

# Course SLOs, Transfer Program SLOs, and GEOs For Dummies

Fred Hochstaedter  
September, 2010

For John Anderson, and others who  
have been asking for a long time

General Education Areas <i>General Education Outcomes (GEOs)</i>	Courses <i>Course-level SLOs</i>	Transfer Programs <i>Program-level SLOs</i>
<p><b>Natural Science</b></p> <p>GEOL 2, OCEN 2, ASTR 10, CHEM 1A, PHYS 2A, BIOL 10, etc....</p> <p><i>GEO:</i></p> <p><i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p>	<p><b>GEOL 2</b> <i>Course-level SLOs:</i></p> <ol style="list-style-type: none"> <li>1. Use observations of rock types and landscape morphology to interpret basic geologic history and processes</li> <li>2. Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</li> </ol> <p><b>OCEN 2</b> <i>Course-level SLOs:</i></p> <ol style="list-style-type: none"> <li>1. Recognize major seafloor features based on their shape and interpret their origin using plate tectonic theory</li> <li>2. Analyze how the Earth's oceans are part of the Earth's systems from geological, chemical, biological, and physical perspectives</li> <li>3. Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</li> </ol>	<p><b>Geology</b></p> <p>18 units from: CHEM 1A, CHEM 1B, GEOL 2, MATH 20A, MATH 20B, PHYS 3A, PHYS 3B (no GEOL prereqs)</p> <p><i>Program-level SLO:</i></p> <p><i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p> <p><b>Oceanography</b></p> <p>18 units from: OCEN 2, CHEM 1A, CHEM 1B, MATH 20A, MATH 20B, PHYS 3A, PHYS 3B (no OCEN prereqs)</p> <p><i>Program-level SLO:</i></p> <p><i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p>
<p><b>Social Science</b></p> <p>ANTH 2, ECON 1, HIST 2, POLS 2, WOMN 10, SOCI 1, etc....</p> <p><i>GEO:</i></p> <p><i>Critically examine and comprehend human nature and behavior, social traditions, and institutions</i></p>	<p><b>ANTH 2</b> <i>Course-level SLOs:</i></p> <ol style="list-style-type: none"> <li>1. Differentiate between fact and opinion and recognize logical fallacies of reasoning</li> <li>2. Demonstrate their knowledge of the unique place of humanity in the biological world.</li> <li>3. Critically examine and comprehend human nature and behavior, social traditions, and institutions</li> </ol>	<p><b>Anthropology</b></p> <p>30 units from: ANTH 2, ECON 1, HIST 2, POLS 2, WOMN 10, SOCI 1, etc.... (no ANTH prereqs)</p> <p><i>Program-level SLO:</i></p> <p><i>Critically examine and comprehend human nature and behavior, social traditions, and institutions</i></p>

The goal is to explain this chart...

...and what we need to do to implement the plan

General Education Areas <i>General Education Outcomes (GEOs)</i>
<p><b>Natural Science</b></p> <p>GEOL 2, OCEN 2, ASTR 10, CHEM 1A, PHYS 2A, BIOL 10, etc....</p> <p><i>GEO:</i> <i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p>
<p><b>Social Science</b></p> <p>ANTH 2, ECON 1, HIST 2, POLS 2, WOMN 10, SOCI 1, etc...</p> <p><i>GEO:</i> <i>Critically examine and comprehend human nature and behavior, social traditions, and institutions</i></p>

Let's start with the 1<sup>st</sup> column:  
General Education Areas

1. There are several GE Areas.  
Two examples are shown here:  
Natural Science and Social Science.

2. GE Areas are comprised of several  
courses, each of which satisfies GE  
Area requirements.

3. Each GE Area has a GEO:  
General Education Outcome .

4. GEOs describe what students should  
be able to do when they complete any  
of the courses in a GE Area.

5. The GEOs are evaluated as part of the  
course-level SLO evaluation for those  
courses that satisfy GE requirements.

General Education Areas <i>General Education Outcomes (GEOs)</i>	Courses <i>Course-level SLOs</i>
<p><b>Natural Science</b></p> <p>GEOL 2, OCEN 2, ASTR 10, CHEM 1A, PHYS 2A, BIOL 10, etc....</p> <p><i>GEO:</i> <i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p>	<p><b>GEOL 2</b> <i>Course-level SLOs:</i></p> <p>1. Use observations of rock types and landscape morphology to interpret basic geologic history and processes</p> <p>2. Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</p> <p><b>OCEN 2</b> <i>Course-level SLOs:</i></p> <p>1. Recognize major seafloor features based on their shape and interpret their origin using plate tectonic theory</p> <p>2. Analyze how the Earth's oceans are part of the Earth's systems from geological, chemical, biological, and physical perspectives</p> <p>3. Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</p>
<p><b>Social Science</b></p> <p>ANTH 2, ECON 1, HIST 2, POLS 2, WOMN 10, SOCI 1, etc...</p> <p><i>GEO:</i> <i>Critically examine and comprehend human nature and behavior, social traditions, and institutions</i></p>	<p><b>ANTH 2</b> <i>Course-level SLOs:</i></p> <p>1. Differentiate between fact and fiction and recognize logical fallacies and faulty reasoning</p> <p>2. Demonstrate their knowledge of the unique place of humanity in the biological world.</p> <p>3. Critically examine and comprehend human nature and behavior, social traditions, and institutions</p>

We'll continue with the 2<sup>nd</sup> column:  
**Courses**

1. Each course has 1-3 SLOs.

2. Some courses satisfy GE requirements. These courses have a GEO as one of their SLOs. Three examples are shown here; GEOL 2, OCEN 2, and ANTH 2.

3. A single GEO serves as one of the SLOs in all courses that satisfy a GE Area.

**General Education Areas**  
*General Education Outcomes (GEOs)*

**Transfer Programs**  
*Program-level SLOs*

Now we'll look at the 3<sup>rd</sup> column:  
Transfer Programs

**Natural Science**

GEOL 2, OCEN 2, ASTR 10, CHEM 1A, PHYS 2A, BIOL 10, etc....

**GEO:**

*Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them*

**Social Science**

ANTH 2, ECON 1, HIST 2, POLS 2, WOMN 10, SOCI 1, etc....

**GEO:**

*Critically examine and comprehend human nature and behavior, social traditions, and institutions*

1. Each transfer program has, as an integral part, at least one course that also satisfies a GE requirement.

2. The GEO for these courses also serve as the Program SLO for the associated transfer programs.

3. Three examples are shown in the third column:  
GEOL 2 -- Geology Program  
OCEN 2 -- Oceanography Program  
ANTH 2 -- Anthropology Program

**Geology**  
18 units from: CHEM 1A, CHEM 1B, GEOL 2, MATH 20A, MATH 20B, PHYS 3A, PHYS 3B (no GEOL prereqs)  
*Program-level SLO:*

*Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them*

**Oceanography**  
18 units from: OCEN 2, CHEM 1A, CHEM 1B, MATH 20A, MATH 20B, PHYS 3A, PHYS 3B (no OCEN prereqs)  
*Program-level SLO:*

*Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them*

**Anthropology**  
ANTH 2, ANTH 4, ANTH 6, LING 15, MATH 16  
3 units from: ANTH 11, ANTH 20, ANTH 21, ANTH 30 (no ANTH prereqs)  
*Program-level SLO:*

*Critically examine and comprehend human nature and behavior, social traditions, and institutions*

<b>General Education Areas</b> <i>General Education Outcomes (GEOs)</i>	<b>Courses</b> <i>Course-level SLOs</i>	<b>Programs</b> <i>Program-level SLOs</i>
<p><b>Natural Science</b></p> <p>GEOL 2, OCEN 2, ASTR 10, CHEM 1A, PHYS 2A, BIOL 10, etc....</p> <p><i>GEO:</i></p> <p><i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p>	<p><b>GEOL 2</b> <i>Course-level SLOs:</i></p> <ol style="list-style-type: none"> <li>1. Use observations of rock types and landscape morphology to interpret basic geologic history and processes</li> <li>2. Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</li> </ol> <p><b>OCEN 2</b> <i>Course-level SLOs:</i></p> <ol style="list-style-type: none"> <li>1. Recognize major seafloor features based on their shape and interpret their origin using plate tectonic theory</li> <li>2. Analyze how the Earth's oceans are part of the Earth's systems from geological, chemical, biological, and physical perspectives</li> <li>3. Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</li> </ol>	<p><b>Geology</b></p> <p>18 units from: CHEM 1A, CHEM 1B, <b>GEOL 2</b>, MATH 20A, MATH 20B, PHYS 3A, PHYS 3B (no GEOL prereqs)</p> <p><i>Program-level SLO:</i></p> <p><i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p> <p><b>Oceanography</b></p> <p>18 units from: CHEM 1A, CHEM 1B, <b>OCEN 2</b> MATH 20A, MATH 20B PHYS 3A, PHYS 3B (no OCEN prereqs)</p> <p><i>Program-level SLO:</i></p> <p><i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i></p>
<p><b>Social Science</b></p> <p>ANTH 2, ECON 1, HIST 2, POLS 2, WOMN 10, SOCI 1, etc...</p> <p><i>GEO:</i></p> <p><i>Critically examine and comprehend human nature and behavior, social traditions, and institutions</i></p>	<p><b>ANTH 2</b> <i>Course-level SLOs:</i></p> <ol style="list-style-type: none"> <li>1. Differentiate between fact and fiction and recognize logical fallacies and faulty reasoning</li> <li>2. Demonstrate their knowledge of the unique place of humanity in the biological world.</li> <li>3. Critically examine and comprehend human nature and behavior, social traditions, and institutions</li> </ol>	<p><b>Anthropology</b></p> <p><b>ANTH 2</b>, ANTH 4, ANTH 6, LING 15, MATH 16</p> <p>3 units from: ANTH 11, ANTH 20, ANTH 21, ANTH 30 (no ANTH prereqs)</p> <p><i>Program-level SLO:</i></p> <p><i>Critically examine and comprehend human nature and behavior, social traditions, and institutions</i></p>

## Benefits of the MPC SLO-GEO Plan

1. A single outcome serves three purposes: course-level SLO, program-level SLO, and GEO
2. An emphasis on dialog: professionals talking to professionals about teaching and student learning
3. All three outcomes are evaluated at the same time: during the normal evaluation of course-level SLOs within the program review framework
4. No SLO Assessment Committee to review assessments of SLOs; it is all done at the department or “group” level
5. No assessments required beyond what is normally done to assign student grades
6. It’s Simple; it only seems complex at the beginning

# Implementation of the SLO-GEO Plan September, 2010

Faculty in charge of transfer programs and GE courses are asked for two things at this time:

1. Acknowledgement\* that they support the most closely associated GEO to be used as the program-level SLO for their program, and entered into CurricUNET
2. Acknowledgement\* that they support the most closely associated GEO to be used as one of the course-level SLOs for their GE courses, and entered into CurricUNET

Transfer Programs <i>Program-level SLOs</i>
<b>Geology</b> 18 units from: CHEM 1A, CHEM 1B, GEOL 2 , MATH 20A, MATH 20B, PHYS 3A, PHYS 3B (no GEOL prereqs) <i>Program-level SLO:</i>
<i>Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them</i>

Courses <i>Course-level SLOs</i>
<b>GEOL 2</b> <i>Course-level SLOs:</i> 1. Use observations of rock types and landscape morphology to interpret basic geologic history and processes
2. Use the scientific method to investigate phenomena in the natural world and use concepts, experiments, and/or theory to explain them

\*Please send acknowledgment as an e-mail to Fred Hochstaedter and Michael Gilmartin