

## UC San Diego - WASC Exhibit 7.1 Inventory of Educational Effectiveness Indicators

Academic Program	(2a) What are these learning outcomes?  <u>Students graduating with a degree should be able to:</u>	(3) Other than GPA, what data/evidence are used to determine that graduates have achieved stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)?	(4) Who interprets the evidence? What is the process?	(5) How are the findings used?
<p>Department: Economics</p> <p>Major: Economics</p> <p>(1) Have formal learning outcomes been developed? Yes</p>	<p><b>Written Communication</b></p> <p>Students should be able to write cogent economic arguments.</p>	<p><b>Written Communication</b></p> <p>Pass the required college writing classes.</p> <p>Written responses to short answer and essay exams given in our courses.</p> <p>OPTIONAL:</p> <ul style="list-style-type: none"> <li>Students may take Econ 125: Demographic Analysis and Econ 176: Marketing where a paper is typically required as part of the course.</li> <li>Students may take small (20 students or less) honors and/or advanced topics classes where students typically write a short paper.</li> <li>Students may also take Econ 199 where they typically write a paper. Finally, our top students may take the Econ 191: Senior Essay Seminar where they write two-quarter research paper with a faculty member.</li> </ul>	<p><b>Written Communication</b></p> <p>College writing instructors.</p> <p>Instructors of our classes.</p>	<p><b>Written Communication</b></p> <p>An inability to write cogent economic arguments leads to lower course grades and may lead student to leave the major.</p> <p>Instructors may bring issues to the VC Undergrad Ed. The VC may bring the issue to the Undergrad Committee. The Committee may decide to bring issue to a faculty meeting.</p>
<p>(6) Date of the last Academic Senate Review? 2015-16.</p>	<p><b>Oral Communication</b></p> <p>Students should be able to communicate economic ideas verbally.</p>	<p><b>Oral Communication</b></p> <p>OPTIONAL:</p> <ul style="list-style-type: none"> <li>Student may take small honors and/or advanced topics classes where students typically present their own research or academic papers.</li> <li>Students may write a Econ 199 paper and present it at the Undergraduate Research Conference.</li> <li>Our top students may take the Econ 191: Senior Essay Seminar where they typically present their research paper to the class.</li> </ul>	<p><b>Oral Communication</b></p> <p>Instructors of these classes.</p>	<p><b>Oral Communication</b></p> <p>An inability to communicate leads to lower course grades in these classes.</p>
<p>December 7, 2016</p>	<p><b>Quantitative Reasoning:</b></p> <p>Students should be able to apply mathematic concepts to the interpretation and analysis of quantitative information in order to solve a wide range of economic problems including:</p> <ol style="list-style-type: none"> <li>Apply the formal methods used by statisticians to analyze data to learn about the real world.</li> <li>Use basic econometric methods to quantify uncertainty with confidence intervals; use regression to infer causal relationships; and use regressions for prediction.</li> </ol>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have learned the material from the previous courses in the sequence.</li> <li>Faculty teaching the advanced electives determine whether students have learned the upper division core material.</li> <li>Faculty teaching the standard electives and the upper division core courses determine whether the students have learned the lower division core</li> </ul>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>Undergrad Committee and VC for Undergrad Ed oversee requirements, which are endorsed by full faculty.</li> <li>At the end of each academic year, the VC solicits faculty feedback regarding the core curriculum and reports findings to the Undergrad Committee. Minor adjustments are made if</li> </ul>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>Individual course instructors use feedback to modify their classes.</li> <li>Internally the department adjusts requirements and course sequences for the major.</li> </ul> <p>The Academic Senate approves any changes to the</p>

	<p>3. Critically interpret empirical studies</p> <p>4. Set up, solve and analyze optimization models</p> <p>5. Apply optimization models to consumer, producer, and market theories</p> <p>6. Use game theory to analyze the strategic behavior of individuals and firms.</p> <p>7. Build macroeconomic models.</p> <p>8. Apply macroeconomic models to understand current issues.</p>	<p>material.</p> <ul style="list-style-type: none"> <li>Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>Minimum of 52 units of upper division economics coursework.</li> <li>Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>Outcomes 1-3 are met by successfully completing Econ 120A-B-C.</li> <li>Outcomes 4-6 are met by successfully completing Econ 100A-B-C.</li> <li>Outcomes 7 and 8 are met by successfully completing Econ 110A-B.</li> </ul>	<p>necessary and approved by the faculty. Major changes are approved by the full faculty and the Academic Senate.</p> <ul style="list-style-type: none"> <li>The Vice-Chair for Undergraduate Education acts on all requests/petitions for variation of requirements.</li> <li>Academic Senate acts on all departmental requests for changes in courses and requirements</li> </ul> <p>The Academic Senate reviews all majors and minors offered by the department and makes recommendations</p>	<p>major requirements</p>
	<p><b>Information Literacy</b></p> <p>Students should be able to recognize when information is needed and have the ability to locate, evaluate and use the needed information. In particular, student should know how to:</p> <ol style="list-style-type: none"> <li>Ask an economic question</li> <li>Gather information and resources</li> <li>Form an explanatory hypothesis</li> <li>Collect data that can be used to test the hypothesis</li> <li>Analyze the data</li> <li>Draw conclusions and suggest future research</li> </ol>	<p><b>Information Literacy</b></p> <ul style="list-style-type: none"> <li>In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower division courses.</li> <li>Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>Minimum of 52 units of upper division economics coursework.</li> <li>Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>Outcomes 1-6 are met by successfully completing the core and elective courses for the major.</li> </ul>	<p><b>Information Literacy</b></p> <p>Same as above</p>	<p><b>Information Literacy</b></p> <p>Same as above</p>
	<p><b>Critical Thinking</b></p> <p>Students should be able to think in a way that is clear, reasoned, reflective, informed by evidence, and aimed at deciding what to believe or do.</p> <ol style="list-style-type: none"> <li>Explain economic models as deliberate simplifications of reality that economists create to think through complex, nondeterministic behaviors</li> <li>Identify the assumptions and limitations of each</li> </ol>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>Faculty teaching the standard electives and the</li> </ul>	<p><b>Critical Thinking</b></p> <p>Same as above</p>	<p><b>Critical Thinking</b></p> <p>Same as above</p>

	<p>model and their potential impacts</p> <ol style="list-style-type: none"> <li>3. Select and connect economic models to real economic conditions</li> <li>4. Explain economic data as useful but imperfect recordings of empirical realities</li> <li>5. Explain the strengths and limitations of economic data and statistical analyses</li> <li>6. Think creatively and combine or synthesize existing economic ideas</li> </ol>	<p>upper division core courses determine whether the students have learned critical thinking in the lower division courses.</p> <ul style="list-style-type: none"> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 52 units of upper division economics coursework.</li> <li>• Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>• Outcomes 1-6 are met by successfully completing the core and elective courses for the major.</li> </ul>		
	<p>All other items not color coded</p> <p>Students should be able to analyze and evaluate behavior and outcomes using economic concepts and models. Students should be able to use economic concepts and models to:</p> <ol style="list-style-type: none"> <li>1. Predict or explain behavior and outcomes in novel settings</li> <li>2. Evaluate choices made by firms, individuals, or groups, and suggest allocations that may help them better achieve their objectives</li> <li>3. Evaluate economy-wide allocations using the concepts of efficiency and equity, and suggest government policies to improve social welfare</li> </ol>	<p>All other items not color coded</p> <ul style="list-style-type: none"> <li>• In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>• Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>• Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower division courses.</li> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 52 units of upper division economics coursework.</li> <li>• Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>• Outcomes 1-3 are met by successfully completing the core and elective courses for the major.</li> </ul>	<p>All other items not color coded</p> <p>Same as above</p>	<p>All other items not color coded</p> <p>Same as above</p>
	<p>(2b)</p> <p>Where are the learning outcomes published?  <a href="https://economics.ucsd.edu/undergraduate-program/major-minor-requirements/economics-major-ba.html">https://economics.ucsd.edu/undergraduate-program/major-minor-requirements/economics-major-ba.html</a></p>			

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Academic Program	(2a) What are these learning outcomes?  <u>Students graduating with a degree should be able to:</u>	(3) Other than GPA, what data/evidence are used to determine that graduates have achieved stated outcomes for the degree? (e.g., capstone course, portfolio review, licensure examination)?	(4) Who interprets the evidence? What is the process?	(5) How are the findings used?
<p>Department: Economics</p> <p>Major: Management Science</p> <p>(1) Have formal learning outcomes been developed? Yes</p> <p>(6) Date of the last Academic Senate Review? 2015-16.</p> <p>December 7, 2016</p>	<p><b>Written Communication</b></p> <p>Students should be able to write cogent economic arguments.</p>	<p><b>Written Communication</b></p> <p>Pass the required college writing classes.</p> <p>Written responses to short answer and essay exams given in our courses.</p> <p><b>OPTIONAL:</b></p> <p>Students may take Econ 125: Demographic Analysis and Econ 176: Marketing where a paper is typically required as part of the course.</p> <p>Students may take small (20 students or less) honors and/or advanced topics classes where students typically write a short paper.</p> <p>Students may also take Econ 199 where they typically write a paper. Finally, our top students may take the Econ 191: Senior Essay Seminar where they write two-quarter research paper with a faculty member.</p>	<p><b>Written Communication</b></p> <p>College writing instructors.</p> <p>Instructors of our classes.</p>	<p><b>Written Communication</b></p> <p>An inability to write cogent economic arguments leads to lower course grades and may lead to exit from the major.</p> <p>Instructors may bring issues to the VC Undergrad Ed. The VC may bring the issue to the Undergrad Committee. Committee may decide to bring issue to a faculty meeting for a vote.</p> <p>Academic Senate Reviews</p>
	<p><b>Oral Communication</b></p> <p>Students should be able to communicate economic ideas verbally.</p>	<p><b>Oral Communication</b></p> <p><b>OPTIONAL:</b></p> <p>Student may take small honors and/or advanced topics classes where students typically present their own research or academic papers.</p> <p>Students may write a Econ 199 paper and present it at the Undergraduate Research Conference.</p> <p>Our top students may take the Econ 191: Senior Essay Seminar where they typically present their research paper to the class.</p>	<p><b>Oral Communication</b></p> <p>Instructors of these classes.</p>	<p><b>Oral Communication</b></p> <p>An inability to communicate leads to lower course grades.</p>
	<p><b>Quantitative Reasoning:</b></p> <p>Students should be able to apply mathematic concepts to the interpretation and analysis of quantitative information in order to solve a wide range of economic problems including:</p> <ol style="list-style-type: none"> <li>1. Apply the formal methods used by statisticians to analyze data to learn about the real world.</li> <li>2. Use basic econometric methods to quantify uncertainty with confidence intervals; use regression to infer causal relationships; and use regressions for prediction.</li> <li>3. Critically interpret empirical studies</li> </ol>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• Minimum of 60 units of upper division economics coursework.</li> <li>• Required upper division courses in microeconomics, econometrics, finance, operations research, and decisions under uncertainty.</li> <li>• Outcomes 1-3 are met by successfully completing Econ 120A-B-C.</li> <li>• Outcomes 4-6 are met by successfully completing Econ 100A-B-C.</li> <li>• Outcome 7 is met by successfully completing Econ</li> </ul>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• Undergrad Committee and VC for Undergrad Ed oversee requirements, which are endorsed by full faculty.</li> <li>• At the end of each academic year, the VC solicits faculty feedback regarding the core curriculum and reports findings to the Undergrad Committee. Minor adjustments are made if necessary and approved by the faculty. Major changes are</li> </ul>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• Individual course instructors use feedback to modify their classes.</li> <li>• Internally the department adjusts requirements and course sequences for the major.</li> </ul> <p>The Academic Senate approves any changes to the major requirements</p>

	<p>4. Set up, solve and analyze optimization models with more than one constraint.</p> <p>5. Apply optimization models to consumer, producer, and market theories</p> <p>6. Use game theory to analyze the strategic behavior of individuals and firms.</p> <p>7. Determine the value of various financial assets and liabilities under uncertainty.</p> <p>8. Translate an economic problem into an appropriate mathematical model; describe solution techniques; and interpret the solutions to mathematical problems in economic terms.</p>	<p>173A-B.</p> <p>Outcome 8 is met by successfully completing Econ 172A-B.</p>	<p>approved by the full faculty and the Academic Senate.</p> <ul style="list-style-type: none"> <li>• The Vice-Chair for Undergraduate Education acts on all requests/petitions for variation of requirements.</li> <li>• Academic Senate acts on all departmental requests for changes in courses and requirements</li> </ul> <p>The Academic Senate reviews all majors and minors offered by the department and makes recommendations</p>	
	<p><b>Information Literacy</b></p> <p>Students should be able to recognize when information is needed and have the ability to locate, evaluate and use the needed information. In particular, student should know how to:</p> <ol style="list-style-type: none"> <li>1. Ask an economic question</li> <li>2. Gather information and resources</li> <li>3. Form an explanatory hypothesis</li> <li>4. Collect data that can be used to test the hypothesis</li> <li>5. Analyze the data</li> <li>6. Draw conclusions and suggest future research</li> </ol>	<p><b>Information Literacy</b></p> <ul style="list-style-type: none"> <li>• In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>• Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>• Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower division courses.</li> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 60 units of upper division economics coursework.</li> <li>• Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>• Outcomes 1-6 are met by successfully completing the core and elective courses for the major.</li> </ul>	<p><b>Information Literacy</b></p> <p>Same as above</p>	<p><b>Information Literacy</b></p> <p>Same as above</p>
	<p><b>Critical Thinking</b></p> <p>Students should be able to think in a way that is clear, reasoned, reflective, informed by evidence, and aimed at deciding what to believe or do.</p> <ol style="list-style-type: none"> <li>1. Explain economic models as deliberate simplifications of reality that economists create to think through complex, nondeterministic behaviors</li> <li>2. Identify the assumptions and limitations of each model and their potential impacts</li> <li>3. Select and connect economic models to real</li> </ol>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>• In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>• Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>• Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower</li> </ul>	<p><b>Critical Thinking</b></p> <p>Same as above</p>	<p><b>Critical Thinking</b></p> <p>Same as above</p>

	<p>economic conditions</p> <ol style="list-style-type: none"> <li>4. Explain economic data as useful but imperfect recordings of empirical realities</li> <li>5. Explain the strengths and limitations of economic data and statistical analyses</li> <li>6. Think creatively and combine or synthesize existing economic ideas</li> </ol>	<p>division courses.</p> <ul style="list-style-type: none"> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 60 units of upper division economics coursework.</li> <li>• Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>• Outcomes 1-6 are met by successfully completing the core and elective courses for the major.</li> </ul>		
	<p>All other items not color coded</p> <p>Students should be able to analyze and evaluate behavior and outcomes using economic concepts and models. Students should be able to use economic concepts and models to:</p> <ol style="list-style-type: none"> <li>1. Predict or explain behavior and outcomes in novel settings</li> <li>2. Evaluate choices made by firms, individuals, or groups, and suggest allocations that may help them better achieve their objectives</li> <li>3. Evaluate economy-wide allocations using the concepts of efficiency and equity, and suggest government policies to improve social welfare</li> </ol>	<p>All other items not color coded</p> <ul style="list-style-type: none"> <li>• In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>• Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>• Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower division courses.</li> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 60 units of upper division economics coursework.</li> <li>• Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>• Outcomes 1-3 are met by successfully completing the core and elective courses for the major.</li> </ul>	<p>All other items not color coded</p> <p>Same as above</p>	<p>All other items not color coded</p> <p>Same as above</p>
	<p>(2b)</p> <p>Where are the learning outcomes published?  <a href="http://economics.ucsd.edu/undergraduate-program/major-minor-requirements/mgmt-sci.html">http://economics.ucsd.edu/undergraduate-program/major-minor-requirements/mgmt-sci.html</a></p>			

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<p>Department: Economics Mathematics</p> <p>Major: Joint Mathematics Economics</p> <p>(1) Have formal learning outcomes been developed? Yes</p>	<p><b>Written Communication</b></p> <p>Students should be able to write cogent economics and mathematics arguments.</p>	<p><b>Written Communication</b></p> <p>Pass the required college writing classes.</p> <p>Written responses to short answer and essay exams given in our courses.</p> <p><b>OPTIONAL:</b></p> <p>Students may take Econ 125: Demographic Analysis and Econ 176: Marketing where a paper is typically required as part of the course.</p> <p>Students may take small (20 students or less) honors and/or advanced topics classes where students typically write a short paper.</p> <p>Students may also take Econ 199 where they typically write a paper. Finally, our top students may take the Econ 191: Senior Essay Seminar where they write two-quarter research paper with a faculty member.</p>	<p><b>Written Communication</b></p> <p>College writing instructors.</p> <p>Instructors of our classes.</p>	<p><b>Written Communication</b></p> <p>An inability to write cogent economic arguments leads to lower course grades and may lead to exit from the major.</p> <p>Instructors may bring issues to the VC Undergrad Ed in either department. The VCs discuss and may bring the issue to their Undergrad Committee. Committees may decide to bring issue to a faculty meeting in both departments for a vote.</p> <p>Academic Senate Reviews</p>
<p>(6) Date of the last Academic Senate Review? 2015-16.</p>	<p><b>Oral Communication</b></p> <p>Students should be able to communicate economic and mathematics ideas verbally.</p>	<p><b>Oral Communication</b></p> <p><b>OPTIONAL:</b></p> <p>Student may take small honors and/or advanced topics classes where students typically present their own research or academic papers.</p> <p>Students may write a Econ 199 paper and present it at the Undergraduate Research Conference.</p> <p>Our top students may take the Econ 191: Senior Essay Seminar where they typically present their research paper to the class.</p>	<p><b>Oral Communication</b></p> <p>Instructors of these classes.</p>	<p><b>Oral Communication</b></p> <p>An inability to communicate leads to lower course grades.</p>
<p>December 7, 2016</p>	<p><b>Quantitative Reasoning:</b></p> <p>Students should be able to apply mathematic concepts to the interpretation and analysis of quantitative information in order to solve a wide range of economic problems including:</p> <ol style="list-style-type: none"> <li>1. Apply the formal methods used by statisticians to analyze data to learn about the real world.</li> <li>2. Use basic econometric methods to quantify uncertainty with confidence intervals; use regression to infer causal relationships; and use regressions for prediction.</li> </ol>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• Minimum of 28 units of upper division economics coursework.</li> <li>• Minimum of 28 units of upper division mathematics coursework.</li> <li>• Minimum of 60 units of upper division economics and mathematics coursework combined.</li> <li>• Required upper division courses in microeconomics, econometrics, finance, operations research, and decisions under uncertainty.</li> </ul>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• Undergraduate Affairs Committee and Vice-Chairs for Undergrad Education in both the mathematics and economics departments oversee requirements, which are endorsed by full faculty.</li> <li>• Minor adjustments are made if necessary and approved by the faculty. Major changes are approved by the full faculty</li> </ul>	<p><b>Quantitative Reasoning</b></p> <ul style="list-style-type: none"> <li>• Individual course instructors use feedback to modify their classes.</li> <li>• Internally the departments of economics and mathematics adjust requirements and course sequences for the major.</li> </ul> <p>The Academic Senate approves any changes to the</p>

	<p>3. Critically interpret empirical studies</p> <p>4. Set up, solve and analyze optimization models.</p> <p>5. Apply optimization models to consumer, producer, and market theories.</p> <p>6. Use game theory to analyze the strategic behavior of individuals and firms.</p> <p>7. Be able to prove basic calculus theorems.</p>	<ul style="list-style-type: none"> <li>• Outcomes 1-3 are met by successfully completing Econ 120A (or Math 180A), 120B-C.</li> <li>• Outcomes 4-6 are met by successfully completing Econ 100A-B-C.</li> <li>• Outcome 7 is met by successfully completing Math 109 and either Math 140A or Math 142A.</li> </ul>	<p>and CEP.</p> <ul style="list-style-type: none"> <li>• The Vice-Chairs for Undergrad Education in both the mathematics and economics departments act on all requests/petitions for variation of requirements.</li> <li>• Academic Senate acts on all departmental requests for changes in courses and requirements</li> </ul> <p>The Academic Senate reviews all majors and minors offered by the department and makes recommendations</p>	<p>major requirements</p>
	<p><b>Information Literacy</b></p> <p>Students should be able to recognize when information is needed and have the ability to locate, evaluate and use the needed information. In particular, student should know how to:</p> <ol style="list-style-type: none"> <li>1. Ask an economic or mathematics question</li> <li>2. Gather information and resources</li> <li>3. Form an explanatory hypothesis</li> <li>4. Collect data that can be used to test the hypothesis</li> <li>5. Analyze the data</li> <li>6. Draw conclusions and suggest future research</li> </ol>	<p><b>Information Literacy</b></p> <ul style="list-style-type: none"> <li>• In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>• Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>• Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower division courses.</li> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 60 units of upper division economics and mathematics coursework.</li> <li>• Required upper division courses in the major.</li> <li>• Outcomes 1-6 are met by successfully completing the core and elective courses for the major.</li> </ul>	<p><b>Information Literacy</b></p> <p>Same as above</p>	<p><b>Information Literacy</b></p> <p>Same as above</p>
	<p><b>Critical Thinking</b></p> <p>Students should be able to think in a way that is clear, reasoned, reflective, informed by evidence, and aimed at deciding what to believe or do.</p> <ol style="list-style-type: none"> <li>1. Explain economic models as deliberate simplifications of reality that economists create to think through complex, nondeterministic behaviors</li> <li>2. Identify the assumptions and limitations of each model and their potential impacts</li> <li>3. Select and connect economic models to real</li> </ol>	<p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>• In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>• Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>• Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower</li> </ul>	<p><b>Critical Thinking</b></p> <p>Same as above</p>	<p><b>Critical Thinking</b></p> <p>Same as above</p>



	<p><b>economic conditions</b></p> <ol style="list-style-type: none"> <li>4. Explain economic data as useful but imperfect recordings of empirical realities</li> <li>5. Explain the strengths and limitations of economic data and statistical analyses</li> <li>6. Think creatively and combine or synthesize existing economic ideas</li> <li>7. Be able to do mathematical proofs elegantly.</li> </ol>	<p><b>division courses.</b></p> <ul style="list-style-type: none"> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 60 units of upper division economics and mathematics coursework.</li> <li>• Required upper division courses in the major.</li> <li>• Outcomes 1-6 are met by successfully completing the core and elective courses for the major.</li> </ul>		
	<p><b>All other items not color coded</b></p> <p>Students should be able to analyze and evaluate behavior and outcomes using economic concepts and models. Students should be able to use economic concepts and models to:</p> <ol style="list-style-type: none"> <li>1. Predict or explain behavior and outcomes in novel settings</li> <li>2. Evaluate choices made by firms, individuals, or groups, and suggest allocations that may help them better achieve their objectives</li> <li>3. Evaluate economy-wide allocations using the concepts of efficiency and equity, and suggest government policies to improve social welfare</li> </ol>	<p><b>All other items not color coded</b></p> <ul style="list-style-type: none"> <li>• In the upper and lower core course sequences, faculty teaching later in the sequence assess whether students have acquired critical thinking skills from the previous courses in the sequence.</li> <li>• Faculty teaching the advanced electives determine whether students have acquired critical thinking skills in the upper division core courses.</li> <li>• Faculty teaching the standard electives and the upper division core courses determine whether the students have learned critical thinking in the lower division courses.</li> <li>• Exit surveys of graduating seniors provide evidence about strengths and weakness of the program.</li> <li>• Minimum of 60 units of upper division economics coursework.</li> <li>• Required upper division courses in microeconomics, macroeconomics and econometrics.</li> <li>• Outcomes 1-3 are met by successfully completing the core and elective courses for the major.</li> </ul>	<p><b>All other items not color coded</b></p> <p>Same as above</p>	<p><b>All other items not color coded</b></p> <p>Same as above</p>
	<p>(2b) Where are the learning outcomes published? <a href="http://economics.ucsd.edu/undergraduate-program/major-minor-requirements/joint-econ-math-major-ba.html">http://economics.ucsd.edu/undergraduate-program/major-minor-requirements/joint-econ-math-major-ba.html</a></p>			