



# 2019 REGIONAL IMPACT STUDY





**11,000 +/-**  
Student enrollment

**78.7%**  
Full-time

**81.1%**  
Traditional age  
(24 years or younger)

**28.5%**  
Racial/ethnic minority

**15.1%**  
from out-of-state

**60%**  
are Pell-eligible and/or  
first-generation to college

104 majors and 46 minors  
at the certificate, associate  
and baccalaureate levels;  
three master's and  
one doctoral program

Third lowest tuition and fees  
among Colorado's four year  
public institutions



**\$78 million**  
financial aid awarded

**50%**  
of freshmen were awarded  
a scholarship



**1,957**  
degrees and certificates  
awarded in Academic Year  
2017-18

**Most popular majors:**

- Biological Sciences
- Business
- Computer Science
- Exercise Science
- Kinesiology
- Mass Communication
- Nursing
- Psychology
- Sport Management
- Teacher Education



**80%**  
of classes have fewer than  
40 students

**50%**  
of classes have fewer than  
20 students



**702**  
full-time faculty and staff

**90%**  
of students gave satisfactory  
responses to experiencing  
intellectual growth at CMU

**86%**  
of students indicate campus  
staff are caring and helpful  
and rate the quality of  
instruction as excellent



# REGIONAL IMPACT STUDY 2019

by **Carol Futhey**  
Provost, Colorado Mesa University

This publication is an update of the study, *Achieving a Higher Degree of Leadership in Western Colorado*, by Carol Futhey, Colorado Mesa University (then Mesa State College), Grand Junction, Colorado (2004). The original publication and the updates focusing on the institution's regional impact, are available online at [coloradomesa.edu/president/impactstudy](http://coloradomesa.edu/president/impactstudy).

### Acknowledgments

Appreciation is extended to the following individuals who contributed to this study: Blake Bickham, Katlin Birdsall, Laura Bradley, Annette Callaway, Sharaya Cowan, Tim Foster, Suzie Garner, Jeremy Hawkins, Jessica Herrick, Calvin Hofer, David Jahnke, Scott Kessler, Jill Knuckles, Mo LaMee, Barry Laga, Mike Mansheim, Curt Martin, Heather McKim, Carrie McVean, Breanne Meier, Jared Meier, Steve Norman, Kelly O'Connell, Lori Payne, Sylvia Rael, Andy Rodriguez, Bette Schans, Jeremy Smith, and Russ Walker. Special thanks to Lisa Smith for the report's design.

Introduction .....	4
Colorado Mesa University in 2018 .....	4
Regional Stewardship .....	6
Regional Economic Impact.....	12
Concluding Comments .....	15

800.982.6372 • 970.248.1020  
1100 North Avenue • Grand Junction, CO 81501-3122  
[coloradomesa.edu](http://coloradomesa.edu)

# INTRODUCTION

Between Fall 2006 and 2016, Colorado Mesa University (CMU) was the fifth fastest growing baccalaureate institution in the United States, with a 56.7% increase in student headcount.<sup>1</sup> While that rate of growth is remarkable, the institution's leadership and achievements go well beyond enrollment and a name change in 2011 from Mesa State College. The University's accomplishments extend to the region's surrounding communities and, in part, are the result of partnerships with government agencies, businesses, and individuals. Thus CMU's successes are tightly interwoven with the region's successes.

Following an overview of the University in 2018, this report describes Colorado Mesa University's contributions to western Colorado from two perspectives. The first is from its role as a regional steward that delivers excellent education as part of preparing a well-educated citizenry. Examples of the quality education that CMU students receive are highlighted here. The second is an examination of the significant contributions that the University makes to the regional economy.

## COLORADO MESA UNIVERSITY IN 2018

CMU has the distinction among Colorado's public four-year institutions of having the authority to award undergraduate and graduate degrees in addition to technical certificates. With this span of degree authority, the institution supports the widest range of credentials for students to pursue, with the focus primarily on educational delivery to 14 western Colorado counties (Figure 1). The institution's student demographics have changed throughout time, such that the University is characterized in its Fall 2018 census as:

- 78.7% full-time;
- 81.1% traditional age (24 years or younger);
- 53.8% female;
- 28.5% racial/ethnic minority;
- 15.1% out-of-state;
- 76.5% baccalaureate-seeking;
- 98.6% undergraduate; and
- 60% Pell-eligible and/or first-generation to college.

Finally, CMU awarded 1,957 degrees and certificates in Academic Year 2017-18, with the ten most popular majors being (in alphabetical order): Biological Sciences, Business, Computer Science, Exercise Science, Kinesiology, Mass Communication, Nursing, Psychology, Sport Management, and Teacher Education.

What is it, then, about CMU that has led to this rapid expansion during the past decade resulting in an enrollment of approximately 11,000 students on an annual basis? The answer lies in a plethora of University actions and accomplishments from across the institution that range from developing excellent academic programs to achieving student successes as



CMU awarded 1,957 degrees and certificates in Academic Year 2017-18.

part of its strong commitment to regional stewardship. The following highlights some of the achievements that have contributed to the University's success:

### 1. An over-riding focus on student success.

As the leading entry in the University's values statement reads, the institution's primary purpose is "high-quality education in a student-centered environment." Not surprisingly, the University found in a 2016 Student Satisfaction Inventory (SSI) of its students that:

- 88% of the respondents indicated that they are made to feel welcome on the campus<sup>2</sup>
- 86% expressed satisfaction in response to the statement: "It is an enjoyable experience to be a student on this campus."

<sup>1</sup> The Chronicle of Higher Education. (2018, August 19), *The Almanac of Higher Education 2018-1*. Accessed from <https://www.chronicle.com/article/Fastest-Growing-Colleges/244022?cid=cp216> on September 13, 2018

<sup>2</sup> Results are based on the 2016 administration of the Student Satisfaction Inventory. The 739 SSI respondents rated various criteria on a 7-point scale with 7 representing the highest level of satisfaction.

**2. A commitment to educational excellence.**

The University's faculty members deliver academically rigorous programs, primarily at the undergraduate level, that have a liberal education core for each of its associate and baccalaureate programs. This instruction prepares students for graduate study and/or career advancement. Student satisfaction with the programs, again, is summarized by the following from the 2016 inventory when:

- 90% of students rated the item: "I am able to experience intellectual growth here" with a satisfactory response.
- 87% responded positively to the item: "There is a commitment to academic excellence on this campus."

**3. Degree and program expansion.**

CMU's 104 programs of study span degree levels now ranging from a technical certificate to the clinical Doctor of Nursing Practice. Using curricular structures such as career ladders and the Bachelor of Applied Science that build on CMU's four- and two-year role and mission, the University has broadened pathways to degree completion. Further, by adopting a curricular model that integrates learning from a liberal education core with applied experiences in a major, CMU is preparing its graduates to be successful 21st century problem-solvers who can navigate the career changes that they will face in the workforce.

**4. Exceptional faculty and staff.** All full-time faculty meet regional accreditation credentialing requirements either by holding the terminal degree for the discipline – earned at prestigious graduate universities across the country – or having extensive education and/or professional experience in their teaching field. They are committed to exemplary undergraduate instruction and view students as active partners in learning. They are able to interact with them through class sizes that encourage student engagement, as nearly 80% of the University's class sections have enrollments of fewer than 40 students and half have less than 20 students. Further, academic and student support staff have a strong customer-service orientation, leading 86% of SSI

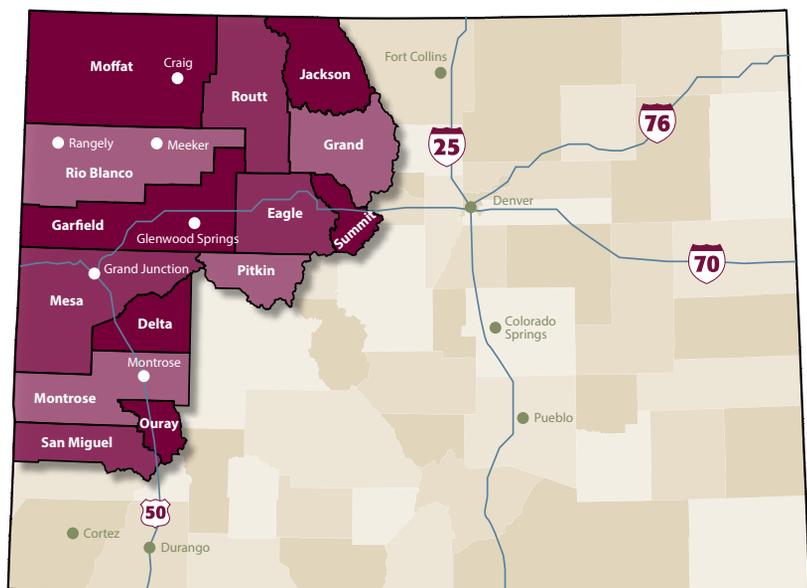
respondents to indicate that campus staff are caring and helpful. Meanwhile, 86% also positively rated that the quality of instruction they receive in most of their classes as excellent.

**5. Campus growth and technology enhancements.**

Since 2009, the University has invested approximately \$363 million in new and existing facilities, including technology upgrades. In addition to the remodel of Tomlinson Library, renovation of Houston Hall, construction of Escalante and Confluence Halls, and the development of a Forensics Investigation Research Station, CMU added a new University Center and built multiple residence halls.

**6. Educational affordability.** Higher education has historically been considered a common good, but changes in the philosophy at the state and federal levels over the past two decades on who should pay for that education has resulted in a shift to one where students are expected to bear a significantly greater share of their tuition. CMU prides itself in consistently having one of the lowest rates of undergraduate tuition and mandatory fees, ranking tenth out of the 12 Colorado four-year public institutions, and has refrained from implementing program-level tuition differentials so as not to discourage students from selecting majors that could have additional costs. To assist students, CMU awarded \$78 million in financial aid in Fiscal Year (FY) 2017-18, of which \$20.5 million went to first-time undergraduates.

**Figure 1: Map of Colorado Mesa University Service Region**



## REGIONAL STEWARDSHIP

Beyond the critical role it plays in an individual's success, education is important to the broader region, state, and the nation. The value of a specific level of college degree has been well-documented in many studies, such as that by the U.S. Bureau of Labor Statistics<sup>3</sup>, and reflects a decrease in unemployment and an increase in earnings as educational attainment rises.

Further, in a 2016 report, the College Board found that "...higher levels of education correspond to more access to health care and to retirement plans; more educated people are more likely to engage in healthy behaviors, to be active and engaged citizens, and to be in positions to provide better opportunities for their children."<sup>4</sup> While one can argue that college students forego earnings while enrolled in school, the College Board report also concluded that "...The median four-year college graduate who enrolls at age 18 and graduates in four years can expect to earn enough relative to the median high school graduate by age 34 to compensate for being out of the labor force for four years and for paying the full tuition and fees and books and supplies without any grant aid."<sup>5</sup>

Higher education institutions have played an essential role in the economic and social progress of communities across the United States through the education of its citizens. Regional public institutions, such as CMU, make contributions of equal value like their sister research universities and community colleges, but these institutions engage more extensively with their home region. This engagement, often summarized by the term regional stewardship, reflects a commitment to engage with representatives of the communities that support regional progress. As the following illustrates, CMU has been a strong regional steward solely as well as by engaging with others to help advance western Colorado through efforts that include:

- Increasing the percentage of citizens who have earned a college degree in collaboration with P-12 (especially at the high school level) to raise the college-going rate of western Coloradans. According to a legislative report by the Colorado Department of Higher Education<sup>6</sup>, the 2016 high school class (statewide) totaled 56,238 graduates, of which 55.8% enrolled in a postsecondary institution



CMU's College and Career Advisors Program expands counseling in four local public high schools and Montrose to help increase the college-going rate of high school graduates.

in Colorado or another state during the fall immediately following graduation. For Mesa County, the proportion was 50%.

Recognizing the economic and social consequences of the below average, local college-going rate, CMU began funding a College and Career Advisor Program in Fall 2017. The program placed a professional in each of the four local public high schools in Mesa County Valley School District 51 and one in Montrose in an attempt to expand counseling leading to improvements in the college-going rate.

- Expanding the availability of dual credit offerings that give high school students a head start on earning college credits while also reducing the cost to complete those courses.
- Providing periodic feedback to high schools on the performance of their graduates.
- Enhancing teacher preparation programs and delivering programs to strengthen the credentials of teachers in specific fields of study.

Further, CMU is:

- Supporting University faculty and staff members' commitments that address regional needs through community-based research, board service, volunteerism, and various other activities that contribute to the intellectual, social, cultural, and economic life of western Colorado.

<sup>3</sup> Elka Torpey. "Measuring the value of education." April 2018. *Career Outlook*, U.S. Bureau of Labor Statistics, Office of Employment Projections. Accessed from <https://www.bls.gov/careeroutlook/2018/data-on-display/education-pays.htm> on November 14, 2018.

<sup>4</sup> Jennifer Ma, Matea Pender, and Meredith Welch. *Education Pays 2016: The Benefits of Higher Education for Individuals and Society*. The College Board, page 7.

<sup>5</sup> Ibid, p. 3.

<sup>6</sup> Katie Zaback, Colorado Department of Higher Education. *2018 Legislative Report on the Postsecondary Progress and Success of High School Graduates*, pages 5, 33. Accessed from <https://higher.ed.colorado.gov/data/reports.aspx> on November 9, 2018.

- Implementing a mix of levels of academic and technical programs that support development of a talented workforce and well-educated citizenry. Additionally, communities across the region, regardless of size, need individuals prepared to support the business, education, and law enforcement sectors.
- Partnering with local businesses and organizations, in addition to the University of Colorado Boulder, to offer both internships for students as well as a pipeline of graduates for employers.
- Emphasizing the purchase of goods and services from western Colorado companies located across the 14 counties.

## Student Success as Part of Regional Stewardship

All of the aforementioned represents resources that CMU has committed to support student learning, often referred to as inputs to the educational process. These inputs, of course, do not take into account the knowledge and skills that students bring to their collegiate experience. But what about the outcomes from their educational experience? How successful are CMU students? What are some indicators of their undergraduate experience? While there is no agreement on a set of success criteria, this section offers some insights on the quality of CMU’s student learning.

### Success after Graduation

A common indicator of student success is the next step in a student’s career, usually employment, but through other choices such as enrollment in graduate school. Based on CMU’s Alumni Surveys, 90.6% of baccalaureate degree respondents were employed, with 76% in a position related to their undergraduate field of study. Additionally, 90.4% of the survey respondents indicated that they were adequately to well-prepared for their career. Examples of employers of CMU graduates, along with universities where alumni are pursuing a graduate degree, are listed in Tables 1 and 2.

### Student Learning Outcomes

According to the most recent national survey released by the Association of American Colleges and Universities<sup>7</sup>, eight out of ten employers place value on baccalaureate graduates who possess intellectual and practical skills and applied learning experiences in their chosen field of study. In particular, employers cited intellectual and practical skills (e.g., critical

**Table 1: Examples of Employers of Recent CMU Graduates**

Amazon.com	HopeWest Hospice	Rocky Mountain Public Broadcasting System
American Insurance Association	Innovative Green Technologies	Ruby Canyon Engineering
Breckenridge Backstage & StageDoor Theater	Kiewit Corporation	St. Mary’s Hospital
Bureau of Land Management	King Soopers Human Resources	Stoller Newport News Nuclear
Cascade County (MT) Deputy Attorney’s Office	KJCT, KKCO, and KREX	Teachers, administrative staff, & principals in school districts across Colorado
Charles Schwab Corporation	KPMG	Telluride Ski Resort
Chevron Corporation	Kroenke Sports & Entertainment	Teradata
Colorado Community Health Network	Land Title Guarantee Company	Thermo Fisher Scientific
Coors Distributing Company	Lockheed Martin Corporation	UMB Bank
Deloitte Touche Tohmatsu LLC	Montrose Regional Library	Utah Division of Wildlife Resources
Delta Chamber of Commerce	New Mexico Game and Fish Dept.	Verizon Wireless
Ernst & Young	NextStar Broadcasting Group	Video Media Yields
Fox 31 Denver	Northrop Grumman Corporation	Visa
Hewlett Packard Enterprise	Nuclear Care Partners	WestWater Engineering
Home Loan Insurance	ProStar	WPX Energy
	Raytheon Missile Systems	
	Reliance Oil Field Services	
	Rocky Mountain Health Plans	

<sup>7</sup> “From May 17 to June 1, 2018, Hart Research Associates conducted an online survey on behalf of the Association of American Colleges and Universities among 501 employers at companies that have at least 25 employees and report that 25% or more of their new hires hold either an associate’s degree from a two-year college or a bachelor’s degree from a four-year college.” Hart Research, on behalf of Association of American Colleges & Universities. *Fulfilling the American Dream: Liberal Education and the Future of Work: Selected Findings from Online Surveys of Business Executives and Hiring Managers*, Washington, DC, July 2018. Accessed from <https://www.aacu.org/research/2018-future-of-work> on October 10, 2018.

**Table 2. Examples of Universities Where Recent CMU Graduates Have Pursued Advanced Degrees**

Arizona State University
Boston University
Claremont Graduate School
Colorado School of Mines
Drexel University
Fordham University
George Washington University
Georgia Institute of Technology
Gonzaga University
Indiana University
Liberty University - College of Osteopathy
Marquette University
Mayo Clinic of Medicine
Montana State University
Pepperdine University - College of Law
Purdue University
Royal Academy of Dramatic Art
San Diego University
Savannah College of Art and Design
Southern Methodist University - College of Law
University of Cincinnati
University of Colorado
University of Colorado - Health Sciences Center
University of Denver - College of Law
University of Iowa
University of Kansas City - Medicine and Biomedical Center
University of Massachusetts
University of Minnesota
University of Montana
University of Oregon
University of Rochester
University of Tennessee - Health Sciences Center
University of Texas - Health Sciences Center
University of Utah
University of Wyoming
Villanova University

thinking, communication, analytic reasoning, and complex problem-solving), personal and social responsibility (e.g., ethical reasoning), and integrative and applied learning as priorities. These expectations have served as the foundation for CMU's four student learning outcomes (SLO) – what students should know and be able to do upon graduation – in addition to the knowledge in their major.

A survey of 606 CMU graduates responded that their CMU education had adequately to very well prepared them in the four SLO areas: to think critically (98.5%), to prepare a well-organized written and/or oral presentation (97.5%), to apply quantitative methods correctly (96.5%), and to apply the knowledge learned in their major through a hands-on research project (98.5%). A fifth SLO – ethical reasoning – is now being implemented.

### Pass Rates on Licensure/Certification Examinations

- Accounting (by exam section):
  - 52.4% Financial Accounting and Reporting (Colorado = 51.1%; U.S. = 45.6%)
  - 47.6% Auditing and Attestation (Colorado = 52.1%; U.S. = 45.9%)
  - 65.0% Regulation (Colorado = 55.5%; U.S. = 48.4%)
  - 77.8% Business Environment & Concepts (Colorado = 64.5%; U.S. = 55.4%)
- Nursing (BSN): 95.6% (Colorado = 90.4%; U.S. = 84.6%) on the National Council Licensure Examination (NCLEX).
- Radiologic Sciences: 100% passing on first attempt on the American Registry of Radiologic Technologists exam (Colorado = 71.4%; U.S. = 87.2%)
- Teacher Education (initial licensure): 99% on the PRAXIS II (comparative state and national pass rates not available).

### Retention and Graduation Rates

The demographic profile of CMU students includes a significant proportion of students who, shown through research, can face greater challenges to being successful in higher education. Among these factors are being first generation to college, having a lower socio-economic status, being less motivated to their education, and needing developmental education courses due to academic under-preparation prior to enrollment, thereby making the achievement of this goal a significant accomplishment. CMU has invested significant resources in academic and student support services, such as tutoring, advising, financial aid counseling, to enhance their likelihood of success.

During the past decade, the University has seen significant improvements in the first-year retention rates for first-time, full-time, baccalaureate students, the tracking cohort defined by the U.S. Department of Education. As shown in Figure 2, the current rate of first-year students retained from their first to second fall semester is 74.7%, while the Fall 2012 cohort (defined the same as for retention) shows a six-year graduation rate of 39.1% as shown in Figure 3. While remarkable gains in both rates have been made, CMU has a sustained commitment to continuing increases in both rates.

### High Impact Practices

High impact practices (HIPs) are educational experiences found to be beneficial to student success, especially when a student participates in two or more of these opportunities. Examples of these practices include first-year transition to college courses, undergraduate research, internships and other field experiences such as clinical placements and student teaching, senior capstone courses, and study abroad.

The National Survey of Student Engagement found that 66% of CMU's survey participants completed at least two or more of these

practices. The survey also reported a participation of 61% for other Rocky Mountain public institutions and for colleges and universities nationwide. Examples of CMU students' participation in some of these activities are described below.

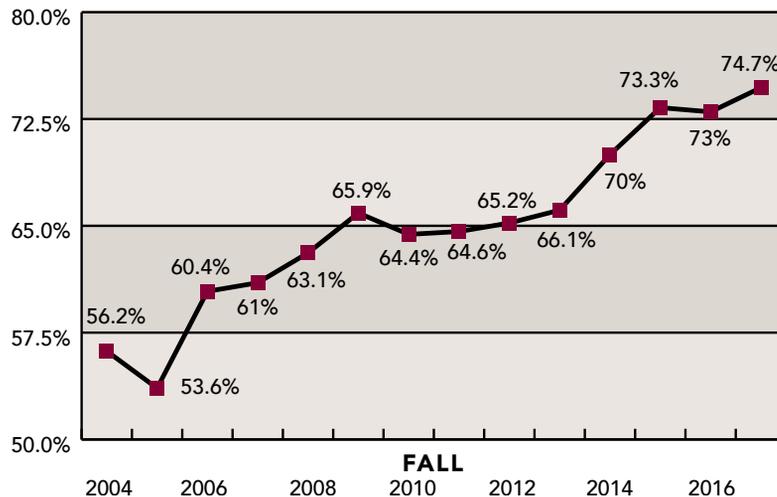
### Undergraduate Research and Participation in Professional Conferences

One of the most valuable types of student engagement that CMU offers its students is participation in a research project, an experience often reserved for graduate students on many campuses. The specifics vary by research focus and methods, usually established by the faculty member with whom the student collaborates, but in each case a student learns how to apply their knowledge and skills to a specific problem and then often presents the results of their work in a professional setting.

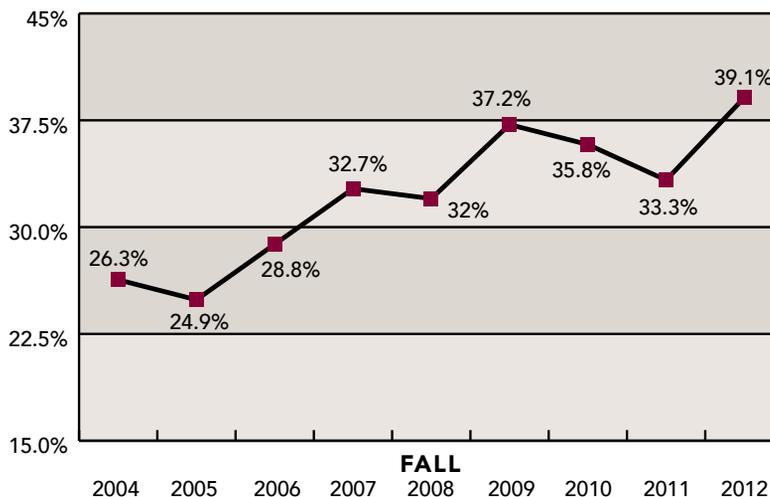
Presenting research results at a professional conference — be it statewide, regional, or national — is an opportunity also often reserved

for graduate students. Because numerous CMU undergraduates are involved in research projects, they frequently participate in a meeting sponsored by a professional association and often compete with students from other institutions. In some cases, they have work published either individually or as a co-author with a faculty member. The following illustrates the breadth of topics and active involvement — from work in labs on campus to experiences “in the field” — in which CMU undergraduates have recently engaged.

**Figure 2: First-year Retention Rate for First-time, Full-time, Baccalaureate-seeking Students Entering Fall 2004 through Fall 2017**



**Figure 3: Six-year Graduation Rate for First-time, Full-time, Baccalaureate-seeking Students Entering Fall 2004 through Fall 2012**



### Student Competitions and Publications

- Business - Marketing: After being selected as one of three finalists from 23 university submissions from across the U.S. to EdVenture's American Petroleum Institute (API) Marketing Challenge, CMU's team placed third in the final competition. The team earned \$5,000 that was donated to the CMU Foundation for business student scholarships.
- Business - Marketing: At a recent state conference, members of Phi Beta Lambda, the Business academic honorary, garnered 34 awards, half of which were first place. All CMU participants took first or second place in their events, qualifying them to compete nationally. Among the awards earned by the nine who participated in the national competition, CMU students placed second and third in Business Decision Making, third in Business Ethics, second in Human Resource Management, third in Macroeconomics, and third in Sports Management & Marketing.



Business Marketing students, who competed in the EdVenture's American Petroleum Institute's Marketing Challenge, were one of three finalists from 23 university submissions and placed third in the final competition held in Washington D.C.



CMU's Future Business Leaders of America Phi Beta Lambda, a business department student organization, sent 16 students to compete at the state competition. All 16 brought home 32 awards and will each advance to nationals.

- English: Based on work in a senior seminar class, an English major published "The Weird: Aesthetic Effect and Power" in the *Midwest Journal of Undergraduate Research* (Summer 2017) and presented her work at the Monmouth University Conference of Undergraduate Research and Scholarship. The student developed a theory of "the weird" rather than simply applying some concept to make sense of unusual art/texts.
- Environmental Science: An ES major won an award for best student presentation at the American Society of Mining and Reclamation for his comparison of multispectral data collected from a drone versus data from traditional collection techniques for monitoring the progress of revegetation on disturbed lands.
- Graphic Design: For the second year in a row, CMU placed first in the Graphic Design advanced category at The Review, an annual portfolio competition of students from across Colorado that was sponsored by the American Institute of Graphic Arts and The One Club (formerly the Art Directors Club of Denver).
- Mathematics (Statistics): Undergraduate majors researched college students' perceptions of social media by defining the topic, writing a survey, collecting and analyzing data, and drawing conclusions, with the results published in the *International Journal of Higher Education*.

### Research Projects and Conference Presentations

- Biological Sciences:
  - Characterized DNA sequences from tamarisk beetles so as to better identify different species that can control the growth of tamarisk trees as part of water conservation efforts in the arid southwest because these plants consume large amounts of water;
  - Compared the gene sequences (DNA) of neurotoxin proteins found in the venom of rattlesnakes found in western Colorado and presented results at the national conference of Ichthyologists and Herpetologists.
- Business: Conducted analyses of socio-demographic data associated with factors contributing to childhood hunger, identified solutions to address the problems, and presented the findings to representatives of the local school district and the Western Colorado Community Foundation who requested the research.
- Chemistry: Experimented with conversion of carbon dioxide into useful chemicals.
- Computer Science: Participated in the national AgBot Challenge that applies technology to farming as part of a robotics competition. A drone scans and sends images of a field to a vehicle that follows and processes the information to determine if weeding is needed, if fertilizer should be applied, as well as if the crop is ready for harvest.



CMU graphic design student accepts his first place award in The Review, a statewide competition for graphic design students.



Mesa Motorsports, based out of the CMU Engineering Club, has been competing in Formula SAE for several years. They are headed to the Michigan International Speedway in May to compete with 120 collegiate teams from around the world.

- **Engineering:** Competed in Formula SAE, an international collegiate student competition organized by the Society of Automotive Engineers.
- **Environmental Science:** Completed a fire history survey and revegetation restoration experiment on the Colorado National Monument.
- **Forensic Anthropology:** Compared findings from CMU's Forensic Investigation Research Station with published accounts of decomposition from Arizona and Texas.
- **Geosciences:** Determined the timing of glacial deposits from the San Juan Mountains by studying the geomorphic and weathering characteristics of the deposits.
- **Kinesiology:** Presented research on the effect of stride frequency on running economy in collegiate and recreational runners at the national meeting of the American College of Sports Medicine.

- **Mathematics:** Completed a statistics project with a team in the National Football League by focusing on the concept of expected points, given combination of down and field position, to both fairly and effectively analyze the execution efficiency of the offense.
- **Psychology:** Gave numerous presentations at the annual meetings of the Rocky Mountain Psychological Association on diverse research topics including "Long Term Effects of Brief Suicide Intervention Gatekeeper Training" and "Microaggressions in the Workplace."

In sum, CMU's commitment to the delivery of excellent academic and technical programs has resulted in a wide range of student successes and accomplished by a phenomenal growth in enrollment. Fulfillment of this responsibility, as part of being a steward of the western Colorado region, has been a key contribution to its educational and social advancement. As will be described in the next section of this report, the University also plays another pivotal role through its impact on the regional economy.



Gene sequences (DNA) of neurotoxin proteins found in the venom of western Colorado rattlesnakes were compared and presented at the Joint Meeting of Ichthyologists and Herpetologists in Rochester, NY, July 2018.



Tree ring analysis was a part of the fire history survey on the Colorado National Monument performed by students and faculty from the Department of Physical and Environmental Sciences. A tree was found on the Monument that was at least 920 years old.

# REGIONAL ECONOMIC IMPACT

## Model Overview and Methodology

This section describes the economic impact of Colorado Mesa University on western Colorado using a short-term approach that examines the effects on regional economic activity from the presence of an institution. This study considers the economic contribution of Colorado Mesa University in FY 2017-18 and relies heavily on the American Council on Education model developed by Caffrey and Isaacs.<sup>8</sup> The model examines CMU's direct spending in five expenditure categories: the University's purchases of goods and services; spending by employees, by students, and by visitors; and finally capital expenditures. The model then applies a multiplier to calculate indirect spending, thereby producing an estimated total regional economic impact of the University.

In the case of Colorado Mesa University, its estimated direct impact on the regional economy for FY 2017-18 was \$260.4 million. When direct and indirect spending are taken into account by the application of the economic multiplier, the estimate expands to \$468.7 million worth of economic activity associated with Colorado Mesa. Thus the University clearly creates a significant economic benefit to the

businesses, households, and local governments in western Colorado.

## Direct Expenditure Categories

### University Expenditures

The myriad products and services that Colorado Mesa purchases from the surrounding region ranges from furniture to office supplies to utilities. In order to determine the University's spending in the surrounding region, budgets for all departments and auxiliary accounts were analyzed and then adjusted to exclude out-of-state companies without a regional presence. Total Colorado expenditures for FY 2017-18 exceeded \$45.1 million (Table 3). Further analysis documented that nearly \$34.3 million, or 76.1%, of the purchased goods and services stayed in western Colorado, while the remaining \$10.8 million was spent elsewhere in the state.

### Employee Salary/Wage Expenditures

This category of expenditures includes items purchased by CMU employees from food to housing payments to entertainment to education and transportation. To determine employee salary/wage expenditure dollar amounts, funds budgeted for

**Table 3: Colorado Mesa University Expenditures in Colorado, FY 2017-18**

Goods and Services Purchased (excluding construction)	Amount	Percent
In western Colorado	\$34,352,895	76.1%
Elsewhere in Colorado	\$10,809,821	23.9%
<b>Total</b>	<b>\$45,162,716</b>	

**Table 4: Colorado Mesa University Employee Salaries, Taxes, and Benefits, FY 2017-18**

Wages	Total
<b>Gross Wages</b>	<b>\$46,260,882</b>
Federal and State Taxes	\$5,424,150
Benefits	\$7,569,089
<b>Net Wages</b>	<b>\$33,267,643</b>
Less 10% non-local spending	\$3,326,764
<b>Estimated Total Employee Local Spending</b>	<b>\$29,940,879</b>

<sup>8</sup> John Caffrey and Herbert Isaacs. *Estimating the Impact of a College or University on the Local Economy*. Washington: American Council on Education. 1971.

**Table 5: Estimated Colorado Mesa University Student Spending, FY 2017-18**

Term	Student Enrollment	Term Length (in months)	Average Student Monthly Expense	Total
Fall 2017 Enrollment	9,591	4	\$1,692	\$64,911,888
Spring 2018 Enrollment (including January Term)	8,737	5	\$1,692	\$73,915,020
Summer 2018 Enrollment	2,075	1	\$1,692	\$3,510,900
<b>Estimated Annual Student Spending</b>				<b>\$142,337,808</b>
Less 10% non-local spending				\$14,233,781
<b>Estimated Total Student Local Spending</b>				<b>\$128,104,027</b>

employee salaries and wages — \$46.2 million — for all University departments and auxiliary accounts were reviewed (Table 4). Student employee spending is accounted for in the next section. Federal and state taxes represented 11.7% of the total, and benefits — including retirement, medical insurance, and life insurance — amounted to another 16.4% of the total. Once taxes and benefits were deducted, net wages amounted to approximately \$33.3 million.

In light of the University’s location in western Colorado, it is an appropriate assumption that employees of Colorado Mesa contribute most of their income after taxes into the area economy. The Bureau of Labor Statistics’ Consumer Expenditure Survey reports that housing and transportation are the two largest areas of consumer expenditures, and it was assumed that there was a limited amount of dollar leakage out of the region. Some activities, such as vacations and entertainment, however, are examples of dollars that may leave the local economy. Given CMU’s location, it is assumed that ten percent adequately accounts for leakage out of the region, resulting in an estimate of \$29.9 million in employee

disposable income that was added to the western Colorado economy. Most of that income was spent in local private businesses, and these direct expenditures multiply through the economy as described in a later section of this report.

### Student Expenditures

Colorado Mesa students add significant dollars to the economy, and most of their spending stays local. To calculate student spending, a mean monthly expenditure was determined by the CMU Financial Aid Office for purchases such as room, board, personal expenses, transportation, and entertainment, an average of \$1,692 per month while enrolled during FY 2017-18. Like that for employee spending, the study assumed that 90% of these dollars remained in the local economy, as shown in Table 5. At that rate, students infused approximately \$128.1 million into the local economy.

Last of all, it should be noted that the above estimate of student spending excludes other ways that Colorado Mesa students affect the local economy. Approximately 45% of CMU students come to the

**Table 6: Colorado Mesa University Estimated Visitors by Activity, FY 2017-18**

Activity	Estimated Visitors
Tomlinson Library	20,272
Performing Arts	12,174
University Center	425,376
Athletics	78,401
Admissions	14,285
Graduation	11,800
<b>Total</b>	<b>562,308</b>

**Table 7: Colorado Mesa University Capital Expenditures in Colorado, FY 2017-18**

Capital Expenditures	Amount	Percent
Expenditures in western Colorado	\$22,058,012	89.0%
Expenditures elsewhere in Colorado	\$2,727,309	11.0%
<b>Total</b>	<b>\$24,785,321</b>	

University from outside the region, thereby bringing money into western Colorado. Additionally, students leave the University with increased knowledge and skills that enhance their subsequent employability and spending levels.

### Visitor Expenditures

Colorado Mesa University attracts a significant number of individuals to Grand Junction each year to attend or participate in a wide range of events. In so doing, these visitors — frequently from communities outside Grand Junction — purchase food, entertainment, lodging, and fuel. Because these dollars are out-of-area dollars, they are “new” dollars to the community and increase overall economic activity.

Based on estimates from academic, student, and athletic departments for the past year, Table 6 offers an expanded listing of CMU activities and their estimated attendance, but excludes informal campus visits such as prospective students and their families not associated with a specific event. An estimated standard destination per diem within the continental U.S. of \$144 (\$93 for lodging and \$51 for meals and incidental expenses) was obtained from the U.S. General Services Administration.<sup>9</sup> Assuming that one-third of the visitors came from outside the region and spent at least the daily average of \$144 for at least one day, while the remaining 75% were “local” and spent the estimated amount for meals only, the estimated value to the regional economy was \$45.9 million.

### Capital Expenditures

Because capital expenditures vary annually due to their dependency on the availability of construction funds, they typically are separated from all other CMU expenditures. During FY 2017-18, the University initiated, continued, and/or completed projects resulting in a total of \$24.8 million for this expenditure category (Table 7). Funds were spent on projects such as classroom construction, technology upgrades for classrooms and labs, parking, and controlled maintenance, with 89% — or \$22 million — of the capital expenditures spent within the 14 western Colorado counties.

### Direct Expenditures Summary

By combining the five expenditure categories, Colorado Mesa University infused over \$260.3 million directly to the regional economy in FY 2017-18 (Table 8). Nearly half of that year’s spending is associated with students attending CMU (49.2%), followed by visitors spending accounting for an additional 17.6% of the expenditures. To more accurately reflect the total economic contribution of the University on western Colorado, however, indirect expenditures also must be considered and are discussed in the next section.

### Indirect Effects

A multiplier reflects the relationship between the dollars spent by one individual that then becomes the income of another person to be spent. The initial

**Table 8: Economic Impact of Colorado Mesa University by Expenditure Category, FY 2017-18**

Expenditure Category	Direct Impact	Multiplier (indirect impact)	Total Impact	Percent of Total
College	\$34,352,895	1.8	\$61,835,211	13.2%
Employees	\$29,940,879	1.8	\$53,893,582	11.5%
Students	\$128,104,027	1.8	\$230,587,249	49.2%
Visitors	\$45,934,941	1.8	\$82,682,893	17.6%
Capital	\$22,058,012	1.8	\$39,704,422	8.5%
<b>Total</b>	<b>\$260,390,754</b>	<b>1.8</b>	<b>\$468,703,357</b>	<b>100.0%</b>

<sup>9</sup> U.S. General Services Administration, FY 2018 Per Diem Rates for ZIP 81501. Accessed from [https://www.gsa.gov/travel/plan-book/per-diem-rates/per-diem-rates-lookup/?action=perdiems\\_report&state=CO&fiscal\\_year=2018&zip=81501&city=Grand%20Junction](https://www.gsa.gov/travel/plan-book/per-diem-rates/per-diem-rates-lookup/?action=perdiems_report&state=CO&fiscal_year=2018&zip=81501&city=Grand%20Junction) on November 20, 2018.

dollar, since it is being “re-spent,” has an indirect impact on the economy beyond the original dollar, and hence, dollars “grow,” or multiply in their effect as they circulate through the economy. For example, the ripple effect of the wages paid to Colorado Mesa faculty and staff members is the employees’ “re-spending” on housing, food, clothing, entertainment, etc. The remainder of the earnings is withheld from the local economy in the form of savings, taxes and spending on goods and services outside the region, adjusted for here by their exclusion.

The multiplier effect magnifies the economic impact of the initial Colorado Mesa expenditures, with a large multiplier indicating a greater regional economic impact than a smaller one. Similarly, the revenues generated by area businesses from supplying goods and services to the University are paid out in wages and material purchases, which in turn are spent on living costs. In theory, this process continues through several rounds of activity with diminishing increments at each stage. This study, however, was limited to the secondary effects of spending.

Generally speaking, higher education studies that include multipliers reflect a re-spending factor that varies rather widely. For this study, a multiplier of 1.8 was chosen, one which is conservative compared to many other studies. Applying this multiplier to the University’s direct expenditures, the total addition to the economy was estimated to be \$468.7 million due to the presence of the University (Table 8). Put differently, without the spending by Colorado Mesa University – including its faculty, staff, students, visitors, and all others affected by what CMU does – the income flow to western Colorado would be \$468.7 million less each year.

The money spent by CMU on goods and services generates jobs in western Colorado in several ways. First is the direct employment of faculty, staff, and students in positions at the University and their accompanying spending. Last year, there were 2,061 people who owed their jobs to the existence of the University. Second, non-payroll, regional expenditures create employment for workers who supply the goods and services to Colorado Mesa. A labor multiplier estimates the number of jobs created by the influx of the University’s spending into the surrounding community. Again, when other impact studies were reviewed, differing labor multipliers were found. Using a conservative labor multiplier of 1.4 to estimate the additional number of jobs due to Colorado Mesa University expenditures results in an additional 2,885 jobs.

## CONCLUDING COMMENTS

Colorado Mesa University’s delivery of excellent academic programs has led to unprecedented growth in headcount and a range of student successes, both during and after enrollment in higher education. The importance of the growth and success is found in the University’s contribution to advancing the region’s future educational, economic, and social progress in educational attainment and workforce preparation. Nearly 16,000 alumni live in one of the 14 counties in CMU’s region, which speaks to educational preparation needed to attract outside investments by business and industry. While the University plays a pivotal

role in this progress on its own, it also has partnered with government bodies, businesses, community organizations, and P-12 educators, all critical linkages for regional success.

Further, as this study estimates, the University was responsible for adding more than \$260.3 million in FY 2017-18 directly to the regional economy. When indirect spending is considered, the total exceeds \$468.7 million. Additionally, there were approximately 824 jobs beyond those at CMU resulting from the \$260.3 million in direct spending by the University.



**\$468.7 million**

total direct and indirect spending in the regional economy by CMU

**2,885**

additional jobs created due to regional spending by CMU

**\$128.1 million**

infused into the economy by CMU students

**\$45.9 million**

resulting from visitors to CMU functions

**\$34.3 million**

goods and services purchased in western Colorado (excluding construction)

# SOME EXAMPLES OF REGIONAL PARTNERSHIPS CONTRIBUTING TO COLORADO MESA UNIVERSITY'S SUCCESS



1, 2: Expansion of Health Sciences programs, facilities, and equipment with support from hospitals in Grand Junction and Montrose.

3: Students meet donors providing scholarship support during the annual "Donors & Scholars" event.

4: Student artwork on display at the 437CO Art Gallery in downtown Grand Junction.

5: President Tim Foster with CMU's College and Career Advisors who work with local high school students.

6: Eureka! Science Museum, co-located in Confluence Hall with Engineering programs. (Photo by Rob Reece)

7: Applied learning in Engineering labs offered through the partnership program delivered by CMU and CU Boulder.

8: Mass Communication students gain story line and production experience as part of a partnership with Rocky Mountain Public Broadcasting System.

