Module specification

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Module Code	SCI452
Module Title	Introduction to Ballistics
Level	4
Credit value	5
Faculty	FAST
HECoS Code	100388
Cost Code	GAFS

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
Aligned with BSc (Hons) Forensic Science for QA purposes	N/A

Pre-requisites

Applicants will be required to sign a Section 21 in relation to the firearms act declaring that they are allowed to use firearms.

Breakdown of module hours

Learning and teaching hours	3 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	6 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	**9** hrs
Placement / work based learning	0 hrs
Guided independent study	41 hrs
Module duration (total hours)	50 hrs

For office use only	
Initial approval date	17/03/2023
With effect from date	17/03/2023

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Date and details of revision	
Version number	1

Module aims

The aim of this module is to provide a basic understanding of the principles and techniques used in the study of ballistics. The module will define and explain what ballistics is, including its main branches (internal, external, and terminal ballistics) and its application in various fields. It will introduce the fundamental concepts and principles and also describe the tools and equipment used in ballistics, particularly focusing on health and safety.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Recall fundamental concepts and principles of ballistics.
2	Identify tools and equipment used in the field of ballistics.
3	Discuss the importance of risk assessment and safety considerations when undertaking ballistics fieldwork.

Assessment

Indicative Assessment Tasks:
This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment 1: 30 minute MCQ covering the concepts and principles of ballistics and asking students to identify tools and equipment used in the field of ballistics.

Assessment 2: 5 minute oral presentation where students will provide a summary of key health and safety factors under guidance of the tutor.

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1&2	In-class test	70
2	3	Oral Assessment	30

Derogations

N/A

Learning and Teaching Strategies

The module will be delivered in line with the University's Active Learning Framework and will involve:

Lectures: To provide students with a comprehensive overview of the key concepts and principles.

Discussions and Seminars: To allow students to engage with the material and explore different perspective while also providing an opportunity for students to ask questions and clarify concepts

Field work: To allow students a chance to observe a range of ballistics environments outside of a classroom providing opportunities to apply the concepts learned in the class to real-world examples.

Online resources and videos: To supplement classroom learning by providing students with additional information and visual aids to further their understanding of the material.

Self-directed study: To empower students to take responsibility for their own learning and to explore topics of interest in more depth.

Indicative Syllabus Outline

- Health, safety & legislation
- Tools and equipment used in ballistics.
- Internal ballistics
- External ballistics
- Terminal ballistics
- Evidence recovery

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update. Please *ensure correct referencing format is being followed as per University Harvard Referencing Guidance.*

Essential Reads

No prerequisite reading is required.

Other indicative reading

Atkins, P. (2010), *The Laws of Thermodynamics: A Very Short Introduction.* First Edition. Oxford University Press

White, P. (2010), *Crime Scene to Court: The Essentials of Forensic Science*. 3rd Edition. London: Royal Society of Chemistry. pp. 322-356

Employability skills – the Glyndŵr Graduate

Each module and programme is designed to cover core Glyndŵr Graduate Attributes with the aim that each Graduate will leave Glyndŵr having achieved key employability skills as part of their study. The following attributes will be covered within this module either through

the content or as part of the assessment. The programme is designed to cover all attributes and each module may cover different areas.

Core Attributes
Engaged
Ethical

Key Attitudes
Commitment
Curiosity
Resilience
Confidence
Adaptability

Practical Skillsets
Digital Fluency
Organisation
Leadership and Team working
Emotional Intelligence
Communication