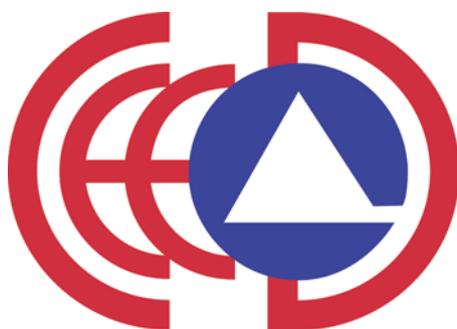


The University of Western Australia



THE UNIVERSITY OF
**WESTERN
AUSTRALIA**

CEED Project Manual for **Academic Supervisors**



Co-operative Education for Enterprise Development

This manual is produced for the use of students conducting their projects under the Co-operative Education for Enterprise Development (CEED) program at the University of Western Australia. Separate manuals are produced for Mentors and the Academic Supervisors of CEED projects

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1. Executive Summary

- **This alerts you to the main issues you will need to deal with in supervising your CEED project**

Introduction

CEED projects carry out productive research for CEED Partners, and develop UWA's industry links. Effective communication is essential throughout the project. Your performance will affect others' opinion of your school and UWA. We must not just *be* good, we must be *seen* to be good! Partners may have unrealistic expectations of what their project can achieve. You are in the best position to ensure realistic outcomes are set.

Structure of CEED projects

CEED projects at Honours level cover three semesters (if students are appointed early enough, the first is mainly preparation and planning), include project work at the Partner's premises for 8 weeks (minimum) over the summer vacation, and become the students' Honours/Final year projects. CEED projects at postgraduate levels have normal duration, but include one or more periods working at the Partner's premises.

Project Supervision

Academic Supervisors provide the main supervision, as always. The CEED Partner provides input, guidance, and on-site supervision via a "Mentor". You and the Mentor should appoint deputies to act in your absence. The CEED Partner's "senior contact" is not normally involved with day to day project activities.

Early Student Targets

If students are appointed early enough, the first semester of project work is essentially planning, resulting in a "Project Brief" which outlines agreed project outcomes, activities, and logistical issues. Students can then begin useful work immediately upon starting on site during the summer vacation.

Starting up

The start-up period is critical. CEED's carefully formulated approach opens communication between students and the Mentor, and helps clarify project outcomes. Students must know what is expected of them, and be equipped to handle their projects well (The CEED Student Workshop, held shortly after student allocation, reinforces this).

Setting Project Outcomes

You will need to understand the CEED Partner's *real desired outcomes*.

The Project Brief

The Project Brief is a vital document clarifying many important issues surrounding the project. If at all possible, it should be finalised before students start on site. It is produced consultatively by the students under your guidance, and signed by you, the Mentor, the



CEED Office and the students.

Pitfalls to Note

Many pitfalls result in avoidable problems. They often come from inadequate planning or poor communication. Early attention to the Project Brief, and care with communication works wonders. Student motivational "troughs" at the start of final year, and your attitude towards the project are other potential problem sources.

Project Expenses

CEED projects may have financial transactions because some costs are recoverable from the Partner. All expenditure must have the client's prior written approval.

Planning and Documentation

The Student Manual outlines techniques for planning and collating information. Your encouragement will help students benefit from this.

CEED Project Presentations

During the mid-semester break at the end of students' final year, a CEED seminar and dinner is held. This is the major CEED function each year, and personnel from participating and potential CEED Partners are invited.

Student Assessment

CEED does not interfere with academic assessment. The CEED Office asks Mentors for feed-back on student performance during the project. You and your school are free to incorporate or ignore such feed-back in your assessment.

Supervisor "Research funds"

As Supervisor, you receive some funds intended to contribute towards your academic research. You will be asked to nominate a UWA account into which the funds can be transferred. Funds are credited to you progressively, and are dependent on the CEED Partner paying its contributions.

Communication

Communication is pivotal for CEED projects. Help your students by setting high standards for communication. Students are required to present Monthly written reports to the Mentor, yourself, and the CEED Office. Students are strongly encouraged to keep all parties informed of progress at all times.

Project Agreement

Each CEED project has a formal Project Agreement between the UWA and the CEED Partner with the students signing an addendum (Student Undertaking) to acknowledge their responsibilities. The Project Agreement also contains provisions for handling issues of Intellectual Property (IP) and confidentiality.

Intellectual Property

While ownership of Intellectual Property produced by joint research (such as CEED projects) is generally shared between the university and client, CEED offers an option whereby Partners may pay a fee surcharge to obtain full ownership of IP produced



during the project. In such cases, the normal CEED payments to students and academic supervisors are increased to compensate for the concession. Ownership of "Background IP" is unaffected by the surcharge, so you are not making any concessions in that area. If you have any concerns about IP, you should contact the CEED Office immediately.

Insurance and Safety on Site

CEED students are *not* employees of the CEED Partner, even during the periods working at the Partner's premises. UWA provides some indemnity for the CEED Partner while students are on site - provided they are not employed by the CEED Partner. Any periods of "employment" must be clearly identified in advance to avoid problems with insurance liability. Students must be alerted to the need for safety at all times. Please observe your duty of care to ensure students are informed of safety requirements.

Studentship and Site Work

Students doing CEED projects at Honours level receive their tax-free CEED Studentship in three instalments, paid at the start of their period on site, and at the beginning of each subsequent semester. Payments are conditional upon students being up-to-date with their reports. Students at Honours level work on their project at the Partner's premises for at least 8 weeks, generally during the summer vacation. Extended periods can be negotiated between students and CEED Partner, with or without pay. Any periods during which the students are employed by the CEED Partner (as opposed to working on their project under the normal CEED terms) must be clearly identified in advance.

The CEED Partner may request that the standard value of the CEED Studentship be increased. This must be arranged through the CEED Office. It may not be used to provide remuneration for periods of employment.



2. Introduction

- **CEED projects increase interaction with outside organisations.**
- **CEED Partners may have expectations which need to be tailored to realistic levels. You will need to detect and handle this.**
- **Effective communication is essential at all times on CEED projects.**
- **Your performance influences outsiders' view of your school and the university.**

Thank you for undertaking supervision of a CEED project. When handled well, it greatly benefits all parties, including yourself. The student gets broader experience than is normally possible; the CEED Partner makes progress on a research problem; you can broaden your research contacts and knowledge while dealing with a stimulating area of endeavour, and the project fee contributes towards your school's income and Research Quantum.

This manual is intended as a reference, so you can meet the needs (and expectations) of CEED Partners and students. Each section contains a brief summary of important considerations.

A quick overview of important items is given in the Executive Summary and the highlighted notes at the top of each section.

CEED projects require more of students, but give broader experience as well as a studentship. With the extended period at Honours level, students can also expect to make greater progress on the problem tackled than is normal with regular projects. CEED also offers the possibility of multi-student projects and even multi-discipline projects.

Requirements of CEED projects

CEED projects must satisfy the needs and expectations of several parties:

- Students need to be able to demonstrate their academic capabilities, and
- CEED Partners need to make progress on their research issues.

These separate requirements have to be combined. The "team" comprising yourself, the Mentor, and students, must define project objectives clearly, and preferably identify which parts satisfy each need.

Particular features which influence handling of CEED projects are:

1. Supplementary supervision externally

You, as Academic Supervisor, remain ultimately responsible for supervising the project, but students are also accountable to their CEED Partner Mentors. If a conflict of interest arises, you will need to intervene to resolve it. The CEED Office can assist if necessary.



2. Formal research situation

CEED Partners pay fees as a contribution towards the cost of their CEED projects which are effectively co-operative research projects. We therefore need to accommodate CEED Partners' administrative needs, e.g. regular reporting. Results need also to be presented in a form suitable for their use.

3. Under external scrutiny

Project performance is under close scrutiny of outsiders, including senior management at the CEED Partner. Their expectations, realistic or otherwise, will be used to judge the project. Their conclusions will reflect on the reputations of you, your school, and on the University as a whole, as well as the student. It is much easier to adjust a CEED Partner's expectations at the beginning of a project than at the end when you may be suspected of covering up for inadequacies.

Some information on CEED

CEED at UWA started in 1989 for engineering, and is now structured to service all schools in the university. It is gradually expanding and developing, and now handles projects at undergraduate and postgraduate levels. CEED is self-funding, and aims to ensure that all who contribute are appropriately rewarded. In the case of Academic Supervisors, this takes the form of extra "personal research" funds. Academic staff who find new CEED projects through their contacts (whether they supervise them or not) also receive personal payment.

Another CEED program has been operating at Edith Cowan University, though its projects are shorter and structured differently (for historical reasons) and consequently cheaper. Curtin and Murdoch universities once had CEED programs managed by an independent firm (which also handled several universities in the eastern states), but they are no longer functioning.



3. Structure of CEED Projects

- **CEED projects are structured to ensure the needs of all parties are met.**
- **All phases are important to the success of a CEED project.**

CEED projects at Honours level have several stages over a twelve month period. Students are generally allocated projects early in second semester, though this can vary. They start work soon after, and must attend an induction course presented by the CEED Office.

Commencement of some projects may be unavoidably delayed, in which case the timetable and goals (outlined in this manual) may need to be modified. Projects at postgraduate levels may commence at any time, depending upon departmental requirements.

Stages of CEED projects

| | Project start year | | Honours level project finish year |
|----------------------------------|--|------------------------------------|---|
| | Sep-Nov | Dec-Feb | Mar-Oct |
| Project definition and proposal | Project start-up | Site work | Honours year / Final Year (2 semesters) |
| and | First semester; Goal definition, planning and agreement on Project Brief | Full-time project work with client | Students working on project along with other Honours/final year students. Writing thesis (and project reports). |
| Interviews for student selection | | | |

First project semester (2nd semester in 3rd year)

Requirements for the first project semester at Honours level are outlined under “Targets for first semester”. If they are selected early enough, students may generally expect to spend 2-4 hours a week on CEED during the latter part of this semester, developing their Project Brief and preparing for the site work period.

Site work

Students work on their projects at the CEED Partner’s site for a minimum of eight weeks during the course of the project. This period can be increased by mutual agreement. Students are *not* employees of the CEED Partner. The university provides some indemnity and personal accident insurance, but students are advised to consider arranging additional personal insurance.



Final or Honours year (2 semesters)

Final year or Honours level students continue their CEED projects as their Final year or Honours project. Time allocated to their CEED project during this period should be similar to regular Honours projects for their course. CEED Partners may need to be reminded that the latter part of second semester is occupied with writing up project theses and reports. The CEED Partner should receive at least one copy of the final project report (possibly with extra material), though any additional copies should be agreed when finalising the Project



4. Responsibility of Academic Supervisor

- **Your performance during the project affects UWA's reputation.**
- **CEED projects need more of your time than equivalent regular projects.**
- **CEED systems minimise time demands for your CEED projects.**
- **Careful monitoring of your project and liaison with the CEED Partner will make good use of your time.**

To maintain the university's reputation for quality, we must all ensure CEED Partners are more than satisfied with the performance and outcomes of their projects. As academic supervisor, you are in the front line in achieving this. With the period of CEED projects extended at some academic levels (e.g. Honours), they inevitably require more of your time than equivalent regular projects. We know you have many demands on your time, so CEED systems aim to minimise the demands of your CEED project.

Your major CEED activities (apart from regular aspects of project supervision) are listed below. Familiarity with these will help you make more effective use of your supervision time.

Before project commencement

- Clarifying project topic, helping provide a brief project description for advertising to prospective students, and encouraging students to apply;
- Short-listing and interviewing applicants for project (on campus with CEED Partner representatives) and selecting acceptable candidates in order of preference;

After allocating students

- Meeting with students and CEED Partner Mentor to define clearly all project outcomes, the approach to be taken, and ensuring appropriate academic content;

Throughout project

- Ensuring students keep properly in touch with all parties;
- Liaising with the CEED Partner Mentor and CEED Office on project progress;
- Ensuring the topic has sufficient academic demands to allow students to obtain good Honours grades, negotiating adjustments if necessary;
- The table on the following page gives a summary of these together with other CEED activities which may be of relevance to you.
- None of these activities need be onerous. There are some deadlines, but these are generally for items requiring little of your time and should be



easily fitted into your schedule.

See the below table:

Time-scale of Supervisor's Activities

The table below summarises the main activities of CEED project supervisors, and approximately when they occur.

| Month | Supervisor activities Start-up Year | Supervisor activities in Final Year | Student activities in Start-up Year | Student activities in Final Year |
|-----------|---|---|--|--|
| January | | Project supervision | Vacation | Available for CEED Site Work |
| February | | Project supervision | Vacation | Available for CEED Site Work |
| March | | Project supervision | Studies | Continue proj at UWA. Studentship |
| April | | Project supervision | Studies | Continue project work |
| May | Contact with potential CEED clients | Project supervision | Studies - exams | Continue project work |
| June | Contact with potential CEED clients | Project supervision | Explore project options | Continue project work |
| July | Contact with potential CEED clients | Project supervision | Explore project options | Start thesis. |
| August | Refining client topic suggestions | Project supervision | Prepare Curriculum Vitae (Resume) | Start thesis. Start CEED paper |
| September | Project applications, interviews, allocation | Project supervision | Student application, interviews, allocation | Project and thesis. Submit CEED paper. Studentship payment |
| October | Consultation on Project Brief. Client meetings, student talks | Checking thesis drafts. CEED Seminar and Dinner | Mentor meetings, begin Project Brief | Conclude project. CEED report |
| November | Student exams | Student exams | Studies - exams | Studies - exams |
| December | Project supervision, approval of Project Brief | Ensure client receives final reports. CEED feedback | CEED site Work. 1st Studentship payment on completion of Project Brief | Done! |

5. Project Supervision

- **Academic Supervisors provide the main supervision.**
- **CEED projects require input and guidance from the CEED Partner, achieved via an appointed "Mentor".**

CEED projects have input from a CEED Partner "Mentor" as well as from you as the academic "Supervisor".

Supervisor

As Academic Supervisor, you remain responsible for oversight of the student's work, and are the primary guide for the project. This remains true even when the student is working at the CEED Partner's site during the vacation period.

Mentor

The Mentor is the main CEED Partner contact for you and the students, and contributes to the project in a number of ways:

- helping define the project outcomes;
- organising CEED Partner resources when needed;
- arranging for students to receive relevant help in areas of the CEED Partner's expertise;
- co-ordinating interfaces with other CEED Partner activity;
- reporting on student performance. A project assessment form will be sent to Mentors by the CEED Office from time to time. You will be informed of any looming issues.
- providing feed-back on the CEED process so the program can be improved.

Students must keep their Mentor informed regularly of progress. You also need to liaise closely with Mentors otherwise they tend to think you are leaving the supervision to them.

CEED Partner "Senior Contact"

Each CEED project has a "senior contact" with the CEED Partner, usually senior to the Mentor, who may (or may not) have a personal interest in the project topic.

Deputy Mentor

The Mentor may become unavailable during the project due to leave or sickness. Please get the Mentor to nominate a deputy early in the project to avoid delays later.

Deputy Academic Supervisor

Please ensure that the CEED Office and students both know who will act as your deputy if you are away or sick.



6. Early Student Targets

- **The first weeks of project work covers essential planning.**
- **Proper planning is crucial to the success of CEED projects.**
- **Ideally, students should be able to start useful work immediately upon arrival on site.**
- **If projects are commenced late, extra care and supervision will be needed to accelerate the planning process.**

Key targets for the student during the first semester are to:

- produce a Project Brief clearly defining things including the project outcomes, the problem boundaries, areas of responsibility, a plan of action, constraints, resources and project deliverables;
- identify and address topics which may require extra study;
- arrange with the CEED Partner for resources to be available when needed;
- set up their planning and documentation system.

Unless their projects started late, by the end of the first semester, students should have:

- produced a “Project Brief” signed by all parties;
- planned and structured their project documentation system;
- accumulated some reference material;
- started developing key skills for handling the project;
- given a brief talk outlining their project and their planned approach to it.

The CEED Project Manual for Students contains detailed information on these requirements.



7. Starting Up

- **Meetings with the Mentor are vital in getting CEED projects started.**
- **Written agreement is needed on many matters to ensure proper directions are set.**

CEED project work normally starts in the latter part of second semester of the start-up year or sometimes in early December after the exam period. The start-up phase includes the following:

- **opening communication channels** between yourself, students and the Mentor;
- **arranging meetings with the Mentor** to set goals and establish your working relationship;
- **informing students** of expectations and equipping them to handle their projects (the CEED induction course provides much of this).
- **encouraging students** early and continuously to behave in a professional manner when handling their project.

Check list for initial meeting with CEED Partner

The following check list should help to obtain the necessary information from the Mentor at your initial meeting. Early items appear on the Student Manual list for students to ask, but *at the end are several items which you alone can address*:

- what would the Mentor like as *primary* and *secondary* outcomes for your project?
- in what form does the CEED Partner want the project deliverables (eg. report, software, working item, etc.).
- what constraints does the CEED Partner want to impose on the approach (eg. to fit other activities, products or policies)?
- what would be a suitable preliminary timetable for the project (*don't* agree to commercial deadlines)?;
- what sort of resources will be needed? Does the CEED Partner have access to them?
- what resources (eg. labs and equipment) does the CEED Partner hope UWA can provide for the project?
- how will the project be handled if particular resources are not available when needed?
- will any equipment or other items need to be ordered specially for the project (at CEED Partner's expense)? If so, is information needed? By when? Who will order them?
- will special test rigs be needed? Where will they be built?
- is any information needed urgently for budgeting purposes?



- what mechanisms will be used to obtain approval on any project expenditure;
- which CEED Partner personnel have expertise relevant to the project?
- agree on communication channels and frequency of student reports (normally monthly). What days and times are good (or bad) for making contact with the Mentor?
- who will act as a “deputy” contact if the Mentor is unavailable for any length of time?
- when can you and the student go to site to familiarise yourselves with the project’s working environment?
- are there any special requirements for summer site work (eg. site(s), medicals, safety pre-training, special clothing)?
- agree on duration of project site work (especially if the student seeks more than 8 weeks);
- will any Personnel Department people be involved? How should the student make contact?

Additional items for Supervisors

- inform the Mentor what expertise you (and others) can and cannot contribute;
- give the Mentor the name of your academic “deputy” in case you are away;
- invite any queries regarding CEED from the Mentor (some may need to be referred to the CEED Office);



8. Setting Project Outcomes

- **Firm project outcomes must be identified.**
- **You must be satisfied that outcomes meet both academic and CEED Partner needs.**
- **You may need to adapt or enhance outcomes to achieve this.**

Project *Outcomes* are the ways in which the client will benefit from the research. As such, *Outcomes* are different to the *deliverables* (what the student will give to the client at the end of the project) and from the methodology and process (how the project will be conducted).

Establishing clear outcomes for CEED projects is essential, whether the project is at undergraduate or postgraduate level. However, identification may not be simple because some CEED Partners do not know exactly what they want from their project, nor what it can achieve. Normally, it is an interactive process.

Most CEED topics naturally contain ample demands for academic excellence within the CEED Partner's desired outcomes, others do not. You may need to suggest additional scope to the Mentor to meet academic demands. Generally, CEED Partners are supportive of this, particularly if you try to tailor any additional work to provide maximum benefit to the CEED Partner.

Suggested below are approaches to establishing project outcomes with the CEED Partner, depending upon the situation:

1. CEED Partner's outcomes are clear, with ample academic depth:

Define a primary outcome, and a secondary to provide an alternative if the primary is frustrated, or as an extra if the primary is achieved early.

2. CEED Partner's outcomes are clear, but insufficient academic depth:

Define primary and secondary outcomes for the CEED Partner as in (1), but also propose and agree on additional (even artificial?) outcomes to meet demands for academic rigour.

3. CEED Partner's outcomes are unclear, probable ample academic depth:

Try to establish motives of CEED Partner in undertaking the CEED project. Taking these into account, suggest your preferred directions and agree on primary and secondary project outcomes as in (1). CEED Partners are often grateful for such suggestions.



4. CEED Partner's outcomes are unclear, probable insufficient academic depth:

Try to establish CEED Partner motives for undertaking the project. Taking these into account, and needs for academic rigour, suggest your preferred directions (including any additional academic depth) and agree on primary and a secondary project outcomes as in (1) above.

A major target for the first project semester is for the student to produce a document, known as the Project Brief, signed by them, the Mentor, yourself and the CEED Office, which defines the desired outcomes, the current situation, the scope of work, project details constraints, resources and the specific deliverables to the client. The Project Brief is further explained in the next chapter.



9. The Project Brief

- **The Project Brief aims to ensure all agree on what is to be done.**
- **It can be modified later if necessary by mutual consent.**
- **Students often underestimate the value of planning and will need encouragement.**

The "Project Brief" is a major key to CEED project planning. Students, whether undergraduate or postgraduate, often underestimate the time they can save by careful planning. You will need to encourage them to invest in it wisely. Your attitude will greatly affect them, so please make your influence positive.

As soon as possible after being appointed, students must produce a Project Brief. It is a formal document, signed by you, the students, their Mentor and the CEED office, It confirms in writing what is to be done.

The Project Brief describes the:

- project
- client's background
- scope of work
- project details
- constraints
- resources needed
- confidentiality
- deliverables to client

The consultative development of a high quality Project Brief is a very important project element. To emphasise this importance, the student's first studentship payment is dependent upon a satisfactory Brief being signed off by all parties.

To develop the Project Brief, students need to hold several face-to-face discussions with you and their Mentor, visit site if possible, and then outline their understanding of the project, its limits of extent (stating what is essential, and what are desirable extras), and its key interfaces with other people's work or equipment. This makes up their first draft and we encourage students to fill it with ideas, questions, and issues, which when addressed by the Mentor, yourself will provide the feedback needed to then generate a more focused draft and this is then developed further.

We discourage students from seeking sign off of their Project Brief until all parties are agreed that they have a focused and realistic Brief. Should requirements change during the project, the Project Brief should be modified and re-signed by all parties. This avoids painful disputes later.



More information on the specific headings in the project brief can be found in the “Project Brief” chapter of the CEED Project Manual for Students at the back of this manual.



10. Pitfalls To Note

- **CEED projects place greater demands than usual on both students and academic Supervisors.**
- **Some problems can easily be avoided.**
- **Please read the points below and take note.**

Most potential pitfalls centre around poor communication and planning. If allowed to persist, either can cause the project to founder. This lowers your credibility, as well as that of CEED and the university as a whole.

Project "flat spots"

There are two major "flat spots" during CEED projects at Honours level during which students can lose direction, or even lose motivation to continue. These occur:

1. when students start at site

Without clearly defined objectives and methods of accomplishing them, students can fall foul of the unfamiliar environment. Mentors are usually very busy and may not notice students floundering. *Some flounder silently*, not wishing to show their inexperience. Make sure your students start on site with properly defined tasks and clear goals.

2. when students recommence study after summer

After a period with few pressures apart from project work, students often find resuming study hard. With some progress already made on their project while on site, there is a *strong temptation to put the project aside "for a short period"* while they get back into the routine of study.

Delays grow as study pressures build up, and the prospect of catching up with project work becomes increasingly daunting - and postponed! Close liaison with you, and clearly defined short-term project deadlines can ease the temptation and help maintain project momentum during this period.

CEED Partner personnel's motives

CEED Partner motives for participating in CEED often vary between persons, and over time. Sometimes the person authorising the project and later assessing its usefulness is using *different criteria* to the Mentor! Try to ascertain this early so you can propose goals which meet *both* sets of criteria. If challenges arise, please contact the CEED Office.

Establish at the outset exactly what the CEED Partner *hopes to achieve* with the project. If you are concerned that there is tension between the Mentor and more senior persons, it may be wise to get the Project Brief agreed by *both*.

Priorities in the both private and public sectors can change quite rapidly. This can result in pressure being applied to students to shift their line of investigation. Modified goals may not be a problem in themselves, but gradual (and informal) modification can unsettle



students and affect their performance and motivation. Changes to goals should be formally agreed by all parties, and documented in a revised (and re-signed) Project Brief.

Vague targets

Allowing vaguely defined outcomes causes irritation and disappointment. Mentors are sometimes reticent about asserting their own views to supposed "experts" at the university. This can result in poorly defined courses of action, but does not prevent later criticism of you if performance does not meet their (hidden?) expectations. Sorting out with the Mentor the general points outlined in the section on "Starting up" should help get a tightly defined project.

Poor communication

Irregular or poor communication is probably the most common cause of CEED Partner dissatisfaction, and can be exacerbated if students feel intimidated by the seniority, competence and experience of their Mentor. Encourage regular communication with the Mentor, even when there is little progress to report.

Demonstrated performance

The CEED Partner will judge you and the university mainly on your attitude and professionalism (and to a much lesser extent, your expertise). The university will also be judged on the student's performance. It is essential that you not only *do* a good job of supervising and helping the student, but that you *ensure the CEED Partner knows* that you are doing it in a professional manner.

Failure of supervisors to do this has caused more dissatisfaction with CEED Partners than any other problem. Lack of complaint doesn't guarantee that all is well - so *keep checking!*

Perceived attitude

Some CEED Partner personnel may have "sensitivities" about the university which might lead to your attitude being unfavourably interpreted (even if unjustly - or maybe it really is your attitude!). Beware of this possibility. You may need to show that academics are human, and do function as part of the wider community!

Share your experience

If you encounter other pitfalls, please let the CEED Office know as soon as possible so other Supervisors can be alerted.



11. Project Expenses

- CEED projects often involve extra financial transactions, so proper handling of paperwork is essential.
- A careful approach minimises effort and risk.

Funding of CEED projects

CEED Partners agree to fund CEED projects as part of the cost-sharing, on condition that their approval is obtained in writing *before* incurring any expenditure. Some projects have significant extra expenditure. Should your project require extra expenditure on behalf of the CEED Partner, the methods of dealing with it are given below. Equivalent information is given in the Manuals for Student and Mentor so all parties can find out the procedures.

In their development of the Project Brief, students are encouraged to identify ALL estimated costs associated with the project – regardless of who will pay. Students undertake financial management of their projects under your oversight. The university has a responsibility to ensure that CEED Partners' funds are handled properly. Students should consult you before proposing any expenditure, and *you need to approve any expenditure* incurred through the university, once it is approved by the CEED Partner.

For your information, the CEED Partner pays fees to the university towards operation of CEED, a part of which provides the "personal research" payments Supervisors receive.

Sum for minor student expenses

CEED Partners pay the CEED Office in advance a small provisional sum from which students can recover incidental project expenses like photocopying. Students must submit such claims to the CEED Office, *verified by you*, giving account of the expenditure for the CEED Partner's records.

The provisional sum is *not* to be used for transport costs which tend to be a sensitive issue with many CEED Partners. The initial sum can be increased with written consent from the CEED Partner, in which case the increases will be treated in the same way as other project expenditure (see below). The initial sum helps get the students to account for all project expenditure, and introduces a mechanism for the CEED Partner to meet some student expenses.

Travel expenses

Under the standard project agreement, CEED Partners agree to reimburse the university and students only for travel outside the Perth metropolitan area, provided it has been agreed to in writing. This should be documented in the Project Brief. If student transport claims are to be handled through the university, arrangements must be confirmed by the



CEED Partner in writing prior to any expenses being incurred.

General approach to expenditure

When the university spends money on behalf of the CEED Partner:

1. prior written authorisation from the CEED Partner is essential;
2. departments make payments from their own accounts as the job progresses, generally claiming reimbursement via the CEED Office at the end of the project;
3. the student must supply sufficient information to your departmental accounts officer, who will inform the CEED Office of expenditure. The CEED Office will invoice the CEED Partner and arrange for your school to be reimbursed. On rare occasions where expenditure is large, progress payments may be appropriate.

It *remains your responsibility* to ensure any agreed cost limit is not exceeded. All expenditure (including use of stock materials) should be recorded against your project. You will need to discuss procedures with the student. Expenditure will need to be processed by your departmental accounting clerk as normal.

When the job is complete, your accounting clerk should send details of expenditure (together with a copy of the CEED Partner's authorisation) to the CEED Office which will invoice the CEED Partner and arrange for your department's account to be credited.

Note: No invoices will be sent to the CEED Partner on your behalf without a copy of the CEED Partner's order or other authorisation for the expenditure - it is a waste of time.

A project expense sheet is shown on the next page, and can be downloaded from the CEED website. The student has been supplied with similar copies. Please ensure all information is properly filled in on this sheet by the student *before* approving any expenditure to be recovered later from the CEED Partner.



12. Planning and Documentation

- **Consistent, high quality is a goal of the CEED program at UWA.**
- **Simple planning techniques can help enormously to produce a robust bit of research.**

The CEED Project Manual for Students contains sections on planning techniques and collating information. Students will need encouragement, and possibly help, in taking advantage of this material. Feedback from past CEED students indicates that they appreciate too late the value of such planning. Please help them to persevere in the early stages and reap the benefits. If you find yourself skeptical of the benefits, please discuss it with the CEED manager. It is possible that the methods do not suit the topic or discipline, but any alternative adopted should incorporate certain features.

CEED Partners may have CEED projects in several schools, and multi-discipline projects are also a possibility. A consistent and functional method of reporting demonstrates a professional approach, and maximises the benefit to the CEED Partner.



13. CEED Project Presentations

- **Apart from departmental talks, students are required to present a brief talk to CEED colleagues in the first semester.**
- **A select few will have the opportunity to give a presentation at a formal seminar involving senior CEED Partner personnel.**
- **You will need to check your students' papers, especially if confidentiality is an issue.**

CEED presentations are organised by the CEED Office as part of CEED activities, and are independent of any seminars organised by departments.

Brief project talks in first semester

Unless their projects started late, students will be required to give a brief talk to their fellow CEED students in the latter part of their first project semester. This helps students get their projects in focus, and gives them a better understanding of typical project progress.

These talks also incorporate feed-back by final year CEED students. This not only helps the new students, but also helps finishing students evaluate the experience they themselves have gained.

CEED seminar and dinner

During the mid-semester break towards the end of the final project semester for Honours level projects a formal CEED seminar is arranged with senior people from CEED Partners and other outside organisations invited to hear selected CEED students give presentations on their work.

An additional purpose of this seminar is to foster future co-operation by showing potential CEED Partners what can be achieved with CEED projects. If you know of people who may be interested in future CEED projects, please inform the CEED Office at least three (3) weeks before the event so an invitation can be sent.

Proceedings, containing papers written by all CEED students, are published and presented to all attendees. Papers must be approved by you and the CEED Partner Mentor before submission to ensure requirements for quality and confidentiality are met. It is essential that we do not inadvertently reveal sensitive information.

The students play a major part in organising the event, though time demands are kept to a minimum. The seminar is followed by a dinner to allow CEED students and Supervisors to meet Mentors and senior people from CEED Partners (and other outside organisations) in a social setting.



14. Student Assessment

- **CEED does not interfere with normal school methods of project assessment.**
- **The different project format provides opportunities for innovative approaches to assessment.**

Assessment methods for undergraduate and postgraduate projects vary between schools with which CEED does not interfere. CEED projects generally fall into the same category of assessment as regular projects, and the CEED Office has no involvement in academic assessment.

For academic assessment purposes, Mentors can be asked to give their opinion of student performance. The CEED Office asks Mentors for feedback on student performance from time to time. Supervisors and schools are free to incorporate such feedback in their assessment, or to neglect it.



15. Supervisor “Research funds”

- **Supervisors of CEED projects receive extra research funds for their efforts**
- **Procedures for determining and handling these are outlined below**

Supervisors of CEED projects have additional constraints imposed upon their normal research because project topics are selected by outsiders, extra meetings with CEED Partners are required, and projects last longer. As compensation, Supervisors receive a portion of the CEED fees paid by CEED Partners as "personal research funds".

When funds become available

With Honours level projects, the CEED Partner is invoiced twice, once upon allocation of the students, and again in September of the final year. As a rule, one half of your CEED supervisor's research funds becomes available as we receive each payment

When the funds becomes available, the CEED office will contact you to find out which university account you would like the mooney transferred to. Alternatively, you can have a “standing order” for your research funds to be transferred automatically to a specified university account.

Non-financial projects

Occasionally a CEED Partner will experience financial (or other) challenges during a project, as a result of which their CEED fees are paid late, or not at all. In such cases, the CEED Office guarantees continuation of the Studentship, and consults Supervisors before any decision is made concerning continuation of the project. The three main options are listed below in order of preference:

- Continue the project unchanged, trusting that fees will eventually be paid (negotiations concerning Studentships may be handled separately). In such cases, Supervisors are asked to liaise with the CEED Partner as normal, though the CEED Partner's copy of the final report may be withheld until payment is received.
- Discontinue project contact with the CEED Partner, but continue the same topic as a regular project to minimise academic disruption to the students. This may be essential if the disruption were to occur during the final year.
- Discontinue project contact with the CEED Partner and abandon the project topic altogether. This option would normally be viable only if the disruption occurred before, or very early in, the site work period.

In the event that a CEED Partner defaults on one or more project payments, the CEED Office guarantees that Supervisors will receive at least half of the "personal research funds" which would have been due from the defaulted payment as well as their normal portion of all payments received.



16. Communication

- **Communication is a vital key to the success of CEED projects.**
- **You can help students by setting and expecting high standards of communication and presentation of information.**

The success of CEED projects hinges on people, and their ability to obtain proper input from all parties. Communication is therefore critical.

Student communication

The risk of misunderstanding need to be minimised. The Student Manual gives details of danger areas, but the main suggestions are:

- 1) Keep in regular contact with all parties.
- 2) Put all agreements in writing.
- 3) Keep all parties well informed

Written Monthly Progress Reports

Students are required to provide a brief progress report every month (throughout *all* phases of the project, including the site work period) to you, their Mentor, and the CEED Office. A pro-forma is shown on the next page, and can be downloaded from the CEED website – www.ceed.uwa.edu.au/forms. Increasingly, such reports are provided by email.

The monthly progress reports are regarded as an absolute minimum for CEED projects, and studentship payments may be delayed, or withheld totally, if students do not fulfill their obligations by providing satisfactory progress reports monthly.

The CEED Partner may want a longer report at the end of the site work period. Students should check with their Mentors about this. If they do submit one, you should also receive a copy.

Communication with the CEED Office

The CEED Office is responsible for arranging CEED projects, and monitoring progress to ensure the CEED Partner's needs are being met. Please keep the CEED Office informed of any major changes.

Changes of your phone contact details

Please inform the CEED Office if your phone contact number is changed.





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CEED Student Monthly Report

Report by: _____ Project Ref: _____

Covering the month of: _____

Project Title: _____

Company: _____

Progress since previous report:

Problems and delays encountered:

Expected progress in next month:

Foreseen problems and delays to be encountered:

Signed... ..
Copy to: (4 total) Academic Supervisor / Mentor / CEED Office / Self

Date.....



17. Agreements

- **Formal agreements with CEED Partners cover all basic aspects of CEED projects as simply as possible.**
- **Confidentiality requirements may be included on some projects.**
- **Intellectual property is sometimes an issue. It can usually be negotiated after the event, but any concerns should be referred to the CEED Office as soon as they arise.**

Contractual documentation for CEED projects has been minimised, but still forms an important part of the working relationship with CEED Partners, covering important issues like liability, indemnity and intellectual property. The university has stringent regulations concerning signing of agreements, so please ensure that all contractual documentation is handled via the CEED Office.

Project Agreement

The university generally signs a Project Agreement with the CEED Partner for each CEED project, though agreements can be arranged to cover a series of CEED projects over several years. Project agreements are arranged by the CEED Office and you do not normally need to be involved except where special confidentiality arrangements are required. If you would like information about the agreement please visit our website at www.ceed.uwa.edu.au.

Status of students: CEED students are not employed by the university, nor by the CEED Partner, although both are committing time, effort and other resources to the projects. CEED students are acting as private individuals to perform a particular bit of work. CEED students sign a formal note accepting their projects and acknowledging their primary responsibilities and a "Student Undertaking" which forms part of the Project Agreement negotiated with the CEED Partner.

Confidentiality

Some CEED Partners may require all parties involved in a project to sign an agreement on confidentiality. This may extend to academic Supervisors, and sometimes even to examiners.

Stringent confidentiality arrangements can be important, particularly as regulations regarding patents can be breached unintentionally. *Please keep the CEED Office informed if you hear of such requirements, and make sure all agreements are handled through the CEED Office.*

Intellectual property

Intellectual Property (IP) is not usually a major issue with CEED projects, but is becoming a matter of increasing concern with many CEED Partners. IP could become



very significant if something of major commercial value is developed within the project period. The default approach in the standard CEED agreement is that no party has outright ownership but, if required, the CEED Partner and UWA (the Students are treated as if they were UWA staff) will negotiate later on ownership. It is not normally practical for individual UWA staff members to be involved in this process, though the normal UWA staff conditions apply when UWA receives benefits.

Some CEED Partners are concerned about losing control of their existing IP through possible sharing of the IP arising from project work, or about damage to their commercial negotiating power. CEED therefore offers a standard option whereby Partners may pay a fee surcharge to obtain full ownership of IP produced during the project. In such cases, the normal CEED payments to students and academic supervisors are increased to compensate for the concession. Ownership of "Background IP" is unaffected by the surcharge, so you are not making any concessions in that area.

In some cases, special arrangements may need to be negotiated at the start of the project. If the CEED Partner raises any such concern with you at any time, please refer them immediately to the CEED Office because we will need to involve the university solicitor in all such discussions.

If you have any concerns about IP at any time during (or even after) the project, please contact the CEED Office immediately. Delays simply allow greater complications to develop.



18. Insurance and Safety on Site

- Safety is the concern of all parties at all times.
- Responsibility for insurance must be kept unambiguous for all stages of the project.
- CEED has insurance mechanisms in place, but you need to know the limitations and what can interfere with them.

Safety is the concern of all parties, and we all have a duty to ensure activities are conducted with maximum safety. Students generally have little experience of industrial safety and insurance, so your guidance can greatly assist them. Great care needs to be exercised with any advice given, because academic staff are not trained or competent to give proper advice on some issues. If in any doubt, refer students to those who are trained and equipped to advise them.

Insurance

The following information on insurance presents a broad outline only. If any issue depends upon this information, you should refer to the appropriate authorities before acting.

The university indemnifies the CEED Partner against damage arising from negligence of CEED students, including periods when visiting and carrying out project work on site, but this is affected if students become employees of the CEED Partner. Please note that the indemnity does not cover deliberate damage or damage arising from deliberate folly!

If students make any arrangement with the CEED Partner for any period of work on site *with remuneration*, they are effectively employees of the CEED Partner for that extra period and the CEED Partner's workers' compensation insurance should cover them for that period. On occasion, an extended period of project work on site might be negotiated but with the studentship (increased or unchanged) remaining the only payment; in such cases, the student would not be regarded as an employee.

Important: Please make sure any period of "employment" is clearly identified in writing so liability for insurance is clear to all parties and disputes are avoided.

The university's insurance of students against personal accident and public liability is limited, and students are advised to consider taking out their own insurance.

Safety on site

The CEED Partner may have a work safety program requiring the students to attend talks on safety matters. The Mentor will make any necessary arrangements, but may need to be asked. Please ensure your students do so. Please impress upon your students that industrial sites often contain unforeseen dangers so, if in any doubt, they should ask someone who is familiar with the environment.



19. Studentship and Vacation Work

- **CEED students receive a Studentship, but may work on their projects at site unpaid at some point during their project.**
- **Students with scholarships or cadetships with the CEED Partner are exceptions.**
- **Extended periods on site can also be negotiated by students with or without pay.**

CEED students who have no other special relationship with the CEED Partner generally have a standard arrangement for their Studentship and site work, though some CEED Partners may choose to increase the sum of the Studentship. CEED students with scholarships or cadetships from the CEED Partner usually have different financial arrangements.

Studentship

CEED Partners pays each student a Studentship over the full term of the project. The studentship is funded from the project fee paid by the CEED Partner. Studentship payments are made by the CEED Office in instalments.

For Undergraduate level projects, these are usually:

1. shortly after the student starts site work in the summer vacation (students must inform the CEED Office when they start on site) and after the student has handed to the CEED Office a Project Brief signed by all parties;
2. once the student has commencement their final year and provided they are up-to-date with their all reports, the second payment will be made approximately in the middle of the year of their Final or Honours year;
3. in second semester in the Honours year, on completion of the six page CEED seminar paper and provided the student is up-to-date with all reports.

CEED Studentships are conditional upon students' satisfactory performance on their projects (including reporting), and on the understanding that they continue projects to their conclusion. Failure to fulfill their project obligations could lead to loss of, or even require repayment of, their Studentship.

Unless students make specific alternative arrangements with the CEED Office, cheques for Studentships will be sent to the address given to the CEED Office. *It is the students' responsibility to inform the CEED Office of any changes of address.* If you or the students have queries regarding the please contact the CEED Office.

Students with a scholarship or cadetship

Students with a scholarship or cadetship from the CEED Partner usually have in place a mechanism giving even more generous financial support. As a general rule, the



mechanism providing the greater support to the student is used for the CEED project, *but not both*, unless the CEED Partner specifically agrees otherwise.

If students have financial support from another organisation which still allows them to fulfill their CEED obligations, that support should not affect their eligibility for the CEED Studentship. Establishing liability for tax would be their responsibility.

Site work

CEED Partners agree to have the students work on their CEED project at site for a set period during the project. Students are responsible for negotiating actual dates with their CEED Partner. Performance on CEED projects will be assessed on the assumption that students use the site work period constructively, so they should not allow their efforts to be diverted.

Courtesy suggests students should inform the CEED Partner's personnel department of their arrangements even though they are not employed by the CEED Partner and are not conventional "vacation students".

Make sure students' status as CEED students working on their projects is properly understood. CEED Partners which regularly employ vacation students may need the distinction clarified, otherwise they may expect CEED students to undertake their regular vacation training program. If difficulties arise, students should ask the CEED Partner to contact the CEED Office for clarification, or make contact themselves.

Many CEED Partners do not object if students wish to work on site for longer than the minimum period, and may even be happy to pay them extra. CEED Partners are under no obligation to allow a longer period, nor to pay extra if students work longer (but they could be reminded that their attitude to this may be conveyed to other students and affect recruiting). Any such arrangement is up to the students and CEED Partner, but *make sure you are informed in writing* of the dates for extensions as there are insurance ramifications.

Students should expect to spend the majority of their time on site working on their projects or matters directly relevant to their projects. They should keep in regular contact with you during this period.

Sometimes CEED Partners offer an opportunity for students to gain additional experience of little direct relevance to the project. If such offers come their way, students are advised to discuss them with you before accepting. Provided it does not interrupt project work for more than 10-15% of the site period, students are usually welcome to take the opportunity since broadening their experience is a major aim of the CEED program.

If students are unable to work the full period during the summer vacation, they need to negotiate alternative arrangements with you and their Mentor to accumulate an equivalent period.

