**BOARD OF REGENTS**
**STATE OF IOWA**

**AGENDA ITEM 8**
**JUNE 8-9, 2016**

**Contact: Diana Gonzalez**

## HIGHER EDUCATION NEEDS ASSESSMENT IN THE DES MOINES METRO

**Action Requested**: Receive the results of the Higher Education Needs Assessment in the Des Moines metropolitan area.

**Executive Summary**: The Board of Regents contracted with MGT of America, Inc. to conduct a comprehensive assessment study of the need for new or expanded access to baccalaureate, graduate, and certificate programs across the Des Moines metropolitan market. Resulting higher education opportunities to meet identified needs/demand could be in the form of online, hybrid and in-classroom opportunities that reduce the barriers and obstacles faced by area citizens, whether they be time-bound, place-bound, or financially constrained to choose other post-secondary alternatives or travel to existing public university campuses. The needs assessment has addressed the question about the need for additional educational services that could be provided by Iowa's public universities. The results will help to refine and focus efforts and resources that will be most appropriate to meet local needs. The study also provides an analysis of potential locations (not specific sites) for a Regents Resource Center (RRC) that would most fully respond to critical unmet needs.

Dr. Ray Thompson, Vice-President of Higher Education Services, with MGT of America, Inc. will present the results of the Higher Education Needs Assessment for the Des Moines Metro Area which has been conducted on behalf of the Board of Regents.

# Des Moines Metro Area
# Higher Education Needs Assessment

REVISED FINAL REPORT
JUNE 7, 2016

BOARD OF REGENTS
STATE OF IOWA

**MGT OF AMERICA CONSULTING, LLC**

FLORIDA | CALIFORNIA | MICHIGAN | TEXAS | WASHINGTON

## REVISED FINAL REPORT

Following issuance of the Final Report on May 27, 2016, MGT revised data in **Exhibits 2-19** through **2-22** found in **Chapter 2.0** displaying total degree awards (academic year 2013-14) by Regent Universities as well as private institutions operating in the Des Moines metro area. A more detailed depiction of degree awards by CIP code displayed in **Appendix B** also was revised. The exhibits and appendix in question are intended for informational purposes only. The revisions required no change in related narrative, and did not impact the needs analysis, resulting findings, or report conclusions.

# TABLE OF CONTENTS

1.0 INTRODUCTION ..... 1-1
- 1.1 STUDY BACKGROUND ..... 1-1
- 1.2 STUDY OBJECTIVES ..... 1-1
- 1.3 REPORT OUTLINE ..... 1-2

2.0 MARKET REVIEW ..... 2-1
- 2.1 POPULATION TRENDS AND PROJECTIONS ..... 2-1
- 2.2 EDUCATIONAL PROFILE OF THE SERVICE AREA ..... 2-5
- 2.3 HIGH SCHOOL ENROLLMENT AND GRADUATION TRENDS ..... 2-7
- 2.4 POSTSECONDARY PROVIDERS ..... 2-9
- 2.5 EMPLOYMENT PROFILE OF THE REGION ..... 2-18
- 2.6 METROPOLITAN AREA COMPARISONS ..... 2-21
- 2.7 SUMMARY OF FINDINGS ..... 2-34

3.0 STAKEHOLDER INPUT ..... 3-1
- 3.1 STAKEHOLDER INTERVIEWS ..... 3-1
- 3.2 SURVEY RESULTS ..... 3-11
- 3.3 SUMMARY OF STAKEHOLDER FINDINGS ..... 3-17

4.0 INDICATORS OF PROGRAM NEED IN DES MOINES ..... 4-1
- 4.1 OCCUPATIONAL PROJECTIONS ..... 4-1
- 4.2 INDICATORS OF PROGRAM DEMAND ..... 4-11
- 4.3 SUMMARY OF NEEDS ..... 4-16

5.0 LOCATION ALTERNATIVES ..... 5-1
- 5.1 ASSUMPTIONS APPLICABLE TO LOCATION ALTERNATIVES ..... 5-1
- 5.2 IDENTIFICATION OF LOCATION ALTERNATIVES ..... 5-2
- 5.3 LOCATION FACTORS ..... 5-3
- 5.4 REVIEW OF LOCATION ALTERNATIVES ..... 5-5

6.0 CONCLUSIONS ..... 6-1
- 6.1 OBSERVATIONS ..... 6-1
- 6.2 POTENTIAL PROGRAMS FOR CONSIDERATION ..... 6-2
- 6.3 ADDITIONAL ISSUES FOR CONSIDERATION ..... 6-4

APPENDICES
- APPENDIX A: PROGRAM INVENTORIES
- APPENDIX B: REGENT AND PRIVATE INSTITUTION DEGREE AWARDS BY PROGRAM
- APPENDIX C: STAKEHOLDER LIST
- APPENDIX D: SURVEY METHODOLOGY
- APPENDIX E: ADDITIONAL RESOURCES

# 1.0 INTRODUCTION

In December 2015, the Board of Regents of the State of Iowa (BOR) retained MGT to conduct a comprehensive academic program needs assessment of the Des Moines Metro Area. Prior to consideration of establishing a Regents Resource Center (RRC) in Des Moines, the Board wished to determine both the academic programs of greatest need, as well as the potential magnitude of demand. They further sought to identify appropriate geographic sectors of the metro area for possible location of a higher education Resource Center which would best address needs and access issues.

The study included a combination of market demographic, population, and education data, as well as qualitative and quantitative input from an array of stakeholders. Information about program needs, preferences, delivery options, barriers and obstacles were gathered to inform the BOR in their efforts to engage higher education providers to offer targeted programs in the community. This introductory chapter provides a brief overview of that study.

The remaining chapters and appendices present data, findings and conclusions that are intended to inform planning decisions of the BOR related to the higher education needs and access issues in the region.

## 1.1 STUDY BACKGROUND

In January of 2015, the AIB College of Business in Des Moines and the University of Iowa announced that AIB intended to close and gift its campus to the University of Iowa. The terms of the gift generally call for the campus to transition from AIB to an RRC operated by the University of Iowa. The 20-acre AIB campus is located three miles south of downtown Des Moines, and includes classroom and administrative buildings, residential housing, and recreational facilities. As an RRC, all three state universities would be able to use the campus for educational programming and related services.

The three Regent universities are interested in further expanding on-site education programming in Des Moines. The Board expects that this Higher Education Needs Assessment Report will provide information to help ensure that this expansion is effective, efficient, and responsive to the educational needs of the region and the universities.

## 1.2 STUDY OBJECTIVES

The Board of Regents, State of Iowa defined a scope of work for the needs assessment to:

- Determine the current and long-term demand for various undergraduate and graduate degree programs and certificates in Des Moines.
- Determine the optimal location in the Des Moines Metro Area for a Regents Resource Center from which to deliver the majority of the educational programs.

The study included a number of stakeholder input opportunities – interviews, group meetings, and online surveys – for various local constituents. Additionally, current market data were gathered on population demographics and projected growth, educational participation and attainment, employment sector trends, and economic conditions. Working with key higher education institutions, MGT compiled a summary inventory of academic programs by degree level, available locally. Through a gap analysis, the consultant team identified key programs of need and potential demand. Finally, MGT provided a review of potential location options for program delivery in the Des Moines Metro Area based on a set factors vetted with the Board.

## 1.3 REPORT OUTLINE

The needs assessment report that follows is presented in the following sequence of five additional chapters:

***2.0 Market Review ---*** depicts population, education and employment characteristics, data points and trends of the defined market encompassing the Des Moines Metro Area. These data set the stage for access and delivery issues as they illustrate barriers that must be addressed, as well as key points of opportunity. This section concludes with a comparative analysis of the Des Moines MSA and ten larger metropolitan areas on a variety of demographic, educational, and economic parameters.

***3.0 Stakeholder Input ---*** summarizes qualitative commentary provided by major employers, local educators, and community leaders in the Des Moines Metro Area, including expressed program needs and gaps, along with common points of interest. It also identifies issues and concerns faced by the community and the state for enhancing and sustaining access to higher education in this locale. The chapter also summarizes aggregate responses to a surveyed purposeful sample of local employers regarding current and future education and training needs of employees and job seekers, as well as a survey of school counselors in the region regarding the higher education needs of the high school students they serve.

***4.0 Indicators of Program Needs ---*** utilizing qualitative interview findings and quantitative survey data collected during this study, combined with state occupational openings projections, academic programs of need are identified by degree level. Further, identified needs are cross-referenced with current academic program inventories and outputs from local institutions to identify gaps.

***5.0 Location Alternatives ---*** outlines a set of five location alternatives that could be considered in response to meeting the needs for public four-year and graduate higher education access in the Des Moines Metro Area.

***6.0 Conclusions ---*** offers key findings and conclusions of the consultant team based upon the information and data compiled in previous sections of the report, our understanding and assessment of the current situation in the Des Moines Metro Area, and our experience advising academic and community leaders in similar situations and circumstances seeking to improve local access to postsecondary education and training opportunities, maintain an appropriately skilled local workforce, and contribute to regional competitive readiness and long-term economic stability.

# 2.0 MARKET REVIEW

In any academic needs study, one must first have a reasonable understanding of the current population features of the geographic market of concern. Each data element provides insight into the factors that may help or hinder desired and targeted educational needs, barriers and access opportunities which impact a skilled workforce. For the Des Moines Metro Area, our analysis starts with basic data on city population counts and demographics, continues with growth rate and projections, along with educational attainment, education participation and pipeline (k-12) indicators. A summary of major local postsecondary education providers and their respective enrollment patterns is offered to understand accessible local capacity. Several current informational points on employment figures, industry sector distribution, income levels and anticipated openings by required degree level are provided. Finally, this chapter concludes with a comparison of Des Moines with a number of similar or logically comparative population centers for the purposes of peer benchmarking and aspirational assessments of higher education provision.

It should be noted that our approach is to depict the marketplace as accurately as possible to reflect current circumstances. In most cases, we have provided the most recent year's data available from each sources and compare that to the same metric five years previous. Data are gathered from a variety of sources, and the most recent year available varies somewhat depending on the agency and metric. As a result, exhibits included in this chapter do not always display data using the same five-year interval. Additionally, the geographies available through each source vary to some extend and do not always reflect what is considered the Des Moines Metro Area. For each source, we identify which geographies are represented. In general, we relied on a definition of the Metro Area consisting of the Des Moines-West Des Moines MSA as defined by the U.S. Census in combination with the service region identified by the Greater Des Moines Partnership. Given the purpose and nature of the study, the focus was on meeting post-secondary education needs of the local market not substantially served by public higher education.

## 2.1 POPULATION TRENDS AND PROJECTIONS

Des Moines is home to more than 200,000 residents, and constitutes nearly half of Polk County's population. **Exhibit 2-1** displays 2010 population and 2015 estimates for Des Moines, along with Iowa, the Greater Des Moines Region and Polk County. According to the Greater Des Moines Partnership, the Greater Des Moines Region includes eight Central Iowa counties: Dallas, Guthrie, Jasper, Madison, Marshall, Polk, Poweshiek, and Warren. As shown, the population of Des Moines has grown at the same rate as Iowa (2.3%), which is less than half that of the Greater Des Moines Region (5.1%). Polk County, however, is growing at the fastest rate of all comparison geographies (5.7%).

EXHIBIT 2-1
2010 AND 2015 POPULATION ESTIMATES
IOWA, GREATER DES MOINES REGION, POLK COUNTY, AND DES MOINES

| | Iowa | Greater Des Moines Region | Polk County | Des Moines |
|---|---|---|---|---|
| 2010 Census | 3,028,666 | 664,275 | 434,416 | 202,095 |
| 2015* | 3,097,663 | 698,382 | 458,980 | 206,702 |
| **# increase** | **68,997** | **34,107** | **24,564** | **4,607** |
| **% increase** | **2.3%** | **5.1%** | **5.7%** | **2.3%** |

Source: State, region, and county data are from the Greater Des Moines Partnership, 2016 (2009 Report from Woods & Poole Economics, Inc.). Des Moines data are from the U.S. Census (2006-2010 and 2010-2014 Community Survey 5-year estimates).

In 2014, Iowa's population was estimated at over three million, while the population of the Greater Des Moines Region was nearly 700,000, nearly one-quarter of the state population, as shown in **Exhibit 2-2**. The breakdown by gender is similar in all geographies with equal representation of men and women.

EXHIBIT 2-2
2014 POPULATION BY GENDER
IOWA, GREATER DES MOINES REGION, AND POLK COUNTY

| | Iowa | | Greater Des Moines Region | | Polk County | | Des Moines | |
|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % |
| Male | 1,526,116 | 50% | 339,005 | 49% | 218,905 | 49% | 100,720 | 49% |
| Female | 1,552,000 | 50% | 348,138 | 51% | 226,231 | 51% | 105,982 | 51% |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

**Exhibit 2-3** provides the population of Des Moines, along with Iowa, the Greater Des Moines Region, and Polk County by age groupings. As with the breakdown by gender, the proportions of the population within each group are similar across geographies.

EXHIBIT 2-3
2014 POPULATION BY AGE
IOWA, GREATER DES MOINES REGION, AND POLK COUNTY

| | Iowa | | Greater Des Moines | | Polk County | | Des Moines | |
|---|---|---|---|---|---|---|---|---|
| | # | % | # | % | # | % | # | % |
| Under 15 years | 602,940 | 20% | 146,970 | 21% | 95,506 | 22% | 45,133 | 22% |
| 15 to 19 | 214,364 | 7% | 44,750 | 7% | 28,481 | 6% | 13,379 | 7% |
| 20 to 24 years | 221,870 | 7% | 42,571 | 6% | 29,254 | 7% | 15,633 | 8% |
| 25 to 34 years | 389,330 | 13% | 100,648 | 15% | 70,295 | 16% | 34,259 | 17% |
| 35 to 44 years | 363,234 | 12% | 91,975 | 13% | 60,714 | 14% | 26,993 | 13% |
| 45 years and over | 1,286,378 | 42% | 260,229 | 38% | 160,886 | 36% | 71,305 | 35% |
| **Total** | **3,078,116** | **100%** | **687,143** | **100%** | **445,136** | **100%** | **206,702** | **100%** |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

The Greater Des Moines Partnership projects that the population of the Greater Des Moines Region, and Polk County specifically, will grow 32% and 35%, respectively, between 2010 and 2040, as shown in **Exhibit 2-4**. During the same time period, the population of the state is projected to grow 15%.

EXHIBIT 2-4
POPULATION PROJECTIONS THROUGH 2040
IOWA, GREATER DES MOINES REGION, AND POLK COUNTY

| | Iowa | Greater Des Moines Region | Polk County |
|---|---|---|---|
| 2010 Census | 3,028,666 | 664,275 | 434,416 |
| 2015 | 3,097,663 | 698,382 | 458,980 |
| 2020 | 3,172,237 | 733,686 | 484,323 |
| 2025 | 3,249,751 | 769,657 | 510,106 |
| 2030 | 3,328,308 | 805,889 | 536,062 |
| 2035 | 3,407,575 | 842,314 | 562,148 |
| 2040 | 3,487,942 | 879,035 | 588,435 |
| **Growth 2010-2015** | 68,997 | 34,107 | 24,564 |
| **% Growth 2010-2015** | 2% | 5% | 6% |
| **Growth 2010-2040** | 459,276 | 214,760 | 154,019 |
| **% Growth 2010-2040** | 15% | 32% | 35% |

Source: Greater Des Moines Partnership, 2016 (2009 Report from Woods & Poole Economics, Inc.).

**Exhibit 2-5** displays the projected population change in five-year intervals for Iowa, the Greater Des Moines Region, and Polk County. Polk is projected to grow at a faster rate than all of the other geographies through 2040, with growth slowing through the time horizon.

EXHIBIT 2-5
PROJECTED POPULATION CHANGE THROUGH 2040
IOWA, GREATER DES MOINES REGION, AND POLK COUNTY

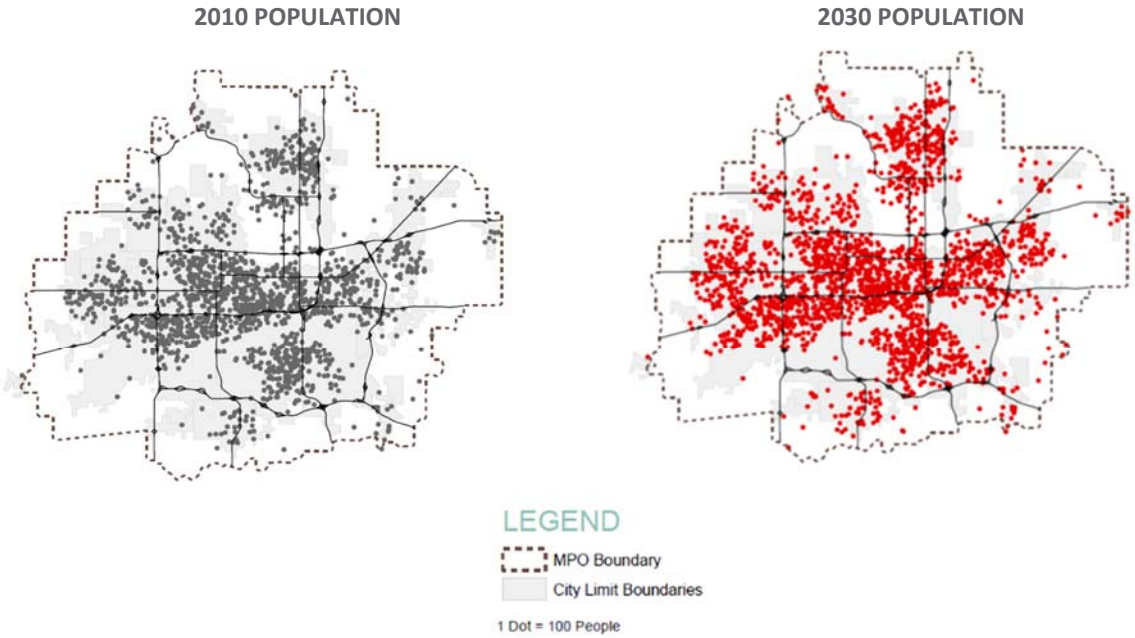
| | Iowa | | Greater Des Moines Region | | Polk County | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| 2010-2015 | 68,997 | 2.3% | 34,107 | 5.1% | 24,564 | 5.7% |
| 2015-2020 | 74,574 | 2.4% | 35,304 | 5.1% | 25,343 | 5.5% |
| 2020-2025 | 77,514 | 2.4% | 35,971 | 4.9% | 25,783 | 5.3% |
| 2025-2030 | 78,557 | 2.4% | 36,232 | 4.7% | 25,956 | 5.1% |
| 2030-2035 | 79,267 | 2.4% | 36,425 | 4.5% | 26,086 | 4.9% |
| 2035-2040 | 80,367 | 2.4% | 36,721 | 4.4% | 26,287 | 4.7% |

Note: The eight-county Greater Des Moines Region includes Dallas, Guthrie, Jasper, Madison, Marshall, Polk, Poweshiek, and Warren counties.
Source: Greater Des Moines Partnership, 2016 (2009 Report from Woods & Poole Economics, Inc.).

**Exhibits 2-6** and **2-7** display the Des Moines Area Metropolitan Planning Organization's visual depiction of population growth in the Des Moines region between 2010 and 2030. Note: Based on the available

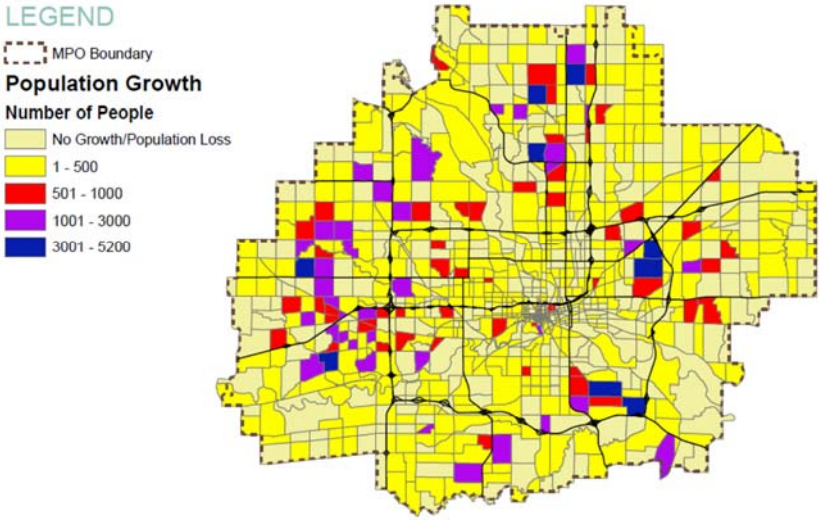
mapping information form the Des Moines Area MPO, data here are provided through 2030 only. As shown, population density is expected to increase particularly west and north of the downtown area.

EXHIBIT 2-6
DES MOINES POPULATION MAPS, 2010 AND 2030




Source: Des Moines Area Metropolitan Planning Organization, 2016.

EXHIBIT 2-7
DES MOINES POPULATION GROWTH 2010-2030




Source: Des Moines Area Metropolitan Planning Organization, 2016.

## 2.2 EDUCATIONAL PROFILE OF THE SERVICE AREA

Approximately 10% of the population aged 15 and over in Des Moines is enrolled in some level of college or graduate school, as compared to between 7.7% and 9.4% in the broader geographies (**Exhibit 2-8**).

EXHIBIT 2-8
2014 EDUCATIONAL PARTICIPATION
POPULATION AGED 15 AND OVER
IOWA, GREATER DES MOINES REGION, POLK COUNTY, AND DES MOINES

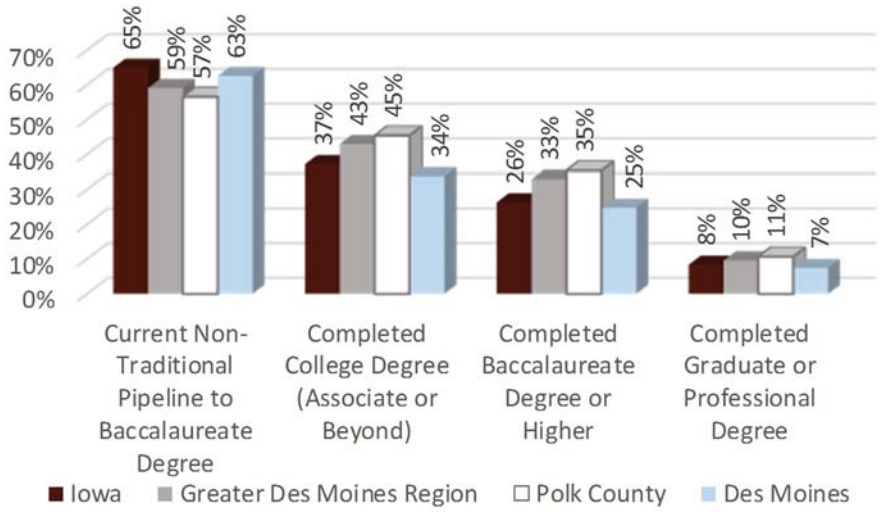
| | Iowa | Greater Des Moines Region | Polk County | Des Moines |
|---|---|---|---|---|
| 15 to 17 years | 804 | 211 | 121 | 93 |
| 18 to 24 years | 148,054 | 22,418 | 15,182 | 8,564 |
| 25 to 34 years | 46,962 | 10,789 | 8,066 | 4,314 |
| 35 years and over | 35,718 | 8,430 | 6,178 | 3,342 |
| Subtotal of those enrolled in college or grad school | 231,538 | 41,848 | 29,547 | 16,313 |
| **Total population 15 and over** | **2,475,176** | **540,173** | **349,630** | **161,569** |

| | Iowa | Greater Des Moines Region | Polk County | Des Moines |
|---|---|---|---|---|
| 15 to 17 years | 0.0% | 0.0% | 0.0% | 0.1% |
| 18 to 24 years | 6.0% | 4.2% | 4.3% | 5.3% |
| 25 to 34 years | 1.9% | 2.0% | 2.3% | 2.7% |
| 35 years and over | 1.4% | 1.6% | 1.8% | 2.1% |
| Subtotal of those enrolled in college or grad school | 9.4% | 7.7% | 8.5% | 10.1% |
| **Total population 15 and over** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

The educational attainment of the over age 25 populations of Iowa, the Greater Des Moines Region, Polk County, and Des Moines are shown in **Exhibit 2-9**. As shown, the city of Des Moines lags behind the broader geographies in college degree attainment for this age group. It has a larger share of residents who have completed high school but not a baccalaureate degree (63%) than Polk County or the Greater Des Moines Region (57% and 59%, respectively). The share of residents over age 25 who have earned a graduate or professional degree is lower in Des Moines than in all of the broader geographies (7%, as compared to 8% to 11%).

EXHIBIT 2-9
EDUCATIONAL ATTAINMENT, POPULATION AGE 25 AND OLDER
IOWA, GREATER DES MOINES REGION, POLK COUNTY, AND DES MOINES




| Population 25 and older | | | |
|---|---|---|---|
| Iowa | Greater Des Moines Region | Polk County | Des Moines |
| 2,038,942 | 452,852 | 291,895 | 132,557 |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.
*Note: The Current Non-Traditional Age Pipeline to Baccalaureate Degree category is defined as the population 25 years or older who have completed high school but not a baccalaureate degree.

Trend data for educational attainment of the over age 25 in Des Moines are offered in **Exhibit 2-10**. As shown, a somewhat greater percentage of residents have earned an associate or bachelor's degree (nearly 3% and 2%, respectively) since 2000. This would indicate a potentially stronger pipeline for baccalaureate and graduate degree programs offered in the region.

EXHIBIT 2-10
2000 AND 2014 EDUCATIONAL ATTAINMENT, POPULATION AGE 25 AND OLDER
DES MOINES

| | 2000 | 2014 | Point change |
|---|---|---|---|
| **Population 25 years and over** | 128,664 | 132,557 | |
| Less than 9th grade | 5.5% | 5.30% | -0.2% |
| 9th to 12th grade, no diploma | 11.5% | 7.40% | -4.1% |
| High school graduate (includes equivalency) | 33.5% | 31.40% | -2.1% |
| Some college, no degree | 21.5% | 22.10% | 0.6% |
| Associate's degree | 6.1% | 9.00% | 2.9% |
| Bachelor's degree | 15.4% | 17.30% | 1.9% |
| Graduate or professional degree | 6.5% | 7.40% | 0.9% |

Source: U.S. Census Bureau, 2016.

## 2.3 HIGH SCHOOL ENROLLMENT AND GRADUATION TRENDS

The number of high school students (grades 9-12) enrolled in Des Moines increased 6% between 2011 and 2015 (531 students), a trend seen even more significantly in Polk County and the Greater Des Moines Region (**Exhibit 2-11**).

EXHIBIT 2-11
HIGH SCHOOL ENROLLMENT TRENDS
IOWA, GREATER DES MOINES REGION, POLK COUNTY, AND DES MOINES
2011-12 AND 2015-16

| | 2011-12 | 2015-16 | # change | % change |
|---|---|---|---|---|
| Iowa | 145,768 | 147,633 | 1,865 | 1.3% |
| Greater Des Moines Region | 33,050 | 35,776 | 2,726 | 8.2% |
| Polk County | 19,937 | 21,766 | 1,829 | 9.2% |
| Des Moines | 8,804 | 9,335 | 531 | 6.0% |

Note: Des Moines enrollment counts include those in the Des Moines Independent Public School District.
Source: Iowa Department of Education, 2016.

The number of high school graduates in Des Moines decreased by 2% (43 students) between 2010 and 2014, as shown in **Exhibit 2-12**. While graduates in the state of Iowa have dropped more significantly (by 6%), that trend is not seen in the Greater Des Moines Region or Polk County, which show increases of 4% and 3%, respectively. Overall in the region there were 293 more high school graduates in 2014 than in 2010.

EXHIBIT 2-12
HIGH SCHOOL GRADUATION TRENDS
IOWA, GREATER DES MOINES REGION, POLK COUNTY, AND DES MOINES
2010 AND 2014

| | 2010 | 2014 | # change | % change |
|---|---|---|---|---|
| Iowa | 36,075 | 33,919 | (2,156) | -6% |
| Greater Des Moines Region | 7,543 | 7,836 | 293 | 4% |
| Polk County | 4,539 | 4,697 | 158 | 3% |
| Des Moines | 2,003 | 1,960 | (43) | -2% |

Note: Des Moines graduation counts include those in the Des Moines Independent Public School District.
Source: Iowa Department of Education, 2016.

The high school graduation rate in Des Moines increased more than three percentage points between 2010 and 2014, an increase from 78.5% to 81.7%, as shown in **Exhibit 2-13**. Graduation rates improved in surrounding areas to a lesser extent, rising between 0.7% and 0.9% over the five-year period.

EXHIBIT 2-13
HIGH SCHOOL GRADUATION RATES
IOWA, GREATER DES MOINES REGION, POLK COUNTY, AND DES MOINES
2010 AND 2014

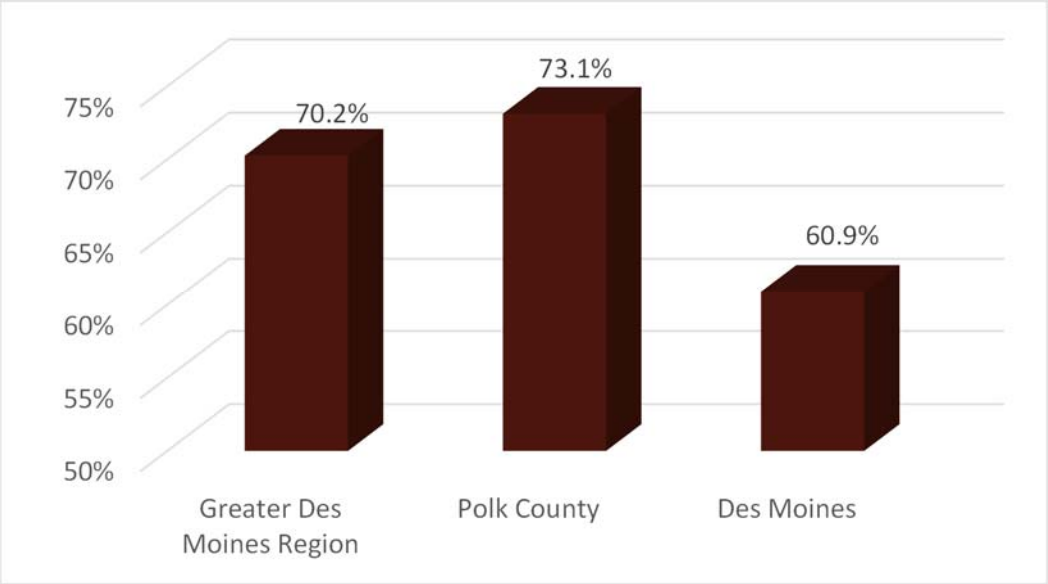
| | 2010 | 2014 | % point change |
|---|---|---|---|
| Iowa | 92.3% | 93.1% | 0.8% |
| Greater Des Moines Region | 94.1% | 94.8% | 0.7% |
| Polk County | 93.0% | 93.9% | 0.9% |
| Des Moines | 78.5% | 81.7% | 3.2% |

Note: Des Moines graduation counts include those in the Des Moines Independent Public School District.
Source: Iowa Department of Education, 2016.

Note that, while enrollment projections are available for each geography through the Iowa Department of Education, they are not disaggregated by grade level, which would allow for examination of high school only enrollment projections. Statewide projections are available by grade level, but no drilldowns were found for smaller geographies for comparison.

**Exhibit 2-14** displays the share of region's high school graduates who are going to college. As shown, Des Moines had a smaller share of students (less than 61%) who enrolled in college within 16 months of graduation in 2012, as compared to Polk County (73.1%) and the Greater Des Moines Region (70.2%).

EXHIBIT 2-14
POSTSECONDARY ENROLLMENT
GREATER DES MOINES REGION, POLK COUNTY, AND DES MOINES*
2012-2013




*Note: Des Moines graduation counts include those in the Des Moines Independent Public School District.
Source: Iowa Department of Education, 2016.

## 2.4 POSTSECONDARY PROVIDERS

Three Regent institutions offer programming in Des Moines for residents who wish to pursue higher education: Iowa State University, the University of Iowa, and the University of Northern Iowa. Each has either a physical presence in Des Moines, or provides programs online which are available to residents of the greater Des Moines area. A brief description of each local institution is presented below:

Iowa State University, established in 1858 by the Iowa legislature, is a Carnegie Research 1 institution with world-class teaching and research programs in agriculture, engineering and technology, veterinary medicine, science, and art. Iowa State is a member of the Association of American Universities, the Association of Public and Land Grant Universities, and the University Innovation Alliance.

More than 36,000 students from all 50 states and 100 countries – including 4,352 from Polk County in Fall 2015 – study 108 undergraduate majors, 112 master's programs, 81 Ph.D. programs, and the professional veterinary medicine degree. It should be noted that ISU enrolled nearly half of the students enrolled in four-year undergraduate programs from the Des Moines MSA in 2014. The university also serves all 99 Iowa counties, including Polk County, through its Extension and Outreach program, and serves central Iowa residents with numerous online graduate degrees and certificates.

Iowa State currently offers a professional MBA program at Capital Square in downtown Des Moines. Veterinary medicine faculty and staff also operate a veterinary specialty clinic in Des Moines, and work closely with the Blank Park Zoo.

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With just over 31,000 students, the University of Iowa is one of the nation's top public research universities, a member of the Big Ten conference since 1899, and an Association of American Universities member since 1909. It offers more than 5,000 classes each year in over 200 majors, minors, and certificate programs. Twenty-five programs are ranked among the top 25 in their field.

The University of Iowa is located in Iowa City, widely recognized as one of the country's most livable communities. Currently, the University operates the John and Mary Pappajohn Education Center in downtown Des Moines, offering selected degrees and other training and instruction primarily focused on business management and the financial services sector. They are poised to expand local programs via the AIB College campus south of downtown.

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Building on its historic excellence in teacher education, UNI has developed outstanding programs in business, humanities, arts, sciences and social and behavioral sciences. Advanced degrees are available in many programs. UNI enjoys national recognition for its high educational standards. U.S. News & World Report has ranked UNI in the top three Midwest public universities for the past 14 years.

Enrollment is just under 12,000 students, and the institution typically graduates 2,500 students per year. Approximately 1,000 Des Moines residents enroll as undergraduates each year at UNI, and 12,000 alumni live in the Des Moines area. The majority of UNI graduates (81%) remain in Iowa upon graduation, and approximately 25% locate or return to Des Moines. UNI has an extensive array of on-line programs capable of distribution across the state.

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In addition to the three Regent institutions, four major private institutions are located within or near the Des Moines Metro Area – Drake University, Grinnell College, Grand View University, and Simpson College. Profiles of each are offered below:

Drake was founded as a one-building college with 77 students approximately 130 years ago and is now a nationally recognized university. This midsized, private university in Des Moines, Iowa enrolls more than 3,300 undergraduates and 1,700 graduate students from 40 states and more than 40 countries. Students choose from more than 70 majors, minors, and concentrations and 20 graduate degrees offered through six colleges and schools. In addition, Drake offers a range of continuing education programs serving working professionals, community members, and area businesses.

---

Founded in 1846, Grinnell College is a private, coed, residential liberal arts and sciences college located in Grinnell, Iowa - about halfway between Des Moines and Iowa City. Grinnell offers bachelor of arts degrees in 26 major fields, with 500 course offerings and a 9 to 1 student-to-faculty ratio. In 2016, U.S. News and World Report ranked Grinnell tied for 19th among all liberal arts colleges in the United States, and tied for highest economic diversity as measured by low-income students receiving federal Pell Grants.

---

Grand View University is a private liberal arts university affiliated with the Evangelical Lutheran Church in America offering bachelor's and master's degrees. Founded 120 years ago, Grand View offers a high-quality education to a diverse student body in a career-oriented, liberal arts–grounded curriculum at two campus locations in Des Moines, Iowa. Grand View welcomes traditional students and adult learners representing a wide range of religious and cultural backgrounds.

With 2,200 students (around 1,700 full time), an average class size of 17, and a student-to-faculty ratio of 14 to 1, students get to know their professors and other students well at Grand View

University. Students come from approximately 30 states and 17 countries, and about 800 students live on campus. About 70% of fulltime undergraduate students are from Iowa.

---

In 1860, Simpson College was founded by members of the Iowa United Methodist Church, and is an independent, coeducational, liberal-arts college. The main campus is located in Indianola, 12 miles south of Des Moines. Simpson also has campuses in West Des Moines and Ankeny. The college offers 80 majors, minors, and programs to 1,400 full-time and 300 part-time students. Simpson has a student-to-faculty ratio of 13 to 1, and has been recognized by U.S. News and World Report as one of the top 10 comprehensive colleges in the Midwest.

A listing of programs available at each institution by level is provided in **Appendix A**. The program listings were developed using the taxonomies available through the Board of Regent's website for the purposes of consistency and comparability. Enrollment and degree award trend data for each institution are shown in **Exhibit 2-15** through **Exhibit 2-18**.

Two additional institutions operate in the Des Moines area - Des Moines University offers programming specific to the health profession, while Des Moines Area Community College offers certificate and associate degree level programming in greater Des Moines. Profiles of these two institutions are provided below, but they are not included in the analyses that follow.

---

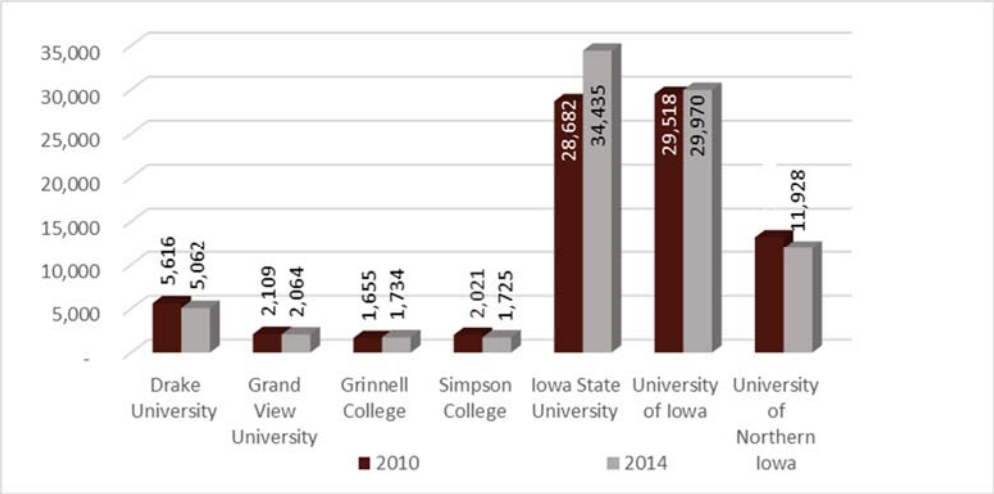
Des Moines Area Community College is a public institution created in 1966 and Iowa's largest two-year college. DMACC's Urban campus is in Des Moines, but programming is offered at five branch campuses and seven Centers throughout the region. The college offers 168 programs, certificates, and transfer degrees, annually serving more than 75,000 credit and non-credit students at campuses and learning centers throughout central Iowa.

---

Founded in 1898, Des Moines University is comprised of three colleges offering nine graduate degrees. Des Moines University offers degree programs in medicine and the health sciences. With a total enrollment of over 1,700, DMU is the largest medical school in Iowa with approximately 883 students in the osteopathic college, the second oldest osteopathic school in the country.

**Exhibit 2-15** displays the total enrollments of each of the three regent institutions and four private local institutions for 2010 and 2014. As shown, enrollments have dropped at four of the seven institutions, most significantly at Simpson (15% decline), Drake, and the University of Northern Iowa (10% decreases each). In contrast, enrollments at Iowa State University increased 20% during the same time period.

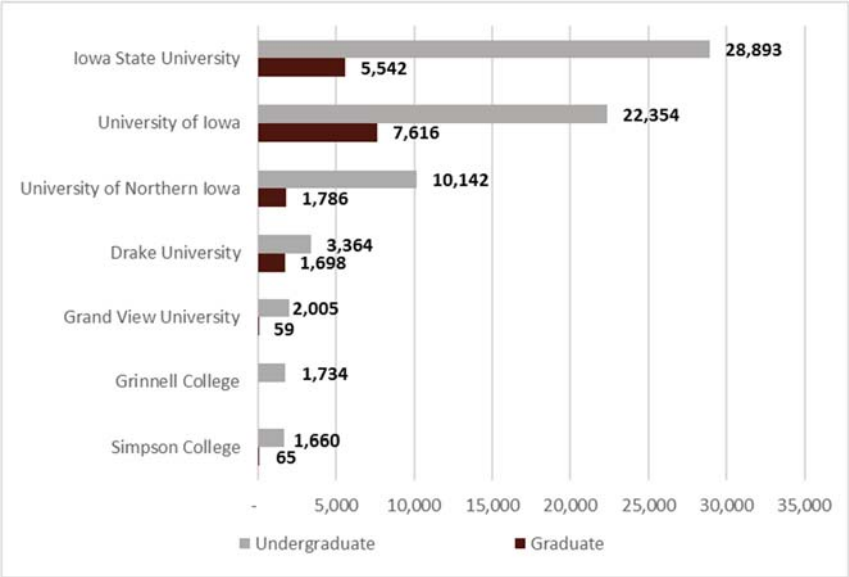
EXHIBIT 2-15
POSTSECONDARY ENROLLMENTS BY PROVIDER
FALL 2010 AND FALL 2014




Source: IPEDS, 2016.

Of the seven institutions, Iowa State enrolls the most students (34,435 in Fall 2014), followed by the University of Iowa (29,970 in Fall 2014). Six institutions offer graduate degrees, although Grand View and Simpson enroll very few graduate students. Grinnell and Simpson enroll the fewest total number of students (1,734 and 1725, respectively), as shown in **Exhibit 2-16**.

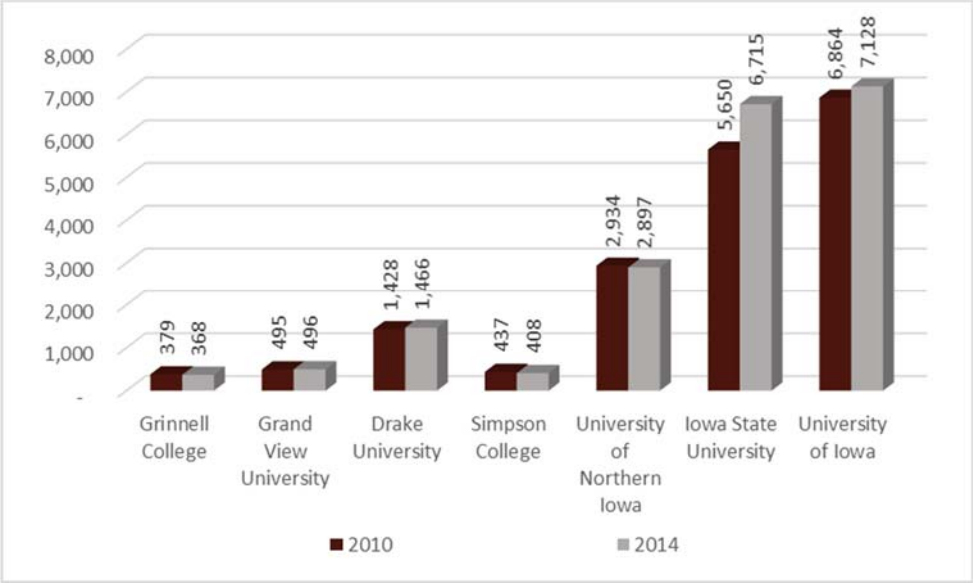
EXHIBIT 2-16
POSTSECONDARY ENROLLMENTS BY PROVIDER AND LEVEL
FALL 2014




Source: IPEDS, 2016.

**Exhibit 2-17** compares the total degrees awarded by the seven providers in 2010 and 2014. While four of the seven institutions increased the number of degrees awarded over the time period shown, Iowa State increased the number of degree awards more significantly than the others. Iowa State awarded 19% more degrees in 2014 than in 2010. In contrast, change in the number of degrees awarded was -7% to 4% at the other institutions over the same time period.

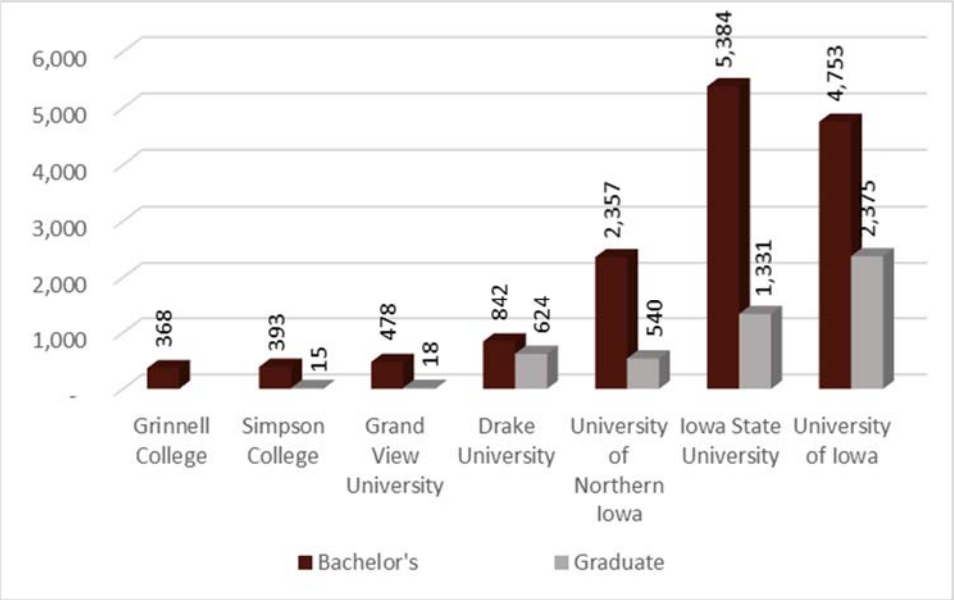
EXHIBIT 2-17
TOTAL AWARDS BY PROVIDER
2010 AND 2014 ACADEMIC YEARS




Source: IPEDS, 2016.

The University of Iowa awarded the most degrees in 2014 among the local higher education providers, granting 7,178 bachelor's or graduate degrees, followed by Iowa State with just over 6,700, as shown in **Exhibit 2-18**. Grinnell granted the fewest degrees, at 368. While none of the institutions in this analysis granted associate degrees, the University of Iowa did grant 50 undergraduate certificates in 2014, which are not represented in this exhibit. Though comparable data were not available for Iowa State through IPEDS, the university indicated that in 2015 they awarded 35 undergraduate certificates.

EXHIBIT 2-18
2014 DEGREES AWARDED BY PROVIDER AND LEVEL




Source: IPEDS, 2016.

**Exhibits 2-19** through **2-22** display the degrees awarded in 2013-14 for three Regent institutions and the private institutions which offer programming in the Des Moines Metro Area, as reported to IPEDS. These data do not include pre- or post-baccalaureate certificate awards, and refer to first majors only. These data are provided as a snapshot of the supply of graduates in the region with credentialing based on academic category. More detailed degree award data by CIP code can be found in **Appendix B**.

EXHIBIT 2-19
2013-14 BACHELOR'S DEGREES AWARDED BY PROGRAM
AT REGENT INSTITUTIONS

| Bachelor's Degree Awards | | | | |
|---|---|---|---|---|
| | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| Agriculture, Agriculture Operations, and Related Sciences | **614** | | | **614** |
| Architecture and Related Services | 133 | | | **133** |
| Area, Ethnic, Cultural, Gender, and Group Studies | 4 | 23 | | **27** |
| Biological and Biomedical Sciences | 296 | 147 | 156 | **599** |
| Business, Management, Marketing, and Related Support Services | 965 | 813 | 443 | **2,221** |
| Communication, Journalism, and Related Programs | 239 | 358 | 169 | **766** |
| Communications Technologies/Technicians and Support Services | | | 20 | **20** |
| Computer and Information Sciences and Support Services | 46 | 76 | 45 | **167** |
| Education | 225 | 136 | 416 | **777** |
| Engineering | 42 | | 49 | **91** |
| Engineering Technologies and Engineering-Related Fields | 1,121 | 339 | 0 | **1,460** |
| English Language and Literature/Letters | 69 | 209 | 61 | **339** |
| Family and Consumer Sciences/Human Sciences | 243 | | 69 | **312** |
| Foreign Languages, Literatures, and Linguistics | 43 | 114 | 20 | **177** |
| Health Professions and Related Programs | 100 | 335 | 111 | **546** |
| History | 83 | 70 | 49 | **202** |
| Liberal Arts and Sciences, General Studies and Humanities | 99 | 207 | 58 | **364** |
| Mathematics and Statistics | 74 | 134 | 33 | **241** |
| Multi/Interdisciplinary Studies | 106 | 132 | 21 | **259** |
| Natural Resources and Conservation | 56 | 27 | | **83** |
| Parks, Recreation, Leisure, and Fitness Studies | 202 | 543 | 130 | **875** |
| Philosophy and Religious Studies | 13 | 41 | 12 | **66** |
| Physical Sciences | 70 | 72 | 34 | **176** |
| Psychology | 157 | 289 | 108 | **554** |
| Public Administration and Social Service Professions | 5 | 54 | 66 | **125** |
| Social Sciences | 131 | 386 | 177 | **694** |
| Visual and Performing Arts | 248 | 248 | 110 | **606** |
| **Grand Total** | **5,384** | **4,753** | **2,357** | **12,494** |

Note: Degree awards reported above represent "first majors" only.
Source: IPEDS, 2016.

EXHIBIT 2-20
2013-14 MASTER'S DEGREES AWARDED BY PROGRAM
AT REGENT INSTITUTIONS

| Master's Degree Awards | | | | |
|---|---|---|---|---|
| | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| Agriculture, Agriculture Operations, and Related Sciences | 68 | | | **68** |
| Architecture and Related Services | 28 | 25 | | **53** |
| Area, Ethnic, Cultural, Gender, and Group Studies | | 7 | 1 | **8** |
| Biological and Biomedical Sciences | 39 | 20 | 11 | **70** |
| Business, Management, Marketing, and Related Support Services | 87 | 454 | 67 | **608** |
| Communication, Journalism, and Related Programs | 12 | 9 | 13 | **34** |
| Computer and Information Sciences and Support Services | | | 0 | **0** |
| Education | 36 | 20 | 1 | **57** |
| Engineering | 137 | 103 | 145 | **385** |
| Engineering Technologies and Engineering-Related Fields | 1 | | 7 | **8** |
| English Language and Literature/Letters | 223 | 52 | | **275** |
| Family and Consumer Sciences/Human Sciences | 28 | 79 | 18 | **125** |
| Foreign Languages, Literatures, and Linguistics | 24 | | | **24** |
| Health Professions and Related Programs | | 19 | 17 | **36** |
| History | 11 | 202 | 54 | **267** |
| Homeland Security, Law Enforcement, Firefighting and Related Protective Services | 6 | 8 | 11 | **25** |
| Legal Professions and Studies | | 4 | | **4** |
| Liberal Arts and Sciences, General Studies and Humanities | | 23 | 12 | **35** |
| Mathematics and Statistics | 27 | 49 | 21 | **97** |
| Multi/Interdisciplinary Studies | 25 | 8 | 11 | **44** |
| Natural Resources and Conservation | 5 | | 2 | **7** |
| Parks, Recreation, Leisure, and Fitness Studies | 3 | 18 | 28 | **49** |
| Philosophy and Religious Studies | | 8 | | **8** |
| Physical Sciences | 17 | 26 | 4 | **47** |
| Psychology | 4 | 22 | 31 | **57** |
| Public Administration and Social Service Professions | 9 | 93 | 48 | **150** |
| Social Sciences | 23 | 25 | 5 | **53** |
| Visual and Performing Arts | 24 | 101 | 13 | **138** |
| **Grand Total** | **837** | **1,375** | **520** | **2,732** |

Note: Degree awards reported above represent "first majors" only.
Source: IPEDS, 2016.

EXHIBIT 2-21
2013-14 DOCTORAL/PROFESSIONAL DEGREES AWARDED BY PROGRAM
AT REGENT INSTITUTIONS

| Doctoral/Professional Degree Awards | | | | |
|---|---|---|---|---|
| | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| Agriculture, Agriculture Operations, and Related Sciences | 16 | | | **16** |
| Area, Ethnic, Cultural, Gender, and Group Studies | | 7 | | **7** |
| Biological and Biomedical Sciences | 59 | 77 | | **136** |
| Business, Management, Marketing, and Related Support Services | 12 | 7 | | **19** |
| Communication, Journalism, and Related Programs | | 13 | | **13** |
| Computer and Information Sciences and Support Services | 12 | 3 | | **15** |
| Education | 38 | 30 | 10 | **78** |
| Engineering | | | 6 | **6** |
| Engineering Technologies and Engineering-Related Fields | 92 | 38 | | **130** |
| English Language and Literature/Letters | 2 | 10 | | **12** |
| Family and Consumer Sciences/Human Sciences | 14 | | | **14** |
| Foreign Languages, Literatures, and Linguistics | | 8 | | **8** |
| Health Professions and Related Programs | 152 | 495 | | **647** |
| History | 1 | 11 | | **12** |
| Legal Professions and Studies | | 180 | | **180** |
| Mathematics and Statistics | 36 | 15 | | **51** |
| Multi/Interdisciplinary Studies | 3 | 1 | | **4** |
| Natural Resources and Conservation | 1 | | | **1** |
| Parks, Recreation, Leisure, and Fitness Studies | 3 | 1 | 4 | **8** |
| Philosophy and Religious Studies | | 3 | | **3** |
| Physical Sciences | 32 | 32 | | **64** |
| Psychology | 8 | 16 | | **24** |
| Public Administration and Social Service Professions | | 2 | | **2** |
| Social Sciences | 13 | 24 | | **37** |
| Visual and Performing Arts | | 27 | | **27** |
| **Grand Total** | **494** | **1,000** | **20** | **1,514** |

Note: Degree awards reported above represent "first majors" only.
Source: IPEDS, 2016.

EXHIBIT 2-22
2013-14 DEGREES AWARDED BY PROGRAM AND LEVEL
PRIVATE INSTITUTIONS OPERATING IN THE DES MOINES REGION

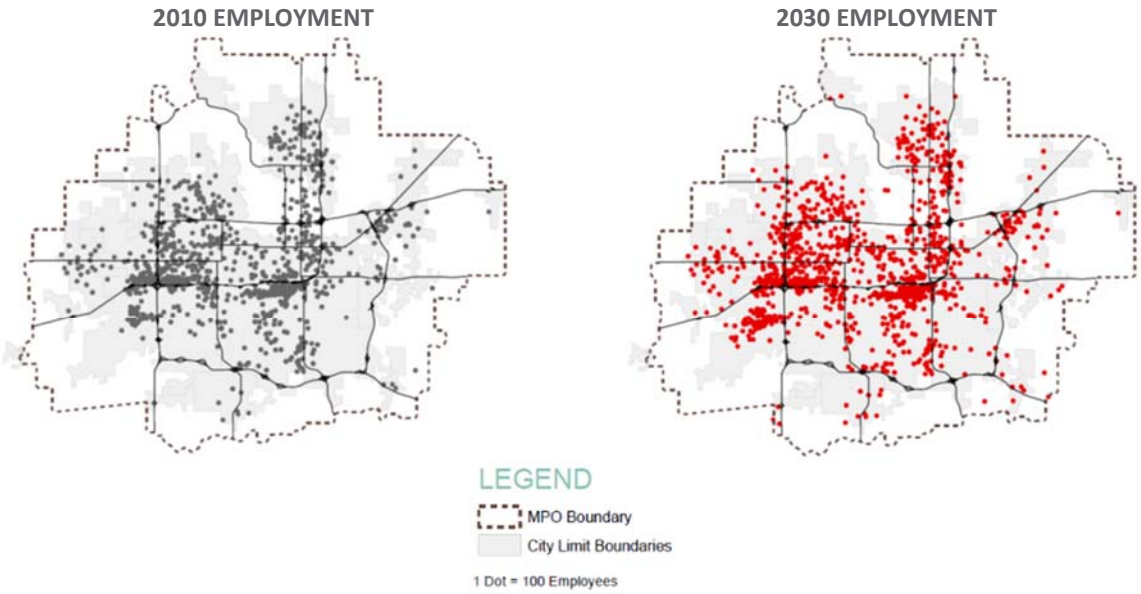
| | Bachelor's | Master's | Doctoral or Professional | Grand Total |
|---|---|---|---|---|
| Biological and Biomedical Sciences | 116 | 16 | | 132 |
| Business, Management, Marketing, and Related Support Services | 651 | 148 | | 799 |
| Communication, Journalism, and Related Programs | 115 | 6 | | 121 |
| Communications Technologies/Technicians and Support Services | 2 | | | 2 |
| Computer and Information Sciences and Support Services | 89 | 2 | | 91 |
| Education | 176 | 176 | 10 | 362 |
| English Language and Literature/Letters | 65 | | | 65 |
| Foreign Languages, Literatures, and Linguistics | 5 | | | 5 |
| Health Professions and Related Programs | 245 | 148 | 498 | 891 |
| History | 41 | | | 41 |
| Homeland Security, Law Enforcement, Firefighting and Related Protective Services | 77 | 7 | | 84 |
| Legal Professions and Studies | 32 | 1 | 131 | 164 |
| Liberal Arts and Sciences, General Studies and Humanities | 31 | | | 31 |
| Mathematics and Statistics | 26 | | | 26 |
| Multi-/Interdisciplinary Studies | 2 | | | 2 |
| Natural Resources and Conservation | 25 | 1 | | 26 |
| Parks, Recreation, Leisure, and Fitness Studies | 59 | | | 59 |
| Philosophy and Religious Studies | 12 | 2 | | 14 |
| Physical Sciences | 26 | | | 26 |
| Psychology | 71 | 3 | | 74 |
| Public Administration and Social Service Professions | 41 | 62 | | 103 |
| Social Sciences | 89 | | | 89 |
| Theology and Religious Vocations | 28 | 7 | | 35 |
| Visual and Performing Arts | 123 | | | 123 |
| **GRAND TOTAL** | **2,147** | **579** | **639** | **3,365** |

Note: Degree awards reported above represent "first majors" only.
Note: Not for Profit Providers include AIB College of Business, Des Moines University-Osteopathic Medical Center, Drake University, Faith Baptist Bible College and Theological Seminary, Grand View University, Mercy College of Health Sciences, Simpson College. For-Profit Providers include ITT Technical Institute-Clive, Kaplan University-Des Moines Campus, University of Phoenix-Iowa
Source: IPEDS, 2016.

## 2.5 EMPLOYMENT PROFILE OF THE REGION

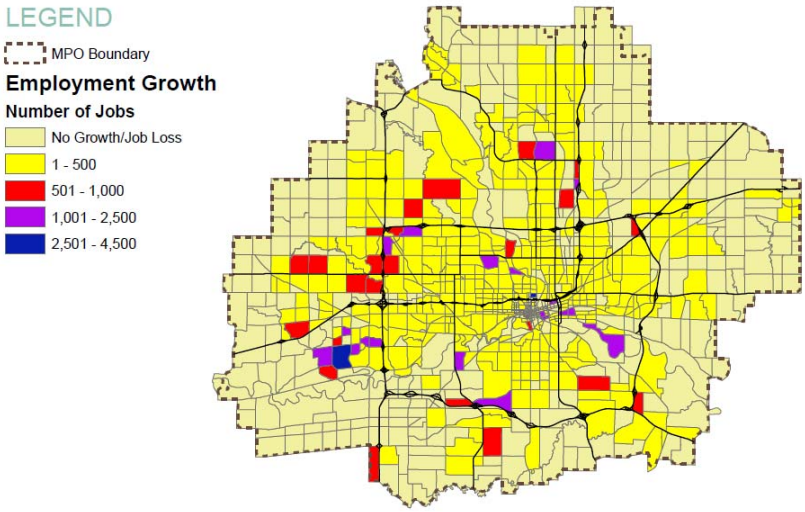
This section of the report details the projected occupational growth in the region as determined by the Des Moines Area Metropolitan Planning Organization. **Exhibits 2-23** and **2-24** display the Des Moines Area MPO's visual depiction of employment growth in the Des Moines Metro Area between 2010 and 2030. As shown, employment growth is expected to be most significant west of the downtown area.

EXHIBIT 2-23
DES MOINES EMPLOYMENT MAPS, 2010 AND 2030




Source: Des Moines Area Metropolitan Planning Organization, 2016.

EXHIBIT 2-24
DES MOINES EMPLOYMENT GROWTH 2010-2030




Source: Des Moines Area Metropolitan Planning Organization, 2016.

**Exhibit 2-25**, displays the median household income for the state, Greater Des Moines Region, Polk County, and Des Moines in 2010 and 2014. As shown, while median household income increased in each geography, the increase was smallest in Des Moines (5% growth, as compared to 7% to 8% in the larger geographies). Household incomes rose approximately $2,250 over the five-year period in Des Moines.

EXHIBIT 2-25
MEDIAN HOUSEHOLD INCOME, 2010-2014
IOWA, GREATER DES MOINES REGION, POLK COUNTY AND DES MOINES

| Median household income (dollars) | 2010 | 2014 | # change | % change |
|---|---|---|---|---|
| **Iowa** | $ 48,872 | $ 52,716 | $ 3,844 | 8% |
| **Greater Des Moines Region** | $ 53,883 | $ 57,876 | $ 3,993 | 7% |
| **Polk County** | $ 56,094 | $ 59,844 | $ 3,750 | 7% |
| **Des Moines** | $ 44,178 | $ 46,430 | $ 2,252 | 5% |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

Similarly, **Exhibit 2-26**, provides the per capita income of each geography. Per capita income grew 6% to 9% in each geography between 2010 and 2014, with the exception of Des Moines, where per capita income remained stagnant over the five-year period.

EXHIBIT 2-26
PER CAPITA INCOME, 2010-2014
IOWA, GREATER DES MOINES REGION, POLK COUNTY AND DES MOINES

| Per capita income (dollars) | 2010 | 2014 | # change | % change |
|---|---|---|---|---|
| **Iowa** | $ 25,335 | $ 27,621 | $ 2,286 | 9% |
| **Greater Des Moines Region** | $ 26,773 | $ 28,852 | $ 2,079 | 8% |
| **Polk County** | $ 29,246 | $ 30,863 | $ 1,617 | 6% |
| **Des Moines** | $ 24,096 | $ 23,989 | $ (107) | 0% |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

**Exhibit 2-27** displays the projected total annual openings in the Iowa Workforce Development (IWD) Region 11 between 2012 and 2022 based on the required educational level. IWD Region 11 includes Boone, Dallas, Jasper, Madison, Marion, Polk, Story and Warren Counties. Among bachelor's degree required occupations, business and financial operations positions and management positions will be the most commonly available (855 and 695 annual openings, respectively) followed by computer and mathematical positions and education, training, and library positions (500 and 465 annual openings, respectively). The community and social service occupation sector will offer the most positions requiring a master's degree (100 annually) followed by healthcare practitioners and technical sector (50 annually). Most prevalent among doctoral/professional degree required positions will be those in the healthcare practitioners and technical sector (165 annually), followed by education, training, and library positions (100 openings).

EXHIBIT 2-27
ANNUAL OPENINGS BY DEGREE LEVEL, 2012-2022
IWD REGION 11

| Occupational Title | Employment | | | Openings | | | |
|---|---|---|---|---|---|---|---|
| | Base Estimated Employment | Projected Employment | Employment Numeric Change | New Annual Job Openings | Replacement Annual Job Openings | Total Annual Job Openings | % Replacement |
| **Baccalaureate** | | | | | | | |
| Business & Financial Operations Occupations | 20,440 | 24,545 | 4,100 | 405 | 420 | 855 | 49% |
| Management Occupations | 17,965 | 21,410 | 3,425 | 345 | 350 | 695 | 50% |
| Computer & Mathematical Occupations | 11,245 | 14,425 | 3,170 | 315 | 185 | 500 | 37% |
| Education, Training, & Library Occupations | 14,470 | 15,940 | 1,475 | 155 | 310 | 465 | 67% |
| Arts, Design, Entertainment, Sports, & Media Occupations | 5,290 | 5,925 | 625 | 70 | 135 | 200 | 68% |
| Architecture & Engineering Occupations | 2,495 | 2,945 | 450 | 45 | 65 | 115 | 57% |
| Sales & Related Occupations | 2,255 | 2,680 | 425 | 40 | 45 | 90 | 50% |
| Community & Social Service Occupations | 1,880 | 2,250 | 370 | 40 | 45 | 75 | 60% |
| Life, Physical, & Social Science Occupations | 2,280 | 2,455 | 175 | 15 | 75 | 95 | 79% |
| Personal Care & Service Occupations | 900 | 1,050 | 145 | 15 | 10 | 25 | 40% |
| Healthcare Practitioners & Technical Occupations | 815 | 920 | 105 | 15 | 20 | 30 | 67% |
| **Master's** | | | | | | | |
| Community & Social Service Occupations | 2,590 | 3,020 | 430 | 45 | 55 | 100 | 55% |
| Healthcare Practitioners & Technical Occupations | 1,110 | 1,485 | 375 | 35 | 20 | 50 | 40% |
| Education, Training, & Library Occupations | 845 | 1,010 | 170 | 15 | 15 | 35 | 43% |
| Management Occupations | 1,320 | 1,470 | 150 | 15 | 35 | 50 | 70% |
| **Doctorate/Professional** | | | | | | | |
| Healthcare Practitioners & Technical Occupations | 3740 | 4430 | 700 | 70 | 90 | 165 | 55% |
| Education, Training, & Library Occupations | 2805 | 3345 | 540 | 50 | 45 | 100 | 45% |
| Life, Physical, & Social Science Occupations | 220 | 250 | 30 | 5 | 5 | 10 | 50% |

Source: Iowa Workforce Development, 2016.

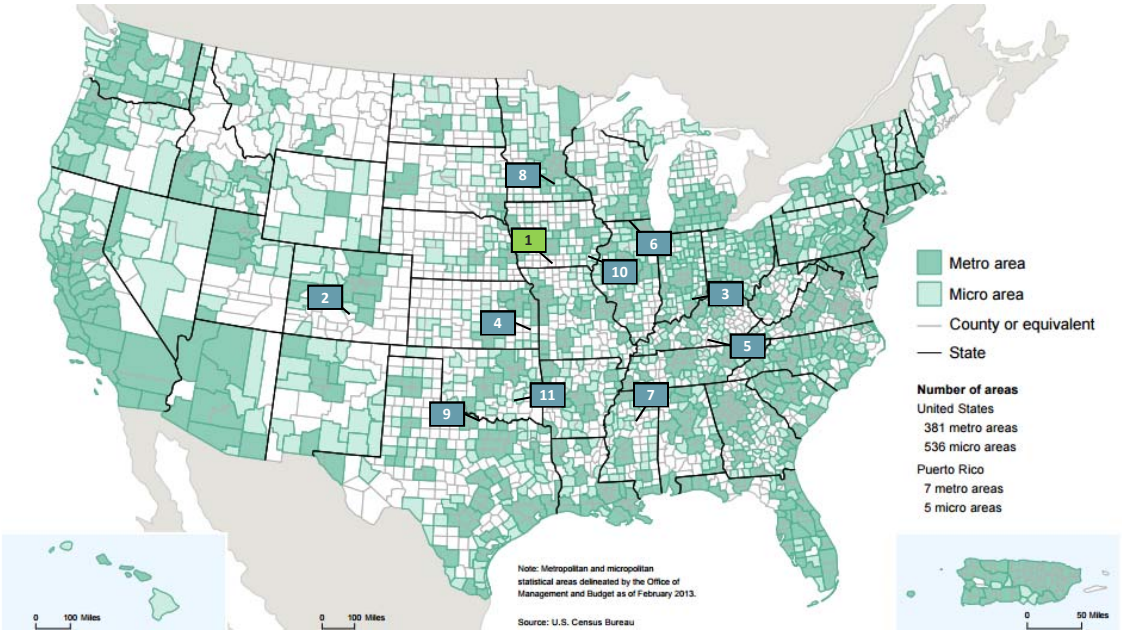
## 2.6 METROPOLITAN AREA COMPARISONS

As part of the Des Moines education needs assessment analysis, it was determined that as the metro area continues to grow and expand economically, a comparative analysis of related population, education, and economic parameters of selected competitive or aspirational markets may be useful in providing perspective on potential impacts directly or indirectly associated with improved access to higher education. This section of the report offers consolidated data from that analysis as supporting information for planning purposes.

### 2.6.1 SELECTION OF COMPARATORS

MGT examined metropolitan areas (MSAs for continuity) nationally to identify similar or logically comparative population centers for the purposes of peer benchmarking and aspirational assessments of higher education provision to the Des Moines market area. An initial pass was taken through the full universe of metropolitan areas to narrow the field to areas located within, or proximate to, the Midwest. Additional markets were eliminated based on considerations including the scale of population and certain other differentiating economic and geographical factors (including elimination of coastal and major port cities). From those remaining, we identified several markets that were mentioned as potential economic and business competitors for Des Moines. We sought metropolitan areas of varying sizes larger than Des Moines to depict potential future population thresholds. Ultimately, a group of 10 metropolitan areas were isolated for further evaluation, as identified in **Exhibit 2-28**.

EXHIBIT 2-28
METROPOLITAN AREAS SELECTED FOR COMPARISON




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| (1) | Des Moines-West Des Moines, IA | (2) | Denver-Aurora-Lakewood, CO | (3) | Indianapolis-Carmel-Anderson, IN | (4) | Kansas City, MO-KS |
| (5) | Louisville/Jefferson County, KY-IN | (6) | Madison, WI | (7) | Memphis, TN-MS-AR | (8) | Minneapolis-St. Paul-Bloomington, MN-WI |
| (9) | Oklahoma City, OK | (10) | Omaha-Council Bluffs, NE-IA | (11) | Tulsa, OK | | |

Source: Map obtained from the U.S. Census Bureau, Maps of metropolitan and micropolitan statistical areas: *Metropolitan and Micropolitan Statistical Areas Feb. 2013*.

## POPULATION, TRENDS, AGE DEMOGRAPHICS

The Des Moines market area is defined in this analysis as the Des Moines-West Des Moines, IA Metropolitan Area (which we will refer to as "the Des Moines area"), which consists of Dallas, Guthrie, Madison, Polk, and Warren counties. This five-county region is home to about 572,000 people (estimated as of July 2015), which is the smallest population among comparative Metropolitan Areas – by a large margin, in some instances. However, the area has grown rapidly in recent years, increasing by nearly 51,000 over the last five years. In terms of growth rate, its pace of expansion (8.9%) ranks second among the group of comparison markets.

EXHIBIT 2-29
POPULATION ESTIMATES OF SELECTED METROPOLITAN AREAS, 2010 AND 2015

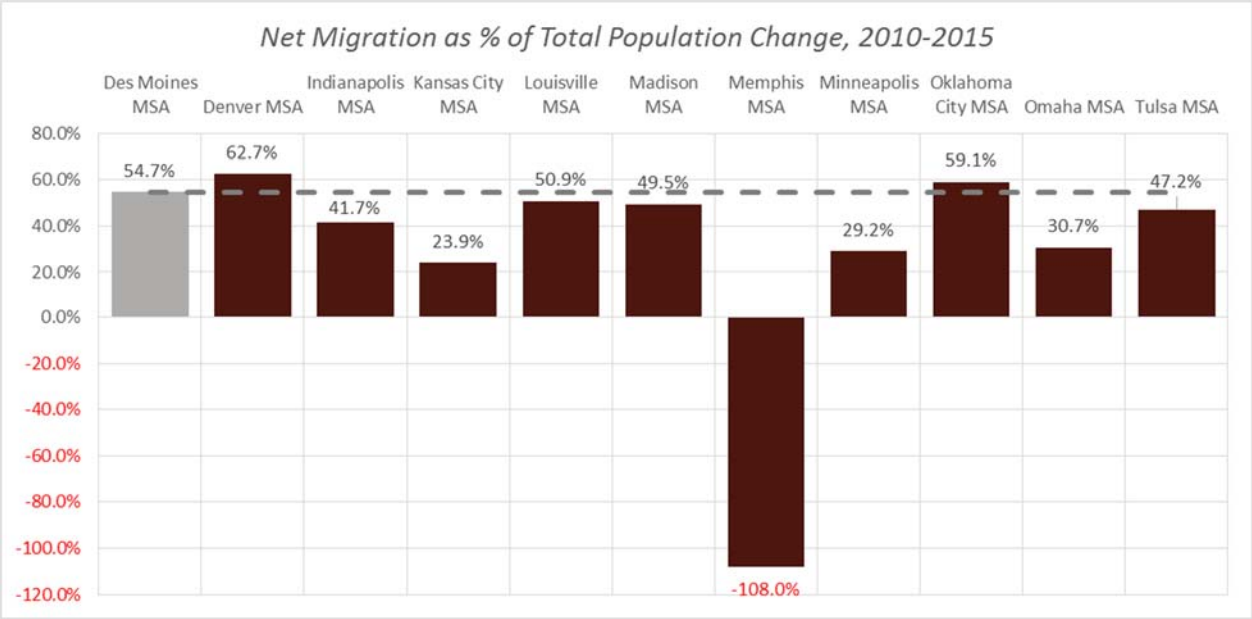
| Geography | Population Estimates (as of July 1) | | Change | | *Rank: % Growth* |
|---|---|---|---|---|---|
| | 2010 | 2015 | Number | Percent | |
| United States | 309,346,863 | 321,418,820 | 12,071,957 | 3.9% | |
| **Des Moines-West Des Moines, IA Metro Area** | **571,981** | **622,899** | **50,918** | **8.9%** | ***2*** |
| Denver-Aurora-Lakewood, CO Metro Area | 2,554,468 | 2,814,330 | 259,862 | 10.2% | *1* |
| Indianapolis-Carmel-Anderson, IN Metro Area | 1,892,614 | 1,988,817 | 96,203 | 5.1% | *6* |
| Kansas City, MO-KS Metro Area | 2,013,703 | 2,087,471 | 73,768 | 3.7% | *9* |
| Louisville/Jefferson County, KY-IN Metro Area | 1,237,810 | 1,278,413 | 40,603 | 3.3% | *10* |
| Madison, WI Metro Area | 606,557 | 641,385 | 34,828 | 5.7% | *4* |
| Memphis, TN-MS-AR Metro Area | 1,326,410 | 1,344,127 | 17,717 | 1.3% | *11* |
| Minneapolis-St. Paul-Bloomington, MN-WI Metro Area | 3,355,540 | 3,524,583 | 169,043 | 5.0% | *7* |
| Oklahoma City, OK Metro Area | 1,257,950 | 1,358,452 | 100,502 | 8.0% | *3* |
| Omaha-Council Bluffs, NE-IA Metro Area | 868,170 | 915,312 | 47,142 | 5.4% | *5* |
| Tulsa, OK Metro Area | 939,978 | 981,005 | 41,027 | 4.4% | *8* |

Source: U.S. Census Bureau, Population Division, *Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2015*.

Over half of population growth in Des Moines is attributable to migration, which ranks third as a proportion of growth among the other 10 areas. Just over one-quarter (28%) of the in-migration was international in nature, with the balance of residents moving to the area (72%) coming from other states and U.S. territories. Despite its relatively small size, the absolute numbers of individuals who have relocated to the Des Moines area from other locations across the U.S. (about 21,000 over this period) ranks third among the 11 institutions included in this comparison, trailing only Denver and Oklahoma City.

The migration data suggest Des Moines and surrounding communities currently offer significant value – economic or otherwise – relative to many other population centers in the region. However, the data may also indicate that businesses in the area must rely on importing talent to fill positions due to voids in the skills or capacities of the local workforce. Stakeholder feedback presented in **Chapter 3.0** of this report corroborates this finding anecdotally, in that many firms expressed a desire for an expansion of the "home-grown" talent base and available training options to support their staffing needs and recruiting efforts.

EXHIBIT 2-30
NET MIGRATION AS A PERCENT OF TOTAL POPULATION CHANGE, 2010 THROUGH 2015




Source: U.S. Census Bureau, Population Division, *Estimates of the Components of Resident Population Change: April 1, 2010 to July 1, 2015*.

Examining the population by age, we see that the Des Moines area has relatively high proportions of younger (under 18 years of age) and younger working adult (25 to 44 years of age) populations. Alternately, the population of traditional college-aged individuals (18 to 24 years) is relatively lower, possibly reflecting the necessary out-migration of some students who choose to attend programs at the home campuses of the Regent institutions.

EXHIBIT 2-31
AGE CHARACTERISTICS OF POPULATION, 2014 ESTIMATES

| Metropolitan Area | Median age (years) | % of Population by Age Group | | | | |
|---|---|---|---|---|---|---|
| | | % Under 18 Years | % 18 to 24 years | % 25 to 44 years | % 45 to 64 years | % 65 years and over |
| **Des Moines-West Des Moines, IA Metro Area** | **35.7** | **25.6%** | **8.6%** | **28.5%** | **25.1%** | **12.1%** |
| *Rank Among Metropolitan Areas:* | *8* | *2* | *8* | *2* | *9* | *9* |
| Denver-Aurora-Lakewood, CO Metro Area | 36.1 | 23.8% | 8.5% | 30.4% | 25.7% | 11.7% |
| Indianapolis-Carmel-Anderson, IN Metro Area | 36.2 | 25.2% | 8.8% | 27.7% | 25.8% | 12.4% |
| Kansas City, MO-KS Metro Area | 37.1 | 24.9% | 8.2% | 27.4% | 26.1% | 13.3% |
| Louisville/Jefferson County, KY-IN Metro Area | 38.4 | 23.2% | 8.6% | 26.3% | 27.4% | 14.4% |
| Madison, WI Metro Area | 35.8 | 21.4% | 12.4% | 27.8% | 25.7% | 12.7% |
| Memphis, TN-MS-AR Metro Area | 35.7 | 25.5% | 9.8% | 26.9% | 25.7% | 12.1% |
| Minneapolis-St. Paul-Bloomington, MN-WI Metro Area | 36.6 | 24.1% | 8.8% | 27.9% | 26.9% | 12.3% |
| Oklahoma City, OK Metro Area | 34.8 | 24.9% | 10.6% | 27.5% | 24.3% | 12.7% |
| Omaha-Council Bluffs, NE-IA Metro Area | 35.2 | 26.0% | 8.9% | 27.8% | 25.1% | 12.2% |
| Tulsa, OK Metro Area | 36.9 | 25.2% | 9.1% | 26.1% | 25.5% | 14.2% |

Source: U.S. Census Bureau, 2014 American Community Survey 1-Year Estimates.

## EDUCATIONAL ATTAINMENT

The rate of college degree attainment in an area can provide insight into access or barriers to assorted levels of programming in the local higher education infrastructure. In this respect, the Des Moines area

shows a very high rate of attainment of associate degrees (1st among the 11 markets), favorable competitiveness at the bachelor's degree level (4th), but ranks much less competitively in terms of graduate or professional attainment (8th). The gap between bachelor's and graduate or professional attainment is perhaps the most compelling aspect of this analysis: if we consider the bachelor's degree-holding population as a pool of eligible candidates who might pursue graduate- or professional-level certification, the Des Moines area ranks last among the selected markets (11th in terms of graduate or professional degrees per 100 bachelor's degree holders).

EXHIBIT 2-32
EDUCATIONAL ATTAINMENT OF THE POPULATION AGED 25 YEARS AND OVER, 2010-2014 AVERAGE

| Geography | % of Population Aged 25 and Over By Educational Attainment Level | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Associate's Degree | | Bachelor's Degree | | Graduate or Professional Degree | | Bachelor's Degree or Higher | | Any College Degree | | Graduate or Professional Degrees per 100 Bachelor's Degrees | |
| | Rate | Rank | Rate | Rank | Rate | Rank | Rate | Rank | Rate | Rank | Rate | Rank |
| **Des Moines-West Des Moines, IA Metro Area** | **10.1%** | **1** | **24.8%** | **4** | **10.3%** | **8** | **35.1%** | **4** | **45.2%** | **4** | **41.4** | **11** |
| Denver-Aurora-Lakewood, CO Metro Area | 7.5% | 8 | 25.6% | 2 | 14.2% | 2 | 39.8% | 2 | 47.3% | 3 | 55.4 | 4 |
| Indianapolis-Carmel-Anderson, IN Metro Area | 7.7% | 6 | 20.1% | 7 | 10.7% | 6 | 30.8% | 7 | 38.5% | 7 | 53.4 | 6 |
| Kansas City, MO-KS Metro Area | 7.4% | 9 | 21.5% | 6 | 12.1% | 4 | 33.6% | 5 | 41.0% | 6 | 56.4 | 3 |
| Louisville/Jefferson County, KY-IN Metro Area | 7.6% | 7 | 16.2% | 11 | 10.6% | 7 | 26.8% | 9 | 34.4% | 10 | 65.2 | 2 |
| Madison, WI Metro Area | 9.8% | 3 | 25.5% | 3 | 16.9% | 1 | 42.5% | 1 | 52.2% | 1 | 66.3 | 1 |
| Memphis, TN-MS-AR Metro Area | 6.8% | 11 | 17.0% | 10 | 9.3% | 10 | 26.3% | 10 | 33.0% | 11 | 54.8 | 5 |
| Minneapolis-St. Paul-Bloomington, MN-WI Metro Area | 9.9% | 2 | 25.9% | 1 | 13.0% | 3 | 39.0% | 3 | 48.8% | 2 | 50.2 | 8 |
| Oklahoma City, OK Metro Area | 6.9% | 10 | 18.7% | 8 | 9.8% | 9 | 28.5% | 8 | 35.3% | 8 | 52.3 | 7 |
| Omaha-Council Bluffs, NE-IA Metro Area | 8.3% | 5 | 22.3% | 5 | 11.1% | 5 | 33.4% | 6 | 41.8% | 5 | 49.7 | 9 |
| Tulsa, OK Metro Area | 8.5% | 4 | 17.9% | 9 | 8.0% | 11 | 25.9% | 11 | 34.4% | 9 | 44.7 | 10 |

Source: U.S. Census Bureau, *2010-2014 American Community Survey 5-Year Estimates (B15003)*.

## SELECTED ECONOMIC CHARACTERISTICS

A compilation of economic characteristics of the selected market areas is provided in **Exhibit 2-33**, including unemployment and poverty rates; median and mean household income levels; and employment by both occupational and industrial sector. Some key observations among these statistics include:

- The Des Moines area has the among the lowest unemployment and poverty rates in the set (2nd lowest among 11)
- It also boasts among the highest household income levels (3rd of 11 by both measures).
- Not surprisingly, the Des Moines area exhibits relatively large proportions of jobs in the management, business, science, and arts and the sales and office occupational sectors, with relatively fewer Service occupations than the other areas.
- This is reflective of the industrial composition of the labor market, with employment in the finance and insurance, and real estate and rental and leasing industrial sector nearly or beyond double that of any other market.

Overall, certain of the unique characteristics of the Des Moines area are highlighted within these data – principally, the overall strength of the economy and the prominence of the finance and insurance sector within that – relative to these other markets.

EXHIBIT 2-33
SELECTED ECONOMIC CHARACTERISTICS OF THE COMPARISON METROPOLITAN AREAS

| Selected Economic Characteristics | Des Moines-West Des Moines, IA Metro Area | Denver-Aurora-Lakewood, CO Metro Area | Indianapolis-Carmel-Anderson, IN Metro Area | Kansas City, MO-KS Metro Area | Louisville/ Jefferson County, KY-IN Metro Area | Madison, WI Metro Area | Memphis, TN-MS-AR Metro Area | Minneapolis-St. Paul-Bloomington, MN-WI Metro Area | Oklahoma City, OK Metro Area | Omaha-Council Bluffs, NE-IA Metro Area | Tulsa, OK Metro Area |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Civilian Unemployment Rate** | **5.6%** | 7.5% | 8.9% | 7.4% | 8.9% | 5.5% | 11.0% | 6.6% | 6.1% | 5.9% | 7.0% |
| **Percent of population below the poverty level** | **11.2%** | 12.0% | 14.6% | 12.6% | 14.8% | 12.6% | 19.4% | 10.6% | 15.7% | 12.3% | 14.9% |
| **Median household income (2014 inflation-adjusted dollars)** | **$61,640** | $64,206 | $52,434 | $57,056 | $50,386 | $61,227 | $47,647 | $68,019 | $50,967 | $57,357 | $49,255 |
| **Mean household income (2014 inflation-adjusted dollars)** | **$79,073** | $86,081 | $71,052 | $75,695 | $68,032 | $78,465 | $66,395 | $88,061 | $69,147 | $74,171 | $66,989 |
| **Employment by Occupational Sector** | | | | | | | | | | | |
| Management, business, science, and arts occupations | **40.3%** | 41.7% | 37.0% | 38.9% | 34.4% | 45.3% | 33.7% | 42.6% | 35.8% | 37.9% | 34.3% |
| Service occupations | **15.6%** | 16.1% | 16.5% | 16.3% | 16.2% | 15.6% | 17.1% | 15.6% | 17.2% | 16.4% | 16.5% |
| Sales and office occupations | **26.1%** | 25.0% | 25.4% | 25.7% | 25.2% | 22.5% | 25.6% | 24.1% | 25.7% | 26.4% | 25.5% |
| Natural resources, construction, and maintenance occupations | **7.6%** | 8.4% | 7.8% | 7.6% | 7.7% | 6.5% | 8.1% | 6.4% | 10.8% | 8.5% | 10.5% |
| Production, transportation, and material moving occupations | **10.4%** | 8.7% | 13.3% | 11.5% | 16.5% | 10.0% | 15.5% | 11.3% | 10.4% | 10.9% | 13.2% |
| **Employment by Industry Sector** | | | | | | | | | | | |
| Agriculture, forestry, fishing and hunting, and mining | **1.6%** | 1.4% | 0.7% | 0.7% | 0.7% | 2.1% | 0.6% | 0.9% | 3.8% | 1.3% | 2.5% |
| Construction | **6.1%** | 7.3% | 5.7% | 6.1% | 5.2% | 4.7% | 5.4% | 4.8% | 7.4% | 6.7% | 6.6% |
| Manufacturing | **8.1%** | 6.8% | 12.9% | 9.3% | 13.3% | 10.6% | 9.9% | 13.6% | 7.0% | 8.7% | 12.7% |
| Wholesale trade | **3.0%** | 3.1% | 3.2% | 3.3% | 3.0% | 2.5% | 3.6% | 3.1% | 2.8% | 2.8% | 3.1% |
| Retail trade | **11.0%** | 10.9% | 11.9% | 11.3% | 11.0% | 10.4% | 11.3% | 11.3% | 12.1% | 11.6% | 11.0% |
| Transportation and warehousing, and utilities | **4.1%** | 5.0% | 5.8% | 5.3% | 7.4% | 3.1% | 11.1% | 4.5% | 4.6% | 5.7% | 6.1% |
| Information | **2.3%** | 3.7% | 1.8% | 2.9% | 2% | 2.6% | 1.4% | 2.1% | 1.8% | 2.4% | 2.6% |
| Finance and insurance, and real estate and rental and leasing | **17.1%** | 8.1% | 6.9% | 8.3% | 8% | 8.0% | 5.5% | 8.6% | 6.6% | 9.7% | 6.4% |
| Professional, scientific, and management, and administrative and waste management services | **10.0%** | 14.8% | 10.8% | 12.6% | 9% | 11.5% | 9.3% | 11.8% | 9.3% | 10.8% | 9.8% |
| Educational services, and health care and social assistance | **21.0%** | 19.2% | 22.5% | 22.4% | 23% | 27.1% | 22.4% | 23.2% | 22.4% | 23.9% | 21.4% |
| Arts, entertainment, and recreation, and accommodation and food services | **7.7%** | 10.1% | 9.0% | 8.5% | 9.1% | 8.6% | 9.4% | 8.3% | 9.0% | 8.5% | 8.8% |
| Other services, except public administration | **4.0%** | 5.0% | 4.7% | 4.6% | 4.6% | 4.0% | 5.0% | 4.5% | 5.3% | 4.2% | 5.5% |
| Public administration | **4.0%** | 4.6% | 4.2% | 4.5% | 3.5% | 4.9% | 4.9% | 3.4% | 7.7% | 3.9% | 3.3% |

Source: U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates.

*Note: **GREEN** outlines denote the highest (or best) score on the measurement; **RED** outlines indicate lowest (or worst).*

### COLLEGE ENROLLMENT AND PARTICIPATION

The number of institutions located within each of the metropolitan areas and respective enrollment levels by sector are presented in **Exhibit 2-34**. The mix of institutions serving each area is diverse, but the lack of a public, four-year institution based in the Des Moines area is unique among the areas represented in this set. Other regions host between one and six institutions in this domain, which serve between 6,500 and 55,000 FTE students, annually, within each region. Overall, this is the largest sector of enrollments across the regions, with nearly 279,000 enrollments across the regions in 2013-14. Public two-year institutions follow closely, enrolling about 274,000 across the regions during this period, and the Des Moines area exhibiting enrollments at or above what might be expected based on relative populations of the regions.

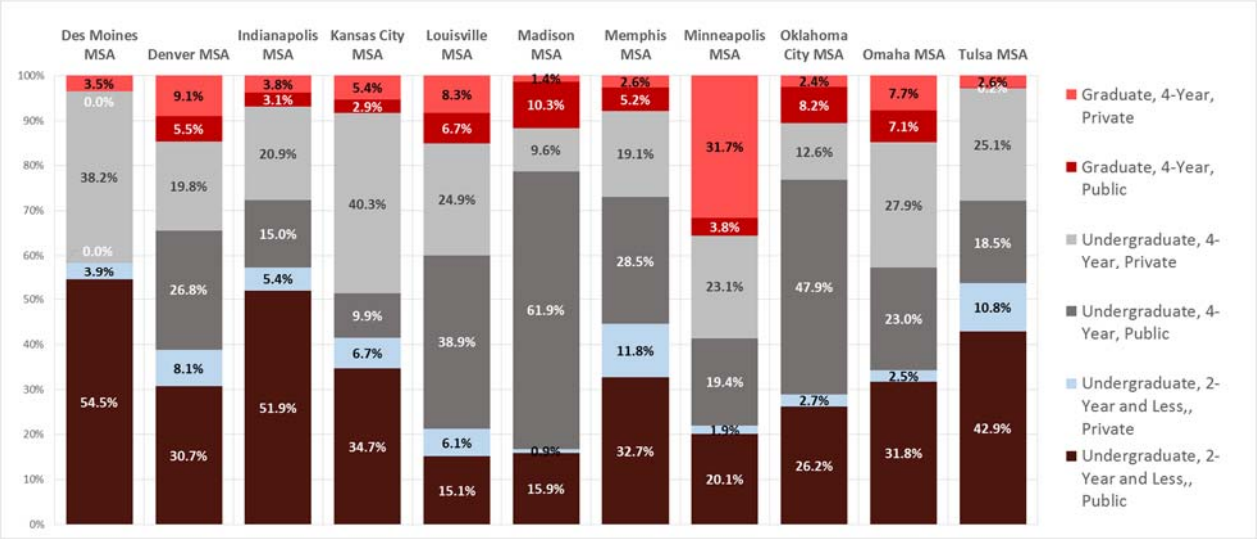
EXHIBIT 2-34
NUMBER OF INSTITUTIONS AND FULL-YEAR FTE ENROLLMENT BY SECTOR AND AREA, 2013-14

| CBSA Definition | Statistic | Sector of Institution | | | | | | | | | GRAND TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Public, 4-year or above | Private not-for-profit, 4-year or above | Private for-profit, 4-year or above | Public, 2-year | Private not-for-profit, 2-year | Private for-profit, 2-year | Public, less-than 2-year | Private not-for-profit, less-than 2-year | Private for-profit, less-than 2-year | |
| Des Moines-West Des Moines, IA | # of Institutions | | 7 | 3 | 1 | 1 | 5 | | | | 17 |
| | 2013-14 FTEs | | 9,717 | 1,959 | 15,270 | 17 | 1,074 | | | | 28,037 |
| Denver-Aurora-Lakewood, CO | # of Institutions | 4 | 9 | 21 | 6 | | 25 | 1 | 1 | 7 | 74 |
| | 2013-14 FTEs | 42,067 | 23,495 | 14,089 | 37,201 | | 9,664 | 2,716 | 22 | 899 | 130,153 |
| Indianapolis-Carmel-Anderson, IN | # of Institutions | 1 | 9 | 10 | 1 | | 8 | 1 | | 17 | 47 |
| | 2013-14 FTEs | 23,352 | 17,783 | 14,227 | 67,265 | | 5,158 | 43 | | 1,845 | 129,673 |
| Kansas City, MO-KS | # of Institutions | 1 | 21 | 14 | 3 | 1 | 8 | 3 | | 15 | 66 |
| | 2013-14 FTEs | 10,617 | 22,927 | 14,958 | 28,662 | 489 | 3,463 | 104 | | 1,610 | 82,830 |
| Louisville/Jefferson County, KY-IN | # of Institutions | 2 | 7 | 10 | 1 | | 11 | | | 2 | 33 |
| | 2013-14 FTEs | 21,822 | 7,908 | 8,029 | 7,248 | | 2,702 | | | 201 | 47,910 |
| Madison, WI | # of Institutions | 2 | 1 | 5 | 1 | | 4 | | | 2 | 15 |
| | 2013-14 FTEs | 44,014 | 2,455 | 4,233 | 9,703 | | 294 | | | 226 | 60,925 |
| Memphis, TN-MS-AR | # of Institutions | 1 | 11 | 5 | 5 | 1 | 5 | | | 11 | 39 |
| | 2013-14 FTEs | 16,562 | 8,261 | 2,378 | 16,062 | 146 | 3,612 | | | 2,024 | 49,045 |
| Minneapolis-St. Paul-Bloomington, MN-WI | # of Institutions | 3 | 19 | 28 | 10 | | 6 | | 2 | 15 | 83 |
| | 2013-14 FTEs | 54,987 | 37,229 | 92,022 | 47,423 | | 1,194 | | 843 | 2,352 | 236,050 |
| Oklahoma City, OK | # of Institutions | 6 | 6 | 6 | 5 | | 4 | 5 | | 9 | 41 |
| | 2013-14 FTEs | 43,722 | 10,008 | 1,688 | 16,022 | | 1,648 | 4,392 | | 496 | 77,976 |
| Omaha-Council Bluffs, NE-IA | # of Institutions | 2 | 7 | 5 | 2 | 1 | 6 | | | | 23 |
| | 2013-14 FTEs | 15,209 | 15,651 | 2,278 | 16,010 | 41 | 1,222 | | | | 50,411 |
| Tulsa, OK | # of Institutions | 3 | 3 | 7 | 4 | | 7 | 7 | | 7 | 38 |
| | 2013-14 FTEs | 6,455 | 6,834 | 2,741 | 13,129 | | 3,088 | 1,722 | | 639 | 34,608 |
| **Grand Total** | **# of Institutions** | **25** | **100** | **114** | **39** | **4** | **89** | **17** | **3** | **85** | **476** |
| **All Areas** | **2013-14 FTEs** | **278,807** | **162,268** | **158,602** | **273,995** | **693** | **33,119** | **8,977** | **865** | **10,292** | **927,618** |

Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 2014-15 Institutional Characteristics and 2013-14 Full-Year Enrollment surveys. Enrollment figures based on reported full-year, full-time equivalent data for each institution. Institutions are classified according to the "Sector" variable in Institutional Characteristics/Directory Information data set, and exclude Administrative entities.

**Exhibit 2-35** provides another helpful perspective on the relative composition of college participation in the region, showing the proportion of enrollments by sector of institution (two-year/four-year and public/private) and level (undergraduate/graduate). Irrespective of the control of the institution (public or private), only about 3.5% of postsecondary enrollments in the Des Moines Area are in graduate programs, which contrasts drastically with other areas. Controlling for the presence of Capella University and Walden University in the Minneapolis area (large, proprietary online providers that collectively enroll nearly 65,000 graduate FTEs), the proportion of graduate enrollment remains over 10% of total postsecondary enrollments across all regions, which is still several multiples beyond the rate observed in the Des Moines market. The Des Moines area also compares less than favorably in terms of four-year undergraduate enrollment, where it ranks 10th among the 11 markets.

EXHIBIT 2-35
PROPORTION OF ENROLLMENTS BY SECTOR AND LEVEL, 2013-14




Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 2013-14 Full-Year Enrollment survey.

Local college participation rates, as presented in **Exhibit 2-36**, are calculated by dividing headcount enrollment numbers (instead of FTE) by the population aged 18 to 44 years – who represent the most likely participants in postsecondary education programs. We see a slightly different dynamic in this framework, with the Des Moines area exhibiting the lowest participation rates among comparison areas for four-year institution undergraduates. Graduate participation as gauged by this metric is again quite low, at about 2.3%, versus a group average of 3.2% – a 41% proportional deficit.

EXHIBIT 2-36
LOCAL COLLEGE PARTICIPATION RATES*, 2013-14

| Metropolitan Area | Estimated Population Aged 18 to 44 Years (2014) | UNDERGRADUATE - 2-YEAR OR BELOW | | | UNDERGRADUATE - 4-YEAR | | | GRADUATE | | | TOTAL POSTSECONDARY | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Headcount Enrollment (Fall 2014) | Under-graduate Local Part. % | Rank | Headcount Enrollment (Fall 2014) | Undergrad Local Part. % | Rank | Headcount Enrollment (Fall 2014) | Graduate Local Part. % | Rank | All Post-secondary Enrollment | Total Post-secondary Local Participation % | Rank |
| **Des Moines-West Des Moines, IA** | **227,318** | **38,050** | **16.7%** | **2** | **12,363** | **5.4%** | **11** | **5,212** | **2.3%** | **9** | **55,625** | **24.5%** | **5** |
| Denver-Aurora-Lakewood, CO | 1,071,482 | 113,552 | 10.6% | 5 | 97,853 | 9.1% | 7 | 41,690 | 3.9% | 3 | 253,095 | 23.6% | 6 |
| Indianapolis-Carmel-Anderson, IN | 720,725 | 188,213 | 26.1% | 1 | 69,122 | 9.6% | 6 | 19,043 | 2.6% | 8 | 276,378 | 38.3% | 2 |
| Kansas City, MO-KS | 736,937 | 75,187 | 10.2% | 6 | 72,080 | 9.8% | 4 | 20,613 | 2.8% | 7 | 167,880 | 22.8% | 7 |
| Louisville/Jefferson County, KY-IN | 441,662 | 22,178 | 5.0% | 11 | 42,649 | 9.7% | 5 | 15,256 | 3.5% | 5 | 80,083 | 18.1% | 10 |
| Madison, WI | 254,556 | 19,247 | 7.6% | 10 | 63,346 | 24.9% | 1 | 15,413 | 6.1% | 1 | 98,006 | 38.5% | 1 |
| Memphis, TN-MS-AR | 492,657 | 39,320 | 8.0% | 9 | 32,752 | 6.6% | 9 | 8,252 | 1.7% | 10 | 80,324 | 16.3% | 11 |
| Minneapolis-St. Paul-Bloomington, MN-WI | 1,282,569 | 104,763 | 8.2% | 8 | 108,811 | 8.5% | 8 | 43,505 | 3.4% | 6 | 257,079 | 20.0% | 8 |
| Oklahoma City, OK | 509,396 | 46,248 | 9.1% | 7 | 69,160 | 13.6% | 2 | 17,738 | 3.5% | 4 | 133,146 | 26.1% | 4 |
| Omaha-Council Bluffs, NE-IA | 332,104 | 38,881 | 11.7% | 3 | 34,159 | 10.3% | 3 | 17,329 | 5.2% | 2 | 90,369 | 27.2% | 3 |
| Tulsa, OK | 341,238 | 38,442 | 11.3% | 4 | 22,566 | 6.6% | 10 | 2,849 | 0.8% | 11 | 63,857 | 18.7% | 9 |
| **Grand Total** | **6,410,644** | **724,081** | **11.3%** | | **624,861** | **9.7%** | | **206,900** | **3.2%** | | **1,555,842** | **24.3%** | |

Source: Population data per U.S. Census Bureau, American Community Survey, 2014 1-Year Estimates. Enrollment data per National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), Fall 2014 Enrollment survey.
*Excludes students enrolled in out-of-area online programs or commuting to out-of-area programs.

## DEGREES AND OTHER POSTSECONDARY CERTIFICATIONS

Postsecondary awards (degrees and certificates) conferred per 100,000 residents aged 18 to 44 years are depicted in **Exhibit 2-37**. While exceeding the group average rates of associate and doctoral/professional awards, the Des Moines area falls about 23% below the average rate of bachelor's degree awards and over 66% below the rate of master's degree awards.

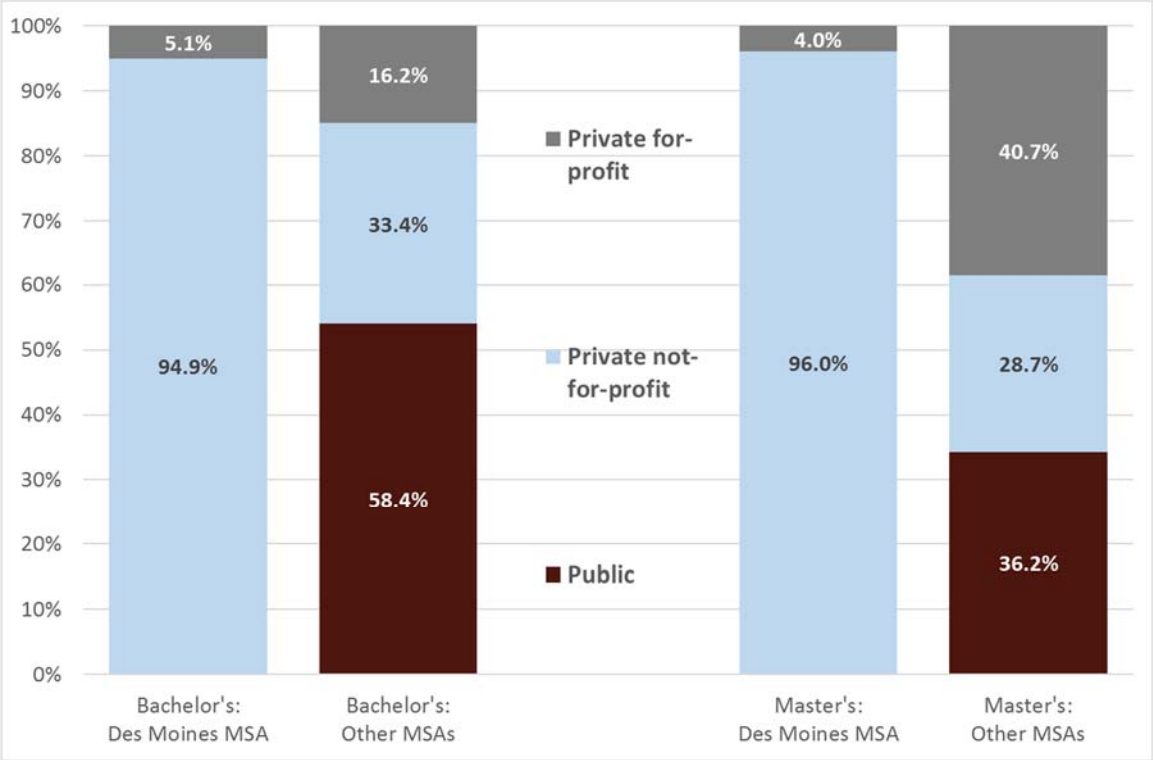
EXHIBIT 2-37
POSTSECONDARY AWARDS PER 100,000 POPULATION AGED 18 TO 44 YEARS, 2013-14

| Metropolitan Area | Estimated Population Aged 18 to 44 Years (2014) | Awards per 100,000 Population Aged 18 to 44 Years | | | | | |
|---|---|---|---|---|---|---|---|
| | | Certificates below the bachelor's Level | Associate's degrees | Bachelor's degrees | Post-bachelor's/ graduate certificates | Master's degrees | Doctoral degree (incl. Professional) |
| **Des Moines-West Des Moines, IA** | **227,318** | **692** | **1,339** | **1,088** | **6** | **255** | **281** |
| Denver-Aurora-Lakewood, CO | 1,071,482 | 1,209 | 640 | 1,239 | 69 | 760 | 158 |
| Indianapolis-Carmel-Anderson, IN | 720,725 | 1,688 | 1,738 | 1,161 | 25 | 636 | 135 |
| Kansas City, MO-KS | 736,937 | 669 | 941 | 1,072 | 28 | 388 | 136 |
| Louisville/Jefferson County, KY-IN | 441,662 | 781 | 717 | 1,207 | 44 | 638 | 187 |
| Madison, WI | 254,556 | 1,215 | 1,476 | 3,686 | 22 | 887 | 602 |
| Memphis, TN-MS-AR | 492,657 | 892 | 563 | 904 | 27 | 313 | 79 |
| Minneapolis-St. Paul-Bloomington, MN-WI | 1,282,569 | 637 | 815 | 1,699 | 150 | 1,498 | 391 |
| Oklahoma City, OK | 509,396 | 715 | 911 | 1,889 | 40 | 712 | 194 |
| Omaha-Council Bluffs, NE-IA | 332,104 | 382 | 862 | 2,027 | 84 | 768 | 319 |
| Tulsa, OK | 341,238 | 1,594 | 1,126 | 503 | 1 | 141 | 69 |
| Grand Total | 6,410,644 | 953 | 949 | 1,420 | 61 | 759 | 224 |

Source: Population data per U.S. Census Bureau, American Community Survey, 2014 1-Year Estimates. Completions data per National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 2013-14 Completions survey.

Looking specifically at these two levels of degrees (bachelor's and master's), we see in **Exhibit 2-38** the balance of production of these awards by institutional sector. Public institutions generate about 58% of bachelor's degrees and 36% of master's degrees in the other markets.

EXHIBIT 2-38
PROPORTION OF BACHELOR'S AND MASTER'S DEGREES AWARDED BY SECTOR, 2013-14




Source: National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 2013-14 Completions survey.

## HIGHER EDUCATION EXPENDITURES AND STATE SUPPORT

As a final component of the comparative market analysis, we present a summary depiction of total postsecondary institutional expenditures alongside assorted avenues of state support provided to fund these activities. The Des Moines area's total institutional expenditures per individual aged 18 to 44 years of age ranks 9th among the 11 markets at just over $2,000 per individual – about 44% lower than the average across markets.

EXHIBIT 2-39
POSTSECONDARY INSTITUTIONAL EXPENDITURES AND STATE SUPPORT, 2013-14

| Metropolitan Area | Total Institutional Expenditures | Total State Support (Appropriations, Grants, Contracts) | State Support as % of Total Institutional Expenditures | Total State Appropriations | Total State Grants & Contracts | Estimated Population Aged 18 to 44 Years (2014) | Total Institutional expenditures per person aged 18 to 44 years |
|---|---|---|---|---|---|---|---|
| **Des Moines-West Des Moines, IA** | **$469,460,201** | **$51,466,481** | **11%** | **$40,541,936** | **$10,924,545** | **227,318** | **$2,065** |
| Denver-Aurora-Lakewood, CO | $3,292,632,270 | $188,500,570 | 6% | $23,059,924 | $165,440,646 | 1,071,482 | $3,073 |
| Indianapolis-Carmel-Anderson, IN | $2,592,807,845 | $527,791,240 | 20% | $457,416,921 | $70,374,319 | 720,725 | $3,597 |
| Kansas City, MO-KS | $1,271,121,371 | $129,114,431 | 10% | $120,231,332 | $8,883,099 | 736,937 | $1,725 |
| Louisville/Jefferson County, KY-IN | $1,353,526,630 | $216,996,289 | 16% | $183,270,014 | $33,726,275 | 441,662 | $3,065 |
| Madison, WI | $2,967,629,260 | $507,394,752 | 17% | $457,187,653 | $50,207,099 | 254,556 | $11,658 |
| Memphis, TN-MS-AR | $929,533,501 | $201,986,306 | 22% | $159,443,147 | $42,543,159 | 492,657 | $1,887 |
| Minneapolis-St. Paul-Bloomington, MN- | $5,920,650,382 | $900,879,219 | 15% | $744,898,028 | $155,981,191 | 1,282,569 | $4,616 |
| Oklahoma City, OK | $2,678,975,025 | $588,997,915 | 22% | $425,134,711 | $163,863,204 | 509,396 | $5,259 |
| Omaha-Council Bluffs, NE-IA | $1,435,320,598 | $284,625,942 | 20% | $248,469,990 | $36,155,952 | 332,104 | $4,322 |
| Tulsa, OK | $891,069,237 | $113,435,191 | 13% | $102,547,639 | $10,887,552 | 341,238 | $2,611 |
| Grand Total | $23,802,726,320 | $3,711,188,336 | 16% | $2,962,201,295 | $748,987,041 | 6,410,644 | $3,713 |

Source: Population data per U.S. Census Bureau, American Community Survey, 2014 1-Year Estimates. Institutional financial data per National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS), 2013-14 Finance survey.

## 2.7 SUMMARY OF FINDINGS

As stated at the onset of this chapter, market demographic factors and trends can and should inform any decision to expand access to higher education locally. Several key points have been highlighted in the data provided that may offer support for the provision of higher education programming in the Des Moines Metro Area.

- The Des Moines Metro Area accounts for nearly one-quarter of the State's total population, and that share is expected to increase slightly over the next decade.
- Polk County is projected to grow at a faster rate than the eight-county Greater Des Moines Region and Iowa as a whole through 2040. In all projections, even though the rate of growth is slowing somewhat, Polk County and the Greater Des Moines Region populations continue to grow at a rate double that of the State as a whole.
- Local planning projections show stronger pockets of growth in the West and North sectors of the metro area.
- College degree attainment among the over age 25 populations for the city of Des Moines lags behind the broader geographies. Des Moines has a larger share of residents who have completed high school but not a baccalaureate degree than Polk County or the Greater Des Moines Region. The percentage of Des Moines residents who have earned an associate or bachelor's degree increased between 2000 and 2014. This would indicate a potentially stronger pipeline for baccalaureate and graduate degree programs offered in the region.
- Des Moines had a smaller share of students who enrolled in college within 16 months of graduation in 2012, as compared to Polk County and the Greater Des Moines Region.
- Between 2012 and 2022, the occupations requiring a bachelor's degree with the strongest growth potential in Iowa Workforce Development (IWD) Region 11 include business and

financial operations positions, management positions, computer and mathematical positions and education, training, and library positions.

- Unemployment has been lower in Polk County than in the broader geographies since 2014, and continues to decline. As this rate drops further, the available skilled workforce pool will continue to shrink, unless replenished by imports and localized entrants.
- Compared to selected peer market areas:
  - All other identified aspirational markets are home to the main campus of at least one public, four-year institution.
  - A disproportionately high component of the strong population growth in the area is due to in-migration from other states; which may correlate with the needs of industry to import labor from out of area.
  - The Des Moines area shows a very high rate of attainment of associate degrees, favorable competitiveness at the bachelor's degree level, but ranks much lower in terms of graduate or professional degree attainment.
  - As a proportion of overall postsecondary enrollment, graduate enrollment in the Des Moines area (3.5% of total) represents a fraction of what it typically constitutes in other market areas (over 10% of total).
  - The local college participation rate in the Des Moines area is the lowest among comparison areas for four-year institution undergraduates and only exceeds 2 of 10 comparison market areas for graduate participation.
  - Collective expenditures per individual aged 18 to 44 years of higher education entities based in the Des Moines area – across public and private sectors – are over 40 percent lower than what is observed for comparison markets.

# 3.0 STAKEHOLDER INPUT

In addition to looking at secondary data (population trends, educational participation and attainment data, and occupational projections in the local market), it is critical to have direct feedback from local employers, community leaders, education providers, and others knowledgeable about the market in order to have a complete assessment of the region. A series of qualitative interviews and group input sessions were conducted as part of this needs assessment. In addition, an online survey was designed in conjunction with Board of Regents staff and the Greater Des Moines Partnership to further assess the higher education needs of local employers. The results of the interviews and survey are summarized in this chapter.

## 3.1 STAKEHOLDER INTERVIEWS

With guidance from the Board of Regents State of Iowa and assistance from the Greater Des Moines Partnership staff, a series of personal interviews were scheduled and completed during a three-day site visit by the consulting team the first week in February. Additional follow-up interviews were completed by phone over the course of three months. These stakeholders included community leaders, representatives from local employer segments, education providers at all levels, and representatives of the Regent universities. Topics of discussion covered key population segments that may be in need of improved higher education access, barriers and obstacles that may prevent or deter participation, academic disciplines and degrees in greatest need, programmatic areas where local options may already exist, and program models and points of delivery that would most benefit those seeking improved access. A total of 67 interviews were completed representing a cross-section of private sector employers, educational institutions, public agencies and community leaders located in the Greater Des Moines region (a complete list of stakeholders is provided in **Appendix C**).

The commentary and discussion generated through this qualitative interview process are intended to inform planning efforts to offer academic programming and training through a regional higher education center in the Greater Des Moines metro region. A summation of key points illustrating perceptions, needs, issues, and concerns expressed by the collection of interview participants is presented below, grouped by either interested partners or industry sector.

### 3.1.1 STAKEHOLDER GROUPS

**BOARD OF REGENTS**

In individual conversations with several members of the Board of Regents and senior BOR staff, their thoughts and concerns regarding access to public four-year and graduate education programs in the Greater Des Moines area were clearly conveyed. All citizens of Iowa should have available opportunities to pursue postsecondary education and college degree attainment no matter where they live or work. Regents believe that as stewards of Iowa's state system of higher education, the Regent universities should collectively respond to meet local higher education needs where appropriate. However, they reiterated several key stipulations to their collective opinion.

- First, any overall response to meet local needs of the Des Moines area should be a collaborative approach and not a competitive one among the Regent universities.
- Unless there is a compelling reason, no duplication of programming should occur in the Des Moines area among the Regent institutions.
- Any response to meet needs must reflect a prudent use of public resources.
- The three universities should continue to work closely with DMACC to coordinate pathways to pursue education at the baccalaureate degree level and beyond.
- Degree programs and continuing education options currently provided by local private colleges and universities should be taken into consideration.
- Efforts should attempt to minimize adverse impacts to the home campuses of the Regent universities.
- Improving local access to public four-year and graduate higher education may require both a short-term and a long-term strategy.

Senior leadership at the University of Iowa, Iowa State University, and University of Northern Iowa also echoed similar sentiments regarding their active involvement in the Des Moines higher education marketplace. From current activities offered in the downtown area by the University of Iowa at the John and Mary Pappajohn Education Center and Iowa State's program offerings at Capital Square, the University of Northern Iowa's on-line programs, and the pending transition of the AIB College campus to the University of Iowa, all options are both encouraging and concerning depending on the stakeholder.

Given the pending AIB transition, in the very near future, Regent programs could be available locally at three different sites in the metro area. This bears the question… *what is the most efficient and effective approach to deliver programs locally to sustain a long-term Regent presence in Des Moines?*

### REGENT UNIVERSITIES

#### The University of Iowa (UI)

For a long time, the University of Iowa has been actively engaged in providing on-site training and degree programs in the Des Moines area, in recent years primarily through the John and Mary Pappajohn Education Center in the downtown area. The University offers a select cadre of baccalaureate and graduate degree programs plus customized training highly focused on local business and industry needs. The facility was carefully designed and equipped for instructional purposes it now serves. The program delivery model and accompanying instructional technology are structured to accommodate the particular circumstances of their target audiences, primarily working adults. The Center is heavily used and has likely reached its capacity to handle additional educational programming. There are no real options to add to the facility or find appropriate space immediately adjacent to it.

> *The John and Mary Pappajohn Education Center was acquired by the University of Iowa in August 2008. The building and programming at the Pappajohn Education Center are directed by the Division of Continuing Education. Course work leading to both certificate and degree programs are available. Prior to this, the building was the Des Moines Higher Education Collaborative (DMHEC). The vision for the center began in 1998 when a task force identified a need for continuing education geared toward the Des Moines business community and John and Mary Pappajohn helped to realize this educational goal for the greater Des Moines area. Originally, the DMHEC*

*included Simpson College, Iowa State University, the University of Northern Iowa, The University of Iowa, Grand View College, Drake University, and the Des Moines Public Schools.*

The recent gift arrangement leading to the acquisition of the AIB College property and facilities south of downtown have provided the University an avenue from which to expand program and training offerings as well as student support services for local clientele. Current plans are to have an initial offering of four UI degree programs at the AIB campus. The social work degree programs (BA & MSW) currently available at the Pappajohn Center would relocate to the AIB site. Two other programs leading to local completion of a bachelor's degree (BS Recreation Management, BA Enterprise Leadership) would be introduced at this location. These four programs are currently available on the UI home campus in Iowa City, as well.

A continued programmatic focus for UI in the Des Moines area is on graduate degree access and post-baccalaureate certificates specific to support local workforce needs to key industry sectors and government agencies in the Capital City. The University leadership realizes the potential to provide local access to degree and continuing education programming for a variety of audiences beyond those currently utilizing the Pappajohn Center. For example, training and certification in a variety of Human Resource areas may be a need to explore for UI. Future degree program possibilities might include disciplines such as business management/finance, communications and marketing, data analytics, risk management, health care professions such as nursing, and a general bachelor's degree completion pathway.

Illustrating opportunities to further serve the Des Moines area, University representatives provided some informative statistics derived from post-graduation follow-up with over 2,400 (out of nearly 10,000) UI baccalaureate degree recipients between Fall 2012 and Summer 2015.

- One in four UI graduates will seek some form of continued education in the future.
- Other than professional degree programs such as Law and Medicine, the most common post-baccalaureate programs of interest are: MBA, Education (instructional/administration), Accounting, Nursing, and Psychology/Mental Health/Counseling.
- Nearly one-third of UI graduates who continue their education do so through UI.
- Six percent of UI graduates move to the Greater Des Moines area.
- Of those staying in Iowa, 14% are living in the Des Moines area.
- Of those living in the Des Moines area, 16% are currently continuing their education, and 24% say they plan to in the future.

These data illustrate a possible segment of the Des Moines population that may have an affinity for continued educational opportunities from UI or another Regent university, if programs of interest were available locally.

Over the last three academic years, UI degree recipients were hired in the following industry sectors:

- Finance and Insurance - 26%
- Health Care and Social Assistance - 15%
- IT related services - 11%

- Educational Services - 9%

University representatives expressed an openness to include all three Regent institutions in any Board of Regents initiatives to expand access to academic programs locally for citizens and employees of the Greater Des Moines metro area. However, they remain cognizant of their responsibility to maintain the enrollment balance on their home campus in Iowa City.

### Iowa State University (ISU)

Given their campus location in Ames, within a reasonable commuting distance to many areas of the Greater Des Moines metro, Iowa State has a greater number of options to address local postsecondary education needs. Access to the full inventory of ISU undergraduate and graduate programs is more readily available to Des Moines residents than that of the other Regent institutions. Iowa State does offer a Professional MBA program in downtown Des Moines in the Capital Square building tailored to working adults, but the need for a more expansive physical presence of academic degree programs in Des Moines has not been as salient an issue for the University given the proximity of the main campus (roughly 35 miles from downtown Des Moines). It is not uncommon for Des Moines residents attending ISU to commute to Ames rather than relocate.

ISU maintains a strong academic connection to the Capital City through an ample array of successful on-line credit and continuing education programming available to those in Des Moines, as well as a collaborative academic advising relationship (Admissions Partnership Program) with DMACC for transfer students. Furthermore, as the state's land grant Institution, ISU has research and extension services that reach into many areas of the Des Moines MSA.

The recent growth experienced by ISU has put pressure on the capacity of the University to meet academic and student services needs in Ames, given current state resources. University leadership acknowledges that an expanded presence in Des Moines is a welcome consideration if driven by documented demand. They insist that any off-campus offerings must maintain a comparable level of quality and rigor as their on-campus programs.

University leadership concur that continuing education and post-baccalaureate/post-masters certificate as well as degree opportunities exist in the Des Moines area. ISU has and will continue to respond to those needs. They currently offer localized certificates and training programs in Cyber Security, Business Analytics, and Community College Leadership. Other graduate programs include: Science and Information Assurance, and Engineering in Information Assurance. Expansion of their Cyber Security training components in the Des Moines area is a possibility to explore.

Iowa State's College of Agriculture and Life Science offers a wide range of degree options and certificates, many through online delivery that reach into the Des Moines area. The College of Electrical and Computer Engineering has a cyber security and security management focus and continues to work with representatives of local industry and data centers to identify additional credentialing needs.

### University of Northern Iowa (UNI)

Currently, the University of Northern Iowa does not have a physical presence in Des Moines, but has developed an extensive array of on-line courses and degree programs to serve the entire state. They have also established a 2+2 relationship with DMACC. It is a challenge for UNI to offer face-to-face instruction in Des Moines, as (in a number of majors) accreditation standards limit the use of adjuncts in the program. UNI, like ISU and UI, places a priority on providing students with high-quality instruction,

whether on-campus, online, or off-campus and, as such, relies primarily on campus-based faculty, rather than adjuncts, to deliver instruction.

The most efficient model to-date to deliver off-campus programs has proven to be on-line and broadcast modes. However, UNI leadership is willing to pursue on-site local instructional opportunities on a limited basis to "test the market" with a few select programs. UNI envisions their expanded involvement in the Des Moines area as a collaboration with the other Regent institutions to avoid any program duplication, instead matching identified areas of need with each institution's programmatic strengths and expertise. Degree and certificate program offerings in the Des Moines metro that align with UNI include Elementary Education and Principal and Superintendent credentialing, which currently have distance delivery options. An applied science baccalaureate online focused on managing business and organizations is in the approval process. Other possible opportunities they foresee may include an applied science baccalaureate with several concentrations, and an industrial technology master's program offered through the College of Humanities, Arts and Sciences. Providing continuing education for real estate professionals in the Des Moines area holds potential for UNI since these courses are already offered to real estate professionals on campus

UNI staff provided some additional facts about their recent graduate connections to the Des Moines area. About 25% land in Des Moines, and a sizeable number enter the metro workforce in education (area school districts), finance/insurance, sales/retail, health and social services, or manufacturing.

They also envision possible opportunities to utilize the AIB campus/facilities for UNI and other Regent institution students completing internship in the Des Moines metro area.

- **Des Moines Area Community College (DMACC)**

Des Moines Area Community College (DMACC) is seen as a critical and vibrant contributor to the development and success of the Des Moines area. It is perceived to be a willing partner to both industry and senior higher education institutions in the area, among whom their customer service orientation is universally appreciated. DMACC desires to be a part of a collaborative solution for continuing advances in participation rates in postsecondary education, degree attainment, upgrades to skills, and general economic growth in the region.

### GREATER DES MOINES PARTNERSHIP

Various representatives that are part of the Greater Des Moines Partnership (GDMP) organization as either staff or active members expressed a recurring message to our team. They believe there is opportunity for an expanded presence of public research universities in Des Moines, and that this presence is an important element of the economic development infrastructure moving forward. In fact, they would like to see all three Regent universities play a collaborative, integral role in Des Moines.

Interviewees, repeatedly referenced the Central Iowa Capital Crossroads plan, in particular one key pillar of its framework -- Human Capital. The plan outlines a PK-20 pipeline to cultivate and sustain a career focused workforce that is premised on connectivity to regional employment, particularly with key target industries. Post-secondary education (at all levels) is embraced as an economic driver (EDGE initiative). Alignment of education partners to achieve plan goals is imperative. Industry sectors that are identified as key to the Capital Crossroads initiatives are:

- Finance and Insurance

- Information Solutions
- Health and Fitness
- Agribusiness
- Manufacturing
- Logistics

Thus, meeting the workforce needs of employers in these sectors is a significant part of the GDMP focus on expansion of local access to higher education. Discussions about an expanded public higher education presence in Des Moines evoked several preferences:

- Post-secondary education needs include: professional/specialty credentials; timely/affordable degree completion options, and lifelong learning.
- Attraction, growth, and retention of a talented and prepared workforce is the focus.
- A downtown location for a new higher education center is desirable for many, following a successful model in the current Pappajohn Education Center. Several areas of downtown were mentioned as potential sites.
- On a number of occasions, attention was called to the city of Indianapolis and the joint campus of Indiana University-Purdue University (IUPUI) as an example of an urban multi-provider campus offering an extensive range of undergraduate, graduate and professional programs, services and research opportunities. It is seen as an aspirational education model for supporting and sustaining economic growth in Des Moines.
- Many GDMP stakeholders expressed that collaboration, coordination, and cooperation between institutions are critical to achieving goals related to an expanded higher education presence in the area.
- The greatest needs cited by this group were skilled trades, health programs, technology, and MBA/finance programs.

### METROPOLITAN PLANNING ORGANIZATION

Input and data resulting from discussions with the Metropolitan Planning Organization (MPO) provided insight into the future population and employment growth patterns for the Des Moines area. The Des Moines Metro is projected to surpass a population of 750,000 by 2040. Several MPO exhibits that illustrate this growth across the metro area are displayed in the previous chapter. Although growth is occurring in many areas of metro Des Moines, strong areas of population growth will continue to the North and West. Ankeny will soon exceed a population of 100,000. Continued development of the I-35 corridor between Des Moines and Ames will have a significant impact on access to the Iowa State campus for academic instruction as well as research collaboration.

Similarly, as the number of residents and workers increase in those specific areas, so too will demand for localized services including access to education and training opportunities. Improvements to transportation corridors and commuter routes will be required to maintain reasonable travel times.

Some industry sectors tend to cluster in particular areas in and around Des Moines. Though not all inclusive, examples might include concentrations of insurance and finance in the downtown business district and in West Des Moines, transportation and logistics to the northeast, and agribusiness and

manufacturing to the northwest. Any new location(s) proposed for higher education delivery points will need to take all of these growth patterns into consideration.

### 3.1.2 INDUSTRY SECTOR NEEDS

The following section provides a synopsis of input from industry sector representatives, and is an indication of interest and need for expanded access to education and training opportunities in the Des Moines Metro area, but not necessarily a quantifiable depiction of demand.

#### INSURANCE/FINANCIAL BANKING SECTOR

The national insurance and financial firms with operations or headquarters in the Des Moines metro recruit nationwide as well as locally. Thus, smaller firms dependent on the same workforce segments may be at a competitive disadvantage. Industry representatives indicate there is a limited surplus of business management, finance, and accounting entry level degreed workforce available. The large companies are hiring entry level employees with bachelor's degrees in finance and economics to staff their local call centers. They report higher than average turnover rates as many of those new customer support employees look for better career opportunities adding to continuous demand in the marketplace for replacements.

Smaller firms have a need for financial, IT, actuarial, and legal personnel to meet their staffing needs and several expressed the potential for significant staff growth in the next three to five years. For professional and management positions, there is interest in MBA programming for current workers (on middle management executive tracks), executive MBA programs for rising company leaders, and training in specialty areas such as actuarial sciences, banking, risk management, insurance and annuities, and human resources. Data analytics and information technology systems support were also frequently referenced – often in relation to the development of customer interface and service applications. Business analysts were also identified as a need in terms of serving as liaisons between IT, other staff, and customers. Institutions that were often mentioned when seeking such degree recipients and instructional programming included Drake University and the University of Iowa, as well as Iowa State University and the University of Northern Iowa in some disciplines.

For the most part, these firms would prefer a downtown location or their own company site for accelerated degree programs or continuing education credentialing and certification programs. Many of these firms also emphasize the cultural development of Des Moines as a rationale for a downtown location for any expansion of Regent institution presence in the area. Higher education is seen as an important component in the development of a more residential, urban center and cultural hub, which serves to make the area a more attractive destination for the class of rising professionals which these firms are seeking to recruit and retain. Convenience and affordability are seen as key factors in any program's success.

Complicating matters, many of the financial profession required certifications and designations are also offered through professional associations or national for-profit entities. Depending on the nature of the instructional content, it will be difficult for a college or university to be competitive in some continuing professional education areas. Two possible exceptions to this are the areas of leadership and customer service. Currently, many of these firms handle this type of training internally; however, it was suggested that the universal applicability of these skills might suggest opportunities to outsource the more commoditized aspects of training to external education providers.

Nonetheless, the industry looks more to established higher education institutions to access convenient and affordable degree programming for the professional development of current staff, as well as to replenish the local entry-level workforce supply. Organizations in this industry sector invariably support educational development of staff in relevant domains through generous tuition reimbursement and other incentives and accommodations to enhance both the credentials and effectiveness of their personnel.

### IT/TECHNICAL SECTOR

A collection of corporate data repositories and large hardware technology support facilities drive a local need to fill and replace IT and technical support personnel.

Employers across other industry sectors identified pronounced needs to provide education and training to their IT staff and managers or recruit new IT personnel to their organizations. Software development, product management, operations technology, healthcare information, communication systems, and business analytics technology are training and recruitment areas of interest to many company representatives. IT skills and professionals are also seen as a critical input and driver for entrepreneurial ventures.

A number of these functional content areas would be most useful in small segments of accelerated courses that may lead to a credential, or could become stackable in nature, but not necessarily requiring immediate attainment of a degree. Boot camps and eight to 12 week “code schools” have been implemented with success in other areas to meet the rapidly evolving needs in this sector. In terms of specific subject areas, .NET and JavaScript languages were referenced as being needed to support legacy systems across several industries.

Company representatives noted that DMACC has been very responsive to information technology needs at the associate degree and certification levels. It was suggested that senior institutions interested in bringing advanced technology/IT programming to local employees must develop a strong collaborative relationship with key employers in the Des Moines area. Programs must carefully align with identified needs, be accessible, and offer value per cost to generate enrollment critical mass. Recruitment of the brightest and most capable graduates from IT programs is extremely competitive between local, national, and international firms. Thus, the concept of a “home-grown” labor force in this area – educating individuals with strong ties to the region – is seen as vital to meeting local industry demands.

### AGRIBUSINESS/AG SCIENCE SECTOR

While new agriculture-specific programs are not necessarily needed, as this demand is already met by major universities in Iowa, some supporting functions in these evolving businesses were identified as gaps. Recruitment of financial professionals to the credit divisions of these firms necessitates competition with the global financial enterprises located in Des Moines. Similar obstacles are faced in recruitment to corporate functions such as human resources and accounting. IT professionals are also a rapidly expanding area of need, as advanced hardware and software interfaces and data tracking mechanisms have increasingly become standard components of smarter agricultural machinery, and customer service through online platforms is also of increasing emphasis. Openings for software engineers frequently persisted for six months before being filled, in one firm’s experience.

Engineering and engineering technologists were also identified as an area of need, including those trained at the master’s degree level and through MBA programs. Skilled trades, such as welding and machinists, were identified among “middle skills” with high demand.

Otherwise, needs were generally characterized as expansion of local, conveniently scheduled access particularly for non-traditional working adults, with a focus on current industry sector employees. Other areas of emphasis include degreed personnel at both the bachelors' and master's levels in disciplines such as: Agronomy, Bio-chemistry, Molecular Biology, Genetics, IT, Analytics Modeling.

Again, convenience was noted as a critical component to any new program offerings, with an opportunity for full-time workers to pursue and obtain graduate credentials.

### MANUFACTURING SECTOR

Beyond the advanced agricultural equipment manufacturing needs noted in the preceding Agriculture section, needs and available local options for degree program access and credentialing differ by manufacturing specialization. There is potential to offer an applied master's degree or an MBA with a combined specialization in manufacturing operations and supply chain management drawing from a college or university business and applicable engineering programs. The target audience would be for middle managers to advance within their organization.

### ARCHITECTURE/ENGINEERING/CONSTRUCTION/REAL ESTATE

Needs of firms in the construction industry were heavily weighted towards skilled trades and associated certificate and associate's level programs. Among bachelor's degree and higher level education positions, engineers were cited as areas of high demand, including construction, mechanical, and civil engineering graduates. The market for construction management graduates to serve as superintendents or assistant superintendents was also seen as fairly tight, with difficulty often experienced in filling new positions. Cost estimating and project management skills were cited as specific elements of overall training programs that would be valuable to augment or emphasize, or to offer as supplemental training to current staff outside of formal degree programs.

In the architecture and design industry, the greatest needs exist for mid-level, experienced design professionals. Thus, rather than the benefits of a degree program as a pipeline, an expanded higher education presence connected with the economic development of Des Moines and its attractiveness to prospective employees would be valuable. A master/apprenticeship program to address entry level employee deficits (i.e., training on how to chase work, write contracts, consider legal implications of design and work with team of consultants) was suggested.

### EDUCATION SECTOR

Local districts have a need for baccalaureate and teacher endorsement programming with local access. A segment of district graduates who wish to pursue a post-secondary education/degree have only one option – DMACC. Current online options are available through Drake University and ISU. District officials see a need for more options to complete a public four-year degree in the Des Moines area.

Area school systems continue to struggle to recruit and retain teachers in certain specialties and disciplines, including special education and English Language Learners (ELL) certifications, and have difficulty meeting goals for the diversity of their instructional staff and leadership. They continue to develop pipelines to fill administrative positions at school or district levels. Many factors including pay scales make the profession less attractive than other career alternatives, thus the districts' continued reliance on colleges and universities to help respond to education workforce issues. Continuing education programs are an ongoing need, with desires expressed for increased access and convenience.

District leadership appears open to additional partnerships with higher education providers and industry, geared towards advising students regarding paths of education, potential careers, and exposure to real-world professional experiences. There are many community initiatives aiming to increase high school graduation rates, equivalency attainment, and college participation and continuation, particularly targeted for disadvantaged socioeconomic groups, which is seen as part of the solution to filling industry needs.

Although there has been interest from various institutions, implementation has been slow in addressing some education programs and professional development/continuing education needs in the metro area. They would like to see UNI do more locally based on their long tradition in teacher education.

### HEALTH CARE SECTOR

Healthcare is a critical pillar of the Capital Crossroads plan. Demand to meet qualified staffing needs continues to grow due to a professional workforce nearing retirement age, limitations on health professions education program class size, an aging patient population, and increased patient load and administrative burden due to implementation of the Affordable Care Act.

Local education and training needs include specialized patient care technicians, pronounced needs for clinical practice RNs/BSNs, social media professionals, pharmacists, robotics technicians, medical informatics specialists, business analysts, and trained executives (such as MBAs with healthcare operations focus), as well as a typical cadre of allied health care professionals, particularly nurses and physicians. The technical evolution of the industry, coupled with the prospective expansion of telemedicine and other remote service delivery models, is expected to drive training needs as well. Paramedicine also features prominently on the horizon, with an increasing emphasis placed on chronic disease management and wellness coaching viewed as critical towards containing costs.

Currently local healthcare systems and providers rely on Des Moines University, Mercy College, DMACC and others to meet their very specific workforce and training needs. Many of the health care profession programs have capacity limitations due to accreditation and licensing requirements, and many are expensive to operate.

### TRANSPORTATION AND LOGISTICS

Local employers expressed a need for candidates trained in supply chain logistics, and see an opportunity for cooperation between DMACC and Regent universities locally to this end. Time management, materials tracking, production/inventory sequencing are all needed skills for the industry. The further development of a transportation hub in the region will necessitate additional employees with training in logistics, transportation management, and rail to road processes and technologies.

### BASIC SKILLS NEEDS

Across all employment sectors, recruiters, business managers, and HR administrators reiterate a need to enhance the basic skills portfolio of the available new hires (millennial baccalaureate degree recipients). Although not industry or discipline specific, needed/desired skill sets often cited by business representatives for nearly every work environment, include:

- Communication and writing skills
- Customer Service

- Leadership
- Analytical thinking
- Problem solving
- Group/team building
- Technical business skills
- Proper workplace protocols
- Understanding their role in the organization's "big picture"

### OTHER COMMUNITY ORGANIZATION AND STAKEHOLDER FEEDBACK

Other community leaders and advocates expressed additional needs and elements of texture that will be important for shaping strategy for meeting the areas postsecondary educational needs. Some key components of this input include:

- There is a need to increase the diversity of the workforce and business and organizational leadership in the area.
- The community has a substantial population of individuals who have not attained a high school diploma or equivalent.
  - Outreach to these populations and local delivery of educational services directly to these populations is seen as an effective strategy, due to limited transportation, childcare needs, academic anxiety, and other barriers to pursuit of educational programs.
  - Beyond overcoming the initial obstacle of high school equivalency, which expands access to Pell grants and general opportunity, and then defining educational options and career paths for these individuals are a priority for the overall economic development of the region.
- Three-quarters of those in poverty in the region are working mothers; training and education are seen as the best path to improving circumstances.
- Ex-offender re-entry into the workforce is an area of concern where skills training plays an important role in reducing recidivism.
- Related to the above, as well as in a broader context, attention to the needs and proper treatment of individuals suffering from mental health issues is also perceived as a priority for reducing certain societal ailments and expanding the available workforce in the area.

## 3.2 SURVEY RESULTS

The feedback resulting from the three online surveys are provided in this section. Survey methodology is provided in **Appendix D**. Please note: the MGT online surveys are the source for all exhibits in this chapter. The information gleaned from these surveys is limited in some instances due to smaller samples of respondents. However, it is intended to supplement qualitative input provided in the previous sections of this chapter.

### 3.2.1 RESPONDENT CHARACTERISTICS

#### EMPLOYERS

The largest share of employer respondents (n=32) represent Finance, Insurance, and Real Estate organizations (50%), followed by Manufacturing (22%). Nearly half (48%) report that their organization is likely to grow by more than 1-5% over the next three to five years, while an additional 21% report that their organization is likely to grow by more than 10%. The average number of full-time employees who currently work at responding company's site(s) in the metropolitan Des Moines area (or an adjacent community) is nearly 2,500, with responses ranging from 10 to 15,000. Employers averaged almost 300 part-time employees (range = 1 to 3,000).

#### SCHOOL COUNSELORS

While respondents work at four different school districts in and around Des Moines, the overwhelming number of the 20 school counselor respondents work for Des Moines Independent Community School District (75%).

#### DMACC STUDENTS

The largest share of the 67 students who completed the survey take the majority of their classes on the Ankeny Campus (49%) followed by the Urban Campus (18%). More than half (55%) are traditional age, while 25% are age 35 or over. The majority take classes full-time (60%), and are pursuing an associate's degree (79%). About one-third intend to finish their education with an associate's degree (30%), nearly two-thirds intend to pursue a bachelor's or graduate degree in the future (48% and 17%, respectively).

### 3.2.2 PROGRAMMATIC NEEDS

**Community college students** who indicated they planned to pursue a four-year degree were asked what degree program they would like to pursue and the most frequent responses were:

- Business/Accounting/Finance/Marketing – 19%
- Computer Science/Management Information Systems – 12%
- Psychology/Sociology – 12%

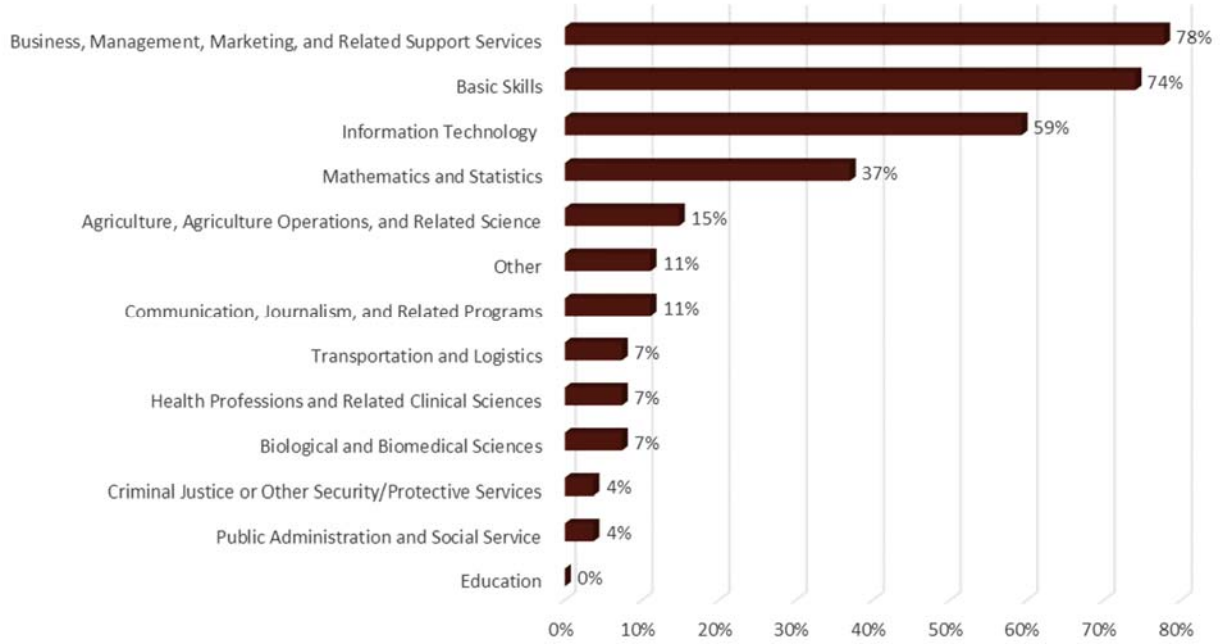
The majority of these students intend to pursue this future degree full-time (72%), at a public college or university (100%) in Iowa (86%).

**Employers** were asked in what broad academic disciplines current and future employees would need training, and the most common responses are listed below:

- Business, Management, Marketing, and Related Support Services - 78%
- Basic Skills - 74%
- Information Technology - 59%

Note that these academic program data represent a snapshot of perceived need and are greatly influenced by the industry sector of the responding employers. They should not be generalized to the region as a whole.

EXHIBIT 3-1
ACADEMIC FIELDS/CATEGORIES IN WHICH CURRENT OR FUTURE EMPLOYEES WILL LIKELY NEED EDUCATION AND TRAINING OVER THE NEXT THREE TO FIVE YEARS AS REPORTED BY EMPLOYERS




Survey respondents who indicated needs in any of the broad academic disciplines shown in **Exhibit 3-1** were then asked to detail the specific number of current and future employees who would need training within that broad grouping. The results of those survey items for bachelor's degree level education and higher are displayed in **Exhibit 3-2**, and will be discussed in the next chapter reflecting specific programmatic needs by educational level and magnitude.

As shown, Basic Skills was indicated as an educational necessity for the largest number of employees (1,182), followed by Business Management (1,067). Please note that these data represent a snapshot of anticipated educational needs for future and current employees for a fraction of employers operating in the greater Des Moines area, and should not be generalized to the region as a whole, considering, the nature of the respondents (Finance, Insurance, and Real Estate organizations - 50% and Manufacturing - 22%)

EXHIBIT 3-2
NUMBER OF EMPLOYEES NEEDING EDUCATION/TRAINING OVER THE NEXT THREE TO FIVE YEARS, AS REPORTED BY EMPLOYERS

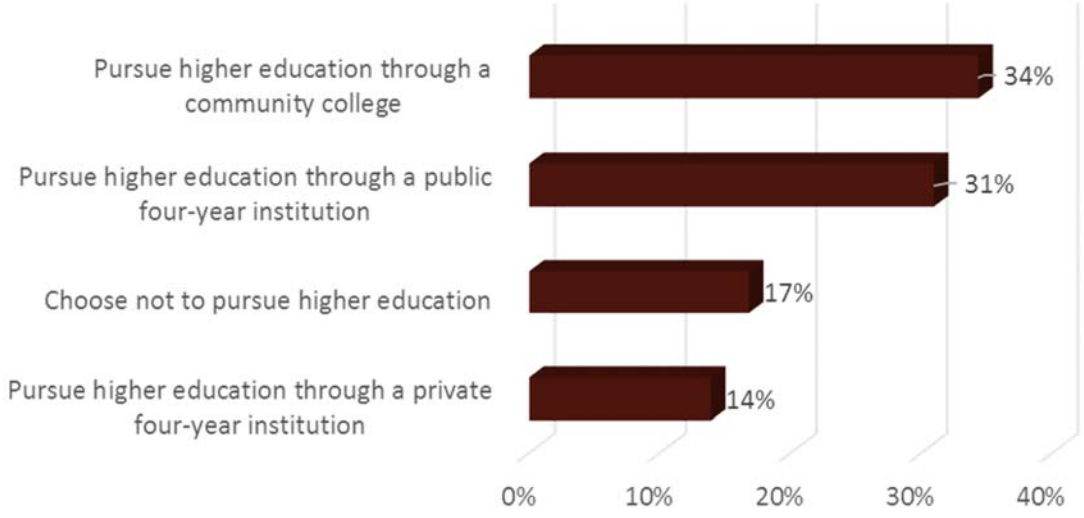
| Academic Category | Bachelor's | Post Bacc | Graduate | TOTAL |
|---|---|---|---|---|
| Basic Skills | 1,139 | 40 | 3 | **1,182** |
| Business Management | 1,042 | - | 25 | **1,067** |
| Finance and Accounting | 172 | 6 | - | **178** |
| Human Resources | 264 | - | - | **264** |
| Marketing and Public Relations | 86 | 3 | - | **89** |
| Criminal Justice or Other Security/Protective Services | 50 | - | - | **50** |
| Information Technology | 816 | 3 | 5 | **824** |
| Health Professions and Related Clinical Studies | 500 | - | 200 | **700** |
| Liberal Arts and Sciences, General Studies and Humanities | 605 | - | - | **605** |
| Mathematics and Statistics | 349 | - | - | **349** |
| Physical Sciences | 44 | 3 | 15 | **62** |
| **TOTAL** | **5,067** | **55** | **248** | **5,370** |

Note: Responding employers indicated education and training needs for fewer than 50 current and future employees in the following academic categories: Agriculture, Biological and Biomedical Sciences; Chemical Engineering; Civil Engineering; Communication, Journalism, and Related Programs; Electrical Engineering; Manufacturing Management and Production, Mechanical Engineering; Natural Resources and Conservation; Public Administration and Social Services; Transportation and Logistics. These categories are not included in the data set above.

### 3.2.3 HIGHER EDUCATION ACCESS

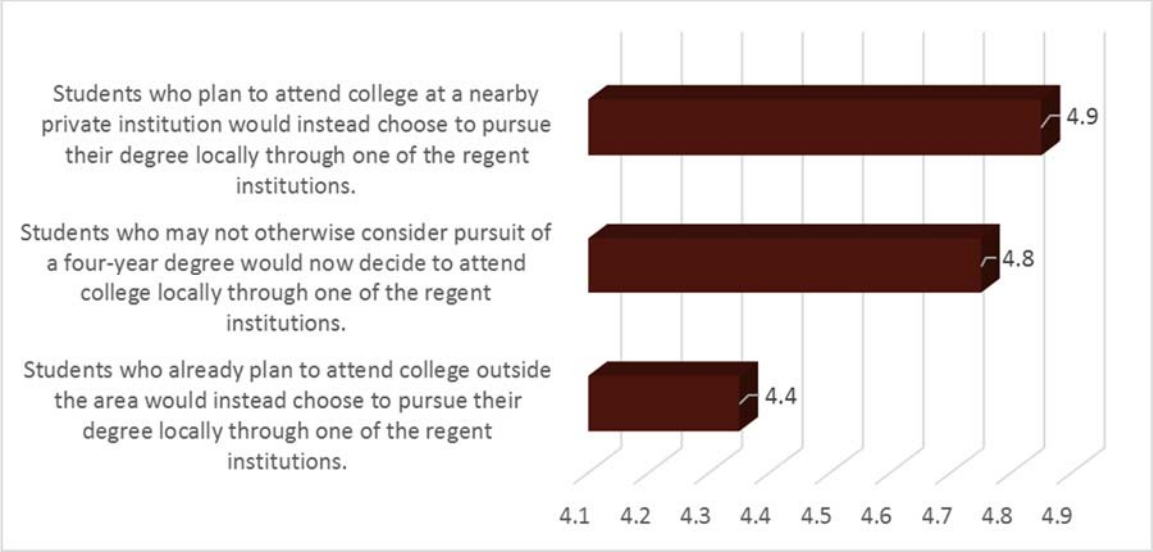
**School counselors** were asked to estimate the percentage of their students who pursue various educational paths, as shown in **Exhibit 3-3**. On average, counselors report that approximately 34% of their students attend community college, while an additional 31% attend a public four-year institution.

EXHIBIT 3-3
STUDENT HIGHER EDUCATION PATHS
AS REPORTED BY SCHOOL COUNSELORS



**School counselors** were asked, "*If academic programs of interest leading to a baccalaureate degree were available in the greater Des Moines metro area from a Regent institution (Iowa State, the University of Iowa, or University of Northern Iowa), in your opinion what percentage of your students would stay in Des Moines to pursue their degree?*" The average response was 30%. Additionally, counselors were asked to indicate the likelihood of several outcomes if baccalaureate degree programs were made available in the greater Des Moines area through a Regent institution. Respondents used a scale of one to ten, and the results are shown in **Exhibit 3-4**. None of the outcomes were rated as particularly likely, but counselors believe that the most likely outcomes of the three scenarios would be students opting for attending one of the Regent institutions over local private institutions (4.9 on the 10-point scale), or those who do not intend to pursue higher education, now opting to enroll in a local Regent sponsored program (4.8).

EXHIBIT 3-4
LIKELIHOOD OF OUTCOMES IF BACCALAUREATE DEGREE PROGRAMS BECAME AVAILABLE LOCALLY THROUGH REGENT INSTITUTIONS AS REPORTED BY SCHOOL COUNSELORS

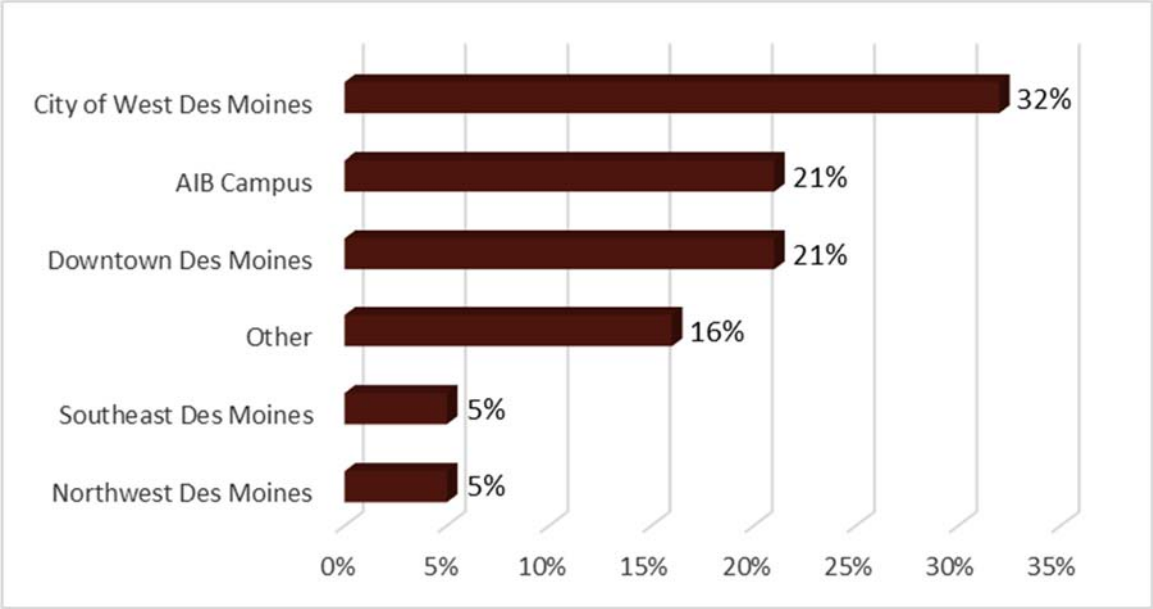



When asked if their plans would change *"if a four-year degree program were available from Iowa State University, the University of Iowa, and the University of Northern Iowa in the greater Des Moines area,"* the majority of **DMACC student respondents** indicated that they would be interested in pursuing a four-year degree locally (53%).

All stakeholders were asked about **barriers to higher education access** in the region. Across the board, affordability is seen as a barrier by the largest share of respondents in each category. The overwhelming majority of employers (89%), school counselors (70%), and community college students (72%) cite affordability or financial constraints as a major obstacle/barrier currently faced by residents and employees seeking education and training in the local area.

When asked to identify the best location for the proposed higher education center, nearly one third of **employers** selected the City of West Des Moines (32%). The AIB Campus and Downtown Des Moines were each selected by 21% of respondents, as shown in **Exhibit 3-5**. Convenience is critical for participation.

EXHIBIT 3-5
OPTIMAL LOCATION FOR THE IOWA BOARD OF REGENTS HIGHER EDUCATION CENTER IN THE GREATER DES MOINES AREA AS REPORTED BY EMPLOYERS




**Employers** were asked to indicate the incentives offered to encourage employees to participate in training and education. Nearly two-thirds of respondents (62%) offer partial tuition reimbursement, while 24% offer full tuition reimbursement. Nearly half (48%) offer release time from work to encourage participation in education and training. Nearly thirty percent offer subsequent salary increases following education completion.

A series of questions was asked to determine employer preferences for education/training modality and timing. The overwhelming majority of **employers** (81%) indicated that in-class, a hybrid/blended model (mix of in-class instruction and distance learning) would be most appropriate for their employees. A minority indicated that Internet/web-based instruction only or face-to-face instruction only would be appropriate (10% each).

The largest share of **employers** (62%) indicated no preference for the day of the week which would work best for education/training of employees. Among those who did indicate a preference, Thursday, Friday and Saturday were the most frequently cited days (four respondents/19%, each).

While most **employers** indicated no preference for class times (52%) among those who did indicate a preference, night classes or late afternoon/early evening are preferred by the largest share of employer respondents (six respondents, or 29% each).

The largest share of **employers** indicated no preference for the frequency of educational/training programs (43%). Among those who did indicate a preference, the largest share (33%) indicated that once a week would be appropriate.

## 3.3 SUMMARY OF STAKEHOLDER FINDINGS

This section summarizes the feedback received through the stakeholder interview process (qualitative data) and the three online surveys (primarily quantitative data).

### TARGET AUDIENCES

Across all stakeholder groups, particular population segments or audiences were common to the discussion of who might be in need of enhanced access to public baccalaureate or graduate level programs in the Des Moines area. Though not mutually exclusive, the prime targets likely include:

- Working adults, non-traditional college age individuals, displaced workers
- Time-bound, place-bound residents and employees in the Greater Des Moines Metro area
- Employees seeking credential upgrades for advancement or new employment
- Individuals seeking skills enhancements or continuing education
- Community college transfers, college returnees, reverse transfers
- Persons not comfortable with a full on-line program
- Financially constrained residents

### MAJOR ACCESS BARRIERS

It is critical to understand issues in the market place that may adversely impact interest and actual participation by individuals in local programs beyond the course/program content. Stakeholders shared their opinions based on their own experiences or feedback they have received from other employers, fellow workers, staff, and others in the local community. In no particular order of magnitude, the following issues may prevent or discourage individuals from initially enrolling or continuing in education and degree programs (beyond the community college level) offered locally. Regent institution planning for any new programs or points of delivery in the Des Moines Metro area must carefully consider all of the factors listed below.

- Location convenient to work or home
- Time of day/day of week scheduling
- Cost of attendance
- Availability of company incentives for work related education/training
- Ease of access to/from commuting routes or public transportation
- Time to degree completion
- Mode of course/program delivery
- Safe and secure environment
- Reputation/quality of institution
- Course/program content is not specific enough to meet need

# 4.0 INDICATORS OF PROGRAM NEED IN DES MOINES

The primary purpose of this assessment is to identify programs of need, parse out those that are currently being met locally to a reasonable degree, gather some measure of demand (magnitude of unmet need) for those that remain, and establish a priority from that metric. Such data will inform the Board of Regents as it explores strategies and actions related to meeting those needs and decisions regarding the enhancement of higher education access in the Des Moines Metro Area.

One concern to be addressed in this assessment is the compatibility of the locally available academic programs of interest with the needs of working adult students, particularly those seeking four-year and advanced degrees. These students may need to attend classes part time, and usually are paying for their own education, so affordability and convenience are key. While a number of academic programs are available in the local market through private or for-profit institutions, in some instances, they may not be a good fit for the non-traditional student.

The information and data set forth in the entirety of this needs assessment report, and particularly, the indicators of demand presented in this chapter, may prove helpful in generating interest among potential Regent institutions who might consider expanding their program offerings locally.

Two different data elements are employed to frame potential program demand:

1. Occupational Projections of local job openings (new positions and replacements) through 2022, as released by Iowa Workforce Development. These projections are the base drivers for potential program demand in the area.
2. Survey responses and interview feedback from a select group of Des Moines employers reporting estimates of annual need for training and education of current and future employees, supplements the above information.

Both data sets are sorted to reflect demand by three college degree levels typically required for entry into that profession/occupation:

- Baccalaureate degrees (BA, BS, and non-professional)
- Master's degrees
- Doctorate and First Professional degrees

## 4.1 OCCUPATIONAL PROJECTIONS

In this section data is presented by each of three degree levels associated with occupational openings projected for Des Moines as described above. Two exhibits are included for each education level, directly reflecting where the job opportunities requiring college degrees will be, and the relative magnitude of total openings.

**Exhibit 4-1** displays the projected annual openings in the Iowa Workforce Development (IWD) Region 11 between 2012 and 2022 requiring a minimum entry baccalaureate education level. IWD Region 11, which covers the study market area, includes Boone, Dallas, Jasper, Madison, Marion, Polk, Story, and Warren Counties. Among bachelor's degree required occupations, business and financial operations positions and management positions will be the most commonly available (855 and 695 annual openings, respectively) followed by computer and mathematical positions and education, training, and library positions (500 and 465 annual openings, respectively).

EXHIBIT 4-1
ANNUAL BACHELOR'S LEVEL OPENINGS BY REQUIRED DEGREE LEVEL, 2012-2022
IWD REGION 11

| Occupations with Baccalaureate Level Education Required | | |
|---|---|---|
| **Broad Occupational Category** | **Occupational Title** | **Total Annual Job Openings** |
| Architecture & Engineering Occupations | Architects | 15 |
| | Civil Engineers | 40 |
| | Industrial Engineers | 25 |
| | Mechanical Engineers | 25 |
| | Engineers, All Other | 10 |
| | TOTAL | 115 |
| Arts, Design, Entertainment, Sports, & Media Occupations | Graphic Designers | 35 |
| | Producers & Directors | 10 |
| | Coaches & Scouts | 50 |
| | Reporters & Correspondents | 15 |
| | Public Relations Specialists | 35 |
| | Editors | 20 |
| | Technical Writers | 10 |
| | Writers & Authors | 10 |
| | Interpreters & Translators | 15 |
| | TOTAL | 200 |
| Business & Financial Operations Occupations | Compliance Officers | 25 |
| | Cost Estimators | 25 |
| | Human Resources Specialists | 45 |
| | Labor Relations Specialists | 15 |
| | Logisticians | 15 |
| | Management Analysts | 80 |
| | Meeting, Convention, & Event Planners | 10 |
| | Fundraisers | 10 |
| | Compensation, Benefits, & Job Analysis Specialists | 10 |
| | Training & Development Specialists | 35 |
| | Market Research Analysts & Marketing Specialists | 80 |
| | Accountants & Auditors | 190 |
| | Budget Analysts | 10 |
| | Credit Analysts | 40 |
| | Financial Analysts | 60 |
| | Personal Financial Advisors | 40 |
| | Insurance Underwriters | 45 |
| | Financial Examiners | 15 |
| | Credit Counselors | 10 |
| | Loan Officers | 75 |
| | Financial Specialists, All Other | 20 |
| | TOTAL | 855 |

Source: Iowa Workforce Development, 2016.

EXHIBIT 4-1 (CONTINUED)
ANNUAL BACHELOR'S LEVEL OPENINGS BY REQUIRED DEGREE LEVEL, 2012-2022
IWD REGION 11

| Occupations with Baccalaureate Level Education Required | | |
|---|---|---|
| **Broad Occupational Category** | **Occupational Title** | **Total Annual Job Openings** |
| Community & Social Service Occupations | Child, Family, & School Social Workers | 55 |
| | Mental Health & Substance Abuse Social Workers | 10 |
| | Health Educators | 10 |
| | TOTAL | 75 |
| Computer & Mathematical Occupations | Computer Systems Analysts | 165 |
| | Information Security Analysts | 15 |
| | Computer Programmers | 30 |
| | Software Developers, Applications | 115 |
| | Software Developers, Systems Software | 30 |
| | Database Administrators | 20 |
| | Network & Computer Systems Administrators | 50 |
| | Computer Network Architects | 20 |
| | Computer Occupations, All Other | 15 |
| | Actuaries | 25 |
| | Operations Research Analysts | 15 |
| | TOTAL | 500 |
| Education, Training, & Library Occupations | Vocational Education Teachers, Postsecondary | 10 |
| | Kindergarten Teachers | 25 |
| | Elementary School Teachers | 160 |
| | Middle School Teachers | 50 |
| | Secondary School Teachers | 115 |
| | Special Education Teachers | 15 |
| | Adult Basic & Second Educ & Literacy Teachers & Instructors | 10 |
| | Substitute Teachers | 70 |
| | Teachers & Instructors, All Other | 10 |
| | TOTAL | 465 |
| Healthcare Practitioners & Technical | Dietitians & Nutritionists | 10 |
| | Medical & Clinical Laboratory Technologists | 10 |
| | Occupational Health & Safety Specialists | 10 |
| | TOTAL | 30 |
| Life, Physical, & Social Science Occupations | Food Scientists & Technologists | 10 |
| | Soil & Plant Scientists | 60 |
| | Environmental Scientists & Specialists, Incl Health | 10 |
| | Biological Technicians | 15 |
| | TOTAL | 95 |

Source: Iowa Workforce Development, 2016.

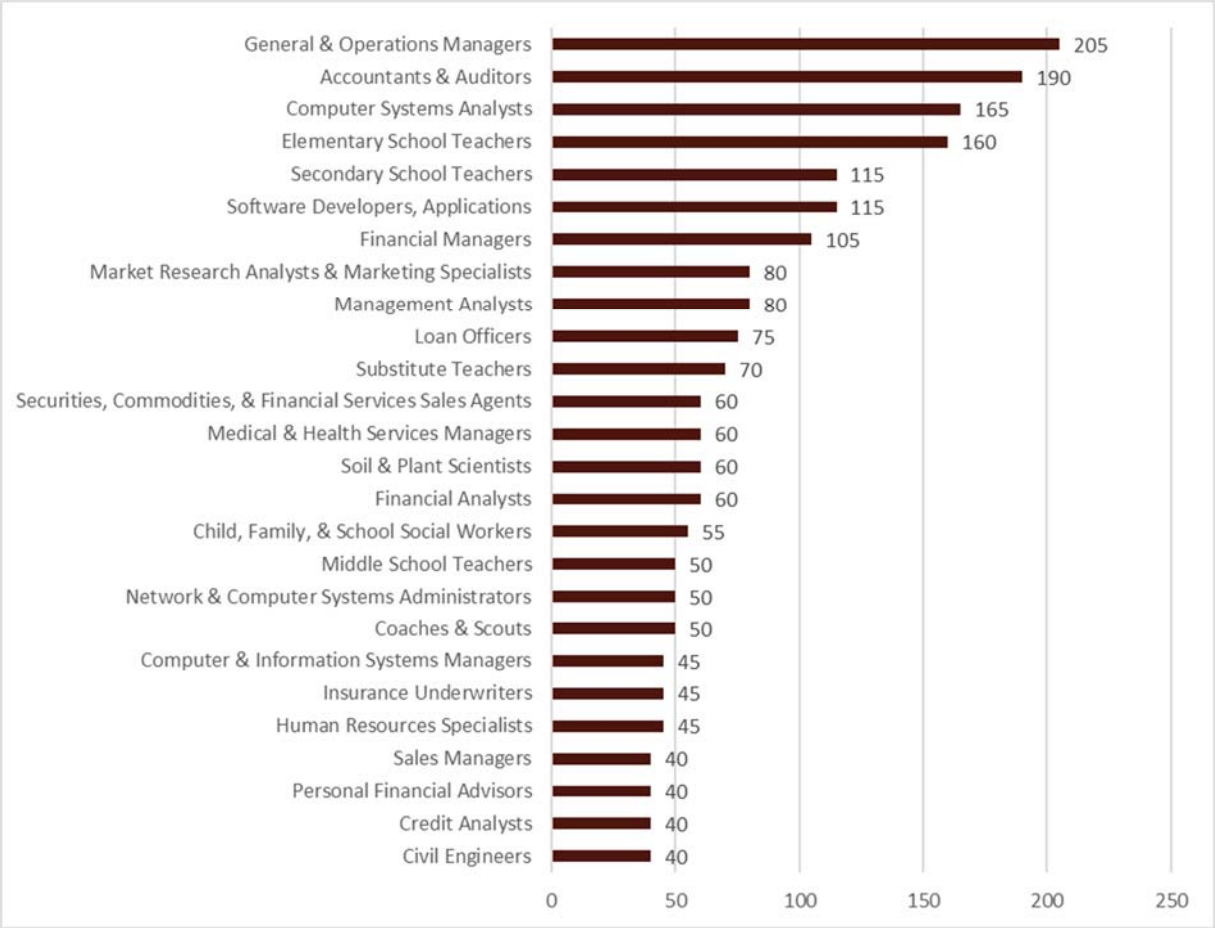
EXHIBIT 4-1 (CONTINUED)
ANNUAL BACHELOR'S LEVEL OPENINGS BY REQUIRED DEGREE LEVEL, 2012-2022
IWD REGION 11

| Occupations with Baccalaureate Level Education Required | | |
|---|---|---|
| **Broad Occupational Category** | **Occupational Title** | **Total Annual Job Openings** |
| Management Occupations | Chief Executives | 30 |
| | General & Operations Managers | 205 |
| | Legislators | 20 |
| | Marketing Managers | 30 |
| | Sales Managers | 40 |
| | Public Relations & Fundraising Managers | 10 |
| | Administrative Services Managers | 30 |
| | Computer & Information Systems Managers | 45 |
| | Financial Managers | 105 |
| | Industrial Production Managers | 15 |
| | Human Resources Managers | 20 |
| | Construction Managers | 35 |
| | Education Administrators, Preschool & Childcare Center/Program | 10 |
| | Architectural & Engineering Managers | 10 |
| | Medical & Health Services Managers | 60 |
| | Social & Community Service Managers | 30 |
| | TOTAL | 695 |
| Personal Care & Service | Recreation Workers | 25 |
| | TOTAL | 25 |
| Sales & Related Occupations | Securities, Commodities, & Financial Services Sales Agents | 60 |
| | Sales Reps, Wholesale & Mfg, Technical & Scientific Products | 30 |
| | TOTAL | 90 |

Source: Iowa Workforce Development, 2016.

**Exhibit 4-2** displays, in rank order, the detailed occupational categories with 40 or more projected openings annually through 2022. The most significant openings in the region will be for general and operations managers (205), accountants and auditors (190), computer systems analysts (165), and elementary school teachers (160 openings annually through 2022). With the exception of elementary school teachers, the other occupational categories cut across the major industry sectors of the metro area.

EXHIBIT 4-2
PROJECTED ANNUAL OPENINGS AMONG DETAILED OCCUPATIONAL CATEGORIES REQUIRING A BACHELOR'S DEGREE, 2012 THROUGH 2022
IWD REGION 11




Source: Iowa Workforce Development, 2016.

The most commonly available open positions through 2022 in IWD Region 11 requiring a master's degree are shown in **Exhibit 4-3**. The community and social service occupational category will offer the most positions requiring a master's degree (100 annually), followed by the healthcare practitioners and technical occupations and management occupations (50 each).

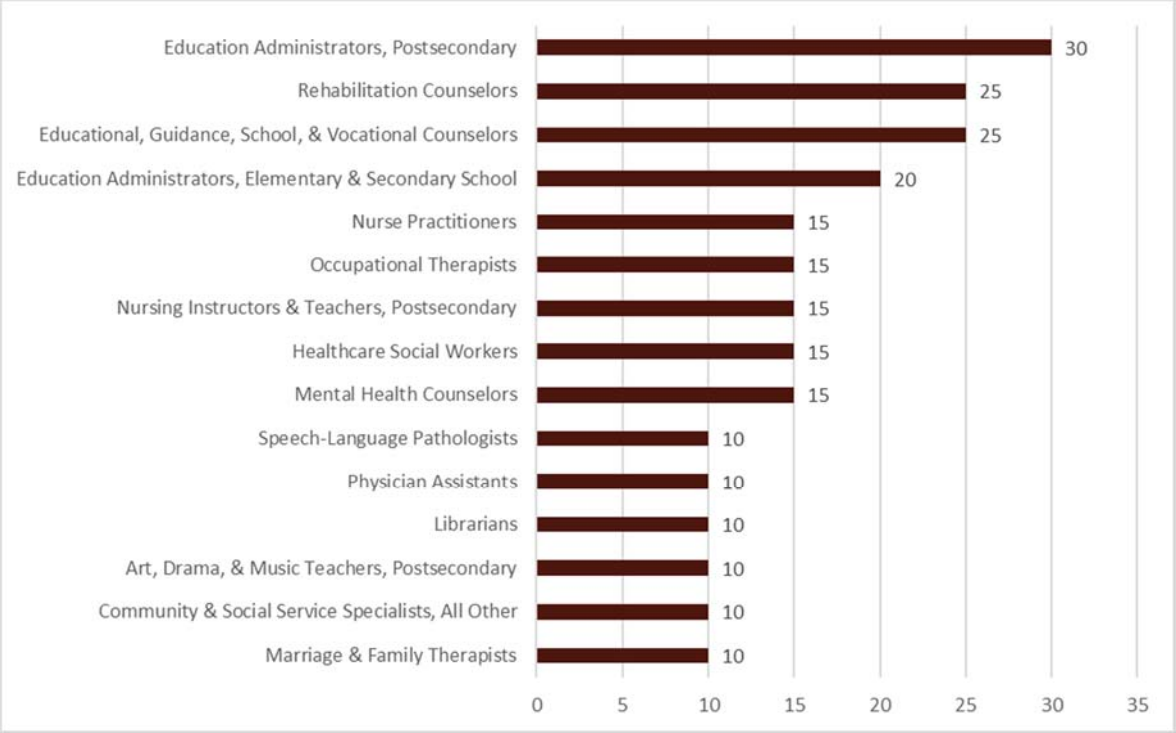
EXHIBIT 4-3
ANNUAL MASTER'S LEVEL OPENINGS, 2012-2022
IWD REGION 11

| Occupations with Master's Level Education Required | | |
|---|---|---|
| **Broad Occupational Category** | **Occupational Title** | **Total Annual Job Openings** |
| Community & Social Service Occupations | Educational, Guidance, School, & Vocational Counselors | 25 |
| | Marriage & Family Therapists | 10 |
| | Mental Health Counselors | 15 |
| | Rehabilitation Counselors | 25 |
| | Healthcare Social Workers | 15 |
| | Community & Social Service Specialists, All Other | 10 |
| | TOTAL | 100 |
| Education, Training, & Library Occupations | Nursing Instructors & Teachers, Postsecondary | 15 |
| | Art, Drama, & Music Teachers, Postsecondary | 10 |
| | Librarians | 10 |
| | TOTAL | 35 |
| Healthcare Practitioners & Technical Occupations | Physician Assistants | 10 |
| | Occupational Therapists | 15 |
| | Speech-Language Pathologists | 10 |
| | Nurse Practitioners | 15 |
| | TOTAL | 50 |
| Management Occupations | Education Administrators, Elementary & Secondary School | 20 |
| | Education Administrators, Postsecondary | 30 |
| | TOTAL | 50 |

Source: Iowa Workforce Development, 2016.

Looking at openings in the detailed occupational categories (**Exhibit 4-4**), it is projected that there will be a need for 30 postsecondary education administrators annually through 2022, followed by rehabilitation counselors and educational, guidance, school, and vocational counselors (25 each). Between school education administrators and counselors at the PK-12 level, nearly 50 positions will be available annually requiring a master's degree or higher.

EXHIBIT 4-4
PROJECTED ANNUAL OPENINGS AMONG DETAILED OCCUPATIONAL CATEGORIES REQUIRING A MASTER'S DEGREE, 2012 THROUGH 2022
IWD REGION 11




Source: Iowa Workforce Development, 2016.

**Exhibit 4-5** displays the projected available open positions through 2022 in IWD Region 11 requiring a doctorate or professional degree. The healthcare practitioners and technical occupations sector will offer the most positions requiring a doctoral/professional degree (165 annually), followed by education, training, and library occupations (100).

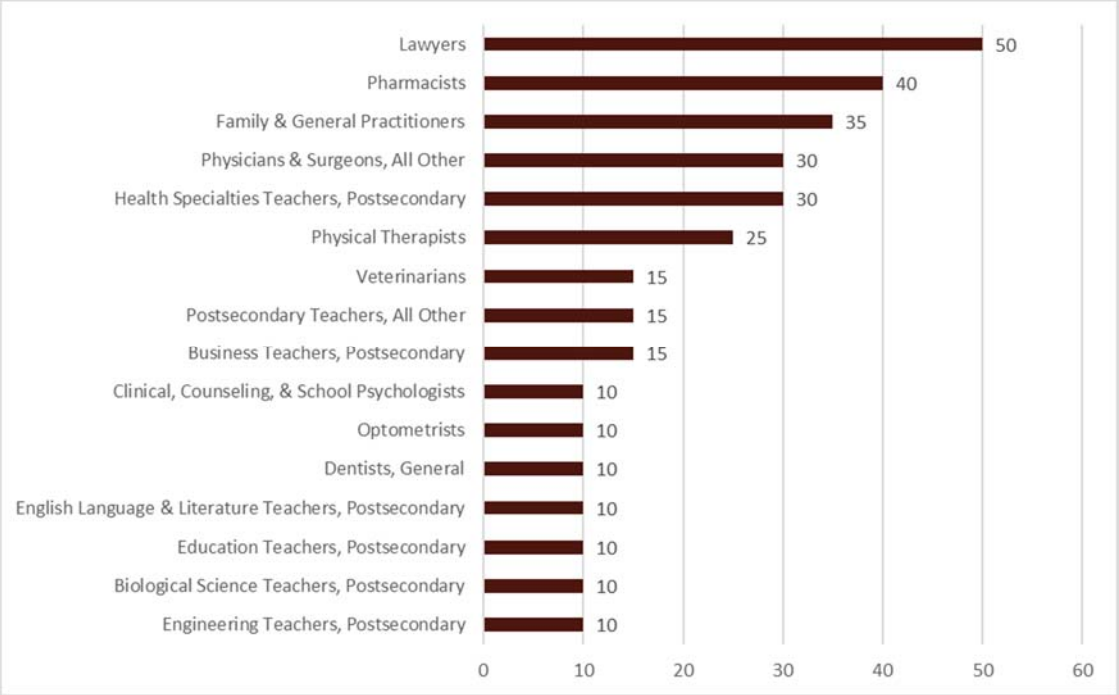
EXHIBIT 4-5
ANNUAL DOCTORATE/PROFESSIONAL LEVEL OPENINGS, 2012-2022
IWD REGION 11

| Occupations with Doctorate/Professional Level Education Required | | |
|---|---|---|
| **Broad Occupational Category** | **Occupational Title** | **Total Annual Job Openings** |
| Education, Training, & Library Occupations | Business Teachers, Postsecondary | 15 |
| | Engineering Teachers, Postsecondary | 10 |
| | Biological Science Teachers, Postsecondary | 10 |
| | Health Specialties Teachers, Postsecondary | 30 |
| | Education Teachers, Postsecondary | 10 |
| | English Language & Literature Teachers, Postsecondary | 10 |
| | Postsecondary Teachers, All Other | 15 |
| | TOTAL | 100 |
| Healthcare Practitioners & Technical Occupations | Dentists, General | 10 |
| | Optometrists | 10 |
| | Pharmacists | 40 |
| | Family & General Practitioners | 35 |
| | Physicians & Surgeons, All Other | 30 |
| | Physical Therapists | 25 |
| | Veterinarians | 15 |
| | TOTAL | 165 |
| Legal Occupations | Lawyers | 50 |
| | TOTAL | 50 |
| Life, Physical, & Social Science | Clinical, Counseling, & School Psychologists | 10 |
| | TOTAL | 10 |

Source: Iowa Workforce Development, 2016.

When the detailed categories are shown in rank order (**Exhibit 4-6**), it is clear that the bulk of positions requiring a doctorate or first professional degree will be in the legal profession or healthcare. As previously stated, these professional programs are not being considered by the consultant team for implementation in the Des Moines Metro Area at this time. These positions require an advanced degree for entry level in the profession, and some are already available locally through Des Moines University or statewide through Regent institutions. Such programs are costly to implement and operate, and consideration of expansion to the local area is not a focus of this assessment. Additionally, there are a number of opportunities available through Drake University for local teachers to complete additional certifications and degree enhancements which might allow for further career advancement, although the Regent institutions have comparable programs.

EXHIBIT 4-6
PROJECTED ANNUAL OPENINGS AMONG DETAILED OCCUPATIONAL CATEGORIES REQUIRING A DOCTORATE/PROFESSIONAL DEGREE, 2012 THROUGH 2022
IWD REGION 11




Source: Iowa Workforce Development, 2016.

### OCCUPATIONAL OPENINGS SUMMARY

One measure that may assist planners in identifying needed postsecondary education programs and training for the local area through a new regional higher education center is future job growth as depicted by projected occupational openings in the Des Moines area through year 2022. Occupational groupings by typical entry level education credentials required are summarized below along with the approximate number of total annual openings expected during the time horizon. Though programming may be available locally, on-line, or through a blended model, these figures indicate a potential magnitude of need which could be addressed by additional academic programming, including both continuing education and/or degree completion.

- **BACCALAUREATE LEVEL**
  - General & Operations Managers (205)
  - Accountants & Auditors (190)
  - Computer Systems Analysts (165)
  - Elementary School Teachers (160)
- **MASTER'S LEVEL**
  - Education Administrators, Postsecondary (30)
  - Rehabilitation Counselors (25)
  - Educational, Guidance, School, & Vocational Counselors (25)
  - Education Administrators, Elementary & Secondary School (15)
- **DOCTORAL/PROFESSIONAL LEVEL**
  - Education Administrators, Postsecondary (30)
  - Rehabilitation Counselors (25)
  - Educational, Guidance, School, & Vocational Counselors (25)
  - Education Administrators, Elementary & Secondary School (15)

## 4.2 INDICATORS OF PROGRAM DEMAND

In this section we focus on estimated local education and training needs by degree level based on projected occupational openings aligned with CIP discipline descriptors (NCES 2010 crosswalk). Such predicted need as expressed by employers (noted in **Chapter 3.0**) applies to degree completion as well as specific training and continuing education.

We have illustrated total degree completions (supply) for academic year 2013-14 (latest data form IPEDS) by the three Regent institutions, as well as the local private institutions in the exhibits below. We are focused only on baccalaureate and graduate level education as it is the focus of the Regent universities and their role in improving access in Des Moines. The deficits in supply indicated in the following exhibits first take into account the total degree production of the local private institutions as well as the Regent institutions' statewide production. An "adjusted supply" of degreed workers has been calculated to reflect the supply more accurately for two reasons:

- Regent institutions provide a statewide workforce, and not all graduates become part of the Des Moines metro workforce pool.
- Local private institutions in total, draw a considerable number of students from outside the state who may intend to leave the area upon graduation.

The adjustment known as the *Supply Localization Quotient* (described in the footnote of **Exhibit 4-7**) accounts for the above degree recipient distribution beyond the local area.

Additional adjustment in the supply figures is required when aligning degree recipient numbers by discipline to detailed occupational openings (demand). The problem lies in the alignment of degree holders from a single discipline with multiple job categories for which they meet the entry educational requirement (NCES). For example, if a university produces 100 graduates annually with a bachelor's degree in accounting (supply), and that degree is the entry criteria for openings across five distinct occupational categories (demand), the available supply must be distributed across those five openings in some manner in order to determine the magnitude of over-supply or deficit. Due to the complex nature of multiple discipline alignments with multiple occupational categories an equal distribution of supply across the number of aligned occupational openings reduces this effect. So in the accounting degree example above, the supply of 100 degree recipients would be distributed across the five occupational categories equally, so each would have a supply of 20 entry-ready individuals.

By making these adjustments, the supply deficits identified better indicate real opportunities to expand program offerings in the local market. In particular, programs targeted toward populations who live and work in Des Moines may offer both career entry and advancement opportunities for local residents who are time- or place-constrained and cannot access other available programming for a variety of reasons.

Though they have a statewide mission, each Regent institution contributes significant numbers of graduates to the Des Moines workforce. The national data sets utilized do not differentiate between on campus and online degree awards, so these counts are reported in the aggregate. The private institutions included in this analysis are located or have a physical presence within the Des Moines Metro Area, and also contribute to a degreed and credentialed workforce.

Occupations with 10 or more projected annual openings in the region are reported. Based on interviews and surveys, we have identified areas of potential need and indicated those areas in the column labeled "stakeholder validation of need," in order to correlate level of demand with expressed need. We also acknowledge that not all openings, including new positions (growth) and existing positions (replacement) will be filled from the local workforce pool. Demand can be filled with credentials such as degree completion, degree upgrade, and other certifications or training related to the occupational area.

As shown in **Exhibit 4-7**, demand exceeds supply of credentialed graduates in most of the occupational categories with expressed employer need. Most notably, projected available positions as accountants and auditors (152 position deficit), computer systems analysts (158 position deficit), general and operations managers (151), and software developers (93) will exceed the supply of annual graduates with these credentials.

EXHIBIT 4-7
LOCAL NEEDS REQUIRING BACCALAUREATE LEVEL EDUCATION/TRAINING

| Occupations with Baccalaureate Level Education Required | | | Annual Adjusted Supply of Degreed Workforce* | Estimated Annual Demand-Supply Gap | Stakeholder Validation of Need |
|---|---|---|---|---|---|
| Broad Occupational Category | Occupational Title | Occupational Projection (Total annual openings) | | | |
| Architecture & Engineering Occupations | Architects | 15 | 13 | (2) | ✓ |
| | Civil Engineers | 40 | 30 | (10) | ✓ |
| | Industrial Engineers | 25 | 11 | (14) | ✓ |
| | Mechanical Engineers | 25 | 32 | 7 | ✓ |
| | Engineers, All Other | 10 | 5 | (5) | |
| | **TOTAL** | **115** | **90** | **(25)** | |
| Arts, Design, Entertainment, Sports, & Media Occupations | Graphic Designers | 35 | 39 | 4 | |
| | Producers & Directors | 10 | 21 | 11 | |
| | Coaches & Scouts | 50 | 45 | (5) | |
| | Reporters & Correspondents | 15 | 39 | 24 | |
| | Public Relations Specialists | 35 | 90 | 55 | |
| | Editors | 20 | 32 | 12 | ✓ |
| | Technical Writers | 10 | 2 | (8) | ✓ |
| | Writers & Authors | 10 | 104 | 94 | |
| | Interpreters & Translators | 15 | 55 | 40 | |
| | **TOTAL** | **200** | **427** | **227** | |
| Business & Financial Operations Occupations | Compliance Officers | 25 | 0 | (25) | |
| | Cost Estimators | 25 | 51 | 26 | ✓ |
| | Human Resources Specialists | 45 | 1 | (44) | ✓ |
| | Labor Relations Specialists | 15 | 17 | 2 | |
| | Logisticians | 15 | 0 | (15) | ✓ |
| | Management Analysts | 80 | 11 | (69) | ✓ |
| | Meeting, Convention, & Event Planners | 10 | 23 | 13 | |
| | Fundraisers | 10 | 0 | (10) | |
| | Compensation, Benefits, & Job Analysis Specialists | 10 | 1 | (9) | ✓ |
| | Training & Development Specialists | 35 | 1 | (34) | |
| | Market Research Analysts & Marketing Specialists | 80 | 36 | (44) | |
| | Accountants & Auditors | 190 | 38 | (152) | ✓ |
| | Budget Analysts | 10 | 63 | 53 | ✓ |
| | Credit Analysts | 40 | 63 | 23 | ✓ |
| | Financial Analysts | 60 | 28 | (32) | ✓ |
| | Personal Financial Advisors | 40 | 26 | (14) | |
| | Insurance Underwriters | 45 | 8 | (37) | ✓ |
| | Financial Examiners | 15 | 37 | 22 | ✓ |
| | Credit Counselors | 10 | 0 | (10) | ✓ |
| | Loan Officers | 75 | 26 | (49) | ✓ |
| | Financial Specialists, All Other | 20 | 26 | 6 | |
| | **TOTAL** | **855** | **457** | **(398)** | |
| Community & Social Service Occupations | Child, Family, & School Social Workers | 55 | 9 | (46) | ✓ |
| | Mental Health & Substance Abuse Social Workers | 10 | 9 | (1) | ✓ |
| | Health Educators | 10 | 2 | (8) | |
| | **TOTAL** | **75** | **21** | **(54)** | |

*The annual adjusted supply of degreed workforce is based on the total number of degrees awarded in 2013-14 according to IPEDS data for three Regent Universities plus the local institutions operating in the Des Moines metro area. Realizing that not all degree recipients remain in the local market pool and that the Regent institutions supply the entire state from their annual graduating classes, an adjustment is required to estimate the actual available local workforce pool (supply). The total number of degrees awarded are adjusted down by the Supply Localization Quotient. The SLQ is calculated by dividing the total occupational openings in the workforce region (IWD Region11) that includes the Des Moines Metro area requiring the specified entry degree level by the corresponding total statewide occupational opening of the same credential. The localized degree recipient count is then multiplied by the SLQ percentage to readjust the available degreed workforce pool estimate in order to provide a more realistic picture of the local qualified supply.

Source: Iowa Workforce Development, employer survey, interviews, and IPEDS.

EXHIBIT 4-7
LOCAL NEEDS REQUIRING BACCALAUREATE LEVEL EDUCATION/TRAINING (CONTINUED)

| Occupations with Baccalaureate Level Education Required | | | Annual Adjusted Supply of Degreed Workforce* | Estimated Annual Demand-Supply Gap | Stakeholder Validation of Need |
|---|---|---|---|---|---|
| Broad Occupational Category | Occupational Title | Occupational Projection (Total annual openings) | | | |
| Computer & Mathematical Occupations | Computer Systems Analysts | 165 | 7 | (158) | ✓ |
| | Information Security Analysts | 15 | 10 | (5) | ✓ |
| | Computer Programmers | 30 | 37 | 7 | ✓ |
| | Software Developers, Applications | 115 | 22 | (93) | ✓ |
| | Software Developers, Systems Software | 30 | 22 | (8) | ✓ |
| | Database Administrators | 20 | 5 | (15) | ✓ |
| | Network & Computer Systems Administrators | 50 | 5 | (45) | ✓ |
| | Computer Network Architects | 20 | 13 | (7) | ✓ |
| | Computer Occupations, All Other | 15 | 12 | (3) | ✓ |
| | Actuaries | 25 | 32 | 7 | ✓ |
| | Operations Research Analysts | 15 | 12 | (3) | ✓ |
| | **TOTAL** | **500** | **177** | **(323)** | |
| Education, Training, & Library Occupations | Vocational Education Teachers, Postsecondary | 10 | 8 | (2) | |
| | Kindergarten Teachers | 25 | 46 | 21 | |
| | Elementary School Teachers | 160 | 220 | 60 | |
| | Middle School Teachers | 50 | 24 | (26) | |
| | Secondary School Teachers | 115 | 471 | 356 | |
| | Special Education Teachers | 15 | 0 | (15) | ✓ |
| | Adult Basic & Second Educ & Literacy Teachers & Instructors | 10 | 1 | (9) | ✓ |
| | Substitute Teachers | 70 | 0 | (70) | |
| | Teachers & Instructors, All Other | 10 | 0 | (10) | |
| | **TOTAL** | **465** | **770** | **305** | |
| Healthcare Practitioners & Technical Occupations | Dietitians & Nutritionists | 10 | 30 | 20 | ✓ |
| | Medical & Clinical Laboratory Technologists | 10 | 1 | (9) | |
| | Occupational Health & Safety Specialists | 10 | 0 | (10) | |
| | **TOTAL** | **30** | **30** | **0** | |
| Life, Physical, & Social Science Occupations | Food Scientists & Technologists | 10 | 22 | 12 | ✓ |
| | Soil & Plant Scientists | 60 | 39 | (21) | ✓ |
| | Environmental Scientists & Specialists, Incl Health | 10 | 48 | 38 | ✓ |
| | Biological Technicians | 15 | 0 | (15) | ✓ |
| | **TOTAL** | **95** | **109** | **14** | |
| Management Occupations | Chief Executives | 30 | 54 | 24 | |
| | General & Operations Managers | 205 | 54 | (151) | ✓ |
| | Marketing Managers | 30 | 96 | 66 | |
| | Sales Managers | 40 | 40 | 0 | |
| | Public Relations & Fundraising Managers | 10 | 16 | 6 | |
| | Administrative Services Managers | 30 | 10 | (20) | |
| | Computer & Information Systems Managers | 45 | 44 | (1) | ✓ |
| | Financial Managers | 105 | 35 | (70) | ✓ |
| | Industrial Production Managers | 15 | 49 | 34 | ✓ |
| | Human Resources Managers | 20 | 17 | (3) | ✓ |
| | Construction Managers | 35 | 16 | (19) | ✓ |
| | Education Administrators, Preschool & Childcare Center/Program | 10 | 0 | (10) | |
| | Architectural & Engineering Managers | 10 | 209 | 199 | |
| | Medical & Health Services Managers | 60 | 7 | (53) | ✓ |
| | Social & Community Service Managers | 30 | 0 | (30) | ✓ |
| | **TOTAL** | **675** | **648** | **(27)** | |
| Personal Care & Service Occupations | Recreation Workers | 25 | 0 | (25) | ✓ |
| | **TOTAL** | **25** | **0** | **(25)** | |
| Sales & Related Occupations | Securities, Commodities, & Financial Services Sales Agents | 60 | 1 | (59) | ✓ |
| | Sales Reps, Wholesale & Mfg, Technical & Scientific Products | 30 | 0 | (30) | |
| | **TOTAL** | **90** | **1** | **(89)** | |

Source: Iowa Workforce Development, employer survey, interviews, and IPEDS.

For master's degree and corresponding levels of training and continuing education needs expressed by local stakeholders, the listings presented in **Exhibit 4-8** reflect a deficit in local supply for each area of employer identified need.

EXHIBIT 4-8
LOCAL NEEDS REQUIRING MASTER'S LEVEL EDUCATION/TRAINING

| Occupations with Master's Level Education Required | | | Annual Adjusted Supply of Degreed Workforce* | Estimated Annual Demand-Supply Gap | Stakeholder Validation of Need |
|---|---|---|---|---|---|
| Broad Occupational Category | Occupational Title | Occupational Projection (Total annual openings) | | | |
| Community & Social Service Occupations | Educational, Guidance, School, & Vocational Counselors | 25 | 19 | (6) | ✓ |
| | Marriage & Family Therapists | 10 | 8 | (2) | |
| | Mental Health Counselors | 15 | 0 | (15) | ✓ |
| | Rehabilitation Counselors | 25 | 0 | (25) | |
| | Healthcare Social Workers | 15 | 8 | (7) | ✓ |
| | Community & Social Service Specialists, All Other | 10 | 0 | (10) | |
| | **TOTAL** | **100** | **36** | **(64)** | |
| Education, Training, & Library Occupations | Nursing Instructors & Teachers, Postsecondary | 15 | 3 | (12) | |
| | Art, Drama, & Music Teachers, Postsecondary | 10 | 17 | 7 | |
| | Librarians | 10 | 9 | (1) | |
| | **TOTAL** | **35** | **29** | **(6)** | |
| Healthcare Practitioners & Technical Occupations | Physician Assistants | 10 | 10 | (0) | ✓ |
| | Occupational Therapists | 15 | 0 | (15) | |
| | Speech-Language Pathologists | 10 | 10 | (0) | |
| | Nurse Practitioners | 15 | 0 | (15) | ✓ |
| | **TOTAL** | **50** | **19** | **(31)** | |
| Management Occupations | Education Administrators, Elementary & Secondary School | 20 | 13 | (7) | ✓ |
| | Education Administrators, Postsecondary | 30 | 26 | (4) | |
| | **TOTAL** | **50** | **39** | **(11)** | |

*See footnote for **Exhibit 4-7**.
Source: Iowa Workforce Development, employer survey, interviews, and IPEDS.

For occupations requiring a doctoral of professional degree, the listings presented in **Exhibit 4-9** reflect a deficit in local supply for a number of industry sectors, but only one reflects a supply deficit in an area of employer identified need (clinical, counseling and school psychologists). As previously mentioned, the assessment is not addressing the expansion of health professions education programs.

EXHIBIT 4-9
LOCAL NEEDS REQUIRING DOCTORATE OR PROFESSIONAL LEVEL EDUCATION/TRAINING

| Occupations with Doctoral/Professional Level Education Required | | | Annual Adjusted Supply of Degreed Workforce* | Estimated Annual Demand-Supply Gap | Stakeholder Validation of Need |
|---|---|---|---|---|---|
| Broad Occupational Category | Occupational Title | Occupational Projection (Total annual openings) | | | |
| Education, Training, & Library Occupations | Business Teachers, Postsecondary | 15 | 0 | (15) | |
| | Engineering Teachers, Postsecondary | 10 | 11 | 1 | |
| | Biological Science Teachers, Postsecondary | 10 | 20 | 10 | |
| | Health Specialties Teachers, Postsecondary | 30 | 73 | 43 | |
| | Education Teachers, Postsecondary | 10 | 2 | (8) | |
| | English Language & Literature Teachers, Postsecondary | 10 | 1 | (9) | |
| | Postsecondary Teachers, All Other | 15 | 0 | (15) | |
| | **TOTAL** | **100** | 108 | **8** | |
| Healthcare Practitioners & Technical Occupations | Dentists, General | 10 | 9 | (1) | |
| | Optometrists | 10 | 0 | (10) | |
| | Pharmacists | 40 | 29 | (11) | |
| | Family & General Practitioners | 35 | 42 | 7 | |
| | Physicians & Surgeons, All Other | 30 | 42 | 12 | |
| | Physical Therapists | 25 | 15 | (10) | |
| | Veterinarians | 15 | 18 | 3 | |
| | **TOTAL** | **165** | 155 | **(10)** | |
| Legal Occupations | Lawyers | 50 | 71 | 21 | |
| | **TOTAL** | **50** | 71 | **21** | |
| Life, Physical, & Social Science Occupations | Clinical, Counseling, & School Psychologists | 10 | 5 | (5) | ✓ |
| | **TOTAL** | **10** | 5 | **(5)** | |

*See footnote for **Exhibit 4-7**.
Note: Although we have included professional degrees in this exhibit (i.e., law, medical, dental, veterinary), the consultant team has not considered them as a part of the focus for local program demand.
Source: Iowa Workforce Development, employer survey, interviews, and IPEDS.

## 4.3 SUMMARY OF NEEDS

The focus on education and training needs in the Des Moines Metro Area is extrapolated from projected annual job openings, current program offerings, and stakeholder input and survey data. After comparing occupational openings to adjusted supply, a series of annual workforce deficits by entry educational credential emerge (Exhibits 4-7 to 4-9) for consideration by the Regent institutions as potential program targets (gaps). When these factors are considered together stakeholder input, several findings are evident.

- According to the IWD, the most prevalent positions available requiring a four-year degree at the entry level will be in management, finance/accounting, information technology, and education (teaching). The need for qualified credentialed candidates in these occupational sectors was confirmed with local employers through the stakeholder input process detailed in **Chapter 3.0**.
- While programming is available locally in some of these disciplines, it is often less affordable through private or for-profit institutions than public options, not fully compatible with the needs

of working adults (requires full time enrollment or classes are offered during the day only), or are offered entirely online (a delivery mode with which all not learners are comfortable).

- Degree completion goals for more than half of DMACC students may be impacted by the ability to access a four-year degree program locally through the Regent institutions (as demonstrated by their survey responses). Affordability was cited as a barrier to higher education access in the region by overwhelming majorities of each stakeholder group surveyed. Continuing education programs that could lead to degree completion through an affordable Regent institution would be a real, workable solution for many local residents allowing them to pursue their higher education goals.
- At the master's level, most positions will be available in the areas of counseling (rehabilitation and educational/vocational) and educational administration, needs also validated by stakeholder feedback.
- Positions requiring a doctoral or professional degree will be most prevalent in law and medicine, program areas which are not currently being considered for expansion to the local market.
- Although entry-level credentials are depicted in the alignment of occupational openings and degreed workforce supply, these deficits may also be indicators of credentialing needs where graduate level degrees are required for career advancement. This is evident in the on-going demand for existing local MBA programs and the graduate level programs in the career education sector.

# 5.0 LOCATION ALTERNATIVES

Once higher education needs of the area have been identified, and potential opportunities for the three Regent universities to respond to those needs in a manner that is not a fully on-line program delivery model are under consideration, a key question remains: *Where should such local programs be offered across the metro area?* Currently the University of Iowa and Iowa State University offer face-to-face and blended instruction at the John and Mary Pappajohn Education Center and at the Capital Square Building, respectively, in the downtown Des Moines area. Furthermore, plans are underway for the University of Iowa to introduce academic programs at yet another location, the former AIB College Campus just south of downtown.

Many stakeholders that contributed to this assessment, voiced their opinions on where the Regents should locate any new public efforts to address local higher education needs. There is a strong, vocal contingent of business leaders that would like to see a new downtown higher education center established. Others seek to improve access closer to their place of business outside downtown Des Moines, including parts of the western suburbs and the City of West Des Moines. Support was noted for transition of the AIB campus to the University of Iowa, while others shared concerns about that specific location. A number of businesses located northwest of the city suggest it is easier to access ISU programs at the Ames campus then to commute into town to meet their training and degree needs.

Additionally, questions about the continued use of the Pappajohn Center and how it would fit into a long-term strategic response by the Regents arose. Local stakeholders reiterated the original intent and unsuccessful effort to sustain a multi-institution partnership at what is now the Pappajohn Education Center. Finally, several community leaders described their long-term vision of a full service downtown campus with the collaborative presence of all three Regent institutions such as that of IUPUI in downtown Indianapolis (Indiana University-Purdue University at Indianapolis).

The Board of Regents in commissioning this needs assessment study also sought an independent perspective on what location or locations would be most appropriate to provide access to needed instructional programs and degree completion options. The consultant was asked to examine general locations or sectors of the Greater Des Moines Metro Area where a Regent Resource Center might be established, but not specific sites or buildings, with one exception, the current AIB College property.

This section of the report reviews five location options identified by the consultant that could be considered in response to meeting the needs for public four-year and graduate higher education access in the Des Moines Metro Area.

## 5.1 ASSUMPTIONS APPLICABLE TO LOCATION ALTERNATIVES

In offering an assessment of where to place a local Regent Resource Center, certain assumptions were applied to all of the location alternatives. Any potential new location should attempt to accommodate the following:

- Institutional functions that encompass, at minimum, instruction and administrative support services.
- An easily accessible, highly visible, local presence.
- Close linkages to the community.
- Continued articulation with local community colleges.
- Access to student support services and high quality instructional support, including technology, learning resources, and advising.
- Capacity for outreach beyond the specific location, including a distance learning component.
- Services for time- and place-bound adults and local employees, as well as the potential to serve traditional-age students.
- Potential to meet changing baccalaureate and graduate program demand in the area.
- Involvement of all three Regent universities to meet the program needs of the Des Moines metro area.
- Continued utilization of the Pappajohn Education Center as an access point to Regent institution programming for the foreseeable future.

## 5.2 IDENTIFICATION OF LOCATION ALTERNATIVES

The following location alternatives (in no particular order of priority) were identified by the study team based on information and data presented in the previous chapters of this report, our time spent on site in the Des Moines area, and our familiarity with other higher education centers across the country. The descriptions of each location alternative are formed by discussions with Board of Regent representatives, administration and staff at the three Regent universities, discussions with local leaders, and input from employer stakeholders across the Des Moines Metro Area.

### LOCATION ALTERNATIVE 1: AIB COLLEGE CAMPUS

- The existing campus will soon transition to the University of Iowa.
- It has a long history and track record of serving as a higher education site.
- Campus infrastructure is in place.
- It is roughly three miles from downtown (Pappajohn Education Center).

### LOCATION ALTERNATIVE 2: DOWNTOWN LOCATION

- The Pappajohn Center is operating near capacity with virtually no options to expand at its location.
- Although local leaders have identified several sites in the downtown area for a possible new education center, specific details of each site were not the focus of this review, only that a new location in the downtown area could be an option.
- A critical mass of potential students (working adults) currently exists in the downtown area.
- The success of the Pappajohn Center demonstrates a history of utilization in that localized area.

### LOCATION ALTERNATIVE 3: WEST DES MOINES/WESTERN SUBURBS

- The western suburbs of Des Moines including the city of West Des Moines is an area of strong projected growth in both population and employment.
- A number of national companies have large operations in this part of the metro area.
- DMACC has a West Des Moines campus, and other higher education providers have operations in the area as well.

### LOCATION ALTERNATIVE 4: CO-LOCATION ON AN EXISTING EDUCATION SITE

- An option that has been observed in other areas of the country is co-location of one or more additional higher education providers on the home campus of an existing college or university.
- Across the Des Moines Metro Area, there are several existing college sites that might be potential co-location options, depending on their available capacity and the home institution's compatibility with the participating Regent institutions.
- This alternative is limited to localized portions of the Des Moines Metro Area where other college operations and instructional delivery currently exist.

### LOCATION ALTERNATIVE 5: MULTI-SITE DISTRIBUTIVE MODEL

- Multiple higher education delivery points could be positioned around the metro area as pockets of need dictate.
- Sites may be focused on specific industry sector needs or on unique audiences that dominate their surrounding location.
- One or more Regent institutions could be active at any or all locations, dependent upon their program alignment with targeted localized needs.
- A shared services model could be developed for supporting multiple sites.

For more than four decades, MGT has worked with a higher education centers (HECs) around the country. For informational purposes in **Appendix E**, we have provided a list of 11 established higher education centers located across the U.S. that might serve as examples of successful approaches and operational/governance models to meet local postsecondary education needs. Some are associated with a "home" institution, while a number include collaborative partnerships representing multiple training, education, and degree program providers working together to enhance local access to postsecondary education via a single site.

## 5.3 LOCATION FACTORS

The set of factors that follow have been used by the consultant team in similar studies. Upon concluding our site visit to Des Moines and as additional data analysis occurred, these factors were modified and refined to align with the situation and market facts of the Des Moines Metro Area. The statements following the factors are intended to put each into a context. The factors are intended to assist decision makers in evaluating location alternatives that might satisfy the needs of the Des Moines Metro Area, support the mission of the Board of Regents, and enable the three Regent universities to further serve the Des Moines residents and business interests. Given this location assessment exercise was not focused on actual properties or facilities (other than AIB), the results may differ as specificity of options

is narrowed. The consultant team did not attempt to assign a priority to each respective factor. Instead, factors are presented in alphabetical order with no assigned weight differential.

**A. Accessibility for Users (Students, Faculty, Staff, and General Public)**

- Accessible in a reasonable commute-time.
- Accessible by public transportation at or near the site.
- Commuting accessibility by other means (e.g., walking, bicycling, etc.).
- Close proximity to other amenities (e.g., parking, restaurants/dining, work places, and homes).

**B. Capital and Operating Costs**

- Magnitude of capital investment required at start-up.
- Potential for efficient annual operating costs.
- Opportunities for operational cost sharing.

**C. Clearly Defined Presence**

- A highly visible and attractive location.
- Clear association with Regent institution(s), although other entities may be present or nearby.

**D. Flexibility and Adaptivity**

- Capacity to respond to changing conditions and demand, including changes or additions to local and state needs.
- Ability to accommodate multiple audiences.

**E. Growth and Expansion**

- A long-term solution supported in a manner consistent with such.
- Clearly perceived as representing a long term commitment by the state.
- Focal point for overall Regent institution involvement locally.

**F. Programmatically Responsive**

- Ability to meet local higher education needs of employers and their employees.
- Ability to meet local higher education and degree needs of residents.
- Compatible with other higher education contributions in the Des Moines area.
- Complimentary to local economic development initiatives.

**G. Time to Implement**

- Immediate ability to respond to local needs.
- Time to respond to local needs on a permanent basis.

## 5.4 REVIEW OF LOCATION ALTERNATIVES

The local community is seeking a permanent, long-term solution to improve access to public four-year and post-baccalaureate instruction and degree options beyond fully on-line programs. This would likely require one or more locations with oversight by the Board of Regents relying on one or more of the Regent institutions to provide programs and services at a Regent Resource Center. The five alternatives posed by the consultants do not address local needs equally and each has inherent and perceived advantages and disadvantages.

For example, co-location on an existing institution's active campus is not viewed as a permanent response, and shared sites typically remain the "home territory" of the host institution. The needs assessment has identified a number of industry sectors that seek a more skilled workforce through increased education and training for current employees, or hiring qualified personnel from the local existing workforce pool, thus increasing demand for education access. Needs differ dramatically for multiple audiences (older working adults, vs. traditional-age students), industry sectors, and across the geography of the metro area requiring varied responses to attend to all. A "one size fits all" approach may not encourage a successful or sustainable solution.

For most prospective students, higher education accessibility is defined primarily by convenience and affordability. Those two factors alone greatly influence; (1) whether a person takes a course or pursues a degree or credential, and (2) where that person accesses the specific education or training, if choices are available. There are similar influences on a provider institution to be as efficient and responsible with resources as they roll out a program. Institutions seek some level of certainty that there is enough demand in the area to support and sustain a program or an operation of multiple program offerings locally. A critical mass of potential students is needed at or adjacent to any location to drive demand. Competition and cost factors will dictate both the complexity and permanence of the response from an institution.

### 5.4.1 ADVANTAGES AND DISADVANTAGES OF LOCATION ALTERNATIVES

After reviewing the five location options identified against the seven key factors listed previously in this chapter, we observe several advantages and disadvantages of each location option. Since the consultant team is not assessing particular properties or venues, very limited, if any reliance on order of magnitude capital costs can be factored into the location options. Only anecdotal commentary regarding facility condition were associated with the AIB site. While the consultant team treated all factors with equal importance, that luxury may not be possible or practical for those who have to make the final decision on location of a new Regent Resource Center in the Des Moines area.

***AIB College Campus:*** The location is an existing college campus with an established, but aging educational infrastructure ready to host students quickly. As a gift to the University of Iowa, there are no site acquisition or new facility costs per se. However, stakeholder comments implied that considerable upgrades (therefore costs) may be required to ensure an updated, sound, and fully operational education site to meet an expanded local need. AIB is located just outside the downtown perimeter, and lacks some amenities and conveniences that a working adult student requires. Some stakeholders expressed concern regarding the safety and security of that location.

***New Downtown Location:*** A location in the heart of downtown Des Moines has been mentioned by many. Such a new location would align with local economic and growth initiatives for the downtown area, as well as the entire metro region. Depending on the available sites/facilities, there would likely be

significant acquisition and development costs. The downtown area has the largest concentrated employee-based critical mass of potential students, and a sustained track record (Pappajohn Education Center) for serving local employer needs. Access for commuters is convenient, and there are options for other services and amenities nearby. Safety, security, and parking issues would need to be addressed, especially for evening utilization. The ability to expand to meet future demand is also a critical element of any downtown location, something that currently constrains the Pappajohn Education Center. Within a reasonable distance, the downtown sector is home to several other established higher education campuses, offering the potential for creation of an "education district".

***Wes Des Moines/Western Suburbs Location:*** Considerable growth in population and employment is expected to continue in the western suburbs of the Des Moines Metro Area. As pointed out during stakeholder interviews and substantiated by planning data, there is a growing employment base surrounding the financial sector located in and around West Des Moines. Those employees live nearby or commute to that area rather than towards downtown Des Moines. The critical mass of potential students (working adults) is substantial, but not as large or diversified as that of the downtown area. However, a location in West Des Moines may offer easier commuter access as well as potential to draw some traditional age students from that side of the metro area and beyond. It would be more difficult to access a western site for residents and employees located in the eastern and northern sections of the metro area. There appears to be ample room to expand as demand dictates. Once again, existing land acquisition and facilities costs on a permanent basis may prove prohibitive.

***Co-Location on an Existing Education Site.*** The potential to co-locate on an existing college campus within the metro area has not been vetted at any level. It is based solely on examples of higher education center models that the consultant team has encountered throughout the country. Such an arrangement, depending on location and capacity, could: (1) serve as an interim site if a new downtown or West Des Moines location were authorized, or (2) be a more efficient and economical option to deliver Regent institution programs in an area of the metro where the critical mass of demand is not as robust, but face-to-face access is limited or absent. The arrangement with the host institution will require collaboration and a non-competitive relationship. Some cost-sharing opportunities of support services may be beneficial to both parties. The Regent Center would need to comply and adhere to any existing campus rules, regulations, expectations, and culture and any pre-existing issues of the site.

***Multi-Site Distributive Model.*** To some extent, expanding on what is already occurring in the Des Moines metro, the distributive model pushes instructional programs and degree offerings out to selected smaller permanent and transitional delivery points based on pockets of need, and specific discipline/occupational directed content. The operational aspects are often more lean and nimble, thus able to react faster to changing demand. Currently, in combination, the Regent universities are active on-site at two locations in downtown (soon to be three) and other distance connections in collaboration with local community college sites. This may be particularly useful in providing access to a specific industry sector for which a permanent downtown or west-side location would be inconvenient. This approach alone may not have the capacity nor the structure to meet a substantial segment of the local need.

### 5.4.2 RECOMMENDED OPTIONS

After carefully analyzing all information and data compiled and reviewing commentary received, the consultant team completed a rating of the five location options described across the proposed seven factors and calculated an unweighted score (see **Exhibit 5-1**). As previously noted, the resulting rating

outcomes did not consider definitive capital and operating costs which might be associated with the five location options, an obvious key decision factor given limited public resources. The team tried to be objective and gauge ratings on the data and information observed. The ratings were strictly based on our perceptions and judgement of the advantages and disadvantages that each may bring to increasing access to public higher education across the Des Moines Metro Area. The rating scale was based on a low, medium, or high designation on each item with an assigned numerical score of 1, 3, or 5, respectively. On two cost items, the rating points were reversed to match the nature of the item direction. A cumulative score was produced for each location alternative. The assessment results favor the downtown location option, with a West Des Moines and the AIB Campus location closely following.

EXHIBIT 5-1
LOCATION FACTORS

| | AIB Campus | Downtown | West Des Moines | Co-Location | Distributed Sites |
|---|---|---|---|---|---|
| | Alt #1 | Alt #2 | Alt #3 | Alt #4 | Alt #5 |
| **A. Accessibility for Users (Students, Faculty, Staff and General Public)** | | | | | |
| The location is accessible in a reasonable commute-time | High | High | Medium | Medium | Medium |
| The travel distance to the location is reasonable | High | High | Medium | Medium | Medium |
| Access to public transportation is available | Low | High | Medium | Medium | NA |
| Commuting by other means is possible, e.g., walking, bicycling, etc. | Low | Medium | Low | Low | Low |
| Proximity to other amenities, e.g., parking, restaurants/dining, work places, and homes | Low | High | High | Medium | NA |
| **B. Capital and Operating Costs** | | | | | |
| Magnitude of capital investment required at start-up | Medium | High | High | Low | Medium |
| Potential for efficient annual operating costs | High | NA | NA | Low | Low |
| Opportunities for operational cost sharing | Low | Low | Low | High | Medium |
| **C. Clearly Defined Presence** | | | | | |
| Highly visible and attractive location | Low | High | Medium | Medium | Low |
| Site/facility is clearly associated with Regent institution(s). | Medium | High | High | Low | Medium |
| **D. Flexibility and Adaptivity** | | | | | |
| Capacity exists to facilitate a response to changing conditions and demand | High | High | High | Low | Low |
| Role so narrowly defined as to limit ability to respond to additional local needs | High | High | High | Medium | Low |
| Ability to accommodate multiple audiences | High | Low | High | Medium | Low |
| **E. Growth and Expansion** | | | | | |
| Long-term solution supported in a manner consistent with such | High | High | High | Low | Low |
| Clearly perceived as representing a long term commitment by the state | Medium | High | Medium | Low | Low |
| Serve as a focal point for overall Regent institution involvement locally | Medium | High | Medium | Low | Low |
| **F. Programmatically Responsive** | | | | | |
| Ability to meet local higher education needs of employers and their employees | Medium | High | High | Medium | Medium |
| Ability to meet local higher education and degree needs of residents | High | Low | High | High | Medium |
| Compatible with other higher education contributions in the Des Moines area | Low | Low | Low | Medium | Low |
| Complimentary to local economic development initiatives | Low | High | Low | Low | Low |
| **G. Time to Implement** | | | | | |
| Immediate ability to respond to local needs | High | Low | Low | Medium | Medium |
| Time to respond to local needs on a permanent basis | Medium | High | High | Medium | Low |
| **SCORE TOTAL (items rated on scale of 1 to 5 - with 1 being least desirable)** | **66** | **79** | **69** | **60** | **40** |

As noted in the previous narrative, the consultant team is not certain of plans for the Pappajohn Education Center if a new center is developed elsewhere, nor is it aware of contingencies for the AIB Campus if a new location should to come to fruition. At minimum, we assumed either or both would be an active education site until a new location is up and running.

# 6.0 CONCLUSIONS

This needs assessment is yet another step by the Board of Regents as they consider expansion of access to public higher education in the Greater Des Moines Metro Area. Study results and conclusions are intended to help inform decisions by the Board and the three Regent institutions in determining the best opportunities and approaches for meeting the higher education needs of the area. Those who have the most to gain, Des Moines area residents, employers, business owners, and workers, have been represented in this effort to gauge collective need for public four-year and graduate degree programs and continuing education. We have presented our findings and conclusions with this in mind.

The subsequent sections of this final chapter provide a brief synopsis of our observations based on the needs assessment findings, followed by a series of issues and concerns for the involved parties to consider as they examine possibilities for expanding access to public higher education in the area, thus enhancing the skilled, educated workforce required to sustain a competitive and viable economy well into the future.

## 6.1 OBSERVATIONS

A fundamental question is pertinent here. Should the largest population center of Iowa have greater local access to public four-year and post-baccalaureate education and degree programs beyond a fully on-line delivery mode? If the answer is yes, and we think that is a likely response, decision makers need an indication of what programs should be targeted for local expansion and what level of demand might be encountered to justify a larger local commitment given scarce public resources. Currently, Regent institutions have a limited program presence in the local Des Moines market, but extend a number of on-line programs to address local needs. However, according to stakeholder comments, those efforts are not adequate to meet all needs. Given Iowa State University's campus in Ames is approximately 35 miles from downtown Des Moines, their full array of programs could be considered available to the local Des Moines market, but the reality is that option does not work for many working adults, which is the primary target audience for proposed expansion.

Further complicating the situation is the pending gift transition of the AIB College campus (located south of downtown) to the University of Iowa and that institution's continued presence at the Pappajohn Education Center. The consultant team was asked to identify geographic areas of the Des Moines Metro that would be most appropriate for establishment of a new Regent Resource Center. All parties expressed a desire to have the three Regent institutions involved in any solution to expand local access in a collaborative and collective manner, relying on the programmatic strengths of each to address specific pockets of need.

A review and analysis of the Greater Des Moines Metro Area (**Chapter 2.0**) is key to understanding the current circumstances, assets, and gaps in the marketplace that may impact decisions regarding local public higher education programming. Several highlights from that review include:

- Private higher education institutions located or operating in the area provide an array of degree programs and continuing education opportunities, but these do not always meet the needs or preferences of all population segments for a variety of reasons.
- The Des Moines MSA is growing faster than the state, and includes one-quarter of the state's population. Thus the magnitude of local higher education needs (beyond the two-year level) will continue to influence statewide decisions despite limited public resources directed towards the Regent institutions.
- When compared to 10 larger markets in the U.S. heartland, a disproportionately high component of population growth in the Des Moines metro is due to in-migration, which may correlate to employer continued reliance on importing a skilled technical workforce.
- Compared to those same markets, Des Moines educational attainment at the associate degree and bachelor's degree levels align favorably, but that is not the case for post-baccalaureate degree attainment, as the local area lags behind the comparison markets.
- The local college participation rate (despite a number of private providers located or operating in the area) is lowest or near so among the 10 comparative markets at both four-year and graduate levels.
- The education pipeline (PK-20 or PK-24) is a recognized key driver of economic growth, diversity, and competitiveness for Des Moines and Central Iowa.
- Local employment is dominated by insurance/finance, information technology, and agri-business/manufacturing sectors with significant need for a degreed and credentialed employee base.
- Industry sectors of critical importance in the continued economic progression of the Des Moines Metro Area (as delineated in the Capital Crossroads initiatives) include: Finance and Insurance, Information Solutions, Health and Fitness, Agribusiness, Manufacturing, and Logistics. Each have cross-cutting workforce needs, as well as industry specific needs for a four-year and post-baccalaureate educated workforce.
- Business and community stakeholders identified a number of barriers that deter citizens and employees from accessing higher education and achieving completion goals beyond the two-year level, thus impacting the available skilled workforce pool locally.
- Both population and employment growth is expected to continue in every sector of the metro area for the next decade or two, but it will be particularly strong in locations to the north and west of the city.

## 6.2 POTENTIAL PROGRAMS FOR CONSIDERATION

Relying on input from local stakeholders, responses from the employer survey, projections of occupational position openings (demand), and degree completion data allocated to the local Des Moines market (supply), our team has identified particular education programming of need that should be explored by the Regent institutions.

The areas identified for program focus that follow were selected due to the quantity of potential annual employment needs, magnitude of the calculated supply deficit, lack of local access, and /or the unique discipline specialty and credential identified by local employers. The listings are group by major

occupational category with specific titles included within each. In some instances, there is a direct one-to-one alignment with academic program disciplines or majors (e.g. Accounting), while groupings of other occupational needs may be address by a single broad degree program (e.g., Business Management). A more complete and detailed listing is provided in **Chapter 4.0**.

- **BACCALAUREATE LEVEL**

| BROAD OCCUPATIONAL CATEGORY | OCCUPATIONAL TITLE |
|---|---|
| Architecture<br>& Engineering Occupations | - Civil Engineers<br>- Industrial Engineers |
| Business & Financial Operations Occupations | - Compliance Officers<br>- Human Resources Specialists<br>- Management Analysts<br>- Training & Development Specialists<br>- Market Research Analysts & Marketing Specialists<br>- Accountants & Auditors<br>- Financial Analysts<br>- Insurance Underwriters<br>- Loan Officers |
| Community & Social Service Occupations | - Child, Family, & School Social Workers |
| Computer & Mathematical Occupations | - Computer Systems Analysts<br>- Software Developers, Applications<br>- Network & Computer Systems Administrators |
| Education, Training, & Library Occupations | - Middle School Teachers<br>- Special Education Teachers |
| Life, Physical, &<br>Social Science Occupations | - Soil & Plant Scientists<br>- Biological Technicians |
| Management Occupations | - General & Operations Managers<br>- Administrative Services Managers<br>- Financial Managers<br>- Construction Managers<br>- Medical & Health Services Managers<br>- Social & Community Service Managers |
| Personal Care & Service Occupations | - Recreation Workers |
| Sales & Related Occupations | - Securities, Commodities, & Financial Services Sales Agents<br>- Sales Reps, Wholesale & Mfg, Technical & Scientific Products |

Other areas of baccalaureate or post-baccalaureate training include specialty certifications in computer software, systems, and related IT skills. It is important to note that the identified graduate program need for education management/teacher credentialing include both master's and doctoral level programming transitioning from a bachelor's to a master's degree or master's to a doctorate.

- **MASTER'S/DOCTORAL LEVEL**

| BROAD OCCUPATIONAL CATEGORY | OCCUPATIONAL TITLE |
|---|---|
| Community & Social Service Occupations | - Mental Health Counselors<br>- Rehabilitation Counselors<br>- Community & Social Service Specialists, All Other |
| Healthcare Practitioners & Technical Occupations | - Occupational Therapists<br>- Nurse Practitioners |
| Education Management Occupations | - Education Administrators, Elementary & Secondary School<br>- Education Administrators, Postsecondary |

## 6.3 ADDITIONAL ISSUES FOR CONSIDERATION

Based on the consultant team's work in similar situations, what we heard from local stakeholders, the market conditions and the resulting demand analysis, we offer the following issues for decision makers to consider as they seek to respond to local requests for expanded access to public higher education programming in the Des Moines Metro Area.

### REGENT RESOURCE CENTER LOCATION OPTION

- Despite the existing access points to Regent institution programming in the metro area and the soon-to-be UI presence on the AIB College site, the consultant team was asked to assess the need for other locations across the Des Moines Metro Area that would be most appropriate for establishment of a long-term Regent Resource Center. Several options were viable and carefully considered, including the AIB Campus, with the most positive option (absence of capital cost estimates) being in the downtown area of Des Moines (**Chapter 5.0**). Concerns over the fate of current delivery sites for Regent institution programming linger if a new center is established. Any location decision must carefully consider resulting impacts on resources versus outcomes both immediate and long-term.

### ACCOMMODATION FOR ESTABLISHED LOCAL PROVIDERS

- Private institutions located or operating in the Des Moines Metro Area also offer a selection of degree programs and continuing education credentialing to local clientele. Regent institutions will need to be cognizant of such options as well as the established relationships those institutions have with the local public and private sector employers. Affordability and convenience may be a competitive advantage for Regent institution program consideration in some instances.

### TARGET AUDIENCES

- The primary audience for the program access expansion by the Regent institutions appears to be non-traditional working adults, but that will differ by program discipline, level, location, and delivery model.
- There appear to be opportunities to serve local traditional age high school graduates and community college students as a secondary market segment, provided risks to enrollments at

both the local community college and the home campuses of the Regent institutions are minimized.

Finally, careful program selection and delivery will be key to the initial success or failure of local program expansion. Selected program offerings must respond to documented needs, and be accessible and delivered in a manner appropriate for the intended students and discipline. They should provide a credential that is valuable to both the recipient, their career path goals, and their respective employer. Affordability and convenience will be key. Regent institution program expansion locally should be deliberate and measured in order to mitigate risks and foster appropriate levels of success in meeting local needs.

# APPENDIX A: PROGRAM INVENTORIES

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>REGENT UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| **AGRIBUSINESS & AGRICULTURAL PRODUCTION** | | | | |
| Agricultural Business & Management | ISU | ISU | ISU | |
| Agricultural Mechanization | ISU | ISU | ISU | |
| Agricultural Production Operations | | ISU | ISU | |
| Agricultural & Food Products Processing | | ISU | ISU | |
| Horticulture Services Operations & Mgmt. | ISU | ISU | ISU | |
| International Agriculture | ISU | | | |
| Culinary Science | ISU | | | |
| **AGRICULTURAL SCIENCES** | | | | |
| Animal Sciences | ISU | ISU | ISU | |
| Food Sciences & Technology | ISU | ISU | ISU | |
| Plant Sciences | ISU | ISU | ISU | |
| Soil Sciences | | ISU | ISU | |
| Agriculture/Agricultural Sciences, Other | ISU | ISU | ISU | |
| **CONSERVATION & RENEWABLE NATURAL RESOURCES** | | | | |
| Natural Resources Conservation | ISU, UNI, UI | UNI | | |
| Natural Resources Mgmt. & Protective Ser. | ISU | | | |
| Fishing & Fisheries Sciences & Management | | ISU | ISU | |
| Forest Production & Processing | ISU | ISU | ISU | |
| Forestry & Related Sciences | ISU | ISU | ISU | |
| Wildlife & Wildlands Management | ISU | ISU | ISU | |
| **ARCHITECTURE & ENVIRONMENTAL DESIGN** | | | | |
| Architecture | ISU | ISU | | |
| City/Urban, Community & Region. Planning | ISU | ISU, UI | | |
| Environmental Design | ISU | ISU | | |
| Interior Design | ISU | ISU | | |
| Landscape Architecture | ISU | ISU (MLA) | | |
| **AREA & ETHNIC STUDIES** | | | | |
| Area Studies | UI, UNI | UI | UI | UI |
| Ethnic & Cultural Studies | ISU, UI | UI, UNI | ISU-Graduate Minor, UI | UI |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>REGENT UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| **MARKETING OPERATIONS/MARKETING & DISTRIBUTION** | | | | |
| Apparel & Accessories Marketing Oper. | ISU | | | |
| **COMMUNICATIONS** | | | | |
| Communications, General | ISU, UI, UNI | UI, UNI | UI | |
| Advertising | ISU | | | |
| Journalism & Mass Communications | ISU, UI | ISU, UI | UI | |
| Public Relations & Org. Communications | UNI | | | UNI |
| Radio & Television Broadcasting | ISU, UI, UNI | UI | | |
| Communications, Other | UNI | | ISU | |
| **COMPUTER & INFORMATION SCIENCES** | | | | |
| Computer & Info. Sciences, General | ISU, UI, UNI | ISU, UI | ISU, UI | UI |
| Information Sciences & Systems | ISU, UNI | ISU, UI | UI | UNI |
| Computer Science | UNI | UNI | | |
| Computer/Information Technology Administration and Management | UNI | ISU | | |
| Computer & Information Sciences, Other | | UNI | | UNI |
| **PERSONAL AND CULINARY SERVICES** | | | | |
| Culinary Arts and Related Services | ISU | | | |
| **EDUCATION** | | | | |
| Education, General | | UI, ISU | ISU, UI, UNI | |
| Bilingual/Bicultural Education | | | UI | |
| Curriculum & Instruction | UI | ISU, UI | ISU, UI, UNI | |
| Education Administration & Supervision | | ISU, UI, UNI | ISU, UI, UNI | UNI |
| Educational/Instructional Media Design | | UI, UNI | UI | |
| Educational Assessment, Testing, and Research, Other | | ISU, UI | ISU, UI | |
| Educational Psychology | | UI | UI | |
| Social & Philosophical Foundations of Education | | ISU, UI, UNI | UI | |
| Special Education | UNI | ISU, UI, UNI | UI | |
| Student Counseling & Personnel Services | | ISU, UI, UNI | ISU, UI, UNI | |
| General Teacher Education | ISU, UI, UNI | ISU, UI, UNI | UI | |
| Teacher Ed., Specific Academic & Vocation | ISU, UI, UNI | ISU, UI, UNI | UI | |
| Teaching English as a Second Language | UNI | UNI | ISU | |
| Education, Other | ISU, UNI | UNI | | |
| **ENGINEERING** | | | | |
| Engineering, General | UI | | | |
| Aerospace, Aeronautical & Astronaut. Eng. | ISU | ISU | ISU | |
| Agricultural Engineering | ISU | ISU | ISU | |
| Bioengineering & Biomedical Engineering | UI | ISU, UI | ISU, UI | |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>REGENT UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| Chemical Engineering | ISU, UI | ISU, UI | ISU, UI | |
| Civil Engineering | ISU | ISU, UI | ISU, UI | UI |
| Computer Engineering | ISU, UNI | ISU, UI | ISU, UI | |
| Electrical, Electronics, & Comm. Engineering | ISU, UI | ISU, UI | ISU, UI | |
| Engineering Mechanics | | ISU | ISU | |
| Engineering Physics | UNI | | | |
| Environmental/Environmental Health Engineering | | UI | UI | |
| Industrial/Manufacturing Engineering | ISU, UI | ISU, UI | ISU, UI | |
| Mechanical Engineering | ISU, UI | ISU, UI | ISU, UI | |
| Engineering in Energy Systems Engineering | | ISU | | |
| Engineering, Other | | | ISU | |
| **ENGINEERING-RELATED TECHNOLOGIES** | | | | |
| Architectural Engineering Technology/Technicians | UNI | | | |
| Industrial Production Technologies | UNI | UNI | UNI | |
| Engineering-Related Technologies | ISU | ISU | | |
| Engineering Technologies/Technicians, Other | UNI | | | |
| **FOREIGN LANGUAGES** | | | | |
| Foreign Languages, Literatures & Linguistics | ISU, UI, UNI | UI | UI | |
| East Asian Languages, Literatures & Linguistics | UI | | | |
| Slavic, Baltic & Albanian Languages, Literatures, & Linguistics, General | ISU, UI, UNI | UI | | |
| Germanic Languages, Literatures & Linguistics | ISU, UI, UNI | UI, UNI | UI | |
| Modern Greek Language & Literature | UI | | | |
| Romance Languages, Literatures & Linguistics | ISU, UI, UNI | UI, UNI | UI | |
| Classics & Classical Languages, Literatures, & Linguistics | ISU, UI | UI | UI | |
| **FAMILY & CONSUMER SCIENCES/HUMAN SCIENCES** | | | | |
| Family & Community Studies | ISU, UNI | UNI | | |
| Family & Consumer Economics & Related Studies | ISU | | | |
| Foods, Nutrition & Related Services | ISU, UNI | ISU | ISU | |
| Housing and Human Environments | ISU | | | |
| Human Development, Family Studies & Related Services | ISU | ISU | ISU | |
| Apparel and Textiles | ISU, UNI | ISU | ISU | |
| **TECHNOLOGY EDUCATION/INDUSTRIAL ARTS** | | | | |
| Technology Education/Industrial Arts | | | | UNI |
| **LEGAL PROFESSIONS AND STUDIES** | | | UI | |
| **ENGLISH LANGUAGE & LITERATURE/LETTERS** | | | | |
| English Language & Literature, General | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| Comparative Literature | UI | UI | UI | |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>REGENT UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| English Composition | | ISU, UI | | |
| English Creative Writing | | ISU, UI | | |
| Speech & Rhetorical Studies | ISU, UNI | | | |
| English Technical & Business Writing | ISU | ISU, UI | | |
| **LIBERAL ARTS & SCIENCES, GENERAL STUDIES & HUMANITIES** | UI | | | |
| Liberal Arts & Sciences, General Studies & Humanities | ISU, UI, UNI | ISU | | |
| **LIBRARY SCIENCES** | | | | |
| Library Science and Administration | | UI, UNI | | |
| **BIOLOGICAL AND BIOMEDICAL SCIENCES** | | | | |
| Biology, General | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| Biochemistry, Biophysics & Molecular Biology | ISU, UNI | ISU, UI | ISU, UI | |
| Botany/Plant Biology | ISU | ISU | ISU | |
| Cell/Cellular Biology & Anatomical Sciences | | ISU | ISU, UI | |
| Microbiological Sciences and Immunology | ISU, UI, UNI | ISU, UI | ISU, UI | |
| Miscellaneous Biological Specializations | ISU, UI, UNI | ISU, UI | ISU, UI | |
| Zoology/Animal Biology | ISU | ISU, UI | ISU, UI | |
| Genetics | UI | | UI | |
| Pharmacology and Toxicology | | UI | UI | |
| Biomathematics, Bioinformatics & Computational Biology | ISU | | | |
| Biotechnology | | UI (Informatics), UNI - PSM | UI (Informatics), UNI - PSM | UI |
| Ecology, Evolution, Systematics, and Population Biology | | UNI - Ecosyst Mgt | | |
| Biological and Biomedical Sciences, Other | UNI (Bioinformatics) | | | |
| **MATHEMATICS AND STATISTICS** | | | | |
| Mathematics | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| Applied Mathematics | | | | |
| Statistics | ISU, UI | ISU, UI | ISU, UI | |
| Mathematics and Statistics, Other | | UI | | |
| **MULTI/INTERDISCIPLINARY STUDIES** | | | | |
| Gerontology | UNI | | | UI |
| Nutrition Sciences | | ISU | ISU | |
| International Studies | ISU, UI, UNI | UI | | |
| Multi-Interdisciplinary Studies, Other | UI | ISU, UI | ISU | UI |
| **PARKS, RECREATION, LEISURE, AND FITNESS STUDIES** | | | | |
| Parks, Recreation & Leisure Studies | UI, UNI | UI | UI | |
| Health & Physical Education/Fitness | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>REGENT UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| **LEISURE & RECREATIONAL ACTIVITIES** | | | | |
| Leisure & Recreational Activities | | UNI | | |
| **PHILOSOPHY & RELIGIOUS STUDIES** | | | | |
| Philosophy | ISU, UI, UNI | UI | UI | |
| Religion/Religious Studies | ISU, UI, UNI | UI | UI | |
| **PHYSICAL SCIENCES** | | | | |
| Physical Sciences, General | UI | UI | UI | |
| Astronomy and Astrophysics | | ISU, UI | ISU | |
| Atmospheric Sciences & Meteorology | ISU, UNI | ISU | ISU | |
| Chemistry | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| Geological & Earth Sciences/Geosciences | ISU, UI, UNI | ISU, UI | ISU, UI | |
| Miscellaneous Physical Sciences | ISU | ISU | ISU | |
| Physics | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| **PSYCHOLOGY** | | | | |
| Psychology, General | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| Clinical Psychology | | UI | UI | |
| Counseling Psychology | | UNI | | |
| Developmental & Child Psychology | | UI | UI | |
| Experimental Psychology | | UI | UI | |
| Social Psychology | | UI | UI | |
| School Psychology | | UNI | UI | ISU |
| **HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES** | | | | |
| Criminal Justice & Corrections | | UI | | |
| **PUBLIC ADMINISTRATION & SOCIAL SERVICE PROFESSIONS** | | | | |
| Public Administration | ISU, UNI | ISU | | |
| Public Policy Analysis | | UNI | | |
| Social Work | UI, UNI | UI, UNI | UI | |
| **SOCIAL SCIENCES** | | | | |
| Social Sciences, General | UI | UI | | |
| Anthropology | ISU, UI, UNI | ISU, UI | UI | |
| Criminology | UNI | UNI | | |
| Economics | ISU, UI, UNI | ISU, UI | ISU, UI | |
| Geography | UI, UNI | UI, UNI | UI | |
| History | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| International Relations & Affairs | ISU, UI | | | |
| Political Science & Government | ISU, UI, UNI | ISU, UI, UNI | UI | |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>REGENT UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| Sociology | ISU, UI, UNI | ISU, UI, UNI | ISU, UI | |
| **VISUAL & PERFORMING ARTS** | | | | |
| Visual & Performing Arts | | | ISU-Major/Minor | |
| Dance | UI | UI | | |
| Design & Applied Arts | ISU, UNI | ISU | | |
| Dramatic Arts | UI, UNI | UI, UNI | | |
| Film/Video & Photographic Arts | | UI | UI | |
| Fine Arts & Art Studies | ISU, UI, UNI | ISU, UI, UNI | UI | |
| Music | ISU, UI, UNI | UI, UNI | UI | |
| Visual and Performing Arts, Other | ISU, UI | | | |
| **HEALTH PROFESSIONS & RELATED PROGRAMS** | UI | | | |
| Communication Disorders Sciences & Ser. | UNI | UI, UNI | UI | |
| Dentistry (D.D.S., D.M.D.) | | UI | | |
| Health & Medical Administrative Services | | UI | UI | |
| Health & Medical Assistants | | UI | | |
| Health & Med. Diagnostic & Treatment Ser. | ISU, UI | UI, UNI | | UI |
| Health & Medical Laboratory Technologies | UI | | | |
| Medical Basic Sciences | UI | UI | UI | |
| Nursing | UI | UI | UI | |
| Pharmacy | UI | UI | UI | |
| Public Health | | UI | UI | |
| Rehabilitation/Therapeutic Services | | UI | UI | |
| Veterinary Medicine (D.V.M.) | | | ISU | |
| Veterinary Clinical Sciences (M.S., Ph.D.) | | ISU | ISU | |
| Miscellaneous Health Professions | ISU | UI (Informatics) | UI (Informatics) | UI |
| Dental Programs | | UI | UI | |
| Health Professions & Related Services | UI, UNI | UI | | |
| **BUSINESS, MANAGEMENT, MARKETING & RELATED SUPPORT SERVICES** | | | | |
| Business Administration & Management | UI, UNI | ISU, UI, UNI | ISU, UI | |
| Accounting | ISU, UI, UNI | ISU, UI, UNI | UI | |
| Business/Managerial Economics | ISU, UNI | | | UI |
| Enterprise Management & Operation | | | | UI |
| Financial Management & Services | ISU, UI, UNI | ISU, UI | UI | |
| Hospitality Services Management | ISU | ISU | ISU | |
| Human Resources Management | UI, UNI | ISU, UI | UI | |
| International Business | | | | UI |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>REGENT UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| Business Information & Data Processing | ISU, UNI | | | |
| Business Quantitative Methods & Management | ISU, UI, UNI | UI | UI | |
| Marketing Management & Research | ISU, UI, UNI | UI | UI | |
| Real Estate | UNI | | | |
| Business, Management, Marketing, and related Support Services, Other | ISU, UNI | ISU | | |

Note: Other programs include Certificate and Specialist degrees.

Source: As reported on the Board of Regents State of Iowa website (http://www.regents.iowa.gov/ICCPHSE/Taxonomy/taxonomy.htm) from the Iowa Coordinating Council For Post High School Education - Taxonomy of Academic Programs By Institution.

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>INDEPENDENT COLLEGES AND UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| **AREA & ETHNIC STUDIES** | | | | |
| Area Studies | GC | | | |
| **CONSERVATION & RENEWABLE NATURAL RESOURCES** | | | | |
| Natural Resources Conservation | SC | | | |
| **COMMUNICATIONS** | | | | |
| Communications, General | SC | | | |
| Advertising | DU | | | |
| Journalism & Mass Communications | DU, GVU, SC | DU | | |
| Public Relations & Organizational Communications | DU | | | |
| Radio & Television Broadcasting | DU, GVU | | | |
| Communications, Other | DU, SC | | | |
| **COMPUTER AND INFORMATION SCIENCES** | | | | |
| Computer & Information Sciences, General | AIB, DU, GVU | | | |
| Information Sciences & Systems | DU, SC | | | |
| Computer Science | DU, GC, SC | | | |
| **EDUCATION** | | | | |
| Education, General | DU | GVU | | |
| Curriculum & Instruction | | DU | DU | DU |
| Education Administration & Supervision | | DU | DU | DU |
| Special Education | | DU | | |
| Student Counseling & Personnel Services | | DU | DU | |
| General Teacher Education | DU, GVU, SC | DU, SC | DU | |
| Teacher Ed., Specific Academic & Vocational Programs | DU, GVU, SC | DU | | |
| Education, Other | DMACC/ISU/SC, DU | DU | | |
| **FOREIGN LANGUAGES** | | | | |
| Foreign Languages & Literatures | DU | | | |
| East & Southeast Asian Languages & Literature | GC | | | |
| East European Languages & Literatures | GC | | | |
| Germanic Languages & Literatures | DU, GC, SC | | | |
| Romance Languages & Literatures | DU, GC, SC | DU | | |
| Classical & Ancient Near Eastern Languages & Literatures | GC | | | |
| **HOME ECONOMICS** | | | | |
| Foods & Nutrition Studies | | | DU | |
| **LEGAL PROFESSIONS AND STUDIES** | | | | |
| Legal Support Services | AIB | | | |
| Legal Professions and Studies, Other | GVU | | | |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>INDEPENDENT COLLEGES AND UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| **ENGLISH LANGUAGE & LITERATURE/LETTERS** | | | | |
| English Language & Literature, General | DU, GVU, GC, SC | DU | | |
| Speech & Rhetorical Studies | DU, SC | | | |
| **LIBERAL ARTS & SCIENCE, GENERAL STUDIES & HUMANITIES** | | | | |
| Liberal Arts & Sciences, General Studies, Humanities | AIB, DU, GVU, SC | DU | | |
| **BIOLOGICAL SCIENCES/LIFE SCIENCES** | | | | |
| Biology, General | DU, GVU, GC, SC | DMU, DU | | |
| Biochemistry & Biophysics | GVU, SC | | | |
| Cell/Cellular Biology and Anatomical Sciences | | DMU | | |
| Biotechnology | GVU | | | |
| **MATHEMATICS** | | | | |
| Mathematics | DU, GC, SC | | | |
| Applied Mathematics | GVU | | | |
| **MILITARY TECHNOLOGIES** | | | | |
| Military Technologies | DU | | | |
| **MULTI/INTERDISCIPLINARY STUDIES** | | | | |
| Multi/Interdisciplinary Studies, Other | GC | | | |
| **PARKS, RECREATION, LEISURE/FITNESS STUDIES, OTHER** | | | | |
| Health & Physical Education/Fitness | AIB, GVU, SC | GVU | | |
| **PHILOSOPHY & RELIGION** | | | | |
| Philosophy | DU, GC, SC | | | |
| Religion/Religious Studies | DU, GVU, GC, SC | | | |
| **THEOLOGICAL STUDIES AND RELIGIOUS VOCATIONS** | | | | |
| Religious/Sacred Music | DU, GVU | | | |
| Theological & Ministerial Studies | | | | |
| Theological Studies & Religious Vocations, Other | | DU | | |
| **PHYSICAL SCIENCES** | | | | |
| Physical Sciences, General | | DU | | |
| Astronomy | DU | | | |
| Chemistry | DU, GC, SC | | | |
| Miscellaneous Physical Sciences | DU | | | |
| Physics | DU, GC | DU | | |
| Physical Sciences, Other | GVU | | | |
| **PSYCHOLOGY** | | | | |
| Psychology, General | DU, GC, SC | DU | | |
| Psychology, Other | GVU | | | |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>INDEPENDENT COLLEGES AND UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| **PROTECTIVE SERVICES** | | | | |
| Criminal Justice & Corrections | GVU, SC | SC | | |
| **PUBLIC ADMINISTRATION & SERVICES** | | | | |
| Public Administration | DU | DU | | |
| **SOCIAL SCIENCES** | | | | |
| Social Sciences, General | DU, GVU | | | |
| Anthropology | GC | | | |
| Economics | DU, GC, SC | | | |
| Geography | DU | | | |
| History | DU, GVU, GC, SC | | | |
| International Relations & Affairs | DU, SC | | | |
| Political Science & Government | DU, GVU, GC, SC | | | |
| Sociology | DU, GC, SC | | | |
| **VISUAL & PERFORMING ARTS** | | | | |
| Design & Applied Arts | DU, GVU | | | |
| Dramatic Arts | DU, GC, SC | | | |
| Fine Arts & Art Studies | DU, GC, SC | DU | | |
| Music | DU, GVU, GC, SC | DU | | |
| **HEALTH PROFESSIONS & RELATED SCIENCES** | | | | |
| Health & Medical Administrative Services | | DMU | | |
| Health & Medical Assistants | DMU | DMU | | |
| Health & Medical Preparatory Programs | GVU | | | |
| Nursing | DU, GVU | DU, GVU | | |
| Osteopathic Medicine | | | DMU | |
| Pharmacy | DU | | DU | |
| Podiatry (D.P.M., D.P., Pod.D.) | | | DMU | |
| Public Health | | DMU | | |
| Rehabilitation/Therapeutic Services | GVU | DMU, GVU | DMU | |
| **BUSINESS MANAGEMENT & ADMINISTRATIVE SERVICES** | | | | |
| Business/Commerce, General | DU, GVU | | | |
| Business Administration, Management and Operations | AIB, SC | DU, GVU | | |
| Accounting | AIB, DU, GVU, SC | | | |
| Financial Management & Services | AIB, DU | | | |
| Human Resources Management | AIB, GVU | DU (ICN) | | |
| International Business | DU, SC | | | |

| TAXONOMY OF ACADEMIC PROGRAMS BY INSTITUTION<br>INDEPENDENT COLLEGES AND UNIVERSITIES | | | | |
|---|---|---|---|---|
| **Instructional Program Titles** | **Bachelor's** | **Master's** | **Doctorate** | **Other Programs** |
| Management Information Systems & Bus. Data Processing | DU, GVU | | | |
| Business Quantitative Methods & Management Science | DU | | | |
| Marketing | DU | | | |
| Taxation | | DU | | |
| Business Management & Administrative Services, Other | DU | | | |
| **HISTORY** | | | | |
| History | GVU | | | |

*Note: Other programs are offered as transitional degrees, post-graduate certificates, or education specialist credentials in selected Education and Health Professions and Related Sciences through DMU and Drake University.

Source: As reported on the Board of Regents State of Iowa website (http://www.regents.iowa.gov/ICCPHSE/Taxonomy/taxonomy.htm) from the Iowa Coordinating Council For Post High School Education - Taxonomy of Academic Programs By Institution.

# APPENDIX B: DEGREE AWARDS

2013-14 BACHELOR'S DEGREE AWARDS BY REGENT INSTITUTIONS

| | Bachelor's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **1.0** | **Agriculture, Agriculture Operations, and Related Sciences** | | | | |
| 1.0102 | Agribusiness/Agricultural Business Operations | 114 | | | **114** |
| 1.0104 | Farm/Farm and Ranch Management | 103 | | | **103** |
| 1.0201 | Agricultural Mechanization, General | 49 | | | **49** |
| 1.0701 | International Agriculture | 15 | | | **15** |
| 1.0901 | Animal Sciences, General | 173 | | | **173** |
| 1.0905 | Dairy Science | 19 | | | **19** |
| 1.1001 | Food Science | 32 | | | **32** |
| 1.1102 | Agronomy and Crop Science | 74 | | | **74** |
| 1.1103 | Horticultural Science | 35 | | | **35** |
| | **TOTAL** | **614** | **0** | **0** | **614** |
| **3.0** | **Natural Resources and Conservation** | | | | |
| 3.0104 | Environmental Science | 33 | 27 | | **60** |
| 3.0502 | Forest Sciences and Biology | 23 | | | **23** |
| | **TOTAL** | **56** | **27** | **0** | **83** |
| **4.0** | **Architecture and Related Services** | | | | |
| 4.0201 | Architecture | 75 | | | **75** |
| 4.0301 | City/Urban, Community and Regional Planning | 24 | | | **24** |
| 4.0601 | Landscape Architecture | 34 | | | **34** |
| | **TOTAL** | **133** | **0** | **0** | **133** |
| **5.0** | **Area, Ethnic, Cultural, Gender, and Group Studies** | | | | |
| 5.0102 | American/United States Studies/Civilization | | 3 | | **3** |
| 5.0103 | Asian Studies/Civilization | | 11 | | **11** |
| 5.0201 | African-American/Black Studies | | 2 | | **2** |
| 5.0207 | Women's Studies | 4 | 7 | | **11** |
| | **TOTAL** | **4** | **23** | **0** | **27** |
| **9.0** | **Communication, Journalism, and Related Programs** | | | | |
| 9.0101 | Speech Communication and Rhetoric | 88 | 239 | 80 | **407** |
| 9.0401 | Journalism | 90 | 119 | | **209** |
| 9.0702 | Digital Communication and Media/Multimedia | | | 42 | **42** |
| 9.0902 | Public Relations/Image Management | 14 | | 47 | **61** |
| 9.0903 | Advertising | 47 | | | **47** |
| | **TOTAL** | **239** | **358** | **169** | **766** |
| **10.0** | **Communications Technologies/Technicians and Support Services** | | | | |
| 10.0301 | Graphic Communications, General | | | 20 | **20** |
| | **TOTAL** | **0** | **0** | **20** | **20** |

| | Bachelor's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **11.0** | **Computer and Information Sciences and Support Services** | | | | |
| 11.0101 | Computer and Information Sciences, General | | 50 | | **50** |
| 11.0104 | Informatics | | 26 | | **26** |
| 11.0701 | Computer Science | 46 | | 40 | **86** |
| 11.0901 | Computer Systems Networking and Telecommunications | | | 5 | **5** |
| | **TOTAL** | **46** | **76** | **45** | **167** |
| **13.0** | **Education** | | | | |
| 13.1202 | Elementary Education and Teaching | 130 | 124 | 288 | **542** |
| 13.1209 | Kindergarten/Preschool Education and Teaching | | | 22 | **22** |
| 13.121 | Early Childhood Education and Teaching | 40 | | | **40** |
| 13.1301 | Agricultural Teacher Education | 39 | | | **39** |
| 13.1303 | Business Teacher Education | | | 4 | **4** |
| 13.1306 | Foreign Language Teacher Education | | | 1 | **1** |
| 13.1309 | Technology Teacher Education/Industrial Arts Teacher Education | | | 6 | **6** |
| 13.1312 | Music Teacher Education | 16 | | 27 | **43** |
| 13.1314 | Physical Education Teaching and Coaching | | | 24 | **24** |
| 13.1316 | Science Teacher Education/General Science Teacher Education | | 12 | | **12** |
| 13.1317 | Social Science Teacher Education | | | 29 | **29** |
| 13.1331 | Speech Teacher Education | | | 2 | **2** |
| 13.1401 | Teaching English as a Second or Foreign Language/ESL Language Instructor | | | 13 | **13** |
| | **TOTAL** | **225** | **136** | **416** | **777** |
| **14.0** | **Engineering** | | | | |
| 14.0201 | Aerospace, Aeronautical and Astronautical/Space Engineering | 87 | | | **87** |
| 14.0301 | Agricultural Engineering | 38 | | | **38** |
| 14.0501 | Bioengineering and Biomedical Engineering | | 69 | | **69** |
| 14.0701 | Chemical Engineering | 103 | 26 | | **129** |
| 14.0801 | Civil Engineering, General | 175 | 51 | | **226** |
| 14.0901 | Computer Engineering, General | 88 | | | **88** |
| 14.0903 | Computer Software Engineering | 28 | | | **28** |
| 14.1001 | Electrical and Electronics Engineering | 105 | 67 | | **172** |
| 14.1801 | Materials Engineering | 43 | | | **43** |
| 14.1901 | Mechanical Engineering | 299 | 83 | | **382** |
| 14.3301 | Construction Engineering | 72 | | | **72** |
| 14.3501 | Industrial Engineering | 83 | 43 | | **126** |
| | **TOTAL** | **1,121** | **339** | **0** | **1,460** |
| **15.0** | **Engineering Technologies and Engineering-Related Fields** | | | | |
| 15.0403 | Electromechanical Technology/Electromechanical Engineering Technology | | | 9 | **9** |
| 15.0612 | Industrial Technology/Technician | | | 21 | **21** |
| 15.0613 | Manufacturing Engineering Technology/Technician | | | 19 | **19** |
| 15.1501 | Engineering/Industrial Management | 42 | | | **42** |
| | **TOTAL** | **42** | **0** | **49** | **91** |

| | Bachelor's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **16.0** | **Foreign Languages, Literatures, and Linguistics** | | | | |
| 16.0102 | Linguistics | 18 | 19 | | **37** |
| 16.0402 | Russian Language and Literature | | 5 | | **5** |
| 16.0501 | German Language and Literature | | 6 | 1 | **7** |
| 16.09 | Romance Languages, Literatures, and Linguistics | 25 | | | **25** |
| 16.0901 | French Language and Literature | | 13 | 5 | **18** |
| 16.0902 | Italian Language and Literature | | 4 | | **4** |
| 16.0905 | Spanish Language and Literature | | 62 | 14 | **76** |
| 16.12 | Classics and Classical Languages, Literatures, and Linguistics | | 5 | | **5** |
| | **TOTAL** | **43** | **114** | **20** | **177** |
| **19.0** | **Family and Consumer Sciences/Human Sciences** | | | | |
| 19.0101 | Family and Consumer Sciences/Human Sciences, General | 15 | | | **15** |
| 19.0401 | Family Resource Management Studies, General | 9 | | | **9** |
| 19.0707 | Family and Community Services | 126 | | 65 | **191** |
| 19.0901 | Apparel and Textiles, General | 93 | | 4 | **97** |
| | **TOTAL** | **243** | **0** | **69** | **312** |
| **23.0** | **English Language and Literature/Letters** | | | | |
| 23.0101 | English Language and Literature, General | 60 | 209 | 61 | **330** |
| 23.1303 | Professional, Technical, Business, and Scientific Writing | 9 | | | **9** |
| 23.1304 | Rhetoric and Composition | | | | |
| | **TOTAL** | **69** | **209** | **61** | **339** |
| **24.0** | **Liberal Arts and Sciences, General Studies and Humanities** | | | | |
| 24.0101 | Liberal Arts and Sciences/Liberal Studies | 99 | 207 | 56 | **362** |
| 24.0103 | Humanities/Humanistic Studies | | | 2 | **2** |
| | **TOTAL** | **99** | **207** | **58** | **364** |
| **26.0** | **Biological and Biomedical Sciences** | | | | |
| 26.0101 | Biology/Biological Sciences, General | 141 | 82 | 114 | **337** |
| 26.0102 | Biomedical Sciences, General | | | 14 | **14** |
| 26.0202 | Biochemistry | 27 | 41 | 14 | **82** |
| 26.0502 | Microbiology, General | 18 | 24 | 1 | **43** |
| 26.0702 | Entomology | 5 | | | **5** |
| 26.0801 | Genetics, General | 21 | | | **21** |
| 26.1201 | Biotechnology | | | 1 | **1** |
| 26.1301 | Ecology | 84 | | 12 | **96** |
| | **TOTAL** | **296** | **147** | **156** | **599** |
| **27.0** | **Mathematics and Statistics** | | | | |
| 27.0101 | Mathematics, General | 48 | 120 | 23 | **191** |
| 27.0501 | Statistics, General | 26 | 14 | | **40** |
| 27.0599 | Statistics, Other | | | 10 | **10** |
| | **TOTAL** | **74** | **134** | **33** | **241** |
| **30.0** | **Multi/Interdisciplinary Studies** | | | | |
| 30.0101 | Biological and Physical Sciences | | | 3 | **3** |
| 30.1101 | Gerontology | | | 15 | **15** |
| 30.1901 | Nutrition Sciences | 23 | | | **23** |

| | Bachelor's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 30.2001 | International/Global Studies | | 65 | 3 | **68** |
| 30.2201 | Ancient Studies/Civilization | | 2 | | **2** |
| 30.9999 | Multi-/Interdisciplinary Studies, Other | 83 | 65 | | **148** |
| | **TOTAL** | **106** | **132** | **21** | **259** |
| **31.0** | **Parks, Recreation, Leisure, and Fitness Studies** | | | | |
| 31.0101 | Parks, Recreation and Leisure Studies | | 151 | 65 | **216** |
| 31.0501 | Health and Physical Education/Fitness, General | | | 65 | **65** |
| 31.0505 | Kinesiology and Exercise Science | 202 | 367 | | **569** |
| 31.0508 | Sports Studies | | 22 | | **22** |
| 31.0599 | Health and Physical Education/Fitness, Other | | 3 | | **3** |
| | **TOTAL** | **202** | **543** | **130** | **875** |
| **38.0** | **Philosophy and Religious Studies** | | | | |
| 38.0101 | Philosophy | 10 | 24 | 9 | **43** |
| 38.0201 | Religion/Religious Studies | 3 | 17 | 3 | **23** |
| | **TOTAL** | **13** | **41** | **12** | **66** |
| **40.0** | **Physical Sciences** | | | | |
| 40.0201 | Astronomy | | 6 | | **6** |
| 40.0404 | Meteorology | 18 | | | **18** |
| 40.0501 | Chemistry, General | 21 | 35 | 3 | **59** |
| 40.0599 | Chemistry, Other | | | 2 | **2** |
| 40.0601 | Geology/Earth Science, General | 16 | 18 | 19 | **53** |
| 40.0699 | Geological and Earth Sciences/Geosciences, Other | | | 2 | **2** |
| 40.0801 | Physics, General | 15 | 13 | 5 | **33** |
| 40.0899 | Physics, Other | | | 3 | **3** |
| | **TOTAL** | **70** | **72** | **34** | **176** |
| **42.0** | **Psychology** | | | | |
| 42.0101 | Psychology, General | 157 | 289 | 108 | **554** |
| | **TOTAL** | **157** | **289** | **108** | **554** |
| **44.0** | **Public Administration and Social Service Professions** | | | | |
| 44.0401 | Public Administration | 5 | | 11 | **16** |
| 44.0701 | Social Work | | 54 | 55 | **109** |
| | **TOTAL** | **5** | **54** | **66** | **125** |
| **45.0** | **Social Sciences** | | | | |
| 45.0201 | Anthropology | 19 | 31 | 12 | **62** |
| 45.0401 | Criminology | | | 84 | **84** |
| 45.0601 | Economics, General | 22 | 138 | 11 | **171** |
| 45.0602 | Applied Economics | | | 11 | **11** |
| 45.0701 | Geography | | 26 | 7 | **33** |
| 45.0901 | International Relations and Affairs | | 8 | | **8** |
| 45.1001 | Political Science and Government, General | 61 | 104 | 30 | **195** |
| 45.1099 | Political Science and Government, Other | | | 5 | **5** |
| 45.1101 | Sociology | 29 | 79 | 17 | **125** |
| | **TOTAL** | **131** | **386** | **177** | **694** |

| | Bachelor's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **50.0** | **Visual and Performing Arts** | | | | |
| 50.0101 | Visual and Performing Arts, General | 13 | | | **13** |
| 50.0301 | Dance, General | | 21 | | **21** |
| 50.0401 | Design and Visual Communications, General | 63 | | | **63** |
| 50.0404 | Industrial and Product Design | 27 | | | **27** |
| 50.0407 | Fashion/Apparel Design | 15 | | | **15** |
| 50.0408 | Interior Design | 50 | | 7 | **57** |
| 50.0409 | Graphic Design | 73 | | 16 | **89** |
| 50.0501 | Drama and Dramatics/Theatre Arts, General | | 29 | 5 | **34** |
| 50.0502 | Technical Theatre/Theatre Design and Technology | | | 5 | **5** |
| 50.0506 | Acting | | | 9 | **9** |
| 50.0601 | Film/Cinema/Video Studies | | 33 | | **33** |
| 50.0701 | Art/Art Studies, General | | 120 | 5 | **125** |
| 50.0702 | Fine/Studio Arts, General | | | 39 | **39** |
| 50.0703 | Art History, Criticism and Conservation | | 8 | 1 | **9** |
| 50.0901 | Music, General | 7 | 37 | 6 | **50** |
| 50.0903 | Music Performance, General | | | 6 | **6** |
| 50.0904 | Music Theory and Composition | | | 1 | **1** |
| 50.091 | Jazz/Jazz Studies | | | 6 | **6** |
| 50.0913 | Music Technology | | | 1 | **1** |
| 50.0999 | Music, Other | | | 3 | **3** |
| | **TOTAL** | **248** | **248** | **110** | **606** |
| **51.0** | **Health Professions and Related Programs** | | | | |
| 51.0203 | Speech-Language Pathology/Pathologist | | | 62 | **62** |
| 51.0204 | Audiology/Audiologist and Speech-Language Pathology/Pathologist | | 64 | | **64** |
| 51.0905 | Nuclear Medical Technology/Technologist | | 1 | | **1** |
| 51.0911 | Radiologic Technology/Science - Radiographer | | 38 | | **38** |
| 51.0913 | Athletic Training/Trainer | 13 | 13 | 23 | **49** |
| 51.1005 | Clinical Laboratory Science/Medical Technology/Technologist | | 4 | | **4** |
| 51.2703 | Medical Illustration/Medical Illustrator | 11 | | | **11** |
| 51.3101 | Dietetics/Dietitian | 76 | | | **76** |
| 51.3801 | Registered Nursing/Registered Nurse | | 215 | | **215** |
| 51.9999 | Health Professions and Related Clinical Sciences, Other | | | 26 | **26** |
| | **TOTAL** | **100** | **335** | **111** | **546** |
| **52.0** | **Business, Management, Marketing, and Related Support Services** | | | | |
| 52.0201 | Business Administration and Management, General | | | 112 | **112** |
| 52.0203 | Logistics, Materials, and Supply Chain Management | 109 | | | **109** |
| 52.0205 | Operations Management and Supervision | 1 | | | **1** |
| 52.0213 | Organizational Leadership | | | 6 | **6** |
| 52.0301 | Accounting | 181 | 146 | 96 | **423** |
| 52.0601 | Business/Managerial Economics | 5 | | | **5** |
| 52.0801 | Finance, General | 212 | 356 | 35 | **603** |
| 52.0807 | Investments and Securities | | | 9 | **9** |

| | Bachelor's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 52.0899 | Finance and Financial Management Services, Other | | | 24 | **24** |
| 52.0901 | Hospitality Administration/Management, General | 39 | | | **39** |
| 52.0907 | Meeting and Event Planning | 69 | | | **69** |
| 52.1002 | Labor and Industrial Relations | | 105 | | **105** |
| 52.1201 | Management Information Systems, General | 109 | | 38 | **147** |
| 52.1301 | Management Science | 99 | | | **99** |
| 52.1304 | Actuarial Science | | 5 | | **5** |
| 52.1399 | Management Sciences and Quantitative Methods, Other | | 30 | | **30** |
| 52.1401 | Marketing/Marketing Management, General | 141 | | 90 | **231** |
| 52.1403 | International Marketing | | | 7 | **7** |
| 52.1499 | Marketing, Other | | 171 | | **171** |
| 52.1501 | Real Estate | | | 7 | **7** |
| 52.2001 | Construction Management | | | 19 | **19** |
| | **TOTAL** | **965** | **813** | **443** | **2,221** |
| **54.0** | **History** | | | | |
| 54.0101 | History, General | 83 | 70 | 49 | **202** |
| | **TOTAL** | **83** | **70** | **49** | **202** |
| **99** | **GRAND TOTAL** | **5,384** | **4,753** | **2,357** | **12,494** |

Note: Degree awards reported above represent “first majors” only.
Source: IPEDS, 2016.

## 2013-14 MASTER'S DEGREE AWARDS BY REGENT INSTITUTIONS

| | Master's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **1.0** | **Agriculture, Agriculture Operations, and Related Sciences** | | | | |
| 1.0104 | Farm/Farm and Ranch Management | 8 | | | **8** |
| 1.0304 | Crop Production | 2 | | | **2** |
| 1.0308 | Agroecology and Sustainable Agriculture | 8 | | | **8** |
| 1.0901 | Animal Sciences, General | 5 | | | **5** |
| 1.0906 | Livestock Management | 1 | | | **1** |
| 1.1001 | Food Science | 3 | | | **3** |
| 1.1102 | Agronomy and Crop Science | 27 | | | **27** |
| 1.1103 | Horticultural Science | 2 | | | **2** |
| 1.1104 | Agricultural and Horticultural Plant Breeding | 4 | | | **4** |
| 1.1201 | Soil Science and Agronomy, General | 8 | | | **8** |
| | **TOTAL** | **68** | **0** | **0** | **68** |
| **3.0** | **Natural Resources and Conservation** | | | | |
| 3.0104 | Environmental Science | | | 2 | **2** |
| 3.0301 | Fishing and Fisheries Sciences and Management | 1 | | | **1** |
| 3.0601 | Wildlife, Fish and Wildlands Science and Management | 4 | | | **4** |
| | **TOTAL** | **5** | **0** | **2** | **7** |
| **4.0** | **Architecture and Related Services** | | | | |
| 4.0201 | Architecture | 17 | | | **17** |
| 4.0301 | City/Urban, Community and Regional Planning | 9 | 25 | | **34** |
| 4.0601 | Landscape Architecture | 2 | | | **2** |
| | **TOTAL** | **28** | **25** | **0** | **53** |
| **5.0** | **Area, Ethnic, Cultural, Gender, and Group Studies** | | | | |
| 5.0102 | American/United States Studies/Civilization | | 1 | | **1** |
| 5.0103 | Asian Studies/Civilization | | 6 | | **6** |
| 5.0207 | Women's Studies | | | 1 | **1** |
| | **TOTAL** | **0** | **7** | **1** | **8** |
| **9.0** | **Communication, Journalism, and Related Programs** | | | | |
| 9.0101 | Speech Communication and Rhetoric | | 5 | 12 | **17** |
| 9.0102 | Mass Communication/Media Studies | | | 1 | **1** |
| 9.0401 | Journalism | 12 | 4 | | **16** |
| | **TOTAL** | **12** | **9** | **13** | **34** |
| **11.0** | **Computer and Information Sciences and Support Services** | | | | |
| 11.0101 | Computer and Information Sciences, General | | 18 | | **18** |
| 11.0103 | Information Technology | 3 | | | **3** |
| 11.0104 | Informatics | | 2 | | **2** |
| 11.0701 | Computer Science | 21 | | 1 | **22** |
| 11.1003 | Computer and Information Systems Security/Information Assurance | 12 | | | **12** |
| | **TOTAL** | **36** | **20** | **1** | **57** |

| | Master's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **13.0** | **Education** | | | | |
| 13.0101 | Education, General | 6 | | | **6** |
| 13.0301 | Curriculum and Instruction | 8 | | | **8** |
| 13.0401 | Educational Leadership and Administration, General | 28 | | | **28** |
| 13.0406 | Higher Education/Higher Education Administration | 56 | 21 | | **77** |
| 13.0408 | Elementary and Middle School Administration/Principalship | | | 23 | **23** |
| 13.0411 | Superintendency and Educational System Administration | | 14 | | **14** |
| 13.0501 | Educational/Instructional Technology | | | 16 | **16** |
| 13.0604 | Educational Assessment, Testing, and Measurement | | 11 | | **11** |
| 13.0901 | Social and Philosophical Foundations of Education | 1 | | 28 | **29** |
| 13.1001 | Special Education and Teaching, General | 1 | 14 | 19 | **34** |
| 13.1004 | Education/Teaching of the Gifted and Talented | | | 2 | **2** |
| 13.1101 | Counselor Education/School Counseling and Guidance Services | | 14 | 17 | **31** |
| 13.1102 | College Student Counseling and Personnel Services | | | 13 | **13** |
| 13.1209 | Kindergarten/Preschool Education and Teaching | | | 1 | **1** |
| 13.1301 | Agricultural Teacher Education | 16 | | | **16** |
| 13.1302 | Art Teacher Education | | 2 | | **2** |
| 13.1305 | English/Language Arts Teacher Education | | 6 | | **6** |
| 13.1306 | Foreign Language Teacher Education | | 5 | | **5** |
| 13.1311 | Mathematics Teacher Education | 5 | 1 | | **6** |
| 13.1312 | Music Teacher Education | | | 3 | **3** |
| 13.1315 | Reading Teacher Education | | 1 | 7 | **8** |
| 13.1316 | Science Teacher Education/General Science Teacher Education | 10 | 9 | | **19** |
| 13.1317 | Social Science Teacher Education | | | 9 | **9** |
| 13.1318 | Social Studies Teacher Education | | 5 | | **5** |
| 13.1401 | Teaching English as a Second or Foreign Language/ESL Language Instructor | 6 | | 7 | **13** |
| | **TOTAL** | **137** | **103** | **145** | **385** |
| **14.0** | **Engineering** | | | | |
| 14.0201 | Aerospace, Aeronautical and Astronautical/Space Engineering | 6 | | | **6** |
| 14.0301 | Agricultural Engineering | 16 | | | **16** |
| 14.0501 | Bioengineering and Biomedical Engineering | | 15 | | **15** |
| 14.0701 | Chemical Engineering | 4 | 4 | | **8** |
| 14.0801 | Civil Engineering, General | 52 | 15 | | **67** |
| 14.0901 | Computer Engineering, General | 21 | 5 | | **26** |
| 14.1001 | Electrical and Electronics Engineering | 22 | | | **22** |
| 14.1101 | Engineering Mechanics | 40 | | | **40** |
| 14.1901 | Mechanical Engineering | | 9 | | **9** |
| 14.2701 | Systems Engineering | 45 | | | **45** |
| 14.3501 | Industrial Engineering | 17 | 1 | | **18** |
| 14.9999 | Engineering, Other | | 3 | | **3** |
| | **TOTAL** | **223** | **52** | **0** | **275** |

| | Master's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **15.0** | **Engineering Technologies and Engineering-Related Fields** | | | | |
| 15 | Engineering Technologies And Engineering-Related Fields | | | 1 | **1** |
| 15.0303 | Electrical, Electronic and Communications Engineering Technology/Technician | | | 1 | **1** |
| 15.0612 | Industrial Technology/Technician | | | 5 | **5** |
| 15.1501 | Engineering/Industrial Management | 1 | | | **1** |
| | **TOTAL** | **1** | **0** | **7** | **8** |
| **16.0** | **Foreign Languages, Literatures, and Linguistics** | | | | |
| 16.0102 | Linguistics | | 6 | | **6** |
| 16.0103 | Language Interpretation and Translation | | 2 | | **2** |
| 16.0501 | German Language and Literature | | | 2 | **2** |
| 16.0901 | French Language and Literature | | | 6 | **6** |
| 16.0905 | Spanish Language and Literature | | 9 | 9 | **18** |
| 16.12 | Classics and Classical Languages, Literatures, and Linguistics | | 2 | | **2** |
| | **TOTAL** | **0** | **19** | **17** | **36** |
| **19.0** | **Family and Consumer Sciences/Human Sciences** | | | | |
| 19.0101 | Family and Consumer Sciences/Human Sciences, General | 10 | | | **10** |
| 19.0504 | Human Nutrition | 4 | | | **4** |
| 19.0701 | Human Development and Family Studies, General | 4 | | | **4** |
| 19.0901 | Apparel and Textiles, General | 6 | | | **6** |
| | **TOTAL** | **24** | **0** | **0** | **24** |
| **22.0** | **Legal Professions and Studies** | | | | |
| 22.0201 | Advanced Legal Research/Studies, General | | 4 | | **4** |
| | **TOTAL** | **0** | **4** | **0** | **4** |
| **23.0** | **English Language and Literature/Letters** | | | | |
| 23.0101 | English Language and Literature, General | 4 | 8 | 18 | **30** |
| 23.1302 | Creative Writing | 14 | 60 | | **74** |
| 23.1304 | Rhetoric and Composition | 10 | | | **10** |
| 23.9999 | English Language and Literature/Letters, Other | | 11 | | **11** |
| | **TOTAL** | **28** | **79** | **18** | **125** |
| **25.0** | **Library Science** | | | | |
| 25.0101 | Library and Information Science | | 23 | 12 | **35** |
| | **TOTAL** | **0** | **23** | **12** | **35** |
| **26.0** | **Biological and Biomedical Sciences** | | | | |
| 26.0101 | Biology/Biological Sciences, General | | 1 | 7 | **8** |
| 26.0102 | Biomedical Sciences, General | 16 | | | **16** |
| 26.0202 | Biochemistry | 1 | | | **1** |
| 26.0305 | Plant Pathology/Phytopathology | 3 | | | **3** |
| 26.0307 | Plant Physiology | 2 | | | **2** |
| 26.0406 | Cell/Cellular and Molecular Biology | 1 | | | **1** |
| 26.0407 | Cell Biology and Anatomy | | 2 | | **2** |
| 26.0502 | Microbiology, General | 1 | 1 | | **2** |
| 26.0507 | Immunology | 2 | | | **2** |

| | Master's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 26.0702 | Entomology | 3 | | | **3** |
| 26.0707 | Animal Physiology | 2 | | | **2** |
| 26.0801 | Genetics, General | 4 | | | **4** |
| 26.1004 | Toxicology | 2 | 1 | | **3** |
| 26.1102 | Biostatistics | | 8 | | **8** |
| 26.1201 | Biotechnology | | | 4 | **4** |
| 26.1309 | Epidemiology | | 7 | | **7** |
| 26.131 | Ecology and Evolutionary Biology | 2 | | | **2** |
| | **TOTAL** | **39** | **20** | **11** | **70** |
| **27.0** | **Mathematics and Statistics** | | | | |
| 27.0101 | Mathematics, General | 3 | 35 | 16 | **54** |
| 27.0301 | Applied Mathematics, General | 6 | | | **6** |
| 27.0399 | Applied Mathematics, Other | | | 5 | **5** |
| 27.0501 | Statistics, General | 18 | 14 | | **32** |
| | **TOTAL** | **27** | **49** | **21** | **97** |
| **30.0** | **Multi/Interdisciplinary Studies** | | | | |
| 30.0101 | Biological and Physical Sciences | | | 11 | **11** |
| 30.1901 | Nutrition Sciences | 5 | | | **5** |
| 30.2001 | International/Global Studies | | 2 | | **2** |
| 30.3101 | Human Computer Interaction | 11 | | | **11** |
| 30.9999 | Multi-/Interdisciplinary Studies, Other | 9 | 6 | | **15** |
| | **TOTAL** | **25** | **8** | **11** | **44** |
| **31.0** | **Parks, Recreation, Leisure, and Fitness Studies** | | | | |
| 31.0101 | Parks, Recreation and Leisure Studies | | 11 | 11 | **22** |
| 31.0501 | Health and Physical Education/Fitness, General | | | 11 | **11** |
| 31.0505 | Kinesiology and Exercise Science | 3 | 6 | 6 | **15** |
| 31.0599 | Health and Physical Education/Fitness, Other | | 1 | | **1** |
| | **TOTAL** | **3** | **18** | **28** | **49** |
| **38.0** | **Philosophy and Religious Studies** | | | | |
| 38.0101 | Philosophy | | 3 | | **3** |
| 38.0201 | Religion/Religious Studies | | 5 | | **5** |
| | **TOTAL** | **0** | **8** | **0** | **8** |
| **40.0** | **Physical Sciences** | | | | |
| 40.0201 | Astronomy | | 1 | | **1** |
| 40.0404 | Meteorology | 6 | | | **6** |
| 40.0501 | Chemistry, General | | 10 | 1 | **11** |
| 40.0504 | Organic Chemistry | 2 | | | **2** |
| 40.0506 | Physical Chemistry | 1 | | | **1** |
| 40.0601 | Geology/Earth Science, General | 5 | 11 | | **16** |
| 40.0801 | Physics, General | | 4 | | **4** |
| 40.0806 | Nuclear Physics | 1 | | | **1** |
| 40.0808 | Condensed Matter and Materials Physics | 2 | | | **2** |
| 40.0899 | Physics, Other | | | 3 | **3** |
| | **TOTAL** | **17** | **26** | **4** | **47** |

| | Master's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **42.0** | **Psychology** | | | | |
| 42.0101 | Psychology, General | 4 | 13 | 3 | **20** |
| 42.2801 | Clinical Psychology | | | 5 | **5** |
| 42.2803 | Counseling Psychology | | | 6 | **6** |
| 42.2805 | School Psychology | | 5 | 8 | **13** |
| 42.2806 | Educational Psychology | | 4 | 9 | **13** |
| | **TOTAL** | **4** | **22** | **31** | **57** |
| **44.0** | **Public Administration and Social Service Professions** | | | | |
| 44.0401 | Public Administration | 9 | | | **9** |
| 44.0501 | Public Policy Analysis, General | | | 11 | **11** |
| 44.0701 | Social Work | | 93 | 37 | **130** |
| | **TOTAL** | **9** | **93** | **48** | **150** |
| **45.0** | **Social Sciences** | | | | |
| 45.0201 | Anthropology | 3 | 3 | | **6** |
| 45.0401 | Criminology | | | 1 | **1** |
| 45.0601 | Economics, General | 4 | 6 | | **10** |
| 45.0701 | Geography | | 3 | 3 | **6** |
| 45.1001 | Political Science and Government, General | 6 | 9 | | **15** |
| 45.1101 | Sociology | 10 | 4 | 1 | **15** |
| | **TOTAL** | **23** | **25** | **5** | **53** |
| **50.0** | **Visual and Performing Arts** | | | | |
| 50.0101 | Visual and Performing Arts, General | 3 | | | **3** |
| 50.0301 | Dance, General | | 5 | | **5** |
| 50.0408 | Interior Design | 5 | | | **5** |
| 50.0409 | Graphic Design | 16 | | | **16** |
| 50.0501 | Drama and Dramatics/Theatre Arts, General | | 10 | | **10** |
| 50.0601 | Film/Cinema/Video Studies | | 1 | | **1** |
| 50.0602 | Cinematography and Film/Video Production | | 3 | | **3** |
| 50.0701 | Art/Art Studies, General | | 57 | | **57** |
| 50.0703 | Art History, Criticism and Conservation | | 2 | | **2** |
| 50.0901 | Music, General | | 23 | 1 | **24** |
| 50.0903 | Music Performance, General | | | 7 | **7** |
| 50.0904 | Music Theory and Composition | | | 1 | **1** |
| 50.0906 | Conducting | | | 1 | **1** |
| 50.0907 | Keyboard Instruments | | | 3 | **3** |
| | **TOTAL** | **24** | **101** | **13** | **138** |
| **51.0** | **Health Professions and Related Programs** | | | | |
| 51.0203 | Speech-Language Pathology/Pathologist | | | 40 | **40** |
| 51.0204 | Audiology/Audiologist and Speech-Language Pathology/Pathologist | | 35 | | **35** |
| 51.0504 | Dental Public Health and Education | | 3 | | **3** |
| 51.0507 | Oral/Maxillofacial Surgery | | | | |
| 51.0508 | Orthodontics/Orthodontology | | 5 | | **5** |
| 51.0599 | Advanced/Graduate Dentistry and Oral Sciences, Other | | 5 | | **5** |
| 51.0912 | Physician Assistant | | 25 | | **25** |

| | Master's Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 51.0913 | Athletic Training/Trainer | | | 5 | **5** |
| 51.1401 | Medical Scientist | | 3 | | **3** |
| 51.2003 | Pharmaceutics and Drug Design | | 1 | | **1** |
| 51.2007 | Pharmacoeconomics/Pharmaceutical Economics | | 2 | | **2** |
| 51.2099 | Pharmacy, Pharmaceutical Sciences, and Administration, Other | | 2 | | **2** |
| 51.2201 | Public Health, General | | 50 | | **50** |
| 51.2202 | Environmental Health | | 3 | 1 | **4** |
| 51.2208 | Community Health and Preventive Medicine | | | 8 | **8** |
| 51.2211 | Health Services Administration | | 25 | | **25** |
| 51.2399 | Rehabilitation and Therapeutic Professions, Other | | 13 | | **13** |
| 51.2501 | Veterinary Sciences/Veterinary Clinical Sciences, General | 1 | | | **1** |
| 51.2504 | Veterinary Microbiology and Immunobiology | 4 | | | **4** |
| 51.251 | Veterinary Preventive Medicine, Epidemiology, and Public Health | 6 | | | **6** |
| 51.3802 | Nursing Administration | | 2 | | **2** |
| 51.3803 | Adult Health Nurse/Nursing | | 1 | | **1** |
| 51.3808 | Nursing Science | | 11 | | **11** |
| 51.3809 | Pediatric Nurse/Nursing | | 1 | | **1** |
| 51.382 | Clinical Nurse Leader | | 4 | | **4** |
| 51.9999 | Health Professions and Related Clinical Sciences, Other | | 11 | | **11** |
| | **TOTAL** | **11** | **202** | **54** | **267** |
| **52.0** | **Business, Management, Marketing, and Related Support Services** | | | | |
| 52.0201 | Business Administration and Management, General | 55 | 397 | 36 | **488** |
| 52.0206 | Non-Profit/Public/Organizational Management | | | 13 | **13** |
| 52.0209 | Transportation/Mobility Management | 1 | | | **1** |
| 52.0301 | Accounting | 26 | 37 | 18 | **81** |
| 52.0901 | Hospitality Administration/Management, General | 5 | | | **5** |
| 52.1304 | Actuarial Science | | 20 | | **20** |
| | **TOTAL** | **87** | **454** | **67** | **608** |
| **54.0** | **History** | | | | |
| 54.0101 | History, General | 6 | 8 | 11 | **25** |
| | **TOTAL** | **6** | **8** | **11** | **25** |
| **99** | **GRAND TOTAL** | **837** | **1,375** | **520** | **2,732** |

Note: Degree awards reported above represent "first majors" only.
Source: IPEDS, 2016.

## 2013-14 DOCTORAL/PROFESSIONAL DEGREE AWARDS BY REGENT INSTITUTIONS

| | Doctoral/Professional Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| **1.0** | **Agriculture, Agriculture Operations, and Related Sciences** | | | | |
| 1.0304 | Crop Production | 3 | | | **3** |
| 1.0308 | Agroecology and Sustainable Agriculture | 1 | | | **1** |
| 1.0901 | Animal Sciences, General | 2 | | | **2** |
| 1.0902 | Agricultural Animal Breeding | 2 | | | **2** |
| 1.0906 | Livestock Management | 2 | | | **2** |
| 1.1001 | Food Science | 3 | | | **3** |
| 1.1103 | Horticultural Science | 2 | | | **2** |
| 1.1104 | Agricultural and Horticultural Plant Breeding | 1 | | | **1** |
| | **TOTAL** | **16** | **0** | **0** | **16** |
| **3.0** | **Natural Resources and Conservation** | | | | |
| 3.0104 | Environmental Science | 1 | | | **1** |
| | **TOTAL** | **1** | **0** | **0** | **1** |
| **5.0** | **Area, Ethnic, Cultural, Gender, and Group Studies** | | | | |
| 5.0102 | American/United States Studies/Civilization | | 7 | | **7** |
| | **TOTAL** | **0** | **7** | **0** | **7** |
| **9.0** | **Communication, Journalism, and Related Programs** | | | | |
| 9.0101 | Speech Communication and Rhetoric | | 8 | | **8** |
| 9.0401 | Journalism | | 5 | | **5** |
| | **TOTAL** | **0** | **13** | **0** | **13** |
| **11.0** | **Computer and Information Sciences and Support Services** | | | | |
| 11.0101 | Computer and Information Sciences, General | | 2 | | **2** |
| 11.0104 | Informatics | | 1 | | **1** |
| 11.0701 | Computer Science | 12 | | | **12** |
| | **TOTAL** | **12** | **3** | **0** | **15** |
| **13.0** | **Education** | | | | |
| 13.0101 | Education, General | 6 | | 1 | **7** |
| 13.0301 | Curriculum and Instruction | | | 1 | **1** |
| 13.0401 | Educational Leadership and Administration, General | 25 | | 8 | **33** |
| 13.0406 | Higher Education/Higher Education Administration | | 7 | | **7** |
| 13.0411 | Superintendency and Educational System Administration | | 3 | | **3** |
| 13.0604 | Educational Assessment, Testing, and Measurement | | 3 | | **3** |
| 13.0901 | Social and Philosophical Foundations of Education | | 1 | | **1** |
| 13.1001 | Special Education and Teaching, General | | 2 | | **2** |
| 13.1101 | Counselor Education/School Counseling and Guidance Services | | 4 | | **4** |
| 13.1102 | College Student Counseling and Personnel Services | | 1 | | **1** |
| 13.1206 | Teacher Education, Multiple Levels | | 3 | | **3** |
| 13.1301 | Agricultural Teacher Education | 1 | | | **1** |
| 13.1302 | Art Teacher Education | | 1 | | **1** |
| 13.1308 | Family and Consumer Sciences/Home Economics Teacher Education | 2 | | | **2** |
| 13.1316 | Science Teacher Education/General Science Teacher Education | | 5 | | **5** |

| | Doctoral/Professional Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 13.1401 | Teaching English as a Second or Foreign Language/ESL Language Instructor | 4 | | | **4** |
| | **TOTAL** | **38** | **30** | **10** | **78** |
| **14.0** | **Engineering** | | | | |
| 14.0101 | Engineering, General | | 5 | | **5** |
| 14.0301 | Agricultural Engineering | 6 | | | **6** |
| 14.0501 | Bioengineering and Biomedical Engineering | | 7 | | **7** |
| 14.0701 | Chemical Engineering | 12 | 2 | | **14** |
| 14.0801 | Civil Engineering, General | 10 | 6 | | **16** |
| 14.0901 | Computer Engineering, General | 5 | 7 | | **12** |
| 14.1001 | Electrical and Electronics Engineering | 20 | | | **20** |
| 14.1101 | Engineering Mechanics | 31 | | | **31** |
| 14.1901 | Mechanical Engineering | | 7 | | **7** |
| 14.3501 | Industrial Engineering | 8 | 4 | | **12** |
| | **TOTAL** | **92** | **38** | **0** | **130** |
| **15.0** | **Engineering Technologies and Engineering-Related Fields** | | | | |
| 15.0612 | Industrial Technology/Technician | | | 6 | **6** |
| | **TOTAL** | **0** | **0** | **6** | **6** |
| **16.0** | **Foreign Languages, Literatures, and Linguistics** | | | | |
| 16.0102 | Linguistics | | 1 | | **1** |
| 16.0199 | Linguistic, Comparative, and Related Language Studies and Services, Other | | 3 | | **3** |
| 16.0905 | Spanish Language and Literature | | 3 | | **3** |
| 16.12 | Classics and Classical Languages, Literatures, and Linguistics | | 1 | | **1** |
| | **TOTAL** | **0** | **8** | **0** | **8** |
| **19.0** | **Family and Consumer Sciences/Human Sciences** | | | | |
| 19.0504 | Human Nutrition | 2 | | | **2** |
| 19.0701 | Human Development and Family Studies, General | 7 | | | **7** |
| 19.0901 | Apparel and Textiles, General | 5 | | | **5** |
| | **TOTAL** | **14** | **0** | **0** | **14** |
| **22.0** | **Legal Professions and Studies** | | | | |
| 22.0101 | Law | | 180 | | **180** |
| | **TOTAL** | **0** | **180** | **0** | **180** |
| **23.0** | **English Language and Literature/Letters** | | | | |
| 23.0101 | English Language and Literature, General | | 10 | | **10** |
| 23.1303 | Professional, Technical, Business, and Scientific Writing | 2 | | | **2** |
| | **TOTAL** | **2** | **10** | **0** | **12** |
| **26.0** | **Biological and Biomedical Sciences** | | | | |
| 26.0101 | Biology/Biological Sciences, General | | 7 | | **7** |
| 26.0102 | Biomedical Sciences, General | 2 | | | **2** |
| 26.0202 | Biochemistry | 5 | 1 | | **6** |
| 26.0203 | Biophysics | 1 | | | **1** |
| 26.0204 | Molecular Biology | | 13 | | **13** |
| 26.0209 | Radiation Biology/Radiobiology | | 4 | | **4** |

| | Doctoral/Professional Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 26.0305 | Plant Pathology/Phytopathology | 2 | | | **2** |
| 26.0307 | Plant Physiology | 1 | | | **1** |
| 26.0406 | Cell/Cellular and Molecular Biology | 6 | | | **6** |
| 26.0407 | Cell Biology and Anatomy | | 3 | | **3** |
| 26.0502 | Microbiology, General | 1 | 7 | | **8** |
| 26.0507 | Immunology | 3 | 10 | | **13** |
| 26.0702 | Entomology | 2 | | | **2** |
| 26.0707 | Animal Physiology | 1 | | | **1** |
| 26.0801 | Genetics, General | 16 | 9 | | **25** |
| 26.0901 | Physiology, General | | 3 | | **3** |
| 26.1001 | Pharmacology | | 4 | | **4** |
| 26.1004 | Toxicology | 3 | 6 | | **9** |
| 26.1102 | Biostatistics | | 3 | | **3** |
| 26.1103 | Bioinformatics | 7 | | | **7** |
| 26.1201 | Biotechnology | 1 | | | **1** |
| 26.1309 | Epidemiology | | 3 | | **3** |
| 26.131 | Ecology and Evolutionary Biology | 7 | | | **7** |
| 26.1501 | Neuroscience | 1 | | | **1** |
| 26.1503 | Neurobiology and Anatomy | | 4 | | **4** |
| | **TOTAL** | **59** | **77** | **0** | **136** |
| **27.0** | **Mathematics and Statistics** | | | | |
| 27.0101 | Mathematics, General | 4 | 9 | | **13** |
| 27.0301 | Applied Mathematics, General | 8 | 5 | | **13** |
| 27.0501 | Statistics, General | 24 | 1 | | **25** |
| | **TOTAL** | **36** | **15** | **0** | **51** |
| **30.0** | **Multi/Interdisciplinary Studies** | | | | |
| 30.3101 | Human Computer Interaction | 3 | | | **3** |
| 30.9999 | Multi-/Interdisciplinary Studies, Other | | 1 | | **1** |
| | **TOTAL** | **3** | **1** | **0** | **4** |
| **31.0** | **Parks, Recreation, Leisure, and Fitness Studies** | | | | |
| 31.0101 | Parks, Recreation and Leisure Studies | | | 4 | **4** |
| 31.0505 | Kinesiology and Exercise Science | 3 | | | **3** |
| 31.0599 | Health and Physical Education/Fitness, Other | | 1 | | **1** |
| | **TOTAL** | **3** | **1** | **4** | **8** |
| **38.0** | **Philosophy and Religious Studies** | | | | |
| 38.0101 | Philosophy | | 2 | | **2** |
| 38.0201 | Religion/Religious Studies | | 1 | | **1** |
| | **TOTAL** | **0** | **3** | **0** | **3** |
| **40.0** | **Physical Sciences** | | | | |
| 40.0404 | Meteorology | 1 | | | **1** |
| 40.0501 | Chemistry, General | 5 | 20 | | **25** |
| 40.0502 | Analytical Chemistry | 6 | | | **6** |
| 40.0503 | Inorganic Chemistry | | | | **0** |
| 40.0504 | Organic Chemistry | 8 | | | **8** |

| | Doctoral/Professional Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 40.0506 | Physical Chemistry | 3 | | | **3** |
| 40.0601 | Geology/Earth Science, General | | 4 | | **4** |
| 40.0801 | Physics, General | 1 | 8 | | **9** |
| 40.0806 | Nuclear Physics | 3 | | | **3** |
| 40.0808 | Condensed Matter and Materials Physics | 5 | | | **5** |
| | **TOTAL** | **32** | **32** | **0** | **64** |
| **42.0** | **Psychology** | | | | |
| 42.0101 | Psychology, General | 8 | 7 | | **15** |
| 42.2803 | Counseling Psychology | | 7 | | **7** |
| 42.2805 | School Psychology | | 2 | | **2** |
| | **TOTAL** | **8** | **16** | **0** | **24** |
| **44.0** | **Public Administration and Social Service Professions** | | | | |
| 44.0701 | Social Work | | 2 | | **2** |
| | **TOTAL** | **0** | **2** | **0** | **2** |
| **45.0** | **Social Sciences** | | | | |
| 45.0201 | Anthropology | | 4 | | **4** |
| 45.0601 | Economics, General | 8 | 4 | | **12** |
| 45.0701 | Geography | | 4 | | **4** |
| 45.1001 | Political Science and Government, General | | 5 | | **5** |
| 45.1101 | Sociology | 5 | 7 | | **12** |
| | **TOTAL** | **13** | **24** | **0** | **37** |
| **50.0** | **Visual and Performing Arts** | | | | |
| 50.0601 | Film/Cinema/Video Studies | | 3 | | **3** |
| 50.0703 | Art History, Criticism and Conservation | | 3 | | **3** |
| 50.0901 | Music, General | | 21 | | **21** |
| | **TOTAL** | **0** | **27** | **0** | **27** |
| **51.0** | **Health Professions and Related Programs** | | | | |
| 51.0204 | Audiology/Audiologist and Speech-Language Pathology/Pathologist | | 16 | | **16** |
| 51.0401 | Dentistry | | 75 | | **75** |
| 51.1201 | Medicine | | 148 | | **148** |
| 51.1401 | Medical Scientist | | 1 | | **1** |
| 51.2001 | Pharmacy | | 107 | | **107** |
| 51.2003 | Pharmaceutics and Drug Design | | 4 | | **4** |
| 51.2004 | Medicinal and Pharmaceutical Chemistry | | 3 | | **3** |
| 51.2007 | Pharmacoeconomics/Pharmaceutical Economics | | 4 | | **4** |
| 51.2099 | Pharmacy, Pharmaceutical Sciences, and Administration, Other | | 8 | | **8** |
| 51.2202 | Environmental Health | | 3 | | **3** |
| 51.2208 | Community Health and Preventive Medicine | | 1 | | **1** |
| 51.2211 | Health Services Administration | | 2 | | **2** |
| 51.2308 | Physical Therapy/Therapist | | 38 | | **38** |
| 51.231 | Vocational Rehabilitation Counseling/Counselor | | 4 | | **4** |
| 51.2401 | Veterinary Medicine | 147 | | | **147** |
| 51.2504 | Veterinary Microbiology and Immunobiology | 5 | | | **5** |

| | Doctoral/Professional Degree Awards | | | | |
|---|---|---|---|---|---|
| | | Iowa State University | University of Iowa | University of Northern Iowa | Total |
| 51.3803 | Adult Health Nurse/Nursing | | 8 | | **8** |
| 51.3804 | Nurse Anesthetist | | 12 | | **12** |
| 51.3805 | Family Practice Nurse/Nursing | | 15 | | **15** |
| 51.3808 | Nursing Science | | 8 | | **8** |
| 51.3809 | Pediatric Nurse/Nursing | | 10 | | **10** |
| 51.381 | Psychiatric/Mental Health Nurse/Nursing | | 7 | | **7** |
| 51.3818 | Nursing Practice | | 21 | | **21** |
| | **TOTAL** | **152** | **495** | **0** | **647** |
| **52.0** | **Business, Management, Marketing, and Related Support Services** | | | | |
| 52.0201 | Business Administration and Management, General | 7 | 6 | | **13** |
| 52.0901 | Hospitality Administration/Management, General | 5 | | | **5** |
| 52.1399 | Management Sciences and Quantitative Methods, Other | | 1 | | **1** |
| | **TOTAL** | **12** | **7** | **0** | **19** |
| **54.0** | **History** | | | | |
| 54.0101 | History, General | 1 | 11 | | **12** |
| | **TOTAL** | **1** | **11** | **0** | **12** |
| **99** | **GRAND TOTAL** | **494** | **1,000** | **20** | **1,514** |

Note: Degree awards reported above represent "first majors" only.
Source: IPEDS, 2016.

2013-14 DEGREES AWARDED BY PROGRAM AND LEVEL
PRIVATE INSTITUTIONS OPERATING IN THE DES MOINES REGION

| | | Bachelor's | Master's | Doctoral or Professional | Grand Total |
|---|---|---|---|---|---|
| **3.0** | **Natural Resources and Conservation** | | | | |
| 3.0103 | Environmental Studies | 5 | 1 | | **6** |
| 3.0104 | Environmental Science | 20 | | | **20** |
| | **TOTAL** | **25** | **1** | **0** | **26** |
| **9.0** | **Communication, Journalism, and Related Programs** | | | | |
| 9.0100 | Communication and Media Studies | 14 | | | **14** |
| 9.0102 | Mass Communication/Media Studies | 2 | | | **2** |
| 9.0199 | Communication and Media Studies, Other | | 6 | | **6** |
| 9.0401 | Journalism | 1 | | | **1** |
| 9.0402 | Broadcast Journalism | 12 | | | **12** |
| 9.0499 | Journalism, Other | 29 | | | **29** |
| 9.0701 | Radio and Television | 8 | | | **8** |
| 9.0902 | Public Relations/Image Management | 32 | | | **32** |
| 9.0903 | Advertising | 17 | | | **17** |
| | **TOTAL** | **115** | **6** | **0** | **121** |
| **10.0** | **Communications Technologies/Technicians and Support Services** | | | | |
| 10.0301 | Graphic Communications, General | 2 | | | **2** |
| | **TOTAL** | **2** | **0** | **0** | **2** |
| **11.0** | **Computer and Information Sciences and Support Services** | | | | |
| 11.0101 | Computer and Information Sciences, General | 21 | | | **21** |
| 11.0103 | Information Technology | 24 | 2 | | **26** |
| 11.0201 | Computer Programming/Programmer, General | 1 | | | **1** |
| 11.0701 | Computer Science | 34 | | | **34** |
| 11.0899 | Computer Software and Media Applications, Other | 1 | | | **1** |
| 11.1003 | Computer and Information Systems Security/Information Assurance | 8 | | | **8** |
| | **TOTAL** | **89** | **2** | **0** | **91** |
| **13.0** | **Education** | | | | |
| 13.0301 | Curriculum and Instruction | | 25 | | **25** |
| 13.0401 | Educational Leadership and Administration, General | | 38 | 10 | **48** |
| 13.1005 | Education/Teaching of Individuals with Emotional Disturbances | | 4 | | **4** |
| 13.1011 | Education/Teaching of Individuals with Specific Learning Disabilities | | 5 | | **5** |
| 13.1101 | Counselor Education/School Counseling and Guidance Services | | 30 | | **30** |
| 13.1201 | Adult and Continuing Education and Teaching | | 17 | | **17** |
| 13.1202 | Elementary Education and Teaching | 103 | 15 | | **118** |
| 13.1205 | Secondary Education and Teaching | 41 | 23 | | **64** |
| 13.1206 | Teacher Education, Multiple Levels | | 9 | | **9** |
| 13.1302 | Art Teacher Education | 3 | | | **3** |
| 13.1305 | English/Language Arts Teacher Education | 1 | | | **1** |
| 13.1311 | Mathematics Teacher Education | 5 | | | **5** |
| 13.1312 | Music Teacher Education | 16 | | | **16** |
| 13.1314 | Physical Education Teaching and Coaching | 7 | | | **7** |

| | | Bachelor's | Master's | Doctoral or Professional | Grand Total |
|---|---|---|---|---|---|
| 13.1399 | Teacher Education and Professional Development, Specific Subject Areas, Other | | 10 | | **10** |
| | **TOTAL** | **176** | **176** | **10** | **362** |
| **16.0** | **Foreign Languages, Literatures, and Linguistics** | | | | |
| 16.0905 | Spanish Language and Literature | 5 | | | **5** |
| | **TOTAL** | **5** | **0** | **0** | **5** |
| **22.0** | **Legal Professions and Studies** | | | | |
| 22.0000 | Legal Professions and Studies | | 1 | | **1** |
| 22.0101 | Law | | | 131 | **131** |
| 22.0302 | Legal Assistant/Paralegal | 4 | | | **4** |
| 22.0303 | Court Reporting/Court Reporter | 5 | | | **5** |
| 22.9999 | Legal Professions and Studies, Other | 23 | | | **23** |
| | **TOTAL** | **32** | **1** | **131** | **164** |
| **23.0** | **English Language and Literature/Letters** | | | | |
| 23.0101 | English Language and Literature, General | 38 | | | **38** |
| 23.1301 | Writing, General | 24 | | | **24** |
| 23.1304 | Rhetoric and Composition | 3 | | | **3** |
| | **TOTAL** | **65** | **0** | **0** | **65** |
| **24.0** | **Liberal Arts and Sciences, General Studies and Humanities** | | | | |
| 24.0101 | Liberal Arts and Sciences/Liberal Studies | 31 | | | **31** |
| | **TOTAL** | **31** | **0** | **0** | **31** |
| **26.0** | **Biological and Biomedical Sciences** | | | | |
| 26.0101 | Biology/Biological Sciences, General | 67 | | | **67** |
| 26.0102 | Biomedical Sciences, General | | 4 | | **4** |
| 26.0202 | Biochemistry | 5 | | | **5** |
| 26.0299 | Biochemistry, Biophysics and Molecular Biology, Other | 39 | | | **39** |
| 26.0403 | Anatomy | | 12 | | **12** |
| 26.1201 | Biotechnology | 2 | | | **2** |
| 26.1501 | Neuroscience | 3 | | | **3** |
| | **TOTAL** | **116** | **16** | **0** | **132** |
| **27.0** | **Mathematics and Statistics** | | | | |
| 27.0101 | Mathematics, General | 20 | | | **20** |
| 27.0301 | Applied Mathematics, General | 6 | | | **6** |
| | **TOTAL** | **26** | **0** | **0** | **26** |
| **30.0** | **Multi-/Interdisciplinary Studies** | | | | |
| 30.9999 | Multi-/Interdisciplinary Studies, Other | 2 | | | **2** |
| | **TOTAL** | **2** | **0** | **0** | **2** |
| **31.0** | **Parks, Recreation, Leisure, and Fitness Studies** | | | | |
| 31.0501 | Health and Physical Education/Fitness, General | 22 | | | **22** |
| 31.0504 | Sport and Fitness Administration/Management | 24 | | | **24** |
| 31.0505 | Kinesiology and Exercise Science | 13 | | | **13** |
| | **TOTAL** | **59** | **0** | **0** | **59** |
| **38.0** | **Philosophy and Religious Studies** | | | | |
| 38.0101 | Philosophy | 5 | | | **5** |
| 38.0103 | Ethics | 0 | | | **0** |
| 38.0201 | Religion/Religious Studies | 7 | 2 | | **9** |

| | | Bachelor's | Master's | Doctoral or Professional | Grand Total |
|---|---|---|---|---|---|
| | **TOTAL** | **12** | **2** | **0** | **14** |
| **39.0** | **Theology and Religious Vocations** | | | | |
| 39.0201 | Bible/Biblical Studies | 12 | 1 | | **13** |
| 39.0301 | Missions/Missionary Studies and Missiology | 2 | | | **2** |
| 39.0401 | Religious Education | 2 | | | **2** |
| 39.0602 | Divinity/Ministry | | 4 | | **4** |
| 39.0699 | Theological and Ministerial Studies, Other | 12 | 2 | | **14** |
| | **TOTAL** | **28** | **7** | **0** | **35** |
| **40.0** | **Physical Sciences** | | | | |
| 40.0201 | Astronomy | 1 | | | **1** |
| 40.0501 | Chemistry, General | 19 | | | **19** |
| 40.0801 | Physics, General | 6 | | | **6** |
| | **TOTAL** | **26** | **0** | **0** | **26** |
| **42.0** | **Psychology** | | | | |
| 42.0101 | Psychology, General | 71 | 3 | | **74** |
| | **TOTAL** | **71** | **3** | **0** | **74** |
| **43.0** | **Homeland Security, Law Enforcement, Firefighting and Related Protective Services** | | | | |
| 43.0103 | Criminal Justice/Law Enforcement Administration | 5 | | | **5** |
| 43.0104 | Criminal Justice/Safety Studies | 68 | 7 | | **75** |
| 43.0106 | Forensic Science and Technology | 3 | | | **3** |
| 43.0202 | Fire Services Administration | 1 | | | **1** |
| | **TOTAL** | **77** | **7** | **0** | **84** |
| **44.0** | **Public Administration and Social Service Professions** | | | | |
| 44.0000 | Public Administration and Social Service Professions | 41 | | | **41** |
| 44.0401 | Public Administration | | 62 | | **62** |
| | **TOTAL** | **41** | **62** | **0** | **103** |
| **45.0** | **Social Sciences** | | | | |
| 45.0299 | Anthropology, Other | 4 | | | **4** |
| 45.0601 | Economics, General | 11 | | | **11** |
| 45.0603 | Econometrics and Quantitative Economics | 3 | | | **3** |
| 45.0901 | International Relations and Affairs | 20 | | | **20** |
| 45.1001 | Political Science and Government, General | 26 | | | **26** |
| 45.1101 | Sociology | 25 | | | **25** |
| | **TOTAL** | **89** | **0** | **0** | **89** |
| **50.0** | **Visual and Performing Arts** | | | | |
| 50.0402 | Commercial and Advertising Art | 15 | | | **15** |
| 50.0409 | Graphic Design | 25 | | | **25** |
| 50.0501 | Drama and Dramatics/Theatre Arts, General | 15 | | | **15** |
| 50.0599 | Dramatic/Theatre Arts and Stagecraft, Other | 3 | | | **3** |
| 50.0605 | Photography | 2 | | | **2** |
| 50.0701 | Art/Art Studies, General | 2 | | | **2** |
| 50.0702 | Fine/Studio Arts, General | 2 | | | **2** |
| 50.0703 | Art History, Criticism and Conservation | 2 | | | **2** |
| 50.0705 | Drawing | 4 | | | **4** |
| 50.0708 | Painting | 1 | | | **1** |
| 50.0799 | Fine Arts and Art Studies, Other | 5 | | | **5** |

| | | Bachelor's | Master's | Doctoral or Professional | Grand Total |
|---|---|---|---|---|---|
| 50.0901 | Music, General | 11 | | | **11** |
| 50.0903 | Music Performance, General | 7 | | | **7** |
| 50.0908 | Voice and Opera | 5 | | | **5** |
| 50.0999 | Music, Other | 24 | | | **24** |
| | **TOTAL** | **123** | **0** | **0** | **123** |
| **51.0** | **Health Professions and Related Programs** | | | | |
| 51.0001 | Health and Wellness, General | 6 | | | **6** |
| 51.0701 | Health/Health Care Administration/Management | 21 | | | **21** |
| 51.0702 | Hospital and Health Care Facilities Administration/Management | | 42 | | **42** |
| 51.0912 | Physician Assistant | | 49 | | **49** |
| 51.0913 | Athletic Training/Trainer | 11 | | | **11** |
| 51.1102 | Pre-Medicine/Pre-Medical Studies | 11 | | | **11** |
| 51.1901 | Osteopathic Medicine/Osteopathy | | | 221 | **221** |
| 51.2001 | Pharmacy | | | 128 | **128** |
| 51.2099 | Pharmacy, Pharmaceutical Sciences, and Administration, Other | 50 | | | **50** |
| 51.2101 | Podiatric Medicine/Podiatry | | | 53 | **53** |
| 51.2201 | Public Health, General | | 52 | | **52** |
| 51.2308 | Physical Therapy/Therapist | | | 96 | **96** |
| 51.3199 | Dietetics and Clinical Nutrition Services, Other | 1 | | | **1** |
| 51.3801 | Registered Nursing/Registered Nurse | 145 | | | **145** |
| 51.3820 | Clinical Nurse Leader | | 5 | | **5** |
| | **TOTAL** | **245** | **148** | **498** | **891** |
| **52.0** | **Business, Management, Marketing, and Related Support Services** | | | | |
| 52.0101 | Business/Commerce, General | 81 | | | **81** |
| 52.0201 | Business Administration and Management, General | 162 | 104 | | **266** |
| 52.0211 | Project Management | 8 | | | **8** |
| 52.0213 | Organizational Leadership | | 13 | | **13** |
| 52.0301 | Accounting | 154 | 22 | | **176** |
| 52.0304 | Accounting and Finance | 9 | | | **9** |
| 52.0305 | Accounting and Business/Management | 2 | | | **2** |
| 52.0399 | Accounting and Related Services, Other | 37 | | | **37** |
| 52.0401 | Administrative Assistant and Secretarial Science, General | 5 | | | **5** |
| 52.0701 | Entrepreneurship/Entrepreneurial Studies | 9 | | | **9** |
| 52.0801 | Finance, General | 32 | | | **32** |
| 52.0899 | Finance and Financial Management Services, Other | | 8 | | **8** |
| 52.1001 | Human Resources Management/Personnel Administration, General | 11 | 1 | | **12** |
| 52.1101 | International Business/Trade/Commerce | 8 | | | **8** |
| 52.1201 | Management Information Systems, General | 5 | | | **5** |
| 52.1304 | Actuarial Science | 49 | | | **49** |
| 52.1401 | Marketing/Marketing Management, General | 74 | | | **74** |
| 52.1501 | Real Estate | 1 | | | **1** |
| 52.9999 | Business, Management, Marketing, and Related Support Services, Other | 4 | | | **4** |
| | **TOTAL** | **651** | **148** | **0** | **799** |

| | | Bachelor's | Master's | Doctoral or Professional | Grand Total |
|---|---|---|---|---|---|
| **54.0** | **History** | | | | |
| 54.0101 | History, General | 41 | | | **41** |
| | **TOTAL** | **41** | **0** | **0** | **41** |
| | **GRAND TOTAL** | **2,147** | **579** | **639** | **3,365** |

Note: Degree awards reported above represent "first majors" only.
Note: Not for Profit Providers include AIB College of Business, Des Moines University-Osteopathic Medical Center, Drake University, Faith Baptist Bible College and Theological Seminary, Grand View University, Mercy College of Health Sciences, Simpson College. For-Profit Providers include ITT Technical Institute-Clive, Kaplan University-Des Moines Campus, University of Phoenix-Iowa

Source: IPEDS, 2016.

# APPENDIX C: STAKEHOLDER LISTING

During a three-day site visit in February 2016 and over the course of the following weeks, the consulting team met individually and in groups, either in person or via telephone with a number of community stakeholders. These stakeholders included representatives from the various industry sectors of primary interest as well as community and educational leaders in the region.

## COMMUNITY LEADER/EMPLOYER REPRESENTATIVES

- Mary Andringa, Vermeer Corporation
- Todd Ashby, Des Moines Metropolitan Planning Agency
- Brian Barry, Telligen
- Kathy Bemisdarfer, American Equity
- Mary Bontrager, GDMP
- Ed Brown, The Iowa Clinic
- Ken Brown, Voya Financial
- Jay Byers, Greater Des Moines Partnership
- Marci Chickering, Wellmark Blue Cross Blue Shield
- Sarah Dodge, Siegwerk
- Mike Faley, GuideOne Insurance
- Becky Gibson, Wells Fargo
- Irving Hahn, QCI
- Greg Halford, Bridgestone
- Jeremy Hamp, Mercer
- Andrew Hansen, John Deere Des Moines Works
- Michael Helak, U.S. Bank
- Phil Hodgin, RDG Planning & Design
- Fred Hubbell, Retired
- Wendy Jensen, Nationwide
- Medha Johnson, American Enterprise
- Heather Kleis, Voya Financial
- Kristi Knous, Community Foundation of Greater Des Moines
- Jay Larsen, Nationwide
- Chris Littlefield, Fidelity & Guaranty Life
- Steve Martin, Emerson
- Scott Mavin, i2tech
- Jessica McCulloh, Wells Fargo
- Eugene Meyer, Greater Des Moines Partnership
- Gerard Neugent, Knapp Properties Inc.
- Rick Neumann, Nyemaster Goode P.C.
- Jim Niederhauser, Iowa Credit Union League Michael Patrick, DuPont Pioneer
- Aaron Pearce, Continental Western Group
- Don Pearson, Wells Fargo & Company
- Randy Pelham, Ruster Sports
- Nate Pritchard, John Deere ISG
- Suku Radia, Bankers Trust
- Scott Reddig, GuideOne Insurance
- Karen Rieck, FBL Financial Group Inc.
- Robert Riley, Feed Energy
- Bob Ritz, Mercy Medical Center – Des Moines
- Krista Robinson, The Weitz Company
- Darwin Rouw, Alliance Technologies
- Alissa Russelburg, Bridgestone
- Joe Sampson, Osmundson Manufacturing
- Gary Scholten, Principal Financial Group
- Scott Seeliger, Cognizant
- Mary Sellers, United Way of Central Iowa
- Grace Swanson, Accumold
- Andrew Swanson, Cognizant
- Rick Tollakson, Hubbell Realty Company
- Andrew Traeger, John Deere Financial
- Georgia Van Gundy, Principal Financial Group
- Liza Veren, Athene USA
- Jeremy Wille, Mercer
- Connie Wimer, Business Publications
- Geoff Wood, Gravitate
- Steve Zumbach, Belin McCormick P.C.

## EDUCATIONAL LEADERS

- Regent Sherry Bates, Board of Regents State of Iowa
- Regent Patty Cownie, Board of Regents State of Iowa
- Regent Katie Mulholland, Board of Regents State of Iowa
- Regent Dr. Subash Sahai, Board of Regents State of Iowa
- Dr. Bob Donley, Executive Director & CEO, Board of Regents State of Iowa
- Dr. Diana Gonzalez, Chief Academic Officer, Board of Regents State of Iowa
- Dr. William Ruud, President, University of Northern Iowa
- Dr. Barry Butler, Exec VP and Provost, The University of Iowa
- Dr. Jonathan Wickert, Senior VP & Provost, Iowa State University
- Dr. James Wohlpart, Provost and Exec VP for Academic Affairs, University of Northern Iowa
- Rob Denson, President Des Moines Area Community College
- Nancy Williams, President AIB College
- Angela Franklin, Des Moines University
- Tom Rice, University of Iowa, Faculty Director, Papajohn Educational Center
- MD Isley, Des Moines Area Community College
- Anne Sullivan, Des Moines Public Schools
- Dave Wilkerson, Waukee Community School District
- Denny Wulf, Norwalk School District
- Jason Pontius, Director of Institutional Research, Board of Regents State of Iowa
- Russell N. Laczniak, PhD, Interim Associate Dean for Graduate Programs & Research, College of Business, Iowa State University
- David K. Holger, Associate Provost for Academic Programs & Dean of the Graduate College, Iowa State University
- Gaylan Scofield, PhD, Director, Brenton Center for Agricultural Instruction and Technology Transfer, College of Agriculture & Life Sciences, AgOnline Distance Education, Iowa State University
- Lon Moeller, Associate Provost for Undergraduate Education &, Dean of the University College, The University of Iowa
- Anne Zalenski, Associate Dean, Distance Education and Outreach, Division of Continuing Education, The University of Iowa
- Crystal Stockdale, Director, Employer Engagement, Office of Career Services, The University of Iowa
- Jamie Cavey, Associate Director, Outcomes, Pomerantz Career Center, The University of Iowa
- Lynne Sebille-White, Senior Director, Career Advancement, Pomerantz Career Center, The University of Iowa
- Kent Johnson, Dean, Continuing and Distance Education, University of Northern Iowa
- Robert J. Frederick, Executive Director, Student Engagement & Outreach, Student Affairs, University of Northern Iowa
- Isabela Varela, Assistant Director, Career Readiness/Employability, Office of Career Services, University of Northern Iowa
- Matt Nuese, Office of Career Services, University of Northern Iowa

# APPENDIX D: SURVEY METHODOLOGY

Three separate online surveys were designed for the following stakeholder groups:

1. Local employers
2. High school counselors in the Des Moines area
3. DMACC students

The results of the surveys and interviews are provided in **Chapter 3**.

## EMPLOYER SURVEY

On February 24, 2016, the Greater Des Moines Partnership distributed the online survey to 197 of its members - representatives of local companies and organizations throughout the Des Moines region. Employers invited to participate represent a cross-section of business categories. The survey remained open until April 5, 2016, allowing employers nearly six weeks to complete the instrument. Multiple follow-up appeals for participation to the sample of employers yielded 32 completed surveys (a 16% response rate). The largest proportion described their industry as Finance, Insurance, and Real Estate (50%). Survey respondents were not required to provide their organization name, but most did. Those who identified themselves were as follows:

- Accumold
- Agri Drain Corp
- American Equity Investment Life Insurance Company
- Belin McCormick
- City of Ankeny
- Cognizant
- Des Moines Area Metropolitan Planning Organization
- FBL Financial Group, Inc./Farm Bureau Financial Services
- Firestone Agricultural Tire Plant
- Homesteaders Life Company
- Hubbell Realty Company
- Kabel Business Services
- Kemin Industries
- Kum & Go
- Mercy Medical Center - Des Moines
- Nationwide Insurance
- The Principal Financial Group
- UnityPoint Health - Des Moines
- Wellmark Blue Cross Blue Shield

## SCHOOL COUNSELOR SURVEY

On March 21, 2016, a survey was distributed to 35 school counselors in the Des Moines Metro Area. The survey remained open until April 1, 2016, allowing counselors two school weeks to complete the instrument. Multiple follow-up appeals for participation to the counselors yielded 20 completed surveys

(a 57% response rate). While surveys were sent to counselors at 10 different school districts, respondents came from four, including:

- Des Moines Independent Community School District
- Ankeny Community School District
- Bondurant-Farrar Community School District
- West Des Moines Community School District

Counselors were asked a variety of questions about the need for and barriers to higher education access among the students they serve.

## COMMUNITY COLLEGE SURVEY

On April 4, 2016, a survey was distributed to 1,050 students enrolled at Des Moines Area Community College (DMACC), approximately a 10% sample of currently enrolled students. Students invited to participate included those seeking academic transfer degrees and diplomas. The survey remained open until April 18, 2016, allowing students two weeks to complete the instrument. Multiple follow-up appeals for participation to the sample of students yielded 68 completed surveys (a 6.5% response rate).

Students were asked a variety of questions about their interest in pursuing further education, particularly in the Des Moines region, and the barriers to higher education access they experience.

# APPENDIX E: ADDITIONAL RESOURCES

A list of 11 selected higher education centers across the country which include multiple partner institutions to deliver programs is offered below as an informational resource to the reader.

Each of these Higher Education Centers (HEC) provide local access to public college or university programs and degrees. Many include multiple institutions offering both credit and continuing education programs and courses as well as student services. Several are dedicated to graduate programs and post-baccalaureate certificates only. Furthermore, there are a number of governance and administrative models represented in this list. We encourage readers to explore these sites and see what possibilities are available across the country.

1. University Center of Lake County (IL), http://www.ucenter.org/
2. Quad Cities Graduate Study Center (IL/IA), http://www.gradcenter.org/
3. Roanoke Higher Education Center (VA), http://www.education.edu/
4. Low Country Graduate Center (SC), https://lowcountrygraduatecenter.wordpress.com/
5. Southwest Virginia Higher Education Center (VA), http://www.swcenter.edu/
6. Auraria Higher Education Center (CO), http://www.ahec.edu/
7. University Center of North Puget Sound (WA), http://www.uceverett.org/
8. Macomb University Center (MI), http://www.macomb.edu/
9. The University Partnership at Loraine County Community College (OH), http://www.lorainccc.edu/UP/
10. ODU HEC's - Hampton Roads Region (VA), https://www.odu.edu/regionalcenters
    https://www.odu.edu/vabeach#
    https://www.odu.edu/peninsula
    https://www.odu.edu/tricities
11. The Universities at Shady Grove - Montgomery County (MD) http://www.shadygrove.umd.edu/

Additionally, we have provided a link to the University of Indiana-Purdue University Indianapolis, as several area community and business leaders interviewed during the needs assessment study mentioned this joint institution as an example of their vision for public higher education expansion in Des Moines.

1. IUPUI https://www.iupui.edu/