GG610
Spring 2012
Friday, 1:30 - 2:20 2:50
Steve Martel
POST 805
smartel@hawaii.edu
956-7797

Class Roster (26)

1 Tayro Acosta
2 Naif Alquthami
3 James Bishop
4 Brian Boston
5 Dana Brodie
6 Alice Colman
7 Sarah Crites
8 Benjamin Czeck
9 Joseph Fackrell
10 Emily First
11 Patrick Gasda
12 Sarah Glancy
13 Samantha Jacob
14 Maria Janebo
15 Christine Jilly
16 Haunani Kane
17 Kendra Lynn
18 Sarah Maher
19 Matthew Markely
20 Katharine Robinson
21 Myriam Telus
22 David Trang
23 Jonathan Tree
24 Christine Waters
25 Gabrielle Weiss
26 Jonathan Weiss
Main Theme for a Good Presentation

- Define a potent central theme, stick to it, and develop it – relentlessly

- Focus: Short presentations
## Goals vs. Objectives

<table>
<thead>
<tr>
<th>Goals</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Broad</td>
<td>• Narrow</td>
</tr>
<tr>
<td>• General</td>
<td>• Specific</td>
</tr>
<tr>
<td>• Intangible</td>
<td>• Tangible</td>
</tr>
<tr>
<td>• Can't be validated</td>
<td>• Can be validated</td>
</tr>
<tr>
<td>• Example</td>
<td>• Example</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>– Become a well-prepared geologist</td>
</tr>
<tr>
<td></td>
<td>– Complete my thesis on Kilauea by March 30</td>
</tr>
</tbody>
</table>

## Class Goals and Objectives

<table>
<thead>
<tr>
<th>Goals</th>
<th>Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Develop ability to communicate in short formats by practice</td>
<td>• Present one 15-minute AGU-style talks</td>
</tr>
<tr>
<td></td>
<td>• Prepare one effective single-paragraph abstract</td>
</tr>
<tr>
<td>• Provide pointers for better writing</td>
<td>• Constructively critique 13 peer presentations</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Course Logistics

Course Schedule

<table>
<thead>
<tr>
<th>Week(s)</th>
<th>Topic(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction / Writing organization &amp; style</td>
</tr>
<tr>
<td>2</td>
<td>Oral presentations</td>
</tr>
<tr>
<td>3</td>
<td>Abstracts</td>
</tr>
<tr>
<td>4</td>
<td>TBA</td>
</tr>
<tr>
<td>5</td>
<td>Pop Ups (2 minutes/person)</td>
</tr>
<tr>
<td>6-11</td>
<td>15-minute presentations (3/session; 1-18)</td>
</tr>
<tr>
<td>12</td>
<td>Spring Break</td>
</tr>
<tr>
<td>13-15</td>
<td>15-minute presentations (3/session; 19-27)</td>
</tr>
<tr>
<td>16  4/26/13</td>
<td>Class evaluation</td>
</tr>
</tbody>
</table>
## Session Schedule for Presentations

<table>
<thead>
<tr>
<th>Time (minutes)</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Logistics</td>
</tr>
<tr>
<td>15</td>
<td>Oral presentation 1 (with questions)</td>
</tr>
<tr>
<td>10</td>
<td>Critique 1</td>
</tr>
<tr>
<td>15</td>
<td>Oral presentation 2 (with questions)</td>
</tr>
<tr>
<td>10</td>
<td>Critique 2</td>
</tr>
<tr>
<td>15</td>
<td>Oral presentation 3 (with questions)</td>
</tr>
<tr>
<td>10</td>
<td>Critique 3</td>
</tr>
<tr>
<td>80 minutes</td>
<td></td>
</tr>
</tbody>
</table>

## Grades

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral Presentation*</td>
<td>40%</td>
</tr>
<tr>
<td>Critiques of peer presentations (13)</td>
<td>30%</td>
</tr>
<tr>
<td>Abstract**</td>
<td>20%</td>
</tr>
<tr>
<td>Pop-Up (1-slide, 2 minutes)**</td>
<td>10%</td>
</tr>
</tbody>
</table>

* Will be open to others in SOEST
** Due 1 week before your presentation
*** Due 2/6/13 (Wednesday)

[Due 1 week before your presentation]
Writing Tips

Key Attributes of a Good Presentation

• Value
• Focus
• Clarity
  – In writing
  – In illustrations
• Good organization
Key Attributes of a Good Presentation

- Value
- Focus
- Clarity
  - In writing
  - In illustrations
- Good organization

- Conciseness
- Economy
- Humility
- Acknowledgement
- Memorability

Generic Scientific Outline

- Abstract
- Introduction
- Procedure
- Data
- Analysis
- Discussion
- Conclusions
- Acknowledgements
- References
- Figures
Generic Scientific Outline

- Abstract
- Introduction
- Procedure
- Data
- Analysis
- Discussion
- Conclusions
- Acknowledgements
- References
- Figures

- An outline is not needed for a 13-minute AGU-style talk!
- It wastes 2 minutes!

Establish a Theme or a Thread

http://upload.wikimedia.org/wikipedia/commons/f/fa/Crystbeads.jpg

Better Scientific Outline

- Abstract
- Introduction
- Procedure
- Data
- Analysis
- Discussion
- Conclusions
- Acknowledgements
- References
- Figures

Abstract

“Scrutiny of the Abstract, II”

http://www.ees.nmt.edu/outside/Geop/Classes/Geop592/Landes[1].pdf

- “in terms of market reached, ... the most important part of the paper” (Landes, 1966)

- Tip: Write this first to focus.
  Then rewrite, rewrite, and rewrite...

- To be continued...
Introduction
(From “Scrutiny of the Introduction”)
http://sep.stanford.edu/sep/prof/Intro.html

• Purpose: invite readers to invest in your paper

Introduction
(From “Scrutiny of the Introduction”)
http://sep.stanford.edu/sep/prof/Intro.html

• Purpose: invite readers to invest in your paper
• Organization
  1 Review
  2 Claim
  3 Agenda
Introduction
(From “Scrutiny of the Introduction”)
http://sep.stanford.edu/sep/prof/Intro.html

• Purpose: invite readers to invest in your paper
• Organization
  1 Review: Relevant background to motivate paper
  2 Claim: Your central thesis/purpose/hypothesis
  3 Agenda: Road map
    • Explain how paper works to fulfill claim
    • Don’t merely recite topics
    • Agenda should clarify claim

Example of an Agenda: Gudmundsson, 1998
Formation and development of normal-fault calderas and the initiation of large explosive eruptions

The first objective of this paper is to provide a model for the initiation and development of the boundary faults of normal-fault calderas. This model is based on, firstly, the results of a boundary-element study on the stress field around shallow magma chambers of different shapes and subject to various loading conditions, and, secondly, analytical solutions on the doming (bending) of elastic plates. A second objective is to use this model as an explanation for large explosive eruptions in general and the empirical relation between collapse and large eruptions in particular. This is done by considering the effect of slip in normal-fault calderas on the potential fluid excess (driving) pressure in the magma chamber associated with the calderas.
Paragraph

- “A self-contained unit dealing with a particular point or thought”
- Topic sentence – Introduces the thought
- Development of the thought
- Concluding sentence
  - Wraps up the thought
  - Relates to the topic sentence
  - Leads into the next paragraph

Expressions of Degree of Confidence

- Know (High confidence)
- Determine
- Establish
- Ascertain
- Understand
- Conclude
- Deduce
- Judge
- Infer
- Suspect
- Guess (Low confidence)
- Believe (Avoid because of “faith-based” connotations)
Phrases to Avoid & Alternatives

- At depths up to 20m → At depths as great as 20m
- It is most likely that... → Most likely...
- There are many reasons ... → For many reasons...
- A number of papers ... → Several papers
- A significant difference → A difference of 10%
- The planet is very small → The planetary radius is 6400 km

Good References

- Suggestions To Authors (Bishop et al., 1978)
- Scrutiny of the Abstract, II (K.K. Landes, 1966)
- The Elements of Style (Strunk and White, 1999)
  - http://www.bartleby.com/141/
- The Nuts and Bolts of College Writing (Harvey, 2003)
- Tips for Good Scientific Writing
  - http://www.soest.hawaii.edu/GG/FACULTY/ITO/
- Tips on Scientific Writing (Go to Teaching->GG410 Undergraduate Seminar)
- Writing Scientific Manuscripts
- From “The Writing Center” at the University of North Carolina (esp. for paragraphs)
  - http://writingcenter.unc.edu/resources/handouts-demos/specific-writing-assignments/scientific-reports
  - http://writingcenter.unc.edu/resources/handouts-demos/writing-the-paper/paragraphs
- Words of Estimative Probability
- Glossary of Critical Thinking Terms
Conclusions

• Set and develop a potent theme*
• Accompanying activities
  – Focus
  – Be economical
  – Support theme by structure, content, and clarity
  – Revise
  – Practice