CO600

Final Year Project Guidance

1 Project Selection and Registration

All students entering Stage 3 are required to register and sign-up for a final year project:
Canterbury: one of CO600/CO620/CO650
Medway: CO600 or CO650

Restrictions
CO620 Students taking this module must be achieving at least a 2:1 (60%) at Stage 2.
CO650 IT Consultancy Project - acceptance onto this module is subject to interview

Deadlines
Friday of Week 28
Friday of Week 1 of the next academic year for students currently out on placement

The final year project is a compulsory part of the programme. Students who do not sign up for a project by the deadline will be referred to the Director of Studies and may face disciplinary procedures.

1.1 Selecting your project

Academic Staff in the School will post project suggestions on the CO600 and CO620 Projects forums. You should contact the supervisor(s) of the proposal(s) that interest you to discuss the project.

Students can also propose a project themselves. This will need approval from a member of academic staff who is willing to act as supervisor. The project must satisfy the requirements of the project module.

1.2 CO600: forming a group

Groups should be between 3 and 5 members.

Things to remember:

- The larger the group, more difficult to manage
- more members does not mean less work
- individuals are assessed, not the group

Finding group members: If you are looking for a group, or for others to join your group use the projects wiki/forum[1] to advertise your project.

Exceptions

In the following circumstances, an individual CO600 project may be permitted:

1https://forum.cs.kent.ac.uk/

- where a student has an ILP which specifically refers to adjustment with regard to group work;
- where a student undertakes a project in collaboration with the company with which they spent their placement. In this case the other "group members" are at the company, and the project would still need an academic member of the School to supervise.

Exceptions are subject to approval by the Senior Tutor (Janet Carter J.E.Carter@kent.ac.uk). A recommendation from Student Support and Wellbeing (https://www.kent.ac.uk/gettingstarted/support-wellbeing.html) is required. The Student Support and Wellbeing services should be contacted in the first instance.

1.3   Registering your project

Once you have formed a group and found a project, the group should complete a Project Registration Form, available from the Student Administration Office, and submit it to the Office by the published deadline.

1.4   Ethics: Research Involving Human Participants

If your project will entail research involving human participants (for example, in user trials or in surveys) you must complete an Ethics Review Checklist together with a paragraph describing the projects. See Appendix 1 to this document.

1.5   Safety
If your project involves hardware construction you will be required to attend a session on safety.

2.   Getting started
Although the project begins in the Autumn term, many students will devote part of the summer vacation to undertake preparatory work and background reading from their project.

3.   Conduct
Project work officially begins on the first day Week 1 of your final year. The project counts for **one quarter of your final year's work**, so you should expect to spend about one and a quarter days a week working on it. Since coursework loading for other modules tends to be very light during the first couple of weeks of term, and heavy towards the end of term, *you are strongly recommended devote rather more time to your project during these early weeks.*

3.1   Meetings with your supervisor
You should arrange to meet with your project supervisor during Week 1. At this meeting preliminary plans for undertaking the project should be discussed and a weekly meeting with the supervisor should be arranged.

At these weekly meetings, you can expect your supervisor to offer technical advice, to monitor progress and to help set targets and draw up plans.

The supervisor will expect to be presented with an overall plan near the start of the project and for this plan to be kept up to date throughout the project.

If for any reason you are unable to attend a meeting, you should email your supervisor and explain the circumstances. These meetings are compulsory and the supervisor will keep a register of attendance. Failure to attend without prior approval can result in academic disciplinary procedures.

3.2   CO600: Meetings of your group

If you are undertaking a group project, you should agree on a time to meet as a group each week (Mondays at 10am is a good time for such meetings). At your weekly meeting, you should review (against the plans you have drawn up) progress, identify any particular problems that have arisen, and agree on work to be undertaken.

At each meeting of the group, someone should be nominated to take minutes, and these minutes (they can be very brief) should be in the group's filespace and accessible to the group's supervisor. If the supervisor does not have access to the group's filespace, the minutes should be emailed to the supervisor every week. The minutes have to summarise what has been done by every group member since the previous meeting. Instead of writing minutes, the group can use existing frameworks (e.g. Scrum) for managing their work. The reports generated by such tools should be available to the supervisor.

4.   Resources

Each project will be allocated shared filespace on a school file server. (This allocation is made around Week 3 of term; you will need to use your own private filespace before then.)

If your project requires significant extra resources (hardware or software), this will have been reported at the time the project was accepted. If your project has minor extra requirements (such as the installation of special software), you are asked to give plenty of notice (weeks, not days!).

5.   Supporting Lectures

A lecture will cover the skills necessary for the preparation of a technical report.

It is most important that you attend the lectures: they will be very helpful to you in conducting your project and drafting your report.

6.   Project Deliverables

Each deliverable has a deadline which will be published on the moodle module page.

The outcomes of the project (the "deliverables") comprise:

- An informative poster for public presentation at the end of year School Projects Fair;

- An abstract which will be used at the poster fair to describe your work and achievements. The abstract template is on the moodle module page
- A technical report describing the scientific/technical outcome of the project, demonstrating the ability to synthesise information, ideas and practices to provide a quality solution together with an evaluation of that solution;
- A well-indexed corpus of material that supports the achievements claimed;
- One or more artefacts (typically computer programs, but possibly taking other forms, such as a VLSI chip design);
- Each individual must submit a report outlining his/her contributions to each of the various aspects of the project. This report will be discussed at an individual *viva voce* examination.
- **A short video demo of your project working. This should be no longer than 5 minutes.**

These deliverables are described in the following sections.

6.1. Poster

There will be a Poster Fair in the Spring Term. All final projects are required to prepare a poster for this event.

The poster should be aimed at informing (and possibly entertaining?) your colleagues about the problem/task/topic your project was investigating and for show-casing your work to the wider world. The poster will not be formally assessed, but it will inform the assessment of your overall project. Your markers are expected to visit your poster.

Your final poster will be printed (by the School) in full colour in A1 size (i.e., 594 x 841mm) for exhibition at the fair.

Poster preparation

- The poster can be prepared as a MS PowerPoint file (filename.ppt). If you prefer to produce your poster using another application then ensure that you submit the result as a PDF file (filename.pdf). More information on how to generate PDF documents can be obtained from system support, or if you are off campus from PDFCreator.
- Please be sparing in your use of large slabs of colour (it is very expensive to print!). In particular, **please do not use a coloured background for your poster**.
- Your poster may be either portrait or landscape format.
- It should carry the "Kent" logo.
- Initially, you should print an A4 draft of your poster and discuss it with your colleagues and your project supervisor. Then, when you have finalised it, you should submit the .ppt file or the PDF file for printing to \\raptor\files\proj\co600\poster_and_abstract\.
- The poster files must be submitted electronically.

6.2. Abstract

This abstract should be written using the template provided on the CO600 Moodle page, and submitted to the same folder as the poster.

6.3. Technical report

This report should be written in the style of an academic paper and should describe the scientific/technical outcome of the project. Appendix 2 contains guidance on the content and structure of the report.

You are advised to start work on the report at the start of the Spring term.

The quality of the technical report will be judged according to the criteria for technical accuracy and clarity of expression normally applied when refereeing academic papers.

Length

The report (excluding abstract, any appendices, and references) cannot exceed the upper limit of 6000 words for CO600 projects. It should be in A4 format. The font size should be at least 12pt, and all margins should be set to at least 1 inch (25 mm). The line spacing should be at least 1.3. There is no limit on the number of pages.

Your report should be prefaced with a title page giving the project type (CO600 or CO620), the title, the project group members' names and the Kent logo.

The Latex template that we provide follows our requirements.

Any appendices will generally be short and terse; you should not use the appendices as an "overflow" for the main text. Reports which are above the stated upper limits may be penalised.

6.4. Corpus of materials

This may include literature reviews, specifications, analyses, designs, implementations, user documentation, testing schedules, and so on, depending on the particular project.

For group projects, it must include minutes of meetings.

6.5. Individual report

This report should be an assessment of the progress of the project, reflections on what you have learnt from undertaking it. It should include a description of the particular activities and outcomes that you have contributed to the project, and of how the group worked together. These reflections should include a critical appraisal of the project, indicating the rationale for any design/implementation decisions, lessons learnt during the course of the project, and evaluation (with hindsight) of the product and the process of its production. It should not be a repeat of other material delivered as part of the project. It should contain at most 1500 words. There are no specific requirements for the format and the structure of the individual report.

The contents of individual reports are deemed to be confidential and are not revealed to other members of the group.

6.6 Video deliverable

A short video demo of your project working. This should be no longer than 5 minutes. You should use video formats that can be played without specialised or unusual video codecs.

7. Submission

The deliverables are submitted at various points during the course of the project in the order listed below. Deadlines will be published on the CO600 Moodle page.

- Poster and Abstract (electronic submission)
- Technical Report (electronic submission), and Corpus (electronic submission)
- Individual Report (electronic submission)
- Video (electronic submission)

Extensions to deadlines are given only in the most exceptional circumstances. You are *strongly advised* to submit your work *well before the published deadline*. Extensions can be given by the Senior Tutor (Janet Carter) only. The CO600/620 convenor and the supervisors cannot give extensions.

7.1 Poster and Abstract
you should submit the .ppt file or the PDF file with your poster to \\raptor\files\proj\co600\poster_and_abstract\.

Your poster will then be printed in readiness for the School Poster Fair.

Your Abstract should be submitted to the same folder as the poster.

7.2 Technical Report
The report should be submitted on Moodle by the published deadline.

7.3 Corpus of materials
The submission should include (as a top-level file named index.html) an HTML index listing all deliverables and their authors with hyperlinks to the individual files in your submission. A sample index is available on the Moodle module page.

The files should, to the greatest extent possible, use standard, non-proprietary formats (such as .txt, .html, etc.) for the files. However, documents in common MS Windows formats (such as .doc, .xls, etc) that are readable on the standard university desktop are acceptable.

The entire corpus should be packed into a zip archive (or similar) and submitted on Moodle. If the corpus is too large to be submitted on Moodle, it should be uploaded to raptor to \\raptor\files\proj\co600\corpus\.

7.4 Individual Report
The Individual Report should be submitted on Moodle by the published deadline.

7.5 Video Presentation
The video should be submitted on Moodle by the published deadline.

8 Assessment

The last stage of the project is the *viva voce* examination. This is a short oral examination conducted by the project supervisor and another member of staff.

The purpose of the viva is to help assess your particular contribution to the project, your understanding of it and your general background knowledge of the field. The vivas are conducted on an individual basis and, typically, last for about 20 minutes.

Towards the end of the viva, you will be invited to add any further information on any aspect of the project that you would wish to be taken into consideration.

The viva may be preceded by a short demonstration of any artifacts (for a group project, this will take place collectively). The viva takes place after the project deliverables have been submitted (either at the end of the Spring term or during the Summer term).

After the vivas are complete, the examiner and supervisor will allocate a mark for each individual. The mark will be defined with respect to the intended learning outcomes (both specific and generic) defined in the CO600 module specification.

Project Marking Criteria are contained in Appendix 3.

The marks for the module overall are subject to confirmation by the Board of Examiners and are released to students at the same time as their final result.

Appendix 1

Research Involving Human Participation

Some undergraduate projects will need to be approved by the Faculty Research Ethics Advisory Group. Such projects, for example, will involve the use of:

- clinical populations, vulnerable children or adults (e.g. adults or children with mental health problems or learning disabilities, prisoners, or young offenders);
- the collection of particularly sensitive personal, biographical, medical, psychological information;
- or procedures that may upset or offend participants (e.g. presentation of unpleasant stimuli; arousal of emotion);
- the internet to conduct the study.

This list is not exclusive, and it should be remembered that:

- The purpose of the Advisory Group in reviewing the proposed study is to protect the dignity, rights, safety and well-being of all actual or potential research participants.

Students intending to work alone with children or vulnerable adults will require a CRB check and an application to the Ethics Group is essential.

At the point of registration, students should discuss with their supervisor whether they will need to make an application to the Ethics Group.   If it does, a description of the project should be provided on the registration form and an Ethics Review Checklist should be completed and attached to it. This is available from: https://www.kent.ac.uk/stms/research-ethics/index.html

Work should not start on a project requiring approval under these guidelines until such approval has been granted.

The Guidelines for Conducting Research with Human Participants will help you to decide whether you need to have your project approved. **The Checklist for Research Projects Involving Human Participation is required for all projects involving human participation, even if ethical approval is not to be sought.**

Further information on ethical considerations is available at: https://www.kent.ac.uk/stms/research-ethics/index.html

Appendix 2

Guidance on preparing the Technical Report for CO600 projects

These notes offer guidance on preparing the Technical Report for the CO600 projects. They should be read in conjunction with the *Final Year Project Guidance* document.

1. Aim of the report

The aim of the report is to provide an overview of the technical and scientific content of your project. The paper should be capable of being read as a self-contained document: after reading it someone should have a good idea of what your project is about, where it fits into the subject, what you have achieved and how this work could be taken further. However, you may want to make references to documents which are contained elsewhere in your submission. For example, you may write a summary of your test results in your report, and refer readers to a detailed testing document which is included in your corpus or as an appendix.

You should write the report so that the technical content and language used would be comprehensible to an average computer science graduate. You might want to test this by giving it to a friend on your course in a different project group and getting them to explain it back to you.

Remember that there are formatting requirements and upper limits on the size of the report.

The paper will typically be used by the markers as the entry point to your project. As a result of reading the report they should have a broad general idea of what you have achieved by doing the project. However, the project is **not** solely marked on the basis of the technical report; the marker will examine the additional material provided in detail too. One important role that the report should play is to guide the marker through the (often large) body of material which is submitted for the project.

2. Structure

The detailed structure of the report is a matter for you to decide, with guidance from your supervisor, but the following structure would be a good starting point.

Two key sections are the *Introduction* (where you grab your reader's attention) and the *Conclusions* (where you present what you have achieved in a positive way). It is a good idea to show a draft copy of the *Introduction* to a colleague and then ask them what they think your project is about.

Title

Should be informative and not too long.

Author(s)

The members of the project group, listed in alphabetical order.

Abstract

This should provide a concise summary of the paper. Typically, it will be between 100 and 200 words in length.

Introduction

This should outline the motivation for the project and sketch the general background. It might also signpost significant features of the rest of the report. Ideally, the introduction will both orient the reader and capture his/her interest.

Background

No project is undertaken in isolation; rather, it builds upon earlier work and published material. In this section, you should provide a detailed account of this material, linking it in with the bibliography at the end of your report. The purpose is twofold: as a formal acknowledgement of prior work in the field, and as guidance to your reader should he or she be unfamiliar with the field.

Aims

A careful statement of what it is that you are setting out to achieve.

(Several technical content sections)

This is where you go into detail about what you have done. You will need to decide the titles for these sections yourself; they will depend on the content of the project. These sections should summarise the technical and scientific achievements of the project.

Depending on the nature of your project, these sections may include: a comparison of different approaches that you considered, accounts of experimental work, mathematical analyses, specifications, top-level architectural diagrams, results obtained, problems encountered, workarounds, user evaluations, performance measures, testing regimes and results, comparisons between different approaches adopted, comparisons with existing work on similar problems.

In particular, you should give a mixture of general discussion of your work and particular examples. Too much general discussion and the reader cannot easily get a handle on what you are doing; too many specific examples and the document fails to "tell a story".

Conclusions

A statement of what your project achieved. For example, you might want to consider:

- how well did your final product work?

- how does it compare with other, similar projects?

- how novel are your ideas?

- what guidance can you offer to others setting out with similar aims?

- what scope is there for further work on the topic?

Acknowledgements

Where you thank people who helped you or gave guidance (including your supervisor!).

Bibliography

A list of work that you have referred to throughout the document, for example related projects and papers, reference documents, relevant textbooks, etcetera.

Some of the references may be of URLs to free-standing, electronically published reports but the majority are likely to be to textbooks or journal articles. Have a look at an academic paper to see the style in which references to published work are presented. There are automated systems such as Endnote and BibTeX which can help you manage references automatically.

Appendices

You might include items such as: test data, detailed results, significant portions of programs, statistical analyses, UML diagrams, etc. that, whilst not essential to understanding the main report, provide fine-grained info supporting conclusions reached or explaining methods adopted.

Appendices do not count towards the page limit. But do not use this as an excuse to "bulk up" the project in the mistaken belief that the heavier the project report the higher the mark! Indeed, you will be marked down for excessive appendices which contain information which would be better included in your corpus.

You should give careful thought to which items you want to include here, and which are better included in the corpus. Written documents, detailed diagrams and tables are often better presented in the report. Items which will only be read briefly (like minutes of meetings) and items which contain large amounts of data (e.g. large sets of testing results) are better placed in the corpus.

3. Restrictions

Remember that, since your report may be published electronically on the web, it must respect copyright rules and must not contain any material of a libellous or personal nature.

4. Timescale

You are strongly advised to start work on your report no later than the start of the Spring Term.

Appendix 3
Assessment Criteria

Band	CO600 Guideline criteria
90-100	Marks in this range should be reserved for a superb all-round performance. Contributions to all areas of the project go well beyond even high expectations.
80-89	Excellent contributions to all areas of the project. Exceeded expectations in some areas. Demonstrates knowledge and understanding of the project area that is beyond standard resources. Integrated well with other group members. Clear appreciation of the project as a whole, its adequacies, limitations and future development.
70-79	Very good contributions to all areas of the project. Successful completion of the allocated tasks. Demonstrated initiative and creative problem-solving ability. Able to research project-related areas. Integrated well with other group members. Able to reflect accurately on adequacy and limitations of the project's achievements.
60-69	Good appreciation of background. A good attempt at applying this to the specified task, with demonstrated ability to cope with difficulties. Good technical skills and involved in several project tasks. Solid and consistent contributions to project meetings and to the group process. Good reflective understanding of the project.
50-59	Satisfactory background reading and a competent attempt at their tasks. Reasonable technical competence. Good contribution to supervision meetings and to the group process. Able to reflect satisfactorily on the project.
40-49	**Pass level.** Competent background reading and appreciation of the project area. A fair, though possibly pedestrian, attempt at their areas of responsibility. Basic technological competence. Adequate contribution in supervision meetings and to the group process. Able to reflect in a limited way on the project.
30-39	Unsatisfactory. Some attempt has been made at the background reading but clearly only partial understanding of project topic. Poor attempt at specified task. Weak technical competence. Limited contribution in supervision meetings and to the group process. Little ability to reflect adequately on the project.
20-29	Inadequate background reading, some application of knowledge to task. Minimal attempt at specified task showing poor understanding. Little, if any, contribution in supervision meetings and to the group process.
10-19	Minimal attempt at background reading, inappropriate use of material, virtually no attempt at specified task, very poor understanding of problem.
0-9	No significant attempt at project work.

Appendix 4
Folders on raptor

Folder path	Description
\\raptor\files\proj\co600\project\	A private file space that the group can use to store their files. The content of this folder is not marked and no deliverables are submitted to this folder.
\\raptor\files\proj\co600\poster_and_abstract\	Poster and abstract are submitted to this folder by the published deadline. Note that this folder will not be available for writing after the deadline.
\\raptor\files\proj\co600\corpus\	The corpus should be submitted on Moodle by the published deadline. If the corpus is too large to be submitted on Moodle, it should be submitted to this folder by the published deadline. Note that this folder will not be available for writing after the deadline.

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