UNSW SYDNEY **Science**

SCIF2041 RESEARCH INTERNSHIP A &
SCIF3041 RESEARCH INTERNSHIP B ENROLMENT APPLICATION

The Faculty of Science research internship courses involve a short theoretical or experimental research project supervised by an academic staff member. The internship may encompass project planning, literature review, project development, fieldwork, experimental work, statistical analyses and oral and written reporting. The format of the course is flexible and decided upon by both the student and academic, however, it should involve the same amount of work as a standard 6 unit of credit course, i.e. approximately 4-5 hours per week with assessable tasks. Assessment may involve such tasks as a literature review, a lab report, a mock / real manuscript for a target journal, etc. ***NB: These courses are available to students in Stage 2 or above. These courses are graded as satisfactory/unsatisfactory. No mark will be given and it does not impact WAM or GPA.***

INSTRUCTIONS
- Locate a potential supervisor and discuss the possibility of a research internship.
- Agree on the expected work for the proposed project, assessment tasks, and deadlines and add the information to this form.
- Submit the form to the Science Student Centre for confirmation and enrolment.

SECTION 1: PERSONAL INFORMATION

Family Name: Oldfield	Student ID: z5207573
Given Name: Ryan	Program Code: 3789
Phone Number: 0420 202 501	Stage/Year: 4

SECTION 2: COURSE DETAILS

Course to be enrolled in *(choose one)*:	SCIF2041 Research Internship A
In which semester would you like to enrol in this course?	1

Supervisor Name: Ben Montet	Supervisor Email: b.montet@unsw.edu.au	Supervisor School: Physics

Proposed Project: The K2 survey used the Kepler telescope to survey 20 fields across the ecliptic plane and search them for planets. Each field was observed for ~75 days at a time. We know of a bunch of planetary systems with this dataset. Near the end of the K2 mission, fields started to overlap with previous fields, so some areas of the sky were observed two or three times, about 3 years apart. People have searched each individual K2 campaign for planets, but to my knowledge none of these overlap fields have been searched as a single entity for planetary systems. With three campaigns worth of data we should be sensitive to planets smaller by sqrt(3) than from one sector alone, so we can search all stars in these campaigns for planets and find the smaller ones that other groups have missed. There's some open-source tools that people have built to do machine learning transit searches, which we can adapt (+ combine with the methods from the stella paper above), or we can use more traditional methods, which is still pretty big data.

ASSESSMENT

Assessment Task	Indicative Weighting (%)*	Due Date
Literature Review	15	23/4/2021
Laboratory performance	50	23/4/2021
Presentation/seminar	25	23/4/2021
Report/paper	10	23/4/2021
Other (please specify)		

*As this course is satisfactory/unsatisfactory, the indicative assessment weighting is provided only as a guide for expected time commitment.

SECTION 4: AUTHORISATION

We have discussed the proposed project, the expected amount of work for the project, details of assessment, and other matters associated with plagiarism and penalties.

Signature of Student: _Ryan Oldfield_____   Date: 5/2/2021_____

Signature of Supervisor: _Brett Mont_____   Date: 5 February 2021_____