Survey of Hiring Practices in Geoscience Industries

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Purpose and methods

- **What, when, where:**

- **Who did interviews and analysis:**
  2 undergraduates and 2 STLFs obtained 65 interviews.

- **Why:**
  Inform students and the Department about needs and expectations of companies hiring new geoscience B.Sc. graduates.

- **How:**
  2) Data collected by 4 interviewees over 3 days, Jan. 2010.
  3) Survey data transcribed.
  4) Coded for emergent patterns (like grounded theory analysis).
  5) Plotted, summarized, disseminated to Dep’t EOS, students, curriculum committees, undergraduate advisors, etc.
Results from Pilot survey

- Feedback forms completed by 21 of 40 participants at the BC Geophysical Society’s Symposium: Geophysics in 3D, Oct 2009.
- Eight open-ended questions (no interviews).
- Results helped refine the more general Jan 2010 interviews.
How do Companies Recruit Entry-Level Employees?

- Company Website
- Word of Mouth/Networking
- Internet Job Banks
- Tradeshow/Conference
- Career Days/Postings in Schools
- Coop
- Magazine/local ads
- University Connections
- Cold Calls/Cold Emails
- Others

What Types of Professionals do Companies Hire?

- Geol. Eng
- Geology
- Env Sci
- Geophysics
- Manage/Finance/Sales
- Hydrogeology
- Civil Eng
- Geochm
- Mining Eng
- Technicians/Operators
- Programming/IT/Software
- Oceanography
- Chem
- Bio
- Other Sciences (Phy/Math/LifeSci)
- Others
Preferred Institutions

<table>
<thead>
<tr>
<th>Institutions</th>
<th>No preference</th>
<th>UBC</th>
<th>Outside B.C.</th>
<th>BCIT</th>
<th>SFU/UVic</th>
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UBC programs hired from

<table>
<thead>
<tr>
<th>Institutions</th>
<th>EOSC Engineering</th>
<th>Bio/Chem/Biochem</th>
<th>Forestry</th>
<th>Others (e.g., Life Sci, Physics,..)</th>
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<td></td>
<td>10</td>
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Impressions of UBC Graduates:

- "hardworking"; "smart"; "fast learner";
- "knowledgeable"; "eager"; "fine to work with"
- "UBC has asset over other schools ..."
- "reputation is good for geology and mining industry"
- "Strong in geology, geochem, mining and hydrogeology"

- "not focused enough compared to BCIT";
- "better programs in Thunderbay, Camosun";
- "no technical writing skills";
- "too theoretical";
- "don't like dirty lab work"
What does “Major in Earth & Ocean Sciences” mean to you?

- Too General/Not specific
- "I don't know"
- Geol/Oceanography/Earth/Hydrology
- Others

Meaning of “Major in Earth and Ocean Science”

- “confusing”
- “so big …. I guess the whole physical environment”
- “which group is it? Biologist? Geologist? Ecologist?”
- “doesn't seem specifically trained for geology”
- “it means everything…. covers the whole earth”
- "no idea what it means"

- “it is attractive to our company”
When assessing resumes, how interesting are the following types of qualifications?

- **Very Interesting**
  - Relevant Work Experience
  - Co-op
  - Exchange
  - Field Experience
- **Somewhat Interesting**
  - Honours Degree
  - Completed APEGBC Requirements
  - Other Work Experience (Not Related to Industry)
  - Research Experience
- **Not Very Interesting**
  - A Minor Degree Added to a Major Degree
Key Skills Which Recent Graduates are Expected to Have

Field Skills Examples: Mapping, core logging, GPS, etc

Computer Skills: **Microsoft
- Field Work
- Computer Literate
- Know how things work/apply knowledge
- Writing
- Personality
- Communications
- Team work
- Willingness/Flexibility
- Project Management
- Data Manipulation/Processing
- Self-initiator
- As long as they are trainable
- Adaptability/Multitask
- Safety
- Lab
- Work Independently
- Physical Fitness
- Follow Instructions
- Problem-solving
- GIS
- Others

Eleven consulting companies say writing is a key skill
“Know the basic knowledge in your own field and how the industry works.”
Personal Attributes/Attitudes Companies Look for in New Hires:

- Willing to learn/do
- Hardworking
- Passionate/Show Interest
- Initiative/Self-motivated
- Friendly/Easy going/Happy
- Team Work
- Willing to do field work and travel
- Good work ethics/Responsible
- Follow Instructions
- Wellspoken
- Punctual/Meet Deadline
- Work Independently
- Positive
- Confident
- Dynamic
- Flexible
- Problem solving/Think outside the box
Persistent Shortcomings in Recent Bachelor Level Graduates

- No Shortcoming
- Unrealistic Expectations
- Not willing to go to the field/get dirty
- Not Professional
- Lack of related experience
- Not willing to learn/adapt
- Writing
- Others

New Skills Expected in the Next Generation

- Computer Skills
- Adaptability/Multidiscipline
- Data Handling
- GIS
- Project Management
- Field Skills
- Can’t think of any
- Others
Dissemination of Results

- Report customized for Department use
- Report customized for Students’ use
  - Advisors
  - Student clubs
  - Website
- Share lessons learned with other departments.
  - Interview questions and protocol.
- Possibilities for follow up:
  - Refined online version for future use & follow up.
  - Contact APEGBC for corroborating data and/or collaborative dissemination.