

# STEM Fellowship

## 2018 Spring Internships Application Handbook

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## ABOUT STEM FELLOWSHIP

STEM Fellowship is a national, student-run, non-profit organization that aims to enrich the paths of students in Science, Technology, Engineering, and Math (STEM) fields through programs, competitions, and workshops. We have our own peer-reviewed open source journal through Canadian Science Publishing and are the organizers of The Big Data Challenge, a mentorship-based research competition in which students analyze big data to discover trends related to socioeconomic or environmental issues in their communities.

Our mission is to use mentorship and experiential learning to equip the next generation of change-makers in STEM with indispensable skills in research, data science, inquiry and scholarly writing. We additionally hope to foster the development of a strong community of like-minded, passionate and innovative students, researchers, and academic and industry experts.

## INTERNSHIP PROGRAM

Our program offers an opportunity for high school students to experience scientific research in a University of Calgary laboratory for five days during spring break. Student interns are mentored by graduate or PhD students and engage in cutting edge research in a specific field. This program allows interns to explore careers in research and develop insight into scientific inquiry through the research process. Our program has been successfully implemented at the University of British Columbia and Simon Fraser University and this is our first year of expansion to the University of Calgary.

## SHORT ANSWER QUESTIONS

This section is the most important, as it is where we get a sense of who you are and how you think and learn. When we select students, we are looking for individuals who will gain a lot from the experience by being engaged and enthusiastic during the internship.

Important things to highlight through your response:

1. Expand on your interest in the projects/subject areas that you have selected to apply for
  - a. Could include questions you have or specific areas of focus that you are interested in
  - b. Could include you considering a related career

- c. Any past experiences you may have had (i.e. things you've learned in school, extra-curricular, life experiences, etc.) that make this project or field of research stand out to you
2. Curiosity
  - a. Why are you interested in this program?
  - b. How will you take advantage of the opportunity for your own learning and development?
3. Responsibility and maturity
  - a. All of these projects take place in leading-edge labs with expensive equipment, samples, and reagents. Mentors are looking for someone they can trust, especially as you assist them to acquire data that will be used in their own research.
4. Perseverance and commitment
  - a. In order to be a successful researcher, it is necessary to be determined and committed to your work. In your responses, try to highlight relevant skills like perseverance that you possess
5. How you will apply this experience to your future; as well as the future of those around you?
  - a. You may speak about how your experience may contribute towards a future career, or that you are hoping to teach others about what you have learnt in the program, or even just gaining some hands on experience to prep for the next step in your career!
  - b. There is no wrong answer, so give it a shot! Past experience in research is not necessary or an asset for this program. Mentors are hoping to share their work and their passion for research with students who may not have had these kinds of opportunities, but are keen and motivated to learn.

## REFERENCE LETTERS

This is where we will see how someone else portrays you, and can use it to see if you are good fit for the internship; as well as compare it with what you said about yourself. Ask your reference early, and talk to them about setting a deadline that gives them enough time to write it.

1. Sit down with them and talk about what makes you well-suited and how the internship will benefit you
2. Come up with specific examples that show your reference you have the characteristics and skills to be successful in the program (i.e. taking initiative in a class project etc.) This will help your letter stand out because it isn't full of general comments (i.e. that you are a great student).

Need help finding a reference? They are all around you, ranging from employers to teachers to sports coaches. Don't be afraid to reach out to

those around you for an extra oomph when it comes to obtaining reference letters.

Good luck on the applications and feel free to contact us at [stemfellowshipucalgary@gmail.com](mailto:stemfellowshipucalgary@gmail.com) if you have any questions.