



2027 Summer Research Project Template

Help us present your project in a way that connects with the right students. Thoughtful, engaging descriptions tend to attract stronger and more suitable applications. Thank you for putting a project forward - these programs rely on your contribution, and we couldn't do it without you.

Section	Description
Project title	Validity and reliability of spatiotemporal measures in para-athletes
Hours & delivery	6 weeks of engagement with 36 hrs per week, between 12 January – 20 February 2027 using a hybrid model at St Lucia and Online.
About the project (150–250 words)	Video-based movement analysis has the potential to provide accessible and scalable methods for assessing movement performance in para-sport. However, measures developed and validated in non-impaired populations may not perform in the same way when applied to para-athletes, who can demonstrate a wide range of movement strategies. This project will investigate the validity and reliability of spatiotemporal measures obtained from video-based movement analysis in non-impaired participants and para-athletes.
What you'll do (100–150 words)	Students will be involved in collecting and processing movement data across a range of functional movement tasks. Spatiotemporal measures such as step time, stride time, cadence, step length and movement velocity will be extracted and evaluated across participants and tasks. The project will investigate the consistency of these measures across repeated trials and examine whether measures obtained from video-based analysis demonstrate comparable validity and reliability across para-athletes and non-impaired participants. Where appropriate, video-derived measures may also be compared with gold-standard laboratory-based motion capture data.
What you'll learn (100–150 words)	Students will gain experience in: · Planning and conducting human movement data collection with non-impaired participants and para-athletes. · Processing and analysing video-based movement data. · Extracting and interpreting spatiotemporal movement measures. · Assessing the reliability and validity of biomechanical measures using appropriate statistical methods. · Comparing movement measures across different populations and movement tasks. · Communicating research findings through scientific figures, written work and oral presentation.
Project outcomes (75–125 words)	Students will be expected to contribute to data collection, complete a defined analysis of the collected and/or existing movement data, produce a short research report and present their findings at the conclusion of the Summer Research Program.
Who should apply? (75–125 words)	This project would be suitable for students from the Faculty of Health, Medical and Behavioural Sciences, particularly those studying exercise and sport science, exercise physiology, or related disciplines. Students from programs with an interest in human movement, para-sport, biomechanics, data analysis or the use of technology to assess movement are encouraged to apply.
Team & supervision (75–125 words)	Dr Paige Treherne p.treherne@uq.edu.au



**Additional
opportunities**
(optional)

**Additional
requirements**
(if applicable)

Contact

Please contact Paige (above) or Dr Thomas Wackwitz (t.wackwitz@uq.edu.au) if you would like further information.
