

# Meng Project COMP 591

Pr. Rida Laraki

Computer Science Department, University of Liverpool, UK

October 16, 2020

Module web page

<http://cgi.csc.liv.ac.uk/~comp591/2020-21/>

# Individual and Group Projects

An important part of the course:

- A chance for you to work on a substantial piece of work.
- Crucial part of the BCS accreditation of your degree course.
- Supposed to stretch you and allow you to demonstrate your skills.

A 30-credit (double) module

- Group Project (1st Semester) and Individual Project (2nd Semester)
- Worth a quarter of the marks for the entire year
- 300 hours of effort over around 40 weeks means **one full day of work per week**

Your project is **your** responsibility

- You can expect **guidance from your supervisor** (around 6 hours per semester)
- But it's up to you to manage your own time and project schedule
- The end result will depend on how much effort **you** put in

## Hybrid Delivery Model

- Following university guidance, we are adopting a hybrid delivery pattern.
- October-November, your project meetings will take place online (MS Teams).
- As the campus begins to reopen, you might want to meet with supervisor in person.
- Some staff offices are not suitable (shared spaces, too small to respect social distancing) and some staff members may be working from home.
- **It's important to maintain regular contact with your supervisor and keep them informed of progress.** Don't hesitate to ask for a meeting when you need an advice!

## Expected Learning Outcomes

- **Work cooperatively within a team.**
- Taking on **various roles** on a substantial problem.
- Make practical use of principles, techniques and methodologies acquired elsewhere.
- **Manage time both individually as well as a team** so as to carry out a project plan.
- Locate and synthesise research information on concepts, ideas, and practices.
- **Undertake research** on their own on a substantial Computer Science problem.
- Devise as a team an efficient solution using an appropriate methodology.
- **Prepare and deliver formal presentations** including an overview of the methodology used, the design of a solution
- **Collaboratively produce a report** describing the conduct of the project

## Conduct of the project

- **1 week.** **Organising the work**, meeting the supervisor, completing the bibliography.
- **2 weeks.** **Laying the foundations**: making precise the aims & objectives; identifying and absorbing the information you need; defining the deliverables; deciding on a methodology; producing a detailed plan.
- **2 weeks.** **Coming up with detailed designs**. If you are producing a piece of software, the detailed design should be carried out, all aspects of the system - architecture, data structures, algorithms and interface, all fully documented. By the end of this phase you should be clear both as to what you will be implementing, how you will implement it, how you will test and evaluate, and what you will do in the next phase. **More detail work division among the group member should be made, as well as the ways and frequency of interactions.**
- **5 weeks.** **You will realise the design you have produced**. During this period you should carry out your software implementation, test the software, conduct any necessary experiments, and perform the evaluation.
- **2 weeks.** **You will present your project and write up your report**. During this period you may find it helpful to discuss an outline of your report, in the form of a table of contents, with your supervisor, and to show your supervisor a draft of your report to get feedback on what you have done.
- **Archiving your work** - source code, tools, documentation and reports - in such a way that they can be used in future work. You should discuss these with your supervisor.

## Calendar for COMP591 (1st semester)

<http://cgi.csc.liv.ac.uk/~comp591/2020-21/calendar.html>

- **Week 2** A clear idea of the project and its requirements is ready.
- **Week 3.** The project specification stage is completed.
- **Week 6.** (assessment). Project specification and design (oral presentation and documentation). The documentation is submitted through the E-project system by Monday 16 November, 2020 (noon). The presentation given within the week of 16-20 November. [20% of project mark]
- **Week 10** (assessment). Final presentation given to the markers in the week 14th-18th of December, 2020. You must submit a pdf copy of your Final Presentation slides through the Comp591 E-project system, by Monday 14th December 2020 (noon). [ 20% of project mark]
- **Week 12** (assessment). Project report and individual reports submitted on Friday 15 January 2021 (noon). [60% of project mark]

## Deliverable / Assessment 1, Project Specification and Design, week 6

- The work to be assessed at this stage comprises both the **Project Specification and Design report** and its **oral presentation**.
- This assessment is worth 20% of the project mark.
- There is **no page nor word limit** for the Project Specification and Design report. Thought I recommend around 10 pages.
- The **deadline for submission of the report is Monday 16 November, 2020 (noon) via the Comp591 E-project system**.
- The presentation is given during the week commencing Monday 16 November, 2020 at a time arranged by you with the supervisor and the second marker.
- The submitted Project Specification and Design report and its presentation are marked by both supervisors.
- Precise instructions here:  
[https://cgi.csc.liv.ac.uk/~comp591/2020-21/COMP591SpecificationAndDesign\(PresentationReport\).pdf](https://cgi.csc.liv.ac.uk/~comp591/2020-21/COMP591SpecificationAndDesign(PresentationReport).pdf)

- The work to be assessed at this stage comprises the project **final presentation** and the **demonstration of the software** produced.
- **Markers should see the software being executed as well as some representative parts of the code.**
- Both the quality of the presentation and the quality of the software should be considered before arriving at a mark.
- The Final Presentation is worth **20% of the project mark.**
- The Demo final presentation is held in the week of 14-18 December 2020, at a time arranged by you with the supervisor and the second marker.
- **The deadline for submission of slides is Monday 14-18 December 2020 (noon) via Comp591 E-project system.**
- Precise instructions here:  
<https://cgi.csc.liv.ac.uk/~comp591/2020-21/COMP591ProjectFinalPresentation.pdf>

- The work to be assessed at this stage comprises both the **group Joint Final Report** and **Individual project reports**.
- The project report is worth **60% of the project mark**.
- The Joint Final Report must be self contained, and contain a complete record of the work carried out.
- **A target of 10,000 words is recommended, with a maximum of 15,000 words.**
- **Appendices will not be included in the maximum word limit.**
- **You should also include the code** of your software (zip format).
- An **individual project report must be up to two A4 pages**, outlining an **individual contribution** to the project and **learning experience**.
- The deadline for submission of the project report is **Friday 15 January 2021 (noon)**.
- Precise instructions here:  
<https://cgi.csc.liv.ac.uk/~comp591/2020-21/COMP591FinalReportIndividualReports.pdf>

## Fourth Year MEng Project

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**Contact R. Laraki**

Coordinator: Prof Rida Laraki  
University of Liverpool Computer Science Department

Fourth Year of an MEng Degree

G401/G404 - MEng Computer Science  
You must take COMP591 (Group Project) in semester one  
and COMP592 (Individual Project) in semester two.

The third year project provides an opportunity to carry out a substantial piece of work for which you are individually responsible. It is a key element of the Honours degree and its BCS accreditation. You are required to apply and explore in more depth some of the things you have learned elsewhere in the course, and to show initiative in expanding and applying your knowledge.

You should not expect to be told everything you need to know, nor exactly what to do. You will have to find much of the information for yourself, drive the project forward, take the initiative, and manage your own time. You'll have a supervisor who will provide advice and guidance, but it's your project and you are expected to take responsibility for it.

### Project supervision

You will be allocated a supervisor who will offer help and advice throughout the project. The role of the supervisor is to ensure you stick to the deadlines, and advise you when writing your final report and other documents that form part of the assessment.

In general, you should not treat your supervisor as a person who can solve all your problems. Very often you might find that you have more detailed knowledge than them, especially if you are working in a new development environment. Your supervisor might not be willing or able to help with tricky coding problems, although they will be able to refer you to the right resources.

Your working relationship with your supervisor will be unique. You shouldn't worry if your experience differs to those of your friends. You'll be treated as an individual, so your meetings will vary in scope and content depending on the project topic. Remember that each supervisor has to balance their workload across many areas, so they might not always be available to meet with you

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Project selection take place in September via E-system

**E-System Logging  
COMP 591**

**E-system Logging  
COMP 592**

### Overview Lecture

An overview of the project modules and the selection process will be given during the first week of the semester Introduction to third year modules, which will take place in Lecture Class

Semester 1 : BROD-105 from 11:00 to 11:30 on September 25 , 2019.

Semester 2: BROD-105 from 10:00 to 10:30 on January 29 , 2020.

Introduction Slides

Declaration Integrity

BCS Code Practice

BCS Code Conduct

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### Elements of a Project

Whilst each project is unique and will be driven by you, every project has four key elements. You should be aiming to produce more than just a piece of software, so you need to show a deeper understanding of the wider context and justify what you're doing.

- 1) Research & Background - This provides the context for your project. You will need to identify and absorb related and parallel work, identify the key ideas you will build on in your project, and identify and acquire any new skills and techniques you will need. You will also begin to formalise the criteria you'll use in the evaluation of the project.
- 2) Planning & Design - Your project requires planning, to identify what needs to be done and what will be produced, when this will be produced, and to give a feasible strategy for carrying out the project. The software that you produce should have a formal design and a plan for its testing and evaluation.
- 3) Realisation & Implementation - Having a plan is no good unless it's carried out. So the plan must be realised, in accordance with the milestones you identified in it. The literature must be surveyed and the design must be implemented and tested. Experiments, testing and evaluation must be performed. All of this will need to be documented in the final report.
- 4) Evaluation & Testing - You should be able to look critically at what you've done. Evaluation needs to cover what was produced. How well does the software perform? Did you make the right design choices? Does your solution meet the needs of its potential users? Generally you should consider how well your project meets its objectives.

You should always keep in mind that you need to demonstrate an awareness and understanding of these key elements. The project spans both semesters, so it's a good idea to keep some kind of written record of your thoughts and progress, even things that don't work or lead you down the wrong path. This will give you something to refer back to when you produce your final report, and during the other assessed activities.

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### COMP 591 (Group Project )

An outline of the milestones throughout the project is given in the Calendar section. Based on these, you should divide your time and work appropriately to make sure you successfully complete each of the stages. Frequent coordination between the group members should be implemented during the project period. The following distribution of time is given as a guide.

1 week. Deciding on the project you will do.

2 weeks. Laying the foundations of your project: making precise the aims and objectives of your project; identifying and starting to absorb the information you need; defining the deliverables of your project; deciding on a methodology which you will follow; and producing a detailed plan of how the project will be conducted and who will be responsible for which part.

2 weeks. Doing the design for your project. This period will be spent completing the reading identified in the previous stage, and coming up with detailed designs to be implemented in the realisation phase. If you are producing a piece of software, the detailed design should be carried out in this period. All aspects of the system - overall architecture, data structures, algorithms and interface - should be designed according to your chosen methodology, and all these aspects should be fully documented. During this phase you will probably consider alternative ways of approaching the problems, and choose the one which you will follow. You may wish to do some experimental coding to clarify these choices. By the end of this phase you should be clear both as to what you will be implementing and how you will implement it. You should also have given thought to how you will test and evaluate what you will do in the next phase. Finally, more detail work division among the group member should be made, as well as the ways and frequency of interactions.

5 weeks. In this phase you will realise the design you have produced. During this period you should carry out your research, software implementation, test the software, conduct any necessary experiments, and perform the evaluation of what you have done. Work partition schedule should be revisited and amended if necessary.

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### Calendar for COMP 591

- \* Week 1. Everyone will have a project allocated by the end of week 1.
- \* Week 2. A clear idea of the project and its requirements is ready.
- \* Week 3. The Project Specification stage is completed.
- \* Week 5. The Project Design stage is completed.
- \* Week 6 (assessment). Project Specification and Design (oral presentation and documentation). The documentation is submitted through the E-project system by Monday 28 October, 2019 (noon). The presentation given within the week of 28 October. [20% of project mark]
- \* Week 10 (assessment). Final presentation given to the markers in the week 25th-29th of November, 2019. You must submit a pdf copy of your Final Presentation slides through the Comps91 E-project system, by Monday 25th November 2018 (noon). [20% of project mark]
- \* Week 12 (assessment). Project report and individual reports submitted on Friday 13 December 2019 (noon). [60% of project mark].

### Calendar for COMP 592

- \* Week 1. Everyone will have been allocated a project which must be agreed by Pr Rida Laraki (Project Co-ordinator).

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Departmental MEng group projects comp 591 produce three deliverables, all of them are formally assessed, as described below. Two members of staff are involved with the assessment of each project. These are referred to below as the Supervisor and the Co-Supervisor.

### Deliverable 1, Project Specification and Design, week 6

The work to be assessed at this stage comprises both the Project Specification and Design report and its oral presentation. Both pieces of work should be considered before arriving at a mark. This assessment is worth 20% of the project mark.

There is no page nor word limit for the Project Specification and Design report. Note that the only penalties that may apply to the Project Specification and Design report and presentation are the late submission penalties. These will be applied by the Student Office. Markers should assess the Project Specification and Design report and the presentation without consideration of the penalties.

For further information on the expected format, structure and content of the Project Specification and Design report and its presentation see the guidance that was provided to students. Note that deviations from the suggested structure are legitimate, provided that the important points are still covered.

The deadline for submission of the Project Specification and Design report is Monday 28 October, 2018 (noon).

The presentation is given during the week commencing Monday 28 October, 2019 at a time arranged by the supervisor.

The submitted Project Specification and Design report and its presentation are marked by both supervisors. The Project Specification and Design Feedback Form is given below. Both markers

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Deliverable 2, Project Final Presentation, week 10

The summative part of the assessment must be completed with reference to the University Marking Descriptors and the Marking Guidelines provided below. The markers then compare marks. If there is a difference of more than 10%, they must discuss the work and attempt to come to a closer agreement on its merits, before returning their mark.

The work to be assessed at this stage comprises the project final presentation and the demonstration of the software produced. Markers should see the software being executed as well as some representative parts of the code. Both the quality of the presentation and the quality of the software should be considered before arriving at a mark.

The Final Presentation is worth 20% of the project mark.

For further information on the expected format, structure and content of the Final Presentation see the guidance that was provided to students. Note that deviations from the suggested structure are legitimate, provided that the important points are still covered.

The final presentation is held in the week 25th-29th November, 2019, at a time arranged by the supervisor.

The final presentation is marked by both supervisors via the Comp591 E-project system. The Final Presentation Feedback Form is given below. The assessment must be completed with reference to the University Marking Descriptors and the Marking Guidelines provided below.

Both markers complete their assessment independently. The markers then compare marks. If there is a difference of more than 10%, they must discuss the work and attempt to come to a closer agreement on its merits, before returning their mark.

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### Deliverable 3, Final and Individual Reports, week 12

The work to be assessed at this stage comprises both the group Joint Final Report and individual project reports. The project report is worth 60% of the project mark.

The Joint Final Report must be self contained, and contain a complete record of the work carried out. A target of 10,000 words is recommended, with a maximum of 15,000 words. Appendices will not be included in the maximum word limit.

An individual project report must be up to two A4 pages, outlining an individual contribution to the project and learning experience.

Note that there are two penalties that may apply to the Final Report: (i) lateness, and (ii) excess length of an individual report. These will be applied by the Student Office. Markers should assess the Final Report without consideration of the penalties.

For further information on the expected format, structure and content of the final report see the guidance that was provided to students. Note that deviations from the suggested structure are legitimate, provided that the important points are still covered.

The deadline for submission of the project report is Friday 13 December, 2019 (noon).

The submitted final report is marked by both supervisors via the Comp591 E-project system. The Dissertation Feedback Form is given below. Both markers complete their assessment independently.

The assessment must be completed with reference to the University Marking Descriptors and the Marking Guidelines provided below.

The markers then meet to agree a mark. If there is disagreement in the marks awarded, the two marks should be returned together with a summary of the reasons for the difference in judgement using the form available below. If there is a differential of more than 10% between the 1st and 2nd marker of a project, a 3rd marker will be assigned to mark the project dissertation. The final mark for the project dissertation will be calculated as 25% of the mark by the 1st marker plus 25% of the mark

rida.laraki@liverpool.ac.uk