# Increasing Impact of Technology in Higher Education
***Utah System of Higher Education | Fall 2016***

*For Fall 2016, of the 175,509 enrolled at third week, 69,535 (39.6 %) are participating in some form of technology delivered instruction. Of that total, 54,269 (30.9%) enrolled in at least one online class.*

Despite availability of online courses and degrees, students prefer using online courses to augment a traditional campus schedule:

- 88% of all students who enrolled Fall 2016 took the majority of their courses on campus;
- Less than 3% of full-time students are enrolled solely in online courses; and
- 52% of students who enrolled solely in online classes are part-time and over 25 years old.

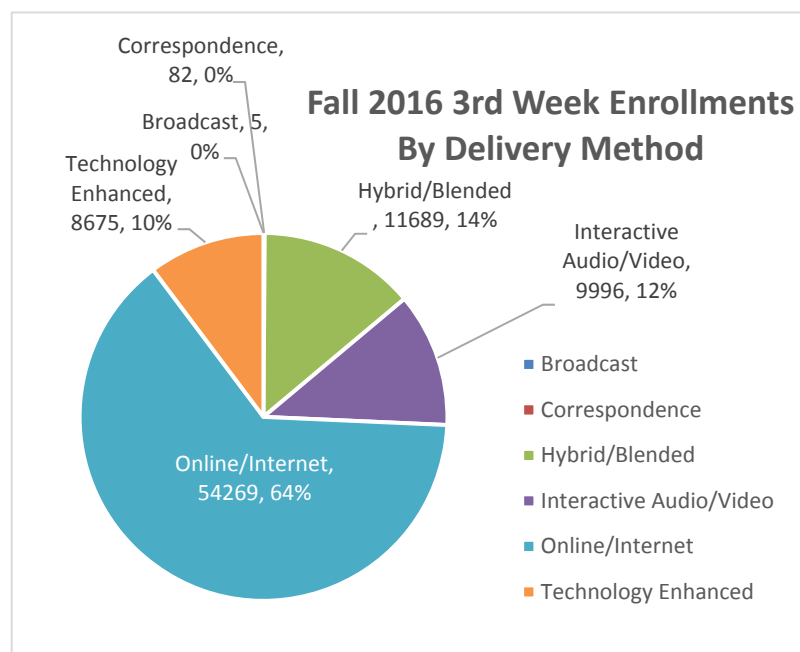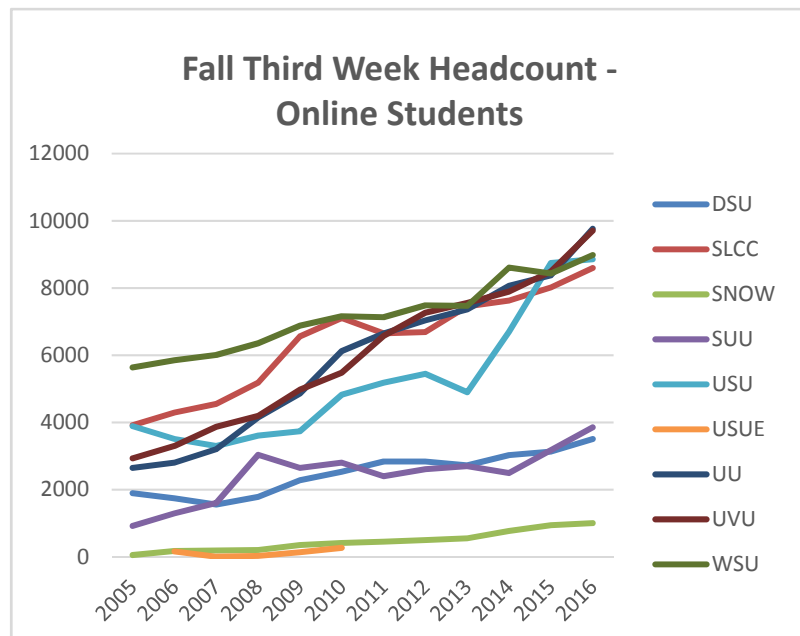## Technology-delivered Instruction and Learning

### 1,948 Online courses

- From Fall 2015 to Fall 2016, USHE institutions added 210 fully online courses and 3 Interactive Video Conferencing (IVC) courses, and 60 hybrid courses.
- Online enrollments rose 4,963 – 10% – from Fall 2015 to Fall 2016.
- 12,839 (7.3%) students enrolled solely in online classes Fall 2016.

### 112 Online programs

- USHE students can earn entire awards online (see list, p. 6):
  - o  7 Terminal Associate
  - o 13 Associate
  - o 32 Bachelor
  - o 29 Master
  - o  1 Doctorate
  - o 27 Certificates
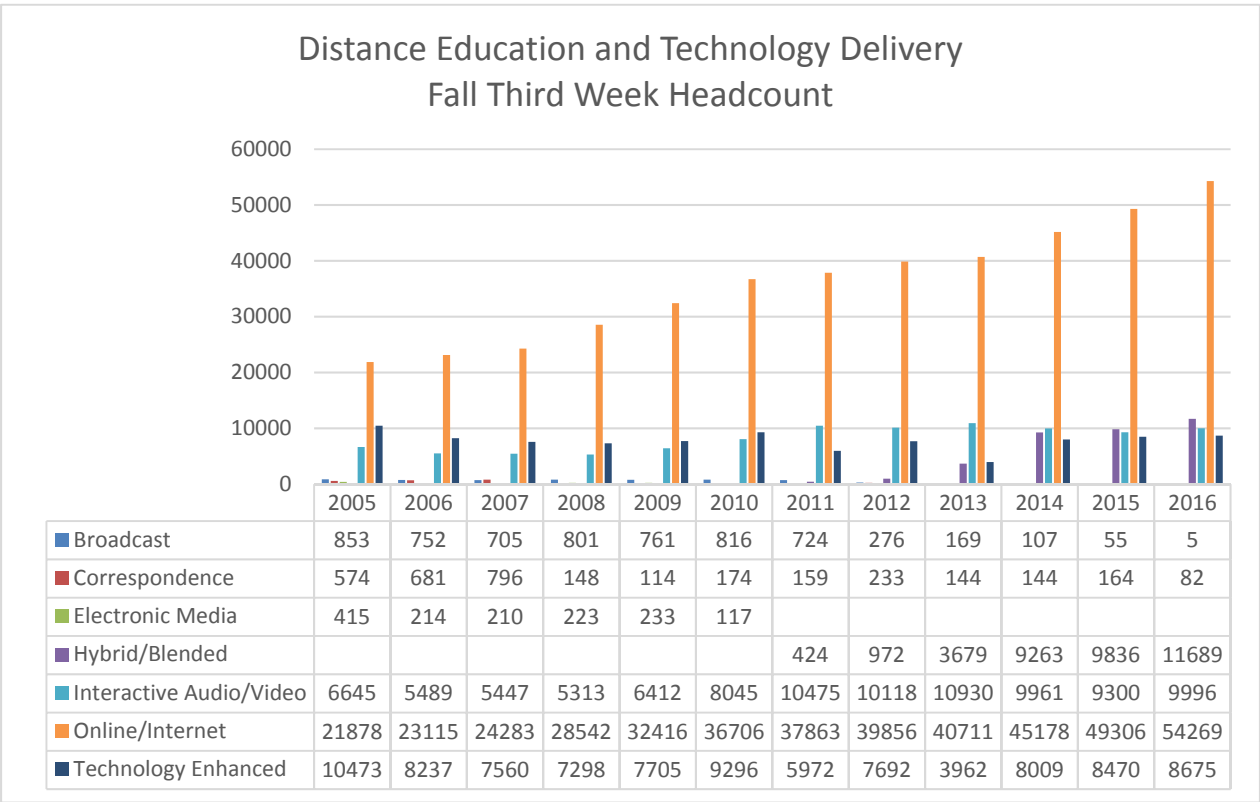  - o  3 Licensure/Endorsement

### 44 IVC programs

- USHE students can earn entire awards over video conferencing:
  - o  1 Terminal Associate
  - o  2 Associate
  - o 16 Bachelor
  - o 14 Master
  - o  1 Doctorate
  - o  2 Certificate
  - o  8 Licensure/Endorsement

### Fall Third Week Headcount - Online Students



Legend: DSU, SLCC, SNOW, SUU, USU, USUE, UU, UVU, WSU

### Fall 2016 3rd Week Enrollments By Delivery Method



- Correspondence, 82, 0%
- Broadcast, 5, 0%
- Technology Enhanced, 8675, 10%
- Hybrid/Blended, 11689, 14%
- Interactive Audio/Video, 9996, 12%
- Online/Internet, 54269, 64%

Legend:
- Broadcast
- Correspondence
- Hybrid/Blended
- Interactive Audio/Video
- Online/Internet
- Technology Enhanced

| Table 1: Online Headcount/Fall Third Week 2005-2016 | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **School** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** |
| UU | 2,646 | 2,801 | 3,205 | 4,147 | 4,860 | 6,124 | 6,648 | 7,038 | 7,363 | 8,065 | 8,377 | 9,764 |
| USU | 3,889 | 3,506 | 3,297 | 3,608 | 3,736 | 4,823 | 5,180 | 5,445 | 4,897 | 6,700 | 8,744 | 8,856 |
| USUE | | 159 | 4 | 28 | 136 | 267 | N/A | N/A | N/A | N/A | N/A | N/A |
| WSU | 5,634 | 5,852 | 6,009 | 6,356 | 6,879 | 7,158 | 7,131 | 7,484 | 7,470 | 8,608 | 8,433 | 8,982 |
| SUU | 917 | 1,292 | 1,604 | 3,038 | 2,647 | 2,801 | 2,400 | 2,606 | 2,698 | 2,493 | 3,175 | 3,854 |
| SNOW | 53 | 173 | 187 | 202 | 349 | 411 | 448 | 496 | 552 | 767 | 939 | 1,003 |
| DSU | 1,893 | 1,741 | 1,555 | 1,785 | 2,279 | 2,530 | 2,834 | 2,835 | 2,722 | 3,025 | 3,130 | 3,507 |
| UVU | 2,931 | 3,297 | 3,871 | 4,195 | 4,972 | 5,480 | 6,572 | 7,263 | 7,556 | 7,893 | 8,492 | 9,708 |
| SLCC | 3,915 | 4,294 | 4,551 | 5,183 | 6,558 | 7,110 | 6,650 | 6,689 | 7,453 | 7,627 | 8,016 | 8,595 |
| **Total** | **21,878** | **23,115** | **24,283** | **28,542** | **32,416** | **36,704** | **37,863** | **39,856** | **40,711** | **45,178** | **49,306** | **54,269** |

## Other Technology-delivered Modalities

USHE students have multiple delivery modalities to choose from. IVC is an important delivery method for rural students.  Also, hybrid classes, courses that are a mix of face-to-face and technology-delivered curriculum, show dramatic growth.  NOTE: USHE began tracking hybrid courses in 2011.



### Distance Education and Technology Delivery Fall Third Week Headcount

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Broadcast | 853 | 752 | 705 | 801 | 761 | 816 | 724 | 276 | 169 | 107 | 55 | 5 |
| Correspondence | 574 | 681 | 796 | 148 | 114 | 174 | 159 | 233 | 144 | 144 | 164 | 82 |
| Electronic Media | 415 | 214 | 210 | 223 | 233 | 117 | | | | | | |
| Hybrid/Blended | | | | | | | 424 | 972 | 3679 | 9263 | 9836 | 11689 |
| Interactive Audio/Video | 6645 | 5489 | 5447 | 5313 | 6412 | 8045 | 10475 | 10118 | 10930 | 9961 | 9300 | 9996 |
| Online/Internet | 21878 | 23115 | 24283 | 28542 | 32416 | 36706 | 37863 | 39856 | 40711 | 45178 | 49306 | 54269 |
| Technology Enhanced | 10473 | 8237 | 7560 | 7298 | 7705 | 9296 | 5972 | 7692 | 3962 | 8009 | 8470 | 8675 |

## Availability of Tech Courses by Academic Level

USHE students have opportunities to take technology delivered courses as both undergraduates and graduate students:

| Snapshot of Technology Delivered Courses by Academic Level/Fall 3rd Week | | | | | | | |
|---|---|---|---|---|---|---|---|
| Level | Hybrid/ Blended | Correspon dence | Technology -Enhanced | Online | Interactive Audio/ Video | Broadcast | TOTAL |
| Graduate | 71 | 6 | 32 | 419 | 152 | 0 | 680 |
| Upper | 167 | 23 | 27 | 598 | 93 | 0 | 908 |
| Lower | 117 | 16 | 119 | 860 | 203 | 1 | 1316 |
| Remedial | 9 | 0 | 1 | 71 | 6 | 0 | 87 |
| TOTAL | 364 | 45 | 179 | 1948 | 454 | 1 | 2991 |

## Technology-delivered Student Services

In addition to instruction, technology enhances numerous services:
- Students apply, register, pay tuition, purchase textbooks, and seek advising online
- Students receive academic progress notification and tracking online through CANVAS analytics as well as new Student Relation Management systems
- Students, faculty, and staff receive emergency messaging
- Online course evaluations incorporate course objectives and measurable outcomes
- Courses encourage public-private partnerships to develop higher education technology solutions

| Snapshot of Technology Based Services by Institution/Fall 2016 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | STUDENT SERVICES | | | PROGRAMS | | COURSES (Fall 3rd Week) | | |
| | Apply Online | Register Online | Pay Tuition Online | Online AS in Gen Studies | Online Certificates/ Degrees | Online | Hybrid/ Blended | IVC |
| U of U | √ | √ | √ | | 20 | 358 | 0 | 34 |
| USU | √ | √ | √ | √* | 27 | 353 | 39 | 329 |
| WSU | √ | √ | √ | √ | 20 | 321 | 139 | 17 |
| SUU | √ | √ | √ | √ | 23 | 222 | 53 | 0 |
| Snow | √ | √ | √ | √ | 1 | 54 | 0 | 30 |
| DSU | √ | √ | √ | | 1 | 78 | 39 | 1 |
| UVU | √ | √ | √ | √* | 10 | 259 | 94 | 43 |
| SLCC | √ | √ | √ | √ | 10 | 303 | 0 | 0 |
| TOTAL | | | | | 112 | 1948 | 364 | 454 |

*offer all GenEd courses required for a 4-year degree through a combination of IVC and online

## USHE-wide Technology Resources

- **UT SARA** – [HB 379, Interstate Reciprocity Agreement for Postsecondary Distance Education](), passed during the 2016 Legislative Session, allowed the Board of Regents to enter into a multi-state agreement, *State Authorization Reciprocity Agreement (SARA)*, which establishes comparable national standards for interstate offering of postsecondary distance education courses and programs. In recent years, as fully online programs have dramatically expanded, the cost and time for a Utah college to secure authorization or exemption to deliver online courses to students in other states has become cumbersome and costly. SARA significantly reduces the costs to administer those programs. Utah was approved as a SARA state August 2016. The Commissioner's Office serves as the state portal agency to evaluate and oversee USHE and non-USHE institutions that meet SARA qualifications.

- **TransferUtah.org –** Shows students how course credits earned at one college may transfer to other Utah institutions. Describes whether the class will be considered equivalent to a class offered by the second institution or will be treated as elective credit.
- **UtahMajors.org –** Provides information on over 2,000 certificates and degrees offered at USHE institutions, including whom to contact for specific questions, advising and course sequencing information. Links to DWS labor market data.

- **Canvas –** Utah Education and Telehealth Network (UETN) provides consortium licensing for Canvas, a cloud-based learning management system to Utah K-12 and higher education institutions.

- **Kaltura Video Management** – The USHE schools collectively license the Kaltura video management, distribution platform with integrated text captioning services. This system provides over 350 Terebytes of curriculum related videos and integrates seamlessly with the Canvas learning management system and institution websites.

## Overall Benefits and Challenges of Technology in Higher Education

**Benefits:**
- Increases capacity of institutions
- Increased access for working students; greater access for rural areas
- Improved instructor-student interaction
- Capture and research rich data about student engagement, interaction, and learning performance

**Challenges:**
- Requires digital literacy
- Over-committing to binding technologies; risk of adopting proprietary systems and vendor lock-in rather than open standards
- Can increase costs if not deployed strategically
- Tracking technology use across a campus, and in turn, maintaining and updating technology tools and the technology core environment
- Changing campus relationships: distance education is now a mainstream campus activity

## 2015-16 Institution Highlights

- **USU** continues to use technology to improve flexibility, access, and affordability for an increasing number of students. In the past five years enrollments in online courses have risen 63% across the university. In Fall 2016 32% of USU students took at least one online course while blended course enrollments have risen 125% in the last three years. USU faculty continue to increase their use of the Learning Management System (in Fall 2016 82% of all USU courses used the LMS) for over 26,000 students, 61,000 assignments, and 264,000 online files uploaded. Meanwhile, USU is emphasizing a quality education experience by requiring new online faculty to earn an online teaching certificate and opportunities to earn digital badging in eLearning pedagogy. USU was ranked #14 nationwide in *US News & World Report* for its online Bachelor's Degree programs. USU continues to focus on academic innovation with competency-based educational designs, new instructional design tools, Open Education Resources, and virtual proctoring for online students.

- **WSU** offered 378 Hybrid courses Fall 2016, an increase of 151 over the previous year as this instructional method continues to grow in popularity. Professional Sales expanded an Online Professional Sales Certificate from a contracted offering to an Open Enrollment offering. Emergency Care and Rescue offered their newly approved Bachelor's Degree in Emergency Health Services in an Online format. Auto Services also expanded their online courses making the Bachelors in Automotive Field Services an Online program. The second co-hort of the Executive Master's of Healthcare Administration started with enrollments similar to the first co-hort. Weber State's Instructional Design team offers training in how to produce quality distance education courses, offers course reviews and assistance with updates to instructors seeking help, and offered a revised version of the Master Online Teacher Certificate that addresses online pedagogy as well online course design strategies. A Blended Learning Program is also offered for faculty who want to focus on hybrid or blended learning.

- **SUU** has completed development of online BS degrees in Accounting, Business Administration, and Communication. SUU has been approved to offer the following online graduate degrees: Masters of Science in Cyber Security and Information Assurance, Masters of Music Education, and Masters of Music in Music Technology.

- **Snow College** has made great strides in its Interactive Video Course (IVC) course offerings in an effort to fill the demand for concurrent enrollment classes offered to the High Schools of rural Utah. It now has 34 credit bearing classes to help speed students' way to a two year degree. Snow has added 2 more online courses and 7 more hybrid courses to help high school juniors and seniors in our service district to earn a college degree.

- **DSU** recently hired a new Director to oversee distance & digital learning. Ryan Hobbs previously led such efforts at Salt Lake Community College. The university has two 2020 strategic goals related to online education: 1. Increase DSU's courses available online from 8.2% (75 courses) to 15%; and 2. Develop two online programs. DSU is committed to increasing its activity in online education and looking at new and innovative ways in increasing access for traditional and non-traditional student. In addition to increasing online offerings, DSU is focusing on the quality of the design and delivery of its existing offerings. It has recently adopted Quality Matters (QM) and will be piloting a new Online Teaching Certification program for its faculty Fall 2017. An online strategic plan, currently under development, will guide DSU's activities and strategic priorities for the next three to five years.

- **UVU** - Online and hybrid courses accounted for approximately 20% FTE enrollments Fall 2016; Live Interactive (IVC), approximately 2% FTE enrollments. Total enrollments in online courses increased by 983 Fall 2015 and total enrollments for hybrid courses increased by 1,177 Fall 2015 to Fall 2016. Strategic initiatives to increase flexible learning options (online and hybrid courses) have resulted in 244% more face-to-face courses entering development for online and hybrid redesign (from 27 courses to 93 courses) in the past year. Implementation of the UVU's Hybrid is the New Normal initiative, as well as UVU's Gateway Course Initiative has contributed to an increase in the number of hybrid courses in development -- from 0 courses in 2014/2015 to 35 courses in 2015/2016. As part of UVU's Flexible Learning Strategy, competency based Certificate of Proficiency programs are planned for development from 2016 to 2018. UVU's Office of Teaching and Learning has developed a research-informed workshop approach to support faculty with course redesign for online and hybrid courses. FlexStudio involves six hours of face-to-face workshop activities plus homework, before meeting with an instructional designer. More than 100 faculty have been through the FlexStudio process, which is now built into UVU's certified Faculty Development Program. In this way, faculty gain recognition for their work to redesign and enhance course design.

- **SLCC** - Online enrollment continues to grow at SLCC with SLCC Online (virtual campus) becoming the second largest campus. Redesign work is underway for the AS in Business and two online Communications certificates. The institution is actively pursuing competency based education (CBE): in the School of Applied Technology (SAT), CBE efforts are underway in 20+ programs to be facilitated in a hybrid format. This work is associated with a TAACCCT grant. CBE efforts are also underway for the Biotech certificate in association with a NSF grant. Developmental Math courses are also being redesigned to be competency-based. Where possible, OERs are utilized in all new and redesign course and program development. The Quality Matters standards are being applied to evaluate online courses. SLCC is piloting several initiatives geared toward increasing completion and retention for online students. Fall 2106, it began a pilot of online success coaching, where students enrolled in two or more online courses or an online program are assigned a student success coach to help them meet educational goals. Success coaches use Starfish Early Alert within Canvas to identify at-risk students. SLCC adopted an online proctoring solution through Proctorio for students taking online classes. It also began a pilot Spring 2017 of online tutoring using Brainfuse, a system which connects students to live online tutoring across several subject areas.

**ATTACHMENT A: USHE Online Programs Available September 2016**

| | | |
|---|---|---|
| **UU** | Cert | Applied Positive Psychology |
| | Cert | Applied Project Management |
| | Cert | Gerontology (undergrad) |
| | Cert | Gerontology (grad) |
| | Cert | Care Management |
| | Cert | Nutrition for Optimal Health, Wellness and Sports |
| | Cert | Personal Fitness Trainer |
| | Cert | Personal Fitness Training - Advanced |
| | Cert | Professional Bookkeeper |
| | Cert | Teaching English to Speakers of Other Languages |
| | BS | Economics **NEW** |
| | BS | Nursing RN to BS |
| | BS | Sustainable Tourism and Hospitality Management |
| | BS | Psychology |
| | BS | Social Work **NEW** |
| | MBA | Master of Business Administration |
| | MS | Electrical Engineering |
| | MS | Gerontology |
| | MS | Sport Pedagogy |
| | OTD | Occupational Therapy |
| **USU** | AS | General Studies |
| | BA | Liberal Arts |
| | BS | Agribusiness |
| | BS | Business Administration **NEW** |
| | BS | Communicative Disorders & Deaf Education |
| | BS | Communicative Disorders (2nd Bachelors) |
| | BS | Economics |
| | BS | Family Life Studies |
| | BS | Interdisciplinary Studies |
| | BS | Psychology |
| | MS | Aviation Safety **NEW** |
| | MDA | Dietetics Administration |
| | MEd | Career and Technical Education |
| | MEd | Instructional Technology |
| | MHR | Human Resources |
| | MNR | Natural Resources |
| | MPSH | Professional Studies in Horticulture |
| | MS | Instructional Technology & Learning Sciences |
| | MTC | Technical Communication |
| | Cert | Administrative Supervisory Concentration |
| | Cert | Blindness |
| | Cert | Deafblindness Preservice Training |
| | Cert | National Environmental Protection Act (NEPA) |
| | Cert | Women & Gender Studies |
| | Endorsement | Chemistry Secondary Science |
| | Endorsement | Deaf Education - Listening and Spoken Language (Grad) |
| | Endorsement | Distance Learning |
| **WSU** | AAS | Computer Science |
| | AAS | Health Information Technology |
| | AAS | Medical Laboratory Technician |
| | AAS | Radiation Technician |
| | AS | General Studies |
| | BS | Automotive Field Service Operations **NEW** |
| | BS | Emergency Healthcare Services **NEW** |
| | BS | Health Information Management |

| | | |
|---|---|---|
| | BS | Health Services Administration |
| | BS | Medical Laboratory Sciences |
| | BS | Professional Sales |
| | BS | Radiological Sciences |
| | BS | Respiratory Therapy   **NEW** |
| | BIS | Computer Science, Health Administration Services, Health Promotion, Health Sciences, History, Information Systems & Technology, Sales and Service Technology, Lifespan Nutrition |
| | MS | Criminal Justice   **NEW** |
| | MSN | Nursing Educator  **NEW** |
| | MSN | Nursing Executive   **NEW** |
| | MHA | Executive Masters of Healthcare Administration |
| | Cert | Health Care Coding & Classification |
| | Cert | Health Information Management Institutional Certificate |
| **SUU** | Cert | Alternative Route to Licensure **NEW** |
| | Cert | Online Learning  **NEW** |
| | Cert | English Language Acquisition & Development  **NEW** |
| | Cert | Gifted & Talented Education  **NEW** |
| | Cert | Mobile Teaching, Learning & Design  **NEW** |
| | Cert | Special Education  **NEW** |
| | Cert | Technological Innovations in Teaching & Learning  **NEW** |
| | AAS | Paralegal |
| | BS | Accounting  **NEW** |
| | BA/BS | Communication   **NEW** |
| | BS | General Studies |
| | BS | Management  **NEW** |
| | MACC | Accounting |
| | MA | Arts Administration |
| | MBA | Business Administration |
| | MS | Cyber Security & Information Assurance  **NEW** |
| | MEd | Education |
| | MM | Music Education  **NEW** |
| | MM | Music Technology  **NEW** |
| | MA | Professional Communication |
| | MPA | Public Administration |
| | MSW | Social Work  **NEW** |
| | MS | Sports Conditioning & Performance |
| **SNOW** | AS | General Studies |
| **DSU** | RN to BSN | Nursing   **NEW** |
| **UVU** | AAS | Aviation |
| | AAS | Business Management |
| | AS | "a non-major transfer associate degree that will qualify for pursuit of a four-year degree at UVU or at another college or university" |
| | AS | Aviation |
| | AS | Business Management |
| | BS | Aviation |
| | BS | Emergency Services Management |
| | BS | Hospitality Management |
| | RN to BSN | Nursing      **NEW** |
| | MSN | Nursing |
| **SLCC** | AS | Business |
| | AS | Criminal Justice |
| | AS | Economics   **NEW** |
| | AS | Engineering Design & Drafting Technology   **NEW** |
| | AS | Education  **NEW** |
| | AS | General Studies |
| | AS | Sociology |
| | CERT | CSIS Information Assurance & Cyber Defense    **NEW** |

| | | |
|---|---|---|
| | CERT | CSIS Network Routing & Switching   **NEW** |
| | CERT | CSIS Network & System Administration   **NEW** |
| | | *Source: USHE Distance Education Directors* |

## ATTACHMENT B:  USHE IVC Programs Available September 2016

| | | |
|---|---|---|
| **SUU** | MS | Education |
| **USU** | AAS | General Technology |
| | AS | General Studies |
| | AS | General Studies - Criminal Justice |
| | BA | Liberal Arts |
| | BS/BA | Early Childhood Education (K-3)   **NEW** |
| | BS | Accounting |
| | BS | Business Administration |
| | BS | Business Education   **NEW** |
| | BS | English – Teaching |
| | BS | Health Education & Promotion |
| | BS | History |
| | BS | History – Teaching |
| | BS | Interdisciplinary Studies |
| | BS | Management Information Systems |
| | BS | Mathematics Education |
| | BS | Psychology |
| | BS | Recreation Resource Management |
| | BS | Social Work |
| | BS | Special Education  – Mild/Moderate Disabilities |
| | MBA | Business Administration |
| | MEd | Elementary Education |
| | MEd | Instructional Leadership |
| | MEd | Physical & Sports Education - |
| | MEd | Psychology - School Counseling |
| | MEd | Secondary Education |
| | MS | Agricultural Systems Technology |
| | MS | Applied Environmental Geoscience |
| | MS | Computer Science |
| | MS | Family & Consumer Sciences Education & Extension |
| | MS | Human Resources (Executive Program) |
| | MS, MEd | Special Education |
| | MSW | Social Work |
| | PhD | Education |
| | Certificate | Medical Assisting |
| | Certificate | Transitional Services |
| | Endorsement | Elementary Mathematics |
| | Endorsement | English as a Second Language |
| | Endorsement | Gifted & Talented |
| | Endorsement | Reading |
| | Endorsement | School Library Media |
| | Licensures | Alternative Teacher Preparation – Early Childhood Special Education |
| | Licensure | Secondary Education (ARL) (Post Baccalaureate) |
| | Licensure | Secondary Teacher Education Program (Undergraduate) |
| | | *Source: USU Regional Campuses & Distance Education; SUU Director, Distance Education* |

**ATTACHMENT C:  USHE Blended/Hybrid Programs Available September 2016**

| USU | | |
|---|---|---|
| | BS/BA | Elementary Education |
| | BS/BA | Family, Consumer, & Human Development |
| | ME | Engineering (ME) |
| | MRC | Rehabilitation Counseling (MRC) |
| | Cert | Gerontology |
| | Cert | Rehabilitation Counseling |
| | Endorsement | E-Learning (Grad) |
| | Endorsement | STEM |
| | Licensure | (ATP) Alternative Teacher Prep. - Special Education (Grad) |
| | Licensure | Administrative/Supervisory Concentration (Grad) |
| | | *Source: USU Regional Campuses & Distance Education; SUU Director, Distance Education* |