



## CEED Industry Sponsored Student Research Projects at UWA

**Cooperative Education for Enterprise Development (CEED) is a formal program designed to link the abilities and training of undergraduate and postgraduate students with the research and development needs of progressive organisations in the wider community.**

### What are CEED Projects?

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Cooperative Education for Enterprise Development (CEED) projects are student research projects undertaken for academic credit. Honours, Masters by Coursework and Engineering Final year Projects are most common, but Higher Degree by Research (PhD, Masters) projects may be arranged.

The project topics are defined by the client enterprise – meaning that CEED projects address real issues in the client's operations, delivering outcomes which enhance performance.

In most CEED projects, the student spends 8 weeks on site with the client during the summer vacation,

immersing themselves in the operations and culture of the client while working on their research project.

Each CEED student has both a UWA academic supervisor and a mentor from the client enterprise. This ensures that the student remains connected to the client throughout the project, and engages UWA academic staff with the client and the project.

Benefits of CEED projects to client enterprises include:

- Cost effective research projects targeting issues specific to the client
- Engagement of UWA experts with client staff and issues
- Extended engagement with potential graduate recruits (including the potential to maintain relationships with vacation employees)
- Specialist training of potential graduate recruits in technology, policy areas, issues and operations unique to the client
- The opportunity to use the client mentor role in development programs for early career staff

- Access to UWA research facilities, and engagement with UWA academic teaching and research staff

CEED projects may be undertaken in any discipline at UWA that offers a suitable research project unit.

There are two CEED intakes each year: The main intake in September-November, and a mid-year intake predominately for engineering disciplines in April-June.

### Past Projects

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Each year, CEED students present their work publicly at the CEED seminar. The seminar proceedings illustrate the nature and range of the projects undertaken by our students and clients.

Past CEED seminar proceedings are available at: [ceed.uwa.edu.au/ceed\\_seminar\\_proceedings](http://ceed.uwa.edu.au/ceed_seminar_proceedings)

## CEED Project Models

### Engineering Final Year Project : Full Project

All engineering students currently complete a two-semester final year research project. Students spend 8 weeks on-site with the company during the summer vacation, complementing their work on the project during the academic year.

- Standard Project Fee for 2014/2015: \$18,000
- Nominal Studentship: \$10,000

### Engineering Final Year Project : “Three-Quarter” Project

“Three-Quarter” Project Students do not spend time on-site with the company during the summer vacation, only working on the project during the academic year. This model is commonly used to maintain engagement with Engineering students who have completed vacation employment with a client.

- Standard Project Fee for 2014/2015: \$13,500
- Nominal Studentship: \$7,500

### Honours Project : Full Project

In many disciplines, top students are invited to undertake a two semester Honours research project after the completion of their undergraduate coursework. Students spend 8 weeks on-site with the company during the summer vacation, complementing their work on the project during the academic year. A three-quarter project model is also available for Honours students.

- Standard Project Fee for 2014/2015: \$18,000
- Nominal Studentship: \$10,000

### Masters by Coursework Project:

Students spend 8 weeks on-site with the company during the summer vacation, complementing their work on the project during the academic year.

- Standard Project Fee for 2014/2015: \$18,000
- Nominal Studentship: \$10,000

### Higher Degrees by Research Projects: Masters and PhD

Clients may sponsor projects for students undertaking multi-year higher degree research projects. The project fee is an annual charge over the life of the project.

- Standard Project Fee for 2014/2015:
- Nominal Studentship: \$10,000 p.a.
- PhD: \$45,000 p.a. (3.5 year commitment)
- Nominal Studentship: \$30,000 p.a.

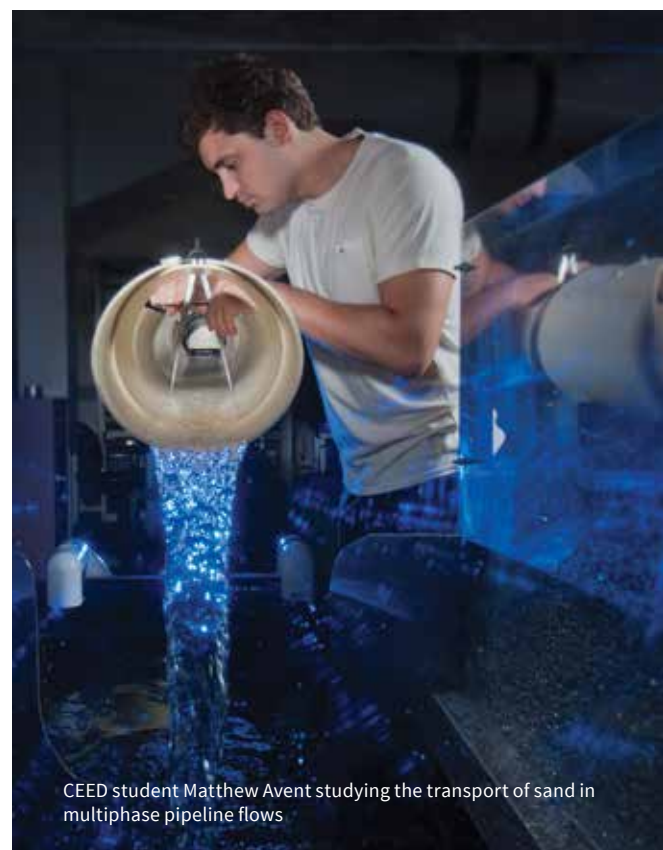
### Pro Bono CEED Projects:

For 2016, pro bono CEED projects may be undertaken with registered charitable organisations.

Contact the CEED director to discuss this option.



CEED staff and students



CEED student Matthew Avent studying the transport of sand in multiphase pipeline flows

## Project Process – Initiation to Deliverables

### Initiation

Contact the CEED Director (Associate Professor Jeremy Leggoe, (08) 6488 7315) for initial discussions. We will work with you to identify possible academic supervisors with expertise in the areas of interest, and the appropriate discipline and project model for the students. For clients seeking to integrate CEED projects into their recruitment and professional development strategies, regular coordination meetings can be scheduled to ensure an optimal process.

### Project Proposal

Once a project scope, mentor and supervisor have been identified, the student recruitment process is initiated by the completion of a project proposal form, available at:

[ceed.uwa.edu.au/forms](http://ceed.uwa.edu.au/forms)

Projects are typically executed under the CEED Standard Project Agreement: [ceed.uwa.edu.au/proj\\_agree](http://ceed.uwa.edu.au/proj_agree), though specialised contracts can be negotiated if necessary.

Student Recruitment and Appointment

Projects are advertised to students via:

- [ceed.uwa.edu.au](http://ceed.uwa.edu.au)
- Twitter @ceed\_uwa
- direct email to specific discipline groups

Once applications have closed, the academic supervisor will review the applicants, and the academic supervisor and client mentor will interview the shortlisted applicants together. Appointment will be based on the rankings provided from the interviews.

### Appointment and Induction

Students accepting CEED projects will sign a student undertaking (which forms part of the Standard Project Agreement). All CEED students pass through a CEED Induction program, which briefs them on our expectations, the expectations associated with



CEED student Shruti Gupta investigating the effect of compaction on buried pipes

working in a professional environment, and the skills needed to manage a research project. An induction program is also available for client mentors

### Site Work

In most CEED projects, the student will complete eight weeks work on site with the client as part of their CEED commitments. The site work is usually completed during the summer vacation, though the exact timing can be flexible to fit the needs of the project, the client and the student.

### Project Brief

After some time to familiarize themselves with the issues (ideally about 3 months into the project), the students will prepare a project brief, in which they set out the deliverables for the project, along with summarizing the methodology and resources needed for the execution of the project. The project brief is signed off by the client, the student, the academic supervisor and the CEED office, and ensures that all parties are agreed on the direction and focus of the project.

### Academic Semester

CEED students will return to campus for the academic semester. During the semester they will continue to work on the project, and should usually maintain a regular meeting schedule with the client and the academic supervisor (for successful projects,

a fortnightly to monthly meeting frequency is typical). The student will also submit monthly reports throughout the project, updating the client and the CEED office on the progress of the project.

### CEED Seminar

In the middle of second semester (usually late September), CEED students provide a public presentation of their work to date at the CEED seminar, conducted at the University Club of WA. The audience at the seminar includes a broad range of interested industry and university staff, along with alumni of the CEED program. All CEED seminar papers and presentations must be approved by the client prior to publication.

### Completion and Deliverables

Academic requirements for most students will be completed at the end of the second semester of their project. CEED students are expected to provide the agreed deliverables to their client within 4 weeks of the completion of their academic requirements – and payment of the final installment of their studentship is conditional on acceptance of the deliverables by the client.

## Project Administration

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### Project Timelines

The majority of CEED students will start the academic portion of their project in the first semester of each year.

The ideal timeline for this main student intake is:

Timing	Action
Aug/Oct 2015	Project proposals submitted and project advertised
Sept/Nov 2015	Applicants interviewed and appointments completed
Late Nov 2015	CEED Induction
Summer 2015/2016	Site work completed
Mar/Oct 2016	Project continues on campus
Nov 2016	Deliverables provided and accepted

In engineering disciplines, many students start their projects in second semester. Proposals for semester 2 projects should be submitted in April/June 2015, site work will occur summer 2015/16, and project completion is in June 2016.

### Intellectual Property

For "standard" CEED projects, ownership of any IP generated during the project is shared 50/50 between UWA and the client, with the client granted license to use any IP generated for their own internal use.

Procedures for commercializing IP are set out in the CEED standard project agreement. Each party retains exclusive ownership of any background technology contributed to the project, along with any modifications or additions to that background technology resulting from the project.

Clients have the option of securing 100% ownership of any IP generated during the project. This is accomplished by nomination in

the Project Proposal, and incurs a cost of 35% of the standard project fee. This increase is reflected in an increase to the studentship provided to the student.

### Confidentiality

Procedures are in place to manage the confidentiality of the information used in the project and the results generated by the project. It is encouraged that students and clients identify potential confidentiality issues during the preparation of the project brief.

No papers, presentations or theses arising from CEED projects will be publically released without the prior written authorization of the client.

### Billing

Clients are billed for half the project fee upon appointment of the student, and for the remainder upon acceptance of the deliverables. For Higher Degree by Research projects, the client will be billed for first year fee upon appointment of the student, and then annually on the anniversary of appointment. Subject to prior agreement, billing timelines can be adjusted if necessary to meet the needs of the client.

### Project Costs

The project fee entirely covers the cost of the studentship, and the access to UWA facilities that is provided to all students. Additional expenses, such as the costs of consumables, specialist facility fees, experimental rig construction, and site travel, are covered by the client, and will be billed at the completion of the project. Such expenses will only be incurred with the prior written consent of the client, and would normally be estimated during the preparation of the project brief.

## CEED Program Office 2015/2016

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### CEED Director

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