

2017 First Year Experience (FYE) 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 **10 am Monday December 5th, 2016**.

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

Project applicant/team leader:

Name: Dr Maurizio Labbate Position: Senior Lecturer
Contact email: Maurizio.Labbate@uts.edu.au Contact phone no: 9514 4064
Faculty: Science
School/Department (if applicable): School of Life Sciences

Other applicants if team application:

Name: Neela Griffiths Position: Lecturer, ALL, IML
Name: Dr Yvonne Davila Position: Lecturer, Science

Title of project: One small step, one giant leap: progressing scientific writing practices and critical analysis for students from a range of transitional pathways

Transition subject involved: 91314 General Microbiology

Endorsement by Associate Dean (Teaching and Learning)

I endorse this project application and confirm that embedding of the project outcomes in the subject will be supported by the Faculty.

Signed

Date:

Have you received one or more FYE Grants previously?

Yes – please attach a progress summary (max 1 page) for any 2016 grant that is not yet completed. Reports from earlier grants will be taken into account.

X No

YD and NG reports to be submitted by Jan 9, 2017.

Project outline (max 1-2 pages) (See guidelines for detail)**A brief description of the aims and rationale for the project**

The large (>600) core subject General Microbiology (91314) has an extremely diverse range of student backgrounds. Approximately 20% of the student cohort enter through alternative pathways (e.g. InSearch, TAFE) so for them this is a 1st stage transition subject. For students in the standard course program it is a 3rd stage subject. This diversity leads to different patterns and timing of engagement with entry level academic and professional communication (APC) skills. The major assessment task in this subject (a written popular science article worth 25%) builds on these entry level APC skills as it requires synthesising, integrating and critical thinking skills which are key to effective scientific communication. Students are asked to be creative in writing a narrative that is informative and entertaining, for a curious non-specialised audience (the general public, not scientists). In previous years, many students have produced articles that provide accurate information, but fail to provide a narrative, critique information or make sensible recommendations. A review of the current materials has identified that more scaffolding and guidance is needed to support the diverse student cohort, through providing catch up materials for 1st stage students and building all students' confidence in their writing and critical thinking skills.

Our aims are to support the student learning journey through a consideration of differing transitional pathways (Nelson, 2014). To ensure all students are equally-well prepared for the requirements of the subject we will use our existing scientific writing and avoiding plagiarism online interactive modules to develop and review the students' fundamental FY APC skills.

We aim to create new embedded interactive online modules and a face-to-face workshop to:

- build on students' APC skills and develop more sophisticated scientific writing skills specifically synthesising and integrating the literature
- develop awareness of different audiences (scientific discipline experts and general public) and how to write appropriately for them (Divan & Mason, 2015)
- build confidence in scientific writing
- develop students' critical thinking and evaluation capabilities which are key elements in scientific communication (Day et al., 2015)

First Year Curriculum Principles for Transition Pedagogy (TP) addressed by the project

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

<http://fyhe.com.au/transition-pedagogy/fy-curriculum-principles/>

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

Transition

X Diversity

Engagement

Assessment

X Design (broader focus)

Evaluation and Monitoring (broader focus)

Explain how each of the selected principles selected frame the new practice in your application.

Diversity - *The first year curriculum embraces and supports the diversity and reality of students' backgrounds, previous experiences and preparedness for university.*

As stated above, our student cohort has a diverse range of backgrounds, experiences and levels of preparedness for university. To meet this challenge, we will apply the learning.futures



model to embed discipline specific online modules and face-to-face workshops. This will also enable accessibility, flexibility and inclusivity.

Design - *The first year curriculum is designed intentionally for commencing students, based on evidence from practice and research.*

To further cater for our diverse cohort, we will intentionally design the curriculum to:

- Provide introductory materials for 1st stage students, which also function as a 'content refresher' for 3rd stage students (Loughlin et al. 2013). These materials utilise the existing APC curricula that we developed for first year core subjects and therefore provides necessary foundation skills.
- Support students in identifying different genres of scientific writing for different audiences and purposes
- Develop students' ability to evaluate, synthesise and integrate the scientific literature in their writing for a non-specialist audience
- Build students' self-confidence in their critical thinking skills

These new learning activities and resources will be designed to provide just-in-time learning materials and feedback for students to support the development of skills for the major assessment task in this subject (due week 8). Our new interactive modules will follow the format of our existing APC modules, thus providing continuity for the students. They will be available and accessible on UTSONline throughout the teaching session and will allow students to refer back when they need to, which is especially important for the transition students.

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

Our student-centred technology-enhanced flipped learning resources align with the UTS learning.futures model.

Key project activities and timeline, including appropriate activities that engage the overall teaching team (if applicable)

January to February

1. Curate past students work for exemplars
2. Rewrite assessment task instructions and rubric
3. Storyboard new content, design and build online interactive modules using Adobe Captivate
4. Test and upload modules to UTSONline
5. Storyboard content and collaborative learning activities for the face-to-face workshop
6. Design face-to-face workshop lesson plan for subject tutors

March to June

7. Upload first year APC skills modules to UTSONline for completion during Week 1
8. Train tutors to facilitate face-to-face workshop (Orientation period)
9. Week 1 - Students complete interactive modules online and prepare for related workshop
10. Week 2 - Students complete workshop; upload assessment task instructions and rubric to UTSONline
11. Week 4 - Design evaluation tool, and apply for ethics approval (T&L evaluation application)
12. Mid-session StuVac - Meeting with tutors to discuss new rubric and conduct marking moderation
13. Mid-session StuVac - UTSONline announcement to remind students to review APC skills modules for assessment task
14. Week 12 / Final StuVac - Conduct evaluation of online resources and workshop (survey and focus group with students and tutors)

July to December

15. Mid-project report due
16. Analysis of SFS comments, survey results and focus groups
17. Final report due

Your evaluation strategy ie how you will know that the project has been successful, with particular focus on the transition pedagogies that you have chosen, and how will you collect information to improve the outcomes?

Our project will be evaluated by monitoring successful completion of modules via UTSONline, post-assessment evaluation survey, and focus groups with students and tutors (separately).

Attach a copy of your evaluation plan available here: <http://tiny.cc/evalplan>

See attached.

Project Budget (insert table or spreadsheet if appropriate) **and budget justification** (remember to add on-costs – approximately 17%) Salary rates- see guidelines for comments.

Activity	Hours	Rate	Total
Research assistant - curating past student work for exemplars, testing modules, collating survey and focus group results (Activity: 1, 4, 14, 16)	16	Casual academic, other academic activity (\$45.01 p/h Nov 2016 rate) incl. 17% oncosts	\$843
Training and marking moderation with tutors - 18 tutors x 3 hours (Activity: 8, 12)	54	Casual academic, other academic activity (\$45.01 p/h Nov 2016 rate) incl. 17% oncosts	\$2844
Survey evaluation and focus group incentives (Activity: 14)			\$300
		Total	\$3987

References

Day, T., Letchford, J., Corradi, H. & Rogers, T. 2015. 'Devising an Online Resource to Help Undergraduate Science Students Critically Evaluate Research Articles'. *Journal of Academic Writing*. Vol. 5 No. 2, pp. 1-19.

Divan, A & Mason, S. 2015. 'A programme-wide training framework to facilitate scientific communication skills development amongst biological sciences Masters students'. *Journal of Further and Higher Education*. Vol. 40, No. 4, pp. 543-567.

Loughlin, W.A., Gregory, S.-J., Harrison, G., & Lodge, J.M. 2013. 'Beyond the First Year Experience in Science: Identifying the Need for a Supportive Learning and Teaching Environment for Second Year Science Students'. *International Journal of Innovation in Science and Mathematics Education*, Vol. 21, No. 4, pp. 13-26.

Nelson, K. 2014. 'Keynote: The First Year in Higher Education – Where to from here?' *The International Journal of the First Year in Higher Education*. Vol. 5 No. 2, pp. 1-20.