

UNM Online: <http://online.unm.edu>

Extended Learning Overview: *Online courses and programs at UNM serve both on-campus students and students participating at a distance.* Extended Learning has facilitated the development and growth of online courses and programs at UNM since 1999.

Since 2009, Extended Learning has built on the strong foundation of quality standards recognized in the Advancement Section of the HLC Comprehensive Evaluation Report (Attachment A). Over the last ten years Extended Learning has experienced considerable organizational change yet continues to lead the online course and program selection process, compliance, student, faculty / course development support, and marketing efforts associated with online programs. Extended Learning, a centralized unit reporting to the Provost Office (Attachment B) administers UNM Online Programs through collaboration and close partnerships with academic units across campus, Center for Teaching & Learning, Center for Academic Programs (CAPS), Veterans Resource Center, UNM Registrar, Enrollment Management, UNM IT, University Communications and Marketing (UCAM), Global Education Office (GEO), UNM Legal Counsel, UNM Bookstore, and a series of other institutional stakeholders.

UNM Curriculum Approval Process: UNM has a rigorous curriculum review process. Any changes, additions, and deletions to curriculum are subject to review and approval by the department or supporting unit, the College(s), the Faculty Senate Undergraduate Committee (if

applicable), the Faculty Senate Graduate Committee (if applicable), the Faculty Senate Curricula Committee, the full Faculty Senate, and the Office of the Provost. For new program or degree proposals, once the proposal has been vetted by the department or supporting unit and the college(s), a preliminary program proposal is submitted for initial review by the Office of the Provost. If approved, new program proposals are then submitted for review to appropriate Faculty Senate Committees and then to the full Faculty Senate. The proposals must also receive formal approval from the Office and, finally, the UNM Board of Regents.

External Approval Process: Currently, for the State of New Mexico, once an undergraduate degree program or any level of certificate program has been approved through the university's internal process, the only external approval needed through the State is for the assigned Classification of Instructional Programs (CIP) code that will be used in reporting and notification to the State of the new program. Beginning in 2019 new undergraduate degrees will require approval from the New Mexico Higher Education Department (NMHED). New graduate degree programs require approval from the New Mexico Higher Education Department (NMHED), the New Mexico Council of Graduate Deans (NMCGD), and the State Board of Finance. Once the UNM and State approval processes have occurred for regular degree offerings there is no further State external approval required to offer the degree online.

All UNM programs, regardless of modality, must follow the same curricular approval and assessment processes outlined above. Once a degree program has been approved for traditional instruction, there is no further curricular review or approval for online program delivery. UNM offers courses in a range of modalities, including face-to-face, hybrid and online (Attachment C).

Instructional Method – Online: Online courses are scheduled as an online section of a regular UNM Course, developed and taught by faculty hired by UNM academic units (see <http://online.unm.edu/admin-resources/index.html>). For consistency and quality, online courses must have similar objectives and instructional requirements as face-to-face sections. Consistency and quality assurance in online courses are the responsibility of the instructor and academic unit, and all UNM quality and assessment practices apply equally to online courses as for their face-to-face counterparts. All online courses and programs are included in UNM's regular assessment processes. All online programs at <http://online.unm.edu> list learning goals for the program, for example BBA outlines learning goals and objectives (<http://bbaonline.unm.edu>).

Once an academic course or program has been identified to be offered online, Extended Learning evaluates the development and production requirements to support the course program. This includes budget and production planning for instructional design, course production, faculty training and support, student support, technology support, scheduling, social media support and digital marketing where appropriate.

Support for online instruction and course development is provided by Extended Learning. In addition to general support, Extended Learning also provides and recommends adherence to UNM's "Online Course Standards Rubric" (Attachment D) developed by an interdisciplinary faculty committee, and based on the national Quality Matters Standards. All new online courses

that are in line to receive a development stipend are subjected to a quality review process. All online courses that are part of a Managed Online Program (Attachment E) must be peer reviewed and meet the 'Accomplished' component of the rubric before the course is scheduled for enrollment. UNM also offers opportunities for Online faculty to qualify for institutional awards of excellence. To be considered for the awards, after teaching an online course three times faculty may submit proposals for their courses to the faculty Online Course Advisory Council to be peer reviewed to qualify for one of two awards of excellence: "Golden Paw" is for faculty, "Silver Paw" is awarded for a TA Master course which are submitted by an Instructor Supervisor of a TA led course UNM Online Course Best Practice Certification Initiative (see <http://extendedlearning.unm.edu/faculty/best-practices.html>).

Online Courses and Programs:

The screenshot shows the UNM Online website's "Online Degree Programs" page. At the top, there are links for Home, Getting Started, Online Programs, Schedule, Student Resources, Legal Stuff, and Admin Resources. Below this, a breadcrumb trail shows UNM / Home / Online Programs. On the left, a sidebar lists "Online Programs" with sub-links for Online Degree Programs, Managed Online Programs, Programs by State, and Programs by Country. The main content area is titled "Online Degree Programs" and features a section about the flexibility of online degrees. It includes a list of programs with icons: Business Administration (BA), Chicana & Chicano Studies (BA), Computer Engineering - Internet of Things (MS), Construction Management (MCM); Dental Hygiene (BS), Dental Hygiene (MS), Educational Leadership (Certificate), Educational Leadership (MA); Elementary Education (MA), Intercultural Communication (BA), Interpersonal Communication (BA), Learning Officer Concentration (MA); Liberal Arts (BA), Music Education (MMU), Native American Studies (BA), Psychology (BA); Radiologic Science (BS), Secondary Education (MA), Space Systems Engineering (MSEE), Space Systems Engineering (MSME); Strategic Communication (BA), Technology & Training (BS). At the bottom, there are links for Apply to UNM, Login to UNM Learn, and Online Technical Support, along with social media icons and a chat window for "LilithBot".

Online Course and Program Selection Process: UNM has three primary strategies for selecting courses and programs to be offered online.

- 1. Academic unit request through Online Course Proposal process (Attachment F):** Academic units wanting to offer an online course that enhances their other online offerings, such as, bringing their programs closer to a degree completion program may submit a proposal for a new online course. If there is an identified demand for the course for the course to be offered online and Extended Learning has resources to support the course development, the new course section is approved for development support, stipend, and is scheduled to be offered online.
- 2. Degree completion programs fully and partially online:** Extended Learning maintains a database of courses offered online. A regular analysis is done of online course offerings and how they align with the degree requirements as listed in the current UNM catalogue (Attachment G). When an academic unit has consistently offered all core

major courses required for a degree Extended Learning reaches out to the academic unit and discusses options for promoting their online degree completion programs.

3. **Managed Online Programs** (Attachment E): In 2015, as part of an effort to attract a new student population, Extended Learning, working with the Provost Office, established the Managed Online Program. The first programs identified to be offered in this format were selected after a request for proposals was sent out to all colleges. During the online program selection process, Extended Learning Leadership contracted with external partners for return on investment analysis (ROI). Over the next few years, working with the Education Advisory Board (EAB) and other external partners providing research on program opportunities (Attachment H) combined with market analysis and academic program readiness additional programs were identified to be offered in this format.

Enrollment/Student Credit Hour Production: *Online courses and programs at UNM serve both on-campus students and students participating at a distance.* UNM Online course enrollment and student credit hour production growth has slowed down, yet continues to increase. In a Spring 2019 data report from 2/17/19, there were 17,148 enrollments in 755 sections, up from 16,793 enrollments in 700 sections reported in Spring 2018. Student credit hour production experienced a small increase during Spring 2019. The UNM-Albuquerque campus online course student credit hour production as of 2/17/19 is 49,395 credit hours. This represents a 1.20% increase from Spring 2018 student credit hour production, which was 48,810. The Spring 2019, online headcount from 2/17/19 was 9,569. Many of these students are considered “online plus students” who are taking both online and regular face-to-face campus courses. UNM Online courses and programs provide access across the State of New Mexico and beyond. The exclusively online students, which is a subset of the 9,569, was 2,143. This number represents students from across the state, out of state, and internationally. Attachment L shows a map with enrollments of exclusively online students from Spring 2019.

Timeline:

2000 -2004: Distance Education Advisory Board formed to work with Extended University on the development of guidelines and procedures associated with distance learning modalities, television and online.

2004: Distance Education Advisory Board was dissolved. Provost Office supported New Media and Extended Learning request for a faculty advisory body focused on online course offerings.

2005-2009: Online Course Standards Task Force was created to: 1. support the upgrade and implementation of UNM's enterprise Learning Management System; 2. recommend institutional guidelines for online courses; and 3. function as an advisory body for New Media and Extended Learning (NMEL), which became Extended Learning, in the support and delivery of online courses. The faculty Task Force had representation from College of Arts & Sciences, Education, Nursing, Engineering and Anderson School of Management.

2009: After the HLC comprehensive evaluation visit UNM New Media and Extended Learning was recognized in the Advancement Section as having expertise in instructional design and pedagogy. Accolades were also given for the NMEL team (Attachment A), as well as, in facilitating the development of quality online courses that meet or exceeds national quality standards. Extended Learning in close collaboration with faculty built on that foundation for continuous improvement.

2009 – 2012: Online course offerings continued to growth as did enrollments and student credit hour production. Various strategies were implemented by Extended Learning to provide incentive for academic units to offer online courses.

2012: By Provost request and as the faculty led Online Course Standards Task Force had completed the tasks established by the 2005 UNM Provost, the faculty led Online Course Advisory Council was established. Members of the Faculty Council included faculty appointed by the deans of Arts & Sciences, Nursing, Education, Engineering, Anderson School of Management, with ex-officio representation from Extended Learning, Associate Provost for Curriculum and Office of Services for Effective Teaching (OSET) which became the Center for Teaching and Learning. The Online Course Advisory Council (OCAC) developed an Online Course Standards Rubric based on best practices from nationally recognized Quality Matters. The UNM Rubric has three levels: 1. Needs Work, 2. Accomplished, 3. Best Practice (Attachment D).

2013: UNM Faculty Senate endorsed UNM Online Course Standards Rubric, which was adopted by most academic units developing and offering online courses and programs. Initially the Rubric was utilized as guidelines for best practices.

2014 -2015: Online Course Standards Rubric was revised to reflect updates from Quality Matters Standards.

2015: Extended Learning manages the institutional membership for SARA (State Authorization Reciprocity Agreements). In accordance with the membership UNM "agrees to abide by the

Interregional Guidelines for the Evaluation of Distance Education and the current NC-SARA Manual". These guidelines adopted by NC-SARA were developed and adopted by the Council of Regional Accrediting Commissions (C-RAC) in 2011 (Attachment I).

Extended Learning implemented the requirement that all new online courses for which academic units were requesting a development stipend must meet the "accomplished" standards in the Rubric before the stipend is distributed. Online degrees known as Managed Online Programs (Attachment E) are offered in a compressed format were launched. Extended Learning, Provost Office, College and academic unit enter into an MOU with specific requirements, a timeline with milestones/deliverables (Attachment J).

2016: Fall first two MOPs: BA Chicana/o Studies (CCS) and Master of Construction Management (MCM).

2017 - 2018: Managed Online Programs BA CCS and MCM both have their first graduates. Extended Learning facilitated Strategic Enrollment and Marketing Planning for Managed Online Programs (Attachment K).

2019: Launched digital marketing campaign for all UNM Managed Online Programs. Extended Learning participating on President's Enrollment Task Force tasked with providing recommendations for attracting new student populations. Extended Learning working with Provost Office to refine new online course and program selection process engaging a broader group of stakeholders.

Attachments:

- A. HLC comprehensive evaluation visit Advancement Section, page 11
- B. Extended Learning Org Chart
 - a. Org Chart – Extended Learning: Strategic Initiatives and UNM Online Programs
 - b. Org Chart – Extended Learning Online Course Development and Faculty Services
- C. UNM Schedule Type Glossary
- D. Online Course Standards Rubric
- E. Managed Online Program Overview
- F. Online Course Proposal Form
- G. Online Degree Worksheet: BBA MIS
- H. EAB Market Research:
 - a. Market Demand for a Bachelor's Level Chicana and Chicano Studies
 - b. Market Demand for an Online Master of Science in Computer Engineering with an Internet of Things Concentration
 - c. Market Viability of an Online Master of Construction Management
 - d. Online Bachelor of Science in Dental Hygiene
- I. Interregional Guidelines for the Evaluation of Distance Education (C-RAC Guidelines)
- J. MOP Templates
 - a. Undergraduate MOU Template
 - b. Graduate MOU Template
- K. UNM/Blackboard Marketing and Enrollment Plan
- L. UNM Main Campus Exclusively Online NM Students by County SP 2019

Advancement Section

University of New Mexico 1101

place during this time. In UNM's effort to consistently embrace the pueblo style architecture for the majority of buildings across the main campus, the Team suggests that particular attention be rendered to the placement of building signage – both in the front and back entrances to facilitate building identification.

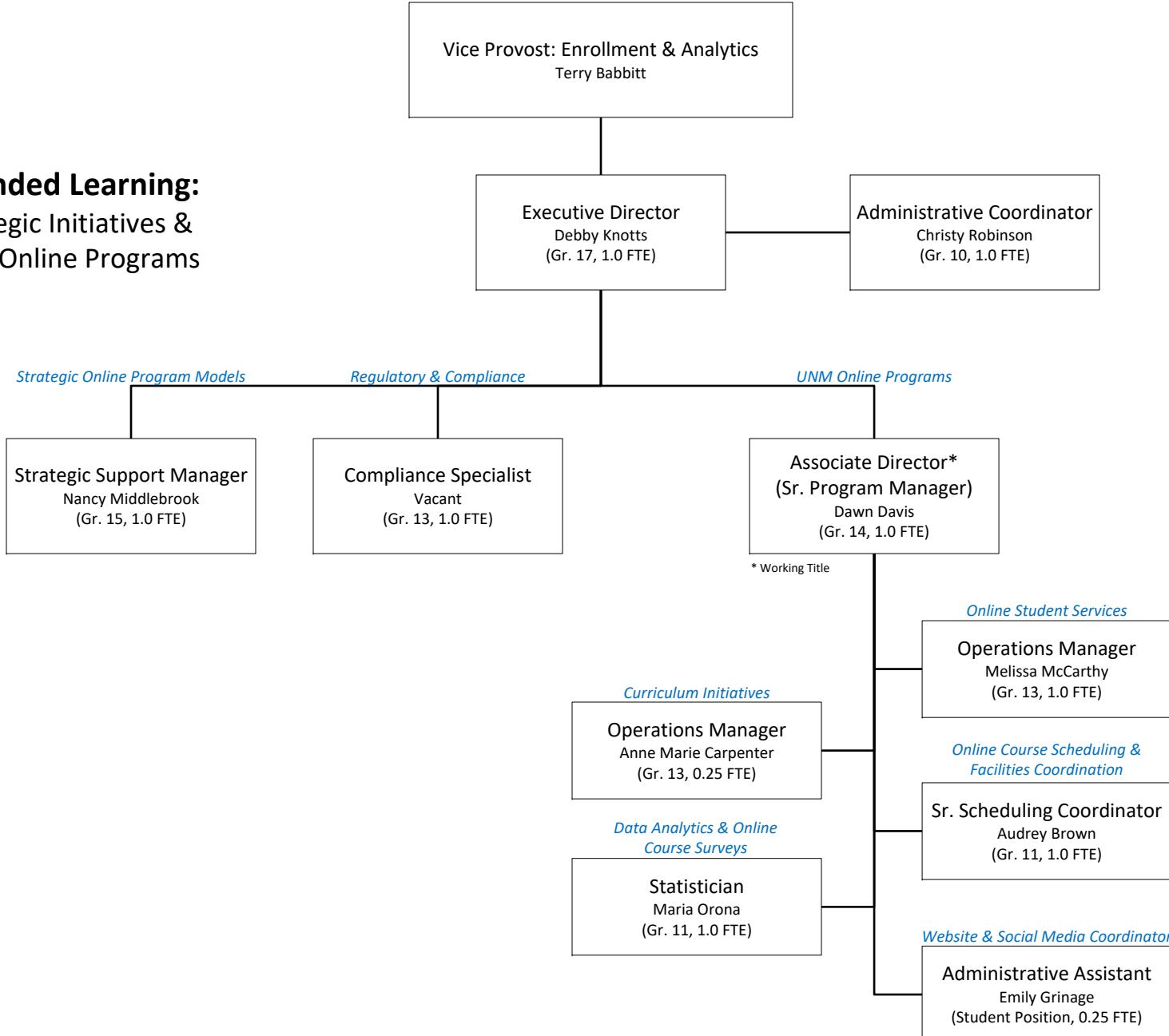
Accolades from the team and from faculty are extended to the instructional designers in NMEL. UNM's online course development reflects attention to Quality Matters and Sloan-C standards in instructional pedagogy. The talented and dedicated instructional design staff creates courses that are academically and visually engaging for the online learner, which is particularly critical for the diverse Extended University student population. Multiple technologies are incorporated – including wikis, podcasts, graphics, animations – to enhance learning. NMEL staff invests much time in course design and go the extra mile to assist faculty in course development and teaching. The staff is exceptional in their dedication to the faculty and student support - working many after hours and weekends to assist faculty when launching a new course or at the beginning of a new term. The caliber of online courses meets or exceeds national quality standards. UNM should submit courses to Sloan-C, WCET or other award competitions for recognition of instructional design efforts.

The Health Science Center grant and contracts awards in 2008 totaled \$134 million. The School of Medicine was awarded 91% of the grant dollars in FY 2008. The college of Nursing was awarded a Robert Wood Johnson grant for \$4.8 million to increase the number and diversity of nurses with health policy knowledge.

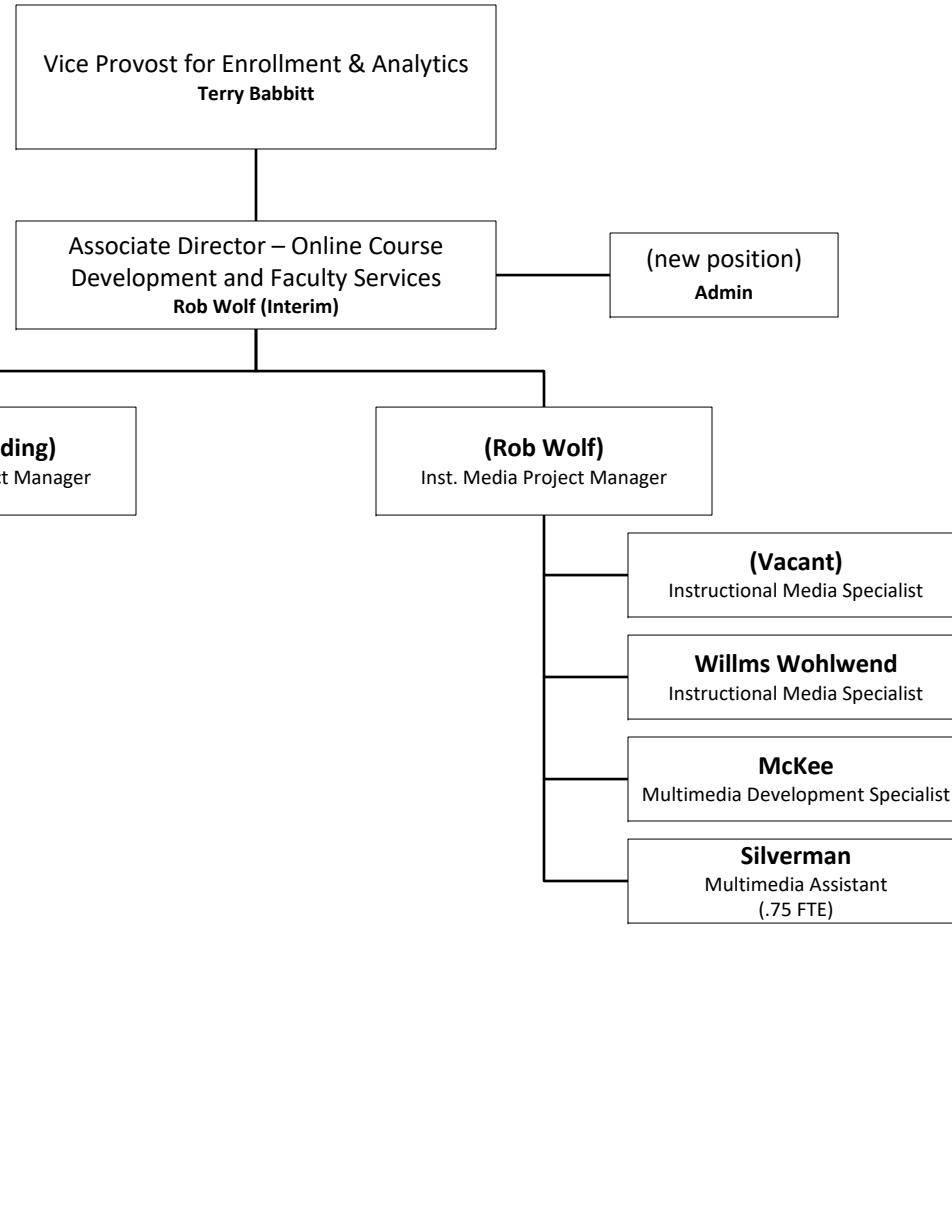
A UNM College of Pharmacy student has been named vice chair of the American Society of Health-System Pharmacists (ASHP) Student Forum Executive Committee. The ASHP Student Forum Committee is comprised of five students appointed by the ASHP president. Also, in the School of Pharmacy two fourth year students placed in the top 10 out of 97 pharmacy schools in the AHSP.

In conclusion, sometimes when looking outward for ideas, we fail to look inward. UNM College of Law deserves special recognition for their attention to the recruitment, preparation and retention of Native Americans. These factors alone are noteworthy, however what truly speaks to the College of Law's commitment to Native Americans is the integration of Native American law and legal issues into the curriculum. The College of Law has implemented successful strategies to integrate the curriculum and enrollment that should serve as a beacon to the UNM campus, state and nation.

Extended Learning: Strategic Initiatives & UNM Online Programs



Extended Learning: Online Course Development & Faculty Services



Schedule Type Glossary **As of 05/25/2012**

Applied Music: Individualized, intensive and practical instruction in voice or a musical instrument that addresses technical and musical skills to improve performance ability and understanding.

Chamber Music Ensemble: An opportunity for students to study and perform music in small, intimate settings such as trios, quartets, and other small groups for instrument or voice. Each instrument plays a part, in contrast to large music ensembles where an entire section of instruments plays a part.

Clinical clerkship: Full-time supervised learning experience in a clinical setting.

Co-op: A structured educational strategy for learning through paid, productive, real-life work experience in a field related to a student's major. It provides progressive1 experience in integrating theory and practice. A co-op is a partnership between students, educational institutions, and employers.

Dissertation: Highly individualized investigative study that results in the development and writing of a dissertation.

Independent Study: Undergraduate or graduate directed study in an area of special interest not readily available through conventional course offerings. The student works with a chosen faculty member who approves the student's individualized plan of study and supervises his/her progress. An independent study may be project-oriented, research-oriented, and/or focus on directed readings and writing in the area of interest. The term used by a program to label an independent study may vary (e.g., independent study, individual study, directed study, problems, undergraduate problems, graduate problems, research problems, honors problems, senior honors research, senior honors thesis, reading and research for honors, readings, directed readings, etc.).

Laboratory: A course taught in a controlled environment requiring specialized equipment and/or facilities. The primary emphasis is on learning by doing and observing, with the burden of course activity placed on the student, under the direction and supervision of the instructor. Labs give students first-hand experience in developing and practicing skills, translating theory into practice, and developing, testing, and applying principles.

Lecture: A course in which the instructor's primary emphasis is on transmitting a body of knowledge or information, explaining ideas or principles, and/or modeling skills. In some courses, students may be expected to participate in classroom activities by means appropriate to the subject matter, such as discussion, performance, skill development, etc.

Lecture/Laboratory: A course that combines aspects of lecture and laboratory as described in the Schedule Type Glossary. Students register for only one section, which includes both the lecture and the laboratory.

Lecture/Practice Experience: A course that combines aspects of lecture and practice experience as described in the Schedule Type Glossary. Students register for only one section, which includes both the lecture and the practice experience.

Major Music Ensemble: A course in which students study large musical works for public, group performance according to their voice or musical instrument fields of study.

Music Pedagogy: Study of musical instruction and tutoring for individuals preparing to teach music in a studio environment. Includes instruction in the introduction and mastery of an instrument or voice, music technique and skill development, reading music, music theory and composition, familiarizing students with various musical genres and styles, and client communications.
This schedule type does not include string pedagogy courses.

Music Repertory: A course in which students study a scope of musical literature for voice or individual instruments.

Practice Experience: Supervised practical experience in a student's field of study that provides him/her the opportunity to apply knowledge gained in an academic setting. The term used by a program to label its practice experience may vary (e.g., internship, practicum, field experience, student teaching).

Professional paper, project, or design project: A culminating scholarly, comprehensive paper, project, or design project that integrates knowledge attained through coursework, research, and experience. The professional paper, project, or design project demonstrates competence in a given academic field or profession and makes a significant contribution within a well defined theoretical, applied, or creative knowledge domain. It may include, but is not limited to, such products as original empirical research projects, case studies, reports of research results, theoretical or applied design projects, manuscripts for professional journals, theoretical essays, creative works, and projects for identified clients. Credit hours earned for the professional paper, project, or design project vary by program. At the graduate level, the professional paper, project, or design project is one option under a Plan II master's degree.

Recitation: Generally a course with a smaller number of students, or a subsection of a larger (lecture) class, designed to include more time for discussion, to see worked examples, and for questions and answers directly related to the lecture class.

Seminar: A course, taught by one or more instructors, that is usually for a small group of students in advanced status within their programs or majors or participating in special programs such as freshmen retention or learning communities. Students may engage in original research, exploration, practice, and/or synthesis of ideas. Results are exchanged through reports, demonstrations, colloquia, and/or discussions. The terms used by a program to label its seminar experience may vary (e.g., professional seminar, honors seminar, advanced seminar, research seminar, pro-seminar, division seminar, freshman/ sophomore seminar, freshmen interest group seminar, living and learning community seminar, etc.).

Studio: A course with primary emphasis on student activity leading to skill development and the enhancement and encouragement of the student's design or performance ability and/or artistic growth. Needed materials, instruments, equipment, and/or tools are provided, or recommendations are made for their acquisition. Evaluation of individual learning may include public display of proficiency and/or evaluation by faculty other than the student's instructor.

Thesis: Highly individualized investigative study that results in the development and writing of a master's thesis.

Topics course: A course exploring a topic not covered by the standard curriculum but of interest to faculty and students in a particular semester.

Workshop: A brief intensive interactive educational program, generally for a small group of people, in which the content is practical and specific to the needs of the group. It has objectives and may concentrate on the acquisition of specific information or skills.

Writing: A course that focuses on student writing. Student writing functions as a class text; it is discussed and critiqued by the instructor and by students in class, and revision of student writing goes on throughout the course. The instructor lectures regarding a body of knowledge or information related to the writing genre specific to the class (e.g., persuasive or analytical essay, technical writing, creative writing, poetry, screenwriting) and explains ideas or principles related to that genre; OR the instructor explains how to write within the context of a specific academic discipline using writing genres appropriate to that discipline and/or uses writing-to-learn assignments as a principal form of instruction.

Instructional Methods

Some sections of courses are delivered through special methods: correspondence, hybrid, online, and web-enhanced. In these cases, the code for the schedule type is coupled with an instructional method when the sections are scheduled. For example, the schedule type for a straight lecture course would be "Lecture," and would have a "Web-Enhanced" instructional method for a lecture course that is web-enhanced. Each of the course delivery methods is defined below:

Correspondence: A correspondence course is a self-paced home study course offered through UNM Extended University to students where contact is generally not face-to-face. Instructional materials, including examinations, are provided to students, and when completed, they are returned for grading. Faculty interact with students through mail, email, telephone, and/or FAX. Correspondence courses may be started at any time, but they must be completed within a 12-month period.

Hybrid: A hybrid course is a blend of face-to-face instruction with online learning using UNM's official learning management system. Hybrid courses move about half of course learning online and, as a result, reduce the amount of classroom seat time. The online portion of the instruction is delivered to the learner using a variety of tools including email, chat, discussion boards, web pages, and multimedia technologies. Specific technologies employed will vary by course and instructor. Class meeting time is reduced by the material covered is equivalent to a normal full-time class delivery for the same number of credits.

Online: An online course is one in which learners access primary content and instruction using a variety of tools from UNM's official learning management system, including email, chat, discussion boards, web pages, and multimedia technologies. Students may or may not be required to purchase textbooks. Specific technologies employed will vary by course and instructor. Depending on the teaching style of the instructor and the course content, instruction can take place synchronously (all participants in the course log in at the same time) or asynchronously (participants log in and participate as their schedule permits), or some combination of the above. UNM's accrediting agency, the Higher Learning Commission of NCA, stresses the importance of a dynamic and interactive learning environment—between students and between students and faculty—regardless of the setting in which it occurs. Email, telephone office hours, chat rooms, and web-based threaded discussions are some of the technologies that help facilitate interaction.

In many cases, the course content, communication tools, and learning activities reside within a learning management system, such as WebCT, which allows for user authentication and tracking in a secure environment. According to New Mexico Higher Education Department (HED) requirements, at least 75% of the course occurs online, while 25% or less employs other delivery methods, including face-to-face contact.

UNM online courses are not open-ended and have set start and end dates. Most follow 8- and 16-week formats with learning activities scheduled on a weekly basis, and include a special fee. UNM Extended University supported online courses are modeled to follow the Best Practices for Electronically Offered Degree and Certificate Programs developed by the Council of Regional Accrediting Commissions <http://www.wcet.info/resources/accreditation/>.

Web-Enhanced: A web-enhanced course is a traditional face-to-face course that uses UNM's official learning management system to expand student learning beyond the boundaries of the classroom. Examples of this include: posting of syllabi and course materials, creation of asynchronous discussions, usage of online quizzes, grade books, communication, and assignment submission tools. The usage of these tools is used to supplement instruction, and does not reduce seat time.

Other Related Definitions

Community-Based Research: Courses employ or introduce students to one or more relevant research methods in the context of a research project designed in collaboration with one or more community partners resulting in products that will be of use to the partners. Ideally, the courses are part of an ongoing collaboration in which community partners serve as sources of knowledge and expertise. Involvement of course increases capacity of the partner organization.

Service-Learning: Service-learning is a pedagogy in which theory and practice are related within the context of collaboration between UNM and one or more community partners. Service-learning provides tangible benefits to community partners while promoting active, durable and contextualized learning for students. Service-learning fosters students' critical and reflective thinking skills, helps them relate their academic experience to broader life experiences, and promotes a sense of civic and social responsibility.



Online Course Standards Rubric

The Online Course Standards Rubric provides a framework for online course design based on the University of New Mexico's online course standards and expectancies for quality online course delivery. The rubric serves to guide instructors in developing new online courses, and in self-assessing existing online courses for improved design and delivery based on nationally recognized online teaching best practices. These guidelines also will assist deans, chairs and distance learning coordinators in developing and improving online course design and instruction in their programs.

Rubric elements are based on best practice requirements from the Higher Learning Commission's Policy for Federal Compliance for Online Courses & verification of student identity in online courses --<http://policy.ncahlc.org/Federal-Regulation/practices-for-verification-of-student-identity.html>.

The rubric is also based on the original work of the UNM Faculty Online Course Standards Task Force established by the Provost's Office and New Media & Extended Learning in 2005 (2005-2009). New elements have been added to reflect Quality Matters Standards 2014 – <http://www.qmprogram.org/our-mission>.

The UNM Online Course Advisory Council, tasked by the Provost to continue the work of the earlier task force, has developed this document to assist the University with the implementation of an institutional model for online course development and instructional delivery and it has been approved by the Faculty Senate Teaching Enhancement Committee. The intent is to address quality assurance across all online courses. It is important to note that this is a formative document and we invite you to send us your comments.

Baseline Checklist

The baseline checklist identifies the minimum requirements for all online courses; these standards should be supplemented by the Rubric that follows.

Baseline Checklist

Institutional Requirements

- Required synchronous participation and/or meeting times are identified prior to registration.
- At least 75% of the course must be delivered online.

Syllabus and Introductory Material

- Syllabus and course schedule are clearly outlined.
- Course materials, dates, and links are reviewed for accuracy and consistency.
- Course Preview or Introduction video/audio is ready to present to students during first week of classes.

Course Navigation and Technical Requirements

- Course uses University enterprise learning management system.
- Students can readily access the technologies required in the course. QM 6.4
- The course technologies are current. QM 6.4
- Technology requirements are clearly mapped with links to required software. QM 6.3
- The tools and media support the course learning objectives. QM 6.1
- Navigation throughout the online components of the course is logical, consistent, and efficient. QM 8.1
- Course is well-organized and easy to navigate. QM 8.1
- All web pages are visually and functionally consistent throughout the course.

Learning Activities

- Lessons are sequenced in logical order.
- Lessons or modules and access to course materials are consistent in structure, design, and location.
- Duplication of information is strategically managed.
- Course identifies synchronous/asynchronous communication tools.

Learning Support

- Learner support is clearly identified within the course.
- Links to Institution student services and resources are noted in the course. QM 7.4

Assessment

- The results of previous course evaluations are integrated into the course when applicable.

Standard 1: Course Overview and Introduction

Course purpose, structure, policies and performance expectations are clearly outlined.

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
A. Syllabus Design - Purpose, Description, Course Format, Student Performance Expectations, Policy Links.			
<input type="checkbox"/> 1. Clearly outlined syllabus and course schedule are prominently placed in the course.	<input type="checkbox"/> 1. Clearly outlined syllabus or course schedule are present but hard to find.	<input type="checkbox"/> 1. There is no syllabus or schedule in the course.	<ul style="list-style-type: none">Syllabus and Course Schedule posted predominately in course
<input type="checkbox"/> 2. Course description in syllabus is consistent with the objectives, requirements, and outcomes of the course.	<input type="checkbox"/> 2. Course description in syllabus is consistent with most of the objectives, requirements, and outcomes of the course.	<input type="checkbox"/> 2. There is either no course description in syllabus or it is inconsistent with the objectives, requirements, outcomes of the course.	<ul style="list-style-type: none">Syllabus and Course Schedule includes prerequisites, contact information and grading policy.
<input type="checkbox"/> 3. Course learning objectives precisely describe specific, observable, and measurable outcomes.	<input type="checkbox"/> 3. Course learning objectives describe outcomes that are measurable. [QM 2.1]	<input type="checkbox"/> 3. Course learning objectives do not describe outcomes that are measurable. [QM 2.1]	<ul style="list-style-type: none">Introduction, orientation, syllabus or opening module includes a statement about meeting the learning objectives.
<input type="checkbox"/> 4. Prerequisite knowledge in the discipline and/or any required competencies are clearly stated. [QM 1.6]	<input type="checkbox"/> 4. Prerequisite knowledge in the discipline or any required competencies are stated.	<input type="checkbox"/> 4. Prerequisite knowledge in the discipline is not stated.	<ul style="list-style-type: none">Syllabus and/or weeks or modules include specific objectives can easily be measured for achievement.
<input type="checkbox"/> 5. Course syllabus provides a variety of course-specific resources and contact information for instructor, department, and program.	<input type="checkbox"/> 5. Course syllabus provides a variety of course-specific resources and only contact information for instructor.	<input type="checkbox"/> 5. Course syllabus provides few course-specific resources or little contact information.	

<input type="checkbox"/> 6. Relationship between learning objectives and course activities are stated clearly. [QM 2.4]	<input type="checkbox"/> 6. Relationship between learning objectives and course activities are presented but not fully or clearly stated.	<input type="checkbox"/> 6. Relationship between learning objectives and course activities are not indicated.	
<input type="checkbox"/> 7. Ethical practices, netiquette and course grading policies are stated clearly. [QM 3.2]	<input type="checkbox"/> 7. Ethical practices, netiquette and course grading policies are present.	<input type="checkbox"/> 7. There are no ethical practice, netiquette or course grading policies.	
<input type="checkbox"/> 8. Required technical knowledge/skills for the course is stated clearly. [QM 1.7]	<input type="checkbox"/> 8. Technical knowledge/skills for the course is present.	<input type="checkbox"/> 8. Technical knowledge/skills for the course is not present.	

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
B. Instructor and Student Introduction Activities			
<input type="checkbox"/> 1. Students are introduced to the purpose and structure of the course. [QM1.2]	<input type="checkbox"/> 1. Students are introduced to the purpose or structure of the course but not all information is stated clearly.	<input type="checkbox"/> 1. Students are not introduced to either the purpose or the structure of the course.	<ul style="list-style-type: none"> • Student Orientation Module • Discussion: first week, orientation activity (introduction) • Assessment tool: quiz or self-assessment • Learning module/week includes media introduction to course and instructor • Discussion topic for clarification and questions
<input type="checkbox"/> 2. Self-introduction by the instructor is appropriate and available online. [QM 1.8]	<input type="checkbox"/> 2. Self-introduction by the instructor is available online.	<input type="checkbox"/> 2. Self-introduction by the instructor is not available online.	
<input type="checkbox"/> 3. Course Preview or introduction video/audio is available online to students on the first day of classes.	<input type="checkbox"/> 3. Course Preview or introduction video/audio is available online to students during the first week of classes	<input type="checkbox"/> 3. Course Preview or introduction video/audio is not available to students within the first week of classes.	

<input type="checkbox"/>	4. Students are required to introduce themselves to the class during the first week.	<input type="checkbox"/>	4. Students are asked to introduce themselves to the class. [QM 1.9]	<input type="checkbox"/>	4. Students are not asked to introduce themselves to the class.	
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Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
C. Course Navigation and Technical Requirements			
<input type="checkbox"/> 1. Course includes a “start here” button or icon on the course home page linking students to start-up information and instructions.	<input type="checkbox"/> 1. Instructions make clear how to get started and where to find various course components. [QM 1.1]	<input type="checkbox"/> 1. Instructions are either not present or unclear.	<ul style="list-style-type: none"> • Syllabus • Introduction module • Orientation module • Help Section/Get Support • Technical Requirements Tab • Course links
<input type="checkbox"/> 2. Course policies, external tools used in the course and/or institutional policies with which the student is expected to comply are adequately explained, with links to up-to-date policies.	<input type="checkbox"/> 2. Course policies, external tools used in the course and/or institutional policies with which the student is expected to comply are stated, or a link to current policies is provided. [QM 1.4; QM 6.5]	<input type="checkbox"/> 2. Course policies, external tools used in the course and/or institutional policies with which the student is expected to comply are not stated, or no link is provided to current policies.	
<input type="checkbox"/> 3. Course instructions articulate and link to an explanation of how the institution’s academic support services and resources can help students succeed in the course and how students can access the services.	<input type="checkbox"/> 3. Course instructions articulate or link to an explanation of how the institution’s academic support services and resources can help students succeed in the course and how students can access the services. [QM 7.3]	<input type="checkbox"/> 3. Course instructions do not articulate or link to an explanation of how the institution’s academic support services and resources can help students succeed in the course and how students can access the services.	
<input type="checkbox"/> 4. Technical requirements for learning activities and course communication tools for the course are clearly identified, and explanations are provided for their use.	<input type="checkbox"/> 4. Technical requirements for learning activities and course communication tools for the course are identified.	<input type="checkbox"/> 4. Technical requirements for learning activities and course communication tools for the course are not identified.	

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
D. Learner Support Services (Technical Support and Accessibility)			
<input type="checkbox"/> 1. Course instructions provide comprehensive details and links to clear descriptions of the technical support offered and how to access it.	<input type="checkbox"/> 1. Course instructions articulate or link to a clear description of the technical support offered and how to access it. [QM 7.1]	<input type="checkbox"/> 1. Course instructions do not articulate or link to a clear description of the technical support offered and how to access it.	<ul style="list-style-type: none"> • Syllabus • Introduction module • Orientation module • Help Section/Get Support • Technical Requirements Tab • Institutional Accessibility Policies Link • Course links
<input type="checkbox"/> 2. Course instructions link to accessibility statements for all technologies required in the course. [QM 8.2]	<input type="checkbox"/> 2. Course instructions link to accessibility statements for most technologies required in the course.	<input type="checkbox"/> 2. Course instructions do not link to accessibility statements for technologies required in the course.	
<input type="checkbox"/> 3. Course instructions articulate and link to the institution's formal accessibility policies and services, and explain how to access or use those services.	<input type="checkbox"/> 3. Course instructions articulate or link to the institution's accessibility policies and services. [QM 7.2]	<input type="checkbox"/> 3. Course instructions do not articulate or link to the institution's accessibility policies and services.	
<input type="checkbox"/> 4. Course provides alternative means of access to course materials in formats that meet the needs of diverse learners. [QM 8.3]	<input type="checkbox"/> 4. Course provides alternative means of access to most of the course materials in formats that meet the needs of diverse learners.	<input type="checkbox"/> 4. Course does not provide alternative means of access to course materials in formats that meet the needs of diverse learners.	
<input type="checkbox"/> 5. Course design facilitates readability, ease of use for multimedia and accommodates the use of assistive technologies. [QM 8.4 & QM 8.5]	<input type="checkbox"/> 5. Course design facilitates readability, ease of use for multimedia or accommodates the use of assistive technologies.	<input type="checkbox"/> 5. Course design does not facilitate readability, ease of use for multimedia or accommodate the use of assistive technologies.	

Standard 2: Instructional Elements

Learning/performance objectives and aligned measurable outcomes are clearly defined and communicated. Active learning is promoted through an interactive student/instructor learning environment, utilizing instructional media, multiple tools and materials for engaging students in the learning process.

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
A. Learning Objectives and Outcomes, Learning Units/Modules, Course Calendar			
<input type="checkbox"/> 1. Each learning module or unit includes a detailed lesson overview, including learning objectives.	<input type="checkbox"/> 1. Each learning module or unit includes a lesson overview	<input type="checkbox"/> 1. Each learning module or unit does not include a lesson overview.	<ul style="list-style-type: none">• Overview Page• Discussions• Articles• Media Resources• External Links to rich content
<input type="checkbox"/> 2. Learning objectives are appropriately designed for the discipline, course level, and student learning outcomes.	<input type="checkbox"/> 2. Learning objectives are appropriately designed for the level of the course. [QM 2.5]	<input type="checkbox"/> 2. Learning objectives are not appropriately designed for the level of the course.	
<input type="checkbox"/> 3. Learning objectives are stated clearly and written from the students' perspective. [QM 2.3]	<input type="checkbox"/> 3. Learning objectives are stated clearly.	<input type="checkbox"/> 3. Learning objectives are not stated clearly and not written from the students' perspective.	
<input type="checkbox"/> 4. Module/unit learning objectives clearly describe outcomes that are measurable and consistent with the course-level objectives and are displayed prominently in the unit/module.	<input type="checkbox"/> 4. Module/unit learning objectives describe outcomes that are measurable and consistent with the course-level objectives. [QM 2.2]	<input type="checkbox"/> 4. Module/unit learning objectives do not describe outcomes that are measurable and consistent with the course-level objectives.	

<input type="checkbox"/>	5. Module/unit includes required and supplemental resources and references that enrich course content and expand student knowledge. Clearly explains the distinction between required and optional materials. [QM4.6]	<input type="checkbox"/>	5. Module/unit includes required resources and references.	<input type="checkbox"/>	5. Module/unit includes no resources and/or references that enrich course content	
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Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
B. Instructional Media, Tools and Materials - Usage for Addressing Learning Objectives			
<input type="checkbox"/> 1. Purpose of instructional materials and how the materials are to be used for learning activities are clearly explained in terms of learning objectives.	<input type="checkbox"/> 1. Purpose of instructional materials and how the materials are to be used for learning activities are clearly explained. [QM 4.2]	<input type="checkbox"/> 1. Purpose of instructional materials and how the materials are to be used for learning activities are not clearly explained.	<ul style="list-style-type: none"> • Overview Page • Learning Modules • Media • Articles • Web Links • Discussions • Assignments • Web Conferencing
<input type="checkbox"/> 2. Instructional materials are sequenced appropriately and consistently across learning modules.	<input type="checkbox"/> 2. Instructional materials are sequenced appropriately.	<input type="checkbox"/> 2. Instructional materials are not sequenced appropriately.	
<input type="checkbox"/> 3. Instructional materials are clearly aligned with and contribute to the achievement of the stated course and module/unit learning objectives.	<input type="checkbox"/> 3. Instructional materials contribute to the achievement of the stated course and module/unit learning objectives. [QM 4.1]	<input type="checkbox"/> 3. Instructional materials do not contribute to the achievement of the stated course and module/unit learning objectives.	
<input type="checkbox"/> 4. Course tools and media encourage and support student engagement and guide the student to become an active learner.	<input type="checkbox"/> 4. Course tools and media support student engagement.	<input type="checkbox"/> 4. Course tools and media do not encourage or support student engagement.	

<input type="checkbox"/> 5. A variety of instructional materials are used to engage students in a multi-dimensional view of the course subject matter (QM 4.5)	<input type="checkbox"/> 5. More than one type of instructional material is used.	<input type="checkbox"/> 5. All course materials use the same basic presentation method.	
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Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
C. Learning Activities			
<input type="checkbox"/> 1. Learning activities promote the achievement of and align with the stated learning objectives.	<input type="checkbox"/> 1. Learning activities promote the achievement of the stated learning objectives. [QM 5.1]	<input type="checkbox"/> 1. Learning activities do not promote the achievement of the stated learning objectives.	<ul style="list-style-type: none"> • Discussions: threaded, blogs, private journals • Individual or group assignments • Projects • Student media projects • Peer review • Simulations • Debates • Interviews • Quizzes • Self-check • Exams • Research
<input type="checkbox"/> 2. Learning activities provide optimal opportunities that enrich and support active learning.	<input type="checkbox"/> 2. Learning activities provide opportunities that support active learning. [QM 5.2]	<input type="checkbox"/> 2. Learning activities provide few or no opportunities that support active learning.	

Standard 3: Interaction and Collaboration

Learning activities are designed to promote interaction and engagement for achieving learning objectives and outcomes.

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
A. Description of Individual and Group Activities and Responsibilities			
<input type="checkbox"/> 1. Requirements for student interaction are clearly articulated and models or sample interactions are provided to guide students	<input type="checkbox"/> 1. Requirements for student interaction are clearly articulated. [QM 5.4]	<input type="checkbox"/> 1. Requirements for student interaction are either unstated or unclear.	<ul style="list-style-type: none">• Syllabus• Overview Page• Discussion• Feedback• Web Conferencing
2. Course includes regular and substantive faculty-initiated interaction that promotes active student learning and engagement.	2. Course includes regular and substantive faculty-initiated interaction.	2. Course includes no or insufficient faculty-initiated interaction.	

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
B. Individual and Group Performance Requirements			
<input type="checkbox"/> 1. Course offers ample opportunities for interaction and communication student to student, student to instructor and student to content.	<input type="checkbox"/> 1. Course offers some opportunities for interaction and communication student to student, student to instructor and student to content.	<input type="checkbox"/> 1. Course offers few or no opportunities for interaction and communication student to student, student to instructor and student to content.	<ul style="list-style-type: none"> • Syllabus • Overview Page • Question Area • Discussion • Individual and Group Assignments / Activities
<input type="checkbox"/> 2. Course includes strategies to encourage substantive and meaningful contact between students and instructor to engage students in active learning experiences.	<input type="checkbox"/> 2. Course includes strategies to encourage contact between students and instructor to engage students in active learning experiences.	<input type="checkbox"/> 2. Course includes few or no strategies to encourage contact between students and instructor to engage students in active learning experiences.	<ul style="list-style-type: none"> • Projects • Student Media Assn • Interviews w/Experts • Student Demonstrations • Web Conferencing • Peer Review • Debate • Simulations • Role Play

Standard 4: Assessment and Feedback

Assessments are aligned with the learning objectives and performance expectations are clearly defined.

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
A. Assignments and Grading Policy			
<input type="checkbox"/> 1. General requirements for student performance are communicated clearly and consistently referenced throughout course materials.	<input type="checkbox"/> 1. General requirements for student performance are communicated clearly.	<input type="checkbox"/> 1. General requirements for student performance are not communicated clearly.	<ul style="list-style-type: none">• Syllabus• Overview Pages• Assignment• Directions• Grading Policy• Rubrics
<input type="checkbox"/> 2. Specific and descriptive criteria are provided for the evaluation of students' work and participation, align with student learning objectives, and are tied to the grading policy.	<input type="checkbox"/> 2. Specific and descriptive criteria are provided for the evaluation of students' work and participation and are tied to the course grading policy. [QM 3.3]	<input type="checkbox"/> 2. Specific and descriptive criteria are not provided for the evaluation of students' work or are unclear.	
<input type="checkbox"/> 3. Multiple forms of frequent and substantive performance feedback opportunities are available to students to track their learning progress including voluntary or multi-attempt practice activities.	<input type="checkbox"/> 3. Multiple forms of performance feedback are available for students to track their learning progress. [QM 3.5]	<input type="checkbox"/> 3. Multiple forms of performance feedback are not provided for students to track their learning progress.	

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
B. Clearly defined assessment activities			
<input type="checkbox"/> 1. Types of assessments selected measure the stated learning objectives, align with course activities and resources, and are ongoing throughout the course.	<input type="checkbox"/> 1. Types of assessments selected measure the stated learning objectives and are consistent with course activities and resources. [QM 3.1]	<input type="checkbox"/> 1. Types of assessments selected either do not measure the stated learning objectives or are not consistent with course activities and resources.	<ul style="list-style-type: none"> • Description of Assignment • Rubrics • Projects • Student Media Projects • Authentic Assessment • Peer Review
<input type="checkbox"/> 2. Assessment instruments selected are sequenced, varied, and appropriate to the student learning styles and work being assessed.	<input type="checkbox"/> 2. Assessment instruments selected are sequenced, varied and appropriate to the student work being assessed. [QM3.4]	<input type="checkbox"/> 2. Assessment instruments selected are not sequenced, varied or appropriate to the student work being assessed.	

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
C. Feedback processes			
<input type="checkbox"/> 1. Instructor's timeline and plan for classroom response time and feedback on assignments is clearly stated, consistent, and aligns with student needs.	<input type="checkbox"/> 1. Instructor's plan for classroom response time and feedback on assignments is clearly stated. [QM 5.3].	<input type="checkbox"/> 1. Instructor's plan for classroom response time and feedback on assignments is not clearly stated.	<ul style="list-style-type: none"> • Syllabus • Orientation Page • Assignment Directions • Feedback • Rubrics • Audio Feedback • Peer Review • Self-Assessment
<input type="checkbox"/> 2. Instructor provides clear, detailed, and constructive feedback commensurate to student performance throughout the course in a timely manner.	<input type="checkbox"/> 2. Instructor provides constructive feedback commensurate to student performance throughout the course.	<input type="checkbox"/> 2. Instructor's feedback is either not clear, not commensurate to student performance, or not given in a timely manner throughout the course.	

Standard 5: Course Evaluation

Course evaluations are utilized for implementing possible improvements for future course delivery.

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
A. Ongoing Course Evaluation			
<input type="checkbox"/> 1. Instructor encourages, provides mechanisms for, and responds to student feedback on course delivery and technology throughout the course.	<input type="checkbox"/> 1. Instructor encourages, provides mechanisms for, and responds to student feedback on course delivery and technology.	<input type="checkbox"/> 1. Instructor does not encourage, provide mechanisms for, or respond to student feedback on course delivery and technology.	<ul style="list-style-type: none">• Discussions• Self-Assessment• SGID• E-mail• Private Journals• Surveys• Office Hours• Announcements• Study Sessions• Help Tickets
<input type="checkbox"/> 2. Instructor initiates student participation in the EL midterm course evaluation and uses the feedback for course improvement.	<input type="checkbox"/> 2. Instructor initiates student participation in the EL midterm course evaluation.	<input type="checkbox"/> 2. Instructor does not initiate student participation in the EL midterm course evaluation.	

Best Practice	Accomplished	Needs Work	Examples of Evidence to Demonstrate Standard
B. End-of-term Course Evaluation			
<input type="checkbox"/> 1. Instructor provides and encourages appropriate end of course evaluation strategies for online learners.	<input type="checkbox"/> 1. Instructor provides appropriate end of course evaluation strategies for online learners.	<input type="checkbox"/> 1. Instructor does not provide appropriate end of course evaluation strategies for online learners.	<ul style="list-style-type: none"> • Online Evaluations • Announcements • Open Ended Questions • Surveys • Feedback Sheets
<input type="checkbox"/> 2. Instructor encourages and provides access to an end-of-term online course evaluation.	<input type="checkbox"/> 2. Instructor provides access to an end-of-term online course evaluation.	<input type="checkbox"/> 2. Instructor does not provide access to an end-of-term online course evaluation.	
<input type="checkbox"/> 3. Instructor makes appropriate adjustments to the course based upon previous course evaluation results as applicable.	<input type="checkbox"/> 3. Instructor makes adjustments to the course based upon previous course evaluation results as applicable.	<input type="checkbox"/> 3. Instructor does not make adjustments to the course based upon previous course evaluation results as applicable.	

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A Managed Online Program is a series of courses that lead to a degree and are offered in a compressed format of eight weeks. The course duration is scheduled within UNM's existing parts of term (Fall 1H, Fall 2H, Spring 1H, Spring 2H, and Summer). The courses are organized in a way that the program can be completed in a timely manner, usually about 12 to 18 months, again depending on the program and degree completion requirements. Students can apply and start a program at multiple times throughout the year. While these programs are available to anyone, the purpose of offering these Managed Online Programs is to attract a new student population that may never have considered attending UNM because of location or of other life circumstances. They are designed as a flexible option for earning a degree.

In addition to being able to quickly progress through course work, students who are in one of the Managed Online Program cohorts are charged a standard flat tuition rate per credit hour, regardless of where they reside – in-state, out-of-state, or international students residing outside of the United States. Regular UNM fees, including the online fee, are not assessed for the Managed Online Programs. However, differential tuition, college and course fees may apply. The current UNM Managed Online Program Tuition for the 2018-2019 Academic Year is as follows:

- Undergraduate Programs: \$349.04 per credit hour
- Graduate Programs: \$372.00 per credit hour

Academic units enter into an agreement with Extended Learning and the Provost Office for Managed Online Programs. Academic units also receive seed funding for meeting deliverables that are outlined in a Memorandum of Understanding (MOU), and benefit by receiving a tuition split that is also outlined in the MOU. Extended Learning will provide some marketing support and provide assistance in developing the course offering cycle and ensuring appropriate setup and course scheduling in the system.

An instructional designer is assigned to each program to work with the program faculty members to develop the courses. All of the courses in a Managed Online Program undergo a faculty peer review process designed to meet UNM's online course standards, which has been endorsed by UNM Faculty Senate and based upon international Quality Matters standards. Faculty members who develop and teach the courses are expected to participate in the "Introduction to Teaching Online" course, which is also known as "ITTO." The purpose of ITTO is three-fold. It is designed to help faculty:

- Analyze and apply Best Practices for Online Learning in an 8-week format
- Design and create an effective online course following the UNM Online Course Standards Rubric
- And, most importantly, relate to the student experience in an online learning environment

Currently, we offer 6 undergraduate degree completion Managed Online Programs:

- Bachelor of Business Administration (BBA)
- BA Chicana & Chicano Studies - Transnational Latino Studies concentration
- BS Dental Hygiene (launching Fall 2019)
- BA Native American Studies - Leadership concentration
- BA Psychology
- BA Journalism & Mass Communication - Strategic Communication concentration

We also offer a minor in Economics and an inventory of UNM Core curriculum courses through a partnership with college of Arts & Sciences and College of Fine Arts.

We also offer 6 master's programs in the Managed Online Program format:

- Master of Construction Management (MCM)
- MA in Organization, Information & Learning Sciences – Learning Officer concentration
- MS in Computer Engineering - Internet of Things concentration
- MS in Electrical Engineering - Space Systems concentration
- MS in Mechanical Engineering – Space Systems concentration
- Master of Music – Music Education concentration (launching Fall 2019)

In Fall 2019, we will also be launching a graduate certificate program in Chicano and Chicana Studies.

More information about UNM's Managed Online Programs, including specific information on current program offerings, can be found at online.unm.edu.



For deadlines and instruction visit: <http://online.unm.edu/admin-resources> | Email: onlinescheduling@unm.edu, 505.277.8585

Received by Extended Learning:
Date: _____ Initials: _____
Status: _____

Online Course Proposal Form

New Course Proposal

Redesign Course Proposal

Faculty name:	Title /Status (Prof, Lecturer, TA, Adjunct):	
Faculty email:	Department:	
Course Subject and Number:	Course Title:	
Credit hours:	Expected course cap:	
Last semester course was offered online:	When can you begin working on this course?	
Anticipated semesters to offer course. Your commitment is to offer the course online at least 3 semesters		
First Semester/Year: _____	2nd Semester/Year: _____	3rd semester/Year: _____
Faculty Experience		
Check all that apply <input type="checkbox"/> Taught this Course <input type="checkbox"/> Taught this course with UNM Learn <input type="checkbox"/> Taught a Fully Online Course at UNM		
What courses have you taught online and when did you last teach online?		

Provide a brief description and attach a degree worksheet noting how this course fits into your department's curriculum and graduation requirements.

What degree/program does this course support? What online courses are currently being offered that fulfill degree requirements? Within the degree, how does this course meet core, major, minor, or elective requirements?

Development Requirements and Stipend Information

All required meetings must be scheduled in advance through Loboweb/Banner. This includes orientations, exams, and exams with specific proctoring times/needs. While it best to offer your course 100% online with no scheduled meetings, no more than 25% of an online course can require face to face meetings.

The course must be developed in collaboration with the Extended Learning Faculty Services and Online Course Development Group. Development must be based on the UNM Best Practices Rubric.

Stipends may be available for developing an online course for the first time to compensate for some of the additional work.

- Is the academic unit requesting a development stipend? _____ Yes _____ No
- Stipends are generally available for full or part of term courses 8 to 16 weeks in length and for three credits.
- Stipends are not available for programs or courses receiving development funds from other sources
- If a stipend is not available for this course offering, would you still like to develop and offer the course online: _____ Yes _____ No

The stipend is transferred to the faculty's college when the course is fully developed, has passed review, and being offered online for the first time.

- Development is based on the UNM Best Practices Rubric:
<http://extendedlearning.unm.edu/faculty/documents/onlinecoursestandardsrubric.pdf>, and assessed by a review team, with processes established by the Online Course Advisory Council and results reported to you.
- Distribution of development stipends to faculty is at the discretion of both the college and the faculty's department.

Signature Approvals

I agree to offer the course online at least 3 semesters, and understand that the content in a course that receives a development stipend is jointly owned by the instructor and the department and can be reused for subsequent UNM online courses. Additionally, I agree to the stipulations and timeline for development of the course and the transfer of development stipend funds.

Faculty Signature: _____ Date: _____

Department Chair: _____ Chair's Signature: _____ Date: _____

College Dean: _____ Dean's Signature: _____ Date: _____

Course Proposals are due prior to the final schedule build date each semester. Email completed and signed forms to onlinescheduling@unm.edu

Attachment G: Online Degree Worksheet

This page is a tool for advising and should not be considered official documentation for any university process

BBA Management Information Systems

Credit Hours Available by Delivery Type

Number of credits required for degree:	120
% Online	85%

Pre-Admission course work online **40**
Pre-Admission course work required **49**
% Pre-Admission course work online **82%**

Program Hours online **71**
Program Hours required **71**
% Program online **100%**

credits NOT online **9**

Courses Required for Graduation	Credit Hours	Credit Hours for Online	Last Semester Offered
Anderson Pre-Admission Work:			
WRITING & SPEAKING (9 Credit Hours):	9		
ENGL 110	3		FA 18
ENGL 120	3		FA 18
ENGL 219 OR 220	3		FA 18
MATHEMATICS (6 Credit Hours):	6		
MATH 121	3		FA 18
MATH 180			No
PHYSICAL & NATURAL SCIENCES (7 Credit Hours):	7		
Choose from UNM Core Sheet	7		FA 18
SOCIAL & BEHAVIORAL SCIENCES (9 Credit Hours):	9		
ECON 105	3		FA 18
ECON 106	3		FA 18
Choose from UNM Core Sheet	3		FA 18
HUMANITIES (3 Credit Hours):	3		
Choose from UNM Core Sheet	3		FA 18
FOREIGN LANGUAGE (3 Credit Hours):	3		
Choose from UNM Core Sheet	3		3
FINE ARTS (3 Credit Hours):	3		
Choose from UNM Core Sheet	3		3

MANAGEMENT (6 Credit Hours):	6		
MGMT 202			No
STAT 145		3	FA 18
COMPUTER SCIENCE (3 Credit Hours):	3		
CS 150L			No
BBA Core			
MGMT 300	3	3	FA 18
MGMT 303	3	3	FA 18
MGMT 306	3	3	FA 18
MGMT 308	3	3	FA 18
MGMT 310	3	3	FA 18
MGMT 322	3	3	FA 18
MGMT 326	3	3	FA 18
MGMT 328	3	3	FA 18
MGMT 398	1	1	FA 18
MGMT 450	3	3	FA 18
MGMT 498	3	3	SU 18
Concentration			
MGMT 329	3	3	FA 18
MGMT 330	3	3	FA 18
MGMT 459	3	3	FA 18
Choose 6 credit hours:	6	6	
MGMT 331			FA 18
MGMT 336			FA 18
MGMT 337			FA 18
MGMT 437			No
MGMT 490			SP 18
UPPER DIVISION HUMANITIES	3	3	
FREE ELECTIVE	22	22	

Reviewed by ECG 11/5/2018

FA 17, SP 18, SU 18, FA 18

notes

will be online FA 19



EAB

MARKET RESEARCH BRIEF

Market Demand for a Bachelor's-Level **Chicana** **and Chicano Studies** Program

Analysis of Employer Demand and Program
Characteristics

COE Forum

Jack Thornton

Market Research Associate

Grace Anderson

Market Research Manager

LEGAL CAVEAT

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Table of Contents

1) Research Methodology.....	4
Project Challenge	4
Methodology	4
Emsi Analyst and Alumni Insight	4
Project Sources	5
Profiled Institutions.....	5
2) Executive Summary	6
3) Characteristics of Peer Programs.....	7
Program Characteristics	7
Student Demand	7
4) Trends in Employer Demand	10
Historical Demand	10
Postgraduate Outcomes.....	11

1) Research Methodology

Project Challenge	Leadership at University of New Mexico approached the Forum with a request to assess the market demand for a bachelor's-level Chicana and Chicano studies program. Through quantitative data analytics and secondary research, the Forum sought to assess the market demand for a bachelor's-level Chicana and Chicano studies program.
EAB's market research function provides insights which guide strategic programmatic decisions at member institutions. The Forum combines qualitative and quantitative data to help administrators identify opportunities for new program development, assess job market trends, and align curriculum with employer and student demand.	
EAB reports rely primarily on labor market data from Emsi Analyst™ tool (description below). Reports occasionally use data from the United States Census Bureau and United States Bureau of Labor Statistics data to explore occupation and job trends. Market research reports may also incorporate Integrated Postsecondary Education Data System (IPEDS) data to assess student enrollment, demographics, and completion rates across competitor programs.	
Methodology	Unless otherwise stated, this report includes online job postings data from August 2017 to July 2018. The forum identified top titles and skills as well as demand over time. The Forum also used Google Trends data to assess search popularity for relevant degree titles.
To best estimate the market demand for graduates of a bachelor's-level Chicana and Chicano Studies program, the Forum analyzed job postings that required skills commonly conferred in a liberal arts degree program to identify relevant titles (e.g., 'research,' 'leadership,' 'communications'). The Forum then used 26 of the most frequently posted relevant titles as search parameters to assess employer demand at the national and regional levels (e.g., 'program coordinator,' 'project manager,' 'teacher').	
Emsi Analyst and Alumni Insight	EAB's Partner for Comprehensive Labor Market Data
This report includes data made available through EAB's partnership with Emsi (Economic Modeling Specialists International), a labor market analytics firm serving higher education, economic development, and industry leaders in the U.S., Canada, and the United Kingdom.	
Emsi curates and maintains the most comprehensive labor market data sets available for academic program planning, providing real-time job posting data, workforce and alumni outcomes data, and traditional government sources of data. Under this partnership, EAB may use Emsi's proprietary Analyst™ and Alumni Insight™ tools to answer member questions about employer demand, the competitive landscape, in-demand skills, postings versus actual hires, and skills gaps between job postings and professionals in the workforce. The Emsi tools also provide EAB with in-depth access to unsuppressed, zip-code-level government data for occupations, industries, programs, and demographics. For more complete descriptions of the Emsi tools, visit:	
<ul style="list-style-type: none">• http://www.economicmodeling.com/analyst/• https://www.economicmodeling.com/alumni-insight/	

To learn more about Emsi and its software and services, please contact Bob Hieronymus, Vice President of Business Development at bob.hieronymus@economicmodeling.com or (208) 883-3500.

Project Sources

The Forum consulted the following sources for this report:

- EAB's internal and online research libraries (eab.com)
- Bureau of Labor Statistics (bls.gov)
- Profiled program webpages:
 - Arizona State University, School of Transborder Studies, accessed 24 August 2018, <https://sts.asu.edu/degrees/undergrad>
 - Iowa State University, U.S. Latino/a Studies Program, accessed 24 August 2018, <http://catalog.iastate.edu/collegeofliberalartsandsciences/uslatino-a-studies/#interdisciplinarymajortext>
 - University of California-Berkeley, Chicana/o and Latina/o Studies, accessed 24 August 2018, <http://ethnicstudies.berkeley.edu/areas-of-study/area/chicano-latino-studies>
 - University of California-Los Angeles, The Chicana/o Studies Major, accessed 24 August 2018, <http://www.chavez.ucla.edu/undergraduate/requirements>
 - University of Texas-El Paso, Online Bachelor of Arts in Chicano Studies, accessed 24 August 2018,
<https://www.utep.edu/extendeduniversity/utepconnect/online-programs/bachelor-programs/online-bachelor-of-arts-in-chicano-studies.html>

Profiled Institutions

The Forum sought to identify and profile bachelor's-level Chicana and Chicano studies programs large public institutions similar to **University of New Mexico**. The Forum conducted secondary research on the following institutions:

A Guide to Institutions Profiled in this Brief¹

Institution	Location	Approximate Institutional Enrollment (Undergraduate/Total)	Carnegie Classification
Arizona State University	Mountain West	59,000 / 71,000	Doctoral Universities: Highest Research Activity
Iowa State University	Midwest	30,500 / 36,000	Doctoral Universities: Highest Research Activity
University of California-Berkeley	Pacific West	30,500 / 42,000	Doctoral Universities: Highest Research Activity
University of California-Los Angeles	Pacific West	31,000 / 45,000	Doctoral Universities: Highest Research Activity
University of Texas-El Paso	South	20,000 / 23,500	Doctoral Universities: Higher Research Activity

1) National Center for Education Statistics.

2) Executive Summary

Increasing national and regional employer demand for bachelor's-level professionals with skills relevant to a Chicana and Chicano studies suggest a promising job market for program graduates. At the national level, employers posted 305,602 relevant openings in July 2018, a 65 percent increase from the 184,822 relevant postings in September 2016. Regional demand for bachelor's-level professionals with skills relevant to a Chicana and Chicano studies program rose 72 percent during this period (i.e., from 49,762 to 85,183 postings).

Encourage students to enroll in business courses outside of the Chicana and Chicano Studies major to prepare them for positions that national and regional employers commonly seek to fill. Though the flexible nature of a liberal arts degree allows graduates to pursue careers in many fields, job postings data indicate high demand for bachelor's-level candidates to fill business roles. Business roles represents 16 of the top 20 most commonly posted national titles national and 16 of the top 20 regional titles (e.g., 'business development manager,' 'account manager'). Employers frequently request that candidates possess business skills for these positions (e.g., 'sales management,' 'marketing strategies'). In addition to high demand for business skills, national data on alumni workforce outcomes indicate that graduates of bachelor's-level Chicana and Chicano studies programs often enter postgraduate positions in education (e.g., 'ESL teacher,' 'English instructor').

Reported bachelor's-level Chicana and Chicano studies completions declined four percent from 2012 to 2017 (i.e., from 716 to 687 completions). Reported completions peaked at 728 completions in 2013 and then decreased to 639 completions in 2015 (i.e., a 12 percent decrease). In addition, National Center for Education Statistics data indicate that only one institution besides **University of New Mexico** offers a bachelor's-level Chicana and Chicano studies program with distance learning components (i.e., **University of Texas-El Paso**)

The degree title "Chicano Studies" exceeds similar titles in search popularity (e.g., "Latino Studies," "Hispanic Studies"). National Google Trends data from the past year indicate that searches for "Chicano Studies" peaked during the week of April 8th, 2018. Users searched for "Latino Studies" 46 percent and "Hispanic Studies" 35 percent as much during that same week.

Focus out-of-state marketing and recruitment efforts for the online bachelor's-level Chicana and Chicano Studies program in California to increase applications and secure enrollments. The vast majority of searches for "Chicano Studies" last year occurred in California. In Texas, the state with the second highest search popularity for "Chicano Studies," Google users searched for the phrase just ten percent as much as California users.

3) Characteristics of Peer Programs

Program Characteristics

Only One Competitor Institution That Reported Completions in the Last Five Years Offers an Online Degree

University of Texas-El Paso represents the only profiled program that offers a bachelor's-level Chicana and Chicano studies program with distance learning components. According to data from the National Center for Education Statistics, no other institution that reported bachelor's-level Chicana and Chicano studies completions from 2012 to 2016 offers a program that includes distance learning components.² The remaining four profiled institutions offer on-campus programs.

Academic requirements for competitor programs range from 30 to 36 credits or 12 to 13 courses. Tuition ranges from \$325 per credit for Iowa residents at **Iowa State University** to \$3,505 per credit for non-California residents at **University of California-Berkeley**.

Characteristics of Bachelor's-Level Chicana and Chicano Studies Programs

Profiled Institutions

Institution	Program Title	Modality	Academic Requirements	Per-Credit Tuition
Arizona State University	Bachelor of Arts in Transborder Chicana/o and Latino/a Studies	On-campus	30 credits	<ul style="list-style-type: none">\$880 (in-state)\$2,360 (out-of-state)
Iowa State University	Interdisciplinary Studies Major (US Latino/a Studies Track)	On-campus	36 credits	<ul style="list-style-type: none">\$325 (in-state)\$925 (out-of-state)
University of California-Berkeley	Undergraduate Major in Chicana/o and Latino/a Studies	On-campus	12 courses	<ul style="list-style-type: none">\$1,175 (in-state)\$3,505 (out-of-state)
University of California-Los Angeles	Bachelor of Arts in Chicana/o Studies	On-campus	13 courses	<ul style="list-style-type: none">\$555 (in-state)\$1,760 (out-of-state)
University of Texas-El Paso	Bachelor of Arts in Chicano Studies	Online	30 credits	<ul style="list-style-type: none">\$335 (in-state)\$535 (out-of-state)

Student Demand

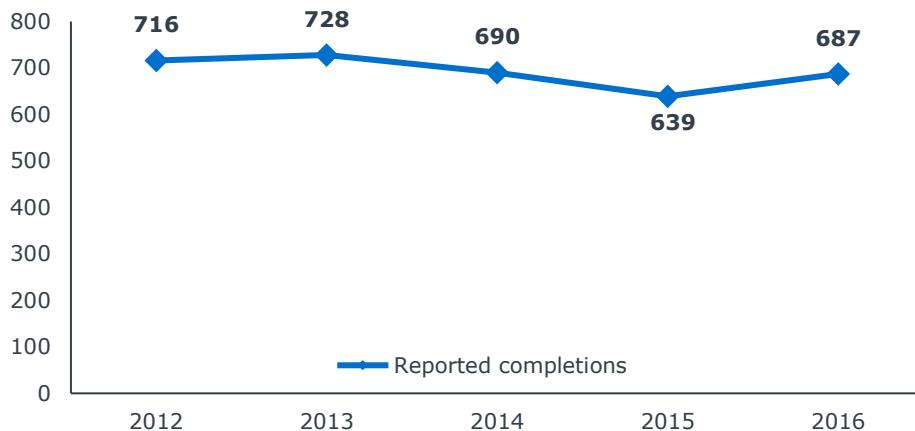
Reported Bachelor's-Level Chicana and Chicano Studies Degree Completions Declined Four Percent from 2012 to 2016

Over the last five years, the total number of reported completions for bachelor's-level Chicana and Chicano studies programs decreased by four percent (i.e., from 716 to 687 completions). Reported completions fluctuated during this period, peaking at 728 completions in 2013 and declining to 639 completions two years later (i.e., a 12 percent decrease).

2) National Center for Education Statistics, IPEDS, CIP Code 05.0203 (Hispanic-American, Puerto Rican, and Mexican-American/Chicano Studies)

Reported Completions for Bachelor's-Level Chicana and Chicano Studies Programs

2012-2016, IPEDS³

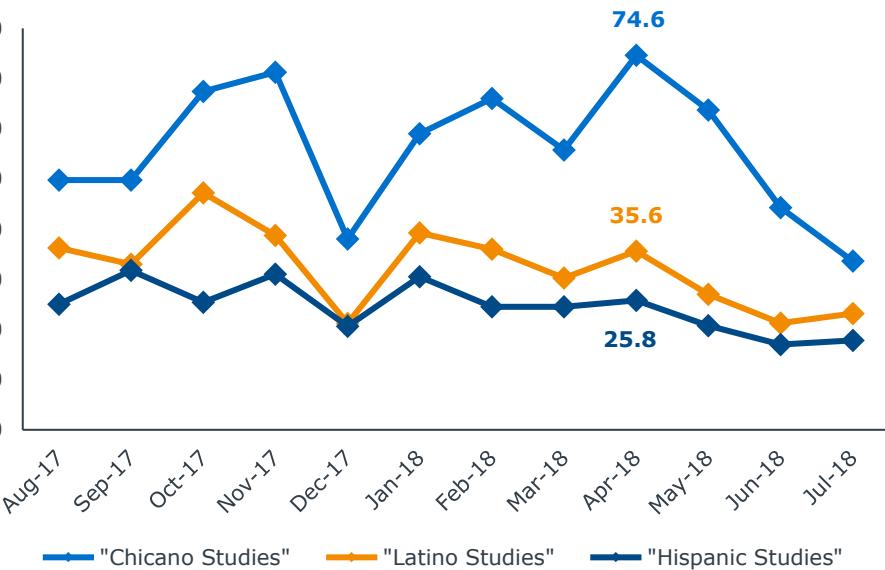


Google Trends data indicates much greater search popularity for the phrase "Chicano Studies" compared to "Latino Studies" and "Hispanic Studies" across the United States. In the last 12 months, nationwide searches for "Chicano Studies" peaked during the week of April 8th, 2018. In contrast, users searched for "Latino Studies" 46 percent and "Hispanic Studies" 35 percent as much during that same week. Google Trends data also indicate that the vast majority of searches for "Chicano Studies" occur in California. Google users in Texas, the state with the second highest search popularity for "Chicano Studies" in the past year, searched for the phrase ten percent as much as California users. Administrators at **University of New Mexico** should therefore focus any out-of-state marketing and recruitment efforts for the online bachelor's-level Chicana and Chicano Studies program in California to capitalize on student interest.

Average Search Popularity of "Chicano Studies," "Latino Studies," and "Hispanic Studies" Per Month

August 2017-July 2018, National Data⁴

Numbers represent search interest relative to highest level of popularity. A value of 100 represents peak popularity for the more popular term. A value of 50 means that the term is half as popular. In the last 12 months, searches for "Chicano Studies" peaked during the week of April 8th, 2018. All values on this chart represent the monthly averages of search interest for each term relative to that peak.

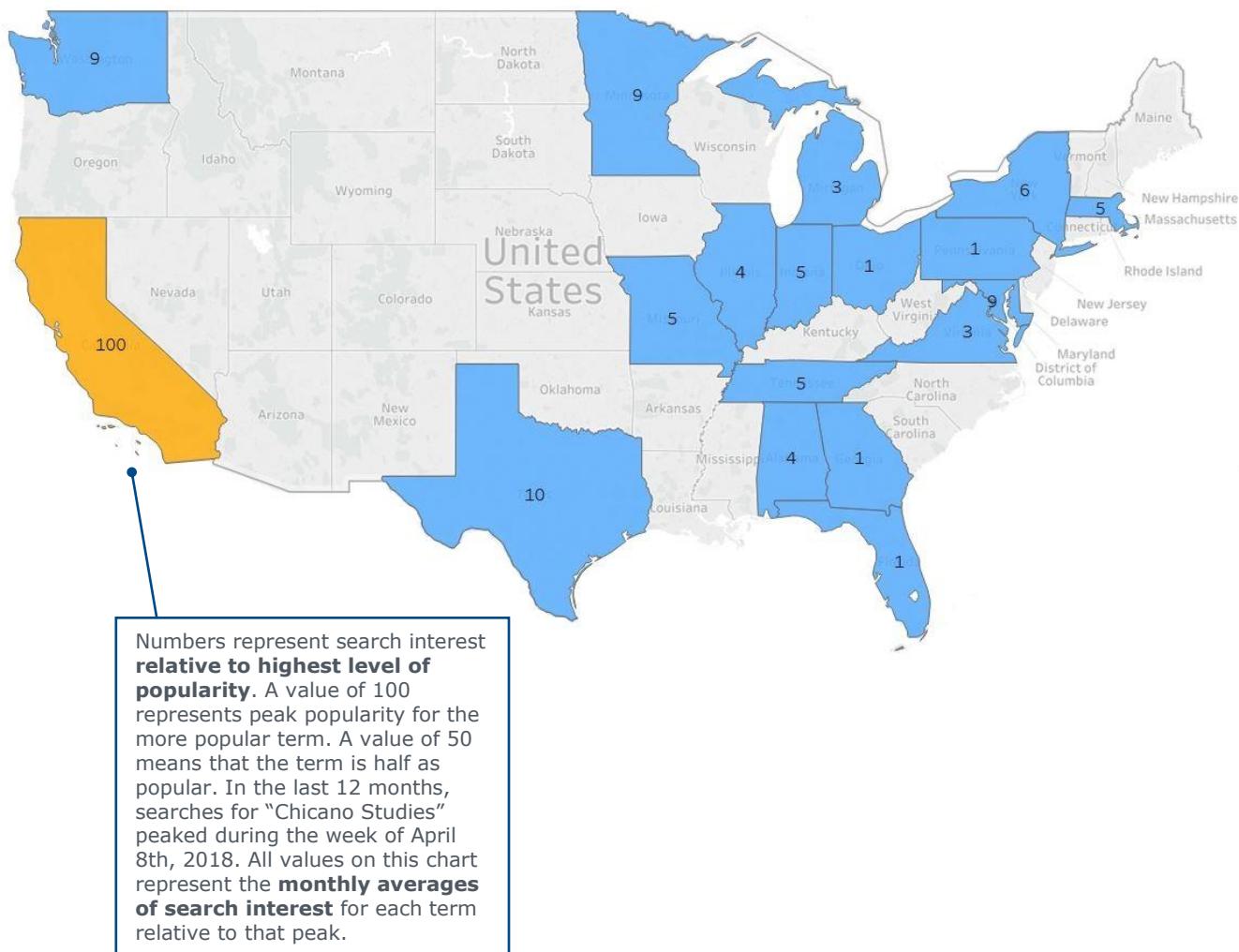


3) National Center for Education Statistics, IPEDS, CIP Code 05.0203 (Hispanic-American, Puerto Rican, and Mexican-American/Chicano Studies)

4) [Google Trends](#)

Search Popularity of the Phrase "Chicano Studies" By State

August 2017-July 2018, National Data⁵



Numbers represent search interest relative to highest level of popularity. A value of 100 represents peak popularity for the more popular term. A value of 50 means that the term is half as popular. In the last 12 months, searches for "Chicano Studies" peaked during the week of April 8th, 2018. All values on this chart represent the monthly averages of search interest for each term relative to that peak.

5) [Google Trends](#)

4) Trends in Employer Demand

Historical Demand

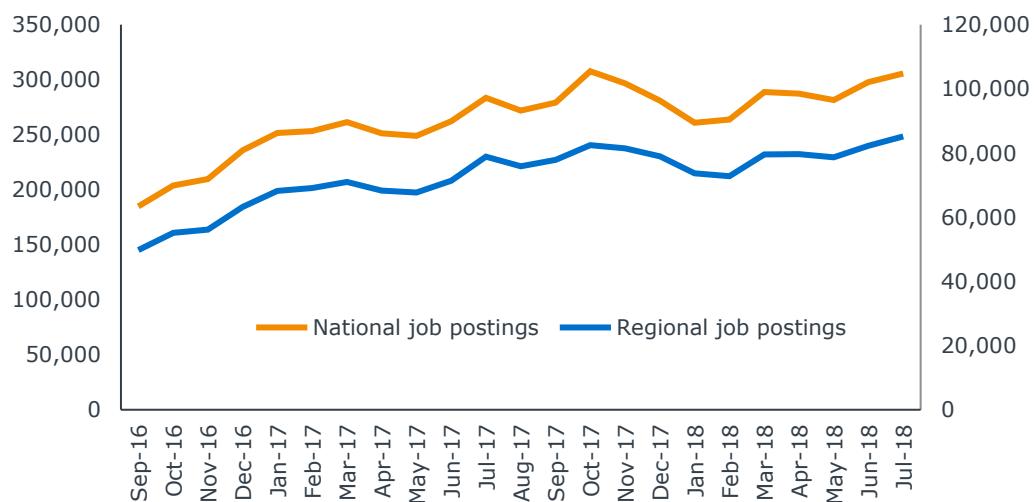
Regional Demand for Bachelor's-Level Professionals in Relevant Occupations Increased 66 Percent from September 2016 to July 2018

Administrators at **University of New Mexico** should note that rising employer demand at the national and regional levels indicates a promising job market for program graduates. National employers posted 305,602 jobs for bachelor's-level professionals with skills relevant to a Chicana and Chicano studies program in July 2018, a 65 percent increase from the 184,822 relevant jobs posted in September 2016. Similarly, regional employer demand for bachelor's-level professionals with skills relevant to a Chicana and Chicano studies program increased 72 percent across this period (i.e., from 49,762 to 85,183 postings).

From 2016 to 2026, the Bureau of Labor Statistics projects average growth in national employment of "sales managers," a top occupation in which employers demonstrate demand for bachelor's-level professionals with skills relevant to a Chicana and Chicano studies program (i.e., seven percent).⁶ By comparison, the BLS projects seven percent employment growth across all occupations nationwide. The BLS also projects that national employment of "foreign languages and literature teachers, postsecondary" will increase 12 percent across this period, while employment of "secondary school teachers, except special and career/technical education" will increase seven percent. National alumni outcomes data indicate graduates of bachelor's-level Chicana and Chicano Studies programs often work in education.

Historical Demand for Bachelor's-Level Chicana and Chicano Studies Professionals

September 2016-July 2018, National and Regional Data⁷



6) Bureau of Labor Statistics
7) Emsi Analyst™

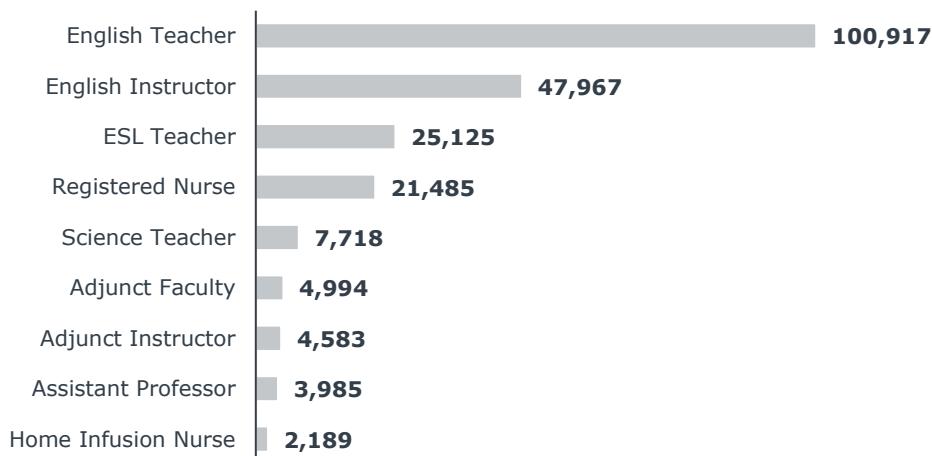
Ensure Students Acquire In-Demand Business Skills to Prepare Them for Careers across Diverse Fields

Given the flexibility of a liberal arts degree, graduates of a bachelor's-level Chicana and Chicano studies program may pursue highly diverse career paths. National data on alumni workforce outcomes indicate that graduates of bachelor's-level Chicana and Chicano studies programs frequently hold educational positions (e.g., 'ESL teacher,' 'English instructor'). In addition, 'registered nurse' and 'home infusion nurse' represent two of the top 10 titles for bachelor's-level Chicana and Chicano studies program alumni, which suggests that students may seek postgraduate roles in the medical field.

Positions Commonly Held by Graduates of Bachelor's-Level Chicana and Chicano Studies Programs

August 2017-July 2018, National Data⁸

n = 280,311 job postings

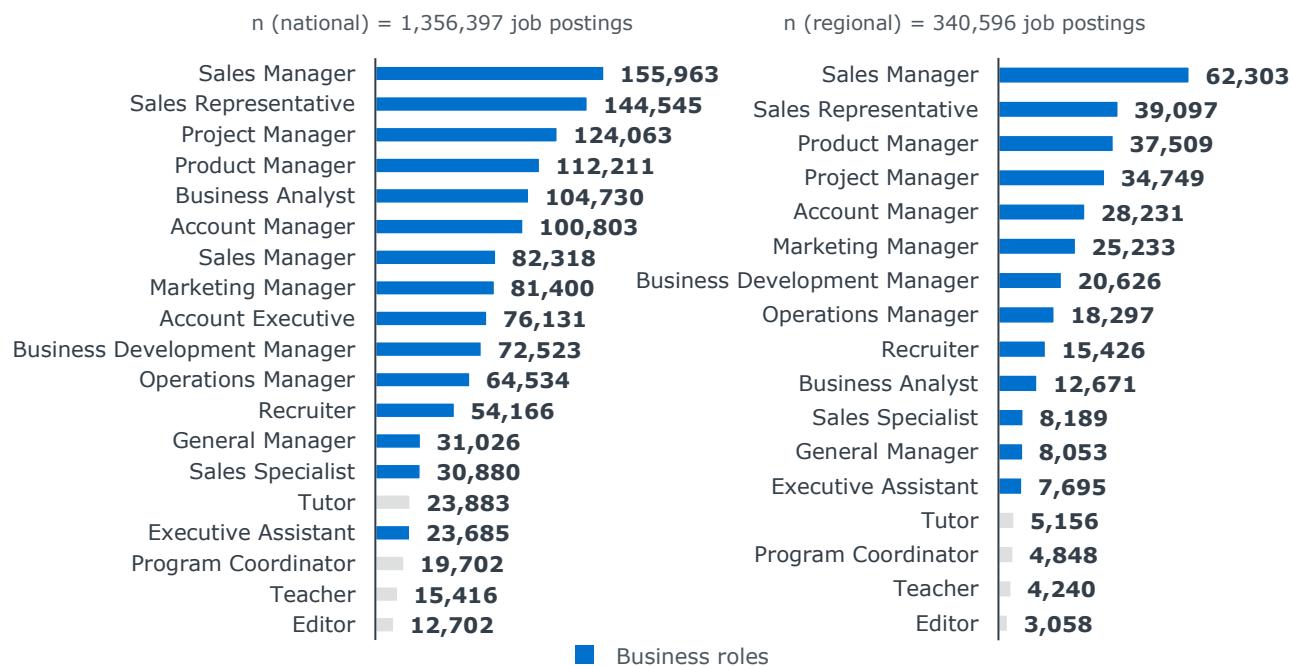


National and regional employers commonly post business roles for bachelor's-level professionals with skills relevant to a Chicana and Chicano studies program. Business roles represents 16 of the top 20 most commonly posted national titles and 16 of the top 20 regional titles (e.g., 'business development manager,' 'account manager'). Employers commonly request that bachelor's-level candidates possess business skills for these positions (e.g., 'sales management,' 'marketing strategies'). 'Selling techniques' represents the top skill at the national and regional levels (i.e., 303,300 of 1,356,397 national postings and 65,867 of 340,596 regional postings). Though graduates may acquire many of these skills such as Salesforce and Microsoft Access through on-the-job training, administrators should encourage students in the bachelor's-level Chicana and Chicano studies to complete business courses outside of their majors to prepare them for sales and general business roles. Advise them to pursue internships in organizations that relate to their academic interests to help them develop these skills in a professional context.

8) Emsi Alumni Insight™

Top Titles for Bachelor's-Level Professionals with Skills Conferred in a Chicana and Chicano Studies Program

August 2017-July 2018, National and Regional Data⁹



Top Skills Most Commonly Requested by Employers that Seek to Hire Bachelor's-Level Professionals with Skills Conferred in a Chicana and Chicano Studies Program

August 2017-July 2018, National and Regional Data¹⁰



*Customer Relationship Management

9) Emsi Analyst™
10) Emsi Analyst™



EAB

DATA SNAPSHOT

Market Demand for an Online Master of Science in Computer Engineering with an Internet of Things Concentration

Analysis of Employer Demand, Program Design, and
Marketing Strategies

COE Forum

Kirsten Hinck

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Table of Contents

1) Research Methodology	4
Project Challenge	4
Methodology and Definitions	4
Burning Glass Labor/Insight™	5
Project Sources	5
Profiled Institutions.....	6
2) Executive Summary.....	7
3) Employer Demand	8
Demand over Time	8
Job Titles for Program Graduates.....	9
Locations with High Demand	10
4) Program Design	11
Comparable Program Characteristics.....	11
Program Titling	12
5) Student Recruitment	13
Marketing Messages.....	13
Professional Associations	14

1) Research Methodology

Project Challenge Leadership at the University of New Mexico approached the Forum as they prepared to launch a new online Master of Science in Computer Engineering with an Internet of Things concentration. Through secondary research of comparable programs and quantitative data analytics, the Forum sought to assess the market viability of an online master's-level computer engineering program with an internet of things concentration.

EAB's market research function provides insights which guide strategic programmatic decisions at member institutions. The Forum combines qualitative and quantitative data to help administrators identify opportunities for new program development, assess job market trends, and align curriculum with employer and student demand.

EAB reports rely primarily on labor market data from the Burning Glass Labor/Insight™ tool (description below). Reports occasionally use data from the United States Census Bureau and United States Bureau of Labor Statistics data to explore occupation and job trends. Market research reports may also incorporate Integrated Postsecondary Education Data System (IPEDS) data to assess student enrollment, demographics, and completion rates across competitor programs.

Methodology and Definitions

Methodology: Unless stated otherwise, this report includes data from online job postings from April 2017 to March 2018. The Forum identified historical demand trends, common job titles, and locations in the profiled region where employers demonstrate high demand for master's-level internet of things professionals.

Definitions: "Regional data" and "regional" refer to:

- Arizona,
- California,
- Colorado,
- Kansas,
- Missouri,
- Nevada,
- New Mexico,
- Oklahoma,
- Texas, and
- Utah.

Annual growth in job postings is measured in the change between July 2013 and December 2017 by six-month halves (i.e., H2 2013 is July 2013 to December 2013).

EAB's Partner for Real-Time Labor Market Data

This report includes data made available through EAB's partnership with Burning Glass Technologies, a Boston-based leader in human capital data analytics. Burning Glass Technologies specializes in the use of web spidering technology to mine more than 80 million online job postings and analyze real-time employer demand. Under this partnership, EAB may use Burning Glass's proprietary Labor/Insight™ tool to answer member questions about employer demand for educational requirements, job titles, and competencies over time, as well as by geography. The tool considers job postings "unspecified" for a skill, industry, employer, geography, certification, or educational requirement when the job posting did not advertise for one of these particular job characteristics. Unspecified postings represent null values and should be excluded from the total number (n value) of job postings analyzed in the query. A more complete description of the tool is available at <http://www.burning-glass.com/products/laborinsight-market-analysis/>.

For more information about the Labor/Insight™ tool, please contact Betsy Denious, Director of Business Development Learning & Policy at bdenious@burning-glass.com or 301-525-6596.

Project Sources

The Forum consulted the following sources for this report:

- EAB's internal and online research libraries (eab.com)
- National Center for Education Statistics (NCES) (<http://nces.ed.gov/>)
- Bureau of Labor Statistics (BLS) (<http://bls.gov/>)
- Profiled programs' webpages:
 - Indiana University-Bloomington, Master of Science in Intelligent Systems Engineering, accessed April 2018,
<https://www.sice.indiana.edu/graduate/degrees/engineering/ms.html>.
 - Lewis University, Master of Science in Computer Science: Intelligent Systems concentration, accessed April 2018, <https://online.lewisu.edu/mscs/intelligent-systems-concentration/courses?cmqfrm=https%3A%2F%2Fwww.google.com%2F>.
 - Northeastern University, Master of Science in Computer Systems Engineering: Concentration in Internet of Things, accessed April 2018,
<http://www.coe.neu.edu/degrees/ms-cse-iot>.
 - Stanford University, Internet of Things Graduate Certificate, accessed April 2018,
<https://scpd.stanford.edu/public/category/courseCategoryCertificateProfile.do?method=load&certificateId=78197420>.
 - University of Pittsburgh, Intelligent Systems Graduate Program, accessed April 2018, <http://www.isp.pitt.edu/>.
 - University of West Scotland, Master of Science in Internet of Things, accessed April 2018, <https://www.mastersportal.com/studies/156098/internet-of-things.html>.

Profiled Institutions

The Forum prioritized research of regional institutions that offer internet of things concentrations in master's-level computer engineering programs. The Forum profiled comparable programs via secondary research at the following institutions:

A Guide to Institutions Profiled in this Brief¹

Institution	Location	Approximate Institutional Enrollment (Undergraduate/Total)	Carnegie Classification
Indiana University-Bloomington	Midwest	39,000 / 49,500	Doctoral Universities: Highest Research Activity
Lewis University	Midwest	6,500 / 4,500	Master's Colleges and Universities: Larger Programs
Northeastern University	Northeast	13,500 / 20,500	Doctoral Universities: Highest Research Activity
Stanford University	Pacific West	7,000 / 17,000	Doctoral Universities: Highest Research Activity
University of Pittsburgh	Mid-Atlantic	19,000 / 28,500	Doctoral Universities: Highest Research Activity
University of West Scotland	United Kingdom	13,500 / 16,000	Not applicable

1) National Center for Education Statistics.

2) Executive Summary

Growing regional demand for master's-level internet of things professionals suggests an opportunity for the *University of New Mexico* to develop an internet of things concentration. Regional employer demand for master's-level internet of things professionals grew 820 percent from July 2013 to December 2017 (i.e., from 196 to 1,804 postings). National employer demand for master's-level internet of things professionals grew at an even faster rate of 1,036 percent in this period (i.e., 377 to 4,283 postings). In the past year, employers list 3,704 job postings for master's-level internet of things professionals in the profiled region and 8,866 postings nationwide.

Market the internet of things concentration to working professionals with engineering experience who seek career advancement or specialization. Profiled programs typically recruit students who possess a technical undergraduate degree (e.g., engineering, mathematics). Highlight skills acquired through the program in marketing materials (e.g., network design, data analytics, security, application development) to indicate the program's relevance to students who seek career advancement. Profiled institutions often advertise growing job opportunities for internet of things professionals across industries (e.g., energy, healthcare, transportation) to attract career-minded students.

Offer courses in short, eight-week modules to accommodate students with competing time commitments (e.g., working professionals). EAB research indicates short modules provide the flexibility adult learners seek in academic programs.² Among profiled programs, **Lewis University** and **Stanford University** offer some, if not all, courses in modules of eight weeks or fewer. Among profiled institutions, only Lewis University and Stanford University offer internet of things programs online.

Continue to include "internet of things" in the concentration title to align with industry trends. Web users search for "internet of things" more frequently than other relevant terms (i.e., "smart technology," "intelligent systems," "internet of everything").³ Three profiled institutions include "internet of things" in either the profiled program or concentration title. Three profiled institutions include "intelligent systems" in the program title (e.g., Master of Science in Intelligence Systems Engineering at **Indiana University-Bloomington**).

2) [EAB Research: Recruiting Nontraditional Students Requires Nontraditional Strategies](#)
3) Google Trends, April 2017 to March 2018, National Data

3) Employer Demand

Demand over Time

Offer an Internet of Things Concentration to Meet Growing Employer Demand for Professionals with Internet of Things Skills

Regional employers post 1,804 job postings for master's-level internet of things professionals in the second half of 2017, an 820 percent increase from the 196 relevant job postings in the second half of 2013. By comparison, regional demand for all master's-level professionals grew 13 percent between H2 2013 and H2 2017 (i.e., 211,913 to 241,131 postings). National demand for master's-level internet of things professionals grew more quickly than regional demand for master's-level internet of things professionals from H2 2013 to H2 2017 (i.e., 1,036 percent compared to 820 percent growth).

Regional employers most frequently seek master's-level internet of things professionals for 'software developer, applications' roles (i.e., 980 postings). The Bureau of Labor Statistics (BLS) anticipates employment of "software developers, applications" will increase 31 percent between 2016 and 2026, faster than the average projected growth across all occupations (i.e., seven and a half percent).⁴ The BLS attributes this growth to rapidly growing demand for professionals who can develop new computer software.⁵

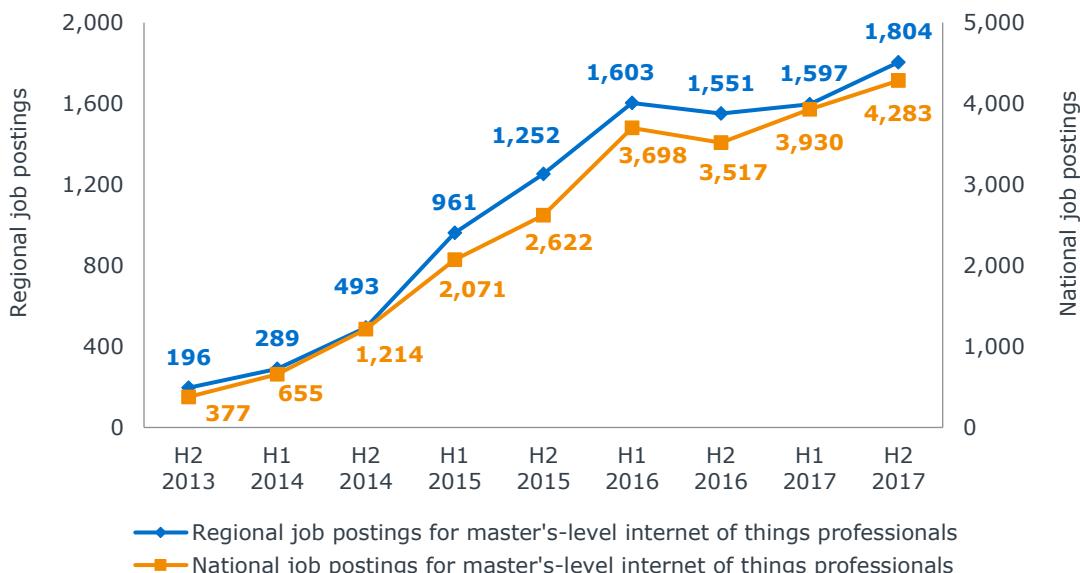
Regional Job Postings

3,704

Regional employers post 3,704 job postings for master's-level internet of things professionals in the last 12 months.

Demand over Time for Master's-Level Internet of Things Professionals

July 2013-December 2017, Regional Data⁶



4) [Bureau of Labor Statistics](#)

5) [Bureau of Labor Statistics](#)

6) Burning Glass Labor/Insight™

Job Titles for Program Graduates

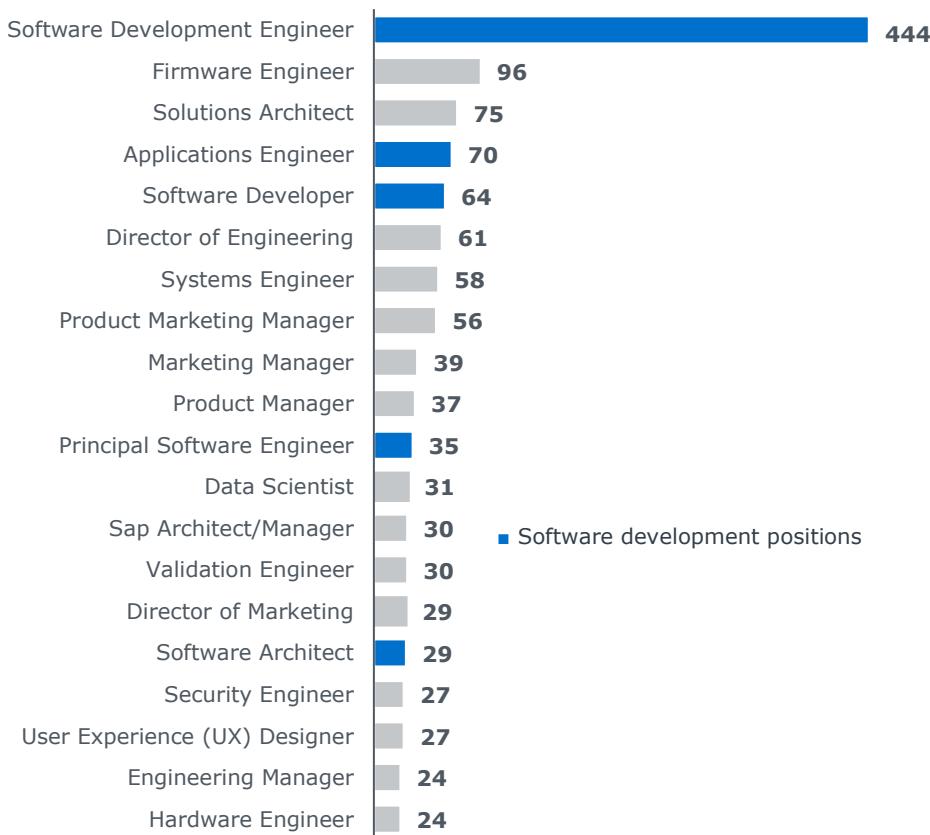
Confer Software Development Skills to Prepare Graduates for In-Demand Software Engineer Roles

As expected, regional employers most frequently seek master's-level internet of things professionals for 'software development engineer' positions. Postings for 'software development engineers' represent 12 percent of all regional job postings for master's-level internet of things professionals (i.e., 444 of 3,704 postings). In addition to 'internet of things' skills, job postings for 'software development engineers' most frequently list 'software engineering,' 'C++,' 'software development,' and 'Java' as preferred skills for job applicants. Other common titles for master's-level internet of things professionals include 'firmware engineer,' 'solutions architect,' 'applications engineer,' and 'software developer.'

Commonly Posted Titles for Master's-Level Internet of Things Professionals

April 2017–March 2018, Regional Data⁷

n= 3,704 job postings, 0 unspecified postings



7) Burning Glass Labor/Insight™

Locations with High Demand

Promote the Program in States where Employers Seek Internet of Things Professionals to Secure Enrollments

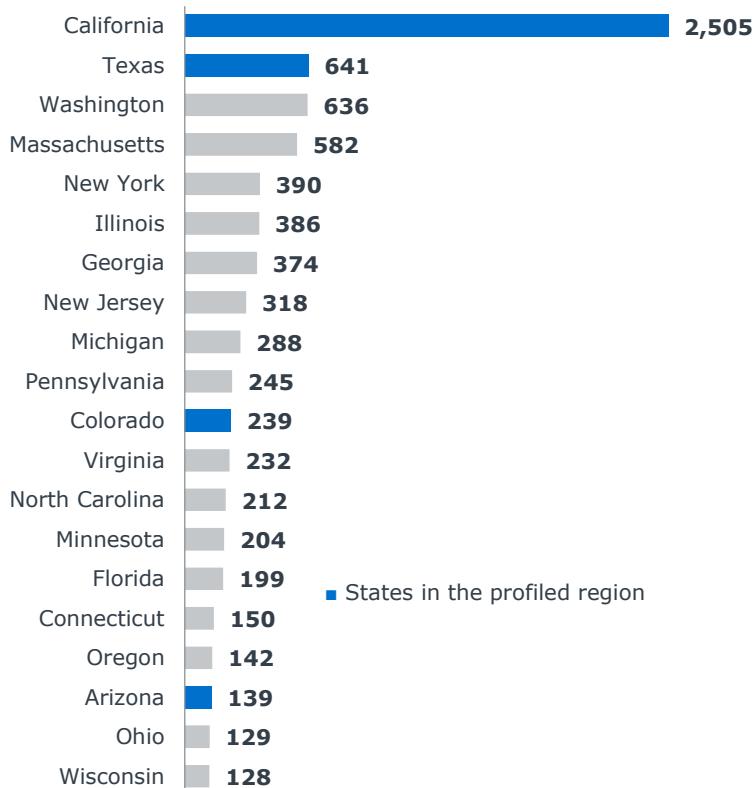
Focus recruitment efforts in regional locations where employers express high demand for master's-level internet of things professionals. As 72 percent of students enroll in online programs at institutions within 100 miles of their place of residence, concentrated recruitment efforts in the profiled region will yield the strongest returns.⁸ Advertise demand for internet of things professionals in California to recruit career-minded students to the program. Employers in California post 28 percent of jobs openings for master's-level internet of things professionals nationwide (i.e., 2,505 of 8,866 postings).

Other states in the profiled region where employers demonstrate demand for master's-level internet of things professionals include Texas (i.e., 641 postings), Colorado (i.e., 239 postings), and Arizona (i.e., 139 postings). In total, employers in the profiled region post 42 percent of all job postings for master's-level internet of things professionals nationwide (i.e., 3,704 of 8,866 postings). Employers in New Mexico list 19 job postings for master's-level internet of things professionals in the last year.

States where Employers Demonstrate the Greatest Demand for Master's-Level Internet of Things Professionals

April 2017-March 2018, National Data⁹

n=8,866 job postings, 0 unspecified postings



1) [Learning House: Online College Students 2017](#)
8) Burning Glass Labor/Insight™

4) Program Design

Comparable Program Characteristics

Continue to Offer Internet of Things Coursework Online and in Eight-Week Modules to Accommodate Working Professionals

Develop an online program to differentiate the internet of things program at the **University of New Mexico** from comparable programs at profiled institutions. Only two profiled institutions (i.e., **Lewis University, Stanford University**) offer master's-level internet of things programs online. Online courses delivered in short, eight-week sessions also provide the flexibility adult learners seek when selecting an academic program.¹⁰ Lewis University and Stanford University's internet of things programs offer some, if not all, classes in short modules of eight weeks or fewer. Students enrolled in the internet of things program at Lewis University typically complete one to two courses per eight-week term and average approximately three courses per semester.

Characteristics of Master's-Level Internet of Things Programs

Profiled Programs

Institution	Program Title	Modality	Program Structure
Indiana University-Bloomington	Master of Science in Intelligent Systems Engineering	Face-to-face	Not advertised
Lewis University	Master of Science in Computer Science: Intelligent Systems Concentration	<ul style="list-style-type: none">Face-to-faceOnline	8-week sessions
Northeastern University	Master of Science in Computer Systems Engineering: Internet of Things	Face-to-face	Not advertised
Stanford University	Graduate Certificate in Internet of Things	Online	Offers select courses in an 8-week format
University of Pittsburgh	Intelligent Systems Graduate Program	Face-to-face	Semester system
University of West Scotland	Master of Science in Internet of Things	Face-to-face	Trimester system

9) [EAB Research: Designing Programs for the Millennial Workforce](#)

Program Titling

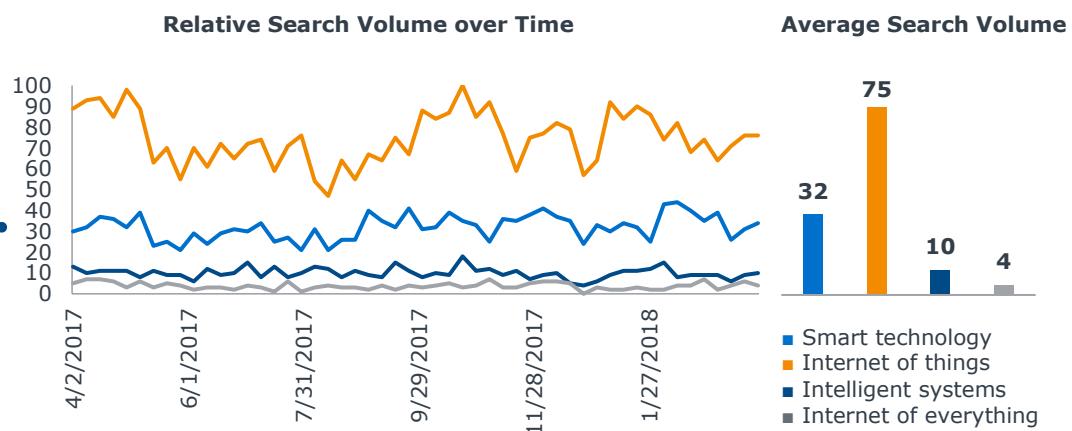
Continue to Use the Phrase “Internet of Things” in Program Titling to Ensure the Program’s Online Visibility

Administrators should note web users search for “internet of things” more frequently than other related search terms (i.e., “smart technology,” “intelligent systems,” “internet of everything”). Among the identified terms, web users search for “internet of everything” the least often. Three of six profiled institutions include “internet of things” in the profiled concentration or program title. Similarly, three program titles include “intelligent systems.” While a popular phrase among profiled programs, “intelligent systems” may not convey the program’s niche focus to students. Continue to include a more popular search term in the program title to increase the number of users who encounter the **University of New Mexico**’s master’s-level internet of things program online.

Relative and Average Search Volume of Prospective Program Titles

Google Trends, April 2017 to March 2018, National Data

Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is the peak popularity for the term. A value of 50 means the term is half as popular. Likewise, a score of 0 means the term was less than 1% as popular.



5) Student Recruitment

Marketing Messages

Advertise Learning Outcomes in Program Marketing Materials to Attract Career-Minded Students

Identify the in-demand skills conferred via the **University of New Mexico**'s proposed curriculum to convey the program's professional value to students. In addition, list job titles commonly posted for master's-level internet of things graduates such as 'software development engineer,' 'firmware engineer,' and 'solutions architect' on the University of New Mexico's program website to help prospective students recognize the employment opportunities available to graduates. EAB research indicates programs that include labor market data in marketing materials experience increased click-through rates and ultimately, increased program applications and enrollments.¹¹ The Master of Science in Internet of Things program at the **University of West Scotland** reports the program prepares graduates for technical developer, project manager, and technical manager positions.

Northeastern University's internet of things program website lists skills gained through the program (e.g., network design, data analytics, security, application development) to demonstrate how the program will enhance students' careers.

Profiled programs' marketing messages also highlight the high demand for internet of things professionals across industries. For example, Northeastern University identifies areas such as energy, healthcare, and transportation as industry sectors with high projected demand for internet of things professionals.

Target Audience

Profiled institutions recruit applicants with undergraduate degrees in areas such as computer science, computer engineering, electrical engineering, mathematics, and information science. At **Lewis University**, prospective students without technical undergraduate experience must complete prerequisite courses to acquire the technical skills needed to succeed in the master's-level internet of things program.

Marketing Messages for Master's-Level Internet of Things Programs

Profiled Institutions

"By some estimates, the number of Internet-connected devices will exceed 50 billion by 2030 . . . [This] graduate certificate prepares engineers and industry professionals to take full advantage of this explosive growth opportunity by providing a broad foundation and deep domain expertise."

Stanford University

"Learn how to design and implement computing systems that perceive, act and learn . . . Learn how to build systems that can collect and respond to various sensor measurements and how to design networks that communicate and coordinate responses to environmental signals. These are the technologies that power the Internet of Things."

Lewis University

"It is expected that careers in this rapidly evolving area will encompass industry sectors ranging from energy, healthcare, transportation, infrastructure, to manufacturing. Graduates will have an understanding of the range of IoT technologies, architectures, and solutions applicable to different domains, and will have the opportunity to develop skills and advanced knowledge in areas such as data analytics, security, IoT architecture, and distributed application development."

Northeastern University

10) EAB, "Competing on Student Outcomes to Attract Today's Career Changer"

Professional Associations

Partner with Professional Associations to Increase Program Enrollments

Advertise the program at conferences hosted by relevant professional associations to attract an audience already interested in internet of things. Contacts at relevant professional associations can also provide insight about industry trends and the University's internet of things curriculum. Existing internet of things and related professional associations include:

- [Internet of Things Consortium](#),
- [Internet of Things Association](#),
- [Alliance for Internet of Things Innovation](#),
- [Internet of Things Security Foundation](#),
- [Mobile Marketing Association: Internet of Things Program](#),
- [Institute of Electrical and Electronics Engineers](#), and
- [National Association of Manufacturers](#).

The National Association of Manufacturers' [website](#) outlines the impact Internet of Things technology may have on manufacturing.



EAB

MARKET RESEARCH BRIEF

Market Viability of an Online Master of **Construction Management** Program

COE Forum

Victoria Kalumbi
Market Research Associate

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Table of Contents

1) Research Methodology.....	4
Project Challenge	4
Methodology and Definitions	4
Burning Glass Labor/Insight™	4
Project Sources	5
Profiled Institutions.....	5
2) Executive Overview	6
Key Observations	6
3) Employer Demand Trends	7
Trends over Time	7
Potential Jobs for Program Graduates.....	9
4) Characteristics of Competitor Master's-Level Construction Management Programs	10
Program Modality	10
Program Tuition.....	10
Program Curriculum	11
Program Partnerships.....	13
National Competitors	15
5) Student Trends and Demographics	16
Program Enrollments	16
Student Trends	16
Program Marketing	19
Appendix A: Networking Contacts	24

1) Research Methodology

Project Challenge	Leadership at the University of New Mexico approached the Forum as they considered launching an online master's-level construction management program. Through a combination of competitor research, qualitative interviews with program administrators of master's-level construction management programs, and quantitative data analytics, the Forum sought to assess the market viability of an online master's-level construction management program at the University of New Mexico.
	EAB's market research function provides insights which guide strategic programmatic decisions at member institutions. The Forum combines qualitative and quantitative data to help administrators identify opportunities for new program development, assess job market trends, and align curriculum with employer and student demand.
	EAB reports rely primarily on labor market data from the Burning Glass Labor/Insight™ tool (description below). Reports occasionally use data from the United States Census Bureau and United States Bureau of Labor Statistics data to explore occupation and job trends. Market research reports may also incorporate Integrated Postsecondary Education Data System (IPEDS) data to assess student enrollment, demographics, and completion rates across competitor programs.
Methodology and Definitions	Methodology: Unless stated otherwise, this report includes data from online job postings from June 2015 to May 2016. The Forum identified the top titles, employers, industries, skills, and locations for the region.
	To best estimate the market demand for master's-level construction management professionals, the Forum filtered for job postings that require a graduate degree within the 'construction managers,' 'cost estimators,' or 'first-line supervisors of construction trades and extraction workers' occupations.
	Definitions: "Regional" refers to the state of New Mexico.
	Annual growth in job postings is measured in the change between January 2011 and December 2015 by six-month halves (i.e., H2 2013 is July 2013 to December 2013).
Burning Glass Labor/Insight™	EAB's Partner for Real-Time Labor Market Data This report includes data made available through EAB's partnership with Burning Glass Technologies, a Boston-based leader in human capital data analytics. Burning Glass Technologies specializes in the use of web spidering technology to mine more than 80 million online job postings and analyze real-time employer demand. Under this partnership, EAB may use Burning Glass's proprietary Labor/Insight™ tool to answer member questions about employer demand for educational requirements, job titles, and competencies over time, as well as by geography. The tool considers job postings "unspecified" for a skill, industry, employer, geography, certification, or educational requirement when the job posting did not advertise for one of these particular job characteristics. Unspecified postings represent null values and should be excluded from the total number (n value) of job postings analyzed in the query. A more complete description of the tool is available at http://www.burning-glass.com/products/laborinsight-market-analysis/ .

For more information about the Labor/Insight™ tool, please contact Betsy Denious, Director of Business Development Learning and Policy at bdenious@burning-glass.com or 301-525-6596.

Project Sources

The Forum consulted the following sources for this report:

- Bureau of Labor Statistics (bls.gov)
- EAB's internal and online research libraries (eab.com)
- National Center for Education Statistics (NCES) (<http://nces.ed.gov/>)
- Profiled institution webpages
 - "College of Architecture, Arts, and Humanities | Graduate Program," Clemson University. Accessed May 11, 2016.
(<http://www.clemson.edu/caah/departments/csm/graduate/index.html>)
 - "Department of Construction Management and Engineering (NDSU)," North Dakota State University. Accessed May 11, 2016.
(<https://www.ndsu.edu/construction/>)
 - "Home | Department of Construction Management," East Carolina University. Accessed May 11, 2016. (<http://www.ecu.edu/cs-cet/construction/>)
 - "MS Construction Management | Engineering and Computing," Florida International University. Accessed May 11, 2016.
(<https://cec.fiu.edu/construction-management/ms-construction-management/>)
 - "MS in Construction Management Online | Purdue Polytechnic," Purdue University. Accessed May 11, 2016.
(<https://polytechnic.purdue.edu/degrees/ms-construction-management-online>)

Profiled Institutions

The Forum interviewed directors of master's-level construction management programs or profiled institutions via secondary at the following institutions:

A Guide to Institutions Profiled in this Brief¹

Institution	Location	Approximate Institutional Enrollment (Undergraduate/Total)	Classification
Clemson University	South	17,000 / 22,000	Research Universities (high research activity)
East Carolina University	South	22,000 / 27,500	Doctoral/Research Universities
North Dakota State University	Midwest	12,000 / 17,500	Research Universities (very high research activity)
Purdue University – Main Campus	Midwest	30,000 / 40,000	Research Universities (very high research activity)
Florida International University	South	41,000 / 50,000	Research Universities (high research activity)

1) National Center for Education Statistics.

2) Executive Overview

Key Observations

Launch an online master's-level construction management program to meet increased national employer demand for construction management professionals.

Between H2 2013 and H2 2015, national employer demand for master's-level construction management professionals increased approximately 58 percent. An online program would allow program administrators to meet national employer demand for master's-level construction management professionals. Job postings from employers in the state of New Mexico account for only 0.5 percent of national job postings in H2 2015. The Bureau of Labor Statistics (BLS) projects approximately five percent employment growth (i.e., about as fast as the national average growth rate for all occupations) from 2014 to 2024 for construction managers.

Include courses and professional development opportunities in construction writing, leadership, and management to prepare graduates for senior-level positions.

Program administrators note students pursue master's-level construction management programs to increase credibility at current place of employment, receive a promotion, or pursue positions with increased responsibility and leadership. Contacts frequently incorporate courses that develop and refine students' ability to write effectively, prepare and lead presentations, and manage organizations. In addition to leadership and management courses, students receive instruction on decision and risk, economic and financial analysis, construction management law, and cost analysis.

Advertise the master's-level construction management program in professional publications, brochures, and program websites to secure enrollments.

Program administrators report that the master's-level construction management program website as the most successful and common method that students learn about master's-level construction management programs. Contacts also report that the use of brochures for local employers, schools, and organizations, and advertisements in professional publications (e.g., *Constructor Magazine*, *Engineering News Record*) serve as a common recruitment method.

Ensure program marketing materials reach international student audiences to fill master's-level construction management cohorts.

Program administrators primarily receive enrollments from working professionals with experience (e.g., three to twenty years) and international students. Contacts receive enrollments from countries in Asia (e.g., China, India, Thailand, Vietnam) as well as Canada, Peru, Saudi Arabia, and Africa. Contacts suggest international students frequently enroll in online master's-level construction management program due to the prestige of an American graduate degree. Additionally, international students with little work experience (i.e., zero to three years) pursue master's-level education to enter the construction management profession.

3) Employer Demand Trends

Trends over Time

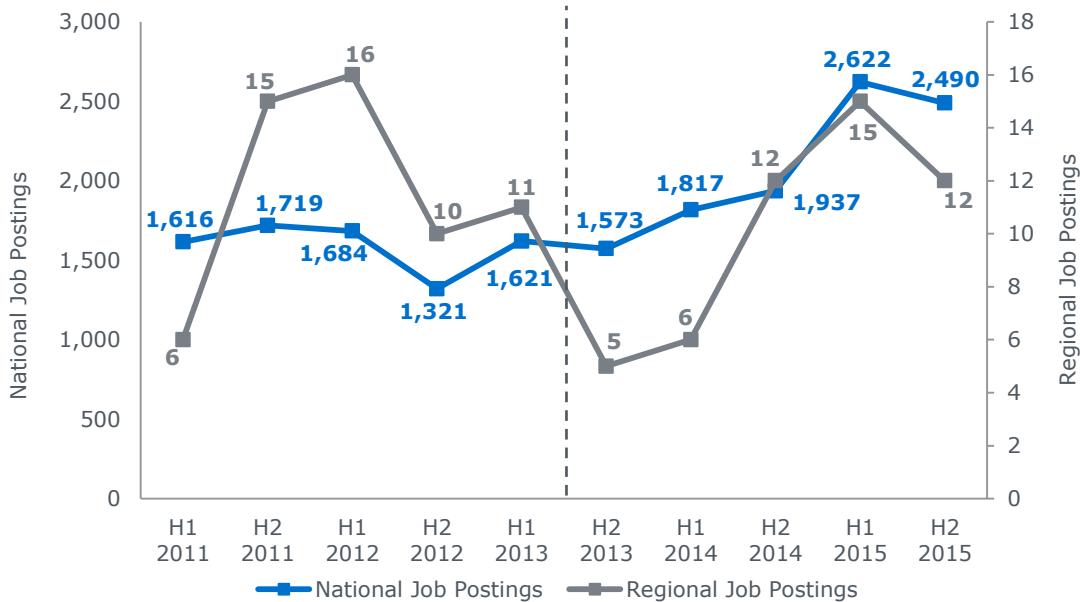
Employer Demand for Master's-Level Construction Management Professionals Increased 58 Percent from July 2013 to December 2015

An online master of construction management program at the **University of New Mexico** would allow program administrators to reach a broad student audience. Job postings for master's-level construction management professionals from employers in New Mexico accounted for only 0.5 percent of national job postings in H2 2015.

Additionally, increased national demand for master's-level construction management professionals confirms an opportunity for program administrators at the University of New Mexico to launch a Master of Science in Construction Management program. National demand increased almost every half since H2 2013, with only one small decline in demand from H1 2015 to H2 2015 (i.e., five percent decrease).

Employer Demand over Time for Master's-Level Construction Management Professionals

H1 2011-H2 2015, National and Regional Data²



2) Burning Glass Labor/Insight™. Due to improved data-mining software, Burning Glass Labor/Insight™ recognizes more positions starting in H2 2013. Data on either side of the dotted line is thus not directly comparable.

The Bureau of Labor Statistics Projects Highest National Employment Growth for Cost Estimators

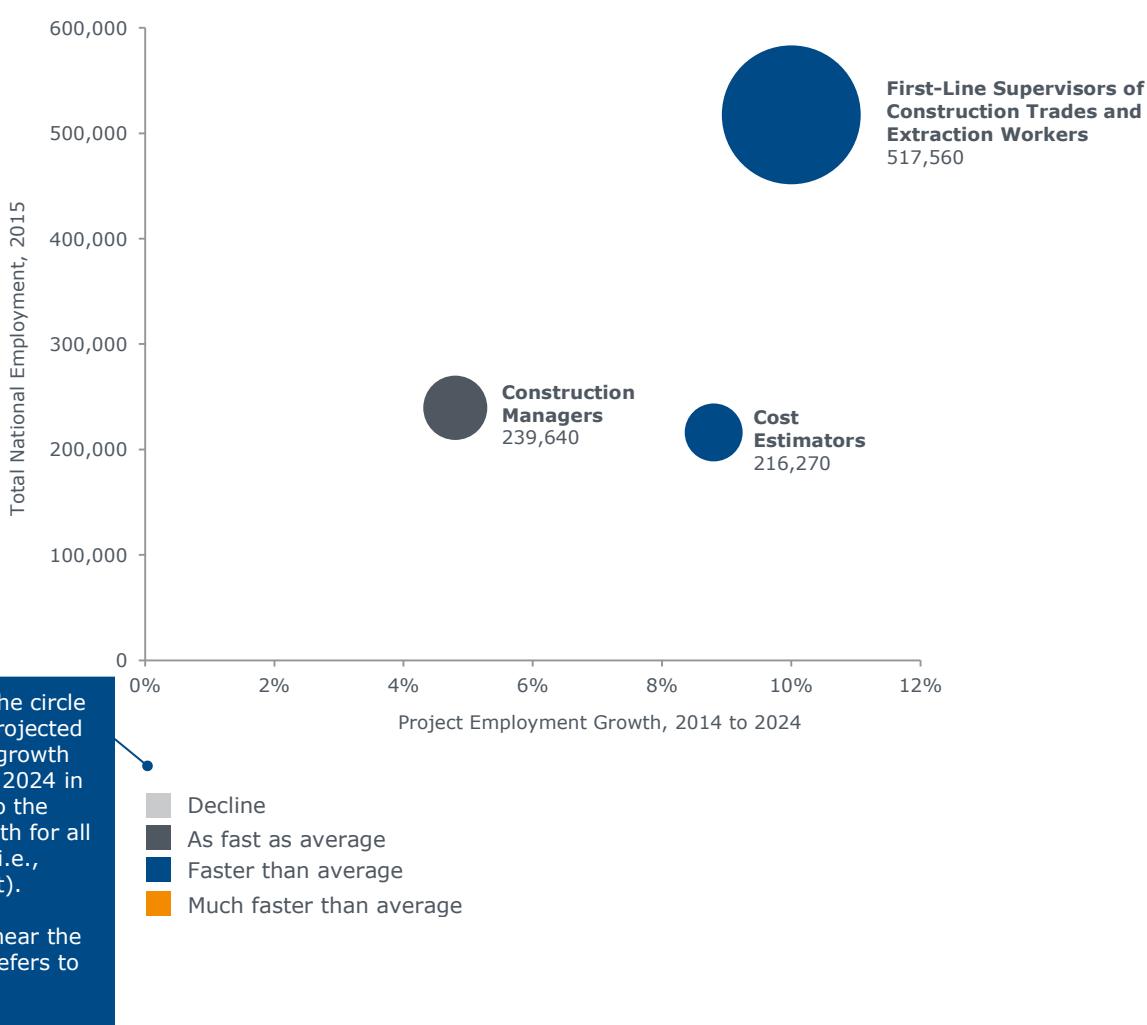
National employment trends from the Bureau of Labor Statistics (BLS) indicate increased employment opportunities for construction management professionals. Among most frequently demanded regional occupations for construction management professionals, the BLS projects highest employment growth for "first-line supervisors of construction trades and extraction workers" (i.e., ten percent) and for 'cost estimators' (i.e., nine percent).

The BLS predicts that the "construction managers" occupation will grow about fast as the national average, with five percent employment growth from 2014 to 2024. The BLS reports employers will need construction managers to oversee construction activity across the United States. Increased population, business growth, and the need to improve infrastructure will lead to an increased demand for construction management professionals.

The size of the circle refers to total national employment in 2015. A larger circle indicates larger national employment.

Total National Employment and Projected Growth for Construction Management Professionals

Bureau of Labor Statistics³



3) Bureau of Labor Statistics (bls.gov)

4) "Total national employment" refers to the employment, or size, of the occupation in 2014.

Potential Jobs for Program Graduates

National Employers Most Frequently Seek to Hire Master's-Level Construction Management Professionals as 'Construction Managers' and 'Cost Analysts'

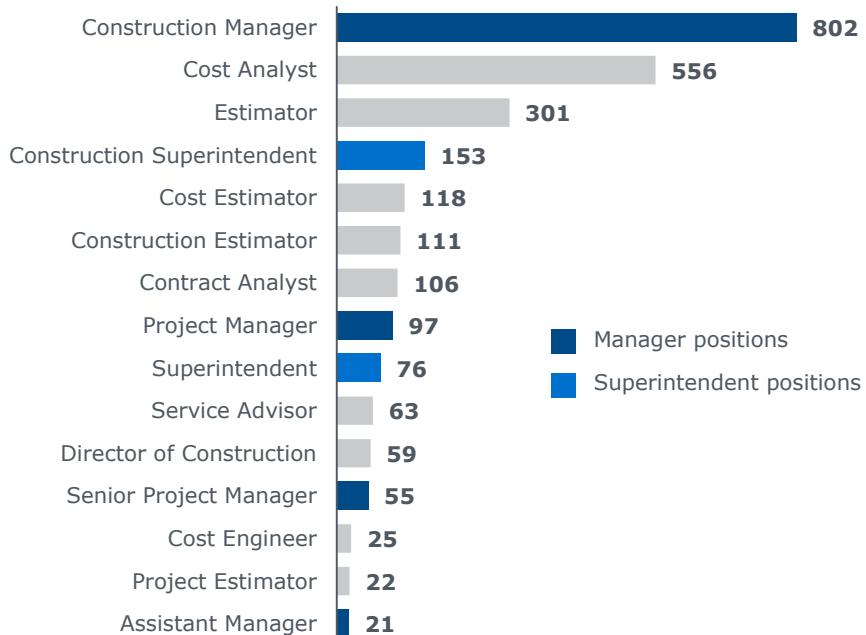
National employers frequently seek master's-level construction management professionals to fill leadership positions; leadership positions such as 'construction manager,' 'project manager,' and 'construction superintendent' represent six of the fifteen most commonly posted titles for master's-level construction management professionals nationwide. Leadership positions account for at least 24 percent of relevant national job postings in the past year.

Highlight opportunities to secure leadership positions in program marketing to attract student enrollments. Program administrators at profiled institutions frequently report enrollments from domestic and international professionals with bachelor's-level degrees seeking to change careers. Program administrators note students with a master's-level degree may earn a promotion to management-level positions. Program administrators at **Clemson University** report that students typically gain promotion to construction management positions (e.g., project executive positions) post-graduation.

Top Titles for Master's-Level Construction Management Professionals

June 2015-May 2016, National Data⁵

n= 5,013 job postings, 0 unspecified postings



Manager positions
Superintendent positions

International Students May Face Challenges with Employment in the United States due to Prejudice and Costs

Contacts report international students frequently do not secure jobs in the United States post-graduation. Contacts note some American employers do not prefer to hire international students and do not feel international students fit into the company culture. Contacts attribute resistance to hire international students because of potential prejudice and higher costs associated with employment of international students (e.g., application and lawyer fees to sponsor an international student can total \$5,000 or more).

5) Burning Glass Labor/Insight™

4) Characteristics of Competitor Master's-Level Construction Management Programs

Program Modality

Program Administrators Offer Online and Face-to-Face Master's-Level Construction Management Programs

Profiled program administrators include an online (e.g., distance-learning) and on-campus option for master's-level construction management students. Students at **Clemson University** may pursue the online or face-to-face option and complete a thesis. Contacts report only two of 24 enrolled master's-level construction management students pursue a thesis, and contacts advise online students against the thesis option due to administrative and resource challenges (e.g., students may not possess access to libraries, full-time work employment may hinder thesis writing, students may not live near an academic environment to complete research).

Master's-Level Construction Management Program Characteristics

Profiled Institutions

Institution	Program Title	Modality
Clemson University	Master's in Construction Science Management	Online, face-to-face
East Carolina University	Master of Construction Management	Online, face-to-face
Florida International University	Master of Science in Construction Management	Online, face-to-face*
North Dakota State University	Master of Construction Management	Online, face-to-face**
Purdue University – Main Campus	Master of Science in Construction Management	Online, face-to-face***

► Highlight Program Structure, Modality, and Tuition to Appeal to Working Professionals

Program administrators at **Florida International University** advertise a Professional Master's in Construction Management professionals. Program directors offer classes only on Saturdays from 8:00am to 5:00pm. Course tuition includes meals, parking, textbooks, graduation caps and rental gowns, and course notes binders.

Program Tuition

Profiled Program Administrators Charge \$230 to \$1,092 per Credit Hour

Program administrators at **Clemson University** charge more for online programs than face-to-face programs than online programs. While face-to-face graduate programs cost only \$663 per credit hour, online programs cost approximately 1.7 times more than the resident programs.

Program administrators at **East Carolina University** charge the lowest program tuition; administrators charge only \$230 per credit hour.

Master's-Level Construction Management Program Tuition

Profiled Institutions

Institution	Tuition, In-State Tuition Per Credit Hour
Clemson University	\$1,092
Purdue University – Main Campus	\$682
Florida International University	\$442
North Dakota State University	\$310
East Carolina University	\$230

Program Curriculum

Ensure Program Curriculum Confers Finance and Budgeting Skills to Meet National Employer Demand

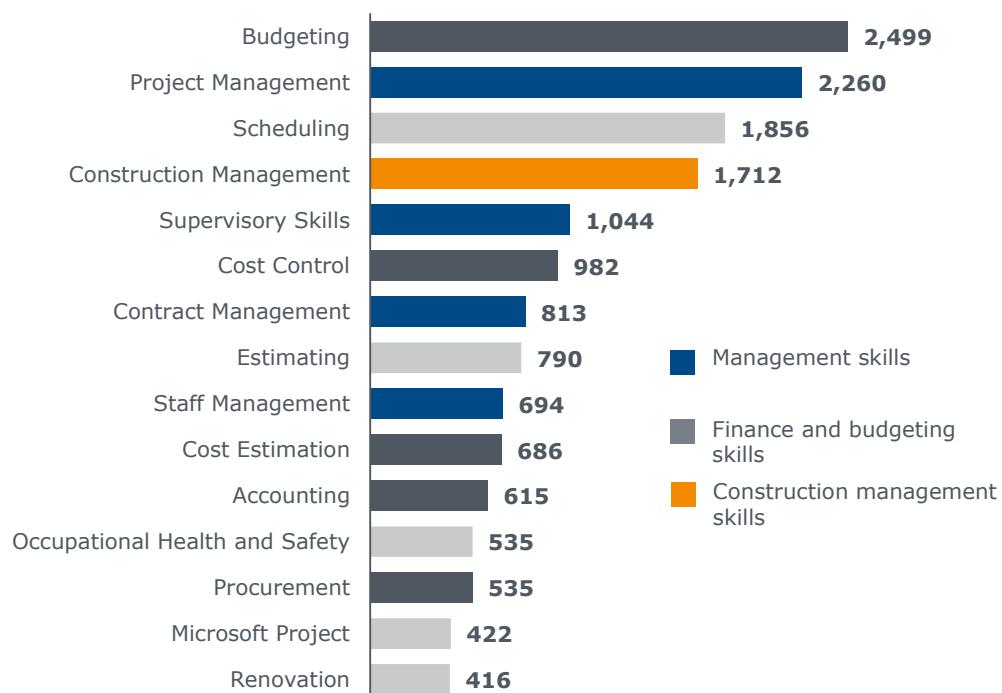
Approximately 50 percent of job postings seek master's-level construction management professionals with 'budgeting' skills. Other high-demand skills include 'accounting,' 'budgeting,' 'cost control,' 'cost estimation,' and 'procurement.'

As expected, regional employers also seek professionals with management skills. Approximately 46 percent of regional job postings include 'project management' as a desired competency for master's-level project management professionals. Courses in the law and human resources may also strengthen master's-level construction management professionals' skills in 'supervisory skills,' 'staff management,' and 'contract management.'

Top Skills for Master's-Level Construction Management Professionals

June 2015-May 2016, National Data⁶

n= 5,013 job postings, 166 unspecified postings



6) Burning Glass Labor/Insight™

Prioritize the Development of Leadership and Management Courses to Prepare Graduates for Director-Level Positions

Include seminars and courses to develop students' ability to increase credibility, professionalism, and leadership. In the program at **Purdue University**, contacts include academic writing courses in which students learn how to analyze research and how to prepare technical presentations. Courses such as "construction leadership and marketing" develop students' abilities to lead organizations, communicate effectively and create marketing strategies. Program administrators at **Clemson University** include a seminar that prepares students to manage construction or construction-related firms.

Program administrators at **East Carolina University** offer a three-course Residential Construction Management Certificate.

No profiled institutions include program concentrations. Contacts at **North Dakota State University** do not include electives due to limited staff resources, and a desire to provide a broad based education. However, contacts at **East Carolina University** will incorporate concentrations and certificates into the master's-level construction management program due to grants from the National Association of Homebuilders. Contacts will develop master's-level program concentration in infrastructure, legal and claims analysis (e.g., arbitration, mediation, claims analysis). Contacts at Clemson University report most popular elective courses include real estate development, civil engineering courses, and architecture courses.

Profiled program administrators do not require or offer internships in master's-level construction management programs. Contacts at **East Carolina University and North Dakota State University** enroll students with construction management or full-time work experience and do not see a need for internships.

Required Courses in Master's-Level Construction Management Program Curriculum

Profiled Institutions

Cost Analysis, Estimating, and Scheduling

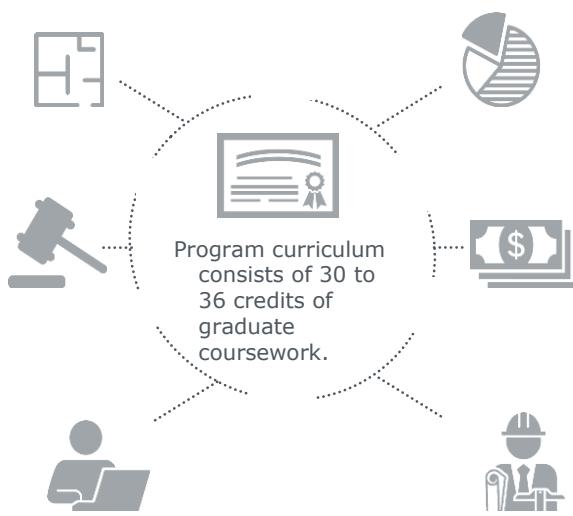
- Advanced Planning and Scheduling
- Cost Analysis and Control
- Fundamentals of Construction Estimating

Legal Studies

- Construction Specifications and Contracts
- Legal Implications of Design and Construction
- Residential Codes, Contracts, and Law

Other Courses and Electives

- Computer Information Systems
- Land Use Management and Design
- Sustainable Construction



Decision and Risk

- Decision and Risk Analysis
- Project Risk Management
- Risk Management in Construction

Economic and Financial Analysis

- Accounting and Financial Management
- Construction Economic Analysis
- Financial Planning Analysis

Management

- Business Strategy and Marketing
- Operations and Strategic Management
- Personnel Management and Negotiations

Partner with Corporate and Professional Organizations to Facilitate Program Delivery

Program administrators at **Clemson University** and **East Carolina University** partner with corporate and professional organizations to enhance program opportunities for students of the master's-level construction management program. Contacts at Clemson University ask corporate partners to make a three year pledge of \$5,000 to support professionally-related activities of students and faculty and to conduct and fund applied research and professional development projects.

Contacts at East Carolina University received a \$98,000 grant from the National Housing Endowment Homebuilding Education Leadership Program (i.e., the philanthropic part of the National Association of Home Builders) in [2013](#). The grant supported the development, marketing, and delivery of online graduate-level construction management coursework in a certificate and specialization form.

Master's-Level Construction Management Partnership Strategies

Profiled Institutions

Invite academic, professional, and corporate partners to sit on the advisory board. Contacts at Clemson University, East Carolina University, and North Dakota State University seek advice, counsel, and industry knowledge from program advisory boards.

Incentivize local, regional, and national organizations to increase participation in partnerships. Contacts at Clemson University advertise benefits of corporate sponsorships that include access to research, recognition in publications, and invitations to recruit students at career fairs.



Increase student engagement in on-campus professional groups to generate industry interest. Contacts report that student involvement and success at professional competitions creates opportunities for sponsorships.

Leverage relationships with faculty, sponsors, and advisory board members to create partnerships. Directors at Clemson University partner with organizations such as:

- American Institute of Constructors
- Associate Builders and Contractors
- Associated General Contractors of America
- Associated Schools of Construction
- Design Build Institute
- National Association of Home Builders

Contact Employers at Gilbane Incorporated, Anthem Blue Cross, and Gilbane Building Company to Establish Partnerships

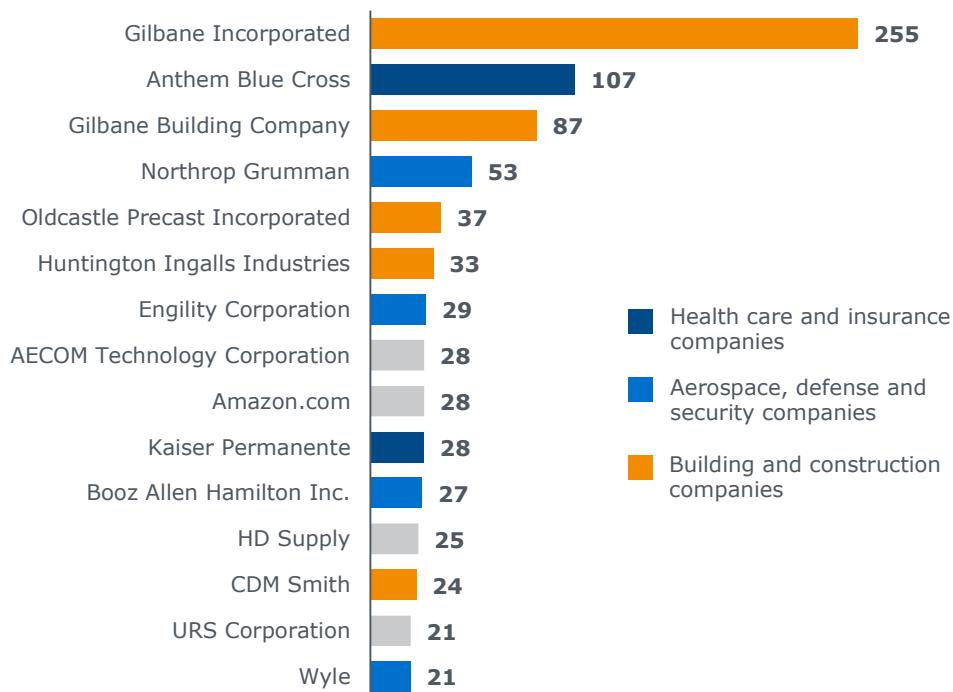
As outlined above, program administrators at **Clemson University** frequently work with corporate partners to facilitate the delivery of the master's-level construction management program. Employers with high demand for master's-level construction management professionals may express interest in a partnership with program directors at the **University of New Mexico** to initiate a pipeline of top construction management talent.

Regional employers at Gilbane Incorporated post approximately 0.5 percent of national job postings. Gilbane Incorporated employers seek master's-level construction management professionals to fill roles such as 'construction superintendent,' 'construction manager,' 'superintendent II,' and 'estimator.'

Top Employers of Master's-Level Construction Management Professionals

June 2015-May 2016, National Data⁷

n= 5,013 job postings, 1,338 unspecified postings



7) Burning Glass Labor/Insight™

25 Institutions Conferred Master's-Level Construction Management Degrees in the 2013-2014 Academic Year

Data from the National Center for Education Statistics indicates 25 institutions self-report degree completions in master's-level construction management programs. Program administrators at **Stevens Institute of Technology** report the highest number of degree completions in 2014; program administrators report 29 degree conferrals.

Program administrators at the **South Dakota School of Mines and Technology** experienced the greatest increase in self-reported degree completions from 2010 to 2014. Program administrators report 233 percent increase in degree completions (i.e., from three to 10 degree completions).

Institutions listed in order of most to least 2014 degree completions.
Institutions in blue self-report online master's-level construction management degree completions.

National Master's-Level Construction Management Degree Conferrals

National Center for Education Statistics

Institution	2014 Degree Conferrals	Change in Degree Conferrals 2010-2014*
Stevens Institute of Technology	29	-28%
Drexel University	27	Not applicable
Columbia University in the City of New York	26	8%
Wentworth Institute of Technology	24	Not applicable
Arizona State University-Tempe	22	5%
California State University-East Bay	20	Not applicable
University of Southern California	20	5%
Newschool of Architecture and Design	14	Not applicable
Philadelphia University	14	Not applicable
University of Washington-Seattle Campus	13	-38%
South Dakota School of Mines and Technology	10	233%
The University of Texas at El Paso	10	Not applicable
Southern Polytechnic State University	8	-20%
Central Connecticut State University	6	-14%
Milwaukee School of Engineering	6	Not applicable
Pratt Institute-Main	5	0%
University of Oklahoma-Norman Campus	4	-60%
Virginia Polytechnic Institute and State University	4	-73%
North Dakota State University-Main Campus	3	Not applicable
Roger Williams University	3	Not applicable
University of Nevada-Las Vegas	3	-40%
Brigham Young University-Provo	2	0%
Louisiana State University and Agricultural & Mechanical College	2	Not applicable
Clemson University	1	-94%
Western Michigan University	1	Not applicable

*Change in degree conferrals from 2010 to 2014 cannot be calculated for institutions with zero self-reported degree completions in 2010.

5) Student Trends and Demographics

Program Enrollments

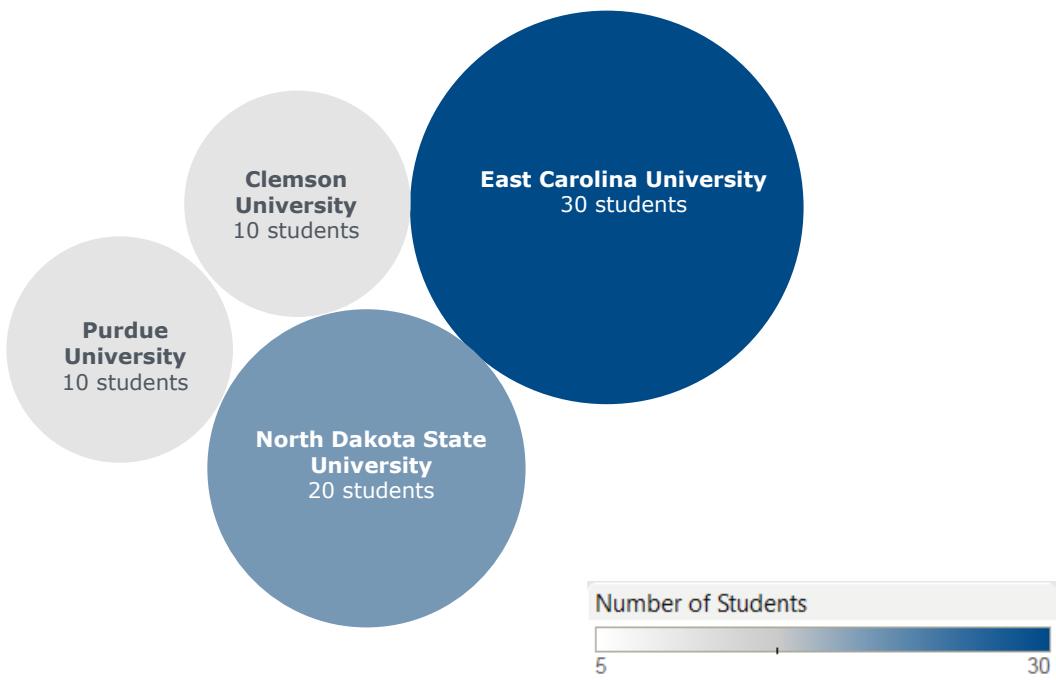
Program Administrators Enroll 10 to 20 Students in Online Master's-Level Construction Management Programs

Ensure program marketing highlights the program modality of the proposed program at the **University of New Mexico** to attract student enrollments. Contacts at **East Carolina University** report increased enrollment in the online master's-level programs. Contacts attribute increased growth due to student preference for online courses.

Program administrators at **North Dakota State University** enroll twice as many more students in the online master's-level program than in the face-to-face option (i.e., 10 students in the face-to-face and 20 students in the online program). Contacts at **Clemson University** enroll more students in the face-to-face programs. Administrators report 14 student enrollments in the face-to-face program and only 10 in the online program.

Online Master's-Level Construction Management Program Enrollments

Profiled Institutions



Student Trends

Prioritize Marketing Outreach to Prospective Regional and International Students to Fill Cohort

Program administrators receive domestic and international enrollment for online master's-level construction management programs. Contacts at **Clemson University** suggest students from international backgrounds enroll in master's-level programs.

due to the prestige of a graduate degree from the United States and the importance of higher education in international cultures.

Most students enter programs with experience in architecture, architectural engineering, civil engineering, or construction management. Contacts report students with backgrounds in other professions pursue the master's-level construction management degree to change careers.

Program administrators at Clemson University and **North Dakota State University** receive few enrollments from bachelor's-level construction management graduates from their institutions. Contacts attribute few enrollments due to a desire to obtain work experience and earn a salary. Directors at Clemson University also note that students do not increase salary rates with a master's degree, and students with little interest in teaching, research, or doctorate-level education do not see the utility of a graduate-level degree in construction.



Consider International Limitations on Online Education to Guide Marketing Efforts

Previous EAB research notes that some countries limit the number of online courses that international students may complete.¹ Some program administrators of international students that recruit international students for master's-level programs target efforts on countries with fewer restrictions (e.g., South Korea).

Demographic Backgrounds of Master's-Level Construction Management Professionals

Profiled Institutions

Gender



- Directors at Clemson University enroll the highest percentage of female students. Contacts enroll **50 percent women and 50 percent men** into the master's-level construction management program.
- Contacts at East Carolina University enroll **15 to 20 percent female** students.

Professional Backgrounds



- Contacts at East Carolina University enroll students with **three to twenty years of experience**.
- Contacts note **international students primarily enter with less experience** (e.g., one to three years of experience post-baccalaureate) than **local students** (e.g., **10 to 15 years of experience**).

Domestic Geographic Backgrounds



- Twenty percent of students enrolled in Clemson University reside in-state, while 80 percent reside out of state. Approximately 20 percent of out-of-state students identify as international students.
- Contacts at North Dakota State University enroll students from the region (i.e., the Midwest).

International Geographic Backgrounds



- Contacts report the highest number of international enrollments from countries in Asia (e.g., **India, Vietnam, Thailand, China**).
- Contacts also receive enrollments from students in **Canada, Peru, Saudi Arabia, and Africa**.

8) "Market Viability of a Global Executive Master of Public Administration Program," EAB, 2016. (<https://www.eab.com/research-and-insights/continuing-and-online-education-forum/custom/2016/06/market-viability-of-a-global-executive-master-of-public-administration-program>)

Program Administrators Report Enrollments Students with Construction Management, Engineering, and Business Backgrounds

Provide prospective students with information about educational institutions where they can complete online courses to ensure students can access information about acceptable pre-requisite courses. Program administrators at **Clemson University** report students with non-construction management degrees (e.g., accounting, business, economics) make up the majority of master's in construction management program enrollments.

Program directors at **East Carolina University** require the following courses for non-construction management professionals, and advertise opportunities to complete program prerequisites on the program website:

- construction documents and analysis,
- construction equipment management,
- construction estimating,
- construction materials and methods,
- construction safety, and
- construction scheduling.

Educational Backgrounds of Master's-Level Construction Management Students

Profiled Institutions

Arts and Engineering	Business and Management	
		
Architecture or Architectural Engineering	Civil engineering	Mechanical engineering
		
Accounting	Business	Construction management

Rely on Program Website to Secure International and National Student Enrollments

Ensure students can readily find the program through a Google search for online master's-level construction management programs. All contacts regard the program website as the most effective way to recruit students, and report students most frequently learn about the website through searches in engines such as Google. Contacts at **East Carolina University** report some program administrators purchase Google Advertisements to ensure the program website appears in the first page of website results.

Program administrators at the **University of New Mexico** should incentivize and reward word-of-mouth referrals to generate interest in the master's-level construction management program. All contacts also emphasize the importance of word-of-mouth referrals to receive program enrollments. Contacts at the University of New Mexico report referrals from friends and former students account for high student enrollment. Please see [here](#) for previous EAB research on word-of-mouth referrals.

While program administrators incorporate online and face-to-face methods, **Clemson University** contacts recommend against sending mail to prospective students. Contacts previously mailed information on the master's-level construction management programs to contracting companies and rarely received questions or follow-ups.

Master's-Level Construction Management Marketing Methods

Profiled Institutions



Encourage faculty to inform other professionals and students of the master's-level construction management program. Contacts at Clemson University note the involvement and engagement of faculty within construction associations ensures the local and national community maintain awareness of the construction management program at Clemson University.



Create brochures with program details to send to local schools, trade programs, and employers. Contacts at East Carolina University also ask members of the construction management advisory board for help in student recruitment, as many members work in the construction management profession.



Advertise program opportunities in professional publications and academic journals. Include a link or QR code to the website and the degree type to ensure students can access program details and contact administrators. Contacts advertise in magazines such as *Constructor Magazine* and *Engineering News Record*.



Seek accreditation with construction management or engineering associations to highlight program credibility. Contacts note accreditation websites help increase the visibility and credibility of the program to prospective students.

- Contacts at Clemson University note the National Center for Construction Education Research and The Associated General Contractors of America recognizes the master's-level construction management program.
- Contacts at East Carolina University will seek Accreditation Board for Engineering and Technology (ABET) due increased popularity and prestige associated with engineering programs nationally and internationally.

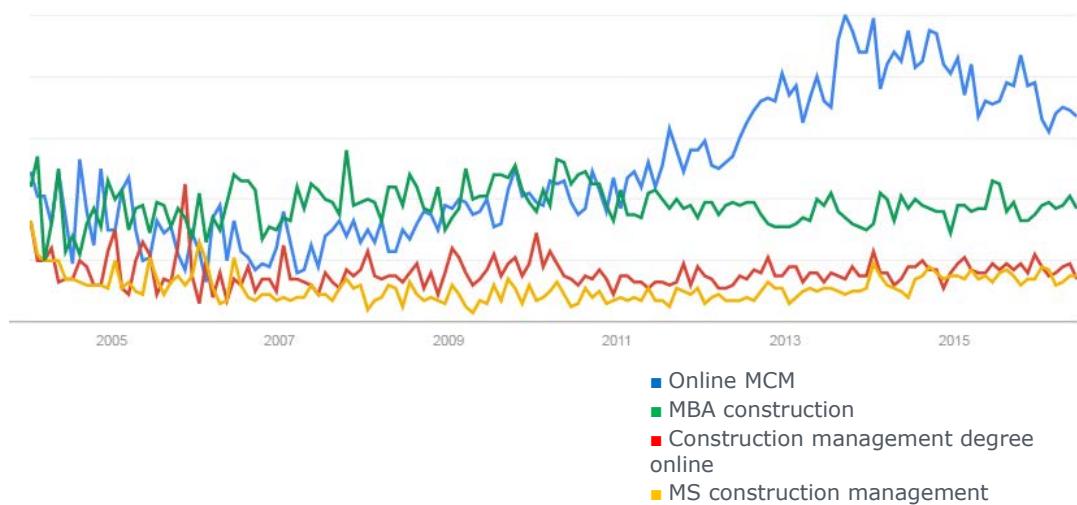
Include Program Level and Modality on Construction Management Website to Align with Frequently Searched Terms

Incorporate “master’s” into the program website to align with higher search volume terms. Google Trends reports zero relative search volume for “online graduate program construction management” and “graduate program construction management.” While “master of science in construction management” returned zero relative search volume, “online MCM” returned the highest relative search volume for any construction management degree-related term with the exception of “project management.” In May 2016, Google Trends reported nearly four times as much search volume for “online MCM” than “MBA construction,” the next highest searched phrase.

“Project management construction management” and “project management construction” returned the highest relative search volume of any terms. However, contacts at **Clemson University** do not require or recommend that students pursue a project management certificate. Program administrators note the project management certificate provides generic information not applicable for construction management profession. Contacts recommend students pursue the CPC (i.e., Certified Professional Constructor) or AC (i.e., Associate Constructor) certificate. Program administrators at **North Dakota State University** require students to pass the AC or CPC exam to earn the degree.

Relative Search Volume of Construction Management Programs

Worldwide Data, Google Trends, February 2004-June 2016



Advertise Available Job Opportunities across Construction and Health Industries on Program Website to Attract Student Enrollments

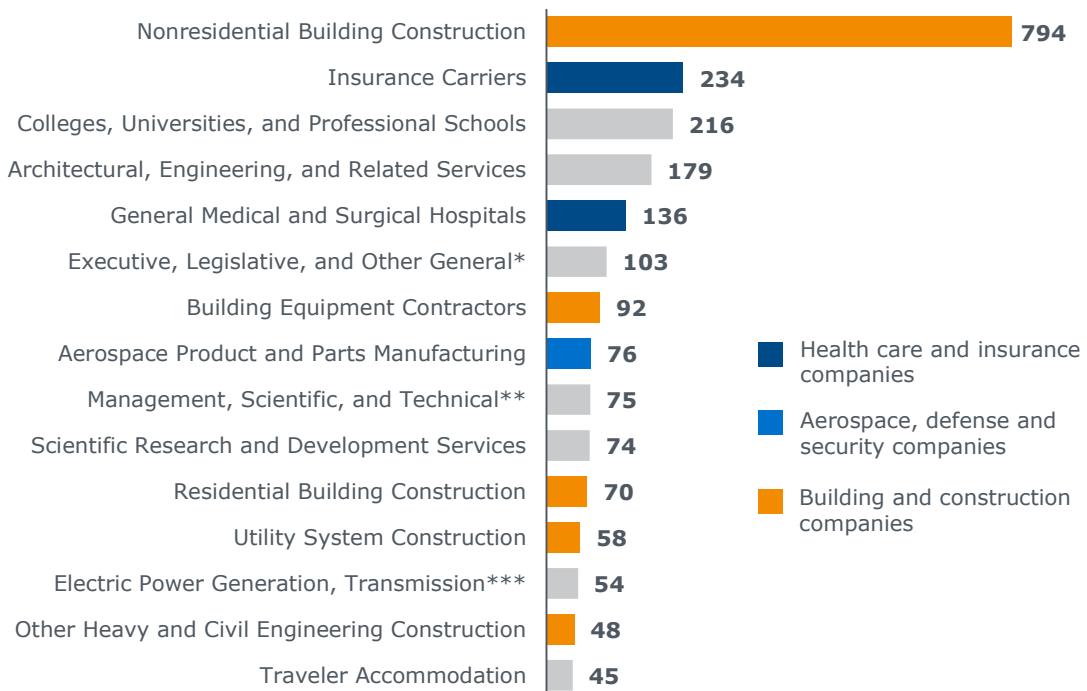
National employers most commonly seek master's-level construction management professionals to fill roles in 'nonresidential building construction' industries. Approximately 16 percent of national job postings originate from employers that operate in the 'nonresidential building construction' industry.

National employers also operate in health related industries. Job postings from employers in the 'insurance carriers' and 'general medical and surgical hospital' account for seven percent of national job postings.

Top Industries for Master's-Level Construction Management Professionals

June 2015-May 2016, National Data⁹

n= 5,013 job postings, 1,694 unspecified postings



*Executive, Legislative, and Other General Government Support

**Management, Scientific, and Technical Consulting Services

***Electric Power Generation, Transmission and Distribution

Market the Construction Management Program to Prospective Students in New York, Washington, D.C., and Los Angeles Metropolitan Statistical Areas (MSAs) to Meet Employer Demand

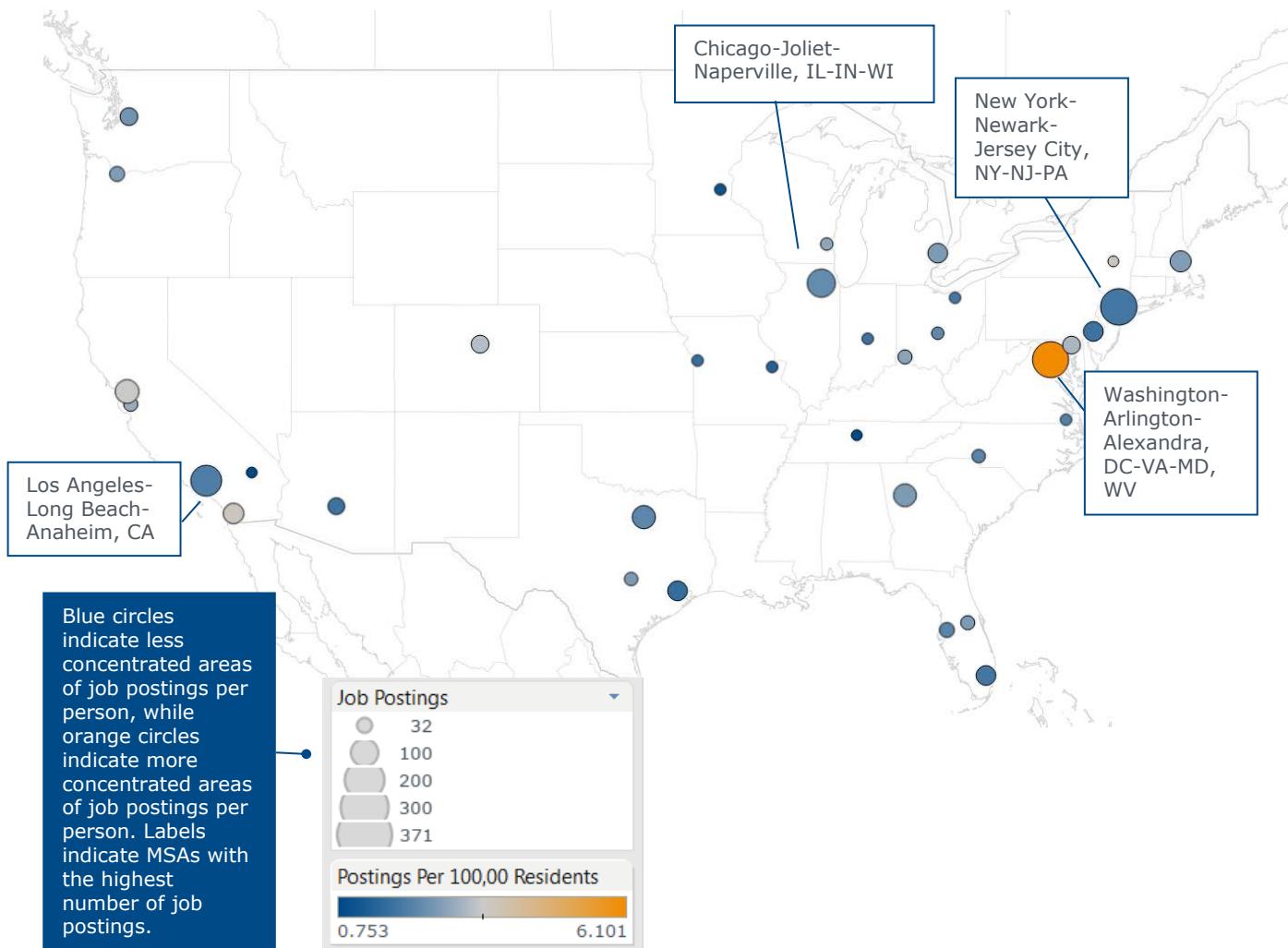
New York and Washington, D.C. employers post approximately 15 percent of relevant national job openings for master's-level construction management professionals. Contacts also suggest that an online program in a large city such as Atlanta or New York will allow program administrators at the **University of New Mexico** to secure enrollments due to the high concentration of prospective students.

Employers in the Washington, D.C. MSA post the highest number of job postings per capita in the country. Employers post approximately six job postings per 100,000 residents. Employers in California, Texas, and New York most frequently post job openings for master's-level construction management professionals. Approximately 14 percent of relevant national job postings originate from California employers.

Top Metropolitan Statistical Areas for Master's-Level Construction Management Professionals

June 2015-May 2016, National Data¹⁰

n= 5,013 job postings, 297 unspecified postings

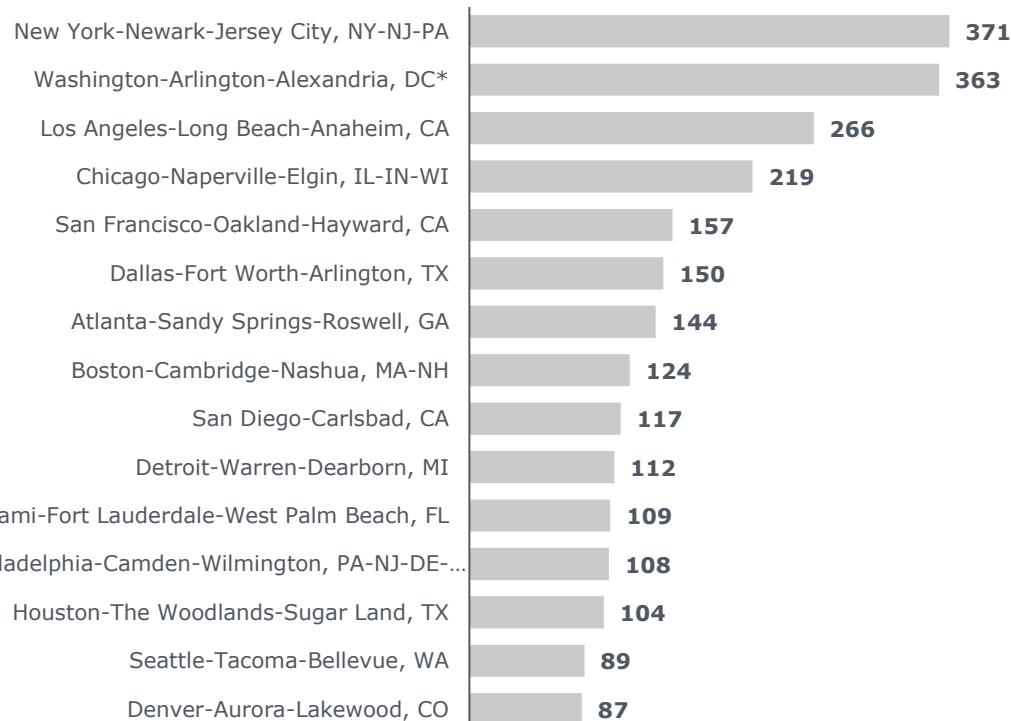


10) Burning Glass Labor/Insight™

Top Metropolitan Statistical Areas for Master's-Level Construction Management Professionals

June 2015-May 2016, National Data¹¹

n= 5,013 job postings, 297 unspecified postings

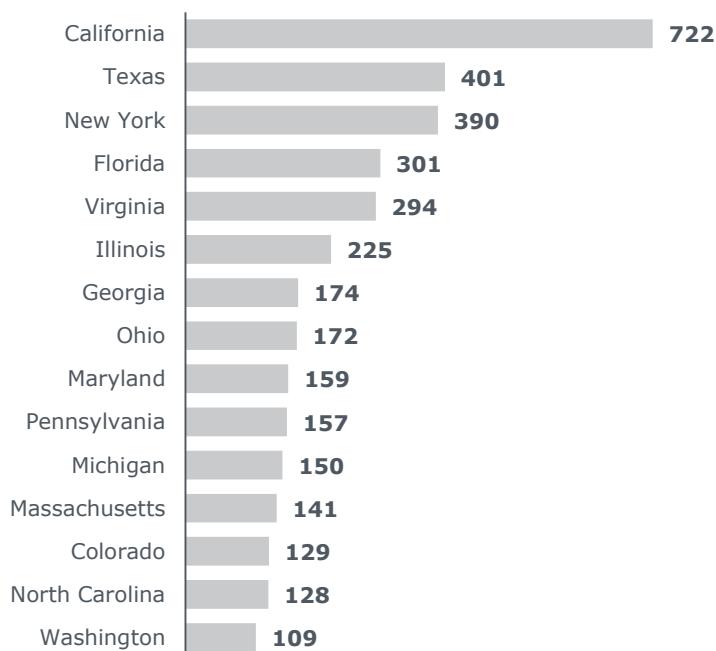


*Washington-Arlington-Alexandria, DC-VA-MD-WV

Top States for Master's-Level Construction Management Professionals

June 2015-May 2016, National Data¹²

n= 5,013 job postings, 297 unspecified postings



11)Burning Glass Labor/Insight™

12)Burning Glass Labor/Insight™

Appendix A: Networking Contacts

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Market Demand for Online Bachelor of Science in **Dental Hygiene** Degree Completion Programs



COE Forum

Cate Auerbach
Research Associate

Lauren Edmonds
Research Manager

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Table of Contents

1) Executive Overview	4
Key Observations	4
2) Program Development.....	5
Skills Comparison	5
Curriculum Development.....	6
Program Recruitment	9
3) Program Growth.....	11
Employer Demand	11
Top Locations.....	12
State Demand Growth.....	14
4) Research Methodology	15
Project Challenge	15
Project Sources	15
Burning Glass Labor/Insight™	15
Appendix A: Additional Job Postings Data.....	17

1) Executive Overview

Key Observations

Demand for graduates with bachelor's degrees in dental hygiene (BS-DH) decreased 11 percent in selected states since 2011. Demand for graduates with associate's degrees in dental hygiene increased 66 percent in selected states since 2011.

California, Florida, Texas, Virginia, and Illinois demand the most BS-DH graduates of selected states; Kansas and Indiana demand the fewest. Employer demand in Alaska, Florida, Idaho, Nebraska, and Oklahoma increased by at least 50 percent since 2011.

Dental services corporations and higher education institutions exhibit the greatest demand for graduates with bachelor's degrees in dental hygiene. Top titles include hygienist, dental hygiene instructor, and sales representative; bachelor's degree programs can incorporate specialized courses such as curriculum development and leadership to prepare students for alternative career paths outside dental practices.

Employer demand trends indicate increased need for X-Rays, dental instruments, treatment planning, sealants, prophylaxis, and dental care skills among graduates with bachelor's degrees in dental hygiene. Job postings for BS-DH graduates cite the most demanded skills for dental hygienists more frequently than job postings for graduates with associate's degrees in dental hygiene.

Definition of Terms

Selected states in which the member has received or applied for state authorization: Alaska, Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Michigan, Missouri, Nebraska, New Jersey, Oklahoma, Texas, Virginia, and Wisconsin

2) Program Development

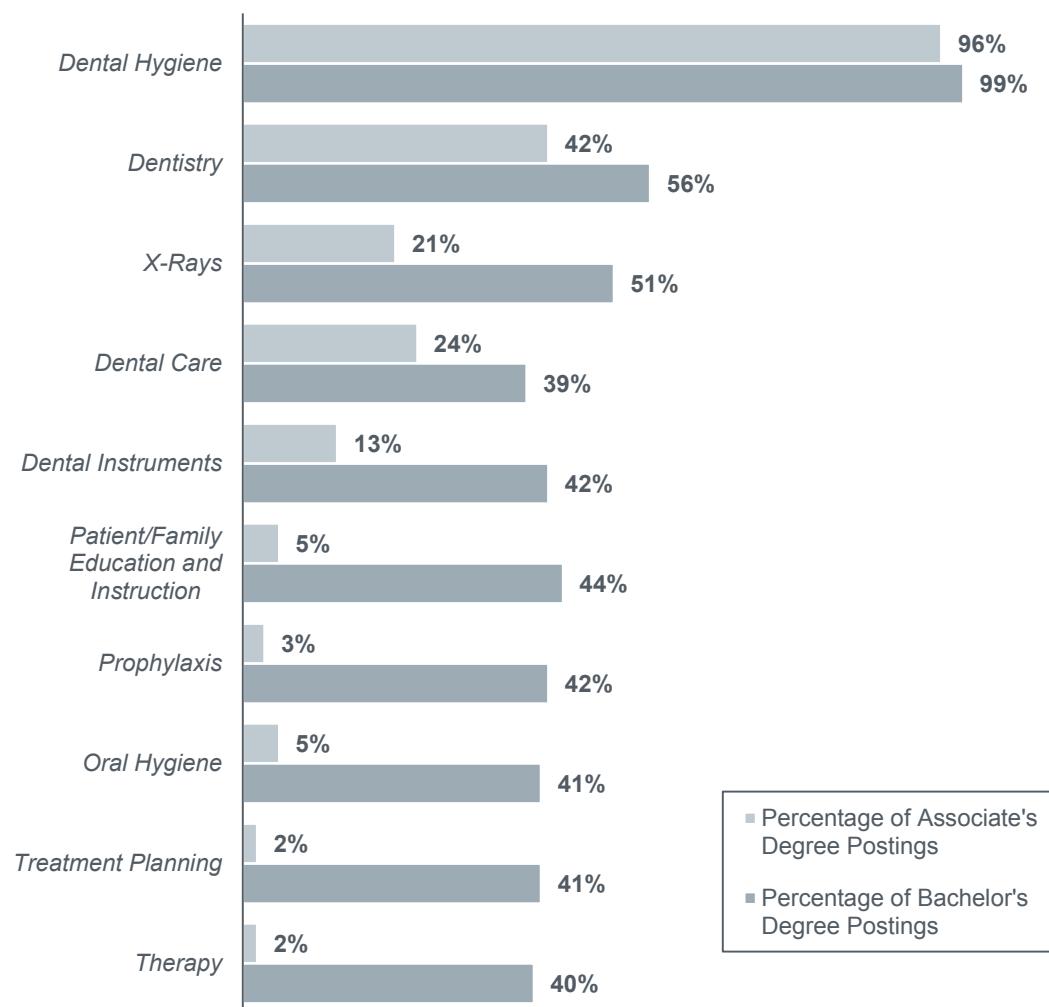
Skills Comparison

Employers Demand More Advanced Skills for Dental Hygienists with Bachelor's Degrees than for Dental Hygienists with Associate's Degrees

Postings for dental hygienists with bachelor's degrees request therapy, treatment planning, oral hygiene, prophylaxis, and patient/family education and instruction skills significantly more often than those for dental hygienists with associate's degrees. Postings for dental hygienists with bachelor's degrees demand dentistry skills fourteen percentage points more often than those for dental hygienists with associate's degrees; postings for dental hygienists with bachelor's degrees demand X-ray skills thirty percentage points more often.

Comparison of Skills Demanded for Graduates with Associate's and Bachelor's Degrees in Dental Hygiene

Selected State Postings, May 2013 – April 2014



Bachelor's n = 369 with 4 unspecified
Associate's n = 165 with 6 unspecified
Source: Burning Glass Labor/Insight™

Employers Increasingly Demand Dental Care and Sealants Skills from Dental Hygienists with Bachelor's Degrees

Since 2011, demand for X-Rays, dental instruments, treatment planning, sealants, prophylaxis, and dental care rose over 1,000 percent.

Change in Skills Demanded for Graduates with Bachelor's Degrees in Dental Hygiene

Selected State Postings, 2011 – 2013

Skill Demanded	Job Openings (2011)	Job Openings (2013)	Percent Change
Dental Care	0.53%	40.47%	7,535.84%
Sealants	1.07%	42.51%	3,872.89%
Dental Instruments	1.61%	45.91%	2,751.55%
Prophylaxis	1.61%	42.51%	2,540.37%
X-Rays	3.76%	52.38%	1,293.28%
Treatment Planning	3.22%	44.55%	1,283.54%
Patient/Family Education and Instruction	6.45%	47.27%	632.86%
Dentistry	14.51%	58.16%	300.82%
Oral Hygiene	19.89%	42.85%	115.43%
Dental Hygiene	95.69%	97.95%	2.36%

2011 n = 186 with 8 unspecified

2013 n = 294 with 6 unspecified

Source: Burning Glass Labor/Insight™

Data collected for H2 2013 and after is not directly comparable to data collected before H2 2013 due to improvements in Burning Glass Labor/Insight's web spidering technology.

Online Bachelor's Degree Completion Programs in Dental Hygiene Include Coursework on General Education, Basic Science, and Dental Science

According to the American Dental Hygienist Association, 53 bachelor's degree programs and 44 bachelor's degree completion programs operate in the United States. Accredited dental hygiene programs include:

Of these, only dental materials/instruments skills appear on the list of top 10 demanded skills for dental hygienists.

- General education courses (e.g., English, speech, psychology, sociology)
- Basic science courses (e.g., general chemistry, anatomy, physiology, biochemistry, microbiology, pathology, nutrition, pharmacology)
- Dental science courses (e.g., dental anatomy, head and neck anatomy, oral embryology and histology, oral pathology, radiography, periodontology, pain control, dental materials)

Pennsylvania College of Technology and Dixie State University both offer fully online bachelor's degree completion programs for dental hygiene associate's degree graduates. Pennsylvania College of Technology prepares students for positions such as legislative aid, insurance review specialist, and special population health care provider. Dixie State College focuses on preparation for employment in an educational setting (e.g., dental hygiene instructor).

Online Bachelor of Science in Dental Hygiene Degree Completion Program at the Pennsylvania College of Technology¹

General Education Courses



Associate's Dental Hygiene Degree Requirements



Dental Hygiene Core Courses

- Issues in Professional Dental Hygiene
- Health Care Delivery Systems
- Health Care Public Policy
- Dental Hygiene Capstone
- Clinical Practice Update



Dental Hygiene Elective Courses

- Contemporary Periodontics
- Health Issues and Transitions
- Application of Teaching and Learning Styles in the Allied Health Professions
- Medical Ethics
- Ethical and Legal Issues Related to Medicine

¹) Pennsylvania College of Technology Dental Hygiene Online Degree Completion Program.
<http://www.pct.edu/schools/hs/dental/BSDHDistanceEd.pdf#zoom=75>

**Online Bachelor of Science in Dental Hygiene Degree Completion Program at
Dixie State University²**

General Education Courses



Associate's Dental Hygiene Degree Requirements



Dental Hygiene Elective Courses

- Biostatistics and Epidemiology
- Research Methodology
- Leadership and Group Dynamics
- Psychology and Measurement
 - Introduction to basic educational concepts of teaching health care professionals. Topics include: educational planning; course development and design; goals and learning objectives; and evaluation and measurement.
- Instructional Practice
 - Provides students with knowledge and skills involved in laboratory and clinical instruction. Emphasizes psychomotor skill development, analysis and remediation of performance problems. Includes lecture and clinical application of knowledge.
- Curriculum and Philosophical Foundations
 - Emphasizes curriculum planning and implementation. Includes teaching philosophies and methodologies, as well as foundations of teaching such as principles of learning, learning styles and motivation, case-based learning, and using educational media and software.
- Public Health and Cultural Diversity
- Dental Public Health Administration
- Community Services Practices
- Senior Project

2) Dixie State University Dental Hygiene Online BS Degree Completion Program. http://dixie.edu/health/dental/bachelor_program.php

Emphasize Bachelor's Degrees as Preparation for In-Demand Alternative Employment

Advertise bachelor's degrees as opportunities to enhance dental hygiene-specific skillsets while achieving the comprehensive experience of a liberal arts education and broader degree applicability. Potential alternative employment includes dental hygiene instructor positions and sales representative positions. Both positions composed significantly larger proportions of job postings in 2013 than in 2011. Incorporate additional coursework (e.g., pedagogy, research methods, sales) into bachelor's degree programs to prepare students for these positions.



Bachelor's Degrees Offer a More Comprehensive Education than Associate's Degrees

The American Dental Hygienist Association compares associate's and bachelor's degrees in dental hygiene.³

Both Associate's and Bachelor's Degrees:

- Are considered entry level to the profession
- Prepare students for the clinical practice of dental hygiene in a private dental office or public clinic

Bachelor's Degrees:

- Offer more elective courses and specialization tracks
- Encompass more total hours of instruction (particularly in written communication, chemistry, oral health and education / preventative counseling, and patient management)
- Open alternative career pathways in education, administration, public health, and research

3) American Dental Hygienist Association (2013). "Dental Hygiene Education: Curricula, Program, Enrollment and Graduate Information." Accessed May 2014. https://www.adha.org/resources-docs/72611_Dental_Hygiene_Education_Fact_Sheet.pdf

Change in Titles for Graduates with Bachelor's Degrees in Dental Hygiene

Selected State Postings, 2011 – 2013

Dental hygienists with bachelor's degrees qualify for teaching positions at the university level.

Title Demanded	Job Openings (2011)	Job Openings (2013)	Percent Change
Dental Hygienist	25.26%	19.04%	746.22%
Dental Hygiene Instructor	3.76%	6.12%	62.76%
Faculty	3.22%	2.38%	26.08%
Adjunct Instructor	2.68%	2.04%	23.88%
Hygienist	31.18%	37.07%	18.89%
Regional Hygiene Administrator	1.61%	1.02%	-36.64%
Field Sales Representative	0%	7.82%	N/A
Clinical Assistant	0%	1.36%	N/A

2011 n = 186 with 0 unspecified

2013 n = 294 with 6 unspecified

Source: Burning Glass Labor/Insight™

Data collected for H2 2013 and after is not directly comparable to data collected before H2 2013 due to improvements in Burning Glass Labor/Insight's web spidering technology.

3) Program Growth

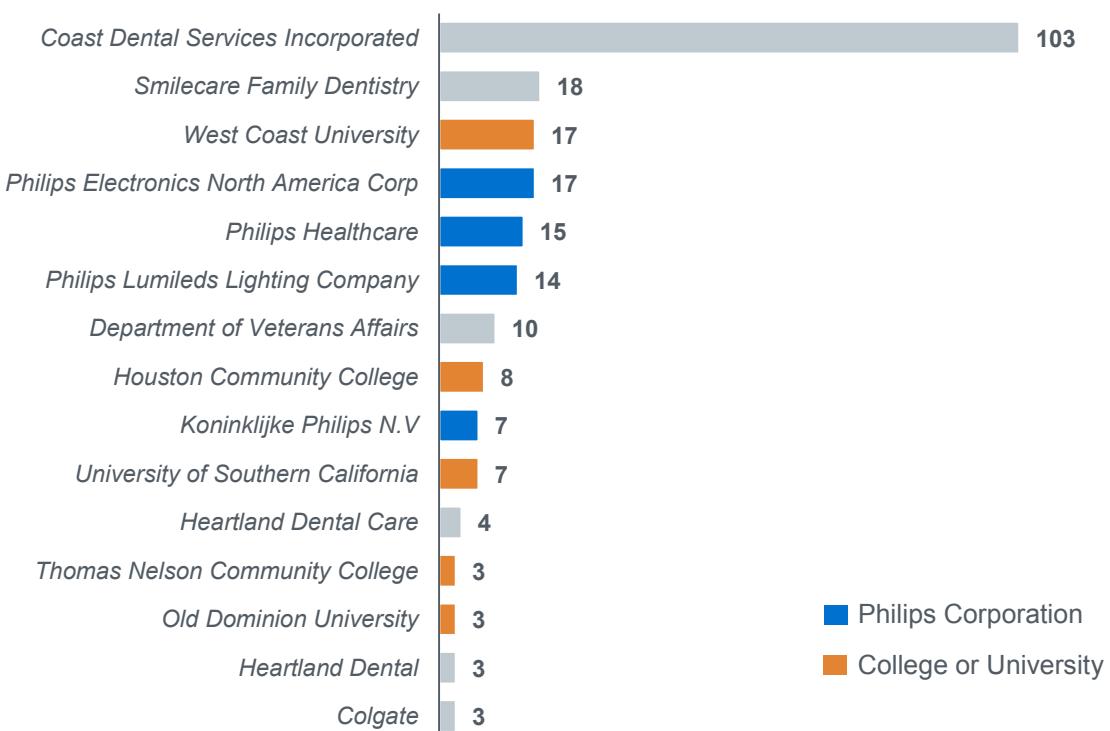
Employer Demand

Dental Services Corporations and Higher Education Institutions Demand the Most Dental Hygienists with Bachelor's Degrees

Philips seeks sales representatives for oral care products; sales representatives possess either a four-year college bachelor's degree or an associate's degree in dental hygiene. Higher education institutions seek instructors in dental hygiene.

Top Employers for Graduates with Bachelor's Degrees in Dental Hygiene

Selected State Postings, May 2013 – April 2014



n = 369 with 70 unspecified
Source: Burning Glass Labor/Insight™

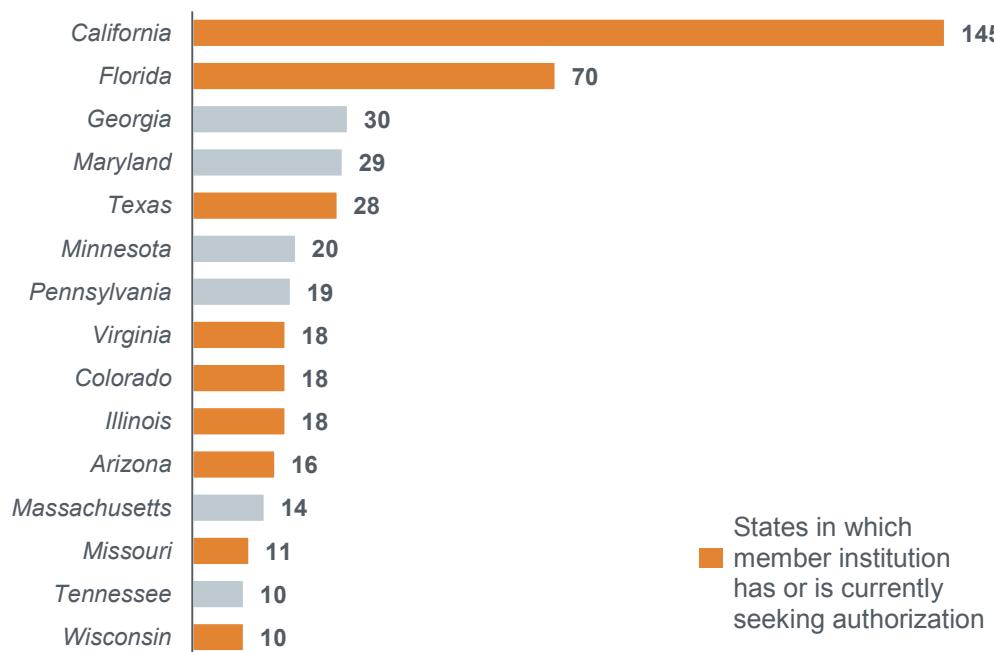
Top Locations

California and Florida Employers Demand the Most Dental Hygienists with Bachelor's Degrees

Nationally and in selected states, California and Florida post the most jobs for dental hygienists with bachelor's degrees. Of the selected states, California employers post almost 40 percent of available jobs. Kansas employers post less than one percent of available jobs. Los Angeles posts 20 percent of all jobs for dental hygienists with bachelor's degrees by metropolitan statistical area (MSA).

Top States for Graduates with Bachelor's Degrees in Dental Hygiene

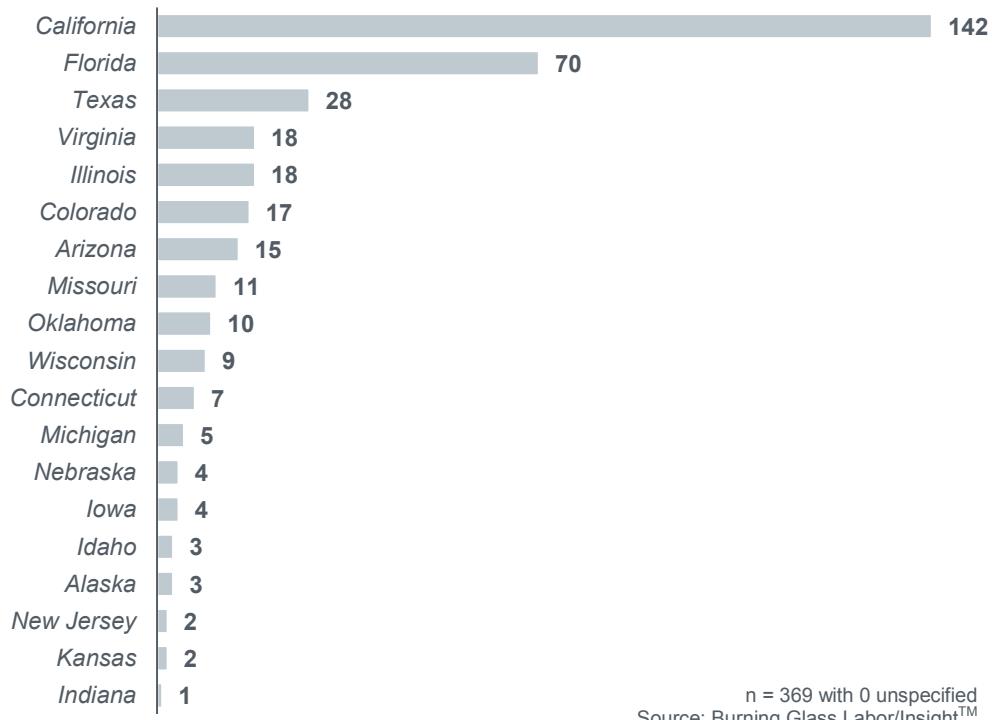
National Postings, May 2013 – April 2014



n = 585 with 0 unspecified
Source: Burning Glass Labor/Insight™

Top States for Graduates with Bachelor's Degrees in Dental Hygiene

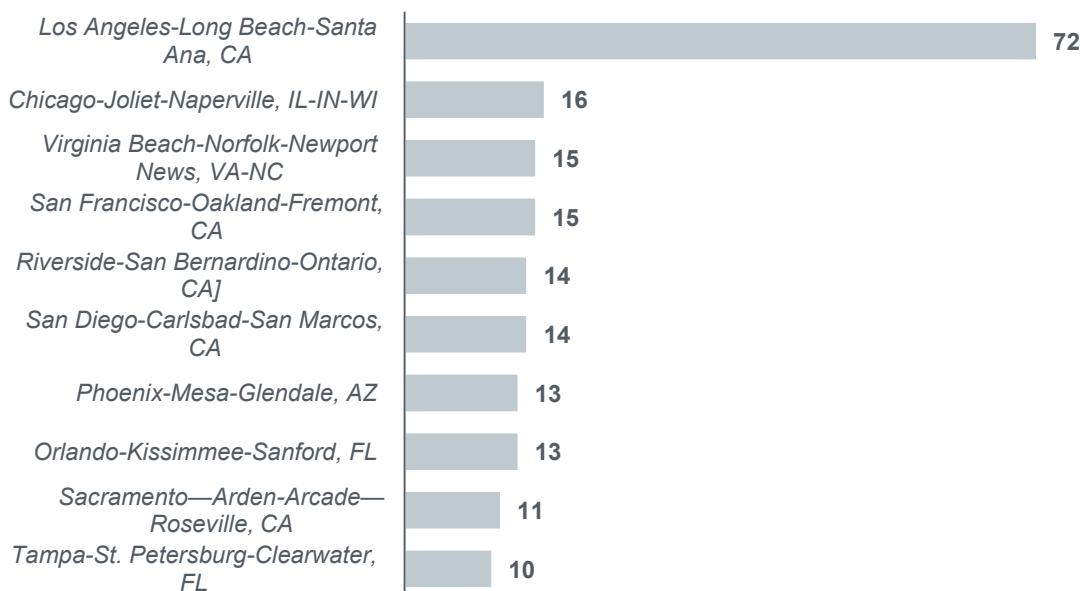
Selected State Postings, May 2013 – April 2014



n = 369 with 0 unspecified
Source: Burning Glass Labor/Insight™

Top MSAs for Graduates with Bachelor's Degrees in Dental Hygiene

Selected State Postings, May 2013 – April 2014



n = 369 with 13 unspecified
Source: Burning Glass Labor/Insight™

State Demand Growth

Alaska, Florida, Idaho, Nebraska, and Oklahoma More than Doubled Postings for Dental Hygienists with Bachelor's Degrees

Available jobs for graduates with bachelor's degrees in dental hygiene increased by at least 50 percent in five states since 2011:

- Alaska,
- Florida,
- Idaho,
- Nebraska, and
- Oklahoma.

These states deserve highest priority for out-of-state recruitment efforts. Demand decreased in 12 targeted states since 2011, most significantly in Hawaii and Kansas.

See Appendix A for change in demand for dental hygienists with bachelor's degrees in selected states.

4) Research Methodology

Project Challenge

Leadership at a member institution approached the Forum to:

- Compare demand for associate's and bachelor's degrees in dental hygiene in: Alaska, Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Michigan, Missouri, Nebraska, New Jersey, Oklahoma, Texas, Virginia, and Wisconsin
- Identify:
 - Potential program niche or focus areas, based on high demand and emerging skills for graduates with Bachelor of Science in Dental Hygiene (BS-DH) degrees
 - Recruitment regions within the identified states, based on:
 - Top employers for BS-DH graduates
 - Top MSAs for BS-DH graduates
- States to target for online authorization expansion, based on states with high demand and high growth in demand for graduates with BS-DH degrees
- Program competition, based on the number of online programs in identified states.
- Profile curricula, specializations, and marketing from the competitor programs, particularly those that prepare graduates for jobs in teaching, industry, and government.

Project Sources

The Forum consulted the following sources for this report:

- EAB's internal and online research libraries (eab.com)
- The Chronicle of Higher Education (<http://chronicle.com>)
- National Center for Education Statistics (NCES) (<http://nces.ed.gov/>)
- American Dental Hygienist Association (https://www.adha.org/resources-docs/72611_Dental_Hygiene_Education_Fact_Sheet.pdf)
- Dixie State University Dental Hygiene Bachelor Program.
http://dixie.edu/health/dental/bachelor_program.php
- Pennsylvania College of Technology Dental Hygiene Online Degree Completion Program. <http://www.pct.edu/schools/hs/dental/BSDHDistanceEd.pdf#zoom=75>

Burning Glass Labor/Insight™

Burning Glass – The Education Advisory Board's Partner for Real-Time Labor Market Data

Part of the data included in this report made possible through our partnership with Burning Glass, a Boston-based firm specializing in use of web spidering technology and Artificial Intelligence engines to mine more than 80 million online job postings for real-time employer demand data. Under the partnership, the Education Advisory Board may use certain features of Burning Glass's proprietary tool called Labor/Insight™ to answer common member questions about employer demand for specific educational requirements, job titles, and competencies over time and by geography. A fuller description of the tool is available at <http://www.burning-glass.com/products/laborinsight-market-analysis/>.

Learn about Burning Glass and Labor/Insight™

Many Education Advisory Board member institutions subscribe to the Labor/Insight™ tool, to provide program directors and marketers desktop access to the tool's full suite of features. Burning Glass is pleased to provide Labor/Insight™ to our members at a substantial discount. For more information about the service, please contact Kelly Bailey, Business Development Manager, kbailey@burning-glass.com or 732-800-2484.

Definition of Terms

The total number of “unspecified” job postings included in a data sample is indicated below all charts and graphs in this report. Job postings are considered “unspecified” for a skill, industry, employer, geography, certification, education requirement, or major when the job posting did not advertise for one of these particular job characteristics and therefore should be subtracted from the total number (n value) of job postings analyzed in the query. Capital cities may be overrepresented in instances where job postings do not specify a location within a state.

Data collected for H2 2013 and after is not directly comparable to data collected before H2 2013 due to improvements in Burning Glass Labor/Insight's web spidering technology.

Appendix A: Additional Job Postings Data



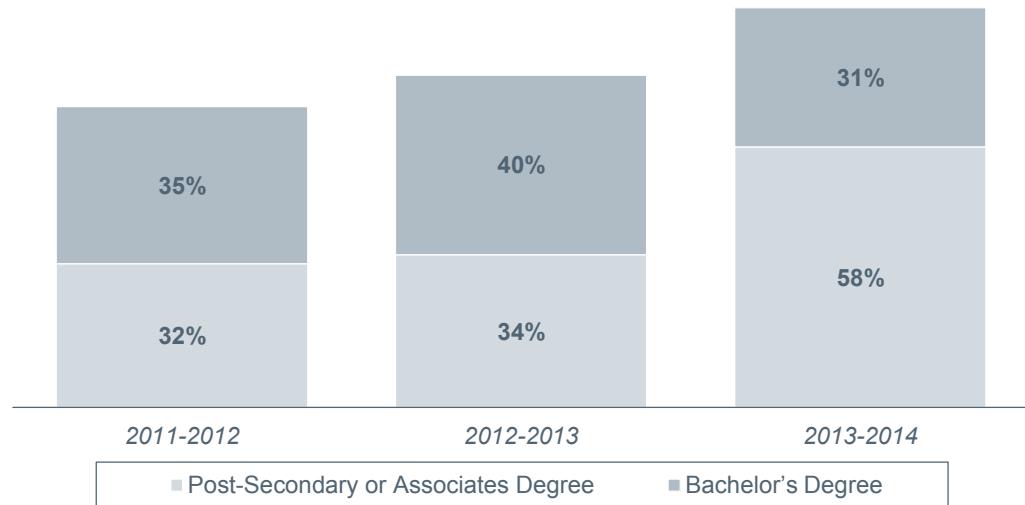
BS-DH Demand Decline

11%

Nationally, demand for BS-DH degrees decreased 13 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Selected States Data, April 2011-March 2014



2011 n = 5,697 with 4,861 unspecified
2012 n = 4,495 with 3,681 unspecified
2013 n = 7,385 with 5,873 unspecified
Source: Burning Glass Labor/Insight™



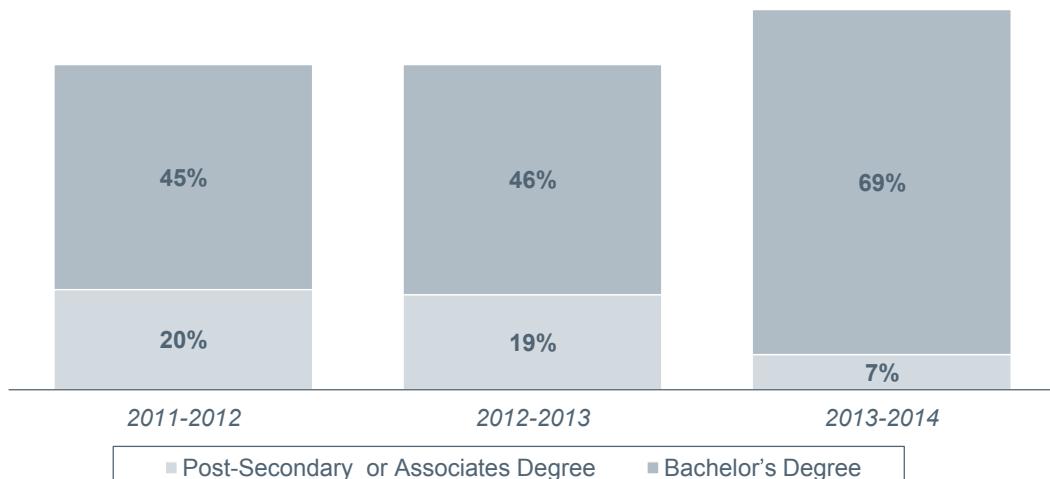
BS-DH Demand Growth

53%

In Alaska, demand for BS-DH degrees decreased 53 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Alaska Data, April 2011-March 2014



2011 n = 96 with 76 unspecified
2012 n = 74 with 48 unspecified
2013 n = 50 with 37 unspecified
Source: Burning Glass Labor/Insight™



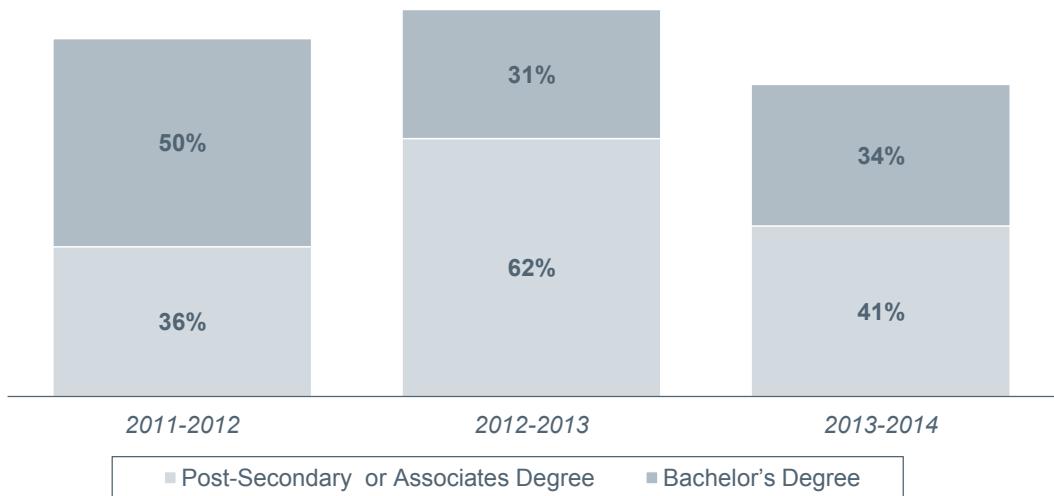
BS-DH Demand Decline

32%

In Arizona, demand for BS-DH degrees decreased 32 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Arizona Data, April 2011-March 2014



2011 n = 198 with 146 unspecified

2012 n = 141 with 128 unspecified

2013 n = 207 with 154 unspecified

Source: Burning Glass Labor/Insight™



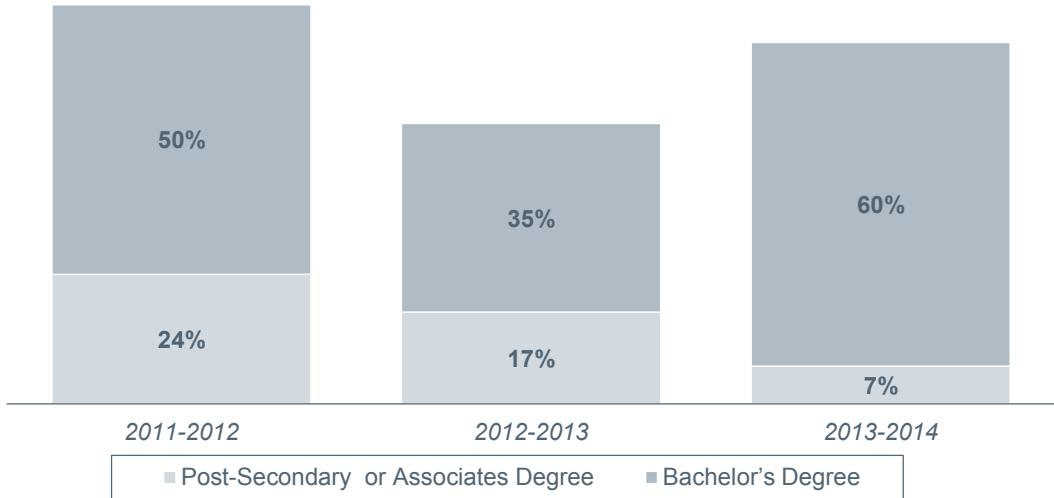
BS-DH Demand Growth

20%

In California, demand for BS-DH degrees increased 20 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

California Data, April 2011-March 2014



2011 n = 514 with 431 unspecified

2012 n = 395 with 324 unspecified

2013 n = 734 with 544 unspecified

Source: Burning Glass Labor/Insight™



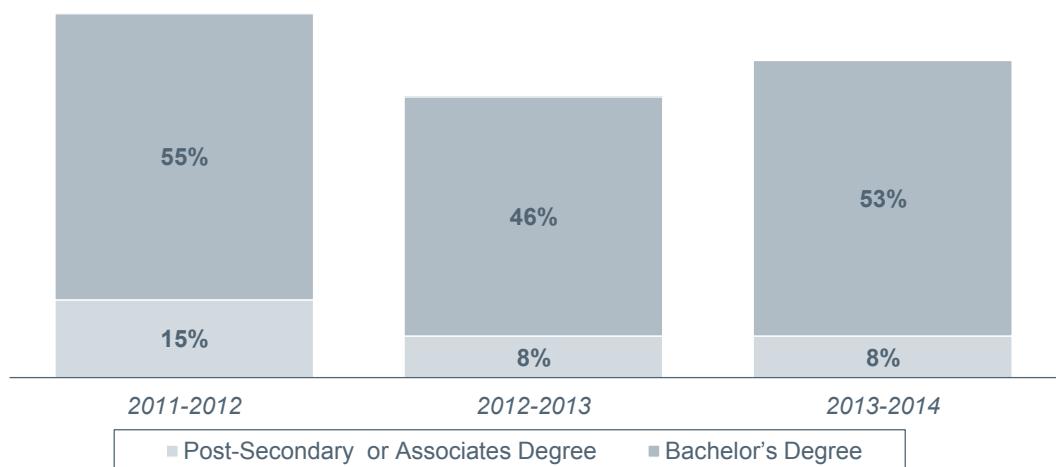
BS-DH Demand Decline

3%

In Colorado, demand for BS-DH degrees decreased 3 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Colorado Data, April 2011-March 2014



2011 n = 210 with 170 unspecified

2012 n = 155 with 142 unspecified

2013 n = 320 with 284 unspecified

Source: Burning Glass Labor/Insight™



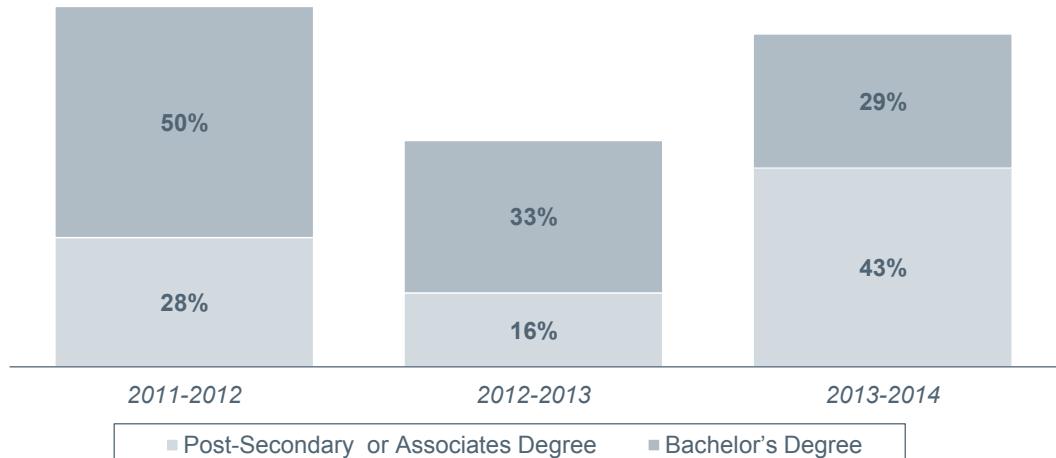
BS-DH Demand Decline

42%

In Connecticut, demand for BS-DH degrees decreased 42 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Connecticut Data, April 2011-March 2014



2011 n = 100 with 78 unspecified

2012 n = 181 with 175 unspecified

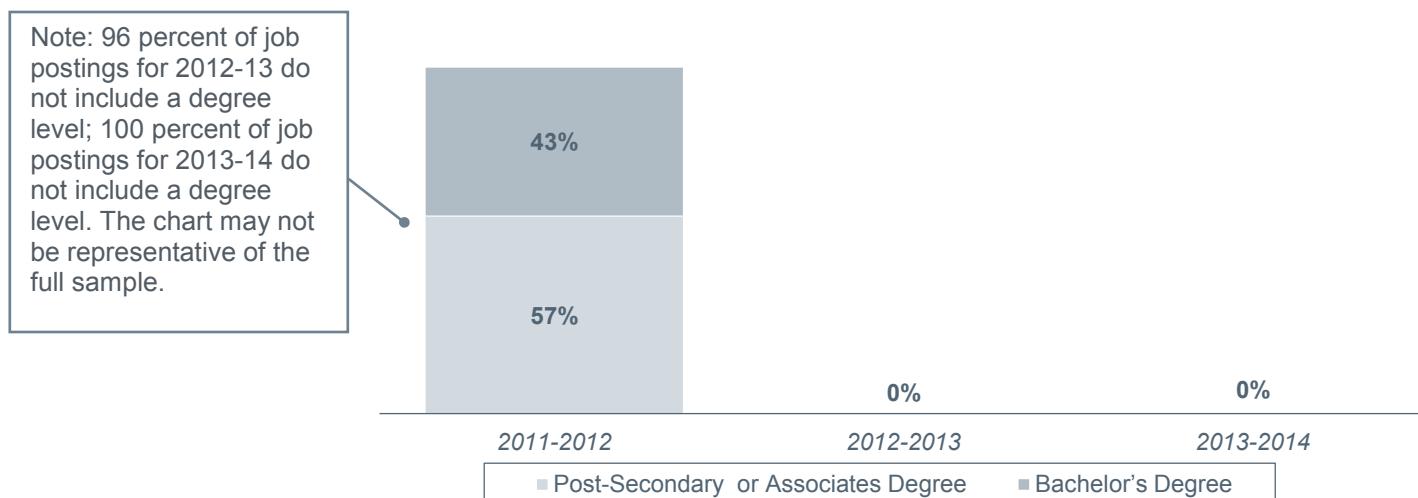
2013 n = 32 with 25 unspecified

Source: Burning Glass Labor/Insight™

2

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Delaware Data, April 2011-March 2014



2011 n = 35 with 28 unspecified

2012 n = 28 with 27 unspecified

2013 n = 8 with 8 unspecified

Source: Burning Glass Labor/Insight™



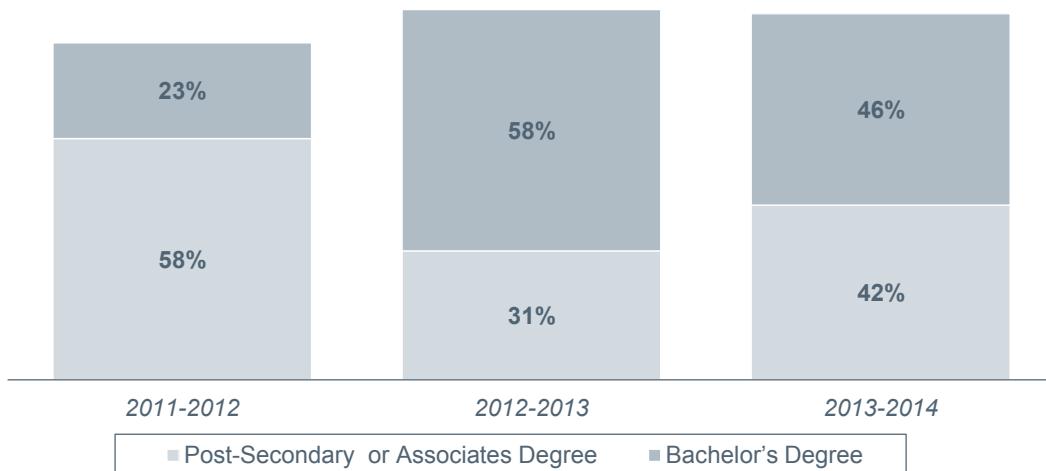
BS-DH Demand Growth

100%

In Florida, demand for BS-DH degrees increased 100 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Florida Data, April 2011-March 2014



2011 n = 319 with 293 unspecified

2012 n = 270 with 208 unspecified

2013 n = 706 with 564 unspecified

Source: Burning Glass Labor/Insight™



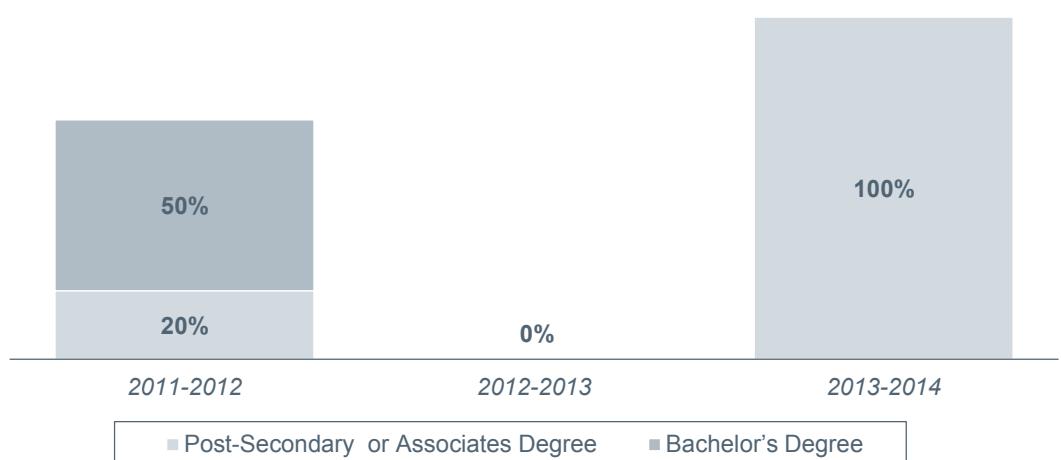
BS-DH Demand Decline

100%

In Hawaii, demand for BS-DH degrees decreased 100 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Hawaii Data, April 2011-March 2014



2011 n = 154 with 0 unspecified

2012 n = 108 with 104 unspecified

2013 n = 41 with 38 unspecified

Source: Burning Glass Labor/Insight™

Note: 96 percent of job postings for 2012-13 do not include a degree level; the chart may not be representative of the full sample.



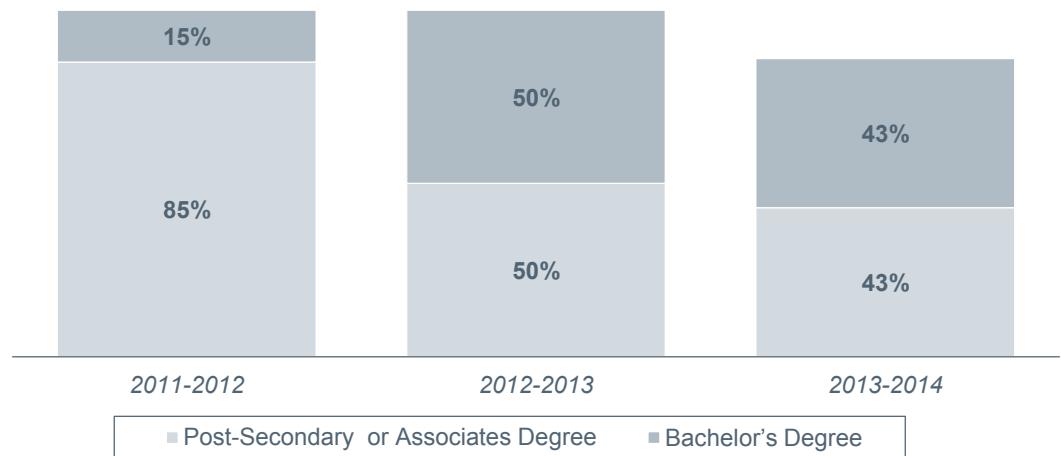
BS-DH Demand Growth

186%

In Idaho, demand for BS-DH degrees increased 186 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Idaho Data, April 2011-March 2014



2011 n = 22 with 15 unspecified

2012 n = 21 with 17 unspecified

2013 n = 67 with 53 unspecified

Source: Burning Glass Labor/Insight™



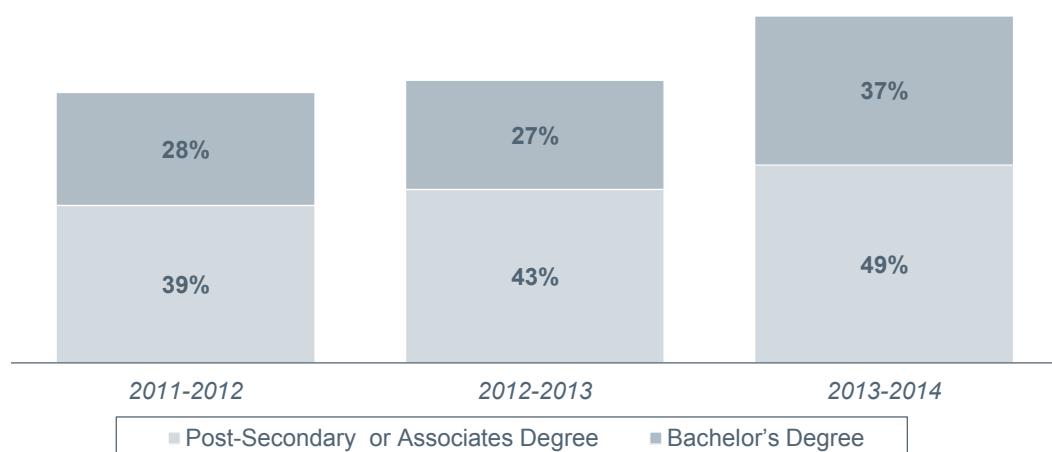
BS-DH Demand Growth

32%

In Illinois, demand for BS-DH degrees increased 32 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Illinois Data, April 2011-March 2014



2

2011 n = 139 with 121 unspecified

2012 n = 217 with 187unspecified

2013 n = 230 with 195 unspecified

Source: Burning Glass Labor/Insight™



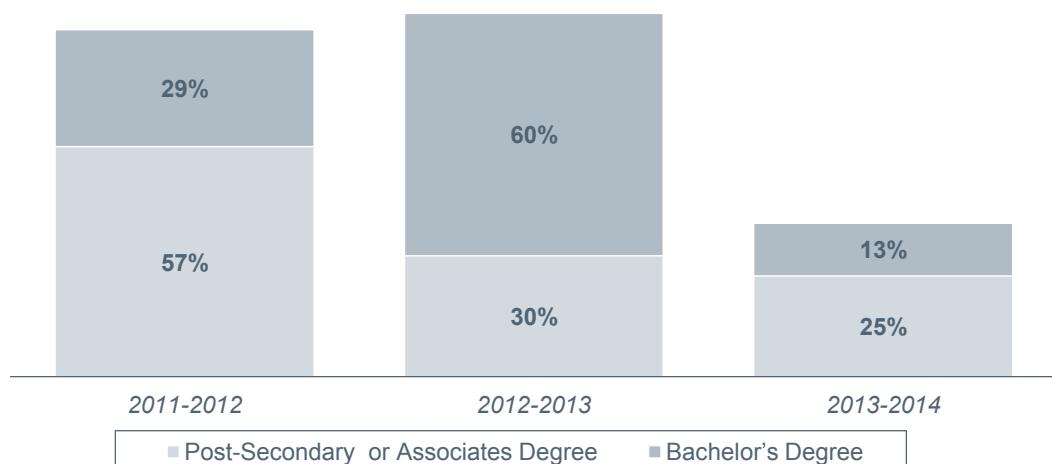
BS-DH Demand Decline

55%

In Indiana, demand for BS-DH degrees decreased 55 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Indiana Data, April 2011-March 2014



2011 n = 132 with 125 unspecified

2012 n = 57 with 47unspecified

2013 n =128 with 112 unspecified

Source: Burning Glass Labor/Insight™



BS-DH Demand Growth

27%

In Iowa, demand for BS-DH degrees increased 27 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Iowa Data, April 2011-March 2014



2011 n = 67 with 52 unspecified

2012 n = 57 with 47 unspecified

2013 n = 97 with 78 unspecified

Source: Burning Glass Labor/Insight™



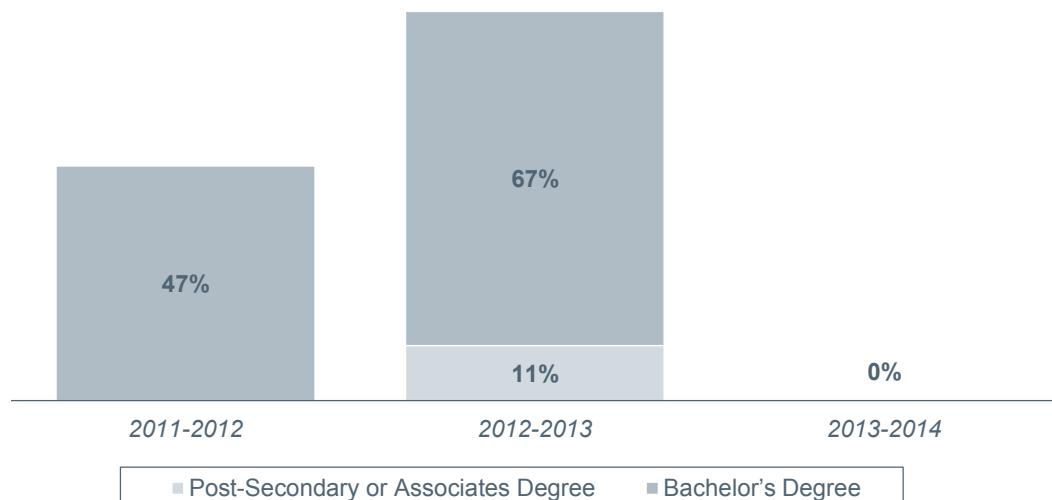
BS-DH Demand Decline

100%

In Kansas, demand for BS-DH degrees decreased 100 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Kansas Data, April 2011-March 2014



2011 n = 51 with 36 unspecified

2012 n = 38 with 29 unspecified

2013 n = 54 with 44 unspecified

Source: Burning Glass Labor/Insight™

Note: 81 percent of job postings for 2013-14 do not include a degree level; the chart may not be representative of the full sample.



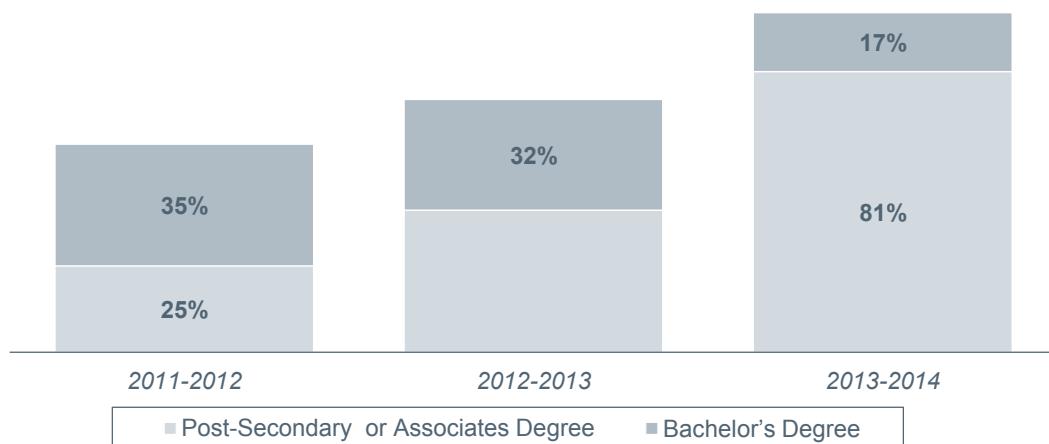
BS-DH Demand Decline

51%

In Michigan, demand for BS-DH degrees decreased 51 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Michigan Data, April 2011-March 2014



2011 n = 170 with 150 unspecified

2012 n = 152 with 115 unspecified

2013 n = 103 with 63 unspecified

Source: Burning Glass Labor/Insight™



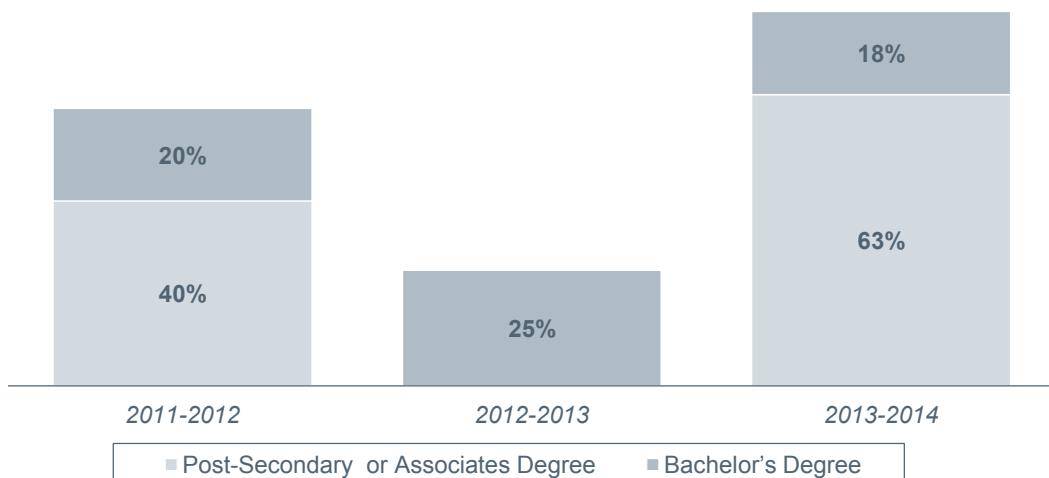
BS-DH Demand Decline

10%

In Missouri, demand for BS-DH degrees decreased 10 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Missouri Data, April 2011-March 2014



2011 n = 103 with 88 unspecified

2012 n = 48 with 44 unspecified

2013 n = 103 with 63 unspecified

Source: Burning Glass Labor/Insight™

Note: 92 percent of job postings for 2012-13 do not include a degree level; the chart may not be representative of the full sample.



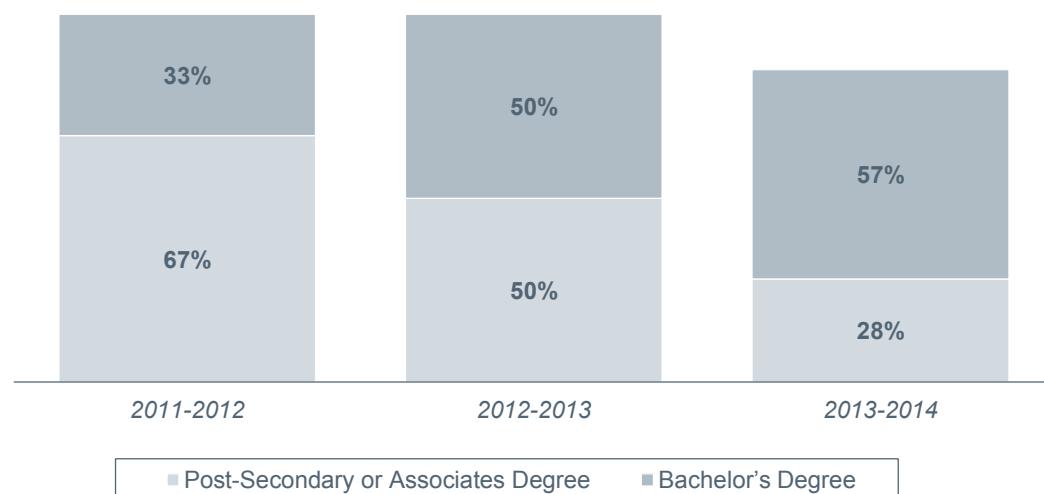
BS-DH Demand Growth

72%

In Nebraska, demand for BS-DH degrees increased 72 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Nebraska Data, April 2011-March 2014



2011 n = 38 with 35 unspecified
2012 n = 26 with 24 unspecified
2013 n = 56 with 49 unspecified

Source: Burning Glass Labor/Insight™



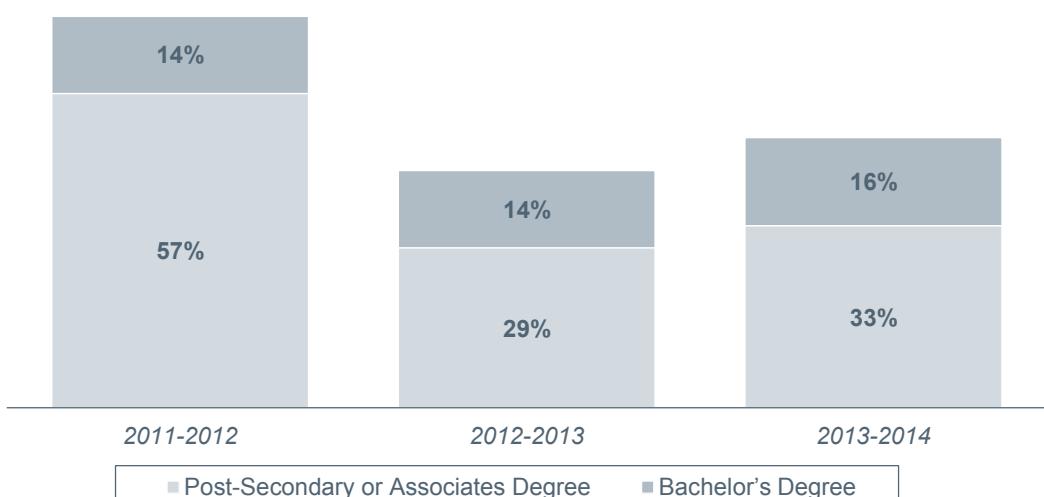
BS-DH Demand Decline

14%

In New Jersey, demand for BS-DH degrees decreased 14 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

New Jersey Data, April 2011-March 2014



2011 n = 60 with 53 unspecified
2012 n = 29 with 22 unspecified
2013 n = 100 with 94 unspecified

Source: Burning Glass Labor/Insight™



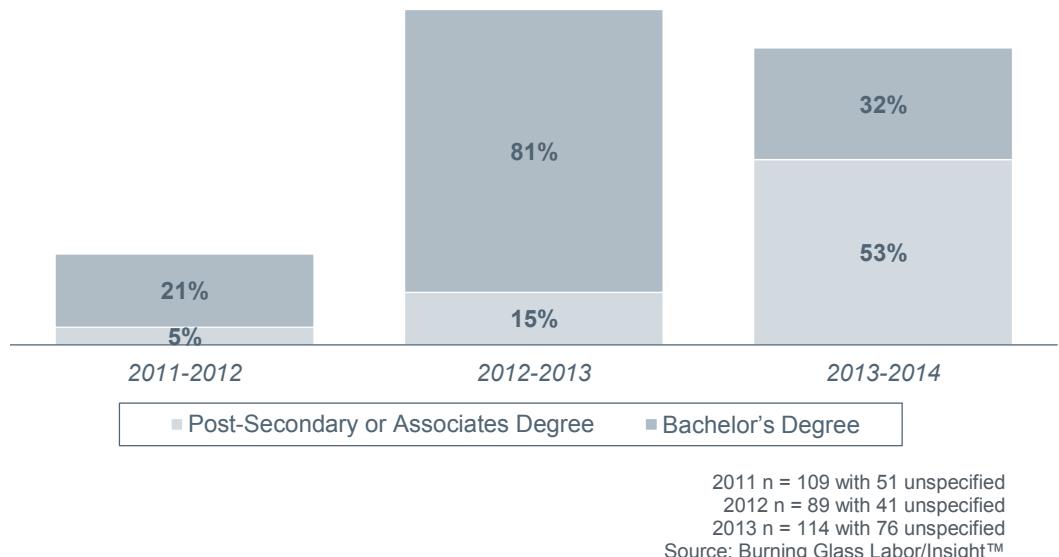
BS-DH Demand Growth

52%

In Oklahoma, demand for BS-DH degrees increased 52 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Oklahoma Data, April 2011-March 2014



2011 n = 109 with 51 unspecified

2012 n = 89 with 41 unspecified

2013 n = 114 with 76 unspecified

Source: Burning Glass Labor/Insight™



BS-DH Demand Decline

61%

In Texas, demand for BS-DH degrees decreased 61 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Texas Data, April 2011-March 2014



2011 n = 439 with 392 unspecified

2012 n = 289 with 246 unspecified

2013 n = 621 with 496 unspecified

Source: Burning Glass Labor/Insight™



BS-DH Demand Growth

5%

In Virginia, demand for BS-DH degrees increased 5 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Virginia Data, April 2011-March 2014



2011 n = 117 with 105 unspecified

2012 n = 931 with 59 unspecified

2013 n = 165 with 141 unspecified

Source: Burning Glass Labor/Insight™



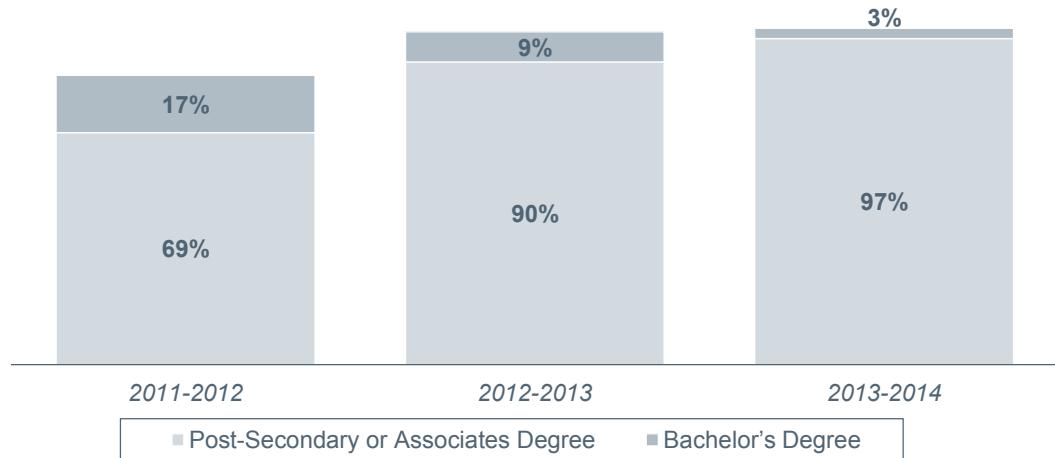
BS-DH Demand Decline

82%

In Wisconsin, demand for BS-DH degrees decreased 3 percent since 2011.

Percentage of Dental Hygienist Positions that Require AAS-DH and BS-DH Degrees

Wisconsin Data, April 2011-March 2014



2011 n = 132 with 103 unspecified

2012 n = 101 with 70 unspecified

2013 n = 321 with 142 unspecified

Source: Burning Glass Labor/Insight™

Interregional Guidelines for the Evaluation of Distance Education

Council of Regional Accrediting Commissions (C-RAC) (2011)

1. Online learning is appropriate to the institution's mission and purposes.

*Analysis/Evidence:*¹

- The mission statement explains the role of online learning within the range of the institution's programs and services;
- Institutional and program statements of vision and values inform how the online learning environment is created and supported;
- As appropriate, the institution incorporates into its online learning programs methods of meeting the stated institutional goals for the student experience at the institution;
- The recruitment and admissions programs supporting the online learning courses and programs appropriately target the student populations to be served;
- The students enrolled in the institution's online learning courses and programs fit the admissions requirements for the students the institution intends to serve;
- Senior administrators and staff can articulate how online learning is consonant with the institution's mission and goals.

2. The institution's plans for developing, sustaining, and, if appropriate, expanding online learning offerings are integrated into its regular planning and evaluation processes.

Analysis/Evidence:

- Development and ownership of plans for online learning extend beyond the administrators directly responsible for it and the programs directly using it;
- Planning documents are explicit about any goals to increase numbers of programs provided through online learning courses and programs and/or numbers of students to be enrolled in them;
- Plans for online learning are linked effectively to budget and technology planning to ensure adequate support for current and future offerings;
- Plans for expanding online learning demonstrate the institution's capacity to assure an appropriate level of quality;
- The institution and its online learning programs have a track record of conducting needs analysis and of supporting programs.

3. Online learning is incorporated into the institution's systems of governance and academic oversight.

Analysis/Evidence:

- The institution's faculty have a designated role in the design and implementation of its online learning offerings;
- The institution ensures the rigor of the offerings and the quality of the instruction;
- Approval of online courses and programs follows standard processes used in the college or university;
- Online learning courses and programs are evaluated on a periodic basis;
- Contractual relationships and arrangements with consortial partners, if any, are clear and guarantee that the institution can exercise appropriate responsibility for the academic quality of all online learning offerings provided under its name.

¹ These bulleted points illustrate actions, processes and facts that institutions may use to demonstrate that they meet SARA requirements.

4. Curricula for the institution's online learning offerings are coherent, cohesive, and comparable in academic rigor to programs offered in traditional instructional formats.

Analysis/Evidence:

- The curricular goals and course objectives show that the institution or program has knowledge of the best uses of online learning in different disciplines and settings;
- Curricula delivered through online learning are benchmarked against on-ground courses and programs, if provided by the institution, or those provided by traditional institutions;
- The curriculum is coherent in its content and sequencing of courses and is effectively defined in easily available documents including course syllabi and program descriptions;
- Scheduling of online learning courses and programs provides students with a dependable pathway to ensure timely completion of degrees;
- The institution or program has established and enforces a policy on online learning course enrollments to ensure faculty capacity to work appropriately with students;
- Expectations for any required face-to-face, on-ground work (e.g., internships, specialized laboratory work) are stated clearly;
- Course design and delivery supports student-student and faculty-student interaction;
- Curriculum design and the course management system enable active faculty contribution to the learning environment;
- Course and program structures provide schedule and support known to be effective in helping online learning students persist and succeed.

5. The institution evaluates the effectiveness of its online learning offerings, including the extent to which the online learning goals are achieved, and uses the results of its evaluations to enhance the attainment of the goals.

Analysis/Evidence:

- Assessment of student learning follows processes used in onsite courses or programs and/or reflects good practice in assessment methods;
- Student course evaluations are routinely taken and an analysis of them contributes to strategies for course improvements;
- Evaluation strategies ensure effective communication between faculty members who design curriculum, faculty members who interact with students, and faculty members who evaluate student learning;
- The institution regularly evaluates the effectiveness of the academic and support services provided to students in online courses and uses the results for improvement;
- The institution demonstrates the appropriate use of technology to support its assessment strategies;
- The institution documents its successes in implementing changes informed by its programs of assessment and evaluation;
- The institution provides examples of student work and student interactions among themselves and with faculty;
- The institution sets appropriate goals for the retention/persistence of students using online learning, assesses its achievement of these goals, and uses the results for improvement.

6. Faculty responsible for delivering the online learning curricula and evaluating the students' success in achieving the online learning goals are appropriately qualified and effectively supported.

Analysis/Evidence:

- Online learning faculties are carefully selected, appropriately trained, frequently evaluated, and are marked by an acceptable level of turnover;
- The institution's training program for online learning faculty is periodic, incorporates tested good practices in online learning pedagogy, and ensures competency with the range of software products used by the institution;
- Faculty are proficient and effectively supported in using the course management system;

- The office or persons responsible for online learning training programs are clearly identified and have the competencies to accomplish the tasks, including knowledge of the specialized resources and technical support available to support course development and delivery;
- Faculty members engaged in online learning share in the mission and goals of the institution and its programs and are provided the opportunities to contribute to the broader activities of the institution;
- Students express satisfaction with the quality of the instruction provided by online learning faculty members.

7. The institution provides effective student and academic services to support students enrolled in online learning offerings.

Analysis/Evidence:

- The institution's admissions program for online learning provides good web-based information to students about the nature of the online learning environment, and assists them in determining if they possess the skills important to success in online learning;
- The institution provides an online learning orientation program;
- The institution provides support services to students in formats appropriate to the delivery of the online learning program;
- Students in online learning programs have adequate access to student services, including financial aid, course registration, and career and placement counseling;
- Students in online learning programs have ready access to 24/7 tech support;
- Students using online learning have adequate access to learning resources, including library, information resources, laboratories, and equipment and tracking systems;
- Students using online learning demonstrate proficiency in the use of electronic forms of learning resources;
- Student complaint processes are clearly defined and can be used electronically;
- Publications and advertising for online learning programs are accurate and contain necessary information such as program goals, requirements, academic calendar, and faculty;
- Students are provided with reasonable and cost-effective ways to participate in the institution's system of student authentication.

8. The institution provides sufficient resources to support and, if appropriate, expand its online learning offerings.

Analysis/Evidence:

- The institution prepares a multi-year budget for online learning that includes resources for assessment of program demand, marketing, appropriate levels of faculty and staff, faculty and staff development, library and information resources, and technology infrastructure;
- The institution provides evidence of a multi-year technology plan that addresses its goals for online learning and includes provision for a robust and scalable technical infrastructure.

9. The institution assures the integrity of its online offerings.

Analysis/Evidence:

- The institution has in place effective procedures through which to ensure that the student who registers in a distance education course or program is the same student who participates in and completes the course or program and receives the academic credit. The institution makes clear in writing that these processes protect student privacy and notifies students at the time of registration or enrollment of any projected additional costs associated with the verification procedures. (Note: This is a federal requirement. All institutions that offer distance education programs must demonstrate compliance with this requirement.);
- The institution's policies on academic integrity include explicit references to online learning;
- Issues of academic integrity are discussed during the orientation for online students;
- Training for faculty members engaged in online learning includes consideration of issues of academic integrity, including ways to reduce cheating.



MEMORANDUM OF UNDERSTANDING

Extended Learning Seed Funding for Fall 2019 Managed Online Program Launches

Program Name: _____

BACKGROUND & RATIONALE: Online education extends the reach of UNM programs and makes it possible for students outside the Albuquerque area to access the high quality UNM education that we so proudly offer. Extended Learning is pleased to advance the institution's online ventures through its *Managed Online Programs*, representing separate admit online degree programs, which will launch in an 8-week course format.

Managed Online Programs commenced in Fall 2016 with programs conforming to an 8-week course carousel with five (5) student enrollment starts per year. This strategy is designed to attract the adult learner who is unable to attend UNM without this alternative pathway. It provides UNM an opportunity to reach a new student population. All courses developed for this initiative will be reviewed by a team of peer faculty members for quality assurance. Additionally, all faculty course designers will have access to, and are encouraged to attend, the Online Course Design Institute. Extended Learning will support academic units in these initiatives with seed funding, described below.

SEED FUNDING AMOUNTS & USES: Seed funding of up to \$100,000 is available for creation of undergraduate degree completion programs and graduate degree programs. Seed funding is intended to cover the costs of development and instruction for four semesters including summer, at which time programs are expected to be sustainable by way of increased enrollments that will be realized financially in the tuition sharing agreement.

TUITION SHARING: The tuition sharing agreement for *Managed Online Programs* that meet all deliverable timelines will route 65% of the total net tuition generated to the academic unit and 35% to the Provost's office. This funding model is intended to incentivize new enrollment growth and will be monitored to ensure that the current delivery option for this program is not diminished by migration to the managed online program. This agreement will need to be revisited by all parties involved if more than 25% of current enrollments in the managed online program were previously counted in an original delivery format. The tuition revenue distribution will occur at the end of the academic semester (fall, spring, and summer) in which the revenue is earned.

TERMS OF FUNDING & REVENUE SHARE: By accepting Extended Learning seed funding, academic units agree to:

Undergraduate Degree Completion Programs

- Develop, review, and offer all required major courses (typically 36 credit hours) on a repeating, 8-week course carousel optimized for 5 annual starts
- The department will ensure that the program is developed to quality standards, launches Fall 2019, and runs without interruption for students
- Agree to allow for the expansion of a steady-state cohort capacity of at least 200 students
- Agree to schedule additional cross-listed sections to allow for more campus enrollments should online program enrollments prove insufficient
- Each designated faculty course designer is encouraged to participate in the Extended Learning Online Course Design Institute or the Online Course Training during the course development window



- Each designated faculty course designer works with Extended Learning to design their course modeling UNM Online Course Standards Rubric and successfully completes the quality review before the first offering of the course

FUNDING & DEVELOPMENT SCHEDULE: The distribution of seed funding to academic units will take place in thirds, upon completion of certain milestones. *Terms shown here for Fall 2019 launch*

- First Disbursement (\$33,333): *deadline for deliverable completion – February 1, 2019*
 - Current, approved curriculum required for degree completion or evidence that appropriate curriculum forms have been submitted for approval through the University's curriculum approval process
 - Managed Online Program Course Development and Quality Review Schedule Worksheet developed for existing courses
 - Admission requirements and any documentation required for the admission process
 - Initial Managed Online Program information collected for web development and other digital marketing
 - Licensure requirements (if applicable)
 - Advising action requirements pre- and post-admission
- Deliverables for Second Disbursement (\$33,333): *deadline for deliverable completion – October 4, 2019*
 - Final approvals received for any outstanding curriculum forms in process at the time of the first disbursement
 - Managed Online Program Course Development and Quality Review Schedule Worksheet updated to include additional courses approved through the University's curriculum process after the first disbursement
 - Managed Online Program Curriculum and Course Carousel Worksheet
 - Specialized technology and/or equipment requirements (if applicable)
 - One third of credit hours developed, reviewed, and scheduled for Fall 2019
 - Fall courses will be scheduled by March 2019, all course development and reviews must be complete by deliverable completion deadline
- Deliverables for Final Disbursement (\$33,334): *deadline for deliverable completion – March 13, 2020*
 - Two thirds of credit hours developed, reviewed, and scheduled for Spring 2020
 - Spring semester courses will be scheduled by October 2019, all course development and reviews must be complete before the start of each part of term (1H or 2H)

EXTENDED LEARNING RESPONSIBILITIES: To ensure successful development and launch of *Managed Online Programs*, Extended Learning will work with other UNM units to ensure the following:

- The creation of a new program code, section attribute, and student attribute to facilitate tuition and fee assessment, course scheduling, and reporting needs
- Facilitating the creation or enhancement of admission application processes specific to Academic Unit
- Assistance with developing the required documents listed above
- Assistance with marketing the program and recruiting students

ELIGIBILITY & EXPIRATION OF FUNDS

Extended Learning and Academic Units shall together work in good faith to meet the milestones laid out in the *Funding & Development Schedule* (above). If the team's best efforts do not result in good progress against milestones, funding may be withdrawn for investment in programs that are better positioned to move forward.



INTELLECTUAL PROPERTY RIGHTS

Any faculty member who participates in the development of online courses subject to this MOU shall continue to hold rights to the intellectual content of such online courses. All faculty members shall be required to separately grant a royalty-free, perpetual, worldwide license to UNM to use the online content and all associated intellectual property rights therein to create and offer online courses to enrolled UNM students, through any platform of UNM's choosing. UNM shall retain all tuition revenue and fees generated from its licensing activities and will share it with the _____ in accordance with the terms of this MOU.

Entered into this _____ day of _____, 2018.

UNM Office of the Provost _____ date
Nicole Dopson, Chief Financial Officer

UNM Extended Learning _____ date
Terry Babbitt, Vice Provost

UNM College or School Dean _____ date

UNM Academic Unit Chair _____ date



MEMORANDUM OF UNDERSTANDING

Extended Learning Seed Funding for Fall 2019 Managed Online Program Launches

Program Name: _____

BACKGROUND & RATIONALE: Online education extends the reach of UNM programs and makes it possible for students outside the Albuquerque area to access the high quality UNM education that we so proudly offer. Extended Learning is pleased to advance the institution's online ventures with the introduction of *Managed Online Programs*, representing separate admit online degree programs, which will launch in an 8-week course format. These programs will commence in Fall 2019 with programs conforming to an 8-week course carousel with five (5) student enrollment starts per year. All courses developed for this initiative will be reviewed by a team of peer faculty members for quality assurance. Additionally, all faculty course designers will have access to, and are encouraged to attend, the Online Course Design Institute. Extended Learning will support academic units in these initiatives with seed funding, described below.

SEED FUNDING AMOUNTS & USES: Seed funding of up to \$100,000 is available for creation of undergraduate degree completion programs and graduate degree programs. Seed funding is intended to cover the costs of development and instruction for four semesters including summer, at which time programs are expected to be sustainable by way of increased enrollments that will be realized financially in the tuition sharing agreement.

TUITION SHARING: The tuition sharing agreement for *Managed Online Programs*, that meet all deliverable timelines, will route 65% of total tuition collected to the academic unit and 35% will be routed to the Provost's office based on the degree completion majors. The tuition revenue distribution will occur at the end of the academic semester (fall, spring, and summer) in which the revenue is earned.

TERMS OF FUNDING & REVENUE SHARE: By accepting Extended Learning seed funding, academic units agree to:

Graduate Degree Programs

- Develop, review, and offer 31-34 credit hours for master's programs (depending on Plan I, II, or III options) on a repeating, 8-week course carousel optimized for 5 annual starts
- Agree to allow for the expansion of a steady-state cohort capacity of at least 200 students
- Agree to schedule additional cross-listed sections to allow for more campus enrollments should online program enrollments prove insufficient
- Each designated faculty course designer is encouraged to participate in the Extended Learning Online Course Design Institute or the Online Course Training during the course development window
- Each designated faculty course designer works with Extended Learning to design their course modeling the UNM Online Course Standards Rubric and successfully completes the quality review before the first offering of the course



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Entered into this _____ day of _____, 2017.

UNM Office of the Provost _____ date
Nicole Dopson, Chief Financial Officer

UNM Extended Learning _____ date
Terry Babbitt, Vice Provost

UNM College or School Dean _____ date

UNM Academic Unit Chair _____ date

UNM Academic Unit Chair _____ date



Blackboard®



University of New Mexico MOP

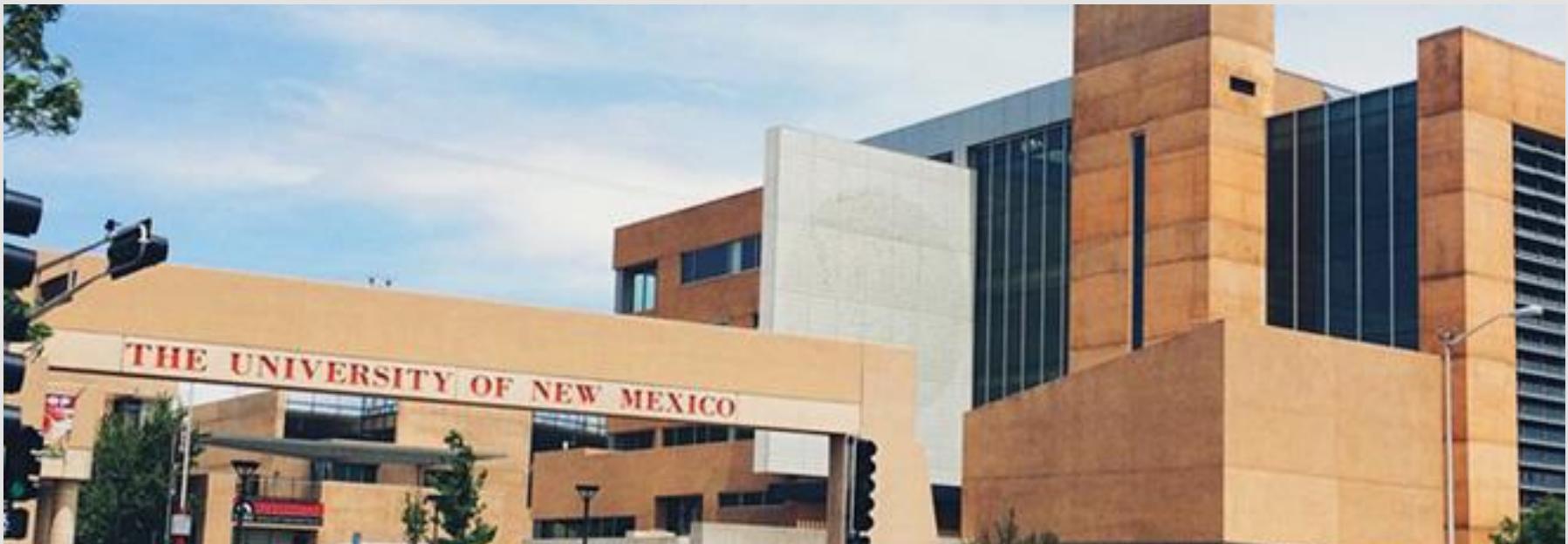
Marketing & Enrollment Plan

May 2018

SCIENCE & TECHNOLOGY BUILDING

Table of Contents

- 
- Goals & Strategy**
 - Marketing Plan Overview**
 - Channel by Channel Review**
 - Creative Strategy**
 - Enrollment Approach**
 - Reporting**



Goals & Strategy

Goals

What we're doing

Understand the market landscape in order to best position UNM MOP

Develop a Strategic Marketing & Enrollment plan that will provide guidance and best practices

Forecast enrollments based on different investment levels to allow for more informed planning

Strategy

How we'd do it



Leverage a **multi-channel** demand generation program that will contribute toward app and enroll volume goals with **predictable** cadence.



Leverage **market research and audience insights** to target the right prospects with the right message at the right time.



Manage lead quality and conversion through the entire enrollment funnel by pairing marketing media insights with enrollment management feedback.



Showcase University of New Mexico's high-caliber brand promise in a consistent and impactful way that highlights program quality, flexibility, diversity and career outcomes.

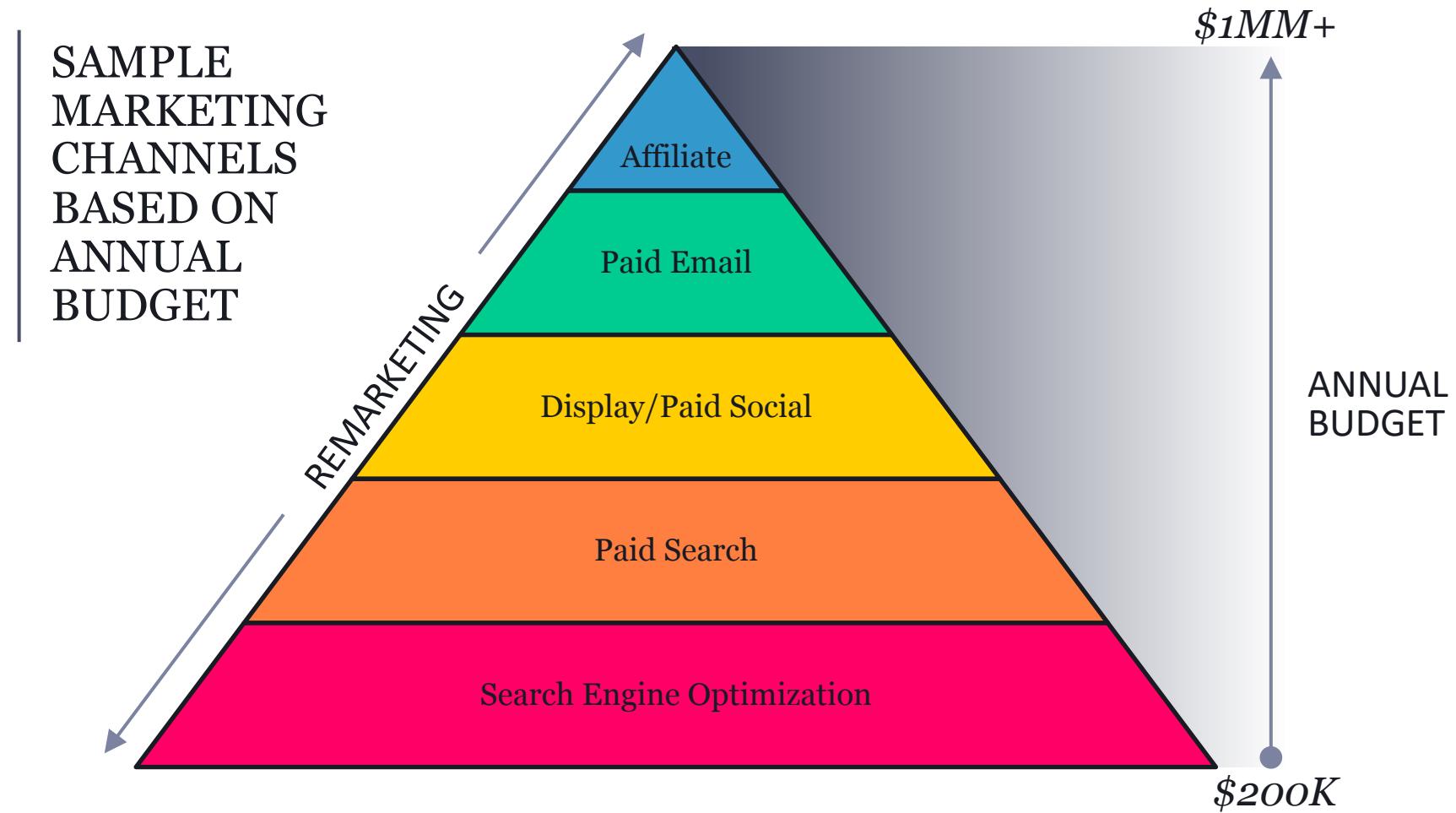


Marketing & Enrollment Plan

Branded vs. Direct Response Campaigns

	BRANDING	DIRECT RESPONSE
 Audience Mindset	Not in market, no conscious intent	In market, explicit interest/intent
 Key Goal	Drive awareness	Drive action
 Targeting	Broad reach	Highly targeted
 Metric Focus	Impressions	Cost per lead
 Creative Strategy	High impact, emotional	Strong user benefits and call to action

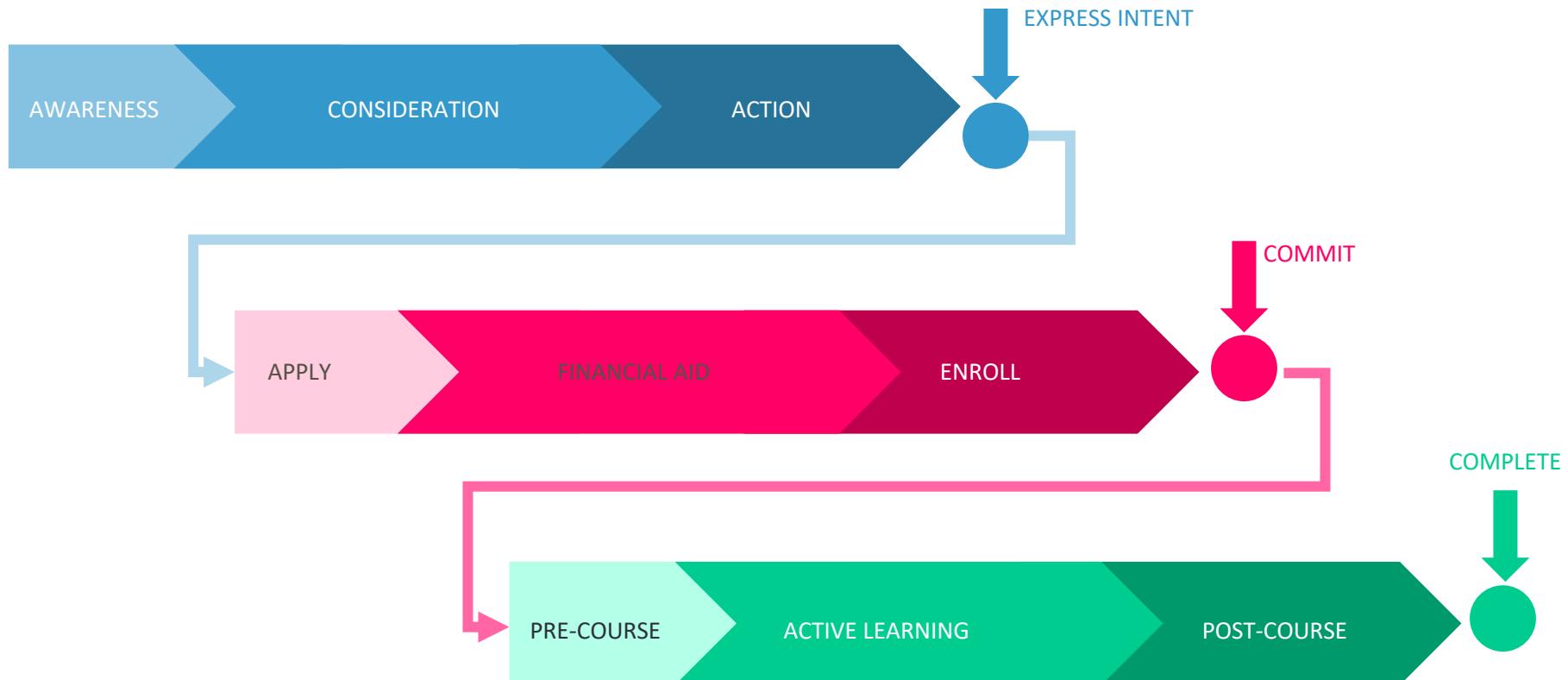
Marketing Channel Methodology



Time from Lead to Enroll

**3-18
MONTHS**

Prospective students can be long-term buyers. Average length of time can vary by degree, location and modality but it can take time to convert.



Channel by Channel Marketing Plan

Marketing Plan Investment

Components

- *Creative Development*
- *Media/Account Management*
- *Digital Media*
- *SEO Assessment, Support & Content Marketing (at higher spends)*
- *Reporting & Tracking*

 **Marketing Strategy:** Utilize direct response, lead generation channels to drive enrollment across UNM MOP.

Marketing Approach

-  Three different spend levels to include paid media and SEO/Content Marketing
-  12 months of marketing and management
-  Mix of paid search (brand/generic), display, retargeting that is both brand level and program specific
-  Projected lead volume will allow for enrollment forecasting

SEO

Recommended Components

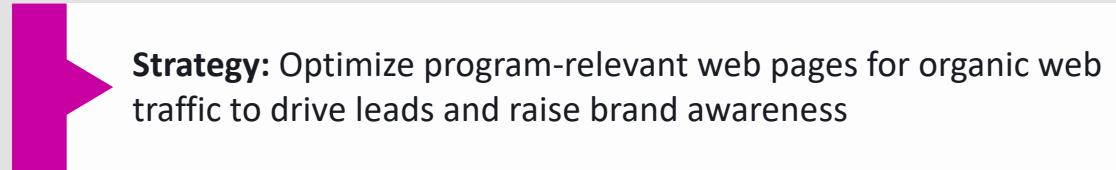
- *SEO Audit*
- *Monthly on-going maintenance (progress dashboard & monthly recommendations)*

Audits

Technical Audit

Keyword & Link Audit

Content Audit



Strategy: Optimize program-relevant web pages for organic web traffic to drive leads and raise brand awareness

Tactics



Audit program-relevant pages within the MOP website



Identify opportunities for optimization and create detailed report



Prioritize maintenance opportunities on those that will make the most impact on lead generation

Paid Media

Strategy: Leverage the most cost-efficient, highest converting paid digital marketing channels to drive leads

Components

- *12 months of live media with active bid management*
- *Paid Search (Branded & Generic)*
- *Display (Google Display Network and Facebook)*
- *Retargeting non-converters*

Tactics



Identify program and audience relevant keywords for targeting through Paid Search



Raise brand and program awareness for specific audiences through Display and Facebook efforts



Author all advertising with a focus on driving traffic to a microsite



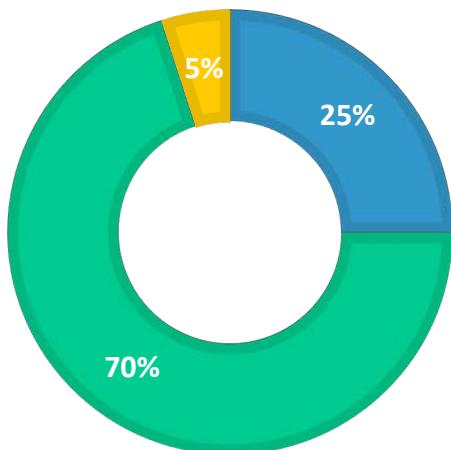
Highlight key value propositions in ads including job placement /outcomes, student experience, quality, support and flexibility



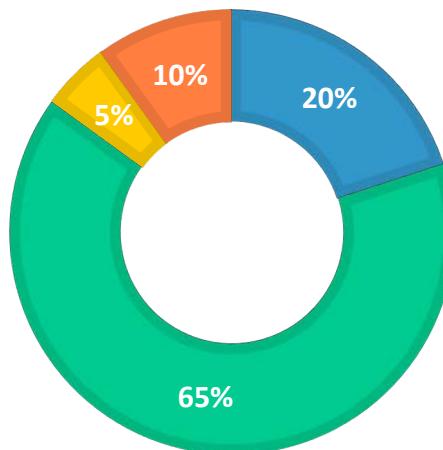
Identify high-impact marketing opportunities in the key markets

Spend by Channel

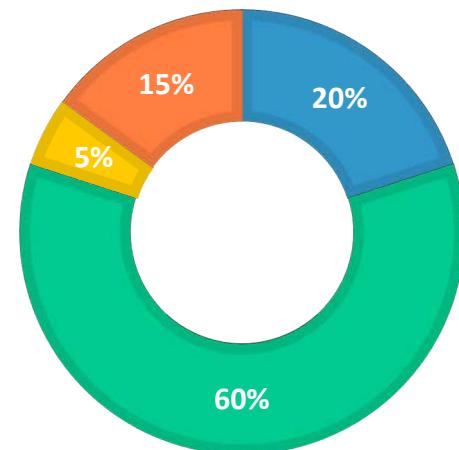
\$250K



\$400K



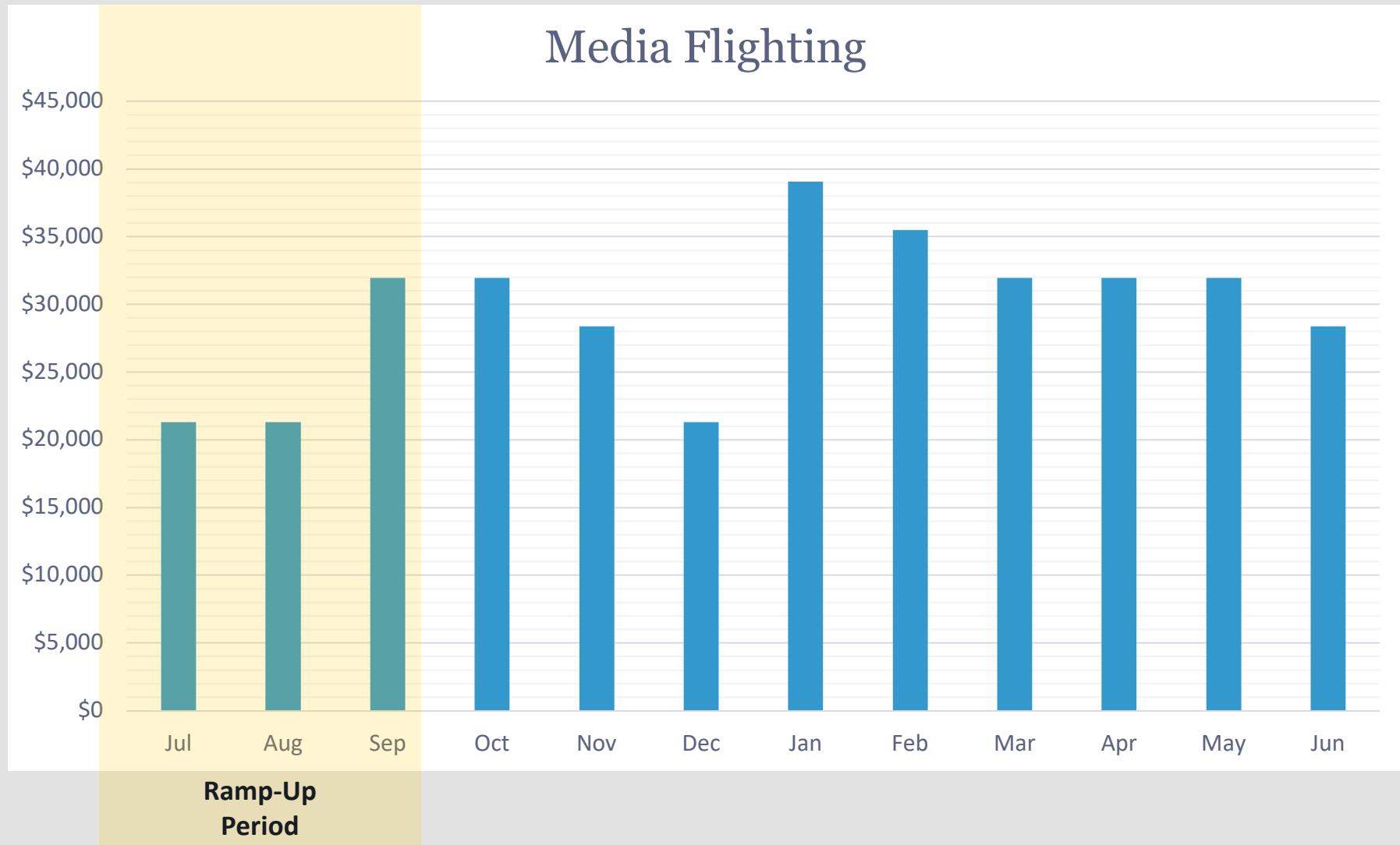
\$550K



Paid Search Generic Paid Search Brand Retargeting Display/Social

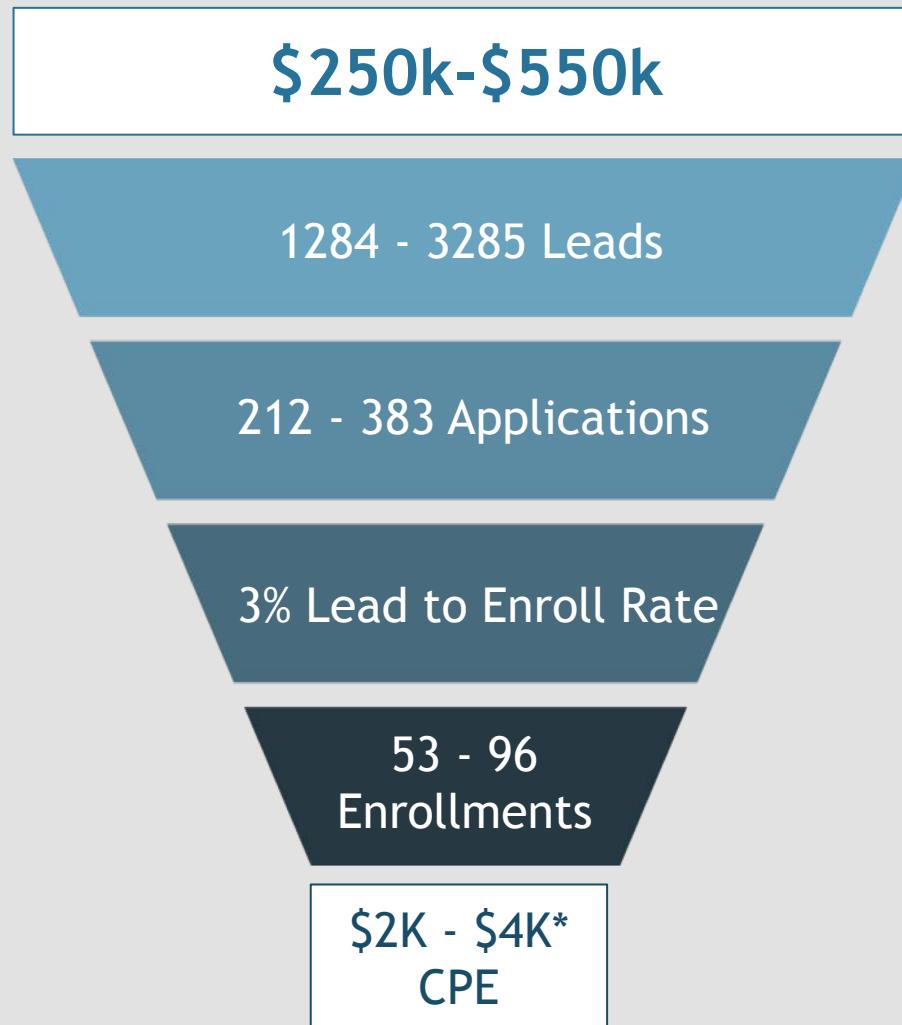


Media Overview



Paid Media Investment Model: Estimated Results*

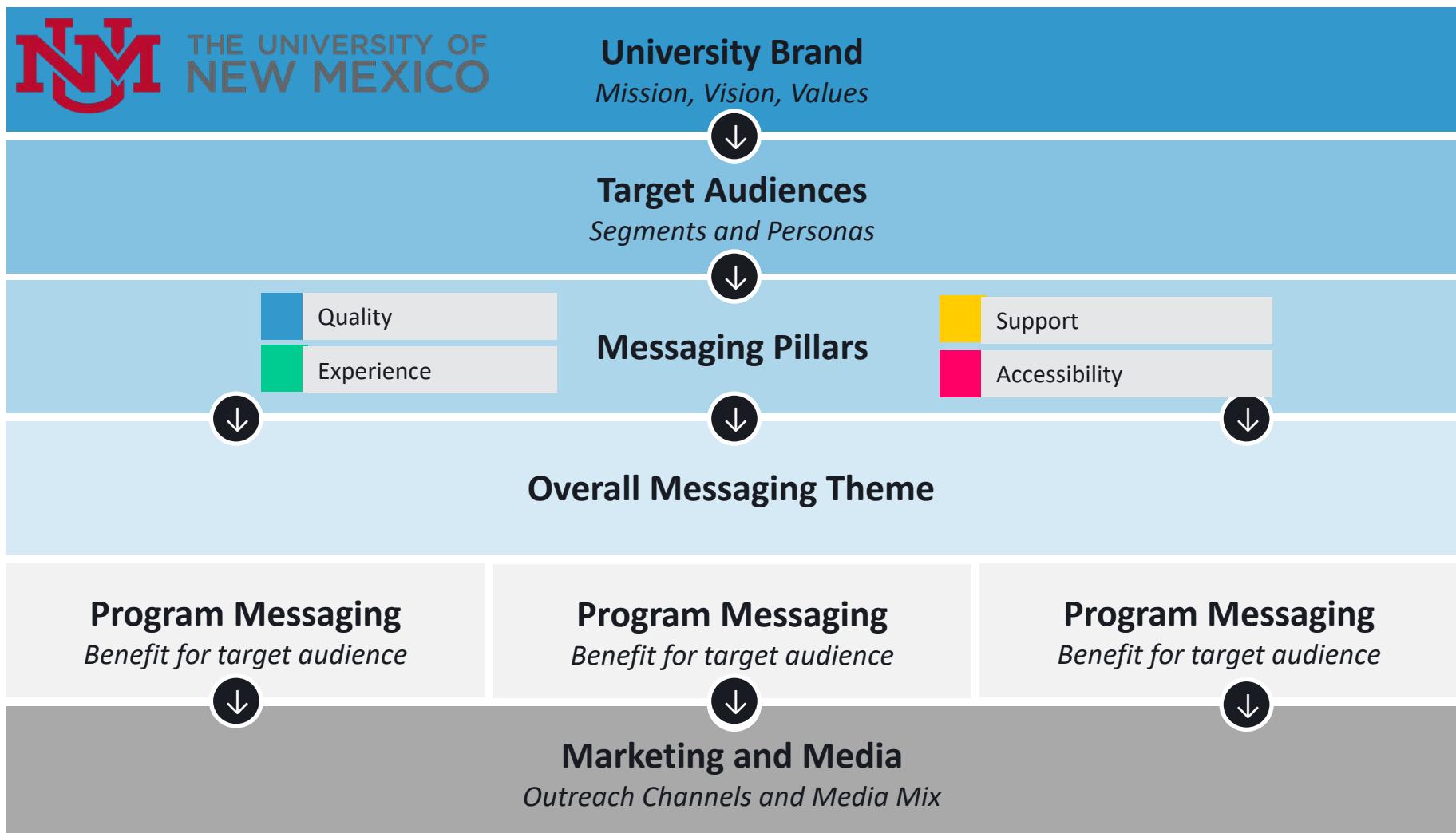
Results over 3-18 month period



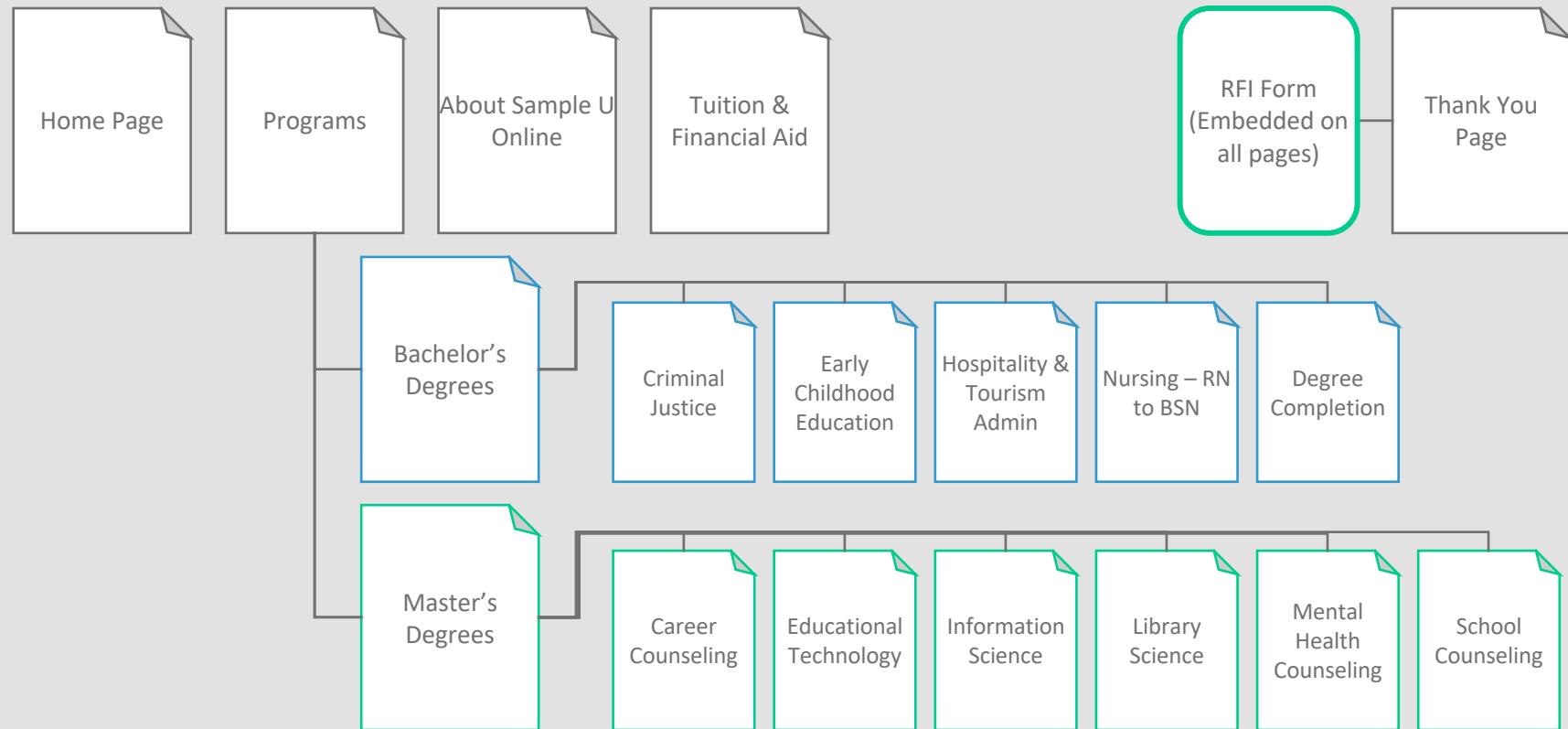
*Includes paid, earned and organic leads; does not include media management fee

Creative Strategy

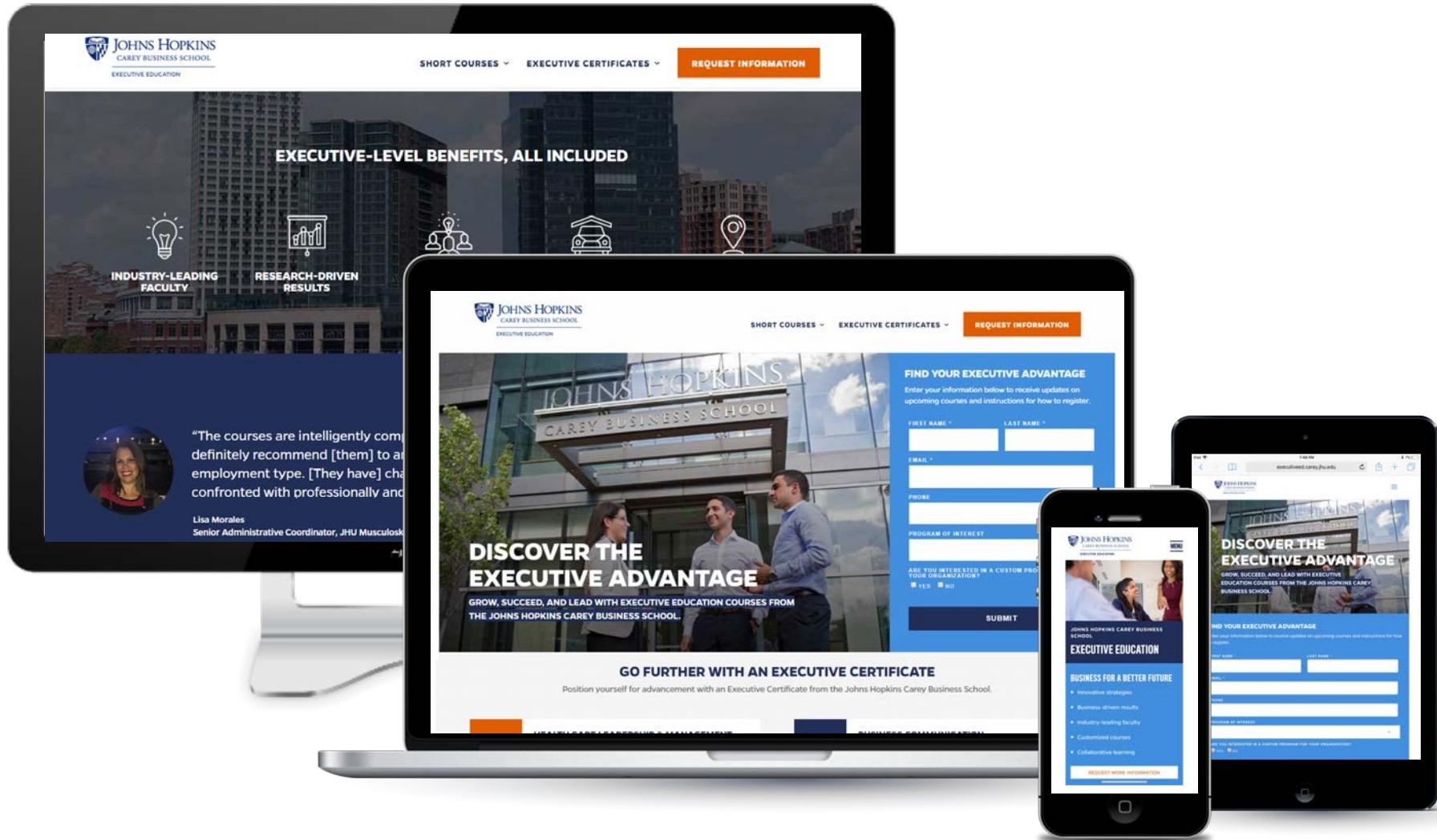
Strategic Messaging Approach



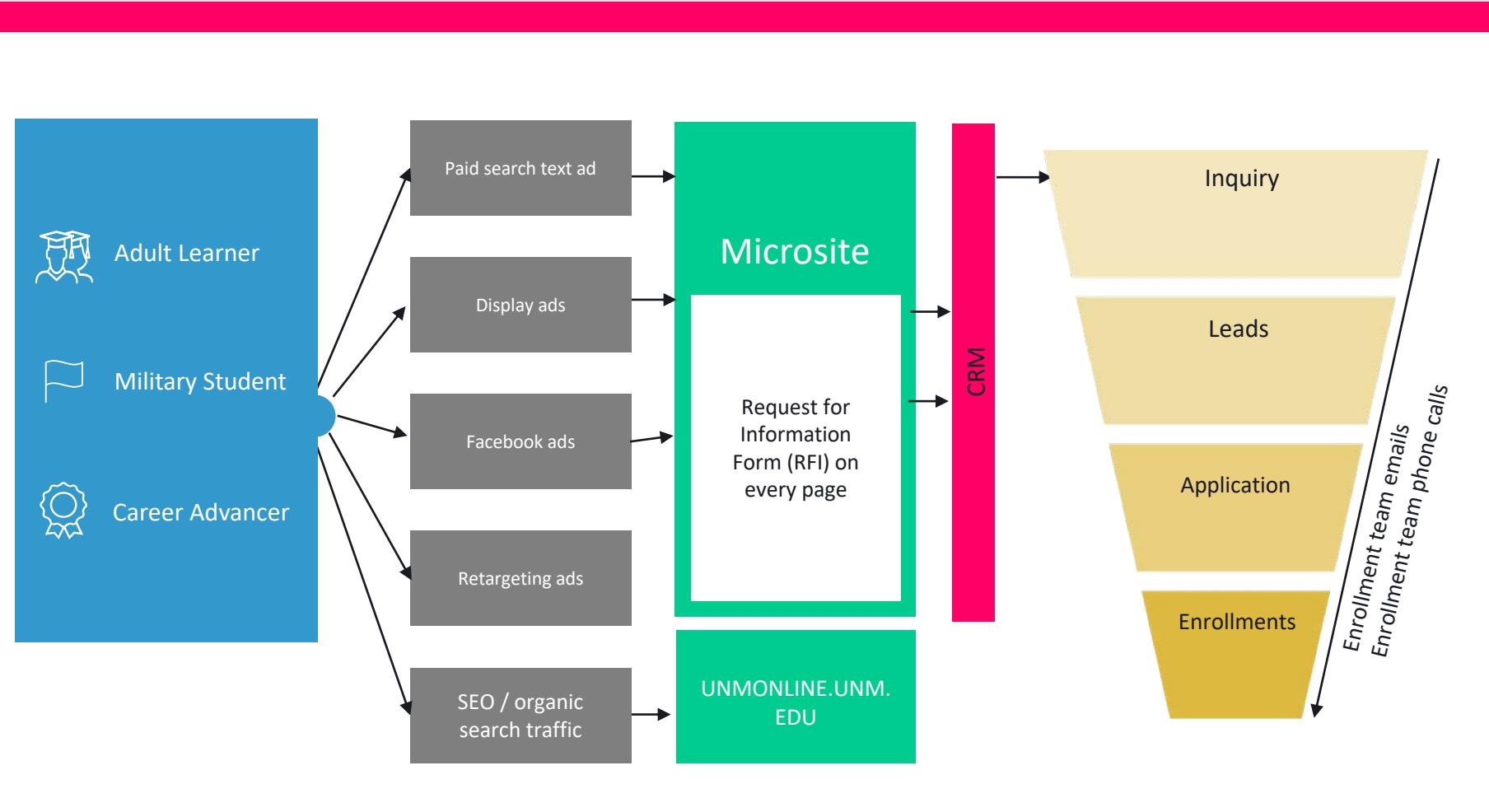
Sample Site Map



Marketing Microsite Sample

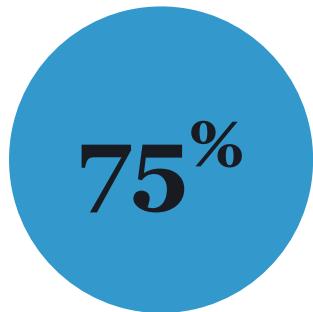


Marketing lead flow



Enrollment Approach

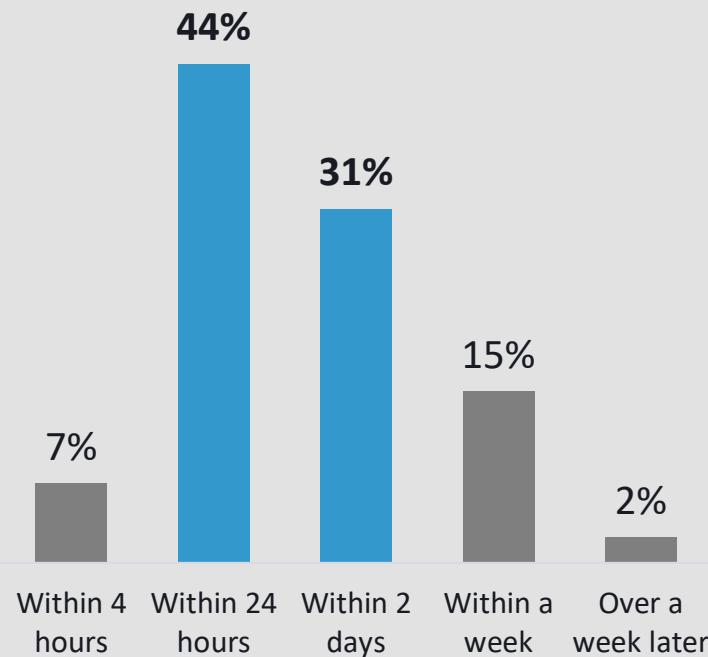
Expectations
on follow-up are
high



EXPECT A RESPONSE TO A
VOICEMAIL OR E-MAIL
WITHIN 24-48 HOURS

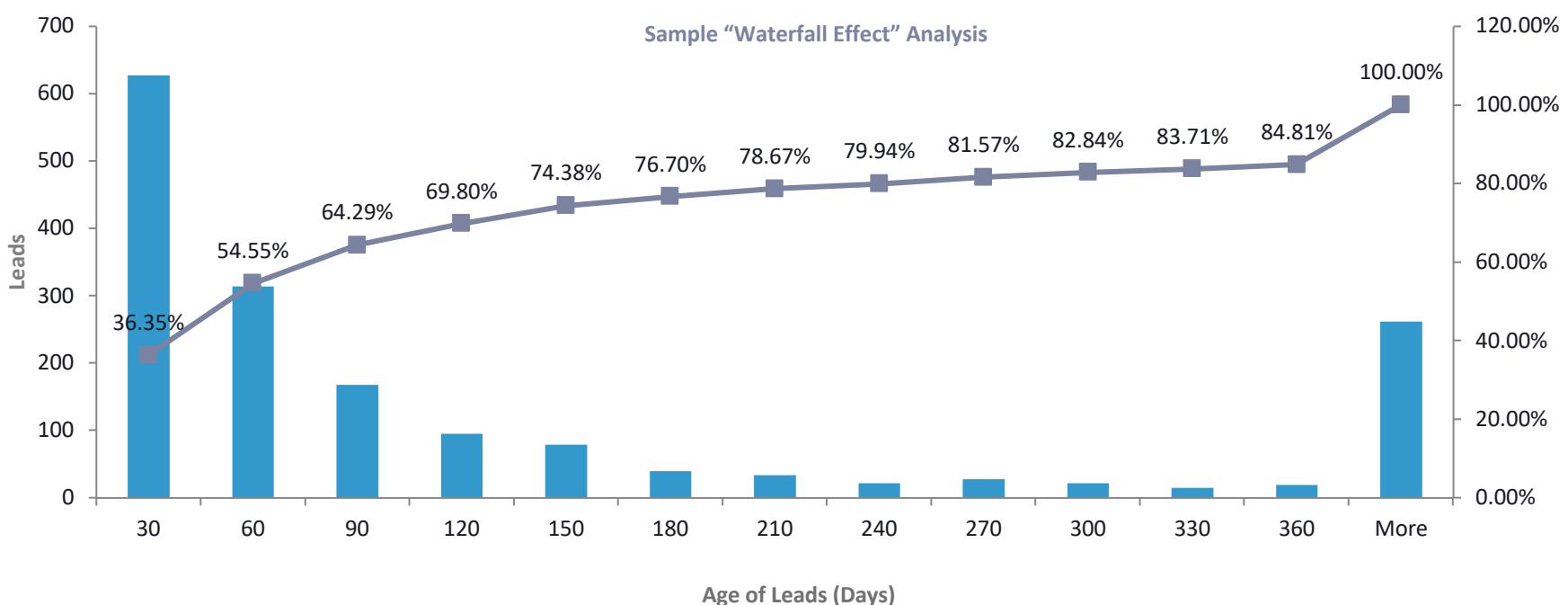
**Survey question fielded to 1,000 prospective
students across all ages*:**

*If you left a voicemail for or sent an email to a
college or university, how quickly would you
expect to receive a response?*



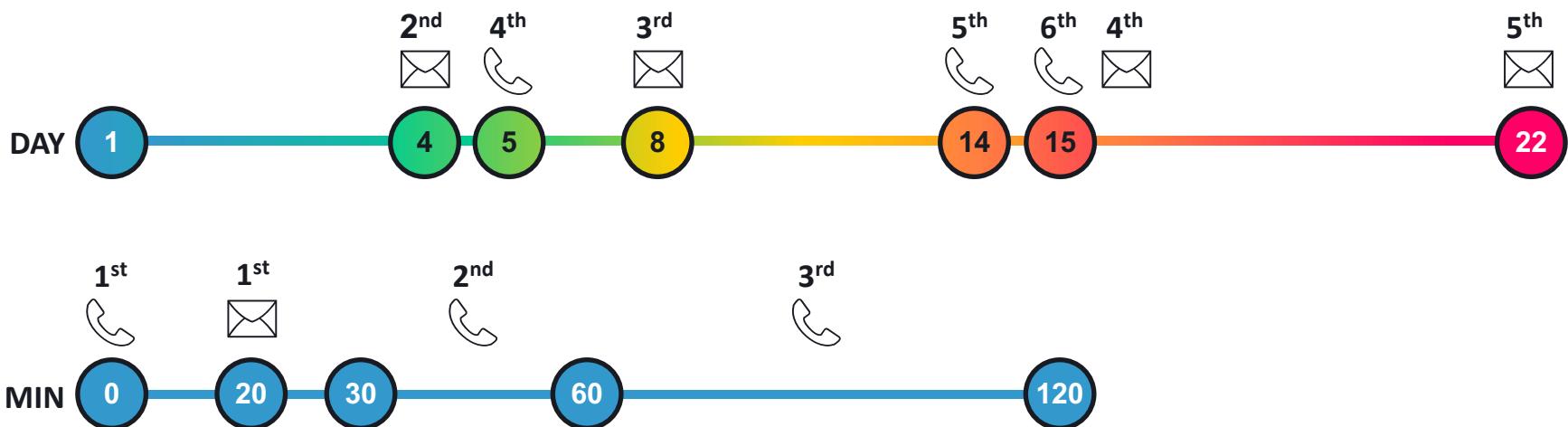
The Waterfall Effect

While digital campaigns are likely to produce leads in-month, those leads will take time to convert to enrollment. We call this the “waterfall effect.”



Consistent Communication Plan

THE ULTIMATE CONTACT STRATEGY



The average GAIN IN ENROLLMENT can be as high as **50%** for phone or email alone by attempting the action at *the recommended times*

Lead Nurture Plan

Funnel Stage		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
ENROLLMENT FUNNEL	Prospect	✉️ Welcome/ Thanks for your Interest	✉️ Top 5 Reasons to Choose Texas Tech	✉️ Scholarship/ Financial Aid Information	✉️ Available Programs / Program-Specific Highlights	✉️ Admissions Staff Intro	✉️ Student Perspective	✉️ Online Student Experience	✉️ FAQ's
		☎️ Prospect Attempts 1-3	☎️ Prospect Attempt 4	☎️ Prospect Attempt 5	☎️ Prospect Attempt 6	<p>Segment: Divide enrollment process by funnel stage, persona, and possibly program/offering</p>			
		Milestone/Deadline- Driven Communications - Event Invitations (in-person events, online webinars) - Application Deadline Approaching				<p>Plan: Identify outreach activities that will occur regularly, up to 18 months from time of inquiry</p>			
		✉️ App Not Complete Reminder	✉️ App Not Complete Reminder	✉️ App Not Complete Reminder	✉️ App Not Complete Reminder	<p>Track: Optimize your messaging, modalities, timing, and pacing based on results</p>			
	APPLICANT	☎️ App Not Complete Attempt 1	☎️ App Not Complete Attempt 2	☎️ App Not Complete Attempt 3	☎️ App Not Complete Attempt 4				
		Milestone/Deadline- Driven Communications - Application Deadline Approaching							

Enrollment Investment

Support for **\$250k** in Marketing

Lead Volume: 1284
Implementation: \$25,000
Enrollment Coaching,
Lead to App: \$75,000

\$100,000

Support for **\$400k** in Marketing

Lead Volume: 2200
Implementation: \$25,000
Enrollment Coaching,
Lead to App: \$130,000

\$155,000

Support for **\$550k** in Marketing

Lead Volume: 3285
Implementation: \$25,000
Enrollment Coaching,
Lead to App: \$195,000

\$220,000

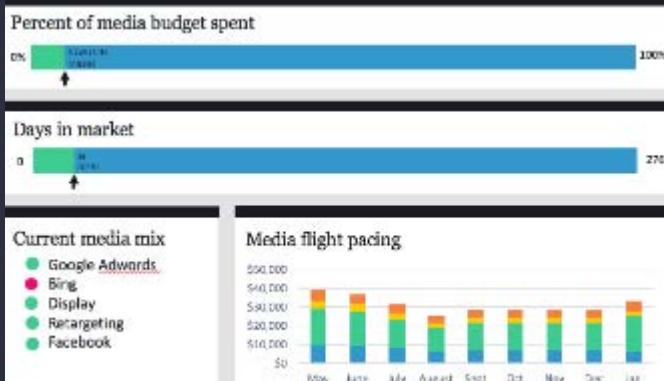
Reporting

Feedback Loop



Bi-weekly Reporting Insights

PAID MEDIA STATUS DASHBOARD



PAID MEDIA BY CHANNEL



7 DAY PAID MEDIA KPI DASHBOARD



MEDIA PERFORMANCE TRENDS: COST



Annual & Quarterly Reporting Insights

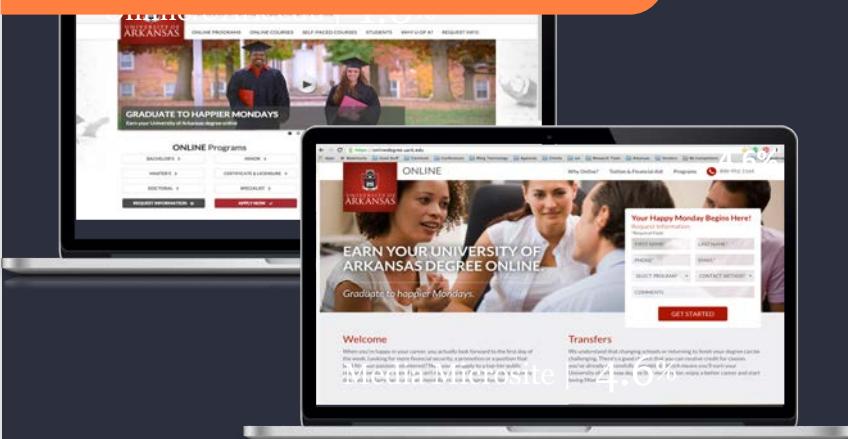
PAID MEDIA STATUS DASHBOARD



ENROLLMENT FUNNEL DATA

	GOAL	TO DATE	% TO GOAL	
LEADS	3,290	5,180	+57%	Exceeded
CPL	\$111	\$71	-36%	Exceeded
APPS	528	502	-5%	TBD
ENROLLS	230	161	-30%	TBD
CPE	\$2,394	\$3,416	+43%	TBD

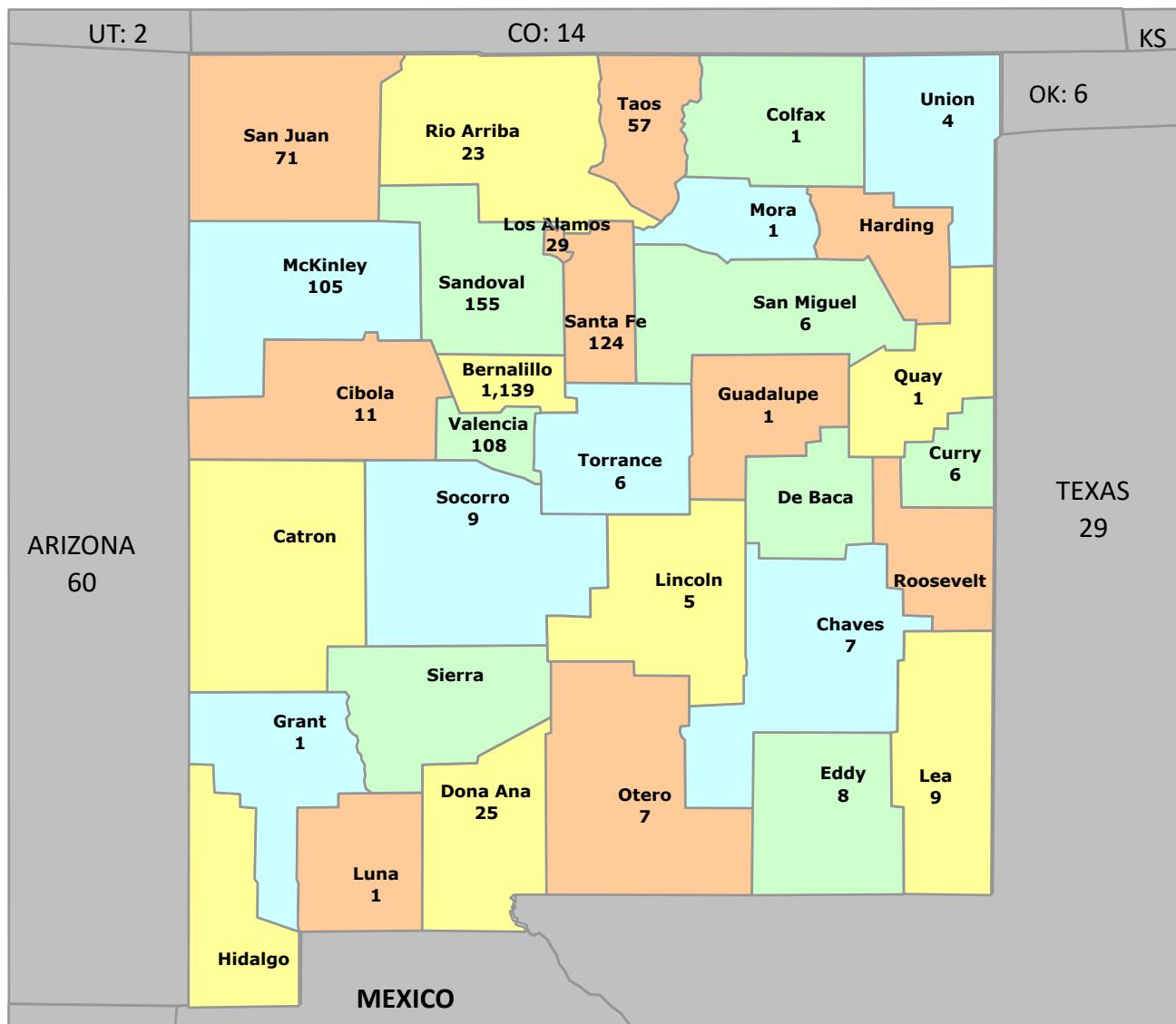
WEBSITE CONVERSION



CAMPAIGN LEADS BY MONTH



Blackboard®



New Mexico online students: **1,921**

Out of State Students: **222**

- 5 international from China, Colombia, India, Japan
- 1 deployed military
- 216 in other US states and territories
- 2 unknown locations