INTERSTATE PASSPORT

A WICHE Region Initiative
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PROJECT OVERVIEW

The WICHE Interstate Passport Initiative, launched in October 2011, is a pilot project that focuses on the problem of interstate student transfer. Working with institutions in five Western states—California, Hawaii, North Dakota, Oregon, and Utah—the initiative takes up this problem with the goal of improving graduation rates, shortening time to degree, and saving students money.

The Interstate Passport Initiative focuses on forging general education core transfer agreements, based on the LEAP Essential Learning Outcomes, between 23 institutions in the five partner states. The LEAP outcomes were developed by the Association of American Colleges and Universities in concert with hundreds of institutions. On a regional level, the Passport Initiative will introduce a new framework for transfer based on this outcomes work. The project focuses on the lower-division general education core, the common denominator among institutions—concentrating on it as a whole, not on individual courses—and will allow for a cross-border “match” of outcomes-integrated general education cores for block transfer.

A Pilot State Facilitator (PSF) has been appointed to lead this effort in each participating state. The PSF will establish and maintain productive interactions and communication with faculty and administrators at the pilot institutions and with the Passport Initiative leadership team. These interactions and communications will be directed at accomplishing the Passport Initiative goals:

- To provide data and information about each state’s general education core and its relationship to state transfer policies and patterns; the number of students who transfer among WICHE states; and the process by which change in policy occurs
- To establish block transfer agreements within and among the pilot states for the lower-division general education core, based on successful integration of LEAP’s Essential Learning Outcomes
- To identify the implications for institutional and state policy for a transfer framework based on learning outcomes for further research and projects.

Over the course of the two-year project the Pilot State Facilitators, with assistance from the Pilot State Coordinator and WICHE staff, will assemble and meet with teams of relevant stakeholders; establish the current status of the participating institutions’ transfer agreements for the general education core; define the extent to which the LEAP outcomes are integrated into the core and how they are assessed; facilitate data collection to help inform the Passport initiative; and participate in Passport implementation—specifically, negotiate a regional agreement for “Passport Status” among eligible participating institutions.

The project also includes the Task Force on Student Tracking whose members include registrars and institutional researchers from the pilot states. The Task Force is charged with devising the plan and method for recording the Passport on student records at both sending and receiving institutions, and also determining how the data will be tracked to measure Passport student success.

This two-year pilot project, funded by a grant from the Carnegie Corporation of New York, will allow the Western states to work together to better serve the needs of their students and may provide a model for other regions, and ultimately the nation, to adopt.

www.wiche.edu/passport
PARTICIPATING STATES AND INSTITUTIONS

CALIFORNIA
Pilot State Facilitator:
Debra David, PhD
Project Director, "Give Student a Compass"
CSU Office of the Chancellor

California State University, Sacramento
Sacramento City College

HAWAII
Pilot State Facilitator:
Richard Dubanoski
Former Dean, College of Social Sciences
University of Hawaii at Manoa

Leeward Community College
University of Hawaii West Oahu

NORTH DAKOTA
Pilot State Facilitator:
Lisa Johnson
Director of Articulation & Transfer
North Dakota University System

Dickinson State University
Lake Region State College
North Dakota State University
North Dakota State College of Science
University of North Dakota
Valley City State University
Williston State College

OREGON
Pilot State Facilitators:
Karen Marrongelle
Assistant Vice Chancellor for Academic Standards and Collaborations
Oregon University System

Kent Neely
Provost and Vice President for Academic Affairs
Western Oregon University

Eastern Oregon University
Columbia Gorge Community College
University of Oregon
Lane Community College

UTAH
Pilot State Facilitator:
Phyllis “Teddi” Safman
Assistant Commissioner for Academic Affairs
Utah State Board of Regents

Dixie State College of Utah
Salt Lake Community College
Snow College
Southern Utah University
The University of Utah
Utah State University
Utah Valley University
Weber State University

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Patricia Shea
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PROJECT SCOPE: PHASE I

Association of American Colleges and Universities
*Liberal Education and America’s Promise*
General Education Essential Learning Outcomes

Beginning in school and continuing at successively higher levels across their college studies, students prepare for twenty-first century challenges by gaining:

- **Knowledge of Human Cultures and the Physical and Natural World**
  - Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts; focused by engagement with big questions, both contemporary and enduring.

- **Intellectual and Practical Skills, including**
  - Inquiry and analysis
  - Critical and creative thinking
  - Written and oral communication
  - Quantitative literacy
  - Information literacy
  - Teamwork and problem solving
  
  Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance.

- **Personal and Social Responsibility**
  - Civic knowledge and engagement – local and global
  - Intercultural knowledge and competence
  - Ethical reasoning and action
  - Foundations and skills for lifelong learning
  
  Anchored through active involvement with diverse communities and real-world challenges.

- **Integrative and Applied Learning**
  - Syntheses and advanced accomplishment across general and specialized studies
  
  Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems.
Passport Process Model

Single state

2-year institution:
General education core
learning outcomes

or System

4-year institution:
General education core
learning outcomes

Faculty adopt LEAP outcomes and integrate into
general education core

Faculty define how
students will demonstrate
they have met ELOs

State 1 set*
State 2 set*
State 3 set*
State 4 set*
State 5 set*

Negotiate regional transfer
agreements for
general education core

Participants sign block transfer
agreement
"Passport Status"

*State sets contain descriptions of: 1) General education core learning outcomes; 2) Process used to integrate ELOs in
general education core; 3) Assessment options used to demonstrate students have met ELOs in general education core
INTERSTATE PASSPORT INITIATIVE
Phase I
Passport Learning Outcomes and Proficiency Criteria

The goal of the Interstate Passport Initiative is to craft lower-division general education core transfer agreements, based on the LEAP Essential Learning Outcomes, between participating institutions in the five pilot states – California, Hawaii, North Dakota, Oregon and Utah. An essential component of the pilot project has been to develop the Passport Learning Outcomes in the three content areas of the project – oral communication, written communication, and quantitative literacy – and to construct the transfer level proficiency criteria that describe the evidence of proficiency for each learning outcome.

At the October 2012 Passport Negotiation meeting held in Boulder, faculty representatives from participating institutions, along with the Pilot State Facilitators and project staff, developed Passport Learning Outcomes for the three lower-division general education disciplines of the Passport initiative. The Passport Learning Outcome Teams – one for each content area – reviewed, compared, and contrasted the five sets of learning outcomes that were submitted by each pilot state to negotiate an agreed-upon set of learning outcomes – the Passport Learning Outcomes (PLO). Institutions that sign the Passport Agreement will be acknowledging that their lower-division general education learning outcomes in these three disciplines map to and are congruent with the Passport Learning Outcomes. It is important to note that Institutions will not be required to use the same language as the PLOs in their learning outcomes, but rather, again, map to the PLOs.

Following that October meeting, the Criteria and Assessment Teams, one for each content area, were assembled to begin work on developing criteria that describe the level of proficiency of the PLOs required for a student to earn a Passport. Over a four-month period, the three Criteria and Assessment Teams, comprised of faculty members from the pilot states, developed, discussed and refined the proficiency level criteria for each Passport Learning Outcome. Linked to these criteria are examples of assignments and/or assessments that may be used as appropriate evidence to support a judgment of “competent at the transfer level.”

The Passport Learning Outcomes and Criteria-Phase I will become part of the first Interstate Passport Agreement. Subject to the approval of the Passport’s Advisory Board, that agreement will be available to the pilot states for signature in June 2013. Funding permitting, work will begin immediately on Phase II of the Passport Initiative with a focus on lower division learning outcomes in additional general education areas.

www.wiche.edu/Passport
Passport Criteria and Assessment Teams
Phase I

Oral Communication
Sharon Cox, (Passport OC Chair), Past Faculty Senate Chair, Assistant Professor, Accounting, University of Hawaii West Oahu
Kevin Baaske, Professor of Communication Studies, California State University Los Angeles
Becky Johns, Associate Professor of Communication, Weber State University (Utah)
Richard Parker, Chair, Arts & Humanities Department, Columbia Gorge Community College (Oregon)
Kim Weissman, Communication Department, Williston State College (North Dakota)

Written Communication Team
James Goodman (Passport WC Chair), Dean of Arts and Sciences, Leeward Community College (Hawaii)
Fiona Glade, Associate Professor, Rhetoric and Composition, Co-Vice Chair, Department of English, California State University Sacramento
Donna Evans, Assistant Professor of English/Writing and Director of the Writing Center and Writing Across the Curriculum, Eastern Oregon University
Maureen Mathison, Associate Professor, Director, Writing Program, University of Utah
Teresa Tande, Assistant Professor of English, Lake Region State College (North Dakota)

Quantitative Literacy Team
Jonathan Bodrero, (Passport QL Chair), Professor of Mathematics, Snow College (Utah)
Julia Myers, Assistant Professor, General Education Chair, University of Hawaii West Oahu
Hal Sadofsky, Chair, Department of Mathematics, University of Oregon
Rick Woodmansee, Student Learning Outcomes Analyst, Sacramento City College
Ryan Zerr, Associate Professor, Mathematics, University of North Dakota

Staff
Pat Shea, Principal Investigator
Bob Turner, Pilot State Coordinator
Terry Underwood, Passport Outcomes and Assessment Specialist
Cathy Walker, Project Manager
INTERSTATE PASSPORT INITIATIVE

Oral Communication

Passport Learning Outcomes and Proficiency Criteria

FINAL DRAFT

TRANSFER LEVEL PROFICIENCY CRITERIA
The transfer level proficiency criteria describe the EVIDENCE of proficiency with the Passport Learning Outcomes at the transfer level that one might see in a student’s behavior, performance or work. These are observable behaviors rather than subjective descriptors such as “appropriate” or “excellent.”

Specific examples, provided in the Transfer Level Proficiency Criteria column of the attached matrix, are not intended to mandate curriculum or assessment methods, nor do they constitute a comprehensive list of concepts that each student must master. Rather, they serve as guidelines for determining whether a student has reached the desired level of proficiency for the specific learning outcome through a variety of possible methods. The inclusion of many diverse concrete examples is intentional as different courses may address a given feature in distinct ways; for example, a statistics course will address learning outcomes differently than a quantitative reasoning course. Also, a given concrete example may possibly address more than one Passport Learning Outcome. No single course, or Passport student, is expected to demonstrate all of these criteria of transfer level proficiency.

ORAL COMMUNICATION FRAMING LANGUAGE
Public speaking entails a crucial set of skills for higher education students to develop not just because of its importance for effective participation in classrooms, but primarily because of its central position as a tool of democracy and civic engagement. The ability to prepare and extemporaneously deliver an argument grounded in credible information and organized effectively is usually developed in one or more courses in oral communication and becomes refined and strengthened through application across the curriculum. The following learning outcomes and signs of proficiency are not meant to convey all that a student might learn about public speaking, but to provide a balanced portrait of what receiving institutions can expect from transfer students who have earned a Passport.
<table>
<thead>
<tr>
<th>Passport Learning Outcome Features</th>
<th>Passport Learning Outcomes (What the student has learned)</th>
<th>Transfer Level Proficiency Criteria (Evidence of proficiency of the learning outcome appropriate at the transfer level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation for Performance</td>
<td>Develop a central message and supporting details by applying ethics, critical thinking and information literacy skills. Organize content for a particular audience, occasion and purpose.</td>
<td>Student speakers will be able to: Select topics that are relevant to and important for a public audience and occasion. Find, retrieve, and critically examine information from personal experience and published sources for credibility, accuracy, relevance, and usefulness. Select and critically evaluate appropriate support materials. Represent sources accurately and ethically. Become fully informed about the subject matter. Defend motive of the presentation. Apply organizational skills in speech writing that use the claim-warrant-data method of argument construction.</td>
</tr>
<tr>
<td>Delivery</td>
<td>Demonstrate performance skills that include organizing and delivering content for a particular audience, occasion and purpose, and using technology as appropriate.</td>
<td>Prepare the audience by verbally outlining the speech at the start. Present an accurate, relevant and fair message. Support main points with specific reference to a variety of materials, including statistics, personal examples, testimony, and other techniques appropriate for the speaking occasion and audience. Make clear distinctions between speaker’s ideas and ideas of others. Use verbal footnotes while delivering the speech.</td>
</tr>
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<tr>
<td>Delivery</td>
<td>Present without reading from notes or visual aids. Use presentation aids or technology to enhance delivery of a presentation. Use delivery techniques (posture, gesture, eye contact, pauses, and vocal expressiveness) and language choices that make the presentation understandable, and speaker appears comfortable. Treat audience with respect.</td>
<td></td>
</tr>
<tr>
<td>Monitor and Adjust</td>
<td>Present in the time allotted.</td>
<td>Recognize that the audience is engaged (e.g., audience members are looking at the speaker, orienting body toward speaker, displaying appropriate facial expressions) and adjust if needed (e.g., the speaker initiates eye contact, rephrases points, changes delivery pace, increases volume, steps toward audience, provides additional examples).</td>
</tr>
<tr>
<td>Critical Receiver</td>
<td>Listen and critically evaluate the speaker’s central message and use of supporting materials.</td>
<td>Audience member will be able to:</td>
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<td>Give speaker full attention (e.g., refrain from using cell phone, laptop, iPads, etc.; engaging in other work or side conversations; or sleeping).</td>
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<td></td>
<td>Ask and answer questions as appropriate.</td>
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<tr>
<td></td>
<td>Restate the purpose of the speech.</td>
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<tr>
<td></td>
<td>Summarize the main points of the speech.</td>
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<tr>
<td></td>
<td>Complete appropriate, constructive peer evaluations.</td>
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</tbody>
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TRANSFER LEVEL PROFICIENCY CRITERIA
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WRITTEN COMMUNICATION FRAMING LANGUAGE
Writing sits at the heart of the mission of the higher education institution. Regardless of the discipline, irrespective of the curriculum, written communication is the key that unlocks critical thinking, analysis, and logical reasoning. Learning to write effectively as an undergraduate is not accomplished in any one course, but learning to use this key to unlock intellectual potential across the curriculum does, in fact, require at least one dedicated course.

The following learning outcomes and proficiency criteria assume that students will experience at least one formal course in academic writing as part of their lower-division General Education. They also assume that students have opportunities to write as part of other lower-division courses. As with the other Passport Learning Outcomes, written communication’s proficiency criteria must be interpreted within local contexts.
<table>
<thead>
<tr>
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</table>
| Rhetorical Knowledge              | Demonstrate rhetorical knowledge: address issues of audience, purpose, genre, syntax, structure, format and knowledge appropriate to the task. | Student’s collection of writing may include one or more of the following:  

- Writing in a variety of genres, including, for example, essays, reviews, lab reports, case studies, research papers.  
- Reflective commentary with analysis of writer’s own levels of effectiveness in a variety of writing situations.  
- Narrative of historical events and/or fictional events using chronological organization.  
- Organization and presentation of factual information in the form of a report.  
- Development of a unified, coherent essay focused on a thesis.  
- Development of an analytical argument with attention to detailed supporting material appropriate to the context.  
- Description and analysis of rhetorical features of a document, such as audience, purpose, and genre.  
- Employment of a variety of types of evidence, such as definition, explanation, analogy, graphics, and/or visuals, as appropriate to the context.  
- Use of a variety of tones, voices, and personae, such as writing in the first person, writing in the third person, adjusting syntax, diction, and structure according to the formality of the occasion and purpose.  
- Awareness of the conventions and expectations of academic audiences.  
- Use of technology appropriate to the context. |
<table>
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<tr>
<td><strong>Use of Sources</strong></td>
<td>Evaluate, apply, and ethically synthesize sources in support of a claim, following an appropriate documentation system.</td>
<td>Critical analysis of all source materials for bias, fairness, accuracy, relevance, and validity.</td>
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<td>Integration of source information and ideas with student’s original perspective on a topic, with evidence of clear distinctions between his/her own ideas and the ideas of others.</td>
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<td></td>
<td>Use of correct punctuation and mechanics to present quotations, citations, page numbers, footnotes, endnotes, and references (bibliography) in accordance with a recognized format and style manual.</td>
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<td></td>
<td>Demonstration of the role of full documentation as a strategy to ensure academic integrity, attributing ideas incorporated from books, articles, the Web, or any other material to the original source using in-text citations and ancillary materials (e.g., reference list).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Presentation of ideas and words of other authors in context, used fairly without distortion.</td>
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<td></td>
<td></td>
<td>Papers written individually for each class and/or assignment unless explicit approval for collaboration or for rewriting a paper done for a previous assignment has been given.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Understanding of the nature of both obvious (cutting and pasting from other sources, buying papers on the Internet) and subtle (paraphrasing and summarizing without citation) forms of plagiarism and a commitment to avoid it.</td>
</tr>
<tr>
<td><strong>Writing Process Knowledge</strong></td>
<td>Develop flexible strategies for generating, revising, editing, and proofreading.</td>
<td>Working documents from inception of idea to final draft (e.g., brainstorming, notes, rough drafts, instructor feedback, peer response, collaboration with a peer writing tutor, incorporation of feedback in revised text, and other relevant illustrations).</td>
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<td>Evidence of revision strategies that begin with global (higher order) concerns and shift to local (lower order) concerns as essays or other pieces of writing are developed over time (e.g., a shift</td>
</tr>
<tr>
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<tr>
<td>Conventions and Mechanics</td>
<td>Demonstrate proficiency with conventions, including spelling, grammar, mechanics, word choice, and format appropriate to the writing task.</td>
<td>from focusing on what to write toward how to write it, but recognizing that the writing process is recursive, not linear, and the writer may return to any stage of process at any time. Illustration of skillful use of strategies to create both coherence and cohesion (e.g., readers are provided signals to guide their construction of meaning from the text by means of transitional words, phrases, and sentences; looking forward or backward in the text; and other devices). Reflective commentary that shows metacognitive awareness of successful and unsuccessful use of processes in samples submitted.</td>
</tr>
<tr>
<td>Self-Assessment and Reflection</td>
<td>Reflect on one’s inquiry and composing processes to critique and improve one’s own and other’s writing.</td>
<td>Demonstration of sentence variety in terms of type, length, word order, emphasis, etc. Evidence that proficiency with language extends to matters of format and paragraphing as well as syntax and style appropriate to the context. Efforts to eliminate common errors in grammar, punctuation, and mechanics; over time, student demonstrates improvement in ability to identify and correct patterns of errors. Discussion of student’s writing process, including experiences and/or strategies with invention, drafting, peer feedback/peer review, revising, and editing. Description and analysis of student’s strengths and weaknesses in writing. Discussion of student’s writing processes and writing choices concerning particular assignments.</td>
</tr>
</tbody>
</table>
INTERSTATE PASSPORT INITIATIVE

Quantitative Literacy

Passport Learning Outcomes and Proficiency Criteria
FINAL DRAFT

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QUANTITATIVE LITERACY FRAMING LANGUAGE
Following are the Quantitative Literacy (QL) Passport Learning Outcomes and corresponding signs of proficiency expected of all students earning the Passport. To earn the QL portion of the Passport, the student must show proficiency in every Passport Learning Outcome feature listed below.
<table>
<thead>
<tr>
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</table>
| **Computational Skills**           | Demonstrates proficiency with arithmetic and algebraic computational skills, and extends them, for example, to geometric and statistical computations. | Solves problems or equations of the appropriate level for the desired quantity.  
Uses logarithms to correctly solve a compound interest problem for the desired time.  
Solves linear and quadratic algebraic equations accurately and reliably without the aid of a calculator.  
Correctly computes the mean, median, mode, and standard deviation for a given numerical data set.  
Rearranges the margin of error formula to find the desired sample size for a given confidence level and margin of error.  
Finds the area or volume of general geometric objects by decomposing them into more basic components (circles, triangles, rectangles, cubes, etc.). *Fix*  
Uses the ideal gas law to compute how one variable is affected as another is changed.  
In problems where units are provided, gives answer in correct units. Also, uses units as a check when solving algebraic problems where units are given.  
Uses a spreadsheet or simple computer programs to automate multiple instances of arithmetic calculation.  
Calculates present and future values of money by evaluating appropriate formulas.  
Determines proportional relationships between the areas/volumes of figures given side (or other) measurements. |
| **Communication of Quantitative Arguments** | Expresses quantitative information symbolically, graphically, and in written or oral language. | Correctly uses mathematical notation in all aspects of the solution of a typical problem at the appropriate level.  
Accurately converts between proper mathematical notation/expressions and written / oral narrative.  
Expresses answer and intermediate steps with correct units.  
Uses appropriate language to link between different steps of stating or solving problems. Avoids using “=” to mean anything other than equality.  
Uses function notation and parentheses correctly in solving problems.  
States the conclusion to a significance test and writes an explanation of the rationale for the conclusion.  
Makes appropriate use of graphical objects (such as geometrical figures, graphs of equations in two or three variables, histograms, scatterplots of bivariate data, etc.) to supplement a solution to a typical problem at the appropriate level.  
Includes an appropriate graph to support or emphasize trends or findings.  
Draws two consecutive iterations of the Koch Snowflake to demonstrate that perimeter increases at |
<table>
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<tr>
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<tr>
<td>Communication of Quantitative Arguments (cont.)</td>
<td>each step. Uses graphs or plots (box-and-whisker, bar graph, etc.) to illustrate a comparison between two related data sets. Illustrates important values (such as median, mean, or extrema) on a graph or histogram of the data under analysis. Uses a graph to correctly present the data collected in a scientific experiment.</td>
<td></td>
</tr>
<tr>
<td>Analysis of Quantitative Arguments</td>
<td>Selects and uses appropriate numeric, symbolic, graphical and statistical reasoning to interpret, analyze and critique information or line of reasoning presented by others.</td>
<td>Determines whether a given sequence of steps constitutes a valid line of reasoning (such as a proposed proof of a mathematical theorem or solution to a quantitative problem). If not a valid method, is able to explain why not. Reads passages which use basic statistics (such as from a newspaper story) and correctly articulates how those statistics could have been calculated and gives a correct analysis of their potential meaning. For example, distinguishes between results that show statistical correlation and causation. When presented with an estimate based on sample data, asks if that sample was randomly chosen, and if not, considers whether that is relevant. Uses present-value and future-value formulas to evaluate claims made about investment opportunities. Critiques the quantitative results obtained from a scientific experiment.</td>
</tr>
<tr>
<td>Formulation of Quantitative Arguments</td>
<td>Recognize, evaluate, and use quantitative information, quantitative reasoning and technology to support a position or line of reasoning</td>
<td>Correctly formulates, organizes, and articulates solutions to theoretical and application problems at the appropriate level. Gives a correct argument why the Koch snowflake has finite area but infinite perimeter. Analyzes quantitative data collected in an experiment. Uses optimization techniques to maximize profit for a business. Correctly proves that an irrational number is irrational (for example, 2 or 1.010010001... ). Uses graphs, diagrams, and charts to compare data sets and draw conclusions. Given the results for a hypothesis test or confidence interval, draws an accurate conclusion. Describes a scenario in which poll voting (plurality method) gives a different result from ranked preference voting. Uses a graph and/or appropriate formulas to find the maximum or minimum value of a quadratic polynomial, and distinguishes between the value at which the maximum occurs and the maximum value itself. When using linear programming, shows an appropriate graph and the details of how the optimum</td>
</tr>
</tbody>
</table>
## QUANTITATIVE LITERACY

<table>
<thead>
<tr>
<th>Passport Learning Outcome Features</th>
<th>Passport Learning Outcomes (What the student has learned)</th>
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</tr>
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<tbody>
<tr>
<td><strong>Outcome</strong></td>
<td>Design and follow a multi-step mathematical process through to a logical conclusion and critically evaluate the reasonableness of the result.</td>
<td>Correctly solves a variety of different problem types (at the appropriate level) that involve a multi-step solution. Selects an algorithm (such as Cheapest Link Algorithm) for working with a graph theory problem (Travelling Salesman) and correctly applies it to the exercise. Based on given data, correctly computes a confidence interval or hypothesis test. Uses synthetic division, factoring, graphing, and other related techniques to find all the (real) zeros of a suitable cubic/quartic polynomial. Writes a computer program to do a multi-step calculation that involves multiple cases. For example, identify whether the input is a prime number, factor the input, or sort a list of numbers. Does appropriate error checking on the resulting computer program. Calculates multiple monthly loan payments for a given principal and different interest rates/times. Then uses the figures to compare the total cost of the loans. Given three linear relationships for three unknowns, correctly solves for the desired quantities. For a given velocity and rate of deceleration, calculates the distance required to stop. Correctly solves an optimization problem, justifying why their solution is in fact an optimal one (for example, using linear programming or differential calculus). Considers the validity of a result from a multi-step problem. Rarely submits solutions that involve an answer of the wrong order of magnitude or involving the wrong type of information (such as a graphical solution when a numeric one is called for). Where possible, checks solutions with the original problem. Looks for signs of model breakdown when using an exponential growth function in a real-world setting. Evaluates the validity of experimental data. Recognizes, quantifies (where possible), and articulates the possibility of error (type I or II, as appropriate) in a significance test. Recognizes nonrandom sample data as nonrandom and considers the possible impact to conclusions.</td>
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Quantitative Literacy ~ FINAL DRAFT ~ Submitted by the Passport Criteria and Assessment Team for Quantitative Literacy: March 2013
<table>
<thead>
<tr>
<th>Passport Learning Outcome Features</th>
<th>Passport Learning Outcomes (What the student has learned)</th>
<th>Transfer Level Proficiency Criteria (Evidence of proficiency of the learning outcome appropriate at the transfer level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Models</td>
<td>Create, analyze and apply appropriate quantitative models to solve quantitative theoretical and real-world problems</td>
<td>Correctly solves problems at the appropriate level which require the student to choose an appropriate technique or formula. Given a floor plan, the cost of the carpet per yard from a roll of given width, and the cost of making a cut, devises a scheme to carpet a floor plan and calculates the cost. Selects the correct model (linear, exponential, logistic, etc.) for a population growth problem and then uses it to solve for the population size at a given time. Given sample data, calculates confidence intervals for population means and correctly interprets results. Constructs applicable linear demand and quadratic revenue functions from given data, then uses the model to determine the price and quantity that maximizes revenue. Given an estimated growth rate per year and a desired investment value after a certain number of years, calculates the initial investment required to reach that value. Solves problems that involve adding rates. (For example if person A requires 4 hours to do a job, and person B requires 3 hours, how long is required for A and B to do this job together?) Selects the correct function type to model a set of real-world bivariate data, determines appropriate values for the constants in the model, and uses the model to answer questions. Utilizes vectors to solve problems involving direction and magnitude.</td>
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INTERSTATE PASSPORT INITIATIVE

“Trust and Tracking”

Facilitating and Monitoring the Efficacy of the Passport

The goal of the Interstate Passport Initiative is to offer students the opportunity to earn a region-wide academic passport that will eliminate unnecessary repetition of academic work when a student transfers from one institution to another across state lines in the WICHE region. To accomplish this goal, participating institutions accept a set of Passport Learning Outcomes that are consistent with the individual institution’s learning outcomes in each academic area contained in the Passport. The Phase I Passport, which will result from the current initial pilot project, addresses three academic areas: oral communication, written communication, and quantitative literacy.

Upon accepting the Passport Learning Outcomes for these areas, each institution will then identify the courses they offer in each area which address both the Passport Learning Outcomes and provide a student with the learning necessary to meet the proficiency level for lower-division general education transfer. In each of these discipline areas, it could be one course or a combination of courses. Although it is unlikely at this point, an institution might accept a certain score on a particular test in one or more of the Passport areas if faculty believe that a student with that score could produce work equivalent to the Passport Learning Outcomes proficiency. It is the faculty’s responsibility at each Passport institution to ensure that its students are achieving the Passport proficiency before awarding a Passport to a student.

A distinctive and essential feature of the Passport is that the validity of the Passport is founded upon “Trust and Tracking.” The Passport is based on “trust” because each Passport institution’s faculty trusts the other Passport institution’s faculty to make good judgments with regard to the institution’s methods of imparting and assessing proficiency with the Passport Learning Outcomes. To ensure transparency for all, each Passport institution will have its profile on the Passport website with the contents of its Passport Block and assessments of learning.

The “tracking” aspect of the Passport monitors the validity of the Passport “trust.” Receiving institutions will share information on the academic performance of their incoming Passport students with the appropriate sending institutions through a centralized repository that aggregates the data. Sending institutions could then use this information for continuous improvement so that their students are successful when they transfer.
The current working model for Passport tracking uses an end-of-term process like checking for an earned certificate or degree. Each Passport institution would identify students who have completed courses in the Passport block, and send a list of new Passport students to a central data bank. The data bank will compile and send tracking reports to each sending institution.

Student data that a receiving institution must send to a sending institution, the frequency of the reports, and the duration of the obligation to report remain under discussion—first, among the Pilot State Facilitators on the information that is most desirable, and second, among members of the Passport Task Force on Student Tracking about their ability to send and receive this information. Among the tracking data under consideration are the percentage of students who complete degrees, the number of terms and/or credits to degree completion, the GPA in the term and/or year following transfer, and the grades in courses dependent on Passport Learning Outcomes. The most valuable information will come from comparing the academic progress of Passport vs. non-Passport transfer students vs. “native” students. The description of this information, once it has been defined, will be posted on the Passport website.

Students at participating institutions would receive notification that they earned a Passport, along with addresses to the Passport website with the list of Passport institutions. Participating institutions will be encouraged to include information about the Passport in their student catalogs so that students will know about it. As the Passport expands, efforts to build public awareness will increase.

By using “Trust and Tracking” the Interstate Passport Initiative will determine the effectiveness of the Passport, provide Passport institutions information they may use in their continuous improvement processes, and provide aggregated data for broader analysis of effective transfer processes. The expectation is that “Trust and Tracking” will facilitate transfer students’ attainment of their academic goals by eliminating unnecessary repetition of academic work after transfer.
For more information about the Passport:

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