

# Biomechanics Research and Innovation Challenge

100 girls, 100 stories, 100 days

**STUDENT  
REGISTRATION  
NOW OPEN**





# WOULD YOU LIKE TO TAKE PART IN BRInC?

We are looking for female high school students in Year 9 or Year 10 to take part in the Biomechanics Research and Innovation Challenge (BRInC) during Term 2 and 3 in 2022. We invite all female students, including girls from culturally diverse backgrounds, girls with a disability, and Aboriginal and Torres Strait Islander girls from all over Australia to take part.

If you would like to learn about the opportunities biomechanics and other STEM careers have to offer, talk to your science teacher to sign you up to the BRInC program. You do not need any previous STEM experience or to be considering studying STEM after high school - just a willingness to learn something new!

For detailed information about the program, please read ahead. More information can also be found on [our website](#) and we are happy to answer to any questions you may have via email [brinc@canberra.edu.au](mailto:brinc@canberra.edu.au). The program is free of cost.

Register for the program [here](#).

We look forward to learning with you!

# ABOUT THE BRINC PROGRAM

The Biomechanics Research and Innovation Challenge (BRInC) is funded by the Federal Government's AusIndustry Women in STEM and Entrepreneurship (WISE) grant. It aims to raise awareness and participation of high school girls in biomedical engineering through focusing on the exciting field of biomechanics.



## What is biomechanics?

Biomechanics is all around us! It helps us understand the movement capabilities of humans, animals and even plants. It is a combination of all STEM fields and because of this, the applications of biomechanics are diverse, i.e. medical device design, enhancing sporting performance and understanding animal movement. Its applied nature provides the opportunity to work on real-world problems to improve individual's quality of life. That's why we love biomechanics!

The BRInC team comprises female researchers in biomechanics from the University of Canberra, Griffith University, University of Newcastle, University of Melbourne, Central Queensland University and the University of Queensland. The project is in collaboration with [BrainSTEM](#), an industry partner with extensive experience in STEM based mentoring programs.

# DELIVERY OF PROGRAM CONTENT

Over a period of 100 days, during Terms 2 and 3 of 2022, 100 Australian school girls will conduct a biomechanics project with the support and guidance of a female researcher in the field of biomechanics (BRInC program mentors).



Before kicking off the program, you will be teamed up with four other students from your school.



Your team will be assigned a mentor from your local area, and you will meet with her regularly across the course of the 13-week program to progress your projects and scientific discoveries.



The BRInC program will commence on Tuesday 3 May 2022 with an online Kickstarter event. During this week you meet with your mentor for the first time. Your teacher will accompany you to the university for all visits\*.



You will meet with your mentor approximately once a week to discuss the research or innovation project. The time and the format (online/face-to-face) of these mentoring sessions can be decided together between the mentor and the team.



You will take part in three workshops organised by BrainSTEM to build key STEM and life skills and to increase your awareness of associated entrepreneurial opportunities.



The BRInC program follows a design thinking framework (empathy, definition, ideation, prototyping, evaluating). The workshops and meetings with your mentor will follow this process to help you solve your research and/or innovation project challenge. We will teach you all about this framework during the program.



The program will conclude with each team presenting their project to the other teams and mentors in a virtual showcase event. These presentations will be judged, and the two winning teams will get to present their project to a wider, national audience (exact location and event TBC). Travel and accommodation costs associated with this prize will be included for the two winning teams.

\*Some (or all) of these sessions will involve travel to the University/Institution of your mentor, this will enable you to gain experience in a biomechanics laboratory.

# STATE TIMELINES

	<b>ACT, NSW, WA</b>	<b>QLD, VIC</b>	<b>SA, TAS, NT*</b>
2 May 2022	Week 1: Kickstarter	Week 1: Kickstarter	Week 1: Kickstarter
9 May 2022	Week 2: Design thinking	Week 2: Design thinking	Week 2: Design thinking
16 May 2022	Week 3: Empathy	Week 3: Empathy	Week 3: Empathy
23 May 2022	Week 4: Empathy	Week 4: Empathy	Week 4: Empathy
30 May 2022	Week 5: Definition	Week 5: Definition	Week 5: Definition
6 June 2022	Week 6: Definition	Week 6: Definition	Week 6: Definition
13 June 2022	Week 7: Ideation	Week 7: Ideation	Week 7: Ideation
20 June 2022	Week 8: Ideation	Week 8: Ideation	Week 8: Ideation
27 June 2022	Week 9: Prototyping	School holidays	Week 9: Prototyping
4 July 2022	School holidays	School holidays	Week 10: Prototyping
11 July 2022	School holidays	Week 9: Prototyping	School holidays
18 July 2022	Week 10: Prototyping	Week 10: Prototyping	School holidays
25 July 2022	Week 11: Business Model Canvas (BMC) workshops	Week 11: Business Model Canvas (BMC) workshops	Week 11: Business Model Canvas (BMC) workshops
1 August 2022	Week 12: Evaluating	Week 12: Evaluating	Week 12: Evaluating
8 August 2022	Week 13: Presentations	Week 13: Presentations	Week 13: Presentations

\*NT and private school students to discuss exact dates with their mentors.

# WHAT WILL STUDENTS GAIN FROM THE BRInC PROGRAM?



Hands on experience in biomechanics and biomedical engineering industry



Access to mentorship from a real-life scientist



The opportunity to undertake a research or innovation project in the field of biomechanics



Access to additional workshops (facilitated by BrainSTEM) to develop life skills



The opportunity to share their research or innovation project with other mentors and mentees in the online virtual showcase event



The two best teams will be awarded a prize to present their work at a wider event (TBD)

# RESEARCH PROJECT

Prior to and following the BRInC program we aim to evaluate mentees attitudes and beliefs about science, technology, engineering, mathematics (STEM) related subjects and careers via a short survey. Your responses will be used to in our research to evaluate the impact of the BRInC mentoring program on students' attitudes and beliefs about STEM related subjects and careers. In addition, you may be asked to participate in a short (30–45min) interview following the conclusion of the program to gain further insight into your experience.



Participation in the survey and/or interviews is completely voluntary, and you may, without any impact on your participation in BRInC, decline to take part or withdraw at any time without providing an explanation. A participant information sheet and consent form outlining the research project in more detail will be sent to all mentees prior to the commencement of the BRInC program.

# FAQS

## ***When will I know who my mentor is?***

Once your school has signed up to BRInC, our program coordinator will pair mentors with mentees based on their geographic location. It is likely you will only find out who your mentor is a week or so before the start of the program. Rest assured however, all our mentors are inspiring women in biomechanics!

## ***When do I meet with my mentor and team for the first time and how?***

The BRInC program Kickstarter will take place on Tuesday 3 May 2022. During this first week you will plan to meet with your mentor at their university/institute where you and your team will get to know her. During this initial meeting you will plan future meeting dates and locations. Your teacher will be given details about your mentor and the meeting location prior to the start of the program via email.

## ***How often do I meet with my mentor?***

Your mentor will meet with your team approximately once a week for about 30–60 minutes at a time. You can discuss the exact meeting time, frequency, location and duration with your mentor and team.

## ***How much time do I need to commit to the program?***

In addition to the weekly 30–60-minute-long meetings with your mentor, you will attend an additional masterclass (60–90 mins) three times during the 13-week program. Your team will continue to work on the amazing project outside of the regular mentoring sessions. As such, we estimate a weekly time commitment of 2–3 hours. Your mentor will be available to answer any questions that you may have during the course of the program – make the most of it!

### ***What time are the workshops held?***

Four repeat sessions of each workshop will run in the assigned week. Times and dates of these sessions will vary across the week, this is to ensure that enough options are available to students.

### ***What if I am unavailable one or two weeks during the program?***

We ask that mentees be available for at least 12 of the 13 weeks of the program. This is to ensure that you get the most out of the program and can actively contribute to your team. The program will break over the school holidays.

### ***Can I choose my team?***

Teams will be assigned based on mentor location. Your team will most likely be other students in Year 9 and 10 from your school so you may already know some of these students.

### ***I am located outside of a university area. Can I still take part?***

Absolutely! Reach out to us and we can discuss your individual circumstances. It is possible to be a mentee via distance or within industry.

### ***Who comes up with the project plan and the content for the research or innovation project?***

Your mentor will likely have some initial ideas for a project based on their speciality/access to equipment etc, but we want the mentees (you) to incorporate your own interests and skills. The mentor will provide guidance and information, but you and your team will decide the final topic for your research or innovation project. Based on the chosen topic the mentor will facilitate discussions and activities for the mentoring sessions based on the design thinking model provided to them in the pre-program mentor workshop.

### ***Do I need to be good at science and maths?***

No, you do not need to be good at science and maths or be considering studying STEM subjects after high school. In fact, we encourage you to take part if you have never considered a career in STEM!

### ***What channels/workspaces do we use?***

There will be a dedicated BRInC Slack channel, and your mentor will create a working channel for the team based on your and your teams' preferences (email, WhatsApp, Microsoft Teams etc). You will also be given access to [Mural](#).

### ***Where will I receive updates and information?***

You will receive updates and information from our email address [brinc@canberra.edu.au](mailto:brinc@canberra.edu.au). We also encourage you to follow our [social media accounts](#) for latest updates.

### ***How do I fill in a consent form?***

After signing up to the program, we will email you the consent form. This is a requirement for all participants of BRInC. We ask both you and your parent or carer to sign it and return to us.

### ***Do all mentors have their Working With Children Check (or the state equivalent)?***

Yes, they do.

### ***What happens in case of a COVID-19 outbreak during the program?***

The participating universities have capacity for face-to-face practical sessions, with approved COVID-19 risk assessment and mitigation plans. All mentors will be required to ensure that students are able to participate in practical activities in a COVID-19 safe manner. Where this is not possible, due to an unexpected closure or lock down, mentors and students will meet online (including virtual lab tours and training, as well as alternatives to face-to-face data collection associated with research projects, such as access to existing data sets or home-based data collection).

# THE BRInC TEAM



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Please do not hesitate to contact us should you have any questions or feedback. The best way to get in touch with us is via email ([brinc@canberra.edu.au](mailto:brinc@canberra.edu.au)). We look forward to seeing you soon!

The BRInC Team



Australian Government  
Department of Industry, Science,  
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