

2019 First and Further Year Experience (FFYE) grants: Embedding transition pedagogies in the curriculum

Application form

Project applications (expressions of interest) must be submitted on this form.
Applications must be submitted by **10am Monday December 10th, 2018**.

Applications are to be submitted by email to Kathy Egea, UTS FYE coordinator at Kathy.Egea@uts.edu.au.

Project applicant/team leader:	
Name: David van Reyk	Position: Senior Lecturer
Contact email: david.vanreyk@uts.edu.au	Contact phone no: 2221
Faculty: Science	
School/Department (if applicable): School of Life Sciences	
Other applicants if team application:	
Name: Helena Asher-Chiang	Position: Careers Consultant
Name: Sean Walsh	Position: Senior Lecturer
Title of project: <i>Using a lab-based experiment, involving taking physiological measurements of “patients” or “volunteers”, to support the transition of medical science students into the workplace</i>	
Subject involved: <i>91708 Medical and Applied Physiology</i>	
Endorsement by Associate Dean (Teaching and Learning) or Head of School	
I <i>Andrea Leigh</i> endorse this project application and confirm that embedding of the project outcomes in the subject will be supported by the Faculty.	
Signed (or via email approval)	
Date: 12/12/2018	
Have you received one or more FYE Grants previously?	
<input type="checkbox"/> Yes – Reports from earlier grants will be taken into account.	
<input type="checkbox"/> No	

A brief description of the aims and rationale for the project (half page)

(Provide brief references to some literature and/or previous project successes to support your claims)

The aim of this project is the redesign of the major lab component of Medical and Applied Physiology, the final core physiology subject of the medical science courses. The driver being that recent figures indicate that among STEM graduates, the group that includes medical science graduates predominantly undertake careers in the Health and Social Assistance Industries or in Professional, Technical or Scientific services¹. This necessitates a rethink about what we should be teaching undergraduates in medical science particular as they transition from university to employment. Currently the major lab component is a student-led experiment where groups of student use their classmates as participants subjecting them to physiological measurements (e.g. brain wave activity, heart rate, breathing rate).

The redesign involves integrating into the lab class authentic workplace considerations specifically, professional ethics², occupational health and safety and client/patient interactions. In support of the redesigned lab class: an experienced Faculty clinician and researcher (SW) will give a lecture on professional ethics, there will be a lecture on the occupational risks (e.g. use of electrical equipment) in conducting physiological measurement, and the co-investigators (HA & SW) will develop and deliver a workshop on professional interactions. We also want to create additional resources including videos from experienced practitioners and a case study from a student who interned with a sonographer. The assessment linked to the lab class will include an evaluation of a modified ethics application prepared by the lab groups (students will have access to completed applications as exemplars). There will also be both a presentation by each group of what they propose to do which must include consideration of ethics and occupational health and safety, and an evaluation of each student's interaction with a participant during the experiment.

*Before the subject runs, we would like to be able to recruit prospective students to participate in focus groups to provide input into the design of the laboratory class. We will organise two meetings of teaching and technical staff. The first will consider the design of the lab class. The second will evaluate the success of its delivery. **In this way, we believe we can develop a teaching activity that broadens medical science graduates' skill base beyond discipline knowledge and familiarity with physiological measurement to include the skills required to conduct work in an ethical, safe and people-friendly way.***

Curriculum Principles for Transition Pedagogy addressed by the project

See Kift (2009) First Year Curriculum Principles for Transition Pedagogy -

<http://transitionpedagogy.com/fy-curriculum-principles/>

Select (tick) from the list below, one or two strongest principles that frame your project aims.

- Transition**
- Diversity
- Engagement**
- Assessment
- Design (broader focus)

Evaluation and Monitoring (broader focus)

Explain how the principles you have selected frame the new practice in your application. (For example: How would you expect your project to support student transition to university, or into your subject from others? How would you expect your project to improve student engagement?)

*Our objective is to aid students with the **transition** from the class laboratory to the workplace to support career success. The planned resources are designed to expose students to authentic issues and considerations of the workplace and provide the opportunity to begin to develop work skills (ethical practice, risk management, person-to-person interactions) in a safe and supportive space. We would like to **engage** students who enrolled in 91708 for Spring 2019 in the co-design of the resources through participation in focus groups in Autumn. Also regarding **engagement**, the participant/student in each experiment and another classmate will conduct an evaluation of the researcher/student interaction with the participant. Finally, we would like to create resources such as videos of current practitioners and a case study of a student who interned as a sonographer to highlight the importance of the development of the targeted professional skills also to increase student engagement.*

Other University/Faculty/Course/Subject priorities addressed (optional)

The project can be linked to one of the graduate attributes for the Faculty of Science (<https://www.uts.edu.au/about/faculty-science/what-we-do/teaching-and-learning>) which is "Professional, ethical and social responsibility" by including consideration of participant ethics and safety in the design of the experiment

Key project activities and timeline; including appropriate activities that engage the overall teaching team (if applicable) Please give a clear description of what you intend to do in the project and how this will enable you to achieve the intended outcomes. (add these by activity number and timeline and aligned to budget)

January/February

1. Prepare and submit ethics approval (some evaluation will be undertaken regardless of grant success)

February/March

2. Recruit Research Assistant

3. Start recruiting for focus groups

4. Liaise with UTS risk assessment/management specialists with regarding supporting resources

March to May

5. Conduct focus groups and collate & analyse responses as to value, design and delivery of the lab class

6. Develop supporting resources on ethics, risks and patient/client relationships

May to July

7. Conduct a meeting of teaching and technical staff before the exercise runs to explain the class and to get input as to the final design of the activity

8. Prepare final version of linked teaching resources (lectures, videos, practical notes) considering: focus group ideas, feedback/guidance from UTS specialists & teaching and technical staff and the availability of resources

9. Liaise with Teaching Laboratory Team as to provision of equipment and training/retraining of teaching staff on their use

July to October

10. Delivery of resources and teaching & training & evaluation & supervision of students.

11. Set up online student evaluation of lab experiment in Week 11

12. Conduct a debrief meeting with teaching and technical staff after Week 12

Post Session

13. Collate survey and meeting responses with the intention of submission of a conference abstract (e.g. AuPS or ACSME) or publication (e.g. Advances in Physiology Education)

Project Budget (insert table or spreadsheet if appropriate) **and budget justification**

Salary rates- see 2019 FFYE guidelines. (remember to add on-costs – approximately 15.99%)

Item Numbers		hours	cost
3,5,11,14	Research Assistant (HEW 5s1053 rate as for Nov 2018 includes 25% casual loading)	20	\$ 989.60
6,8	Media Arts and Production student intern (HEW 4s1041 rate as for Nov 2018 and includes 25% casual loading)	16	\$ 694.88
5	Focus group (Two x 1 hr each with a group of six) incentives for 12 students (\$50 movie vouchers/gift card/iTunes card based on student pre-request)		\$ 600.00
6,7,9,10	In-kind from Faculty staff (i.e. work on the project will be incorporated into teaching workload)		\$ -
7,12	Payment for casual teaching staff (12) to attend meetings (2) during the teaching period (Nov 2018 non PhD rate for "Other Activity")		\$ 1,129.68
3,5,6,7,8,11,12,14	15.99% on costs for salary items		\$ 449.98
		total	\$ 3,864.14

Evaluation strategy

Outline your evaluation strategy i.e. how you will know that the project has been successful and how you will collect information for improvement?

As a measure of the impact of these classes and resources, before and after them we will run surveys for the students to rate their understanding and relevance to their future career of ethics, safety and client relations. We considered conducting additional student focus groups after the teaching session, but we suspect that interest is likely to be minor given the immediate onset of exam period and with most of these students finishing their degree in this session. We will however, have the additional input as to the success of the classes from the post class meeting with technical and casual staff.

Reference List

(Evidence for claims made in application)

1) Office of the Chief Scientist (2016) *Australia's STEM Workforce: Science, Technology, Engineering and Mathematics*, Australian Government, Canberra

2) Goswami, N., Batzel, J. J., & Hinghofer-Szalkay, H. (2012). Assessing formal teaching of ethics in physiology: an empirical survey, patterns, and recommendations. *Advances in Physiology Education*, 36(3), 188-1