

Saint Louis University
Program Assessment Plan

Program (Major, Minor, Core): Graduate Programs in Geoscience, Graduate Programs in Atmospheric Science
Department: Earth & Atmospheric Sciences
College/School: College of Arts & Science
Person(s) Responsible for Implementing the Plan: Department Chair
Date Submitted: 31 May 2017, Updated 6 Oct 2017

Program Learning Outcomes	Curriculum Mapping	Assessment Methods	Use of Assessment Data
<i>What do you expect all students who complete the program to know, or be able to do?</i>	<i>Where is the outcome learned/assessed (courses, internships, student teaching, clinical, etc.)?</i>	<i>How do students demonstrate their performance of the program learning outcomes? How does the program measure student performance? Distinguish your direct measures from indirect measures.</i>	<i>How does the program use assessment results to recognize success and "close the loop" to inform additional program improvement? How/when is this</i>

<p>Goal 1: Assess relevant literature or scholarly contributions in the Earth & Atmospheric Sciences</p>	<p>Journal Club, Seminar, Graduate Classes, Research</p>	<p>1.1: Student can list the main journals in the field. 1.2: Student can outline the main areas of research in their field of study. 1.3: Student can identify notable research groups and investigators. Student can demonstrate broad knowledge of areas outside of their sub-specialty, and specific knowledge of publications in their field. 1.4: Student can indicate the current key issues and highly-cited papers in the field and identify emerging trends and new research directions. 1.5: Student can identify the most important historical contributions in the field and outline their importance.</p>	<p>See Above</p>
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Goal 2: Apply the major practices, theories, or research methodologies in the Earth & Atmospheric

Goal 4a: Articulate arguments or explanations to both a disciplinary or professional audience and to a general audience, in oral forms

Journal club,
research
presentations,
conferences, classes

4a.1: Student can give a prepared talk.

4a.2: Student integrates figures and graphics into their presentation.

4a.3: Student answers questions competently and

1. It is not recommended to try and assess (in depth) all of the program learning outcomes every semester. It is best practice to plan out when each outcome will be assessed and focus on 1 or 2 each semester/academic year. Describe the responsibilities, timeline, and the process for implementing this assessment plan.

The committee decided that we would prefer to fill out the evaluation form for all 6 goals each year rather than for a subset of the goals.
The assessment plan

Graduate Program Assessment: Evaluation Sheet to be completed by Professors / Advisors

Student: _____ Program: _____
No. Semesters in Department: _____ Date: _____
Evaluator: _____

For each item below, please rate the student's strength on a scale of 1 to 5 where 1: not achieved yet, 2: beginning, 3: making progress, 4: meets expectations, 5: exceeds expectations.
Please add a short comment for each goal to illustrate the way in which the student demonstrated attainment.
Note that the purpose of this evaluation sheet is to assess the program, not the student.

Goal 1: Assess relevant literature or scholarly contributions in the Earth & Atmospheric Sciences:

- ___ 1.1: Student can list the main journals in the field.
- ___ 1.2: Student can outline the main areas of research in their field of study.
- ___ 1.3: Student can identify notable research groups and investigators. Student can demonstrate broad knowledge of areas outside of their sub-specialty, and specific knowledge of publications in their field.
- ___ 1.4: Student can indicate the current key issues and highly-cited papers in the field and identify emerging trends and new research directions.
- ___ 1.5: Student can identify the most important historical contributions in the field and outline their importance.

Comments:

Goal 2: Apply the major practices, theories, or research methodologies in the Earth & Atmospheric Sciences:

- ___ 2.1: Student is aware of different skills needed to carry out research in E&AS, eg. data analysis, field work, numerical modeling, computational competence.
- ___ 2.

Goal 4: Articulate arguments or explanations to both a disciplinary or professional audience and to a general audience, in both oral (4a) and written (4b) forms:

- ___ 4a.1: Student can give a prepared talk.
- ___ 4a.2: Student integrates figures and graphics into their presentation.
- ___ 4a.3: Student answers questions competently and adjusts their presentation style based on audience feedback.
- ___ 4a.4: Student uses technical words precisely and is able to explain concepts without jargon.
- ___ 4a.5: Student is familiar with examples of outstanding speakers in the field and aspires to excellence themselves.

Comments:

- ___ 4b.1: Student is familiar with examples of excellent writing and with sources of advice on scientific writing.
- ___ 4b.2: Student can write about their work clearly.
- ___ 4b.3: Student can create publication quality figures and graphics.
- ___ 4b.4: Student revises their written work based on feedback.
- ___ 4b.5: Student writing is clear and concise while avoiding confusing sentence constructions.

Comments:

Goal 5: Evidence scholarly and/or professional integrity in Earth & Atmospheric Sciences:

- ___ 5.1: Student knows about cases of fraud in science and can explain the importance of integrity in research.
- ___ 5.2: Student cite work appropriately.
- ___ 5.3: Student describe both positive and negative results and give sufficient detail about their work so that it can be replicated.
- ___ 5.4: Student describes weaknesses in their own work.
- ___ 5.5: Student is able to question themselves, accept criticism and grow from it.

Comments:

General Comments:

Graduate Program Assessment: Self-Assessment

Program:

No. Semesters in Department:

Date:

For each item below, please rate your strength on a scale of 1 to 5 where 1: very weak, 2: weak, 3: average, 4: strong, 5: very strong, relative to your fellow graduate students.

Please add a short comment for each goal to describe one of the more significant areas of progress you feel you have made, and progress you plan to make.

Note that the purpose of this evaluation sheet is to assess the program, not the student.

Goal 1: Assess relevant literature or scholarly contributions in the Earth & Atmospheric Sciences:

- _____ 1.1: Student can list the main journals in the field.
- _____ 1.2: Student can outline the main areas of research in their field of study.
- _____ 1.3: Student can identify notable research groups and investigators. Student can demonstrate broad knowledge of areas outside of their sub-specialty, and specific knowledge of publications in their field.
- _____ 1.4: Student can indicate the current key issues and highly-cited papers in the field and identify emerging trends and new research directions.

Atmospheric Sciences:

- _____ 2.1: Student is aware of different skills needed to carry out research in E&AS, eg. data analysis, field work, numerical modeling, computational competence.
- _____ 2.2: Given a figure, student could describe a method that could be used to generate it.
- _____ 2.3: Student has demonstrated competence with several different skill sets.
- _____ 2.4: Student has reached expert level in one type of skill.
- _____ 2.5: Given a paper in the student's specialty, the student could create a plan to reproduce the study.

Something I've progressed on:

Something I plan to work on:

Goal 3: Apply knowledge from the Earth & Atmospheric Sciences to address problems in broader contexts:

- _____ 3.1: Student can identify the main areas of societal relevance in E&AS.
- _____ 3.2: Student can explain how their field impacts society.
research.
- _____ 3.5: Student can evaluate policy prescriptions and political debates in the light of their discipline.

Something I've progressed on:

Something I plan to work on:

Goal 4: Articulate arguments or explanations to both a disciplinary or professional audience and to a general audience, in both oral (4a) and written (4b) forms:

- _____ 4a.1: Student can give a prepared talk.
- _____ 4a.2: Student integrates figures and graphics into their presentation.
- _____ 4a.3: Student answers questions competently and adjusts their presentation style based on audience feedback.
- _____ 4a.4: Student uses technical words precisely and is able to explain concepts without jargon.
- _____ 4a.5: Student is familiar with examples of outstanding speakers in the field and aspires to excellence themselves.

Something I've progressed on:

Something I plan to work on:

- _____ 4b.1: Student is familiar with examples of excellent writing and with sources of advice on scientific writing.
- _____ 4b.2: Student can write about their work clearly.
- _____ 4b.3: Student can create publication quality figures and graphics.
- _____ 4b.4: Student revises their written work based on feedback.
- _____ 4b.5: Student writing is clear and concise while avoiding confusing sentence constructions.

Something I've progressed on:

Something I plan to work on:

Goal 5: Evidence scholarly and/or professional integrity in Earth & Atmospheric Sciences:

- _____ 5.1: Student knows about cases of fraud in science and can explain the importance of integrity in research.
- _____ 5.2: Student cite work appropriately.
- _____ 5.3: Student describe both positive and negative results and give sufficient detail about their work so that it can be replicated.
- _____ 5.4: Student describes weaknesses in their own work.
- _____ 5.5: Student is able to question themselves, accept criticism and grow from it.

Something I've progressed on:

Something I plan to work on:

General Comments on your Graduate Program: