

# **INSTRUCTIONS—NEEDS ASSESSMENT**

This document provides general information to document the need for a new academic program.

## **GENERAL PLANNING**

The collection of data on the population, industry, and occupational trends in a region and state is an important starting point for academic program planning. This involves the collection of basic demographic and economic data and environmental scanning to collect information on external “big picture” issues and trends that can have long term implications for the institution and for program sustainability. Environmental scanning often looks at issues and trends in four or five categories, such as demographics, economics, society, politics, and technology. The purpose of environmental scanning is to promote a future orientation for institutional leadership, and to identify potential trends that may be opportunities or threats to the organization as a result of these changes.

The last section of this document provides web links and contact information including Minnesota Labor Market Analysis Resources, U.S. Labor Market Analysis Resources, samples of System Supply and Demand Labor Market Analyses, and contacts. The Labor Market Analyst can also assist in identifying data sources. Contact: [Bruce.Steuernagel@so.mnscu.edu](mailto:Bruce.Steuernagel@so.mnscu.edu)

## **ASSESSING STUDENT INTEREST**

It is necessary to document student interest for a proposed program. This information is sometimes difficult to get, so ample time should be allowed for surveys or other kinds of research. Following are methods and tools for gathering this information.

### ***Identification of potential students***

What is the population you will be targeting? Consider variables such as age, education, location, and employment status, etc. You can survey working adults in your area, the unemployed, high school students in Project Lead the Way, PSEO or Tech Prep programs, students currently enrolled in related classes, or statewide association members.

Student interest in majors can be gleaned from the ACT Educational Planning and Assessment System (EPAS). This is a group of tests developed by ACT to assess student preparation for post-secondary education. Minnesota will pay for the standard test reports when public school districts administer standardized career assessments to middle or high school students. [ACT STUDENT INTEREST SURVEY](#)

You can also identify potential student demand for programs from industry publications, professional journals, government publications, grant applications and partnerships for the proposed program.

### ***Surveying potential students***

There are several approaches that can be used to survey students. For example:

- Surveys of students currently enrolled in related programs or courses can be conducted. For example, students enrolled in customized training clock hour courses in the college(s), or students in lower division courses within a discipline. They could be asked whether they would be interested in the proposed program;
- Surveys of high school counselors and students in related courses in area high schools can be used to estimate the potential number of students;
- Surveys of potential employers indicating how many current employees would be interested in taking courses or enrolling in the program;

- An advertisement or a pop-up survey on the college/university Web site could be used to solicit interest levels.

Create a sample large enough to elicit meaningful data to document the expected number of students entering the program annually. Strive for an 80 percent response rate from the sample you have defined.

There are several possible methods for surveying groups. You can mail or distribute a survey form or a postcard to selected groups, design an interactive Web page to gather information, put an ad in a local newspaper, or conduct phone calls.

### ***Survey Questions***

Consider some of the following survey questions.

How interested are you in an occupation like \_\_\_\_\_?

What are your enrollment plans for college? This year? Next? In the future? Definite or Undecided? College or University?

How likely are you to attend \_\_\_\_\_(the institution conducting the survey)?

What major are you interested in pursuing? (Give them a choice? Open ended?)

Is transfer important to you?

What major do you plan to pursue if you transfer?

The entry level mathematics/other requirement for this program are \_\_\_\_\_.  
What level of mathematics have you completed?

How far are you willing to commute?

What is the best time of day for classes for you?

Do you want more information? (Provide contact information)

Contact \_\_\_\_ for more information about \_\_\_\_\_ at \_\_\_\_\_.

In addition to open-ended questions, we recommend closed options responses using a Likert scale. A Likert scale is usually 4 possible responses from: Not Interested to Very Interested.

### **ASSESSING UNNECESSARY DUPLICATION**

Determining whether there is a need for a new program requires assessing whether other programs in the service area will be impacted negatively, and whether system resources are used efficiently. The assessment will take into account such measures as: the proximity of the proposed program to existing programs, whether there is sufficient potential enrollment to sustain all programs, and whether there are sufficient projected job openings for graduates of all programs.

The service area should roughly correspond to a likely labor market area for the occupation and/or the area where potential students are located. Traditionally this has been defined as a either specific region or group of counties of the state or an area within a one hour drive of the proposed program location. The labor market may vary depending on the nature of the

occupation. For example, occupations that have lower wage levels will typically have smaller geographic labor markets because long commutes are not economically viable. For other programs, such as unique programs, the service or market area can be the entire state, the upper Midwest region or other designated area. This is generally the case for bachelor degree programs where there is often significant relocation following completion of the program.

***Enrollment Impact/System Efficiency.*** The proposed program should not adversely affect enrollment in related programs at existing public colleges and universities within the proposed service area.

- Check the program inventory for related programs offered by system colleges and universities. Contact Academic Programs staff for a list of programs similar to the proposed program or check the current inventory available at the Program Review website. Click on [Program Inventories](#)
- A detailed environmental scan should also examine similar programs offered by private nonprofit colleges, private proprietary schools and the U of M to assess potential for competition for enrollments. The Career One Stop education and training tool at [Find College Programs](#) may be of assistance in helping to identify other Minnesota higher education institutions offer programs similar to the one being developed.
- Use [MAPQUEST](#) or [GOOGLE MAPS](#) to determine the distance from existing programs at other institutions to your institution. The Career One Stop tool also allows you to search for comparable programs within a 1-50 mile radius of a specified zip code. Based on your knowledge and information on your institution service area, determine if there is likely to be a significant overlap in areas served by the potential new program.
- Check enrollment level and trends in similar programs at other system institutions. Student enrollment (FYE) data are available from the system Instructional Cost Study. [Institutional Cost Study](#) The level of detail for FYE data varies, with 4-digit CIP code being the most common. In addition to enrollment, the size of similar programs at other public and private colleges, in terms of number of graduates, can be gleaned from the Market Share dashboard found at [MnSCU MARKET SHARE REPORTS](#)

***Employment Impact/Student Employment Success.*** The anticipated number of graduates should not adversely affect placement of graduates from programs at existing sites in the proposed service area. All existing similar programs in the service area should be experiencing successful graduate employment, related employment, continuing education, transfer or advanced study (over 75 percent).

Evaluate the placement rate of graduates of similar programs offered by other system colleges and universities by examining data from the Graduate Follow-up Survey. Data are available on both Total Employment Rate and Related Employment Rate. Contact the Labor Market Analyst for assistance with the data or consult the Minnesota Consumer Report on ISEEK.

[MINNESOTA CONSUMER REPORT](#) The Consumer Report contains employment and wage data on program graduates required by the Workforce Investment Act (WIA).

### **ASSESSING OCCUPATIONAL AND PROFESSIONAL SUPPLY AND DEMAND**

Legislation and Board policies and procedures require that new program applications must include an assessment of need based on occupational supply and demand. Generally, a supply/demand analysis should be done for each proposed new occupational or professional program. It is more difficult to undertake the analysis for liberal arts and science programs because graduates move into a much wider array of occupations, thus making it difficult to identify and limit the scope of occupational demand. However, if the proposed liberal arts program does have some relevant occupations, it would be a plus to include the analysis.

**Supply.** Labor supply includes the number of unemployed individuals in Minnesota who last worked in the occupation(s) related to the proposed new program, and the number of recent graduates from programs similar to the proposed program at other institutions in the State. Other sources of supply are migration from outside of Minnesota and those who shift from a different occupation into the proposed occupation. However, there is no reliable measure of these latter two sources of supply.

**Demand.** Occupational demand refers to current unfilled openings and projected annual job openings due to both growth and replacement. It is important to estimate the number of job openings that are anticipated over the next ten years, even though there may be fluctuations due to business cycles. Such documentation is important to justify the investment of resources in the proposed new program, as well as to attract student interest.

Occupational demand for the occupational and professional programs must be documented for the relevant labor market area. The area can vary depending on the proposed occupation and level of training. However, as a minimum, demand data for the region in which the institution is located and the State of Minnesota should be provided. In some cases, it is also advisable to widen the labor market area to include border states, the Upper Midwest region, and even the U.S. as a whole.

Demand for a new program may be created by new legislation or professional accreditation requirements. These changes mandate the completion of the program in order to be employed in the occupation. The changes can affect incumbent workers in the occupation, as well as new entering students.

The primary source for data on occupational demand in Minnesota is the Labor Market Information Office of the Department of Employment and Economic Development (DEED-LMI). Ten-year occupational employment and job opening projections for the State and six sub-state planning regions are produced on a two-year cycle. At the national level, the Bureau of Labor Statistics (BLS) produces ten-year projections. Occupational demand data for neighboring states are also available from the state Economic Security Agency.

Another possible source of demand data is the appropriate professional or trade association. In some cases, there may be information that is more specific and relevant to the proposed program than is available for the more general occupational classifications produced by DEED-LMI or the BLS.

In addition to the basic occupational employment projections data from DEED-LMI and BLS, it is also advisable to have additional documentation of demand for the program. There are several ways to document occupational demand.

**Surveys.** You can survey potential employers directly. Mailing lists can be obtained from advisory or steering committees, professional associations, licensure, registration, or certification boards, phone, business or member directories or other sources. One excellent source of names of major employers in a community is the DEED [Community Profile Tool](#). Another source of information is the Career One Stop [Employer Locator Tool](#).

The survey can request the following kinds of information:

- Number of current employees in proposed occupational area(s)
- Typical job titles and wages of employees in the proposed occupation
- Number of projected employees to be hired over the next year, or the next three years in new or replacement positions
- Difficulty experienced in hiring qualified individuals

- Number or percent of employers that support development of the proposed program
- Number of employers that would consider hiring graduates of the proposed program
- Interest in offering an internship site for students in the proposed program
- Interest in being a member of an advisory committee for the proposed program.

**Labor Market Information Research.** In addition to the occupational employment projections produced by the BLS and DEED-LMI, there are several other sources for labor market information that can be used to document demand.

- Documentation from professional organizations indicating the demand for employees
- Articles discussing employment opportunities in professional, trade and business journals, newsletters, publications and web sites
- An analysis over time of job openings using job banks such as [USAJOBS.GOV](http://USAJOBS.GOV) or [MONSTER MONTHLY EMPLOYMENT INDEX](http://MONSTERMONTHLYEMPLOYMENTINDEX)

Librarians, DEED Regional Labor Market Analysts, and placement or employment specialists may also be of assistance in researching other information to document occupational demand.

**Informal research.** Local or statewide research can also be conducted in less formal ways:

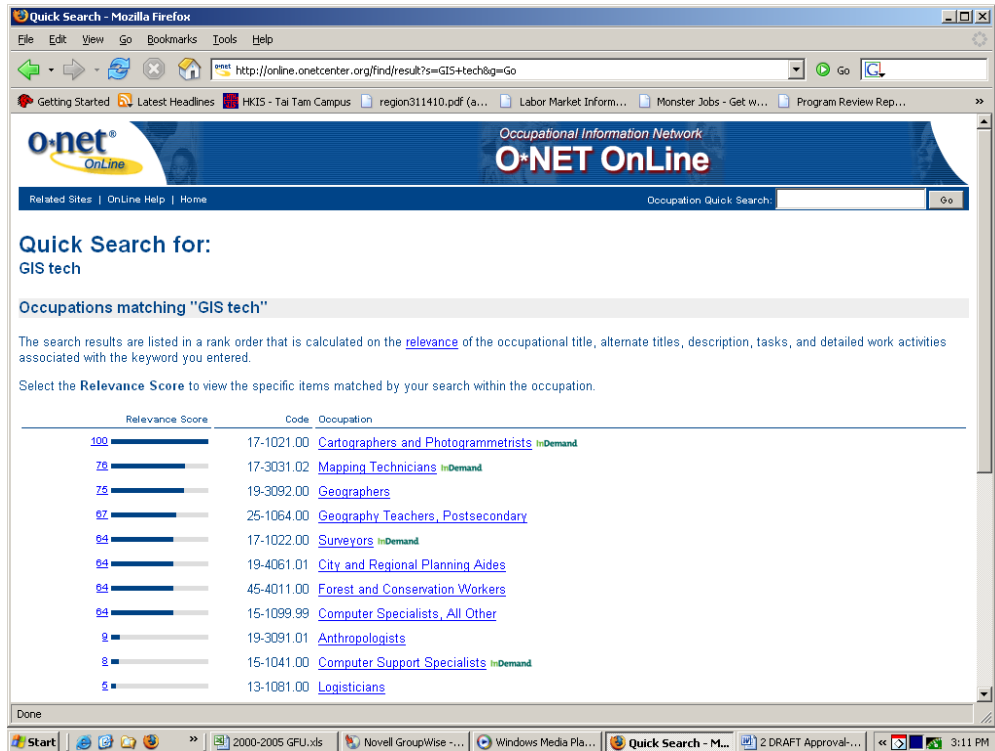
- Documented calls to college placement services requesting information on graduates of such a program,
- Advisory or steering committee information that reflects reliable industry assessment of projected employment demand,
- Documentation from grant applications and partnerships for the proposed program,
- Economic development organizations—membership and minutes and letters of support, or
- Letters of support from potential employers indicating demand and that they would support development of the proposed program, consider hiring graduates of the proposed program, and/or would be interested in serving as an internship site or on an advisory committee.

**Labor Market Information.** There are two basic steps necessary to gather labor market demand data. First, you need to identify the Standard Occupational Classification (SOC) code(s) that are related to the proposed program. In some cases there will be a clearly identifiable SOC code. In other cases, however, the proposed program may be for a very specific occupation or one that is new and emerging. In this case, the best one can do is to find the SOC code that represents the more general group of occupations that includes the one in your new program. The following websites will enable you to identify the most appropriate SOC code:

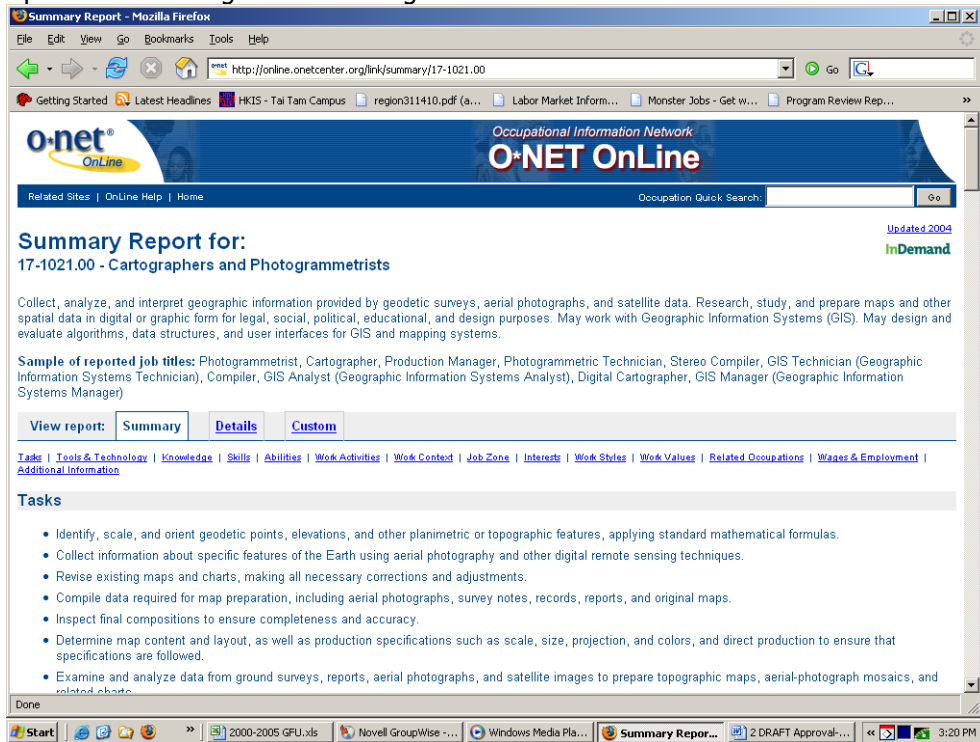
**[SOC Code Search Tool](#)** This tool searches a database of hundreds of thousands of lay-titles to match your occupation with the closest BLS-defined SOC Code.

**[O\\*Net Quick Search](#)** This search tool allows you to find occupations using keywords or O\*NET-SOC codes, or by browsing Job Families, High Growth industries, STEM disciplines, or O\*NET Descriptors.

EXAMPLE: You are proposing a new GIS program to train GIS Technicians. Put GIS Technician in the O\*Net Quick Search box and press Go. The results show the following:



The search gives you a couple of possible SOC codes, with the best fit being 17-1021 Cartographers and Photogrammetrists. To get more information about this occupational title and verify that this is what will be covered in the proposed program, click on the occupation. You will get the following results:



If the job description for SOC 17-1021 is satisfactory, you can go to the next step which is to get the corresponding labor market data on demand. In addition to the projected

occupational employment and job openings for the U.S., Minnesota and your region, you can use the SOC code to get wage data for this specific occupation.

Go to the Employment Outlook Tool at the DEED-LMI website and follow the steps.

**Employment Outlook Tool**

1. Under Occupation Projections, select the Long-term projections button
2. Select the U S, Minnesota, and Planning Area in which your institution is located, then press Select. For example Seven County Minneapolis-St. Paul, MN
3. In the Select Occupation Groups, select 17-Architecture and Engineering Occupations
4. Click View Detailed Occupations
5. Select 171021-Cartographers and Photogrammetrists
6. Click on View Data of Selected Occupations

You should get the following screen:

The screenshot shows a web browser window displaying the 'EMPLOYMENT OUTLOOK TOOL' results. The page is titled 'MNDEED - LMI - Projections - Mozilla Firefox' and the URL is 'http://www.deed.state.mn.us/lmi/tools/projections/Results.aspx'. The page features the 'positively Minnesota' logo and navigation links for 'Business Services', 'Community Development', 'Facts and Figures', 'Job Seekers', 'News and Events', and 'Publications'. Below the navigation, there are buttons for 'Employment Outlook Home', 'Change Area', 'Change Occupation', and 'Download Data'. The main content area is titled 'Long-Term Occupation Projections' and includes instructions to 'Click column headings to sort data.' The data is presented in three tables, one for each region: U.S., Minnesota, and Seven County Mpls-St Paul, MN. Each table has columns for SOC Code, Occupation, Estimated Employment 2004, Projected Employment 2014, Percent Change 2004 - 2014, Numeric Change 2004 - 2014, 2004 - 2014 Replacement Openings, and 2004 - 2014 Total Openings. The U.S. table shows 10,513 estimated jobs in 2004 and 12,117 projected in 2014, with a 15.3% increase and 1,604 numeric change. The Minnesota table shows 103 estimated jobs in 2004 and 123 projected in 2014, with a 19.4% increase and 20 numeric change. The Seven County Mpls-St Paul, MN table shows 83 estimated jobs in 2004 and 100 projected in 2014, with a 20.5% increase and 17 numeric change. The total openings for the U.S. are 5,200, for Minnesota 60, and for Seven County Mpls-St Paul, MN 47.

SOC Code	Occupation	Estimated Employment 2004	Projected Employment 2014	Percent Change 2004 - 2014	Numeric Change 2004 - 2014	2004 - 2014 Replacement Openings*	2004 - 2014 Total Openings**
<b>U S</b>							
171021	Cartographers and Photogrammetrists	10,513	12,117	15.3%	1,604		5,200
<b>Minnesota</b>							
171021	Cartographers and Photogrammetrists	103	123	19.4%	20	40	60
<b>Seven County Mpls-St Paul, MN</b>							
171021	Cartographers and Photogrammetrists	83	100	20.5%	17	30	47

\* Replacement Openings:  
\*\* Total Openings

This table shows the ten-year projected number of openings due to growth (numeric change 2004-2014) and due to replacement (2004-2014 Replacement Openings). The last column shows the ten-year total projected openings for the occupation.

In the case of this particular occupation, it is clear that the employment level is very small and most of the state's jobs are located in the Twin Cities region. DEED-LMI projections indicate only 5 to 6 openings per year for Cartographers and Photogrammetrists. Given this small number, it would be advisable to expand the list of related occupations where there is either a close relationship to the training, or where it can be shown that the proficiency in GIS software is a critical part of the skill set for a

particular occupation. Going back to the first step using the O\*Net search gives us the following seven occupational titles that have a high relevance score: Mapping Technicians, Geographers, Postsecondary Geography Teachers, All Other Computer Specialists, Surveyors, City and Regional Planning Aides, and Forest & Conservation Workers.

## MINNESOTA LABOR MARKET ANALYSIS RESOURCES

Minnesota labor market data is gathered by the Minnesota Department of Employment and Economic Development (DEED).

DESCRIPTION	LINK
DEED Home page	<a href="#">DEED</a>
Glossary of Labor Market Terms	<a href="#">DEED Glossary</a>
Current Monthly Employment by Industry (CES)	<a href="#">Monthly by Industry</a>
Employment by County, Economic Region	<a href="#">County and Region</a>
Employment Projections, (US, MN, and 6 Sub-state Regions)	<a href="#">Employment Projections</a>
Brochures for regions	<a href="#">Brochures</a>
Wages and Benefits Salary Survey Tool	<a href="#">Wages and Benefits</a>
Employee Benefits Survey	<a href="#">Employee Benefits</a>
Job Vacancy Survey	<a href="#">Job Vacancies</a>
Unemployment Rates for most recent month	<a href="#">Unemployment Rates</a>
Occupations in Demand	<a href="#">Occupations in Demand</a>
<i>Skills for the 21<sup>st</sup> Century</i>	<a href="#">21st Century Skills</a>
<i>Minnesota Careers</i>	<a href="#">MN Careers</a>
<i>MN Most Marketable Skills</i>	<a href="#">MN Marketable Skills</a>
MN Licensed Occupations	<a href="#">MN Licenses</a>
<i>Healthcare Workers: A Shortage Revisited</i>	<a href="#">Health Care Workers</a>
Skills Requirements for MN Workforce: Regional	<a href="#">Workforce Skills</a>
<i>Minnesota Economic Trends</i>	<a href="#">MN Economic Trends</a>
<i>Minnesota Employment Review</i>	<a href="#">MN Employment Review</a>
MN Demographic Center	<a href="#">MN Demographer</a>
MN 2000 Census data	<a href="#">MN 2000 Census Data</a>
MN Customized Census Reports, Maps, Data Dow	<a href="#">Customized Census Reports</a>
MN Annual Population and Household Estimates (2000)	<a href="#">Population and Household Estimates</a>
MN Population Projections	<a href="#">Population Projections</a>
MN Labor Force Projections	<a href="#">Labor Force Projections</a>

## U.S. LABOR MARKET ANALYSIS RESOURCES

DESCRIPTION	LINK
BLS National Employment Projections, 2006-2016	<a href="http://www.bls.gov/emp/home.htm">http://www.bls.gov/emp/home.htm</a>
BLS Occupational Outlook Handbook	<a href="http://www.bls.gov/oco/home.htm">http://www.bls.gov/oco/home.htm</a>
Career Guide to Industries	<a href="http://www.bls.gov/oco/cg/home.htm">http://www.bls.gov/oco/cg/home.htm</a>
U.S. Dept. of Labor, ETA 21 <sup>st</sup> Century Workforce Initiative	<a href="http://www.dol.gov/21cw/">http://www.dol.gov/21cw/</a>
The O*NET program is the nation's primary source of occupational information on hundreds of standardized and occupation-specific descriptors. The database is continually updated by surveying a broad range of workers from each occupation.	<a href="http://online.onetcenter.org/">http://online.onetcenter.org/</a>
Occupational Supply Demand System	<a href="#">Occupational Supply Demand</a>
State Job Banks	<a href="http://www.ajb.dni.us">http://www.ajb.dni.us</a>
Career Resource Library	<a href="http://www.acinet.org/acinet/library.asp?category:3.1">http://www.acinet.org/acinet/library.asp?category:3.1</a>
Monster.com	<a href="http://jobsearch.monster.com/">http://jobsearch.monster.com/</a>
Yahoo! Hotjobs.com	<a href="http://www.hotjobs.com/">http://www.hotjobs.com/</a>
ISEEK FutureWork	<a href="http://www.iseek.org/sv/futureWork?outId=35">http://www.iseek.org/sv/futureWork?outId=35</a>
America' Career InfoNet	<a href="http://www.acinet.org/acinet/default.asp?soccode=&amp;stfips">http://www.acinet.org/acinet/default.asp?soccode=&amp;stfips</a>
Emerging Occupations	<a href="http://www.cdr.state.tx.us/researchers/emerging.asp">http://www.cdr.state.tx.us/researchers/emerging.asp</a>

## SYSTEM SUPPLY AND DEMAND LABOR MARKET ANALYSES

FIELD	OCCUPATION
<b>Education</b>	<a href="#">Para-Education</a>
	<a href="#">Early Childhood Education</a>
	<a href="#">Childcare and Education</a>
<b>Manufacturing</b>	<a href="#">Machinist</a>
	<a href="#">Tool and Die</a>
	<a href="#">Industrial Engineering Technician</a>
<b>Health</b>	<a href="#">Registered Nurse</a>
	<a href="#">Licensed Practical Nurse</a>
	<a href="#">Surgical Technician</a>

## **CONTACTS: MINNESOTA LABOR MARKET DATA**

Listed below are Office of the Chancellor and DEED regional labor market analysts who can assist you with data, analysis or other questions pertaining to industry and occupational issues.

### **MnSCU Labor Market Analyst**

Bruce Steuernagel  
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### **MnSCU Project Managers, Strategic Partnership and Workforce Development**

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### **Workforce Center Regional Labor Market Analysts**

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