255 Capitol Street NE, Salem, OR 97310
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Docket Item:

University Program Approval: Western Oregon University, Bachelor of Science (B.S.) in Economics and Mathematics

Summary:

Western Oregon University proposes a new degree program leading to a B.S. in Economics and Mathematics. The statewide Provosts' Council has unanimously recommended approval. Higher Education Coordinating Commission (HECC) staff completed a review of the proposed program. After analysis, HECC staff recommends approval of the program as proposed.

Staff Recommendation:

The HECC recommends the adoption of the following resolution:

> RESOLVED, that the Higher Education Coordinating Commission approve the following program: B.S. in Economics and Mathematics at Western Oregon University

Proposal for a New Academic Program

Institution:	Western Oregon University
College/School:	College of Liberal Arts and Sciences
Department/Program Name:	Economics and Mathematics
Degree and Program Title:	Economics and Mathematics Major

1. Program Description

a. Proposed Classification of Instructional Programs (CIP) number.

30.4901: Application of mathematical methods to the development of economic theory, models, and quantitative analysis

Definition: A program that is a structured combination of economics and mathematics courses. Includes instruction in independently designed, individualized, or regular programs.

b. Brief overview (1-2 paragraphs) of the proposed program, including its disciplinary foundations and connections; program objectives; programmatic focus; degree, certificate, minor, and concentrations offered.

The Economics & Mathematics program provides students with an opportunity to acquire a solid foundation in both fields during their undergraduate studies. This program combines the quantitative methods of mathematics with an applied science in order to solve real world problems. The skills and knowledge acquired by students in this program are increasingly vital in the ever increasing importance of the service sector in the current economy. Students in this major not only gain valuable skills but also study a fascinating set of ideas that will help them with a career in the changing job market.

c. Course of study – proposed curriculum, including course numbers, titles, and credit hours.

The Economics & Mathematics program is a self-contained 90-credit degree completion program. To reach a total of 90 credits, students will be advised on choosing an additional 18 credits. Students placing into MTH 111 will take MTH 111 & MTH 112 as prerequisites for the major, accounting for 8 of these 18 credits. The remaining credits should be upper division and can be from an optional minor and/or courses in EC, MTH,

CS, IS, GIS (ES 341, 342, or GEOG 341), COM, WR or other disciplines suggested by an advisor.

Curriculum

The curriculum is comprised of three elements: Economic courses, Mathematics courses, and Electives.

Economics (24 cr)

- EC 201 Introduction to Microeconomics Credits: 4
- EC 202 Introduction to Macroeconomics Credits: 4
- EC 311 Intermediate Microeconomics I Credits: 4
- EC 312 Intermediate Microeconomics II Credits: 4
- EC 313 Intermediate Macroeconomics Credits: 4
- EC 315 Econometric Analysis and Report Writing Credits: 4

Economics Electives (8 cr)

Approved upper division economics electives Credits: 8

Mathematics (28 cr)

- MTH 251 Calculus I Credits: 4
- MTH 252 Calculus II Credits: 4
- MTH 254 Multivariate Calculus Credits: 4
- MTH 280 Introduction to Proof Credits: 4
- MTH 341 Linear Algebra I Credits: 4
- MTH 365 Mathematical Probability Credits: 4
- MTH 366 Mathematical Statistics Credits: 4

Mathematics Electives (8 cr)

- MTH 314 Differential Equations Credits: 4
- MTH 351 Introduction to Numerical Analysis Credits: 4
- MTH 354 Applied Discrete Mathematics Credits: 4
- MTH 358 Mathematical Modeling Credits: 4
- MTH 363 Operations Research Credits: 4

Economics / Mathematics Capstone Project (4 cr)

- EC 413/MTH 413 Economics and Mathematics Capstone I Credits: 2
- EC 414/MTH 414 Economics and Mathematics Capstone II Credits: 2

Total Credits: 72

Economics - Mathematics credit breakdown

		Credits		Credits		Credits	TOTAL
Lower division	EC	8	MTH	16	EC/MTH	0	24
Upper division	EC	24	MTH	20	EC/MTH	4	48

Economics - Mathematics 90-credit program pathway

- Placing in MTH 111: MTH 111 (4) + MTH 112 (4) + free electives (10) + major core (72) = 90
- Placing in MTH 112: MTH 112 (4) + free electives (14) + major core (72) = 90
- Placing in MTH 251: Free electives (18) + major core (72) = 90

Students will work closely with advisors to plan an academic program that includes sufficient upper division coursework to enable them to complete 60 upper division credits within the 90-credit program. The university has inventoried upper division course work at WOU, and identified over 300 courses that are taught at the upper division and have one or no course prerequisites. In general these courses are more specialized in focus than lower division courses but are accessible to students with disciplinary tools developed in the course. To satisfy the 60 upper division credits graduation requirements, students placing into MTH 111 will need to include four upper division credits from their 30 free elective credits. Those placing into MTH 112 or higher will complete the 60 upper division credits within the program.
Faculty will propose specific course offerings so that students in the Economic & Mathematics program are equipped with supplementary courses such as computer science and information systems. These supplementary courses will provide additional skills for students in that program to be successful in multifaceted job requirements.

d. Manner in which the program will be delivered, including program location (if offered outside of the main campus), course scheduling, and the use of technology (for both on-campus and off-campus delivery).

Students will be able to enroll in any WOU courses for which they have the prerequisites, and so may take courses on WOU's main campus in Monmouth or at the campus in Salem. Whenever possible, we will offer courses in flexible formats. The program will draw on WOU's learning management system (Moodle) for all flexible format course delivery (including face-to-face), including instructional and curriculum design support from WOU's Center for Academic Innovation. Access to specialized software, such as SPSS, Matlab and R/RStudio, is managed by University Computing Solutions.

e. Adequacy and quality of faculty delivering the program.

This program takes advantage of established programs at WOU. The Economics and Mathematics courses in the Economics and Mathematics BS degree are existing courses that are taught as part of the General Education program, the Economics and Mathematics curriculum at WOU. WOU also has highly qualified faculty teaching in a range of disciplines that will contribute to this program.

f. Adequacy of faculty resources – full-time, part-time, adjunct.

This program will require the development of two new courses: EC/MTH 413 and EC/MTH 414. These cross-listed capstone courses will be supervised by the Mathematics and/or Economics Departments faculty. They will be taken by the seniors in the program over two-terms. WOU's faculty have sufficient capacity and expertise to deliver these courses as needed. All of the other courses in the dual program are offered regularly by the Economics Department and the Mathematics Department.

g. Other staff.

No new staff is needed, the Business Division and Mathematics Department office staff will both work with the new program.

h. Adequacy of facilities, library, and other resources.

WOU already has the facilities, library, and other resources in place to support the courses offered by WOU.

i. Anticipated start date.

Pending approval by HECC and NWCCU, we anticipate beginning this program in Fall 2021.

2. Relationship to Mission and Goals

a. Manner in which the proposed program supports the institution's mission, signature areas of focus, and strategic priorities.

Western Oregon University's mission is "To create lasting opportunities for student success through transformative education and personalized support". WOU is distinguished by its student-centeredness, a personalized approach to education, a strong liberal education and the high value it places on its role as an access institution in Oregon. Our strategic plan calls for the university to:

- Strengthen programs that support graduates' career, professional, and graduate school preparedness (1.1.3)
- Provide intentional and effective paths to graduation within 180 credits (I.2.1)
- Promote academic array that provides distinctive, high-quality programs (II.4.1)
- Improve access to coursework for degrees, programs and certificates (I.2.3)
- Promote interdisciplinary courses and degree programs that support collaborative and multidimensional educational experiences and pathways (II.1.4)

The proposed BS degree in Economics and Mathematics embodies WOU's mission, values, and strategic plan in that it creates a clear educational pathway that combines quantitative methods of mathematics with the economic discipline in order to solve real world problems. Coupled with the fundamental skills of a liberal arts degree, such as communication, quantitative literacy skills, and critical thinking, this will prepare students to immediately enter into a range of careers upon graduation.

b. Manner in which the proposed program contributes to institutional and statewide goals for student access and diversity, quality learning, research, knowledge creation and innovation, and economic and cultural support of Oregon and its communities.

One of the state's goals is to increase the number of students earning 4-year degrees. Creating a clear pathway to a career-focused baccalaureate degree will help achieve that goal. Likewise, one of the stated educational goals for the Oregon STEM Investment Council, established in 2013 by HB 2636, is to double the number of students who earn a postsecondary degree requiring proficiency in science, technology, engineering, or mathematics. Students interested in economics will have the option to develop these skills as part of the combined major.

c. Manner in which the program meets regional or statewide needs and enhances the state's capacity to:

i. improve educational attainment in the region and state;

One of the state's goals is to increase the number of students earning 4-year degrees. Creating a clear pathway to a career-focused baccalaureate degree will help achieve that goal. Additionally, according to the U. S. Bureau of Labor Statistics, there are twenty occupations that require a bachelor's degree for entry-level positions and have faster than average projected job growth. Six of these are relevant to graduates of our program.

ii. respond effectively to social, economic, and environmental challenges and opportunities;

Document (5) ranks the top high-wage, high-demand occupations that are considered to be priorities in terms of job training by the Oregon Employment Department. Excluding health care, occupational classifications that might be destinations for our undergraduates include: financial managers, accountants and auditors, marketing and sales managers, cost estimators, and operations researchers.

iii. address civic and cultural demands of citizenship.

This degree provides students the opportunity to earn a degree that includes a broad-based liberal education, which will give them skills such as problem solving skills, critical thinking skills, quantitative literacy skills, and communication skills which are essential in order for citizens to contribute constructively to society. Additionally, understanding the underlying financial and economic challenges requires learning about socio-economic disparities, roots of poverty and related concerns. A healthy and responsible global society needs citizens who are well-versed in these valuable concepts.

3. Accreditation

Economics and Mathematics Program is not a field in which accreditation is available.

a. *Accrediting body or professional society that has established standards in the area in which the program lies, if applicable.*

b. *Ability of the program to meet professional accreditation standards. If the program does not or cannot meet those standards, the proposal should identify the area(s) in which it is deficient and indicate steps needed to qualify the program for accreditation and date by which it would be expected to be fully accredited.*

c. *If the proposed program is a graduate program in which the institution offers an undergraduate program, proposal should identify whether or not the undergraduate program is accredited and, if not, what would be required to qualify it for accreditation.*

d. *If accreditation is a goal, the proposal should identify the steps being taken to achieve accreditation. If the program is not seeking accreditation, the proposal should indicate why it is not.*

4. Need

a. Anticipated fall term headcount and FTE enrollment over each of the next five years.

	Headcount projections, first 5 years of program					
	2021-22	2022-23	2023-24	2024-25	2025-26	
Cohort 1 (21-22)	4.00	4.00	3.00	2.00	0.00	
Cohort 2 (22-23)	0.00	4.00	4.00	3.00	2.00	
Cohort 3 (23-24)	0.00	0.00	4.00	4.00	3.00	
Cohort 4 (24-25)	0.00	0.00	0.00	4.00	4.00	
Cohort 5 (25-26)	0.00	0.00	0.00	0.00	4.00	
Total	4.00	8.00	11.00	13.00	13.00	

Projections are based on current enrollments in the Economics and Mathematics Departments and projected job growth in related career paths.

	FTE projections (Average of 12 credits per term), first five years of the program					
	2021-22	2022-23	2023-24	2024-25	2025-26	
Cohort 1 (21-22)	6.07	6.07	4.67	3.27	1.40	
Cohort 2 (22-23)	0.00	9.33	9.33	7.00	4.67	
Cohort 3 (23-24)	0.00	0.00	14.00	14.00	10.27	
Cohort 4 (24-25)	0.00	0.00	0.00	14.00	14.00	
Cohort 5 (25-26)	0.00	0.00	0.00	0.00	14.00	
Total	6.07	15.40	28.00	38.26	44.33	

We assume that students will attend full-time.

b. Expected degrees/certificates produced over the next five years.

	Graduate projections, first 5 years of the program					
	2021-22	2022-23	2023-24	2024-25	2025-26	
Cohort 1 (21-22)	0.00	1.00	1.00	2.00	0.00	
Cohort 2 (22-23)	0.00	0.00	1.00	1.00	2.00	
Cohort 3 (23-24)	0.00	0.00	0.00	1.00	1.00	
Cohort 4 (24-25)	0.00	0.00	0.00	0.00	1.00	
Cohort 5 (25-26)	0.00	0.00	0.00	0.00	0.00	
Total	0.00	1.00	2.00	4.00	4.00	

c.* Characteristics of students to be served (resident/nonresident/international; traditional/nontraditional; full-time/part-time, etc.*)

We expect the characteristics of students in this major to reflect the overall population of WOU students pursuing a bachelor's degree. The STEM designation may increase the number of international students.

d. **Evidence of market demand.**

The Brookings Institution's Hamilton Project (1) notes "[m]ajors that emphasize quantitative skills tend to have graduates with the highest lifetime earnings. The highest-earning majors nationally are those in engineering fields, computer science, operations and logistics, physics, economics, and finance." A useful interactive chart (2) allows comparisons to be made for the lifetime earnings path between majors based on level of degree (or no degree/high school diploma). If we compare a bachelor's degree in economics to a bachelor's degree for all other majors, and a bachelor's degree in economics to a high school degree (or GED), we generate the following table:

Median Annual Earning Over Career (in 2014 dollars)

Years Since Start of Career	Bachelor's: Economics	Bachelor's: Other	High School or GED
1	$43,000	$35,000	$17,000
10	$74,000	$57,000	$30,000
20	$94,000	$71,000	$37,000
30	$89,000	$72,000	$39,000

Given the evidence from The Hamilton Project and other aforementioned sources, the potential earnings for WOU graduates in Economics and Mathematics is well above the annual earnings numbers included in HECC's WOU snapshot (3).

The State of Oregon Employment Department data on state/regional employment trends are accessible at (4). That website includes Oregon Occupational Employment Projections from 2017-2027 for over 800 occupations. WOU program graduates would be most likely to pursue careers under the job classification titles "Management,

Business and Finance" or "Professional and Related" (to Management, Business and Finance). Management, Business and Finance includes occupations such as financial managers, purchasing managers, cost estimators, logisticians, market analysts, and insurance underwriters. The Professional and Related category includes, *inter alia*, database administrators, actuaries, statisticians, and economists. These positions all require a bachelor's degree to enter the occupation. In general, these occupations are projected to have higher than average growth in Oregon.

***e.* If the program's location is shared with another similar Oregon public university program, the proposal should provide externally validated evidence of need (e.g., surveys, focus groups, documented requests, occupational/employment statistics and forecasts).**

WOU is located near Salem in the mid-Willamette Valley. The only other public university in this region is Oregon State University, and their mathematical economics option is designed for students intending to do graduate work in economics and finance. For example, it requires students to take the advanced microeconomic and macroeconomic theory courses rather than the intermediate level courses taken by most economics majors. The proposed program at WOU is designed to give graduates with a bachelor's degree the skills required for entry-level positions in a wide range of occupations. Those interested in graduate studies will take courses most appropriate for their intended graduate discipline.

***f.* Estimate the prospects for success of program graduates (employment or graduate school) and consideration of licensure, if appropriate. What are the expected career paths for students in this program?**

Some of the expected occupations for graduates of this program are actuary, budget analyst, business consultant, data analyst, financial analyst, geographic information analyst, government policy analyst, health informatics analyst, investment manager, marketing manager, operations manager, professor, risk manager. Employers include banks, consulting firms, finance companies, government agencies, insurance companies, and colleges and universities.

5. Outcomes and Quality Assessment

a. Expected learning outcomes of the program.

Students majoring in the new Economics and Mathematics major will achieve WOU's Undergraduate Learning Outcomes: Quantitative Literacy, Written Communication, Inquiry & Analysis, Integrative Learning, and Diversity. The curriculum will also help students meet WOU's General Education Learning Outcomes (GELOs) which are as follows:

- WOU GELO #1: **Intellectual Foundations and Breadth of Exposure**

Practice different and varied forms of knowledge, inquiry, and expression that frame academic and applied learning

- WOU GELO #2: **Critical thinking**

Demonstrate the ability to evaluate information and develop well-reasoned and evidence-based conclusions.

- WOU GELO #3: **Citizenship**

Articulate the challenges, responsibilities, and privileges of belonging in a complex, diverse, interconnected world.

- WOU GELO #4: **Multidisciplinary learning**

Integrate knowledge, perspectives, and strategies across disciplines to answer questions and solve problems.

In addition, the BS in Economics and Mathematics major will have the following program-specific learning outcomes. These outcomes are related to the Economics and Mathematics Programs at WOU.

1. Demonstrate the effective use of mathematical skills to solve quantitative problems from a wide array of authentic contexts. (Q)
2. Apply relevant theoretical models to explore microeconomic and macroeconomic issues (IA).
3. Demonstrate effective communications of economic and mathematical concepts. (W)

Students will achieve these outcomes through a curricular structure that ensures a balance between breadth and depth of exposure. Breadth is ensured through the general education courses students will take at WOU, as well as the required lower division Economics and Mathematics courses. The depth of exposure will occur through the upper division coursework in Economics and Mathematics students will take at WOU, as well as the two capstone courses that are required for the major.

b. Methods by which learning outcomes will be assessed and used to improve curriculum and instruction.

Since the WOU University Learning Outcomes and General Education Learning Outcomes apply to all students who are enrolled at WOU, they are assessed by university faculty committees.

Listed above are three degree-specific learning outcomes. Learning outcome #1 is aligned with the WOU Mathematics major learning outcomes, and is assessed every

three to five years by the Mathematics Department. Currently, the learning outcome is assessed using the LEAP VALUE rubric for Quantitative Literacy. Learning outcome #2 is aligned with the WOU Economics major learning outcomes, and is assessed every three to five years by the Economics Department. Currently, the learning outcome is assessed using the LEAP VALUE rubric for Inquiry and Analysis.

Learning outcome #3 is aligned with the WOU Mathematics and Economics majors learning outcomes, and is assessed every three to five years by both departments. Currently, the learning outcome is assessed using the LEAP VALUE rubric for Written Communication.

Faculty of the WOU Economics and Mathematics Departments will meet annually to review assessment findings from the previous year. Curricular adjustments, such as required courses, course-specific learning outcomes, concept delivery strategy, etc., will be discussed and considered for implementation.

c. Nature and level of research and/or scholarly work expected of program faculty; indicators of success in those areas.

Faculty in the Economics and Mathematics Departments at WOU are expected to meet the scholarly standards of their respective divisions. Faculty may demonstrate their scholarly achievement in the scholarship of discovery, application, integration and teaching & learning. All tenure-track WOU faculty are expected to maintain engagement in at least one of these modes of scholarship.

6. Program Integration and Collaboration

a. Closely related programs in this or other Oregon colleges and universities.

Reed College and Portland State University are the only institutions in Oregon to have a major combining significant elements of both economics and mathematics. The mathematics-economics major at Reed College is similar in its weighting of the two disciplines to the proposed major at WOU. The quantitative economics major at Portland State University emphasizes economics (56 credit hours in economics and 23 credit hours in math/statistics). Both Oregon State University and the University of Oregon have options within the economics major for additional coursework in mathematics.

These programs are designed for students who plan to pursue a graduate degree in economics. The proposed major at WOU is intended to serve a broader audience and gives students the flexibility to take electives in related disciplines based on their individual career plans.

b. Ways in which the program complements other similar programs in other Oregon institutions and other related programs at this institution. Proposal should identify the potential for collaboration.

The proposed program is a collaboration of the Departments of Mathematics (within the Division of Mathematics and Natural Science) and Economics (Division of Business & Economics), including instruction, advising and the capstone project. Courses required for the proposed major, with the exception of the capstone, are currently offered for the existing major and minor in the two departments.

c. If applicable, proposal should state why this program may not be collaborating with existing programs.

The individual courses in the proposed major are replicated at other Oregon institutions in their existing economics and mathematics programs.

Instructions on Budget Outline form

1. Whose viewpoint?

The Budget Outline is intended to show the budgetary impact resulting from offering the new program. This table should be completed from the viewpoint of the budgetary unit that will be responsible for the program. Determine what the budgetary unit will be doing (in terms of new or additional activities) that it is not now doing and show what these activities will cost — whether financed and staffed by shifting of assignments within the budgetary unit; reallocation of resources within the institution; special appropriation of the legislature; or gift, grant, or other funds.

2. No additional resources needed?

If the program is simply a rearrangement of courses already being offered, relying on access to library resources available for other programs, with no requirements for new or additional specialized facilities, equipment, or technology, and with no increase or decrease in students served by the budgetary unit responsible for the program, the budgetary impact would be near zero and should be so reported in the table.

3. Additional resources needed?

If FTE faculty or support staff assigned to the budgetary unit must be increased to handle an increased workload as a result of the new program (or to provide added competencies), indicate the total resources required to handle the new activities and workload (e.g., additional sections of existing courses) by specifying: (1) how much of this total figure is from reassignment within the budgetary unit (Column A), and (2) how much is from resources new to the budgetary unit (Columns B-E). Please provide line item totals in Column F.

References:

(1) Hershbein B. and M. Kearney. Major Decisions: What Graduates Earn Over Their Lifetimes. The Hamilton Project (Brookings Institution). Retrieved 7/1/19 from http://www.hamiltonproject.org/papers/major_decisions_what_graduates_earn_over_their_lifetimes

(2) The Hamilton Project (Brookings Institution). Career Earnings by College Major. Retrieved 7/2/19 from http://www.hamiltonproject.org/charts/career_earnings_by_college_major/

(3) Oregon Higher Education University Snapshot. 2017-2018 Academic Year Western Oregon University. Retrieved 7/9/19 from https://www.oregon.gov/highered/research/Documents/Snapshots/WOU-Snapshot.pdf

(4) State of Oregon Employment Department. Retrieved 7/10/19 from https://www.qualityinfo.org/pubs

(5) State of Oregon Employment Department. Oregon Careers 2019. Retrieved 7/10/19 from https://www.qualityinfo.org/documents/10182/33976/Oregon+Careers+2019?version=1.12

Summary of Prospective Program in Development
Bachelor of Science, Economics and Mathematics
Western Oregon University

Submitted to Statewide Provosts Council: January 15, 2020

Brief Description

This Economics and Mathematics program combines the quantitative methods of mathematics with an applied discipline in order to solve real world problems. The program provides students with an opportunity to acquire a solid foundation in both fields during their undergraduate studies. The skills and knowledge acquired by students in this program are increasingly vital with the ever increasing importance of the knowledge-based service sector in the current economy. Students in this major not only gain valuable skills but also study a fascinating set of ideas that will help them with a career in the changing job market. The Economics & Mathematics program is a self-contained 90-credit degree completion program. With 32 credits in Economics, 36 in Mathematics and a 4 credit capstone, students will be advised on choosing an additional 18 credits. The remaining credits should be upper division and can be from an optional minor and/or courses in EC, MTH, CS, IS, GIS (ES 341, 342, or GEOG 341), COM, WR or other disciplines suggested by an advisor.

Program Location and Modality

This program will be offered face-to-face at WOU campuses in Monmouth and/or Salem.

Anticipated Start Date

Fall 2021.

Anticipated Enrollment

1st year	2nd year	3rd year	4th year	5th year	10th year
4	8	11	13	13	20

These numbers are based on current enrollments in the Economics and Mathematics Departments and projected job growth in related career paths.

Addressing Statewide Needs & Alignment with WOU's Strategic Plans

One of the stated educational goals for the Oregon STEM Investment Council, established in 2013 by HB 2636, is to double the number of students who earn a postsecondary degree requiring proficiency in science, technology, engineering, or mathematics. Students interested in economics will have the option to develop these

skills as part of the combined major. According to The State of Oregon Employment Department data, projected job growth from 2017-2027 for Management, Business and Finance is 14.9% (from 223,717 to 257,010) and 13.2% for Professional and Related (from 329,179 to 372,668). The number of jobs for economists is estimated to rise from 239 to 272, a 13.8% increase. The estimated growth for all jobs in Oregon is 12%.

According to the Brookings Institution, graduates with majors that emphasize quantitative skills, including economics, tend to have the highest lifetime earnings. The Oregon Employment Department reports that 2019 mean salary across all occupations is $53,361. In the Professional and Related category, earnings are significantly higher in many of the possible careers for our graduates. The mean salary for economists is $88,937, buyers and purchasing managers $63,664; cost estimators $72,895; logisticians $76,714; budget analysts $76,423; and insurance underwriters $73,975. The proposed program aligns with WOU's institutional priorities, as identified in the WOU Strategic Plan to:

- Promote academic array that provides distinctive, high-quality programs
- Promote interdisciplinary courses and degree programs that support collaborative and multidimensional educational experiences and pathways

Relationship to Other Programs in Oregon

Reed College and Portland State University are the only institutions in Oregon to have a major combining significant elements of both economics and mathematics. The mathematics-economics major at Reed College is similar in its weighting of the two disciplines to the proposed major at WOU. The quantitative economics major at Portland State University emphasizes economics (56 credit hours in economics and 23 credit hours in math/statistics). Both Oregon State University and the University of Oregon have options within the economics major for additional coursework in mathematics. These programs are designed for students who plan to pursue a graduate degree in economics. The proposed major at WOU is intended to serve a broader audience and gives students the flexibility to take electives in related disciplines based on their individual career plans.

Contacts

The BS in Economics and Mathematics degree was developed by the WOU Economics and Mathematics Departments. Interested universities should contact:

1. Dr. John Leadley, Economics Department Head, Western Oregon University, leadlej@mail.wou.edu
2. Dr. Hamid Behmard, Natural Science and Mathematics Division Chair, Western Oregon University, behmarh@mail.wou.edu

Institution: Western Oregon University
Program: BS in Economics and Mathematics

Action: At the **June 4, 2020** meeting, the Statewide Provosts Council approved a new program for **Western Oregon University, BS in Economics and Mathematics** to move forward to the Oregon Higher Education Coordinating Commission for its review and approval. The **Western Oregon University** Board of Trustees approved the **BS in Economics and Mathematics** program at its **April 15, 2020** meeting.

Eastern Oregon University
Sarah Witte, provost
_X_ Approved
__Opposed
__Abstained

Oregon State University
Ed Feser, provost
_X_ Approved
__Opposed
__Abstained

Portland State University
Susan Jeffords, provost
_X_ Approved
__Opposed
__Abstained

University of Oregon
Patrick Phillips, provost
_X_ Approved
__Opposed
__Abstained

Oregon Health & Science University
Elena Andresen, interim provost
_X_ Approved
__Opposed
__Abstained

Oregon Tech
Joanna Mott, provost
_X_ Approved
__Opposed
__Abstained

Southern Oregon University
Susan Walsh, provost
_X_ Approved
__Opposed
__Abstained

Western Oregon University
Rob Winningham, provost
_X_ Approved
__Opposed
__Abstained