

SWOT Analysis worksheet

This worksheet was provided at the EER 2023 workshop “*What skills do bachelor-level students need and where are these practiced in my program?*”. [Program with links, refs and pointers.](#)

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Name:

Course/program:

Objective: The task you are aiming to accomplish or the question you are posing.
(Example: “*What can we do to improve with opportunities students have to learn about and develop the knowledge, skills, and dispositions they will use in the geoscience workforce?*”)

Three steps to the SWOT analysis process: 1) Articulate, 2) Analyze, 3) Plan actions.

Step 1, Articulate: Assess strengths, weaknesses, opportunities, threats

	Helpful to achieving the objective	Harmful to achieving the objective
Existing aspects or components	<i>Strengths</i> ● Type strengths here	<i>Weaknesses</i> ● Type weaknesses here
External or potential aspects or components	<i>Opportunities</i> ● Type opportunities here	<i>Threats</i> ● Type threats here

The 4 matrix segments can be addressed by posing questions as illustrated below. These serve as an example of the type of thinking that can drive relevant and productive discussions. The examples are not meant to be exhaustive – they simply offer some ideas of how a SWOT analysis can proceed.

Objective: *Example:* To provide geophysics students with opportunities to learn about and develop the knowledge, skills, and dispositions they will use in the geoscience workforce.

Questions: consider the phrase, "*and how do we know?*" What evidence you have for your strengths and weaknesses.

Strengths

1. What is effective about your course or program in connecting students to careers?
 - Coop
 - Data science oriented faculty
 - Math-capable faculty
 - Existing minerals focus (although not geoph.)
2. What resources do you have at your university and in your region to support connections to the geoscience workforce?
 - Well-managed coop
 - BCGS (although professionals have little time)
3. Which students are you serving well (i.e., what kinds of careers have your students been successful going into from your program)?
 - Pre-grad students.
 - Scientifically-minded students.
4. Other
 - A supportive Head (even if faculty are less supportive)

Weaknesses

1. What is less effective about your course or program in terms of connecting students to geoscience careers?
 - Few direct relationships between courses offered and relevant or potential careers. AKA courses that are science rather than application oriented.
 - Insufficient field experiences
 - Add more ...
2. What resources do you need but lack in your department, university, or region?
 - Regular, concrete and coordinated relationships with industry (mdru, bcgs, ...)
3. What annoys, frustrates, or disappoints your students about career preparation?
 - Relating theory to practical
 - Lack of info about both opportunities and necessary steps to become a professional.
4. Other
 - Student (& parent) awareness of opportunities in geoscience (a ubiquitous issue)
 - Advising in geoph – could become an opportunity.
 - Shortage of grad/ugrad interactions. What low cost options? Maybe TA contributions other than the course itself.
 - Tendency for faculty to focus on their own priorities.

Opportunities

1. Which courses or co-curricular activities exist that could highlight workforce skills?

- Reintroduction of an applied geophysics course for geophysics students.
- Co-op
- Summer internships or jobs
- 2. What local and regional connections do you have in the geoscience workforce?
 - BCGS
 - MDRU
 - GIF
- 3. What connections can you foster with your alumni?
 - BCGS
 - Seek alumni in “other” jobs.
- 4. What strategic plans or institutional initiatives are aligned with the work you want to do?
 - BC gov mandate to establish QA for programs
 - Funded curriculum renewal – QuEST
- 5. Other
 - Connect with career centre.
 - LinkedIn group for dept, alumni, students.
 - Clubs – lots of discussion. Rationalize clubs – more communicative, and grads too.
 - Careers development course at 3rd yr.
 - Grad/ugrad relationships?
 - Improve advising
 - Have students engage with Craig’s 4 questions. Senior students talk to 1st yrs?
 - Capture coop, goglobal and other experiences of students for younger students – in a seminar, in a course, as a collection in the LMS.

Threats or barriers

1. How is the workforce in your region changing?
 - Minex and mining is re-emerging as important
 - Datascience and changing methods or ways of working (AI, ML)
2. What are attitudes towards career preparation in your department and institution?
 - Head / institution are supportive, faculty less so.
 - “changing” courses is hard to do
 - faculty are hard to convince.
3. Other
 - Local personnel or time to support / advocate / develop.
 - Relevant science education specialist is leaving at end of 2023.
 - Reluctance (short of time/energy) of faculty to learn about other aspects of their disciplines.

Step 2, Analyze, rank, & correlate your entries in the SWOT matrix

After you have filled in the matrix, you can **rank** the strengths, weaknesses, opportunities, and threats within it.

Matches between strengths and opportunities:

Vulnerabilities where weaknesses correlate with threats:

Ideas for converting threats to opportunities or weaknesses into strengths:

Step 3, Planning: Use the analysis to plan for change

What is your **revised objective** now that you have completed the SWOT?

What **evidence** do you need to gather to make your case?

Who are your potential **allies** and what strategies do you have to bring them on board? *(These are the people that are central to moving the project forward.)*

Who are your potential **collaborators** and what do they bring to the table? *(These are the people who can support your efforts.)*

How will you know if you have been **successful**?

What is your **timeline** to achieve your objective?