The John A. Dutton e-Education Institute
Strategic Plan 2014-19

July 1, 2014

Introduction

The John A. Dutton e-Education Institute was established in 2000 as the learning design unit for the College of Earth and Mineral Sciences. Over the past decade and a half, the Dutton Institute has made tremendous strides in partnership with the College's academic units. Today more than 120 online courses have been created, serving 14 certificate and degree programs offered through Penn State World Campus. The impact on residential instruction has grown, as well, with 25 online courses offered to University Park and Commonwealth Campus students as of 2013-14. This growth has led to greater student impact than ever, with more than 3,380 World Campus and more than 5,750 resident instruction enrollments in the College's online courses during the 2013-14 academic year.

To support this growth, the Dutton community has grown likewise. By July 1, 2014, there are 99 faculty and staff in our midst. The vast majority of these individuals are full and part-time faculty who teach and advise online learners. A robust learning design team that is now comprised of an Assistant Director for Learning Design, 5 learning designers, 4 assistant learning designers, a multimedia specialist, a videographer, 2 programmers, and a research associate supports their work. Two administrative assistants and 2 administrative support assistants help ensure that the College's entire online teaching and learning efforts operate smoothly.

In looking ahead to 2018-19, a diverse team of representatives from across the Dutton community worked together to inform our future direction. This team met through 2 retreats focused on identifying strengths, weaknesses, opportunities, and threats and to draft our collective vision, mission, and strategic goals. Their work was informed from an extensive survey of the entire Dutton community, who also informed each of the draft plan's iterations. Meetings were also conducted with leadership from the College's academic units, institutes, and Dean's office to ensure that the Dutton Institute would be well positioned to serve the College's strategic goals.

The document that follows is the culmination of a yearlong effort. It will be used to guide the work of the Dutton Institute over the next 5 years, providing us with a valuable foundation and framework. With the ever-changing landscape in higher education, the Dutton Institute will also be prepared to adjust and adapt this plan as needed. We look forward to an exciting future!

The Current State of EMS Online: July 2014

Online Programs

At the beginning of the 2009 strategic planning period, the College of Earth and Mineral Sciences offered 6 online certificate and degree programs through Penn State World Campus:

> 1999 – Post baccalaureate Certificate in GIS
> 2001 – Undergraduate Certificate in Weather Forecasting
> 2004 – Master of Geographic Information Systems (MGIS)

2006 – Graduate Certificate in Geospatial Intelligence (GEOINT)
2008 – M.Ed. in Earth Sciences
2009 – Geospatial Intelligence option in the iMPS in Homeland Security

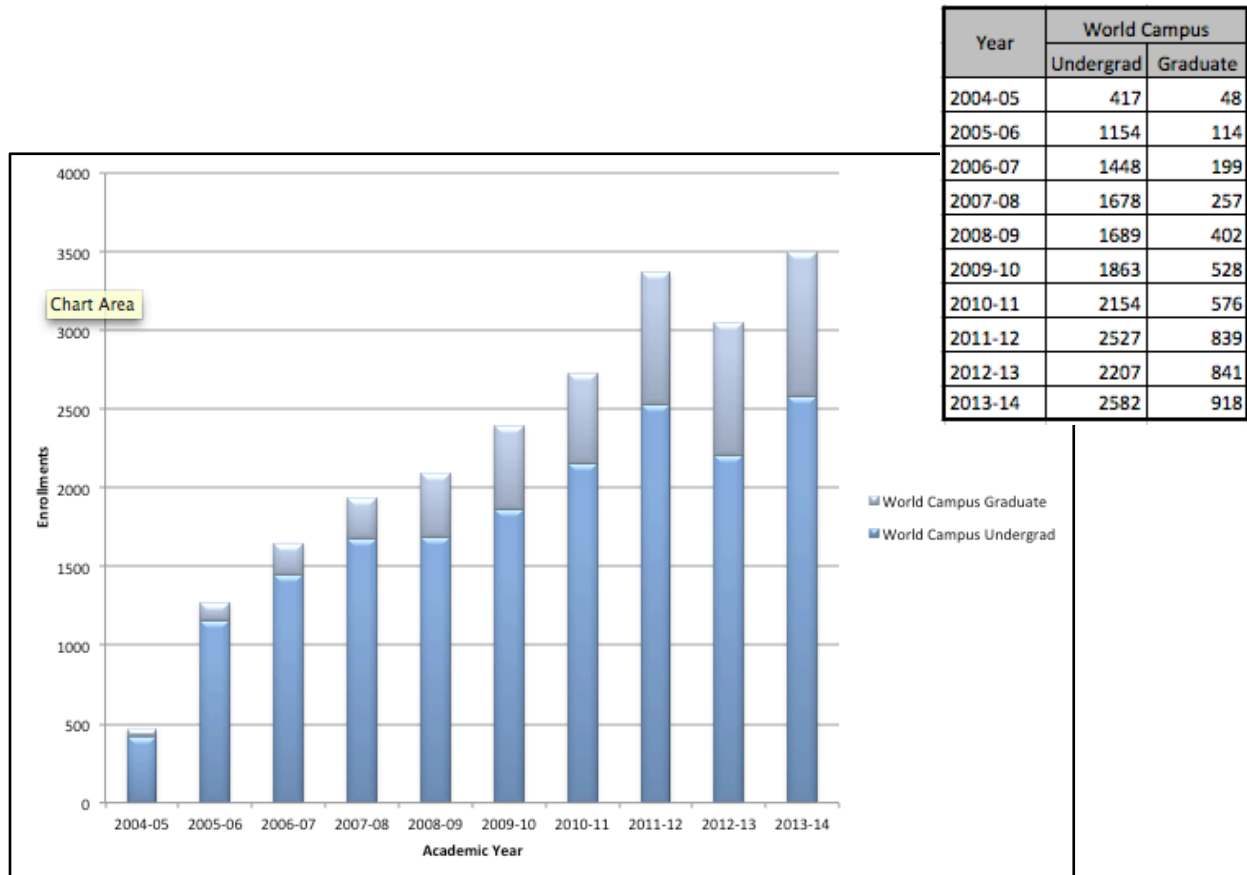By July 2014, that number had grown to 14, with the addition of 8 new programs:

2010 – BA in Energy & Sustainability Policy (ESP)
2012 – Minor in Energy Business and Finance
2013 – iMPS in Renewable Energy & Sustainability Systems (RESS) with 4 options
2013 – RESS Graduate Certificate in Solar Energy
2013 – RESS Graduate Certificate in Sustainability Management & Policy (SMP)
2013 – Post-baccalaureate Certificate in Geospatial Intelligence Applications (GEOAPP)
2013 – Graduate Certificate in Earth Science Education
2014 – Geodesign option in the Master of Geographic Information Systems

Participation in these programs continues to climb. The College's online student population in our certificate and degree programs now includes almost 1700 active students who currently study through the World Campus.
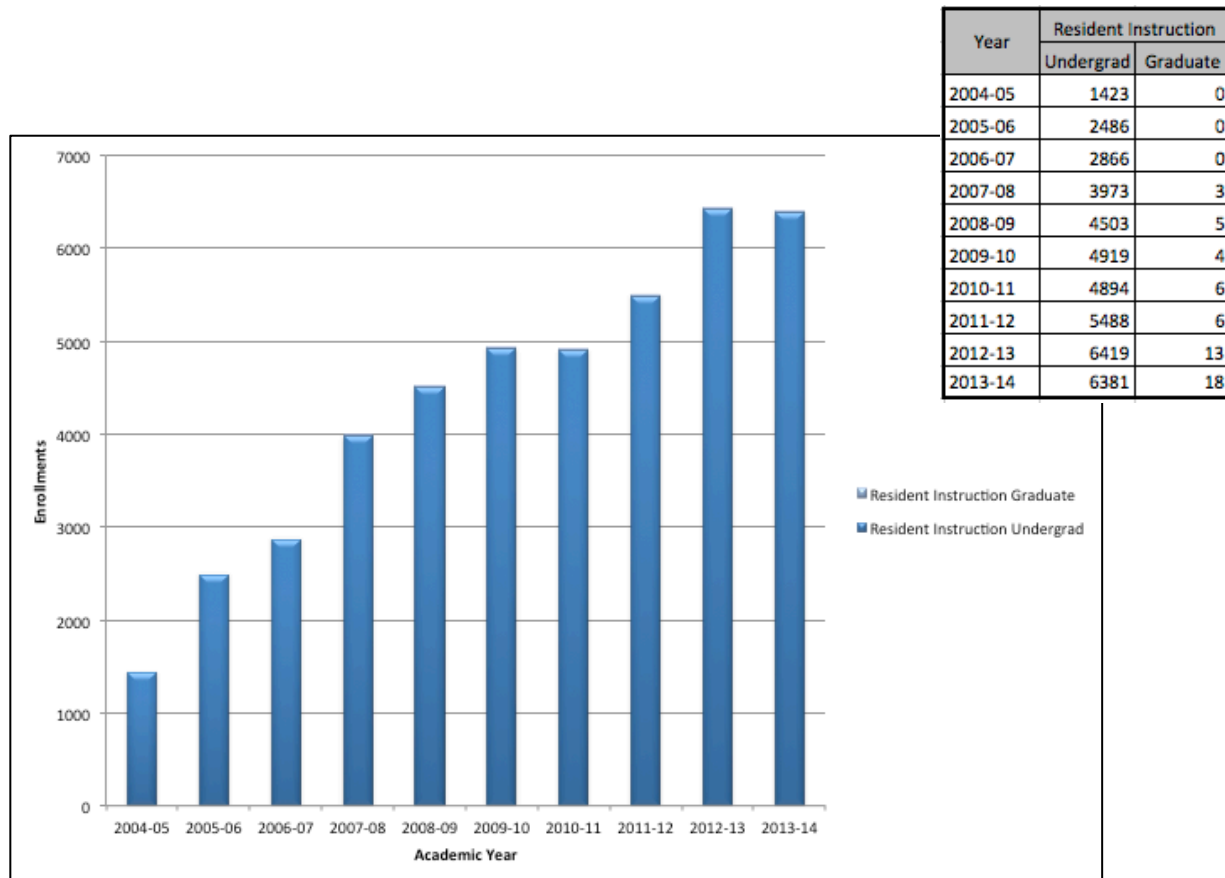
Program	Launch Date	Lifetime Students	Active Students	Average Age	%Adult	%Male	%Mil	%US	Program Graduates
GIS Certificate	1999	4338	619	35	95	61	15	97	2310
Weather Forecasting Certificate	2001	750	444	35	79	66	3	91	53
Master of GIS	2004	448	156	38	100	62	16	96	219
GEOINT Certificate	2006	466	132	35	98	72	39	98	237
M.Ed. in Earth Sciences	2008	54	22	39	95	59	18	100	30
iMPS in Homeland Security, GEOINT option	2009	173	105	35	96	74	61	100	32
BA in Energy & Sustainability Policy	2010	182	152	34	91	60	19	99	11
Minor in Energy Business & Finance	2012	35	26	29	65	62	8	92	4
iMPS-RESS Base option	2013	4	4	29	100	50	25	100	0
iMPS-RESS Bioenergy option	2013	1	1	42	100	100	0	100	0
iMPS-RESS Solar option	2013	2	2	38	100	100	50	100	0
iMPS-RESS Sustainability option	2013	4	4	46	100	100	0	75	0
RESS Bioenergy Certificate	2013	1	1	34	100	100	0	100	0
RESS Solar Energy Certificate	2013	5	5	33	100	80	0	100	0
RESS Sust. Mgmt. & Policy Certificate	2013	6	6	35	67	33	0	100	0
GEOAPP Certificate	2014	27	15	37	93	60	33	93	0
Earth Science Education Certificate	2014	2	2	35	100	0	0	100	0
iMPS-RESS Wind option	2014	0	0	NA	NA	NA	NA	NA	0
RESS Wind Energy Certificate	2014	0	0	NA	NA	NA	NA	NA	0
TOTALS AND AVERAGES		6498	1696	31.5	81	58	15	85	2896

Course Enrollments

In terms of course enrollments, students who study with the College through the World Campus are typically working adult professionals who study part-time, typically enrolling in just 1 or 2 courses at a time. They may take courses as part of our certificate and degree programs, or they may be enrolling in EMS online courses as part of their General Education requirements or for personal interest. By 2013-14, the number of EMS World Campus course enrollments had grown to 3,500.

Year	World Campus	
	Undergrad	Graduate
2004-05	417	48
2005-06	1154	114
2006-07	1448	199
2007-08	1678	257
2008-09	1689	402
2009-10	1863	528
2010-11	2154	576
2011-12	2527	839
2012-13	2207	841
2013-14	2582	918

The number of online courses the College makes available to the University's resident instruction students grew tremendously as well, from 7 course offerings in 2009 to 26 course offerings in 2014. Enrollments in the College's resident instruction online courses have risen to 6,399 in 2013-14.

Year	Resident Instruction	
	Undergrad	Graduate
2004-05	1423	0
2005-06	2486	0
2006-07	2866	0
2007-08	3973	3
2008-09	4503	5
2009-10	4919	4
2010-11	4894	6
2011-12	5488	6
2012-13	6419	13
2013-14	6381	18

Summer Session

Perhaps the data that tells the best story of the College's online impact is for the Summer Session. Beginning in 2011, the University changed its budget model for the Summer Session to provide new College-level Student Credit Hour targets and new incentives for exceeding those targets. As a College, we decided to take on this challenge by creating an annual Summer Session Call for Proposals that provides matching funds to academic departments who wish to create new online courses targeted at serving the resident instruction population over the Summer Session. As illustrated by the data below, this strategic effort has resulted in a dramatic increase in the number of Student Credit Hours generated by Summer 2013.

	SCH	Allotment
Summer 2011	2066	$220,793
Summer 2012	2171	$277,528
Summer 2013	2709	$443,700

Massive Open Online Courses (MOOCs)

The educational reach of the College of Earth and Mineral Sciences has been even further enhanced through our entrance into the "MOOC" landscape in 2013. Working with our colleagues across the

University, the College offered two of the University's first 5 MOOCs through Coursera: "Maps and the Geospatial Revolution," authored and taught by Anthony Robinson, and "Energy, the Environment, and Our Future," authored and taught by Richard Alley and Seth Blumsack. Both of these initiatives were incredibly successful in helping to increase Penn State's visibility and global brand, showcasing our academic and faculty strengths, reaching new markets for our World Campus programs, and providing a rich research environment that brings "big data" to new heights in the teaching and learning arena.

The number of registrants, active participants, and even completion rates (when compared to the "industry standard" of approximately 5%) exceeded our expectations. The Maps MOOC was offered a second time in 2014 and is planned for a third offering in 2015. Based

	Registrations	Active Participants	Completion Rate
Maps	48,448	36,384	8.40%
Energy	34,447	22,085	9.80%

on this initial success, a third MOOC, "Geospatial Intelligence and the Geospatial Revolution," authored and taught by Todd Bacastow, will be launched in late 2014.

University Leadership

Finally, the Dutton Institute and the College of Earth and Mineral Sciences have been well represented across the University due to recognition of our efforts. Members of the Dutton community serve on a number of key committees, often with leadership responsibilities, including the following:

- Penn State Online Coordinating Council
- Faculty Senate
- Council on Engaged Scholarship
- General Education Planning and Oversight Task Force
- LionPATH Faculty Advisory Committee
- Penn State MOOC Strategy Group
- Military Recognition Week
- Accessibility Strategic Plan Task Force
- Penn State Web Conference

It is with this strong foundation that we are proud to present our strategic plan for the next 5 years.

Our Vision

The Dutton Institute will be the teaching and learning center of excellence for the faculty, staff, and students of the College of Earth and Mineral Sciences and the vanguard for distance learning at Penn State.

Our Mission

Penn State has provided more than 100 years of leadership in the field of distance education, from the era of correspondence study via the Pony Express to today's many incarnations of web-based instruction. The College of Earth and Mineral Sciences (EMS), through the support of its John A. Dutton e-Education Institute, has been at the forefront of the University's online teaching and learning initiatives since their inception in the late 1990s.

The College of EMS continues to anticipate and respond to new distance learning market opportunities through the collaborative efforts of its extensive network of faculty and staff. It provides high quality, engaging, and rigorous educational experiences with the goal of exceeding learners' expectations. The Dutton Institute works in close partnership with the College academic units to manage the lifecycle of online and hybrid courses and programs. Together, faculty, staff, and administration utilize cutting-edge learning methods and technologies to deliver educational experiences that are preeminent in their quality and appeal.

As the University continues to evolve, the Dutton Institute enables the College to do more than measure the quality of distance education against residential instruction; it facilitates the recognition of the incredible learning opportunities online instruction can provide. Through our collaborations, we are able to add a level of quality, flexibility, and engagement that traditional means of teaching and learning alone have not achieved.

In the next five years, our focus will be on **innovation**, **endurance**, and **diversity**. Together we will strive to:

- **Prepare the College of EMS' faculty, staff, and learners for the changing landscape of higher education.** Current dividing lines between online and face-to-face teaching and learning will disappear. New pedagogical and technological affordances make learning any time, any place a reality for all. We will develop innovative methods, technologies, and tools that enrich and enhance the teaching and learning environment. So-called "difficult" pedagogical strategies will be possible inside and outside the classroom. We will shift the focus from "developing content" to "creating learning experiences." We will personalize the learning experience by providing learning environments that are flexible, "smart," and inherently interesting. We will make participation in engaged scholarship opportunities possible for all EMS learners.

- **Design and implement models for self-sustaining academic programs that emphasize quality in student outcomes and value to the College of EMS.** We will work in partnership with the College's academic units to create new courses and programs that continue to reflect the College's strategic initiatives. Courses and programs, at the undergraduate and graduate levels, will showcase the research and teaching strengths of the College. We will support faculty, staff, and learners through the lifecycle phases of educational research, design, delivery, support, and reinvention – creating resources that can be shared across the University for the benefit of all. Online learning will be integrated into the culture of the College.

- **Provide seamless access to an EMS education driven by learner needs, regardless of location or situation.** Gone will be barriers in the learner's path, replaced by increased access to courses and programs for residential and online learners. Expanded online University learning and extracurricular resources will eliminate distinctions between the online and face-to-face world and will enable us to build stronger learning communities. We will reproduce and expand the engagement that takes place in University classrooms, hallways, and social spaces to connect all EMS learners. We will better connect residential and online learners with each other and with resources that support and enrich their educational experiences. Improved financial aid will become a resource for programs that are "non-standard" by design. Proactive usability strategies for learners with disabilities will improve the educational experience for all. Culturally relevant curricula will address the needs of local and global learners. "Classrooms" will become more diverse and more inclusive than ever.

Our Values

Our community shares many key values that drive our efforts, including
- A passionate commitment to students and student learning
- Community
- Integrity
- Ongoing, open communication
- Innovation
- Continuous quality assurance, control, and improvement
- Personal and professional development
- A safe work environment
- Fiscal responsibility

Our Strategic Priorities for the Next Five Years

INNOVATION - Prepare the College of EMS' faculty, staff, and learners for the changing landscape of higher education

1. GOAL: Monitor program health and increase effectiveness of learning environments through the use of learner and predictive analytics.
   a. STRATEGY: Implement a system for capturing and analyzing course and program data that generates easy to use, personalized, real-time recommendations that inform student, faculty, and administrative decisions.

2. GOAL: Support students in reaching their personal learning goals.
   a. STRATEGY: Implement tools that help students to align their unique skills, learning goals, and career aspirations.
   b. STRATEGY: Implement tools that enable students to plan/design their own curriculum path.
   c. STRATEGY: Support programs in the development of assessments that will help learners to self-identify their readiness to study at a distance and within a specific discipline.

3. GOAL: Explore and apply new technologies and pedagogies to enrich online learning environments.

a. STRATEGY: Create a culture of research and innovation through the establishment of a "Center for Learning Research and Innovation in the Earth and Mineral Sciences" that brings together EMS faculty, staff, and students who share a passion for innovation in online teaching and learning, while also connecting with University resources such as those in the College of IST; Computer Science; Learning, Design, and Technology; and the Center for Online Innovation in Learning.
b. STRATEGY: Facilitate sharing of innovations across the EMS community through seminar series and creation of an online "Showcase Library."
c. STRATEGY: Enable students to engage with EMS any time, anywhere, and on any device through course materials and interaction tools that are mobile-friendly.
d. STRATEGY: Develop innovative assessment approaches that speak to engagement, competencies, and professionalism and that go beyond the letter grade.

4. GOAL: Encourage an engaged scholarship requirement for all EMS online degree programs.
a. STRATEGY: Create case studies that communicate best practices in engaged scholarship across disciplines, all levels of academic study, and various levels of scale.
b. STRATEGY: Collaborate with interested online programs to incorporate opportunities .for students to apply course concepts through research, internships, service learning, community-based learning, study abroad, and capstone experiences.
c. STRATEGY: Highlight the benefits of engaged scholarship for both students and faculty in program marketing materials, program office websites, and courseware.

5. GOAL: Expand students' networking opportunities with peers, faculty, and program alumni.
a. STRATEGY: Develop a learner profiling system by analyzing student data to develop categories of student profiles that are based on common traits such as life status, background, aspirations, motivation, and performance; within each profile, connect new students with existing students to create a peer support network.
b. STRATEGY: Implement a system for each program where students can network with each other, program alumni, and even prospective employers.

6. GOAL: Create new interdisciplinary online courses and programs that reflect higher education and industry trends.
a. STRATEGY: Partner with EMS academic units, in close consultation with their external advisors, in their creation of new, interdisciplinary programs that meet demonstrated market need (e.g., a program at the intersection of water and energy).
b. STRATEGY: Create new World Campus-delivered General Education themes that showcase issues/topics important to EMS.

7. GOAL: Inspire outstanding teaching and learning practices throughout the EMS community.
a. STRATEGY: Provide consultation services to faculty to support the development of online resources for resident instruction.
b. STRATEGY: Implement an online mentoring program that pairs interested faculty with both an Institute learning designer and an experienced faculty member to provide guidance on creating online or hybrid courses.
c. STRATEGY: Provide professional development opportunities to all EMS faculty and staff who are interested in exploring the possibilities of online education.

8. GOAL: Enable learners to build upon their prior experiences.
a. STRATEGY: Create at least 1 competency-based course or program that enables students to achieve learning outcomes at their own pace.

b. STRATEGY: Incorporate prior-learning assessment opportunities in all online programs to support lifelong learning.

ENDURANCE - Design and implement models for self-sustaining academic programs that emphasize quality in student outcomes and value to the College of EMS.

1. GOAL: Sustain and enhance the quality of our College's rich collection of online courses.
   a. STRATEGY: Establish a course revision and academic inventory process.
   b. STRATEGY: Create a culture of reinvestment in online programs.
   c. STRATEGY: Develop program support metrics and expectations.
   d. STRATEGY: Build faculty capacity for course instruction and program leadership.

2. GOAL: Incorporate online learning into the culture of the College.
   a. STRATEGY: Create tenure-line and multi-year fixed term positions for faculty whose primary responsibilities are for online teaching and learning.
   b. STRATEGY: Increase the involvement of the College's resident faculty in course development, teaching, and advising in the College's online programs, with the goal of providing the College's practitioner faculty (i.e., faculty who hold positions outside of academia or are retired from such positions) and World Campus students with opportunities for engagement with leading EMS researchers.
   c. STRATEGY: Increase the involvement of the College's practitioner faculty in course development, teaching, and advising in the College's resident programs, with the goal of providing resident EMS faculty and students with opportunities for engagement with expert practitioners.
   d. STRATEGY: Increase opportunities for EMS' resident graduate students to take World Campus courses and for advanced EMS PhD students to teach online courses during summer semesters.
   e. STRATEGY: Recognize and award exemplary collaborative efforts of instructors, instructional designers, and staff who support the College's online initiatives.

3. GOAL: Strengthen support for the College's online programs.
   a. STRATEGY: Increase the promotion opportunities for fixed term teaching faculty.
   b. STRATEGY: Develop a leadership succession plan for each online program.
   c. STRATEGY: Increase Institute financial support through active development efforts and the development of progressive models for fundraising, including small and targeted contributions.
   d. STRATEGY: Allocate a proportion of course and program annual net revenues to a new Institute fund that is dedicated to the creation of program-independent tools and administrative models.
   e. STRATEGY: Provide program administrative support that keeps pace with World Campus growth.

4. GOAL: Increase efficiency and effectiveness in the design and delivery of online courses and programs.
   a. STRATEGY: Optimize the Institute's learning design team to scale support for both the development of new online courses and the revision of existing online courses, while operating at peak efficiency .
   b. STRATEGY: Establish a multi-level cost and valuation model for providing learning design and program administration services to College departments.

c. STRATEGY: Enhance student application and advising experiences to ensure that all students who apply (or attempt to apply) to our programs receive the high quality personal contact from program staff that sets our online programs apart.
d. STRATEGY: Develop tools to assist with the creation of course offering schedules that are based on student needs and projected demand.
e. STRATEGY: Create effective and innovative models for course blueprinting, "rapid prototyping," learning design consultation, and program administration/management that optimize Institute resources.

DIVERSITY - Provide seamless access to an EMS education driven by learner needs, regardless of location or situation

1. GOAL: Improve international and diverse student, faculty, and stakeholder participation in development and delivery of online courses and programs.
   a. STRATEGY: Partner with international firms/agencies to deliver custom programming.
   b. STRATEGY: Increase representation of underrepresented groups in the staffing (i.e., instructors) of online courses.
   c. STRATEGY: Increase the cultural relevance of online EMS courses and programs.
   d. STRATEGY: Create online courses that meet the needs of Commonwealth Campus students who ultimately wish to transition to University Park.
   e. STRATEGY: Ensure seamless access to online EMS courses and programs for students with disabilities.
   f. STRATEGY: Increase participation of faculty and students who are located outside of the United States.
   g. STRATEGY: Offer at least 1 online course in a non-English spoken language that meets a specific market demand.

2. GOAL: Ensure equal access to the College's resources for all EMS students.
   a. STRATEGY: Provide equal access to EMS support services (e.g., tutoring, advising) for all EMS students.
   b. STRATEGY: Provide equal access to EMS financial support (e.g., scholarships, awards) for all eligible EMS students.
   c. STRATEGY: Create new scholarship opportunities for EMS students who study through the World Campus.
   d. STRATEGY: Provide equal access to EMS extracurricular activities (e.g., clubs, events) for all EMS students.
   e. STRATEGY: Build student learning communities within courses, across programs, and throughout the College.
   f. STRATEGY: Increase financial scholarships, academic opportunities, and career services to Penn State veterans and their families, working in collaboration with the appropriate Penn State entities such as the Office of Governmental Affairs and the World Campus.