



Academic Language & Learning Unit

# Interim Report Writing Skills



# Contents

1. Purpose and style of an interim report
2. The sections of an interim report
  - a) Introduction
  - b) Literature Review
  - c) Project Management
  - d) Conclusion
3. Time Management



Purpose and style

# Interim report checklist

- ✓ What are you trying to achieve? Is this reasonable with the time and resources available?
- ✓ What is the context of this project? Why is the research needed? What other research is it building on?
- ✓ Is your work convincing? Have claims been supported by evidence from literature? Do you demonstrate good knowledge of the field by having broad, relevant and up-to-date sources?
- ✓ Do you show attention to detail in the accuracy of calculations and writing?
- ✓ Is it clear what you have done, need to do, and what the steps are to complete the project?

[https://www.southampton.ac.uk/englishforengineers/understanding\\_assessed\\_tasks/reports/interim\\_reports.page](https://www.southampton.ac.uk/englishforengineers/understanding_assessed_tasks/reports/interim_reports.page)

# Your interim report should:

1. State your **aims** and **objectives**.
2. **Explain** your research.
3. Show what you have **achieved**.
4. Demonstrate the **steps** to **complete** the project on **time**.

[https://www.southampton.ac.uk/englishforengineers/understanding\\_assessed\\_tasks/reports/interim\\_reports.page](https://www.southampton.ac.uk/englishforengineers/understanding_assessed_tasks/reports/interim_reports.page)

## Interim Report

**Abstract**

**Introduction**

**Literature Review**

**Project Management**

**Conclusions**

**References & Appendices**

## Purpose of the section

**Summary of the report**

**Identify  
topic**

**Gap in  
knowledge**

**Scope**

**Aim /  
Purpose**

**History of subject matter**

**Clear identification  
of themes**

**Planned  
Methodology**


**Timeline for  
Completion**

**Current  
Progress**

**Future  
Work**

**Summary of  
research proposal**

**Restatement of  
value and gap**



Sections of an  
interim report

---

# The introduction



# Purpose of the introduction:

- To show **why** this research is **important**
- To create **interest**
- To establish **how** your research **fits** with **previous literature**
  - to establish the '**gap**' or unanswered questions
- To outline the **scope** of your **project**
- To present your **objectives** and your **research question**

# Structure of the introduction:

1. Start with an attention-getting broad statement that establishes a general topic for the article.
2. Narrow the topic in successive sentences that outline the state of the art and introduce a gap in knowledge.
3. End the introductory paragraph with a general statement of the problem and optional supporting/specifying statements. Specify the general direction of the paper.

(Socolofsky, 2004)

Let's look at the "Good interim report"  
available on Moodle ...

What structure does this model use for  
the introduction?

First paragraph of the introduction

The objective:

**UHMWPE = state of the art**

Since its initial use in the 1950's as a biomedical prosthetic, **ultra-high molecular weight polyethylene (UHMWPE)** has evolved into an industry leading, light weight polymer, with applications in aerospace, marine, medical, and sports. The discovery of a gel spinning process in the late 1970's initiated the commercial production of the high strength, high modulus fibres that we know today as Dyneema® and Spectra®. Through the gel spinning process, molecular orientation, leading to continuing advancements in the field, establishes a **general topic**. These advancements are subsequently inspiring research into the application of UHMWPE for high performance light weight armour grade composite systems<sup>2</sup>. The considerable open source scientific research available into this application includes most high performance fibres<sup>3</sup>, across a variety of configurations<sup>4</sup>, but UHMWPE still dominates the field (Lee, et al., 2000).

Start with an attention-getting  
**broad statement** that  
establishes a **general topic**.

Since its initial use in the 1950's as a biomedical prosthetic, **ultra-high molecular weight polyethylene (UHMWPE)** has evolved into an industry leading, light weight polymer, with applications in aerospace, marine, medical, and sports. **The discovery** of a gel spinning process **in the late 1970's** initiated the **commercial production** of the high strength, high modulus fibres that we know today as Dyneema® and Spectra® (Werff & Heisser, 2013). The high draw ratio's achievable through the gel spinning process which result in an extremely high molecular orientation, together with exceptional specific strengths have fuelled continuing advancements in UHMWPE. These advancements are substantial and have led to a range of UHMWPE for high performance applications. The open source scientific research available into this application includes most high performance fibres, across a variety of configurations, but UHMWPE still dominates the field (Lee, et al., 2000).

**Narrow** the topic in successive sentences that **outline** the **state of the art.**

Since its initial use in the 1950's as a biomedical prosthetic, **ultra-high molecular weight polyethylene (UHMWPE)** has evolved into an industry leading, light weight polymer, with applications in aerospace, marine, medical, and sports. The **discovery** of a gel spinning process **in the late 1970's** initiated the **commercial production** of the high strength, high modulus fibres that we know today as Dyneema® and Spectra® (Werff & Heisser, 2013). The high draw ratio's achievable through the gel spinning process which result in an extremely high molecular orientation, leading to exceptional specific strengths **have fuelled continuing advancements in the development of UHMWPE**. These continued advancements are subsequently inspiring research into the application of UHMWPE for high performance light weight armour grade composite systems. The considerable open source scientific research available into this application includes many **Narrow** further (more state of the art).... applications, but UHMWPE still dominates the field (Lee, et al., 2000).

Since its initial use in the 1950's as a biomedical prosthetic, **ultra-high molecular weight polyethylene (UHMWPE)** has evolved into an industry leading, light weight polymer, with applications in aerospace, marine, medical, and sports. The **discovery** of a gel spinning process **in the late 1970's** initiated the **commercial production** of the high strength, high modulus fibres that we know today as Dyneema® and Spectra® (Werff & Heisser, 2013). The high draw ratio's achievable through the gel spinning process which result in an extremely high molecular orientation, leading to exceptional specific

**Narrow** further (more state of the art)....

strengths in the development of frequently inspiring research into the light armour grade composite systems. The considerable open source scientific research available into this application includes most high performance fibres, across a variety of configurations, but

**UHMWPE still dominates the field** (Lee, et al., 2000).



## Second paragraph of the introduction

The objective:

**Introduce (indicate) a gap in the literature**

## Language that indicates the gap... I.e. “why not thermoplastic?”

The identifiable consistency covering the evaluated open source literature, has been the use of thermoset resin matrices. **Although limited, some research** has been conducted into thermoplastic matrices and compliant laminates, with (Morye, et al., 2000) specifically studying a comparison between the two matrices in ballistic rigid laminates (Morye, et al., 2000). The Aberdeen Army Research Laboratory (ARL) also examined thermoplastic matrices, and the relationship between thermoplastic ratio and structural properties in armour grade composites, focussing specifically on combat helmets. **Unfortunately,** the ARL found thermoplastic matrices deficient in this application due to excessive back face deformation (BFD) and penetration compromise (Zhang, et al., 2015). **Alternatively,** the experimental results obtained by (Morye, et al., 2000) reported a promising 15% increase in *V0* results when comparing thermoplastic ballistic rigid laminates to epoxy aramids of equivalent areal density. The specific matrix used by Morye, et al. (2000) is not stated, **but does indicate promise** for a pure **thermoplastic compliant laminate**.

## Third paragraph of the introduction

The objective:

**Arrive at a gap in the literature**

More state of the art (blue) + Gap (orange)

I.e. Metal = alternative to thermoplastic + ballistic

Gap = metal hybridisation

Complementing monolithic composite research, is the significant **research into fibre metal laminate (FML) hybrid composites**. The performance of E-glass polypropylene and aluminium hybrid FML's was reported by (Compston, et al., 2001) which found the **performance of polypropylene based FML's superior** in contrast to their thermoset counterpart. This work was furthered by (Wambua, et al., 2007) who examined **the ballistic behaviour** of natural fibre polypropylene FML's, diverging from the stacked layer FML to a hybrid with variations in **strike and backing face**.

Despite the matrix, **metal**, and stacking sequence variations of all these works, all found a **performance increase** through **metal hybridisation**.

At the moment the gap is still implicit.

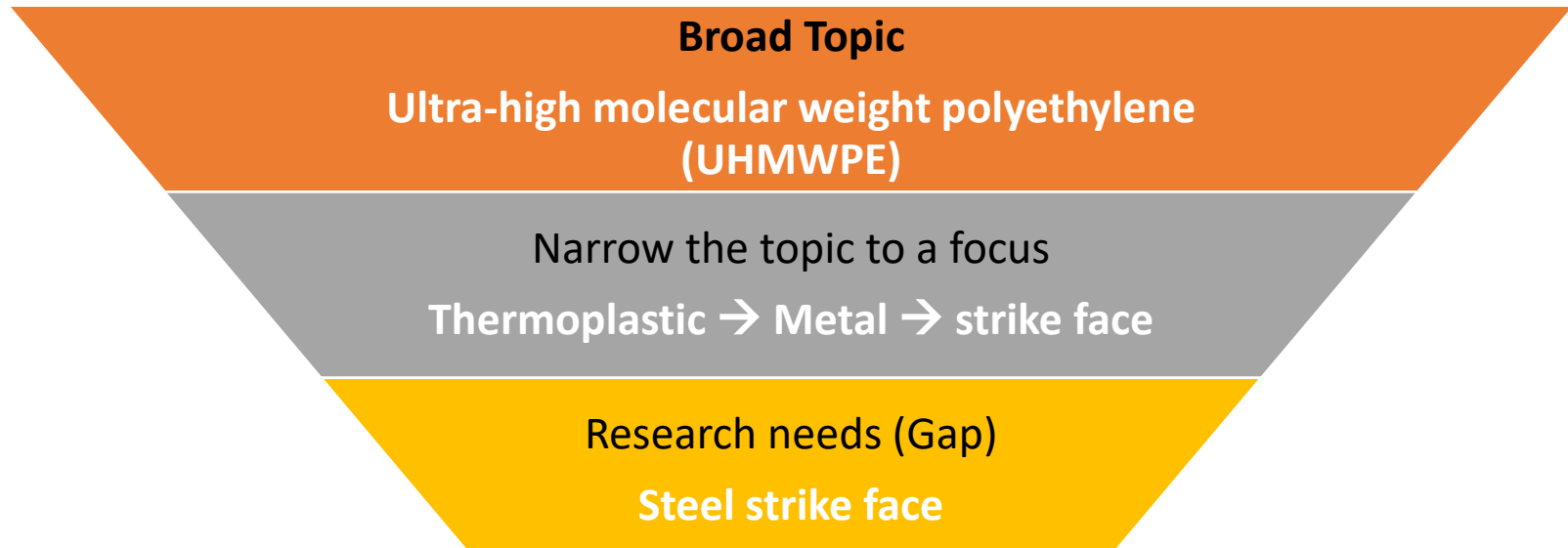
The introduction could be improved by explicitly stating the gap.

“The influence of a **steel strike face** on a UHMWPE compliant laminate **is yet to be investigated.**”

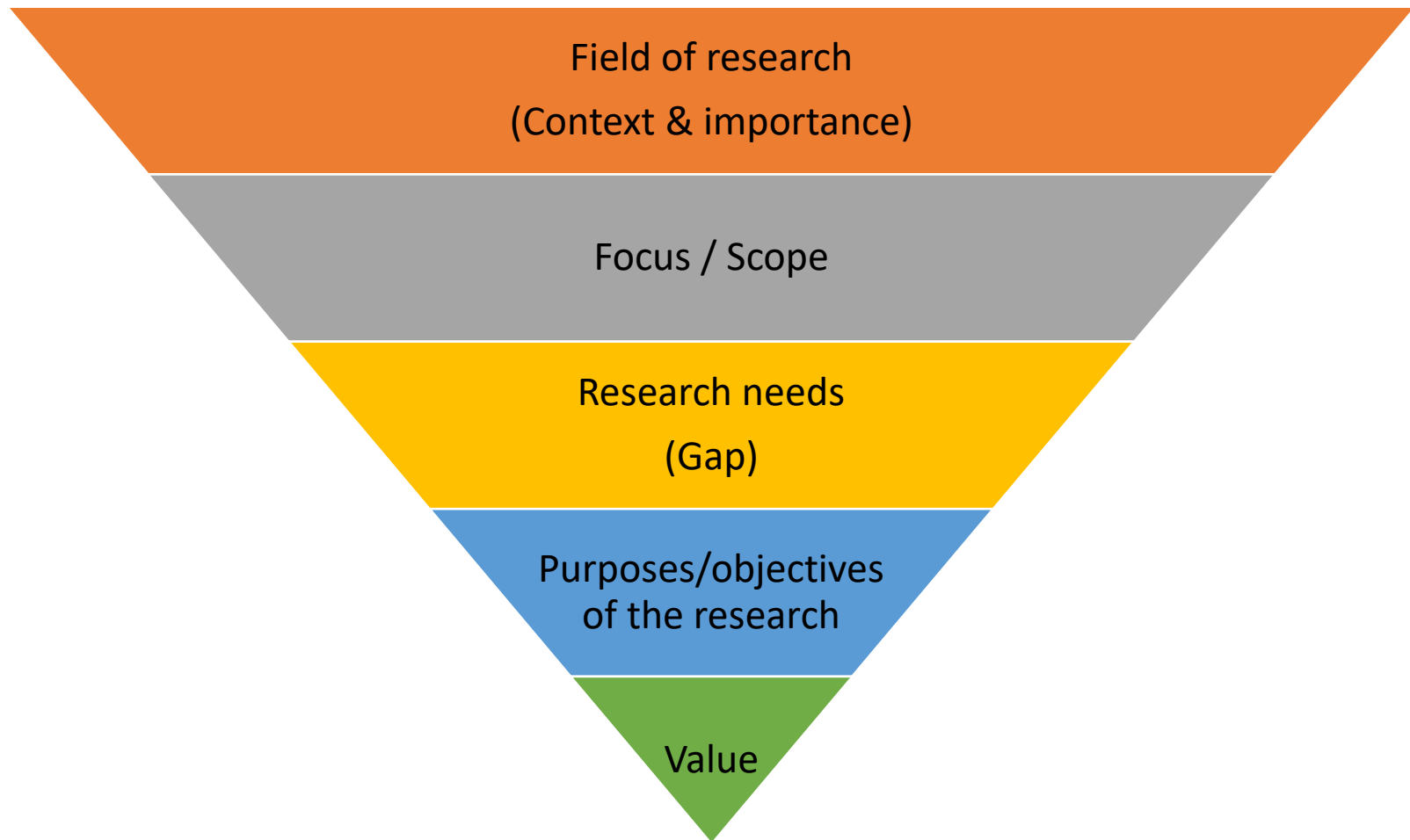
examined **the ballistic behaviour** of natural fibre polypropylene FML's, diverging from the stacked layer FML to a hybrid with variations in **strike and backing face**. Despite the matrix, **metal**, and stacking sequence variations of all these works, **all found a performance increase through metal hybridisation.**



# Introduction so far ...



Now we need to add ...



Previously identified in introduction

UHMWPE

Ballistic  
behaviour

Metal  
Strike Face

First sentence of Project Aim:

The aim of this project is to **identify the influence...**

Let's pause for a moment...



# Verbs in research aim

Think about what you are specifically doing and which verb best defines the aim of your research.

For example:

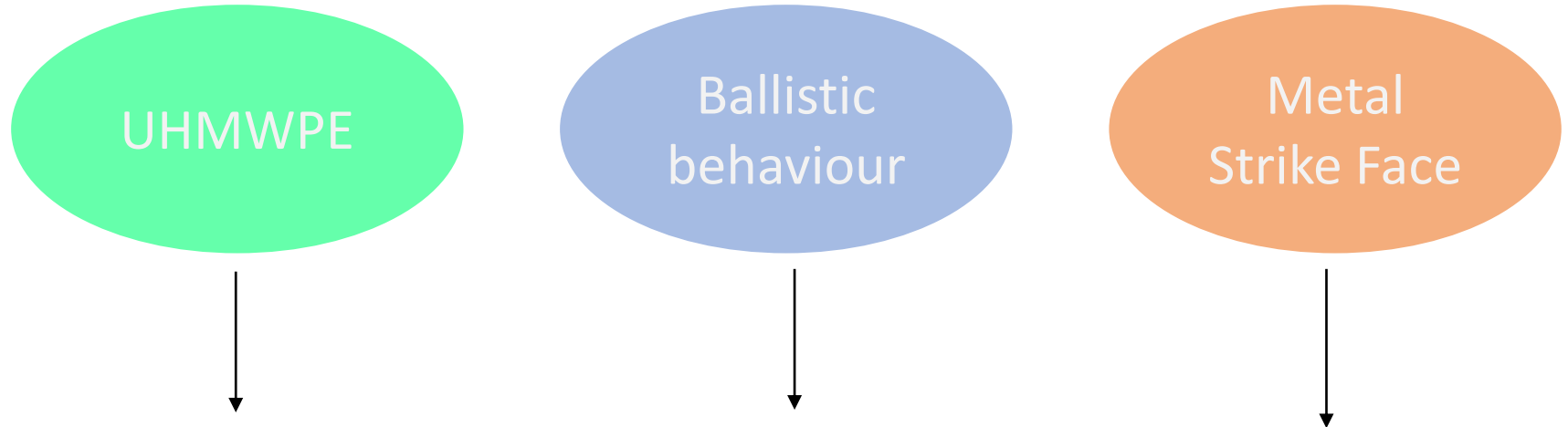
- Analyse – investigate variables
- Identify – look for key features of something (perhaps best / worst)
- Investigate – in depth analysis + implications
- Define – interpret something / distinguish from similar things
- Measure – some kind of numeric outcome
- Assess – consider the importance of something

Now back to the example...

First sentence of Project Aim:

The aim of this project is to **identify the influence...**

Previously identified in introduction



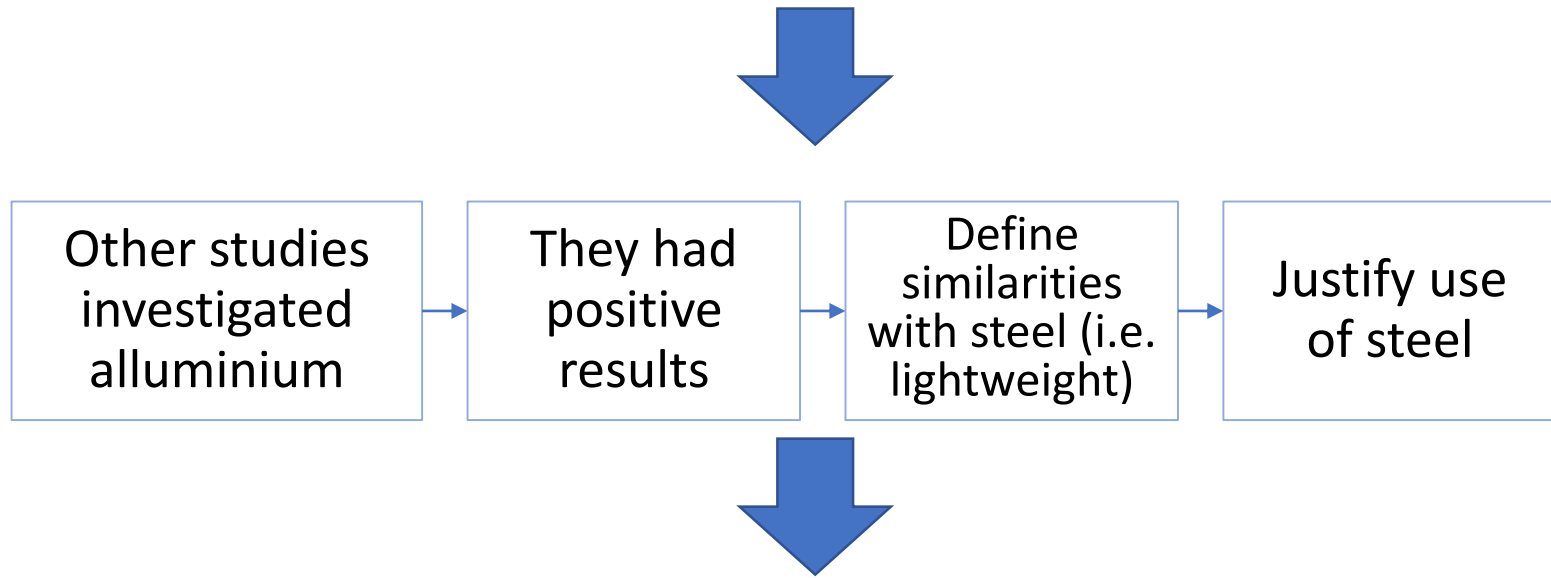
The aim of this project is to **identify the influence** of a **steel strike face** on an **UHMWPE** compliant **laminate exposed to ballistic loading**.

The aim of this project is to **identify the influence** of a **steel strike face** on an **UHMWPE** compliant **laminates exposed to ballistic loading**.



Literature of other studies who did similar things  
(but not quite what you are doing)  
I.e. indicate the method

The aim of this project is to **identify the influence** of a **steel strike face** on an **UHMWPE** compliant **laminate exposed to ballistic loading**.



**To achieve this aim**, a manufacturing procedure **will be developed**, a successful bonding technique **evaluated**, and the final product **tested** and **evaluated**.

# Project scope

... narrow down the aim → key themes still stated but with **more detail**

This study will use a **kinetic energy (KE) balance** to evaluate the influence of a **C3A5 steel strike-face** on an **UHMWPE compliant laminate**.

# Project scope

Note that the statement also **reiterates reporting verbs**

I.e. how will it evaluate?

This study **will use a kinetic energy (KE) balance to evaluate the influence of a C3A5 steel strike-face on an UHMWPE compliant laminate.**

# Literature review



# Literature Review – Background

1. Cite the most significant historical sources that form the foundation underlying the topic that will be extended in your report. The seminal literature.
2. Focus on the cutting edge knowledge base and the significant differences between the work that has already been published and the new contribution that your report is presenting.

Guiding principle:

“The literature review identifies the seminal historical contributions, outlines the state of knowledge, and justifies the novelty of the article’s contribution.”

(Socolofsky, 2004)

# Literature Review

1. History of the subject matter
2. Clear identification of themes
  - Headings and subheadings
  - Used to create a structure to reflect the different parts of your project

# Task for you to check logic of your literature review...

1. Isolate the heading and first sentence of each section.
  - Does it make sense?
  - Would another person understand your study from this alone?
  - Do the sections take one logical step at a time?
  - Does it lead into a methodology?

Tell a research  
**STORY**

Look at the example...

## II.A. Fabric Geometry – *and ballistic impact*

Fabric selection is a trade-off between protection and burden, with **fabric geometry** playing a significant role in the effectiveness of ballistic protection.

## II.B. Ballistic Regime

The way composite materials respond to **impact loading and dissipate the incident kinetic energy** is very different from that of metals.

## II.C. Matrix Selection

Advanced fibre compliant laminates include the use of **polymeric matrices** to form rigid geometries, with both thermoset and thermoplastic matrices used.

## II.D. Composite manufacture

The **manufacture of compliant laminates** is still subject to considerable propriety limited processing, especially where matrix selection diverges from the typical commercial thermosets.

## II.E. Thick Composite

For threats involving **higher velocities thick composites** are used.

## II.F. Projectile Geometry

**Projectile geometry** has been shown to play a significant role in the failure mechanisms of **ballistic laminates**.

## II.G. Testing

There are three **testing methodologies** commonly accepted for the evaluation of ballistic laminates; ballistic limit (V50), back face deflection, and energy consideration.

## II.H. Strike Face and the Fibre Metal Laminate Hybrid

With the relatively low temperature stability of UHMWPE laminates, and the significance of BFD to their application for personal protection, much research has been conducted into hybrid composites.



# Time Management

# Organising time

**Long term:** Map your research and assessment tasks using a Semester Assessment Planner.

**Short term:** Prioritise using a Weekly Planner and daily To-Do Lists.

# How to create a semester assessment planner

Units and assessment	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Mid-Session Break	Mid-Session Break	Week 8	Week 9	Week 10	Week 11	Week 12
ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101
Meetings with supervisor/panel	Arrange meeting with supervisor	Have first meeting with supervisor	First meeting with panel	Meeting with supervisor		Meeting with supervisor	Second meeting with panel	Meeting with supervisor		Meeting with supervisor	Third meeting with panel	Meeting with supervisor		Meeting with supervisor
Research Proposal	Conduct research for proposal	Start writing first draft of proposal	Revise drafts of proposal	Research Proposal due										
Research Report	Define the problem; Develop answerable research questions; research how others have approached these questions; narrow the topic further	Define the research variables; Define a hypothesis	Design experiment; think clearly about controls needed; Locate and finalise measurement instruments	Start designing stimuli	Complete design of stimuli	Expand on literature review for research report; Collect data; write methodology section	Finish collecting data	Revise understanding of statistical tests needed for data analysis	Finish analysing data	Draw conclusions based on findings; think about suggestions for further research	Write up results section	Ensure whole report is coherent	Research Report due	
Oral Defence													Start preparing oral defence	Complete oral defence
ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123
Class Test 20%				Test self on theory and formulas	Test self on theory and formulas	Class Test 20%								
Assignment 20%							Start research for assignment	Start writing assignment	Finish first draft of assignment	Finish final draft of assignment		Assignment 20%		
Final Exam 60%	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations		Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations

1. Use an Excel spreadsheet.
2. Rows: courses/tasks
3. Columns: weeks (or vice versa)
4. Include each milestone for the week it is due. Also include the percentage weighting of the item so that you can manage your “effort” accordingly.
5. Think about each subtask required to complete the assessment or milestone. How long should each task take? Work your way backwards to assign each major task to a week. You will then see when you ought to start each assessment item.
6. If you have identified a clash in due dates, you may need to start one assignment earlier than planned to allow both to be submitted on time.

Units and assessment	Week 1	Week 2	Week 3	Week 4	Week 5
<b>ZQRS101</b>	<b>ZQRS101</b>	<b>ZQRS101</b>	<b>ZQRS101</b>	<b>ZQRS101</b>	<b>ZQRS101</b>
Meetings with supervisor/panel	Arrange meeting with supervisor	Have first meeting with supervisor	First meeting with panel	Meeting with supervisor	
Research Proposal		Start writing first draft of proposal	Revise drafts of proposal	Research Proposal due	
Research Report	Define the problem; Develop answerable research questions; research how others have approached these questions; narrow the topic further	Define the research variables; Define a hypothesis;	Design experiment; think clearly about controls needed; Locate and finalise measurement instruments;	Start designing stimuli	Complete design of stimuli
Oral Defence					
<b>ZABC123</b>	<b>ZABC123</b>	<b>ZABC123</b>	<b>ZABC123</b>	<b>ZABC123</b>	<b>ZABC123</b>
Class Test 20%				Test self on theory and formulas	Test self on theory and formulas
Assignment 20%					
Final Exam 60%	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations



Week 6	Week 7	Mid-Session Break	Mid-Session Break	Week 8	Week 9
ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101	ZQRS101
Meeting with supervisor	Second meeting with panel	Meeting with supervisor		Meeting with supervisor	Third meeting with panel
Expand on literature review for research report; Collect data; write methodology section	Finish collecting data	Revise understanding of statistical tests needed for data analysis;	Finish analysing data	Draw conclusions based on findings; think about suggestions for further research	Write up results section
ZABC123	ZABC123	ZABC123	ZABC123	ZABC123	ZABC123
Class Test 20%					
	Start research for assignment	Start writing assignment	Finish first draft of assignment	Finish final draft of assignment	
Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations			Read textbook or readings; revise lecture content; practice formulas and calculations	Read textbook or readings; revise lecture content; practice formulas and calculations

Be realistic

## **How much time would it take YOU to...?**

Read a text book chapter?

Review the literature on your research topic?

Plan and write your methods section?



**Tip:**

Write a little, often.

These slides and a Excel planner template will  
be made available on Moodle

If you wish to discuss anything with the ALL Unit, or show us drafts of  
your writing...

Please email

**KnowALL@adfa.edu.au**