

## The John A. Dutton e-Education Institute Strategic Plan 2020-25

### Introduction

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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 two decades, the Dutton Institute has made tremendous strides in partnership with the College's academic units. Today approximately 150 online courses have been created, serving 18 certificate and degree programs offered through Penn State World Campus. In addition, in 2019-2020, our College provided 261 resident instruction course sections of 72 EMS online courses, serving 6,265 unique undergraduate and graduate students.

To support this growth, the Dutton community has grown likewise. By the Spring of 2020, there were 105 faculty and staff in our midst (see <https://www.e-education.psu.edu/community>). The vast majority of these individuals are full and part-time faculty who teach and advise online learners. Our learning design team is now comprised of a Director of Learning Design, 7 learning designers, 2 assistant learning designers, 2 multimedia specialists and a web production assistant, 3 programmers and a programming intern, 1 project manager, an instructional production specialist, and a graduate assistant. 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 2020-2025, representatives from across the Dutton community have provided input to inform our future direction. A retreat was also held with the Institute's appointees to examine and discuss our strategic direction, creating a comprehensive set of goals, objectives, and key performance indicators to guide our future work. These resources have been shared at the College level, as well, to ensure that the Dutton Institute will be well positioned to serve the College's strategic goals.

The document that follows is the culmination of that 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: Spring 2020

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#### Online Programs

At the beginning of the 2020-25 strategic planning period, the College of Earth and Mineral Sciences offered 18 online certificate and degree programs through Penn State World Campus:

1. 1999 – Post-baccalaureate Certificate in GIS
2. 2001 – Undergraduate Certificate in Weather Forecasting
3. 2004 – Master of Geographic Information Systems
4. 2006 – Graduate Certificate in Geospatial Intelligence Analytics

5. 2009 – Geospatial Intelligence option in the Intercollege Master of Professional Studies in Homeland Security
6. 2010 – Bachelor of Arts in Energy & Sustainability Policy
7. 2012 – Minor in Energy Business and Finance
8. 2013 – Graduate Certificate in Solar Energy
9. 2013 – Graduate Certificate in Sustainability Management & Policy
10. 2013 – Master of Professional Studies in Renewable Energy & Sustainability Systems
11. 2014 – Minor in Geography
12. 2014 – Post-baccalaureate Certificate in Geospatial Intelligence Applications
13. 2015 – Undergraduate Certificate in Earth Sustainability
14. 2015 – Undergraduate Minor in Earth and Sustainability
15. 2016 – Bachelor of Science in Energy & Sustainability Policy
16. 2016 – Graduate Certificate in Remote Sensing and Earth Observation
17. 2018 – Graduate Certificate in Geospatial Programming and Web Map Development
18. 2018 – Graduate Certificate in Weather and Climate Analytics

Participation in these programs continues to be strong. The College's online student population in our certificate and degree programs now includes approximately 1,300 active students who currently study through the World Campus.

**College of Earth and Mineral Sciences  
World Campus Program Demographics**

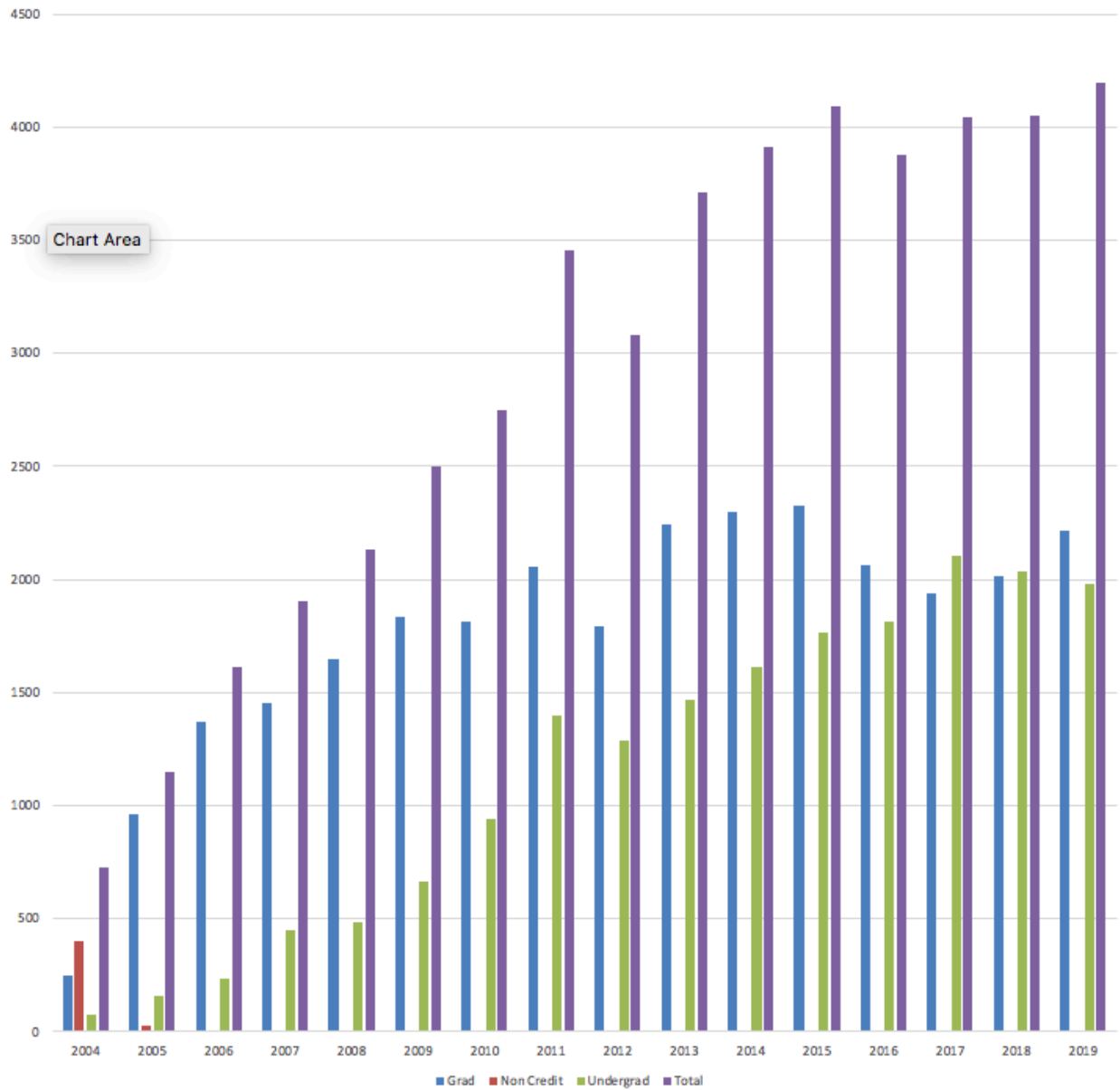
Academic Plan Type	Start of Program	Program	All-Time Program Counts			Spring 2019 to Spring 2020							
			Accepted	Accepted - Never Took A Class	Program Graduates	Active	% Male	Ave. Age	% US	% Adult	% Active Military	% Veteran	% First Gen UG
Certificate	2014	Geosp Intel Appl (PCT)	215	38	67	59	55	34.00	98	91	0.00	3.39	1.69
	2006	Geosp Intell Analytic (GCT)	624	46	262	74	60	35.00	95	94	0.00	1.35	2.70
	2018	Geospatial Prog. & Web Dev (GCT)	125	35	11	84	65	37.00	88	95	0.00	1.19	1.19
	2013	Grad Certificate in Bioenergy	20	5	10	1	100	45.00	100	100	0.00	0.00	0.00
	2014	Grad Certificate in Earth Science	15	2	4	0		29.00					
	2006	Grad Certificate in GEOINT Analytics	158	1	86								
	1999	Grad Certificate in GIS	4616	372	2491	370	57	34.00	98	94	0.00	1.08	1.89
	2016	Grad Certificate in RMT SNG	116	23	38	57	57	39.00	100	94	0.00	0.00	1.75
	2013	Grad Certificate in Solar Energy	106	41	26	20	90	38.00	95	95	0.00	5.00	0.00
	2013	Grad Certificate in Sust. Policy & Mgmt	107	31	35	21	61	39.00	85	100	0.00	0.00	4.76
	2014	Graduate Certificate in Wind Energy	37	11	16	6	50	31.00	83	83	0.00	0.00	0.00
	2001	Undergrad Certificate in Weather	421	39	164	84	73	38.00	90	85	0.00	1.19	3.57
	2015	Undergraduate Certificate in Earth	27	7	9	14	35	34.00	92	92	0.00	0.00	28.57
2018	Weather Climate Analytics (GCT)	12	4	0	7	71	39.00	100	100	0.00	0.00	14.29	
Major	2010	Enrgy/Sustanblty Pol (BA)	253	33	61	22	40	35.00	100	95	0.00	4.55	9.09
	2016	Enrgy/Sustanblty Pol (BS)	194	26	25	121	61	34.00	97	88	0.83	6.61	14.88
	2009	iMPS-HLS (Geointel option)	395	23	189	103	66	34.00	100	98	0.00	7.77	4.85
	2008	M.Ed. in Earth Sciences	89	6	61	14	50	36.00	100	100	0.00	14.29	21.43
	2004	Master of GIS (GEOINT and Geodesign options)	737	16	440	190	64	38.00	92	99	0.00	3.16	3.16
	2004		30	1	3	11	63	38.00	90	100	0.00	0.00	9.09
	2004		106	5	36	35	65	35.00	97	97	0.00	5.71	2.86
	2013	Ren Engy & Sys Systm (MPS)	46	7	4	26	69	41.00	88	96	0.00	3.85	0.00
	2013		16	1	7	4	50	44.00	50	100	0.00	0.00	0.00
	2013		52	4	20	27	81	38.00	81	96	0.00	0.00	3.70
2013	81		11	28	36	77	38.00	94	97	0.00	0.00	2.78	
2014	12		1	4	4	100	40.00	75	100	0.00	0.00	0.00	
Minor	2012	Minor in Energy Business and Finance	99	4	23	11	63	27.00	90	72	0.00	0.00	0.00
	2014	Minor in Geography	39	3	14	13	53	32.00	100	84	0.00	7.69	30.77
Pre-Major	2010	EMS Pre Major	307	33	0	45	55	34.00	97	88	6.67	2.22	11.11
<b>Grand Total</b>			<b>7672</b>	<b>756</b>	<b>3541</b>	<b>1311</b>	<b>61</b>	<b>36.00</b>	<b>95</b>	<b>94</b>	<b>0.31</b>	<b>2.97</b>	<b>4.65</b>

## 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, usually 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. In 2018-19, there were a total of 4,198 World Campus EMS course enrollments, generating 12,784 student credit hours.

World Campus Enrollments				
Academic Year	Grad	Non Credit	Undergrad	Total
2004	249	404	75	728
2005	961	24	161	1146
2006	1372		238	1610
2007	1455		452	1907
2008	1648		485	2133
2009	1834		662	2496
2010	1811		940	2751
2011	2056		1396	3452
2012	1792		1289	3081
2013	2246		1466	3712
2014	2296		1613	3909
2015	2326		1765	4091
2016	2061		1817	3878
2017	1940		2105	4045
2018	2016		2036	4052
2019	2215		1983	4198
<b>Grand Total</b>	<b>28278</b>	<b>428</b>	<b>18483</b>	<b>47189</b>

World Campus Course Enrollments 2004 - 2019



The number of online courses the College makes available to the University’s resident instruction students has grown tremendously, from 7 course offerings in 2009 to 261 sections of 72 unique course offerings in 2019-2020. These courses reached 6,265 unique undergraduate and graduate resident instruction students and generated 7,340 enrollments (22,020 student credit hours).

**COVID-19 and the Move to Remote Teaching**

On March 18, 2020, the University announced that all face-to-face instruction would be moved to a “remote delivery” format for the remainder of the Spring 2020 semester. The College of Earth and Mineral Sciences had already begun preparations for such a move, and the Dutton Institute was ready to

assist. By the end of the Spring semester, 64 EMS faculty members teaching in residence had worked closely with members of the Dutton Institute's learning design team with their transition to remote teaching. This important support continued for the Summer 2020 semester, and as of this writing, preparations are underway to support EMS faculty with a potential continuation of this "new normal" into the Fall 2020 semester.

Supporting resident instruction has never been more important, as our teaching faculty become increasingly interested in innovation in the teaching and learning space. The future of higher education will undoubtedly incorporate more "flipped classrooms" that capitalize on the most effective uses of the face-to-face environment, hybrid course formats that reduce the number of face-to-face class meetings by moving select learning activities to the online environment, and virtual experiences that enhance or even replace traditional field trips, internships, undergraduate research, and many other opportunities that enrich classroom learning for all students, regardless of their geographic location or financial situation. Our work with EMS faculty throughout the pandemic has helped us to further refine our strategic thinking and direction for the next five years.

### **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 University committees and organizations, often with leadership responsibilities, including the following:

- Penn State Online Coordinating Council
- e-Education Council
- Open and Affordable Educational Resources Working Group of the Transforming Education Strategic Plan Executive Committee
- Faculty Development Resources Working Group of the Transforming Education Strategic Plan Executive Committee
- Organizational Processes Steering Committee of the Strategic Plan Executive Committee
- Digital Learning Cooperative Advisory Committee
- Student Engagement Network Advising Group
- University Faculty Senate
- Commission for Adult Learners

It is with this strong foundation that we are proud to present our strategic plan for the next 5 years. This plan is a living document that will be continually refined in response to College and University needs, as well as the changing higher education landscape.

## **Our Vision**

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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 Motto**

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Supporting teaching and learning excellence in the earth and mineral sciences.

## **Our Mission**

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Penn State has provided more than 100 years of leadership in the field of distance education, from the era of correspondence study via postal Rural Free Delivery 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 both face-to-face and online instruction can provide. Through our collaborations, we are able to add a level of quality, flexibility, and engagement that traditional methods of teaching and learning alone have not achieved.

As we look ahead, the Dutton Institute will collaborate with the College's academic units to meet the vision of One Penn State 2025 to:

1. Provide a Seamless Student Experience
2. Achieve Curricular Coherence
3. Design Relevant and Responsive Programs
4. Engage Learners Throughout Their Lifetimes
5. Achieve the Highest Level of Efficiency of University Resources

## **Our Values**

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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 and creativity
- Continuous quality assurance, control, and improvement
- Personal and professional development
- A safe work environment
- Fiscal responsibility

## **Our Strategic Priorities for the Next Five Years**

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Unveiled in the fall of 2018, One Penn State 2025 represents President Barron’s vision for University-wide educational innovation. OPS 2025 provides a framework

“To reimagine student learning and support services across all Penn State’s campuses to boost student success, engagement with Penn State and the efficient use of University resources. With partnerships across colleges, campuses and administrative units, the initiative will transform business processes, curricula, course and degree content, and delivery methods across the University.” (“President Barron unveils vision of ‘One Penn State 2025’ for trustees | Penn State University,” 2018)

To reflect our commitment to OPS 2025, our strategic goals for the next five years are organized around the framework’s five guiding principles (from <https://strategicplan.psu.edu/implementing-the-strategic-plan/signature-initiatives/one-penn-state-2025/>):

1. **Provide a seamless student experience**  
In 2025, Penn State will provide students with a seamless, mobile student experience in all student interactions with the institution, whether this be the admissions or enrollment processes, the process of taking courses, co-curricular learning, or full access to the curricula and support services offered across the University.
2. **Achieve curricular coherence**  
In 2025, Penn State will embrace a commitment to design degree, minor, and certificate programs that provide students with access and clearly articulated pathways through the curriculum, built through thoughtful approaches to course coherence. Strong disciplinary and interdisciplinary communities and multiple and flexible models of course taking will form the basis of this transformation.
3. **Design relevant and responsive programs**  
In 2025, Penn State will offer degrees and programs with learning outcomes defined by disciplinary communities and contemporary needs while also offering flexibility in achieving these outcomes via multiple pathways.
4. **Engage learners throughout their lifetime**  
In 2025, Penn State will engage learners throughout their lifetimes with content that is timely, topical, and relevant to their personal and professional wellbeing.
5. **Achieve the highest level of efficiency of University resources**  
In 2025, Penn State will leverage digital resources and align faculty, academic, and administrative resources to strengthen learning, research, and student support opportunities, thereby achieving greater institutional efficiency to address equity of, access to, and affordability for a high quality Penn State education.



**Goal 1 - Provide a Seamless Student Experience**

Objectives	Strategies	Key Performance Indicators
<p>Ensure students can successfully interact with EMS’ online courses and programs anytime, anywhere, and on any device</p>	<ul style="list-style-type: none"> <li>• Define baseline levels for that ensure courseware is viewable on any size device (i.e., is responsive)</li> <li>• Develop and maintain online courseware that meets baseline responsiveness level</li> <li>• Incorporate course-related technology instructions into courseware as appropriate</li> <li>• Ensure all course and program websites have clear contact information for student technical and instructional support</li> <li>• Enable movement through course learning environment(s) as seamless as possible (e.g., between Drupal sites and Canvas)</li> </ul>	<ul style="list-style-type: none"> <li>• Course exceeds baseline measurement for responsiveness</li> <li>• New course websites are routinely reviewed for responsiveness</li> <li>• Clear contact information for technical and instructional support on all course and program websites</li> <li>• Number of courses using Canvas/Drupal LTI (Learning Tools Interoperability)</li> </ul>
<p>Provide seamless access to online EMS courses and programs for all students</p>	<ul style="list-style-type: none"> <li>• Define baseline levels for courseware accessibility</li> <li>• Courses are developed based on Universal Design for Learning (UDL) and accessibility principles</li> <li>• Online teaching and learning materials and activities are pro-actively tested for accessibility</li> <li>• Faculty are advised on the types of adjustments needed for accessibility as needed</li> </ul>	<ul style="list-style-type: none"> <li>• All courses pass regular accessibility audit (before first launch and at regular review periods)</li> </ul>

<p>Advocate for access and affordability for prospective and current EMS students who study online</p>	<ul style="list-style-type: none"> <li>• Track queries about financial aid that come to program assistants</li> <li>• Collaborate with faculty and University librarians to locate open and affordable educational resources as standard part of course development process</li> <li>• Incorporate link to financial resources/aid page on program websites</li> </ul>	<ul style="list-style-type: none"> <li>• Number of online learners advised on financial matters</li> <li>• Number of online learners who receive financial support</li> <li>• Number of courses using OAER and calculation of corresponding cost savings for students</li> </ul>
<p>Provide writing tutor support for EMS students who study online</p>	<ul style="list-style-type: none"> <li>• Dedicate portion of learning design team support to providing writing tutor services for online learners</li> <li>• Communicate and encourage usage of writing tutor services with faculty who teach courses via World Campus and EMS online learners</li> <li>• Conduct an annual survey of faculty and students who utilized writing tutor services to assess benefit</li> </ul>	<ul style="list-style-type: none"> <li>• Measure usage of writing tutor support</li> <li>• Report of who has been tutored and how they performed on tutored exercises</li> <li>• Findings of annual survey of faculty and students who utilized writing tutor services to assess benefit</li> </ul>
<p>Facilitate support for students with varied knowledge backgrounds and experiences</p>	<ul style="list-style-type: none"> <li>• Create a Drupal library item focused on instructional and student affairs resources that can be incorporated into online courseware</li> <li>• Encourage faculty to incorporate the instructional and student affairs resources library item prominently into courseware</li> <li>• Provide exit questionnaires to students that learn more about the instructional and student affairs resources they utilized in their program and to get input on additional resource needs</li> </ul>	<ul style="list-style-type: none"> <li>• Number of courses incorporating library item for Penn State’s instructional and student affairs resources</li> <li>• Number of programs incorporating exit questionnaires about instructional and student affairs resource experiences</li> <li>• Identification of additional instructional and/or student affairs resources needed to support students</li> </ul>

**Goal 2 - Achieve Curricular Coherence**

Objectives	Strategies	Key Performance Indicators
<p>Support adherence to the Faculty Senate’s curricular coherence policy (i.e., the “80/20 rule”)</p>	<ul style="list-style-type: none"> <li>• Provide most recent course proposal to faculty during course development and revision processes</li> <li>• Collaborate with faculty authors to map the new courseware against the approved curriculum</li> </ul>	<ul style="list-style-type: none"> <li>• Curricular coherence for all courseware developed or revised assessed based on original proposal</li> <li>• Lead faculty and academic department home will be advised of any proposed courseware appearing to exceed the 80/20 rule so they can determine if a course change proposal should be generated</li> </ul>
<p>Help learners to self-assess their readiness to study at a distance</p>	<ul style="list-style-type: none"> <li>• Encourage all online programs to include a link to <a href="#">“Are you ready to be an online learner?”</a> in their program office websites and course welcome materials</li> <li>• Create diagnostic survey for students to evaluate their readiness to study at a distance</li> <li>• Encourage course authors and instructors to incorporate information about best practices for studying at a distance into their course materials (e.g., <a href="https://student.worldcampus.psu.edu/sites/default/files/Time-Management-Infographic-tagged.pdf">https://student.worldcampus.psu.edu/sites/default/files/Time-Management-Infographic-tagged.pdf</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Number of program website directing students to <a href="#">“Are you ready to be an online learner?”</a></li> <li>• Number of courses that incorporate the diagnostic readiness survey into the <a href="#">“Are you ready to be an online learner?”</a> website</li> <li>• Number of courses that incorporate information about best practices for studying at a</li> </ul>

		distance into their course materials
Provide learners with diagnostic materials/tools to evaluate their readiness to succeed with program and course content	<p>Collaborate with course authors and academic programs to:</p> <ul style="list-style-type: none"> <li>• Develop and maintain diagnostic materials/tools based on program and course content</li> <li>• Provide modules to remediate students’ knowledge and skills</li> <li>• Provide research-based activities on learning strategies (e.g., retrieval practice, spaced practice, and metacognition skills) that can be incorporated into online courseware</li> </ul>	<ul style="list-style-type: none"> <li>• Number of diagnostic materials/tools created</li> <li>• Number of remediation modules created</li> <li>• Findings from course entrance/exit surveys</li> <li>• Number of research-based activities on learning strategies (e.g., retrieval practice, spaced practice, and metacognition skills) incorporated into online courseware</li> </ul>
Enable seamless sharing of course materials across campuses and colleges	<ul style="list-style-type: none"> <li>• Collaborate with faculty authors and academic departments to contribute EMS-developed Open Educational Resources to Open@PSU website</li> <li>• Promote OER materials through Penn State’s faculty discipline communities</li> <li>• In collaboration with other learning design units, institute a University-wide instructional content management system (ICMS)</li> <li>• Get adoption of ICMS before and after launch (programs/departments)</li> <li>• Support and use University supported technologies (Office 365 teams, Gsuite, Canvas, Piazza, Kaltura etc.) to host and deliver course content and activities</li> </ul>	<ul style="list-style-type: none"> <li>• Number of EMS OER materials in use at other Penn State campuses/colleges</li> <li>• Have a working iCMS prototype available by 2021</li> <li>• Number of courses that launch in ICMS</li> <li>• Number of courses that are transitioned to ICMS</li> <li>• Usage of University-supported resources</li> <li>• Training (and encouragement of University training) and support of faculty on University supported resources</li> </ul>

<p>Work in partnership with EMS academic units to ensure high quality online courseware informed by industry best practices</p>	<ul style="list-style-type: none"> <li>• Use the Quality Matters framework to inform course development</li> <li>• Encourage use of faculty peer review process for all online courses (e.g., <a href="https://facdev.e-education.psu.edu/evaluate-revise/peerreviewonline">https://facdev.e-education.psu.edu/evaluate-revise/peerreviewonline</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Number of Learning Design Team members trained in Quality Matters framework</li> <li>• Number of Learning Design Team members using of QM standards during development</li> <li>• Number of programs using established faculty peer review process</li> </ul>
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### Goal 3 - Design Relevant and Responsive Programs

<b>FOCUS AREA:</b> Create new interdisciplinary online courses and programs that reflect higher education and industry trends		
<b>Objectives</b>	<b>Strategies</b>	<b>Key Performance Indicators</b>
Partner with EMS academic units, in close consultation with their external advisors, in their creation of new, interdisciplinary programs and courses that meet demonstrated market needs	<ul style="list-style-type: none"> <li>• Involve Dutton leadership as early as possible when considering new online programs or courses</li> <li>• Utilize market research tools (e.g., Burning Glass) to identify program opportunities and analyze potential for proposed programs</li> </ul>	<ul style="list-style-type: none"> <li>• Dutton Institute representation at program advisory board meetings</li> <li>• Market research reports provided to academic units as needed</li> </ul>
Work with academic departments and program leads to establish a course revision process to ensure courseware is up to date in both content and pedagogy	<ul style="list-style-type: none"> <li>• Partner with academic programs and departments to create a common set of course review processes and procedures</li> <li>• Create a system that faculty can use to initiate revisions</li> <li>• Add functionality to the existing course database (and/or Teamwork) that establishes revision schedule, tracks when changes are made, and notifies when there is a need for course revision</li> <li>• Investigate ways to simplify the Drupal interface so faculty are more able to make revisions on their own</li> </ul>	<ul style="list-style-type: none"> <li>• All courses reviewed on a regular basis using a consistent process and, if necessary, revised during the defined timeframe</li> <li>• Number of faculty who used revision request system</li> <li>• Average time until revisions are needed</li> </ul>
Create a culture of research and innovation that brings together EMS faculty, staff, and students who share a passion for innovation in online teaching and learning	<ul style="list-style-type: none"> <li>• Connect EMS faculty and staff with University resources to support research and innovation such as those in Teaching and Learning with Technology, Penn State World Campus, University Libraries,</li> </ul>	<ul style="list-style-type: none"> <li>• Number of research projects related to the scholarship of teaching and learning</li> <li>• Number of Dutton Institute personnel engaged in the scholarship of teaching and learning</li> </ul>

	<p>and the Schreyer Institute for Teaching Excellence</p> <ul style="list-style-type: none"> <li>• Provide training opportunities for Dutton Institute personnel related to writing grant proposals and conducting scholarly research</li> <li>• Identify funding opportunities to support the scholarship of teaching and learning (SoTL)</li> <li>• Promote the Dutton Institute as a research partner within the College</li> <li>• Create a formal “Dutton Partnership” award to be presented as part of the Wilson Banquet</li> </ul>	<ul style="list-style-type: none"> <li>• Addition of Dutton Partnership Award to the College’s Wilson Banquet</li> <li>• Amount of research funding awarded to support the scholarship of teaching and learning</li> <li>• Number of requests to the EMS community seeking SoTL research partners</li> </ul>
Facilitate the sharing of teaching and learning innovations across the EMS community	<ul style="list-style-type: none"> <li>• Provide faculty development programming focused on identified needs and trends in teaching and learning</li> <li>• Create a Dutton Institute Faculty Advisory Group to identify pedagogical needs/challenges, faculty development opportunities, and inform Institute initiatives</li> <li>• Highlight courseware exemplars in appropriate Dutton Institute websites</li> </ul>	<ul style="list-style-type: none"> <li>• Number of development programs offered</li> <li>• Number of faculty development program participants</li> <li>• Number of meetings of a Dutton Institute Faculty Advisory Group</li> <li>• Number of courseware exemplars incorporated into Dutton Institute’s websites</li> <li>• Level of invited participation in committees and task forces across the University to share our expertise and experiences</li> </ul>
Help EMS faculty learn about the latest findings in learning design and how to adapt these strategies to their own teaching and learning environments	<ul style="list-style-type: none"> <li>• Create a Dutton Institute “Learning Science Portal” that links research on teaching and learning with practice/examples</li> </ul>	<ul style="list-style-type: none"> <li>• Number of topics addressed on Learning Science Portal</li> <li>• Number of site visits to Learning Science Portal</li> </ul>

	<ul style="list-style-type: none"> <li>• Provide consultation to EMS faculty related to applying topics addressed on Learning Science Portal to their own classrooms</li> </ul>	<ul style="list-style-type: none"> <li>• Analysis of feedback received through Learning Science Portal site</li> <li>• Number of faculty consultations provided related to Learning Science Portal</li> <li>• Number of communications sent out to the EMS community related to new strategies or research findings</li> </ul>
Provide learning design support and professional development opportunities to all EMS faculty and staff who are interested in improving the quality of teaching and learning	<ul style="list-style-type: none"> <li>• Conduct outreach efforts to provide awareness of and support for use of various technologies and teaching and learning methods that can be used to improve learning</li> <li>• Provide one-on-one learning design consultation services to course instructors to support online, resident, and hybrid instruction</li> <li>• Promote the use of the EMS Faculty Studio to support teaching needs, including flipped classroom and “contingency planning” strategies</li> <li>• Implement a mentoring program that pairs interested course instructors with both an Institute learning designer and an experienced course instructor</li> <li>• Provide workshops, resources, and communities of practice related to hybrid teaching</li> <li>• Conduct annual survey to obtain feedback from faculty partners</li> </ul>	<ul style="list-style-type: none"> <li>• Number of course instructors receiving one-on-one learning design consultation services</li> <li>• Number of course instructors utilizing EMS Faculty Studio</li> <li>• Number of instructor/learning design teams</li> <li>• Number of faculty development programs and resources related to hybrid teaching</li> <li>• Number of faculty development program participants</li> <li>• Number of site visits to Dutton Institute’s Faculty Development website</li> <li>• Analysis of results from annual feedback survey</li> </ul>
Provide course enrollment data and analyses to inform program planning	<ul style="list-style-type: none"> <li>• Create course enrollment dashboards to illustrate enrollment trends, student</li> </ul>	<ul style="list-style-type: none"> <li>• Course enrollment dashboards</li> <li>• Automated course drop-out report</li> </ul>



	<p>course needs, and projected demand to inform scheduling</p> <ul style="list-style-type: none"> <li>• Create reports that provide demographic analyses of students who drop out</li> <li>• Implement bi-annual dashboard functionality enhancements with prototyping and evaluation to ensure user needs are satisfied</li> </ul>	<ul style="list-style-type: none"> <li>• Bi-annual enhancement prototypes</li> <li>• Bi-annual dashboard performance evaluation</li> </ul>
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**Goal 4 - Engage Learners Throughout Their Lifetimes**

<b>Objectives</b>	<b>Strategies</b>	<b>Key Performance Indicators</b>
Provide students with learning support mechanisms to help them succeed beyond their courses and programs	<ul style="list-style-type: none"> <li>• Curate a list of resources for lifelong learners that can be incorporated into program websites</li> <li>• Encourage inclusion of topics related to lifelong learning and goal setting into courseware</li> </ul>	<ul style="list-style-type: none"> <li>• Number of program websites utilizing resource listing for lifelong learners</li> <li>• Number of courses that incorporate topics related to lifelong learning and goal setting into courseware</li> </ul>
Identify barriers to lifelong learning and suggest solutions to the appropriate University offices and leadership	<ul style="list-style-type: none"> <li>• Conduct a biennial survey of EMS' online student populations to identify distance learning pain points and suggestions for process improvements</li> <li>• Draft white paper that utilizes existing research on barriers to lifelong learning to suggest ways to address concerns raised in biennial survey</li> </ul>	<ul style="list-style-type: none"> <li>• Biennial survey of returning and non-degree online student populations</li> <li>• Biennial white paper shared with appropriate members of the College and University leadership</li> </ul>

<p>Create General Education courses that support disciplinary trends and students' life-long learning needs</p>	<ul style="list-style-type: none"> <li>• Collaborate with academic units to identify disciplinary needs and trends that could be addressed through the development of new General Education</li> <li>• Create new World Campus-delivered General Education inter-domain and linked courses that showcase issues/topics important to EMS</li> <li>• Partner with other colleges/campuses in the development of General Education inter-domain and linked courses</li> </ul>	<ul style="list-style-type: none"> <li>• Number of new General Education courses proposed</li> <li>• Number of inter-domain and linked courses developed for delivery through World Campus, including those developed in collaboration with another college</li> </ul>
<p>Disseminate the knowledge and expertise of the College of Earth and Mineral Sciences</p>	<ul style="list-style-type: none"> <li>• Connect both EMS alumni and current students to the College's OER Repository</li> <li>• Through the OAER Working Group, collaborate with University partners to expand the College's OER Repository to serve the entire university</li> <li>• Collaborate with academic departments to adapt existing courseware to serve a more general audience and/or to use it for other purposes, such as non-credit or community outreach</li> <li>• Help academic programs to capture their alumni experiences in order to promote courses/programs and to engage prospective and current students</li> </ul>	<ul style="list-style-type: none"> <li>• Number of visitors to EMS OER Repository</li> <li>• Adoption of EMS OER Repository for University use</li> <li>• Number of "spin off" resources from existing EMS courseware</li> <li>• Utilization of Dutton Institute support to capture program alumni experiences</li> </ul>

**Goal 5 - Achieve the Highest Level of Efficiency of University Resources**

Objectives	Strategies	Key Performance Indicators
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<p>Enhance student application and advising experiences to ensure that all students who apply to our programs receive the high-quality personal contact from program staff that sets our online programs apart</p>	<ul style="list-style-type: none"> <li>• Revisit and update existing program support standards and metrics</li> <li>• Standardize tools used by program assistants across all programs (e.g., DSIS, FrontApp, Teamwork)</li> <li>• Work with lead faculty to build program FAQ for student support</li> <li>• Use course surveys to gauge students' knowledge of available resources</li> <li>• Enhance use of FrontApp to incorporate tracking of all communications with students and to ensure attention to student queries during staff absences</li> </ul>	<ul style="list-style-type: none"> <li>• Number of Program Office inquiries</li> <li>• ~75% of all inquiries are handled by program assistants</li> <li>• Number of student queries tracked in FrontApp</li> </ul>
<p>Enable seamless sharing of content and teaching/learning resources to be more easily distributed across the institution</p>	<ul style="list-style-type: none"> <li>• In collaboration with other learning design units, institute an instructional content management system (ICMS) that is available to every college/campus</li> <li>• Contribute OER through Open@PSU website</li> <li>• Promote OER materials through faculty discipline communities</li> </ul>	<ul style="list-style-type: none"> <li>• ICMS usage statistics</li> <li>• Number of EMS OER materials in use at other Penn State campuses/colleges</li> </ul>
<p>Bring the University's disparate data sources together with our own course and program information to support the full course development and delivery process</p>	<ul style="list-style-type: none"> <li>• Create a new student information system (DSIS) with an intuitive interface</li> <li>• Implement new DSIS with student advisors and program assistants</li> <li>• Provide bi-annual reports to program lead faculty to provide feedback and generate new development ideas</li> </ul>	<ul style="list-style-type: none"> <li>• Number of student advisors and program assistants using new DSIS</li> <li>• Bi-annual reports to program lead faculty</li> </ul>

<p>Optimize our ability to scale support for both the development of new online courses and the revision of existing online courses, while operating at peak efficiency</p>	<ul style="list-style-type: none"> <li>• Explore opportunities for innovative models and strategies for course design and support materials/resources</li> <li>• Allow flexibility in the techniques used to support course development and delivery in order to encourage creativity, enhance productivity, and heighten satisfaction</li> <li>• Provide opportunities for sharing of techniques across learning design team to inspire further innovation</li> <li>• Seek new funding models that would enable move away from a “billable hour” (time) model to one that focuses on what is accomplished (results)</li> </ul>	<ul style="list-style-type: none"> <li>• Number of internal presentations on course development and delivery strategies</li> <li>• Number of external publications on course development and delivery strategies</li> <li>• New funding model(s) for course development and delivery support</li> </ul>
<p>Optimize course development and maintenance processes to enable support of entire Institute mission</p>	<ul style="list-style-type: none"> <li>• Develop processes and training to shift course maintenance to the IDAs and IPAs to provide more time for the designers to engage in research initiatives in partnership with EMS faculty</li> </ul>	<ul style="list-style-type: none"> <li>• Number of research initiatives involving members of the learning design team</li> </ul>