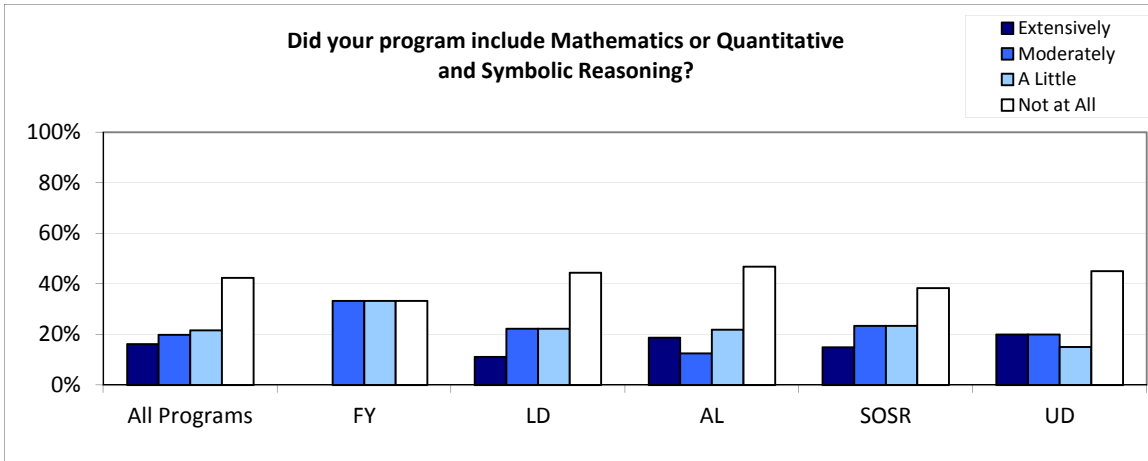


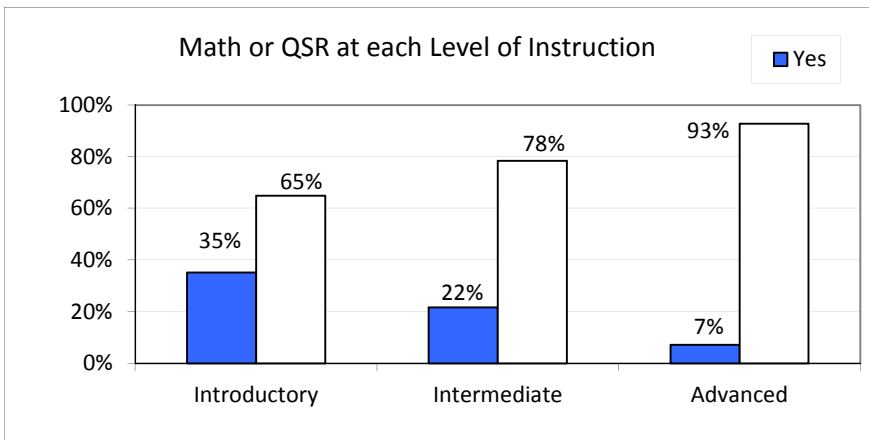
## End-of-Program Review 2014-15

### Mathematics or Quantitative and Symbolic Reasoning (QSR) in all programs

After three consecutive years of increase, the presence of mathematics or quantitative and symbolic reasoning dropped in 2014-15 from its peak of 73% in 2013-14, to 58%. The presence of mathematics or quantitative and symbolic reasoning declined in all the program levels of the curriculum.



	Extensively	Moderately	A Little	Not at All	Percent of Programs with any Math or QSR	Programs with any Math or QSR (N)	Programs responded (N)
All Programs	16.2%	19.8%	21.6%	42.3%	57.7%	64	111
First-year (FY only)	0.0%	33.3%	33.3%	33.3%	66.7%	2	3
Lower Division (LD) FY-SO	11.1%	22.2%	22.2%	44.4%	55.6%	5	9
All Level (AL) FR-SR	18.8%	12.5%	21.9%	46.9%	53.1%	17	32
Sophomore-Senior (SOSR)	14.9%	23.4%	23.4%	38.3%	61.7%	29	47
Upper Division (UD) JR-SR	20.0%	20.0%	15.0%	45.0%	55.0%	11	20



All programs with Mathematics or QSR	Program Type	Faculty	Extent	Fields/areas of Math or QSR		
				Introductory	Intermediate	Advanced
Advanced Research in Environmental Studies with A. Styring	UD	Alison Styring	Extensively		GIS	Statistics
Advanced Research in Environmental Studies with C. LeRoy	UD	Carri LeRoy	Extensively			Statistics Data interpretation
Chemistry Counts!	AL	Dharshi Bopegedera	Extensively	College algebra		
General Chemistry	AL	Lydia McKinstry	Extensively		Application of algebra, graphing, descriptions analysis/interpretations of quantitative data	
The Chemistry of Living Systems	SOSR	Paula Schofield	Extensively		Data Analysis Applied math (for chemistry)	
Undergraduate Research in Scientific Inquiry with C. Barlow	SOSR	Clyde H. Barlow	Extensively		Data analysis	
Undergraduate Research in Scientific Inquiry with A. Brabban	SOSR	Andrew Brabban	Extensively		Data analysis	
Physical Systems and Applied Mathematics	SOSR	Neil Switz, Ph.D.	Extensively		Math: Vector calculus, linear algebra, some differential equations	Math: Fourier techniques Symbolic Reasoning: Dirac Notation based approach to quantum mechanics and linear algebra
Models of Motion	AL	Rachel Hastings	Extensively	Calculus		
Structures and Strictures: Fiction, Mathematics and Philosophy	LD	Steven Hendricks	Extensively	Liberal Arts Mathematics		
Practice of Sustainable Agriculture	AL	David Muehleisen/Przybylowicz	Extensively	Descriptions/analyses/interpretations of data, spatial design problems	Algebra - fertilizer problems, irrigation calculations Descriptions/analyses/interpretations of data, spatial design problems	
The Art and Science of Sport	SOSR	Mark Harrison/ Allen Mauney	Extensively	Algebra Statistics with Excel	Descriptions/Analyses, etc. of data	
Poetry for the People: Landscapes of Community	SOSR	Suzanne Simons	Extensively		Formal Patterns of poetry	
Histories and Mysteries of English	AL	Diego de Acosta	Extensively	Linguistics (Phonology and Syntax)		
Introduction to Environmental Studies	SOSR	Gerardo Chin-Leo	Extensively	Algebra		
Washington State Legislative Internships	UD	Cheri Lucas-Jennings	Extensively		SB 5285 - Increasing the minimum hourly wage with opposition by the Assoc. of WA Business; Restaurants, and the Farm Bureau.	Budget exercises Analysis/interpretation of data for adequate support of proposed legislation
Business for Good	AL	Joe Tougas	Extensively	Statistics		
Understanding Language	UD	Diego de Acosta	Extensively			Linguistics, specifically Phonetics, Phonology and Syntax.
Environmental Analysis	SOSR	Abir Biswas	Moderately		Algebra	Statistics
Avian Monitoring and Research Methods	SOSR	Alison Styring	Moderately		Statistics	
Geopolitics, Energy, Economics and Stewardship of the Pacific Northwest	SOSR	Zoe Van Schyndel	Moderately		Quantitative and Symbolic Reasoning in economics and business	
Undergraduate Research in Scientific Inquiry with J. Neitzel	SOSR	Jim Neitzel	Moderately		Data Analysis Modeling	
Wildlife Biology: Birds and Fishes	UD	Alison Styring	Moderately	Geometry	Trigonometry	
Student-Originated Studies: Agricultural Systems	SOSR	David Muehleisen	Moderately	Algebra Spatial design		

Proteins, Plastics, and Pandemics	UD	Carolyn Prouty	Moderately	0 not checked	Epidemiology: Bio-Statistics Data analysis and interpretation	
Trees	FY	Fischer	Moderately	[Faculty did not elaborate.]		
Business: Innovation, Stewardship and Change	AL	Shaw	Moderately	Quantitative Reasoning Accounting and finance		
Bodies of Knowledge	SOSR	Donald Morisato	Moderately	Symbolic Reasoning (genetics)		
Wildlife: Conservation and Writing	UD	Impara	Moderately		Descriptions/analyses/interpretations of data	Spatial Analysis Solving spatial design problems
Psychology and Mindfulness	SOSR	Mukti Khanna	Moderately	Quantitative Reasoning for social sciences by Margeret Blanken-Biller		
Political Economy and Social Movements: Race, Class and Gender	SOSR	Peter Bohmer	Moderately	Quantitative Reasoning Social Statistics		
Small Things: Intimate Inquiries into Everyday Life	LD	Laura Citrin	Moderately	Quantitative Analysis--Statistics in Psychology		
Current Economic and Social Issues: Explanations, Actions and Solutions	LD	Peter Bohmer	Moderately	Social statistics Quantitative Reasoning		
Evolution and the Human Condition	AL	Heather Heying	Moderately		Analysis of data; hypothesis generation; logic	
Intermediate Macroeconomics	SOSR	Womeldorf	Moderately	Analysis and interpretation of data Interpretation of mathematical equations in economics	Financial Math	
River Resources	SOSR	Ken Tabbutt	Moderately		Algebra Trigonometry	GIS Economic Calculations
Multicultural Counseling: A Holistic Perspective	UD	Heesoon Jun	Moderately		Statistics Description/Analysis/interpretation of data (Psychological research)	
Forensics and Criminal Behavior	AL	Rebecca Sunderman	Moderately	Precalculus Data analyses & interpretations Geometry		
Undergraduate Research in Civic Intelligence (Research and Action Laboratory)	SOSR	Doug Schuler	Moderately	[Faculty did not elaborate.]		
Between Land and Sea: Observations on Biological and Cultural Change	AL	Sarah Pedersen	Moderately	Applied arithmetic and geometry; spacial reasoning Interpreting graphing of populations		
Musical Theatre as Liberal Education: Interdisciplinary Lessons from Sondheim	AL	Marla Beth Elliott	A Little	Music notation literacy		
The Art of Writing Poetry	SOSR	Gail Tremblay	A Little	Studies in identifying and using pattern and rhythm in language in poetry and the writing of lyrics.		
Ornithology	SOSR	Alison Styring	A Little	Statistics - Reviewed, some student incorporated into projects	Statistics - Reviewed, some student incorporated into projects	
Technical Writing in the 21st Century	SOSR	Thuesen	A Little	Stats		
Creating Dance Here and Now	SOSR	Robert Esposito	A Little	[Faculty did not elaborate.]		
Sacred Movement, Sacred Sound	AL	Sean Williams	A Little	Music notation Movement notation		
Field Mycology: Mushrooms of the Pacific Northwest	SOSR	Noelle Machnicki	A Little	Data interpretation	Technical species descriptions 9included measurement and microscope calibration)	

TRI: Rebuilding Native Nations-Strategies for Governance and Development (Port Gamble)	UD	Cindy Marchand-Cecil	A Little	This type of work was done on a site by site basis, and was done based upon the individual faculty's understanding of it and comfort level with integrating it into the work done in class. For this year, I would have to say that I did this the least of all, but this had to do with me being pulled into teaching unexpectedly and teaching students in several different approaches, all at once.	
Green Nature, Human Nature	AL	Lardner	A Little	Excel workshop on succession	
Makers of Modern Drama: Chekhov, Ibsen, and Others	AL	Marla Beth Elliott	A Little	Three-dimensional design problems in technical theatre	
Earth Dynamics: Climate, People and History	LD	Nancy Koppelman	A Little	[Faculty did not elaborate.]	
Healthcare in the U.S. - A Systemic Look	SOSR	Nancy Anderson	A Little	We used the computer to examine health and health care databases and students had to interpret the data.	
Power In American Society	SOSR	Larry Mosqueda	A Little	Statistics	
Development and Learning: Birth to 14	UD	Terry Ford	A Little	Research statistics	
Power in American Society (winter)	SOSR	Larry Mosqueda	A Little		Analysis/Interpretations of data
Student-Originated Studies: Maritime Cultures, Pacific Northwest History, Pacific Northwest Native Cultures, Maritime Literature	AL	Sarah Pedersen	A Little	Navigational arts: interpreting data, interpreting charts, simple applied geometry, time/speed/distance calculations, conversions of various sorts	
Counter Narratives: Songs and Stories Across Cultures	UD	Drew Buchman	A Little	Music Theory	
Musical Cities	SOSR	Stephanie Kozick	A Little	Music notation	
Reflecting on Activism: Custer Died for Your Sins	AL	Yvonne Peterson	A Little	Descriptions/analyses/interpretations of data	
Where Are You? Introduction to Geography and Geographical Awareness	AL	Martha Henderson	A Little	Descriptive Statistics	
Consciousness: Pathways to the Self	FY	Don Middendorf	A Little	Data Analysis and Interpretation	
Gateways for Incarcerated Youth	SOSR	Chico Herbison	A Little	Ethno mathematics	
Native Decolonization in the Pacific Rim: From the Northwest to New Zealand	SOSR	Kristina Ackley	A Little	Descriptions/analyses/interpretations of data	
What Does it Mean to be an "American"? Colonial America to Present	LD	Michael Vavrus	A Little	[Faculty did not elaborate.]	