



EAB

# Financial Sustainability Engagement

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Academic Affairs Budget - Analysis and Findings

Eastern Washington University

# Financial Sustainability Engagement

## Academic Affairs Budget - Analysis and Findings

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# Financial Sustainability Engagement

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## Engagement Context

**Background:** Eastern Washington University (EWU) is facing a structural budget deficit that is expected to be permanent. The University anticipates having a smaller student population going forward and plans to shrink its academic affairs budget to create a smaller and more sustainably sized set of academic offerings for its undergraduate population.

**Purpose:** EAB has been asked to help EWU's leadership objectively assess the academic savings opportunities within its existing academic affairs portfolio. This opportunity assessment has two components: Academic Efficiency Assessment and Program Prioritization Opportunity.

**Academic Efficiency Assessment:** Identify ways to create efficiencies within the existing set of academic program offerings by sizing the opportunities to: 1) collapse underfilled course sections; 2) identify small classes that can be taught once every two years rather than annually; and 3) identify opportunities to bring a greater percentage of faculty up to the contracted teaching load.

**Program Prioritization Opportunity:** This exercise is meant to assess the 'value' of each academic program to the University by identifying the critical drivers of value for different majors based on student demand for and interest in programs of study, the relative cost of instruction in different programs, the current and expected state and regional workforce demand, the strength of an area of study in producing graduates relative to state and regional universities, and the success of a program in retaining and supporting students as they strive for a university degree.

**Goal:** EAB has been asked to identify a potential list of academic efficiencies and majors that can be sunset and to size the financial savings from each of those opportunities. EWU has set a goal of shrinking its academic affairs budget by \$16 million. EAB's opportunity analysis and findings are contained within this report. EWU's leadership team will use this quantitative analysis and financial opportunity assessment as an input to their final determination as to how to create a financially sustainable academic affairs budget for the future.

## EAB Financial Sustainability Engagement Project Team

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## EAB Analysis and Findings

EAB has thoroughly analyzed EWU's academic affairs portfolio, reviewing its course offerings, majors, departmental expenses, teaching capacity, and the regional demands for the graduates that EWU is producing. All of these inputs, along with discussions with faculty and administrative leaders, have been factored into our Academic Efficiency and Program Prioritization findings.

- **Our charge** is to size the potential opportunities available for shrinking the academic affairs budget, not to make recommendations as to which of those opportunities should be acted upon.
- **Academic Efficiency Opportunity** – EWU, like every university, has organized and delivered its academic coursework using its own full-time faculty and other instructors on a contractual basis. Across the course of Academic Year 2019-20, EWU offered a total of 17,315 undergraduate student course credits (a single class typically counting for 2-5 credits). We identified opportunities to: 1) collapse underfilled course sections; 2) reduce the number of classes with fewer than 10 students by offering those classes once every two academic years rather than every year; 3) require faculty members who taught fewer credits than a standard course-load to increase their teaching loads. By eliminating the three areas of inefficiency, EWU could realize a maximum savings of **\$3,440,216**.
- **Program Prioritization Opportunity** - EAB evaluated and ranked all the state-supported undergraduate majors at EWU to assess their overall value to the University, from highest to lowest. In addition to each major's Institutional Value Score, we appended to each major the total instructional cost of delivering that major (salary, benefits, administration) and the number of student credit hours taught to both students majoring in that discipline and credit hours taught to students in other majors.

This exercise allowed us to create a list of majors and their associated expense to EWU. There is a list of majors in the Appendix, ordered by Institutional Value Score from highest to lowest.

- **Institutional Value Score:** EAB completed an evaluation of each major, assigning each major an Institutional Value score, a quantitative score created by assessing each major at EWU using a prioritization rubric. (See the Prioritization Rubric section for a detailed explanation of how the rubric is constructed and applied).
- **'Value'** has a variety of different quantitative and qualitative components. Our charge was to analyze the available quantitative data on academic program performance. As a result, EAB did not attempt to assess each major's qualitative 'value' relative to the other majors in the following areas (among others): the centrality of each major to EWU's mission, the importance of particular majors to the broader community, or the role a certain major plays in the public's perception of EWU. Qualitative assessment will be completed by EWU leadership.

However, we believe that not every area of quantitative value is equally important and have assessed Student Demand as the most important indicator of the quantitative value of a program of study. Students vote with their feet, choosing a major based on their interests while non-majors also can express their interest by choosing to take classes in a field in which they do not major. As such, our prioritization rubric weights student demand more heavily.

- **Prioritization:** We believe that every program of study should be measured in a number of different ways to fully and fairly assess its contribution to the institution. While a certain area of study may score poorly in one area, i.e. - not have many students who have declared a major; that same program may score well in other areas such as drawing

students to EWU and being relatively inexpensive to teach. The prioritization rubric ranks each major against 5 critical areas:

- **Student Demand for the Program of Study:** How many student credit hours are attempted and how many students are majoring in a particular field?
- **Cost of Instruction:** How much does it cost to teach classes in this major?
- **Competitive Position of Program:** How does EWU compare to a peer-group of 10 schools in graduating students with this major?
- **Student Outcomes by Program:** What is the relative earnings power and the effectiveness of a particular major in having students earn a degree?
- **Program Attractiveness:** How effective is the program of study in drawing students to EWU and to its major?

## Academic Efficiency Opportunities

Reducing the academic affairs budget at a university can be achieved by teaching fewer total courses (consolidating students into fewer classes or removing some small classes from each year's offerings) or using existing teaching resources more intensively.

As part of our work with EWU, EAB has gathered data and completed a series of analyses to identify what, if any, existing academic efficiencies could be realized. What our analysis revealed is that EWU has three opportunities:

1. **Consolidate Underfilled Course Sections:** There are currently courses with multiple sections that are 'under-filled', meaning the section has fewer students than the course maximum. There is an opportunity to consolidate many course sections filling the remainder until they are 90% filled. Doing so will eliminate the need for some extraneous course sections.
2. **Teaching Small Classes on Alternating Years:** There are some courses (Lectures; Seminars; Lectures w/Lab; Labs; Lecture with Practice Discussion and Dialogues) with a single section that has fewer than 10 students. If the university were to only teach these small classes on alternating academic years (rather than every academic year) EWU could reduce the need for teaching capacity. (Of course, potential impact on student progress to degree might limit the ability to shift all small courses to alternating years.)
3. **Have Every Faculty Member Teach at Contractual Workload:** Many EWU faculty members teach fewer credits than the standard workload of 36 credits for Tenure/Tenure Track faculty and 45 credits for Senior Lecturers/Lecturers. While there are a variety of reasons for this, if EWU were to require every faculty member to teach at the standard load, EWU would not need to contract with adjunct faculty to teach as many courses. We estimate the maximum potential savings, recognizing that there will still be justifiable reasons for some faculty to receive a reduced load.

For an explanation of the methodology used to assess the Academic Efficiency opportunities available at EWU, see the *Detailed Explanation of How We Calculated EWU's Academic Efficiency Opportunities* section of the Appendix.

## EWU - Academic Affairs Course Offering

Course Credits	Total	Total if Teaching at Contractual 'Full-Load'	Percentage of 'Full-Load' Taught
<b>Taught in Academic Year 2019-20</b>	17,315	18,556	
• Taught by Tenure & Tenure-track Faculty	8,261	11,395	72.5%
• Taught by Senior Lecturers & Lecturers	5,341	7,161	74.6%
• Credit Taught by Other Instructional Staff	3,713	0	
<b>Savings from Replacing Other Instructional Staff with Full-time Faculty</b>			<b>\$2,785,000</b>

Academic Year 2019-20 Course Credits Taught in...	Total	Savings from NOT Offering Those Credits
• Underfilled Sections that Can be Collapsed	597	\$447,841
• Low-Enrollment Classes that Could be Offered in Alternate Years ( <i>Savings = 50% of total opportunity as courses need to be offered once every two years</i> )	553	\$207,375
<b>Total Savings (Credits and Dollars)</b>	1,132	<b>\$655,216</b>
<b>TOTAL ACADEMIC EFFICIENCY OPPORTUNITY</b>		<b>\$3,440,216</b>

### Program Prioritization Opportunities

- While Academic Efficiency is a potential strategy for saving money in academic affairs, even a rigorous implementation of every strategy at EWU will be insufficient to reap the budget gains EWU is seeking. Therefore, EAB completed a rigorous data analysis to assign a quantitative Institutional Value Score to each undergraduate major, from highest institutional value to lowest. This data is one input that EWU leaders can use when assessing where resources might be diverted from, or directed to, in order to strengthen the overall academic portfolio array at EWU.

### Prioritization Rubric

- EAB's prioritization rubric is a quantitative scorecard, used to assess each of EWU's undergraduate programs, assigning each major an Institutional Value Score. The 81 programs are evaluated against each other, from highest scoring (10 is the highest possible score) to lowest scoring (1 is the lowest possible score). Each component of the rubric has been assigned a weighting to reflect the relative value of that component to the overall value of a major and every undergraduate major at EWU has been evaluated against the same discrete value drivers, which are grouped into five critical areas:

- Student Demand for the Program of Study:** How many student credit hours are attempted and how many students are majoring in a particular field? (**Weighting = 33.34%**)

2. **Cost of Instruction:** How much does it cost to teach classes in this major? (**Weighting = 16.67%**)
3. **Competitive Position of Program:** How does EWU compare to a peer-group of 10 schools in graduating students with this major? (**Weighting = 16.66%**)
4. **Student Outcomes by Program:** What is the relative earnings power and the effectiveness of a particular major in having students earn a degree? (**Weighting = 16.67%**)
5. **Program Attractiveness:** How effective is the program of study in drawing students to EWU and to its major? (**Weighting = 16.66%**)

### EWU Major Prioritization Rubric

Metric	Detailed Data Description		Data Source	Data Use
Student Demand for Program  <b>33.34%</b>	Majors  16.67%	Number of Majors 8.34%	APS* Program Tab	Majors ranked from most students to least
		% Change in Number of Majors 8.33%	APS Program Tab	Majors ranked by percentage growth from Fall 2015-16 to Fall 2019-20
	Student Credit Hours Attempted  16.67%	Total Number of SCH Attempted 8.34%	APS Data	Majors ranked from most Student Credit Hours (SCH) attempted to least
		% Change in Number of SCH Attempted  8.33%	APS Data	Growth in SCH by Major, ranked by percentage growth from academic year 2015-16 to 2019-20
Cost of Instruction  <b>16.67%</b>	Cost Per SCH Attempted		APS Program Tab, Costs Tab	Majors ranked from most expensive to least expensive in 2018-19
Competitive Position  <b>16.66%</b>	Relative Position in Number of Degrees Conferred by Major Among Peer Group  8.33%		US Dept of Education 2-digit Classification of Instructional Programs (CIP) Codes; Data for academic year 2017-18	Majors ranked by number of degrees conferred relative to 10 school peer group from programs first among 10 to those tenth among 10
	Relative Growth in Number of Degrees Conferred by Major Among Peer Group 8.33%		US Dept of Education 2-digit Classification of Instructional Programs (CIP) Codes; Data for change from academic year 2012-13 to 2017-18	Majors ranked by change in number of degrees conferred relative to 10 school peer group with the school having the largest increase ranked first and the smallest increase last

Student Outcomes per major  <b>16.67%</b>	Earnings for Graduates with each Major  8.34%	WA State Education Research & Data Center data on EWU graduates' earnings by 2-digit CIP code. <i>Data as of 2017 and does <b>NOT</b> include grads who are: employed outside of WA, unemployed or self-employed or worked less than 4-quarters of last year, made less than \$14,000 per year.</i>	Ranking of median earnings of graduates, by major, 9-years after receiving their degree from EWU, 2017
	Attrition Rate (Left EWU) of Declared Majors  8.33%	Navigate	Ranking of each major based on student attrition from lowest to highest. Attrition measured by adding up total students in a major in Fall 2016 and tracking their progress. Attrition equals those students in Fall 2020 (regardless of their major at that time) who are <b>no longer at EWU and did not graduate</b> . Attrition rate is determined by dividing students in each major that left EWU by total students in that major in Fall 2016.
Program Attractiveness  <b>16.66%</b>	Interest Declared in a Major During Application for Those that Enroll  8.33%	Data from EWU	Majors ranked by number of incoming first year students expressing interest in a major, largest number to lowest
	Number of Current Students with an Undeclared Major who have Expressed Interest in a Particular Major  8.33%	Data in APS	Majors ranked by number of current students with an undeclared major expressing interest in a major, largest number to lowest

\*APS – Academic Performance Solution – an EAB technology platform that aggregates and assess student demand, faculty workload, course costs, etc.

### Mechanics of Program Evaluation

The above table lays out the data used to assess each of the critical areas of assessment, the sources for that data and the way in which the analysis of each component was completed. All of the data above is for the academic year 2019-2020, unless otherwise noted. Points were assigned to a particular major in each areas of evaluation, based on their placement in an ordinal ranking, by decile.

- By way of illustration – In the assessment of number of Student Credit Hours (SCH), every major was listed from the program with the most SCH listed first to the program with the fewest SCH listed last. The list of majors was then broken into deciles and all the majors in the first decile (those with the most attempted SCH) received 10 points each, the majors in the second decile received 9 points each and so on, with the majors in the last decile receiving 1 point each. Every major area of study's 'score' (from 10-1) was then multiplied by the weighting for number of majors (.0833) – so all of the majors in the top decile each received .833 points (10 X .0833) and each of the majors in the last decile received .0833 points (1 X .0833).

- The same exercise was repeated for each of the areas of assessment above and all of the points that a major received in each category was then summed. The final tally gave each major an Institutional Value Score and all 85 majors were sorted by their Institutional Value Scores from the major with the highest score (Exercise Science = 8.0004) to the major with the lowest Institutional Value Score (Women's and Gender Studies = 2.3332).
- With 81 majors under evaluation, each decile was not of equal size. (Dividing 81 Majors by 10 would mean there should be 8.1 majors per decile and majors only come in whole numbers.) As such, we decided that the top scoring decile should have 9 majors and every other decile should have 8 majors.

For an explanation of the methodology used to assess each component of the prioritization rubric, see the *Detailed Explanation of How Institutional Value Scores Were Generated for EWU's Majors* section of the Appendix.

## Engagement Methodology

EAB held discussions with numerous individuals at EWU and gathered and analyzed data on EWU's academic offerings to create our estimates of potential savings from both Academic Efficiency and Program Prioritization efforts.

- **Discussions:** EWU Administrative Leaders including the Interim President, Interim Provost, AVP Undergraduate Policy and Planning, VP Business and Finance, Chief Financial Officer, Incoming Provost, Head of Enrollment and Senior Budget Officer. We held conversations with the Head of the Faculty Senate, the Leadership Faculty Union, the Executive Committee of the Faculty Senate, the Past 3 Presidents of the Faculty Senate, EWU's Academic Deans and the Executive Director of EWU's Institute of Public Policy and Economic Analysis.
- **Presentations:** EAB held two separate 90-minute presentation and question and answer sessions, one with the Faculty Senate and one with the EWU Board of Trustees to explain this engagement and provide transparency into the process.
- **Data Sources:** EAB relied on a variety of data sources to collect information about each of the departments and majors at EWU. In particular, we accessed the Academic Performance Solutions system which houses information on EWU's academic portfolio including students, their course of study, faculty members and their workload, etc. We relied on data from EWU's financial systems to determine departmental expenses, and we accessed external data sources included the US Dept of Education and Washington State's ERDC database. All of this data was aggregated and analyzed to determine each major's Institutional Value Score and the associated expense of delivering that coursework to students.
- See the Appendix for a detailed list of the supporting files and documents used as part of our analysis and review.

# Appendix

## Supporting Documents

In addition to this report, there are various data files and documents that should be reviewed and considered as part of this analysis.

- **EWU Majors-Institutional Value Scores-FINAL (Excel File)** – This document contains the data and information collected and analyzed as part of the Program Prioritization Analysis. Each tab has different data elements and the aggregation and calculation of final scores is found in the tab titled “Major Ranking Data”.
- **EWU Undergraduate Majors Analyzed-FINAL (Excel File)** – This document contains a full list of the undergraduate majors at EWU and details how we arrived at the final list of 81 majors analyzed in this report. Some majors were combined, some majors were excluded and the instances where that has happened are highlighted and documented.
- **EWU – Tripwire Analysis – 5.1.20 (Excel File)** – This document contains data collected by EWU staff on EWU’s various academic programs to assess program health. The various tabs contain program-specific information for academic years 2016-17, 2017-18 and 2018-19 and aggregates student credit hours taught, number of students, degrees awarded, costs and other information. Departmental expenses and workload data from this document was used to disaggregate departmental-level data to major-level data for the Institutional Value Score analysis.
- **Course Capacity Opportunity Assessment-FINAL (Excel File)** – This document contains data on courses taught at EWU in academic year 2019-20, detailing the number of sections of each course, the credits awarded and the number of students in each class.
  - The tab titled “Underfilled Section Efficiency” identifies those classes with multiple sections that are below the maximum capacity and models out the number of sections that could be eliminated if all sections were filled to 90% of maximum.
  - The tab titled “Small Class Efficiency” identifies those classes with a single section that have fewer than 10 students.
- **Faculty Workload Opportunity Assessment-FINAL (Excel File)** – This document contains data detailing faculty teaching loads in academic year 2019-20. This data was aggregated for all faculty members (Tenured, Tenure-Track, Senior Lecturers and Lecturers), compared to the contractual workload for these faculty members. The Tab titled “Total Dept. Credits & Savings’ models out the Total Savings Opportunity from moving faculty members closer to contracted workload.

## Majors Evaluated in the Program Prioritization Analysis

	Department	Major Name	Institutional Value Score - TOTAL	SAVINGS Eliminating Major (\$) <i>(Continuing to Teach Service SCH)</i>	TOTAL Major Expense (\$) FY 2019
1	Wellness and Movement Sciences	Exercise Science	8.0004	799,100	1,278,977
2	Sociology & Criminal Justice	Criminal Justice	7.917	222,026	358,055
3	Communication Studies	Communication Studies	7.6671	703,206	1,252,496
4	Biology	Biology	7.5834	1,363,436	2,270,824
5	Engineering and Design	Mechanical Engineering	7.5005	1,174,503	1,350,324
6	Computer Science	Computer Science	7.3338	1,394,609	1,897,804
7	Psychology	Psychology	7.2503	603,136	1,021,691
8	Engineering and Design	Construction Mgmt Tech	7.2497	202,212	232,483
9	Mathematics	Mathematics Education	7.1671	553,131	1,676,904
10	Engineering and Design	Manufacturing Technology	7.1665	264,091	303,625
11	English	English Education	7.0836	340,306	483,582
12	Political Sci & Intl Affairs	Political Science	6.9169	688,094	1,176,336
13	Sociology & Criminal Justice	Sociology	6.9167	314,774	576,528
14	Engineering and Design	Mechanical Engineering Tech	6.9167	254,463	292,556
15	Accounting	Professional Accounting	6.7508	663,449	1,295,953
16	Mathematics	Mathematics	6.7508	424,172	1,285,945
17	Education	Elementary Education	6.6662	855,235	1,111,052
18	Chemistry/Biochem & Physics	Chemistry/Biochemistry	6.5837	801,214	2,236,480
19	English	Journalism	6.5833	131,941	187,491
20	Psychology	Applied Developmental Psych	6.4172	493,776	836,439
21	Program/Addiction Studies	Addiction Studies	6.4168	196,822	281,432
22	Engineering and Design	Electrical Engineering	6.2504	394,417	453,460

	<b>Department</b>	<b>Major Name</b>	<b>Institutional Value Score - TOTAL</b>	<b>SAVINGS Eliminating Major (\$)</b> <i>(Continuing to Teach Service SCH)</i>	<b>TOTAL Major Expense (\$)</b> <b>FY 2019</b>
23	Dental Hygiene	Dental Hygiene	6.2499	1,096,656	1,400,639
24	Mod. Languages, Lit. & Phil.	English as a Second Language	6.2492	65,518	166,280
25	Mathematics	Mathematics/Middle Level	6.1667	128,262	388,847
26	Wellness and Movement Sciences	Combined Health and Fitness with Health and Physical Education	6.0838	299,772	479,792
27	Inform Systems & Bus Analytics	Business Analytics	5.9994	69,218	158,382
28	Management	Management	5.9173	813,818	1,068,339
29	Geography and Anthropology	Urban and Regional Planning	5.9169	464,774	532,888
30	Biology	Environmental Science	5.9168	149,912	249,681
31	Engineering and Design	Applied Technology	5.9161	9,916	11,400
32	Finance & Marketing	Marketing	5.8338	145,483	612,836
33	Engineering and Design	Design	5.8333	677,854	779,327
34	School of Social Work	Social Work	5.8332	1,884,484	2,757,336
35	Program/Children's Studies	Children's Studies	5.8331	217,411	266,306
36	Theatre & Film	Film	5.8328	311,286	444,339
37	Mod. Languages, Lit. & Phil.	Spanish	5.7504	308,199	782,189
38	English	English	5.7503	276,498	392,910
39	Education	Early Childhood Education	5.7494	446,880	580,550
40	Geography and Anthropology	Anthropology	5.5838	174,799	488,558
41	History	History	5.5833	354,129	770,637
42	English	Technical Communication	5.4999	117,093	166,392
43	Chemistry/Biochem & Physics	Chemistry/Biochem Education	5.4993	57,230	159,749
44	Inform Systems & Bus Analytics	Management Information Systems	5.4173	309,013	707,077
45	Finance & Marketing	Finance	5.4171	102,187	430,455

	<b>Department</b>	<b>Major Name</b>	<b>Institutional Value Score - TOTAL</b>	<b>SAVINGS Eliminating Major (\$)</b> <i>(Continuing to Teach Service SCH)</i>	<b>TOTAL Major Expense (\$)</b> <b>FY 2019</b>
46	Geography and Anthropology	Geography	5.4169	210,421	562,609
47	Political Sci & Intl Affairs	International Affairs	5.3333	148,378	253,661
48	Education	Literacy, Reading & Writing	5.3329	416,060	540,512
49	Economics	Economics	5.2502	483,454	1,457,067
50	Management	Entrepreneurship	5.0832	108,081	141,883
51	Engineering and Design	Technology	5.0007	491,737	565,349
52	Wellness and Movement Sciences	Outdoor Recreation	5.0004	119,494	191,253
53	Wellness and Movement Sciences	Therapeutic Recreation	4.917	91,918	147,118
54	Music	Music: Instrument, Choral, Gen	4.9163	573,073	947,166
55	History	Social Studies Education	4.8337	226,020	491,852
56	Management	Human Resource Management	4.8331	151,843	199,332
57	Wellness and Movement Sciences	Recreation & Tourism Mgmt	4.7506	133,282	213,320
58	Chemistry/Biochem & Physics	Physics	4.7501	139,328	388,916
59	Mod. Languages, Lit. & Phil.	Philosophy	4.7501	160,637	535,508
60	Inform Systems & Bus Analytics	Data Analytics	4.6671	155,740	356,360
61	Management	International Business	4.6664	67,696	88,868
62	Art	Studio Art	4.6663	372,395	832,870
63	Music	Music	4.6662	547,603	905,070
64	Chemistry/Biochem & Physics	Physics Education	4.666	9,952	27,780
65	Mod. Languages, Lit. & Phil.	Spanish Education	4.583	64,507	163,714
66	Geology	Earth & Space Science Secondary	4.5828	85,623	219,941
67	English	Humanities	4.5005	44,413	63,112
68	Geology	Geology	4.417	293,563	754,084

	<b>Department</b>	<b>Major Name</b>	<b>Institutional Value Score - TOTAL</b>	<b>SAVINGS Eliminating Major (\$)</b> <i>(Continuing to Teach Service SCH)</i>	<b>TOTAL Major Expense (\$)</b> <b>FY 2019</b>
69	Education	Special Ed & Elem Endorsement	4.4164	335,306	435,602
70	Theatre & Film	Theatre	4.4163	186,330	370,832
71	Art	Visual Arts Education	4.2492	88,199	197,259
72	Biology	Biology Education	4.1662	54,537	90,833
73	Biology	Natural Science Education	4.1661	29,748	49,545
74	Art	Art History	4.0824	81,865	183,093
75	Program/Health Serv Admin	Health Services Administration	4.0002	246,726	246,726
76	Computer Science	Computer Information Systems	3.9168	4,876	6,636
77	Education	Educational Studies	3.8325	15,410	20,019
78	Program/Health Serv Admin	Health Informatics Tech & Mgmt	3.6663	29,710	29,710
79	Music	Musical Theatre	3.4157	12,735	21,048
80	Education	Business & Marketing Education	2.8329	31,063	130,852
81	Program/Women's & Gndr Studies	Women's and Gender Studies	2.3332	169,378	444,123

## Detailed Explanation of How Institutional Value Scores Were Generated for EWU's Majors

The following contains an explanation of the sources and methodologies used to produce the data to populate the Prioritization Rubric and assign an institutional value score to each EWU major analyzed as part of the Financial Sustainability Engagement.

### Number of Majors:

- This data indicates the number of students who officially declared each major in the Fall Quarter/Semester of 2019. This data comes from the Tripwire document Eastern Washington University shared with EAB. When majors were consolidated for this analysis (e.g., EAB collapsed the Bachelor of Science, Bachelor of Computer Science, and Bachelor of Arts in Computer Science into a single Computer Science major) EAB combined the number of declared majors for each original major for the new consolidated major. The analyzed majors that are the result of combining multiple majors are identified in the spreadsheet Majors to be Included in Prioritization.

### **Percent Change in Number of Majors:**

- This data indicates the percent change in the number of students who officially declared each major from the Fall Quarter/Semester of 2015 to the Fall Quarter/Semester of 2019. This data comes from the Tripwire document Eastern Washington University shared with EAB. When majors were consolidated for this analysis EAB combined the number of declared majors for each original major for the new consolidated major in both Fall 2015 and Fall 2019 and calculated the percent change. If any analyzed major had no declared majors in the Fall Quarter/Semester of 2015-2016 but did have declared majors in subsequent terms, EAB calculated the percent change in majors based on the number of majors in the first term after Fall 2015-2016 for which data was available.

### **Number of SCH Produced in Associated Major Prefix:**

- EAB used data from the APS platform on the number of student credit hours (SCH) attempted in the 2019-2020 academic year at the 100, 200, 300, and 400 level for each course prefix. EAB matched each course prefix with its associated department and matched each course prefix with its associated, analyzed major where possible. EAB used the proportion of students enrolled in each major in each department in Fall 2019 to allocate proportionally all SCH taught in the department at the 100 and 200 level across all the department's majors.
- When a course prefix matched to one analyzed major, EAB attributed all 300 and 400 level SCH associated with that course prefix to the major. When a course prefix matches to more than one analyzed major, EAB used the proportion of students enrolled in each major associated with that course prefix to proportionally allocate the 300 and 400 level SCH associated with that course prefix across the majors associated with that course prefix.
- When a course prefix in a department did not match to any analyzed major, EAB proportionally allocated the 300 and 400 level SCH associated with that course prefix across all the majors in the department based on the proportion of students in the department enrolled in each major.
- For the majors in the department of Mod. Languages, Lit. & Phil., EAB allocated all SCH at any level associated with the course prefix for each analyzed major directly to that major, and did not proportionally allocate any SCH associated with another course prefix to an analyzed major.

### **Percent Change in Number of SCH in Associated Major Prefix:**

- In addition to collecting data on the number of SCH attempted at the 100, 200, 300, and 400 level in 2019-2020 for each course prefix, EAB collected data on the number of SCH attempted at these levels in the 2015-2016 academic year for each course prefix. Similar to the procedure for allocating SCH to each major for the 2019-2020 year, EAB used the proportion of students enrolled in each major in each department in Fall 2019 to allocate proportionally all SCH taught in the department at the 100 and 200 level in 2015-2016 across all the department's majors. When a course prefix matches to one analyzed major, EAB attributed all 300 and 400 level SCH associated with that course prefix in 2015-2016 to the major. When a course prefix matches to more than one analyzed major, EAB used the proportion of students enrolled in each major associated with that course prefix to proportionally allocate the 300 and 400 level SCH associated with that course prefix across the majors associated with that course prefix. When a course prefix in a department does not match to any analyzed major, EAB proportionally allocated the 300 and 400 level SCH associated with that course prefix across all the majors in the department based on the proportion of students in the department enrolled in each major. For the majors in the department of Mod. Languages, Lit. &

Phil., EAB allocated all SCH at any level associated with the course prefix for each analyzed major directly to that major and did not proportionally allocate any SCH associated with another course prefix to an analyzed major. EAB used these numbers to calculate the percent change in attempted SCH per major from 2015-2016 to 2019-2020.

#### **Cost per Student Credit Hour Produced:**

- This represents the cost to produce a single student credit hour (SCH) in the department that houses each of the analyzed program as of the 2018-2019 academic year. When any department houses more than one major, the overall department's cost per SCH is assigned to each major within that department.

#### **Relative Position in Number of Degrees Conferred by Major Among Peer Group:**

- EAB assigned each EWU major to a 2-digit Classification of Instructional Programs (CIP) code. Using the list of nine identified competitors Eastern Washington University provided (listed above), EAB identified the number of bachelor's-level degree completions reported under each 2-digit CIP code by Eastern Washington University and each of its competitors in the 2016-2017 and 2017-2018 years. EAB averaged the number of completions each institution reported across those two years. The relative position denotes where Eastern Washington University ranks among its 10-institution peer group in terms of total number of degree conferrals. A smaller fraction indicates a higher number of completions compared to competitors (e.g., 1/10 indicates Eastern Washington University reported the most completions of the 10 analyzed institutions). A larger fraction indicates a lower number of completions compared to competitors (e.g., 9/10 indicates Eastern Washington University reported the ninth most completions with the relevant CIP code of the 10 analyzed institutions).
- A fraction with a denominator less than 10 indicates either that not all the competitor institutions report completions with the relevant CIP code (e.g., 7/9 indicates Eastern Washington University reports the seventh most completions of the nine analyzed institutions that report completions) OR that the fraction is simplified (e.g., 8/10 could simplify to 4/5). Fractions that simplify are indicated on the Salary and Competitive Position tab of EWU Majors-Institutional Value Scores-FINAL spreadsheet.
- **10-Institution Peer Group:** Eastern Washington University, Washington State University, Western Washington University, University of Washington, Whitworth College, Central Washington University, University of Washington – Tacoma, University of Idaho, Portland State University, and Gonzaga University.

#### **Relative Growth in Number of Degrees Conferred by Major Among Peer Group:**

- EAB assigned each major to a 2-digit Classification of Instructional Programs (CIP) code. Using the list of identified competitors Eastern Washington University provided (listed below), EAB identified the number of bachelor's-level degree completions reported under each 2-digit CIP code by Eastern Washington University and each of its competitors in the in the 2012-2013 and 2017-2018 academic years. The relative growth indicates how the growth in the number of completions reported by Eastern Washington University compares to the growth in the number of completions reported by its identified competitors. A smaller fraction indicates higher total growth in number of completions (e.g., 1/10 indicates the total number of completions Eastern Washington University reported increased more than the completions at any of the 10 analyzed institutions). A larger fraction

indicates lower growth than the growth at competitor institutions (e.g., 9/10 indicates Eastern Washington University's reported completions increased the ninth most of the 10 analyzed institutions).

- A fraction with a denominator less than 10 indicates either that not all the competitor institutions report completions with the relevant CIP code (e.g., 7/9 indicates Eastern Washington University's reported completions increased the seventh most of the nine analyzed institutions that report completions) OR that the fraction is simplified (e.g., 8/10 could simplify to 4/5). Fractions that simplify are indicated on the Salary and Competitive Position tab of EWU Majors-Institutional Value Scores-FINAL spreadsheet.

### **Earnings For Graduates with Each Major:**

- EAB assigned each major to a 2-digit Classification of Instructional Programs (CIP) code. EAB consulted the State of Washington's [Education Research & Data Center](#) (ERDC) to get data on the median earnings of graduates of bachelor's-level programs associated with each CIP code from Eastern Washington University nine years after graduation.
- For some CIP codes, Washington State's Education Research & Data Center does not provide data on graduate earnings nine years after graduation for Eastern Washington University graduates, but instead provides data for a period of years less than nine years. The ERDC provides data on median earnings overall for graduates with a bachelor's-level degree in the state of Washington nine years after graduation. When data on median earnings nine years after graduation for the appropriate CIP code was not available for Eastern Washington University graduates, EAB calculated the percent difference for that CIP code between the median earnings of bachelor's-level Eastern Washington University graduates and the median earnings of bachelor's-level graduates overall statewide in the last year in which data was available on Eastern Washington University graduates. EAB then calculated the estimated median earnings for bachelor's-level Eastern Washington University graduates nine years after graduation based on the overall statewide median earnings for bachelor's degree holders nine years after graduation and the percent difference between the median earnings for Eastern Washington University graduates and the median earnings for overall statewide bachelor's degree holders for the relevant CIP code in the last year for which data on Eastern Washington University graduates was available.
- Majors for which EAB had to calculate an estimated median earning for bachelor's-level graduates nine years after graduation are indicated on the Salary and Competitive Position tab of EWU Majors-Institutional Value Scores-FINAL spreadsheet.

### **Attrition Rate of Declared Majors**

- EAB used data from Eastern Washington University's Navigate platform to identify the number of students who were enrolled and had officially declared a major in the Fall Quarter/Semester of 2016 for each analyzed major. EAB then identified the number of those students for each major who had graduated OR were still enrolled as of the Fall Quarter/Semester of 2020. From this, EAB determined the number and percent of students who had been enrolled and declared a major in the Fall Quarter/Semester of 2016 but had not graduated and were not enrolled at the University as of the Fall Quarter/Semester of 2020 for each analyzed major.
- When multiple majors were combined for this analysis, EAB combined the number of students who had officially declared a major in the Fall Quarter/Semester of 2016 and those who had not graduated and were not enrolled in the Fall Quarter/Semester of 2020 for each major that went into

the consolidated major to determine the percent of students from the Fall Quarter/Semester of 2016 who were not enrolled at the University and had not graduated as of the Fall Quarter/Semester of 2020.

### **Interest Declared in a Major During Application for Those that Enroll:**

- EAB used data provided by Eastern Washington University on the intended majors of students who applied and ultimately enrolled at the University in 2019. To the extent that a major which applicants intended to pursue matches an analyzed major, EAB attributed students who had intended to pursue a major to the corresponding available, analyzed major. When a major which applicants intended to pursue did not match well with an available major at Eastern Washington University, EAB proportionally allocated those applicants to the available, analyzed majors within the department that houses the intended major of the applicants.
- EAB used the number of declared majors in each analyzed, available major in Fall 2019 to proportionally allocate the applicants who intended to pursue an unavailable major housed in the same department. When an applicant's intended major was housed in a department different from the department that houses the available, analyzed major, EAB attributed the applicants interested in that major to the available, analyzed major.

### **Number of Current Students With an Undeclared Major, Who Have Expressed Interest in Particular Major:**

- EAB used data from the APS platform on the number of students who indicated interest in a major but had not officially declared any major at Eastern Washington University. To the extent that a major in which students indicated interest matches an analyzed major, EAB attributed students who had indicated interest in a major to the corresponding available, analyzed major. When a major in which a student declared interest did not match well with an available major at Eastern Washington University, EAB proportionally allocated those students to the available, analyzed majors within the department that houses the major of interest. EAB used the number of declared majors in each analyzed, available major in Fall 2019 to proportionally allocate the students who indicated interest in an unavailable major housed in the same department. When a major of interest was housed in a department different from the department that houses the available, analyzed major, EAB attributed the students interested in that major to the available, analyzed major even though it is housed in a department different from the one that houses the unavailable major in which students can express interest.

### **Detailed Explanation of How We Calculated EWU's Academic Efficiency Opportunities**

To identify potential cost savings from increased academic efficiency, EAB analyzed three potential sources of increased efficiency: consolidating underfilled course sections, teaching small classes on alternating years, and having every faculty member teach at least at contractual workload.

**Consolidating underfilled course sections:** EAB examined enrollment and capacity in course sections offered in the 2019-2020 academic year. To identify course sections that EWU could consolidate into fewer course sections. EAB identified course codes with more than one section offered in the 2019-2020 academic year and the average capacity per section based on the enrollment caps for each section for each course code. EAB identified the total capacity for each course code based on the enrollment caps for all sections

offered in 2019-2020. EAB also identified the total enrollment for each course code based on the enrollment in all sections offered in 2019-2020. Using these numbers, EAB identified the total excess capacity (i.e., the difference between capacity based on enrollment caps and the actual enrollment) for each course code across the 2019-2020 academic year, assuming a target enrollment per section of 90% of the enrollment cap. EAB used the average capacity per section to identify the number of whole, excess sections that could be consolidated (i.e., EAB rounded down to whole numbers the calculated number of excess sections offered). EAB identified the average number of credits per section offered in 2019-2020 for each course code.

- **Potential financial savings** from consolidating excess sections into fewer sections, was calculated by identifying the number of excess credits offered due to the excess sections offered for each course code for 2019-2020 and assigned a dollar value of \$750 per credit (average compensation to adjunct professors at EWU). The identified potential cost savings results from multiplying \$750 by the number of excess credits offered. EAB conducted this analysis for the following course types: Laboratory, Lecture, Lecture + Practice/Discussion, Lecture with Lab, Seminar and Dialogue.

**Teaching small classes in alternating years:** EAB examined enrollment in course sections for each course code offered in the 2019-2020 academic year to identify course codes for which only one section was offered in the 2019-2020 academic year, and for which enrollment in that section was equal to 10 students or fewer. EAB identified the number of credits per section offered in 2019-2020 for each of these relevant course codes.

- **Potential cost savings from teaching small classes only in alternating years**, was estimated by assigning a dollar value of \$750 per credit (average compensation to adjunct professors at EWU). EAB multiplied \$750 by the number of offered credits associated with course codes with only one section in 2019-2020 when that section had an enrollment of 10 or fewer students, to identify the cost of offering those sections in the 2019-2020 academic year. The identified potential cost savings equals half the cost of offering those sections in the 2019-2020 academic year since EWU could realize savings of only half that amount each year, on average, by offering sections for those course codes on alternating years. EAB conducted this analysis for the following course types: Laboratory, Lecture, Lecture + Practice/Discussion, Lecture with Lab, Seminar and Dialogue.

**Holding faculty member to contractual workloads:** EAB examined the number of credits each tenured, tenure track (i.e., probationary faculty), and special faculty (i.e., lecturers and senior lecturers) member taught in the 2019-2020 academic year. For tenured and tenure track faculty members, EAB calculated the difference between the contracted teaching load of 36 credits per year and the number of credits each faculty member actually taught, if they taught fewer than 36 credits in 2019-2020. For special faculty (i.e., lecturers and senior lecturers) EAB calculated the difference between the contracted teaching load of 45 credits per year and the number of credits each faculty member actually taught, if they taught fewer than 45 credits in 2019-2020. EAB included the following course types in calculating the number of credits faculty members taught for this analysis: Experimental (96's), Laboratory, Lecture, Lecture & Practice/Discussion, Lecture with Lab, Performance and Simulation, Seminar and Dialogue.

- EAB then identified the total number of credits lost due to faculty teaching below contracted load – a total of 4,954 credits (i.e., the difference between the number of credits taught by tenured, tenure track, and instructional faculty and the number of credits they could teach if all faculty teaching below contracted load taught at contracted load). If faculty taught at their Theoretical Capacity (actual workload + credits lost to workload below capacity) EWU's faculty could have taught a total of 18,556 credits, which is greater than the actual credits offered in academic year 2019-2020 of 17,315.

**Potential cost savings from faculty members teach at least at contracted workload,** was calculated by assigning a dollar value of \$750 per credit (average compensation to adjunct professors at EWU) taught by instructors other than tenure, tenure track, senior lecturers or lecturers – a total of 3,713 credits. The existing faculty at EWU has the capacity to teach these credits as the total of 4,954 credits lost to faculty teaching below contracted load is below the number taught by other instructors.