Chair Olson calls the meeting to order.

- (1) Program Inventory Management (pp. 1-16)

**MINNESOTA STATE COLLEGES AND UNIVERSITIES
BOARD OF TRUSTEES**

Agenda Item Summary Sheet

Committee: Board of Trustees Study Session

Date of Meeting: January 20, 2010

Agenda Item: Program Inventory Management

Proposed Policy Change Approvals Required by Policy Other Approvals Monitoring
 Information

Cite policy requirement, or explain why item is on the Board agenda:

The Board of Trustees has asked for information regarding a) an explanation of processes and criteria used to manage the inventory of academic programs, b) a summary of the inventory of academic programs and c) the relative growth/decline of trades programs.

Scheduled Presenter(s):

Linda L. Baer, Senior Vice Chancellor for Academic and Student Affairs
Manuel López, Associate Vice Chancellor, Academic and Student Affairs
Joan Kuzma Costello, Provost/Vice President for Academic Affairs, Inver Hills Community College

Outline of Key Points/Policy Issues:

Full time equivalent enrollment in career and technical education courses has remained stable from 2005 to 2009 while total enrollment for all courses has increased. During this same period the number of academic programs in some trades such as Electrical/Electronics Maintenance and Repair Technology, Precision Systems Maintenance and Repair Technologies, and Vehicle Maintenance and Repair Technologies has decreased while the number of non-trades programs has increased.

The Minnesota State Colleges and Universities offer over 4,200 academic programs. Colleges and universities apply to the Office of the Chancellor to request changes to their program inventory.

Background Information:

Board of Trustee policy 3.36-Academic Programs and Chancellor’s procedure 3.36.1-Academic Programs establish parameters for academic programs and procedures for managing the program inventory. Guidelines, forms and instructions are used by college and university staff members to submit change requests to the Office of the Chancellor. Modifications to the program inventory occur when a program is closed, suspended, reinstated, relocated, replicated, added, or changed. Program characteristics that may be changed include: academic award, credit length, name, classification code, delivery mode, location, and emphases.

**BOARD OF TRUSTEES
MINNESOTA STATE COLLEGES AND UNIVERSITIES
*INFORMATION ITEM***

Study Session: Program Inventory Management

BACKGROUND

The Board of Trustees Academic and Student Affairs Committee has asked questions about the a) processes and criteria used to manage the inventory of academic programs, b) number of programs offered by the system and c) relative growth/decline of career and technical education and trades programs.

Managing the inventory of academic programs involves three inter-related functions; these are listed below. The first function (academic program applications) and elements of the second (program inventory) are discussed in this Board of Trustees Information Item. Program review, the third function, is not discussed.

1. Academic program applications. Applications are required when a program is closed, suspended, reinstated, relocated, replicated, added, or changed. Program characteristics that may be changed include: academic award, credit length, name, classification code, delivery mode, location, and emphases.
2. Official system program inventory. The program inventory is used for accountability, federal reporting, student information, planning/analysis, and marketing.
3. Academic program review. Colleges and universities review programs and report annually to the Office of the Chancellor as prescribed by Board policy and Chancellor's procedure.

PROGRAM APPLICATIONS: APPROVAL PROCESSES AND CRITERIA

Board of Trustees policy and Chancellor's procedures shape academic program processes and approval criteria. Guidelines, forms and instructions provide further requirements and supporting information. Academic Program policies, procedures, guidelines, forms and instructions are available at www.mnscu.edu.¹

Program Approval Processes

All new programs and some changes to existing programs must be reviewed and approved by the Office of the Chancellor. The following actions require approval:

New Location
New Program

¹ Click on policies and procedures or, to find guidelines, forms and instructions, click on: division web sites - academic and student affairs - academic programs.

Notice of Intent (if applicable)
Redesign: Add or delete emphasis
Redesign: Add or replace existing program
Redesign: Change program or emphasis name or CIP
Redesign: Change program or emphasis credit length
Redesign: Online delivery status
Redesign: Reinstate suspended program
Relocate or Replicate a Program
Suspend or Close a Program

Roles

College or University The process of initiating new programs or redesigning existing programs begins with the faculty at each college or university. In some cases external review boards or program advisory committees offer suggestions. Generally, a formal college or university-wide committee of the faculty then reviews and makes recommendations concerning applications. The faculty's recommendation is then forwarded to the college or university administration, where it receives its final review and college/university approval before an application is submitted to the Office of the Chancellor for final approval.

Office of the Chancellor Academic Programs staff members review applications for compliance with existing academic program policy, procedures, and guidelines and make or recommend approval decisions.

Board of Trustees Board of Trustees approval is required when colleges or universities request a mission change to offer a new type of award.

Approval Process

Program Planning and Development Colleges and universities are responsible for completing program applications. Academic Programs staff are available for consultation regarding selection of appropriate application forms, the program approval process, timelines, and information resources.

College or University Approval Documentation of appropriate college and university approval must be included with the application.

Comment Period When submission of a Notice of Intent is required, the Office of the Chancellor posts it to a listserv of chief academic officers and presidents for a 21 day review and comment period.

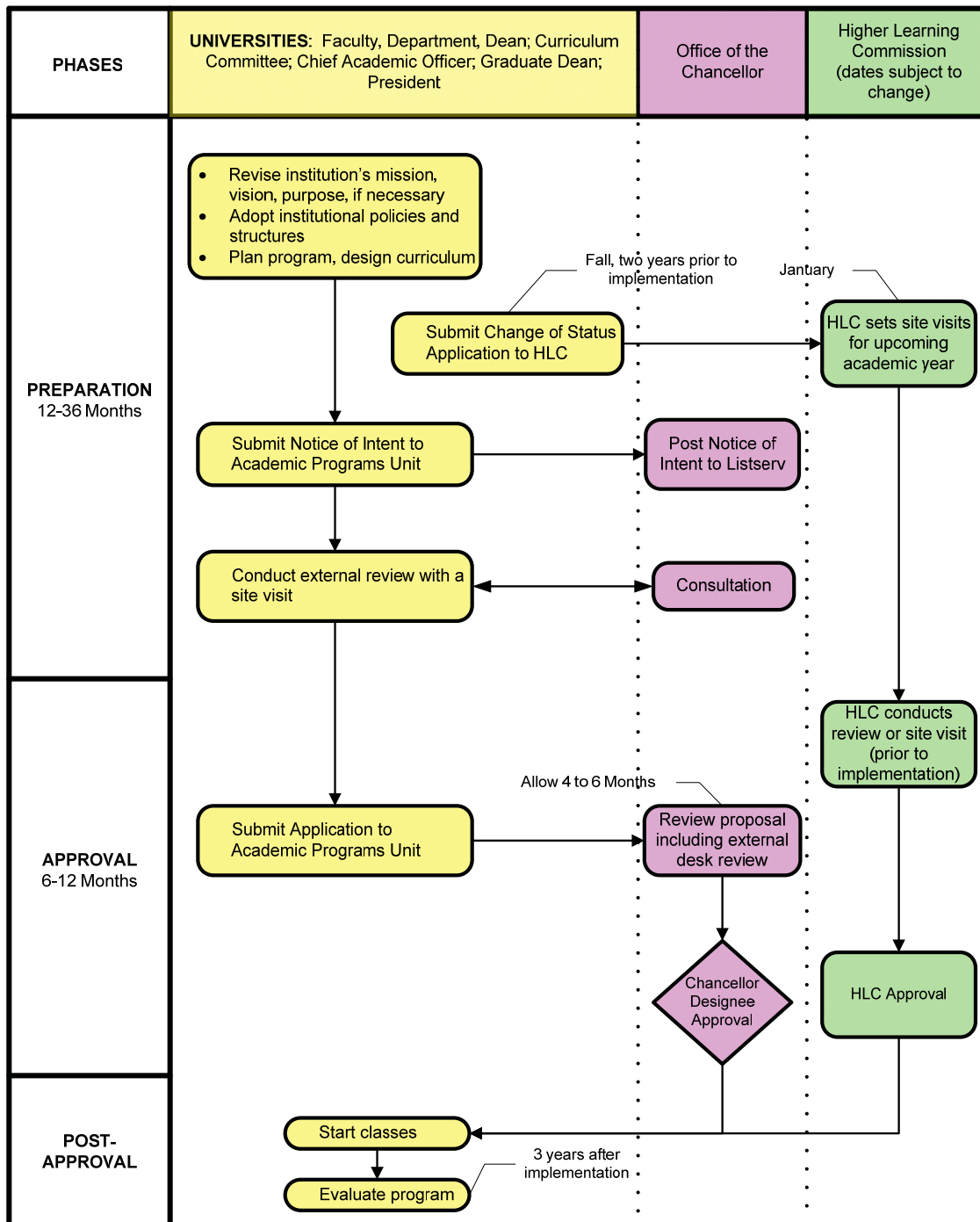
Submission of Application Form One copy of a completed application is submitted in a Word format via e-mail and one paper copy by mail (four paper copies for doctoral applications). Applications may be submitted any time during the year. Proposals may be withdrawn at any time.

Review and Approval The application review process often involves questions, discussions, and revisions. Proposals are subject to critical analysis and changes may be required. In some cases, proposals may need to be modified significantly, may be delayed, or conditions may be required. Once approved, the program is added to the official program inventory.

The following diagram illustrates the sequence of steps and roles for approval of a new doctoral program. The process for other new programs is similar except that the Higher Learning Commission is not usually involved, external reviews are not required (except for Master's degree programs) and Chancellor's procedure does not require an evaluation three years after implementation. Doctoral program applications require more time to review than other new program applications.

DOCTORAL PROGRAM APPROVAL PROCESS

DRAFT
Aug 20, 2008



Approval Criteria

Approval criteria vary depending upon the type of program application (new academic program, redesign,

closure, etc.). Chancellor's procedure 3.36.1 – Academic Programs, provides criteria for:

- Part 3. Authorized Academic Awards.
 - Subpart A. System college and university award authority
 - Subpart B. Academic Award attributes
 - Subpart C. Program credit length waivers for associate and baccalaureate degrees.
- Part 4. Authority to Establish Academic Program Locations.
- Part 5. Academic Program Approval.
 - Subpart A. Approval of new academic programs
 - Subpart B. Approval of changes to existing academic programs
 - 1. Closure
 - 2. Accreditation to deliver academic programs online
 - 3. Redesign
 - 4. Suspension and reinstatement
 - 5. Academic program replication and relocation

The most extensive criteria are required for new programs. New academic program criteria, required by Chancellor's procedure 3.36.1 – Academic Programs, Part 5, Subpart A are shown below. Guidelines, forms and instructions align with these criteria.

Criteria for New Program Approval (Chancellor's procedure 3.36.1)

Part 5. Academic Program Approval. *The chancellor shall prepare guidelines for the preparation of academic program proposals.*

Subpart A. Approval of new academic programs. *A new academic program requires approval by the chancellor before it is offered by a system college or university.*

All college level courses required for academic program completion, with the exception of preparatory courses, shall be included in the total number of credits for an undergraduate academic program.

Pursuant to guidelines prepared by the chancellor, academic program proposals must provide documentation of:

1. **Authorization**
 - *alignment with the system college or university mission and award authority.*
2. **Resources**
 - a. *the capability to provide necessary human, facility, technological and financial resources,*
 - b. *faculty qualifications, and*
 - c. *facility leases and bonding requests, where applicable.*
3. **Need**
 - a. *student interest,*
 - b. *occupational demand, and*
 - c. *avoidance of unnecessary duplication with academic program at other system colleges and universities.*
4. **Academic Program Attributes**
 - a. *location(s) and delivery mode,*
 - b. *regional or other inter-institutional reviews where applicable, and*
 - c. *special circumstances, such as a specified termination date, intermittent delivery, or rotating sites.*
5. **Curriculum**

- a. conceptual framework,
 - b. catalog description,
 - c. student learning outcomes,
 - d. academic program goals and objectives,
 - e. list of courses,
 - f. delivery mode,
 - g. college programmatic pathway, where applicable,
 - h. conformance to award and design requirements, and
 - i. academic program assessment plan.
6. **External academic program requirements, where applicable**
- a. transferability of credit,
 - b. academic program accreditation,
 - c. third party assessment of student learning outcomes, such as assessments under the federal Carl D. Perkins Vocational and Technical Education Act of 1998, Public Law 105-332,
 - d. industry skills standards, and
 - e. industrial or professional certification and/or licensure requirements.
7. **Approvals and Agreements**
- a. signed articulation agreements or collaborative agreements where applicable,
 - b. academic program advisory committee recommendations where applicable,
 - c. documentation of system college or university approval, and
 - d. other documentation that supports the application.

Program Application Illustration: Inver Hills Community College

Office of the Chancellor staff members process approximately 900-1,200 program applications per year. To illustrate changes to a college's program inventory, a list of applications processed for Inver Hills Community College during calendar year 2009 is provided below.

| Inver Hills Community College, Program Applications for Calendar Year 2009 | | | | | |
|--|---|---------|-------------|---------------------|---|
| CIP | Program/Emphasis Name | Credits | Award | Location | Changes |
| Action: Added | | | | | |
| SubType: New | | | | | |
| 13.050100 | Innovative Technology and Instruction | 9 | Certificate | Inver Grove Heights | New Program |
| 13.140100 | TESOL: Teaching English for Speakers of Other Languages | 10 | Certificate | Inver Grove Heights | New Program |
| 26.010100 | Biology | 60 | AS | Inver Grove Heights | New Program |
| Action: Changed | | | | | |
| SubType: Emphasis² | | | | | |
| 24.010100 | Liberal Arts and Sciences | 60 | AA | Inver Grove Heights | Reduced credit length of Mathematics emphasis |
| 24.010100 | Liberal Arts and Sciences | 60 | AA | Inver Grove Heights | Added Political Science emphasis |
| 24.010100 | Liberal Arts and Sciences | 60 | AA | Inver Grove Heights | Added Mathematics emphasis |

² A program emphasis is a focused component of an academic program.

Inver Hills Community College, Program Applications for Calendar Year 2009

| CIP | Program/Emphasis Name | Credits | Award | Location | Changes |
|----------------------------------|---------------------------------------|----------------|--------------|---------------------|-----------------------------------|
| 24.010100 | Liberal Arts and Sciences | 60 | AA | Oak Park Heights | Added Political Science emphasis |
| 24.010100 | Liberal Arts and Sciences | 60 | AA | Shakopee - MCF | Added Political Science emphasis |
| 24.010100 | Liberal Arts and Sciences | 60 | AA | Stillwater - MCF | Added Political Science emphasis |
| 51.160102 | LPN Mobility | 64 | AS | Inver Grove Heights | Program name; classification code |
| 51.160100 | Paramedic Mobility | 64 | AS | Inver Grove Heights | Program name |
| 51.160101 | Nursing | 64 | AS | Inver Grove Heights | Classification code |
| SubType: Redesign Changed | | | | | |
| 13.010102 | Teacher Education | 60 | AS | Inver Grove Heights | Program name |
| 13.050100 | Innovative Technology and Instruction | 9 | Certificate | Inver Grove Heights | Delivery mode |
| 15.120200 | I.T. Help Desk | 16 | Certificate | Inver Grove Heights | Reduced credits |
| 22.030100 | Legal Administrative Assistant | 64 | AS | Inver Grove Heights | Reduced credits; program name |
| 22.030100 | Legal Administrative Assistant | 28 | Certificate | Inver Grove Heights | Reduced credits; program name |
| 22.030200 | Paralegal | 60 | AS | Inver Grove Heights | Reduced credits |
| 22.030200 | Paralegal | 30 | Certificate | Inver Grove Heights | Reduced credits |
| 24.010200 | Individualized Professional Studies | 60 | AS | Inver Grove Heights | Classification code |
| 46.040300 | Building Inspection Technology | 60 | AAS | Inver Grove Heights | Reduced credits |
| 46.040302 | Building Permit Technician | 17 | Certificate | Inver Grove Heights | Reduced credits |
| 46.041200 | Construction Management | 60 | AS | Inver Grove Heights | Reduced credits |
| 50.070200 | Art | 60 | AFA | Inver Grove Heights | Reduced credits |
| 51.160100 | Nursing | 64 | AS | Inver Grove Heights | Program name |
| 51.161400 | Nursing Assistant | 5 | Certificate | Inver Grove Heights | Program name |
| 52.010100 | Contemporary Business | 60 | AS | Inver Grove Heights | Delivery mode |
| 52.030100 | Accounting | 62 | AS | Inver Grove Heights | Reduced credits |

| Inver Hills Community College, Program Applications for Calendar Year 2009 | | | | | |
|--|----------------------------|---------|-------------|---------------------|----------------------------------|
| CIP | Program/Emphasis Name | Credits | Award | Location | Changes |
| 52.070300 | Small Business Development | 15 | Certificate | Inver Grove Heights | Increased credits; delivery mode |

PROGRAM INVENTORY

The Minnesota State Colleges and Universities system offers over 4,200 academic programs. Programs are counted at each location where a student could complete an entire program. In addition to location, an academic program is uniquely identified by its academic award (certificate, diploma, associate in arts degree, etc.), code number from the Classification of Instructional Program (a 6-digit code handbook published by the U.S. Department of Education that categorizes specific major fields of study titles), and the college or university authorized to confer the award.

The table below shows the current number of academic programs offered by each college/university and award type. Of the total 4,222 academic programs, colleges offer 3,119 (73.9 percent) and universities offer 1,103 (26.1 percent).

Number of Academic Programs by College/University by Award, 31-Dec-2009

| | | Certificate | Diploma | Associate of Applied Science | Associate | Bachelors | Graduate Certificate | Graduate | Doctorate |
|---|--------------|-------------|---------|------------------------------|-----------|-----------|----------------------|----------|-----------|
| Colleges | Total | | | | | | | | |
| Alexandria Technical College | 104 | 32 | 34 | 29 | 9 | 0 | 0 | 0 | 0 |
| Anoka Technical College | 74 | 24 | 29 | 21 | 0 | 0 | 0 | 0 | 0 |
| Anoka-Ramsey Community College | 85 | 41 | 0 | 5 | 39 | 0 | 0 | 0 | 0 |
| Central Lakes College | 97 | 35 | 32 | 23 | 7 | 0 | 0 | 0 | 0 |
| Century College | 129 | 56 | 25 | 35 | 13 | 0 | 0 | 0 | 0 |
| Dakota County Technical College | 138 | 44 | 38 | 48 | 8 | 0 | 0 | 0 | 0 |
| Fond du Lac Tribal and Community College | 48 | 24 | 1 | 8 | 14 | 1 | 0 | 0 | 0 |
| Hennepin Technical College | 233 | 93 | 68 | 68 | 4 | 0 | 0 | 0 | 0 |
| Hibbing Community College | 49 | 11 | 14 | 14 | 10 | 0 | 0 | 0 | 0 |
| Inver Hills Community College | 54 | 27 | 0 | 5 | 22 | 0 | 0 | 0 | 0 |
| Itasca Community College | 20 | 5 | 3 | 4 | 8 | 0 | 0 | 0 | 0 |
| Lake Superior College | 120 | 46 | 27 | 34 | 13 | 0 | 0 | 0 | 0 |
| Mesabi Range Community and Technical College | 56 | 22 | 14 | 15 | 5 | 0 | 0 | 0 | 0 |
| Minneapolis Community and Technical College | 129 | 58 | 29 | 19 | 23 | 0 | 0 | 0 | 0 |
| Minnesota State College-Southeast Technical | 125 | 51 | 33 | 34 | 7 | 0 | 0 | 0 | 0 |
| Minnesota State Community and Technical College | 178 | 37 | 59 | 57 | 25 | 0 | 0 | 0 | 0 |
| Minnesota West Community and Technical College | 211 | 66 | 71 | 52 | 22 | 0 | 0 | 0 | 0 |
| Normandale Community College | 40 | 18 | 0 | 7 | 15 | 0 | 0 | 0 | 0 |
| North Hennepin Community College | 68 | 39 | 0 | 9 | 20 | 0 | 0 | 0 | 0 |
| Northland Community and Technical College | 118 | 43 | 34 | 29 | 12 | 0 | 0 | 0 | 0 |
| Northwest Technical College - Bemidji | 92 | 40 | 26 | 24 | 2 | 0 | 0 | 0 | 0 |

Number of Academic Programs by College/University by Award, 31-Dec-2009

| | | Certificate | Diploma | Associate of Applied Science | Associate | Bachelors | Graduate Certificate | Graduate | Doctorate |
|--|--------------|--------------|------------|------------------------------|------------|------------|----------------------|------------|-----------|
| Pine Technical College | 36 | 13 | 7 | 9 | 7 | 0 | 0 | 0 | 0 |
| Rainy River Community College | 15 | 4 | 5 | 2 | 4 | 0 | 0 | 0 | 0 |
| Ridgewater College | 195 | 55 | 69 | 54 | 17 | 0 | 0 | 0 | 0 |
| Riverland Community College | 144 | 73 | 32 | 23 | 16 | 0 | 0 | 0 | 0 |
| Rochester Community and Technical College | 126 | 45 | 23 | 23 | 35 | 0 | 0 | 0 | 0 |
| Saint Paul College | 124 | 61 | 20 | 31 | 12 | 0 | 0 | 0 | 0 |
| South Central College | 179 | 76 | 46 | 46 | 11 | 0 | 0 | 0 | 0 |
| St. Cloud Technical College | 96 | 18 | 37 | 38 | 3 | 0 | 0 | 0 | 0 |
| Vermilion Community College | 36 | 15 | 4 | 4 | 13 | 0 | 0 | 0 | 0 |
| College Totals | 3,119 | 1,172 | 780 | 770 | 396 | 1 | 0 | 0 | 0 |
| Universities | Total | | | | | | | | |
| Bemidji State University | 117 | 2 | 0 | 0 | 3 | 94 | 2 | 16 | 0 |
| Metropolitan State University | 98 | 6 | 0 | 0 | 0 | 67 | 12 | 12 | 1 |
| Minnesota State University Moorhead | 121 | 7 | 0 | 0 | 1 | 81 | 7 | 24 | 1 |
| Minnesota State University, Mankato | 271 | 8 | 0 | 0 | 4 | 130 | 36 | 89 | 4 |
| Southwest Minnesota State University | 151 | 1 | 0 | 0 | 4 | 102 | 1 | 43 | 0 |
| St. Cloud State University | 233 | 2 | 0 | 0 | 3 | 144 | 18 | 63 | 3 |
| Winona State University | 112 | 3 | 0 | 0 | 2 | 75 | 14 | 16 | 2 |
| University Totals | 1,103 | 29 | 0 | 0 | 17 | 693 | 90 | 263 | 11 |
| Totals of Colleges and Universities | 4,222 | 1,201 | 780 | 770 | 413 | 694 | 90 | 263 | 11 |

as of 29-Dec-2009

COMPARISON OF CAREER AND TECHNICAL EDUCATION (CTE) FULL YEAR EQUIVALENT (FYE) WITH LABOR MARKET INFORMATION

Partly related to the recent economic down turn, questions have been raised about change in career and technical education offered by Minnesota State Colleges. Data indicate that FYE in CTE courses at the colleges remained relatively stable, increasing by 0.8 percent from 38,830 in FY 2005 to 39,131 in FY 2009³. Enrollment trends reflect adjustments to occupational markets. The Office of the Legislative Auditor, in their 2009 study of Occupational Programs, notes that “the Minnesota State Colleges and Universities (MnSCU) system generally does a good job of assessing economic conditions and workforce needs ...”

³ Definitions:

- Career and Technical Education (CTE) courses are those defined under the Perkins Grant Program as implemented in Minnesota State Colleges and Universities.
- Definitions:
 - Full Year Equivalent in Career and Technical Education – FYE in CTE courses during the fiscal year.
 - Full Year Equivalent in Career and Technical Education by Career Cluster – FYE in CTE courses by career cluster. Career clusters are aggregations of programs on the basis of similar careers.

Labor market information and student full year equivalent enrollment (FYE) in career and technical education is presented for twelve program clusters. Three of these clusters showed an increase in CTE FYE, three showed a decrease and six were relatively unchanged.

Agriculture/Food and Natural Resources

1. Overall FYE has remained steady at about 5 percent of total CTE FYE.
2. Cluster showed an increase of 101 or 5.4 percent from 2005 to 2009 with the increases in agriculture and natural resource programs that may be starting to benefit from increasing interest in Green (conservation, sustainability, organic) offsetting a nearly 29 percent drop in Applied Horticulture and Horticultural Business Services that is tied to the collapse of new residential construction and the associated landscaping services.

Architecture and Construction

1. Share of total CTE FYE dropped from 8.8 percent in 2005 to 7.3 percent.
2. Enrollment in this cluster experienced the largest numerical and percentage drop of any cluster. This retrenchment of enrollment is in direct response to the collapse of the construction job market from its peak in 2006 to the present. Based on DEED-LMI seasonally adjusted data for Minnesota, the statewide number of construction wage and salary jobs has dropped by 38,700 or - 29.3% from its post 2001 recession peak in February 2006 to July 2009.

Arts, A/V Technology and Communications (Includes Information Technology programs)

1. Little overall change in the share of total CTE FYE or actual enrollment.
2. The overall lack of change masks some of the underlying shifts in the specific programs. There were sharp drops in enrollment in several areas of IT, such as programming and data processing, which have declining employment because of outsourcing and new technologies. On the other hand there were increases in enrollment in computer science and computer engineering technologies and several multi-media areas.

Business/Management /Finance

1. Its share of total CTE FYE increased over the period from 14.5 percent to 15.3 percent making it the second largest cluster after Health Science.
2. Enrollment in most subareas showed growth, with the exception of real estate which dropped by 77 percent.

Health Science

1. The largest CTE cluster maintained its share of total CTE FYE during this time at 23.6 percent.
2. Enrollment in the cluster grew by 284 or 3.2 percent which seems small given the rather significant amount of attention that health careers get in the media. The more explosive enrollment growth occurred earlier in the decade in response to the nursing shortage. For

example, the number of two-year program nurse program completers increased by 849 or 97 percent between 2001 and 2005.

3. There was a downturn in enrollment in several of the allied health areas during 2005-2009. These were Allied Health Diagnostic, Intervention, and Treatment; Clinical/Medical Laboratory Science and Allied Professions; and Rehabilitation and Therapeutic Professions. Given the fact that much of the nursing shortage has diminished (at least for now), it would be important for some students who are interested in health careers to consider these smaller but critical allied health professions as an alternative.

Hospitality and Tourism

1. This CTE cluster maintained its share of total CTE FYE during this time at about 5.5 percent.
2. Nearly the entire increased enrollment over the period took place in fitness trainer and nutrition programs which may reflect an increasing focus on wellness.

Human Services/Government/Education & Training

1. This CTE cluster maintained its share of total CTE FYE during this time at about 3.5 percent.
2. Overall, there was a small increase in enrollment. There was a shift away from Family Studies and Social Work towards Education and Human Services.

Law, Public Safety and Security

1. This CTE cluster increased its share of total CTE FYE over the period from 4.5 percent to just over 5 percent.
2. Enrollment grew at the second fastest rate of any cluster, 15.1 percent, trailing only Manufacturing.
3. Tight State and local government budgets have kept hiring of law enforcement officers to modest levels. However, there is probably strong demand for personnel who work in the criminal justice and corrections areas, since these sectors have seen increased activity and new prisons.

Manufacturing

1. This CTE cluster increased its share of total CTE FYE by a full percentage point over the period from 5.6 percent to 6.6 percent.
2. Enrollment in manufacturing programs registered both the largest numerical and percentage gain of any CTE cluster during the period. Enrollment in precision manufacturing programs grew by over 44 percent, and enrollment in heavy/industrial equipment maintenance grew by 207 percent.
3. There has been a good deal of promotion of precision manufacturing over the past five years, even though the Minnesota manufacturing sector as a whole has steadily been cutting jobs since the middle of 2005. On a seasonally adjusted basis, the number of manufacturing jobs in July 2009 was 51,200 (-14.7%) less than the post 2001 recession high of 348,800 in May 2005. Manufacturing has lost 101,200 jobs (-25.4%) from its all-time peak of 298,800 in June 1998.

4. The increase probably reflects the special work of the Manufacturing and Applied Engineering Center of Excellence and its work with specific companies and industry associations to beef up local technical college programs to serve small- and medium –sized companies that are surviving foreign outsourcing by investing in advanced equipment and skilled workers to successfully compete for business in specialized niche products at a competitive price.

Marketing, Sales, and Service

1. This CTE cluster experienced a decrease in its share of total CTE FYE, falling from 8.0 percent to 6.9 percent.
2. The bulk of the decline in enrollment took place in two areas, Cosmetology and General Sales, Merchandising. Seven of the nine colleges with cosmetology-related programs are in Greater Minnesota. The decreasing size of the traditional high school graduates to college enrollment base in rural MN and may partially account for the downturn. The general shift to self-service and large box retailers may account for a downturn in the sales/merchandising program.

Technology & Engineering

1. This CTE cluster generally maintained its share of CTE FYE at around 3.1 percent.
2. Enrollment gains in electromechanical instrumentation and industrial production technologies did not quite offset a large decrease in enrollment in electrical engineering technologies. This cluster is one that probably has also benefitted from the promotion and program development activities of the Manufacturing and Applied Engineering Center of Excellence.

Transportation, Distribution and Logistics

1. This CTE cluster also experienced a decrease in its share of total CTE FYE, falling from 6.2 percent to 5.2 percent.
2. Enrollment dropped by the second largest amount of any CTE cluster, in percentage terms, -15.4 percent, due to the decline in enrollment in vehicle maintenance and repair technologies programs.
3. The decline appears to be a response to a decreased demand from employers in both the motor vehicle and parts industry and auto repair and maintenance industry. Minnesota employment in the motor vehicle industry has dropped 4,614 or -13.2 percent from July 2005 to July 2009. Employment in auto repair and maintenance firms dropped by 1,712 or -10.7 percent during that same period.

Programs in the Trades

Concern has been expressed that some areas of career and technical education may be declining more rapidly than other areas with particular concern about the number of programs being closed. The following analysis focuses on a sub-set of career and technical education called “trades”.

Definition of Trades The term “trades” refers to occupations requiring skilled labor. For the purpose of this analysis, 20 (out of 377) broad program classifications were selected to represent trades. Programs in these classifications have content and objectives that have traditionally represented the trades. System colleges offer programs in 15 of these 20 classifications, which represent programs in construction trades, mechanic and repair technologies/technicians and precision production.

Definition of Non-Trades “Non-trades” includes programs in (1) career and technical education that are not in the trades and (2) liberal arts and sciences.

The analysis below shows the number of trades programs offered by colleges with a comparison to the number of all other programs (non-trades).

As assessed by the number of applications submitted by colleges to close or open programs, the number of programs offered by the system increased or remained the same in eight trades classifications and decreased in seven over the last five calendar years. In total, the number of academic programs in the trades declined by 18 as shown in the table below. During this period colleges have added 126 and closed 144 programs in the trades. Comparatively, the number of programs in non-trades areas has increased by 158.

The largest declines in the number of trades programs occurred in Precision Systems Maintenance and Repair Technologies (-20), vehicle maintenance and repair technologies (-20), and Electrical/Electronics Maintenance and Repair Technology (-15).

Trades and Non-trades: College Program Applications by Calendar Year

| Trades | Program Action ⁴ | 2005 | 2006 | 2007 | 2008 | 2009 | Total | Net Change |
|---|-----------------------------|------|------|------|------|------|-------|------------|
| 1. Building/Construction Finishing, Management, and Inspection. | Added | 1 | 1 | 0 | 2 | 7 | 11 | 5 |
| | Removed | 1 | 1 | 0 | 1 | 3 | 6 | |
| 2. Carpenters. | Added | 3 | 3 | 0 | 0 | 3 | 9 | 0 |
| | Removed | 1 | 4 | 1 | 1 | 2 | 9 | |
| 3. Construction Trades, General. | Added | 0 | 2 | 0 | 0 | 1 | 3 | 3 |
| | Removed | 0 | 0 | 0 | 0 | 0 | 0 | |
| 4. Electrical and Power Transmission Installers. | Added | 0 | 2 | 1 | 3 | 6 | 12 | 4 |
| | Removed | 4 | 2 | 0 | 1 | 1 | 8 | |
| 5. Electrical/Electronics Maintenance and Repair Technology. | Added | 1 | 0 | 0 | 1 | 0 | 2 | -15 |
| | Removed | 5 | 1 | 2 | 0 | 9 | 17 | |
| 6. Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician | Added | 0 | 1 | 0 | 1 | 1 | 3 | -3 |
| | Removed | 5 | 0 | 0 | 1 | 0 | 6 | |
| 7. Heavy/Industrial Equipment Maintenance Technologies. | Added | 0 | 1 | 9 | 4 | 3 | 17 | 6 |
| | Removed | 5 | 1 | 1 | 1 | 3 | 11 | |

⁴ Added includes new programs, programs replicated to a new location and program redesigns that result in a new program. Removed includes closed programs and program redesigns that remove a program.

Trades and Non-trades: College Program Applications by Calendar Year

| Trades | Program Action ⁴ | 2005 | 2006 | 2007 | 2008 | 2009 | Total | Net Change |
|--|-----------------------------|------|------|------|------|------|-------|------------|
| 8. Leatherworking and Upholstery. | Added | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| | Removed | 0 | 0 | 0 | 0 | 0 | 0 | |
| 9. Mason/Masonry. | Added | 1 | 0 | 0 | 0 | 0 | 1 | -5 |
| | Removed | 0 | 3 | 0 | 0 | 3 | 6 | |
| 10. Plumbing and Related Water Supply Services. | Added | 3 | 0 | 3 | 0 | 0 | 6 | 6 |
| | Removed | 0 | 0 | 0 | 0 | 0 | 0 | |
| 11. Precision Metal Working. | Added | 1 | 7 | 10 | 4 | 16 | 38 | 8 |
| | Removed | 8 | 10 | 3 | 3 | 6 | 30 | |
| 12. Precision Production Trades, General. | Added | 1 | 0 | 0 | 0 | 0 | 1 | -4 |
| | Removed | 0 | 0 | 0 | 0 | 0 | 0 | |
| 13. Precision Systems Maintenance and Repair Technologies. | Added | 0 | 0 | 1 | 0 | 1 | 2 | -20 |
| | Removed | 0 | 0 | 1 | 0 | 5 | 6 | |
| 14. Vehicle Maintenance and Repair Technologies. | Added | 10 | 1 | 6 | 0 | 1 | 18 | -20 |
| | Removed | 12 | 7 | 8 | 9 | 2 | 38 | |
| 15. Woodworking. | Added | 1 | 0 | 0 | 0 | 1 | 2 | -5 |
| | Removed | 0 | 2 | 1 | 0 | 4 | 7 | |
| Total Trades | Added | 22 | 18 | 30 | 15 | 41 | 126 | -18 |
| | Removed | 41 | 31 | 17 | 17 | 38 | 144 | |
| Total Non-Trades | Added | 204 | 142 | 85 | 103 | 217 | 751 | 158 |
| | Removed | 152 | 64 | 77 | 136 | 164 | 593 | |
| Total Trades and Non-Trades | Added | 226 | 160 | 115 | 118 | 258 | 877 | 140 |
| | Removed | 193 | 95 | 94 | 153 | 202 | 737 | |

The following table shows that colleges offer a total of 541 programs in the trades. This represents 17.4 percent of all programs offered by system colleges. The greatest number of trades programs is offered in vehicle maintenance and repair technologies (162 programs) and precision metal working (111 programs).

Count of College Programs, December 2009

| Trades | Number of Programs |
|---|--------------------|
| 1. Building/Construction Finishing, Management, and Inspection. | 34 |

Count of College Programs, December 2009

| Trades | Number of Programs |
|---|--------------------|
| 2. Carpenters. | 46 |
| 3. Construction Trades, General. | 6 |
| 4. Electrical and Power Transmission Installers. | 45 |
| 5. Electrical/Electronics Maintenance and Repair Technology. | 13 |
| 6. Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician | 34 |
| 7. Heavy/Industrial Equipment Maintenance Technologies. | 37 |
| 8. Leatherworking and Upholstery. | 2 |
| 9. Mason/Masonry. | 7 |
| 10. Plumbing and Related Water Supply Services. | 20 |
| 11. Precision Metal Working. | 111 |
| 12. Precision Production Trades, General. | 1 |
| 13. Precision Systems Maintenance and Repair Technologies. | 10 |
| 14. Vehicle Maintenance and Repair Technologies. | 162 |
| 15. Woodworking. | 13 |
| Total Trades | 541 |
| Total Non-Trades | 2,578 |
| Total College Programs | 3,119 |