



GAM705 MAJOR PROJECT Handbook

Academic Year 2020-21
MA Game Design, MA Game Art,
MSc Artificial Intelligence for Games

Ed Powley

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Chapter 1

Introduction

You are required to deliver a **major project** as part of your Masters degree; in the form of **research and/or innovation** relating to your specialism, encompassing **empirical** and/or **practice-based** research. Individually, you will explore a field that interests you, and for which there is a clearly identified need.

The higher level aim for this module is to support you on your journey through a research and innovation project that has the potential to contribute new knowledge in a chosen field of study, produce an artefact that is of publishable quality, and develop your personal portfolio in a way that supports your future aspirations. If your project is particularly strong, there may be scope for taking it forwards for publication in academic conferences, or seeking business start-up funding.

Project scope

The brief for this project is intentionally open-ended. You will be assigned a **supervisor**, a member of academic staff whose role is to mentor you through the project. With your supervisor's aid, you will refine your proposal and then deliver your project.

Your project may be:

- **A standalone individual project**, where you undertake all of the work yourself.
- **An individual contribution to a group project with other GAM705 students**. The maximum size of a group in this case is 4, and each member of the group must have a well-defined contribution to the overall project.
- **An individual contribution to an external project**. Some students at this stage of their studies may be working as interns or part-time employees in industry, as members of teams under incubation schemes such as Transfuzer, or collaborating with students from other courses. In this case, you may leverage this work as the basis for your major project as long as:
 - you are able to fulfil the requirements of this assignment;
 - you are making a well-defined contribution to the external project; and
 - you obtain permission from your external partners, in particular addressing any issues around intellectual property or commercially sensitive information.

The main aim for this project is to produce some kind of **artefact**. Again, the definition of "artefact" is intentionally open-ended, but should be a physical or digital work which satisfies a **need** for an intended **audience**. This could be:

- **A software product**. For example a game, an app, or a reusable software component. This could be a marketable product, or a demo / prototype.
- **A written dissertation**. That is, a long-form piece of academic writing, based on an in-depth review of relevant academic literature and possibly a piece of primary research, making a contribution to knowledge in a particular specialist field.
- **A portfolio of creative works**. For example, a portfolio of art assets, presented professionally and coherently, demonstrating the student's artistic process.
- **Something else**. The brief is intentionally open-ended, and you are welcome to discuss with your supervisor what might constitute a suitable artefact.

Module overview

For this module, you are required to complete one assignment, composed of two parts: a proposal **pitch** and an **artefact**.

Note that this module is worth 60 credits, which is twice as many credits as your previous modules. As such the expectation is that the amount of work you put into this module is roughly double that of previous modules.

GAM705 Final Major Project: Proposal (20%)

Your **proposal pitch** will present your project concept and disseminate your initial research and experimentation. In delivering this proposal pitch you will evidence a familiarity with the wider context of your project, how it relates to the relevant academic literature and the value of the work to be carried out. You are also required to address the ethical issues surrounding your project, and justify your proposed research methods accordingly. A plan should be present that shows you have thought about the time constraints of the module, potential blockers that might hinder development and the milestones that will ensure project delivery.

You will be provided with a template to help shape the proposal but you **should** adapt it to suit the requirements of your project.

GAM705: Final Major Project: Artefact (80%)

The nature of the artefact will vary dramatically between individuals. However, your work will be assessed on the same shared criteria of viability, design, innovation, functional coherence, quality of defence. This set of criteria have been selected for their transferability and may have slightly different meaning depending on your specialism. For instance, software design usually refers to the planning and implementation of code. Whereas, user experience design will include considerations for the user journey and the perceived usability of an artefact. It is critically important to recognise that in this project you **must** evidence an iterative process and document your critical thinking. It is your choice how you document your process but tools such as blogs, version control, design portfolios, sketchbooks and many others can be used. When it comes to assessment, it is vital that the assessor is able to identify how your project has developed from initial concept, through a series of prototypes and arrived at the final deliverable.

Chapter 2

Assignment Structure for the Major Project

The Major Project is a single assignment consisting of two formally assessed parts: the proposal pitch (weighted 20%), and a presentation of the final artefact (weighted 80%). This chapter breaks down the key deliverables for the project. Recall that **formative** submissions are opportunities for feedback on works-in-progress, whereas **summative** submissions are formally assessed pieces of work which contribute to your final mark.

Part A: Project Concept

This part consists of a **single formative submission**.

To complete this part, **conceive** of a topic for your project, by:

- (i) **reviewing** the state-of-the-art from an industry and/or academic point of view; and
- (ii) **deriving** a key question or problem from the review to motivate your work.

Discuss this topic with your **supervisor** in the timetabled supervision meetings in weeks 1 and 3. You will receive **informal feedback** on your proposal, which you should use to iterate upon your ideas.

Part B: Proposal Pitch

This part consists of a **single summative submission**, worth **20%** of the overall marks for this assignment. This work is **individual** and will be assessed on a **criterion** basis, according to the rubric in Chapter 4.

To complete this part, **prepare** a 10-minute proposal pitch that will answer the following high-level questions:

- (i) What is the context of your project? How does it fit into your specific field?
- (ii) What are the key results, from academic literature and/or from state-of-the-art, upon which your project will be built?
- (iii) What are the key research questions that you will seek to answer in your project?
- (iv) What will be the final format of your artefact?
- (v) Who is the audience for your artefact, and what need does it fulfil for them?
- (vi) What are the key legal, social, ethical, and/or professional issues associated with your project?

Deliver your presentation in the timetabled session in week 4, and be prepared to **defend** your proposal in Q&A.

You will receive immediate **informal feedback** from the tutors in the session, and **formal feedback** within 15 working days of the timetabled proposal pitch session.

Part C: Project Delivery

This part consists of **multiple formative submissions**.

To complete this part, carry out an extensive research and innovation project using industry standard project management principles and techniques. You will receive regular **informal feedback** about your work through meetings with your supervisor. Iteratively improve the artefact and show it to your supervisor in a timetabled meeting. As the requirements for the artefact will vary by project, consult with your supervisor to verify whether or not the artefact is adequate for the desired purpose.

Part D: Artefact Submission

This part consists of a **single summative submission** that feeds into Part E.

To complete this part, upload a .zip file containing the final version of your artefact and any assets/dependencies to the LearningSpace.

Note that LearningSpace will only accept a single .zip file, with a maximum size of 1 gigabyte. If your file is too large, you may be permitted to submit a link to materials hosted elsewhere, e.g. a repository on the Games Academy Git server or a shared folder on the university's OneDrive. Please discuss this with your supervisor and/or the module leader prior to submission.

This work is **individual** and will be assessed on a **criterion** basis, according to the rubric in Chapter 4. You will receive **formal feedback** within 15 working days of the summative deadline.

Part E: Viva Presentation

This part consists of a **single summative submission**. Together, parts D and E are worth **80%** of the overall marks for this assignment. This work is **individual** and will be assessed on a **threshold** basis, according to the rubric in Chapter 4.

To complete this part, **prepare** a 15-minute presentation that will answer the following high-level questions:

- (i) What is the context and high-level concept of your project?
- (ii) How did you approach the development of the project?
- (iii) What answers did you find to the key research questions that you set out to explore?
- (iv) Does your artefact fulfil the need you identified for your target audience? Why / why not?
- (v) What are the wider implications and value of your work? What potential is there for future work?

If appropriate to the project, your presentation should include a 5-minute demonstration of your artefact. You can demonstrate the artefact "live" in the presentation if you wish, however it is strongly advised you also prepare a pre-recorded video demonstration as a backup.

Deliver your presentation in the timetabled session in week 13, and be prepared to **defend** your project in Q&A.

You will receive immediate **informal feedback** from tutors, and **formal feedback** within 15 working days of the summative deadline.

Chapter 3

Guidance on Completing your Project

Ethical Clearance

All students must follow Falmouth University's Research Ethics Policy. In practice, this means you may need to complete the Research Ethics Approval Application Form and obtain ethical clearance **before** using the research artefact you have created to collect primary data. Even if collecting such data presents minimal to no risk. Furthermore, if your project involves human participants (e.g. for testing a game system you have developed), or presents a significant ethical risk (e.g., systems that process personal data) then you will need to have completed the full Research Ethics Approval Application Form available on the Falmouth Integrity & Ethics page linked below. You **should** discuss matters of an ethical nature with your research supervisor and pay particular attention to how you address these issues in your research methodology. The ethics form should be submitted as part of the final artefact submission.

Read more about Falmouth University's Integrity and Ethics policy here:

<https://www.falmouth.ac.uk/research/research-ethics-integrity>

Project Management

The final major project can be quite a daunting and intimidating prospect. Many students find it challenging because of its self-directed nature and the accompanying discipline and dedication needed to follow it through. However, do not worry! Completing the project is not only intellectually liberating and a mark of your academic independence, but will provide you with a sense of achievement and satisfaction.

It will also constitute an key indicator—a symbol—of your competence to potential employers. It gives you something you can showcase in interview and discuss in considerable depth and with enthusiasm. Successful completion of such a project demands a mastery of core employability skills including: initiative; problem solving; communication, both written and spoken; self-regulated learning; as well as planning and management. Though the stretching of your ability in these areas to limits you never thought possible will likely be rather uncomfortable, you feel better for it when you graduate.

A pitfall that many students fall into, however, is time management. Minimise your procrastination and try to chip away at your work a little every day! Although your milestones will vary depending on the nature of your project, ideally the research artefact should be near its completion towards week 10 of the module. Be sure to document, organise and reflect on your process as you go. Do not underestimate the value of this process!

It is critically important that you consider **project management** again at this stage. Consider an artefact development life-cycle that is appropriate to your project. Ensure you use appropriate project management tools including critical path analysis, Gantt charts, and burn-down charts to keep track of your progress. Also, do not underestimate the importance of the **validation and verification** aspect of the research artefact. Where applicable, you must ensure sufficient time is made to enact quality assurance practices that will defend the integrity of your research by showing that your research project was appropriately managed and your artefact was constructed through the sound application of pipelines and processes applicable to your specialism.

If you encounter any issues with respect to your time management, please consult your supervisor who can provide you with advice. They are there to support you, so take advantage of their experience. Also, ensure that you take advantage of the support services offered by the Academic Skills Team (ASK):

<http://ask.fxplus.ac.uk>

Frequently Asked Questions

Can I change my project concept partway through?

It is a natural part of any project that your concept and aims will shift as the project evolves, and as you receive feedback from your supervisor and from others. The project you propose initially is not set in stone, and allowing it to evolve over time is in fact a key part of agile project management. However, caution is advised before making radical changes, especially as the final deadline for the project draws closer. In any case, your supervisor can advise.

Can I use asset packs or open-source software libraries in my project?

Yes — this is a good way of managing the scope of a complex project, and allowing you to work around gaps in your skill set. However it is important to make sure that any work that is not your own is properly credited. Also be aware that you will only receive credit for your own work, so you must ensure that you are adding significant value to any third-party work you use.

Is a written submission required?

All students must submit their artefact and deliver the two presentations described in Chapter 2. If the artefact is not itself a written dissertation, then no written submission is required.

Are slides required for the assessed presentations?

Slides are not mandatory, however if you choose not to use them then you should give careful thought to what other visual aids might help you get your concept across to the audience. Slides may be prepared using your choice of presentation software.

Where can I ask further questions?

You may contact your supervisor or the module leader, either by email or through Microsoft Teams. Refer to LearningSpace for staff contact details.

Chapter 4

Marking Descriptors

Note that the assignments which constitute your Final Major Project are **not** marked in a criterion-based fashion. Instead, your project supervisor will assign an overall grade by considering the following descriptors in relation to your project.

You **must** demonstrate success at every learning outcome in order to pass.

GAM705 Research Proposal (20%)

| Criterion | Weight | Near Pass | Pass | Merit | Distinction |
|------------------------|------------------|---|---|---|---|
| Ethical Considerations | Required to pass | <p>Ethical dimensions of the project have clearly not been considered</p> <p>Unaddressed ethical concerns prevent the project from continuing</p> | <p>Ethical dimensions of the project have been considered</p> <p>Either the project qualifies as low ethical risk, or ethics approval has been sought and obtained with all risks adequately addressed</p> | | |
| Communication Skills | 20% | <p>There is no presentation</p> <p>There is no structure to the presentation</p> <p>The presentation delivery is chaotic and with very little substance to the discussion</p> <p>There are no visuals to support the discussion</p> | <p>A research topic has been identified</p> <p>The presentation has an appropriate structure</p> <p>The presentation delivery is clear and concise</p> <p>Some visuals are used to underpin the discussion</p> | <p>A research topic has been outlined with clarity</p> <p>The presentation has an appropriate structure and flow</p> <p>the presentation is delivered with clarity and enthusiasm</p> <p>Visuals are used to underpin the discussion</p> | <p>A research topic has been outlined with clarity and in a persuasive manner</p> <p>The presentation structure and flow are of a publishable quality</p> <p>the presentation is delivered in a confident and professional manner</p> <p>High quality visuals are used to underpin the discussion</p> |
| Innovation and Flair | 20% | <p>The proposal concept is not innovative</p> <p>There is no evidence of divergent and/or subversive thinking</p> <p>The value/opportunity has not been identified</p> <p>There is no USP</p> | <p>The proposal concept is slightly innovative</p> <p>There is some evidence of divergent and/or subversive thinking</p> <p>The value/opportunity has been identified</p> <p>A USP has been identified but with very little justification</p> | <p>The proposal is reasonably innovative</p> <p>There is reasonable evidence of divergent and/or subversive thinking</p> <p>The value/opportunity has been identified with clarity and justified</p> <p>A USP has been identified with a reasonable justification</p> | <p>The proposal concept is highly innovative</p> <p>There is considerable evidence of divergent and/or subversive thinking</p> <p>The value/opportunity has been identified with clarity and persuasively justified</p> <p>A USP has been identified and justified persuasively</p> |
| Research | 20% | <p>There is no reference to the relevant academic research</p> <p>There is no market/audience research</p> | <p>There is some reference to the relevant academic research</p> <p>There is some market/audience research</p> <p>The research is sometimes used to support the discussion</p> | <p>There is an appropriate amount of references to the relevant academic research</p> <p>There is an appropriate amount market/audience research</p> <p>The research is used to support the discussion throughout</p> | <p>The relevant academic research is acknowledge throughout creating a authoritative tone</p> <p>There is considerable market/audience research</p> <p>The research is underpins every aspect of the discussion</p> |

| Criterion | Weight | Near Pass | Pass | Merit | Distinction |
|------------------|--------|--|---|---|---|
| Feasability | 20% | <p>There is no consideration for scope</p> <p>There is no consideration for the pipelines and tools that will support the development</p> <p>There is no plan or consideration for development life-cycle</p> <p>There is no consideration for how success is measured</p> | <p>There some consideration for scope</p> <p>There is some consideration for the pipelines and tools that will support the development</p> <p>There is a basic plan and consideration for development life-cycle</p> <p>There is some consideration for how success is measured</p> | <p>The project has been scoped appropriately</p> <p>The appropriate pipelines and tools that will support the development have been identified</p> <p>There is a detailed plan and consideration for development life-cycle</p> <p>There is clear methodology for how success is measured</p> | <p>The project has been scoped appropriately</p> <p>There appropriate pipelines and tools that will support the development have been identified</p> <p>There is evidence of a skills audit to ensure a balance between expectation and reality</p> <p>There is evidence of rigorous planning and estimation utilising industry standard principles and techniques for project management</p> <p>There is clear methodology for how success is measured</p> |
| Depth of Insight | 20% | <p>The proposal contains no insight</p> <p>The proposal raises more questions than it answers</p> <p>There are considerable omissions</p> | <p>The proposal contains some insight</p> <p>The proposal provides enough insight to communicate the concept and project development</p> <p>There are no obvious omissions</p> | <p>The proposal contains some insight</p> <p>The proposal provides enough insight to communicate the concept and project development</p> <p>There are no obvious omissions</p> | <p>The proposal contains much insight</p> <p>The proposal provides comprehensive insight into the concept and project development</p> <p>There are no obvious omissions</p> |

| Criterion | Weight | Near Pass | Pass | Merit | Distinction |
|---------------|--------|--|--|---|---|
| Innovation | 20% | <p>The artefact is not innovative</p> <p>There is no evidence of divergent and/or subversive thinking</p> <p>The artefact has no clear value for the intended audience</p> <p>There is no USP</p> | <p>The artefact is slightly innovative</p> <p>There is some evidence of divergent and/or subversive thinking</p> <p>The artefact has a value for the intended audience</p> <p>there is evidence of a potential USP</p> | <p>The artefact is reasonably innovative</p> <p>There is reasonable evidence of divergent and/or subversive thinking</p> <p>The artefact has much value for the intended audience</p> <p>There is a clear USP</p> | <p>The artefact is highly innovative</p> <p>There is considerable evidence of divergent and/or subversive thinking</p> <p>The artefact has considerable value for the intended audience</p> <p>There is a clear USP</p> |
| Viability | 20% | <p>There is no functioning artefact</p> <p>There is no plan for dissemination</p> <p>There is no attempt to measure success</p> <p>There is no plan for future enhancements</p> | <p>There is a functioning artefact that could be considered an MVP</p> <p>There is a basic plan for dissemination</p> <p>There is an attempt to measure success</p> <p>There is a plan for future enhancements</p> | <p>There is a functioning artefact that goes beyond MVP</p> <p>There is a reasonable plan for dissemination</p> <p>There is evidence of measuring success using the appropriate methodology</p> <p>There is a robust plan for future enhancements</p> | <p>There is a fully formed artefact that goes well beyond MVP</p> <p>There is a extensive plan for dissemination</p> <p>Success has been measured using the appropriate methodology and the results have been used to inform...</p> <p>An extensive plan for future enhancements</p> |
| Design | 20% | <p>There is no evidence of a design process</p> <p>There is no evidence of critical making</p> <p>Appropriate design principles and processes have not been applied to the project development</p> | <p>There is some evidence of a design process</p> <p>There is some evidence of critical making</p> <p>Appropriate design principles and processes have been applied to the project development</p> | <p>There is much evidence of a design process</p> <p>There is much evidence of critical making</p> <p>Appropriate design principles and processes have been applied to the project development</p> <p>The artefact evidences divergent practice</p> | <p>There is considerable evidence of a design process</p> <p>There is considerable evidence of critical making</p> <p>Appropriate design principles and processes have been applied to the project development</p> <p>The artefact evidences considerable divergent practice and pushes the boundaries of the particular specialism</p> |
| Functionality | 20% | <p>The artefact does not function as intended</p> <p>There are critical/major issues with the artefact</p> <p>The artefact does not meet the needs of the intended audience</p> | <p>The artefact functions as intended</p> <p>There are some minor issues in the artefact</p> <p>The artefact meets the needs of the intended audience</p> | <p>The artefact functions as intended</p> <p>There are very few issues in the artefact</p> <p>The artefact meets the needs of the intended audience</p> | <p>The artefact functions as intended</p> <p>There are no issues in the artefact</p> <p>The artefact meets the needs of the intended audience as evidences by appropriate testing methodology</p> |

| Criterion | Weight | Near Pass | Pass | Merit | Distinction |
|-----------|--------|--|--|--|--|
| Defense | 20% | <p>The student did not attend the viva</p> <p>There is evidence of academic misconduct</p> <p>There is little or no work to defend</p> | <p>There is enough work to showcase</p> <p>There is some awareness of the wider research field in which the work is situated</p> <p>The student provides some justification for their approach</p> <p>The student is able to provide basic responses to questions about their work</p> | <p>There is an adequate body of work</p> <p>There is a good awareness of the wider research field in which the work is situated</p> <p>The student provides adequate justification for their approach</p> <p>The student is able to provide detailed responses to questions about their work</p> | <p>There is an extensive body of work</p> <p>There is a considerable awareness of the wider research field in which the work is situated</p> <p>The student provides considerable justification for their approach</p> <p>The student is able to provide detailed responses to questions about their work informed by their research and experimentation</p> |