



Module Specification

Electrocardiogram (ECG) Interpretation for Paramedic Practice

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Part 1: Information

Module title: Electrocardiogram (ECG) Interpretation for Paramedic Practice

Module code: UZYYGQ-15-1

Level: Level 4

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

Faculty: Faculty of Health & Applied Sciences

Department: HAS School of Health and Social Wellbeing

Partner institutions: None

Field: Allied Health Professions

Module type: Module

Pre-requisites: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: This module explores the reading and interpreting of the Electrocardiogram (ECG), a fundamental skill for Paramedics. It starts by investigating the various underlying structures that are responsible for generating electrical impulses in the heart, before considering how these are manifested on the 12-Lead ECG.

Next, you will investigate how various pathological processes can be identified and

understood through the ECG, and become familiar with a systematic interpretation tool to identify these abnormalities.

Finally, utilising your knowledge of these conditions, you will learn how to treat and manage them, including pharmacological and non-pharmacological interventions and referral pathways.

Features: Not applicable

Educational aims: The aims of this module are to explore the interpretation of the electrocardiogram (ECG) in the context of paramedic practice. The module will focus on the underlying principles of cardiac electrophysiology, recognition of ECG presentations through systematic interpretation and management of these presentations.

Outline syllabus: Cardiac Physiology:

- Mechanics of Contraction
- Action Potential
- Cardiac Conduction Pathway
- Cardiac Circulation
- Circulatory Shock

Principles of Electrocardiogram (ECG):

- Measurement of Amplitude and Time
- Temporal spacing

Individual Components of the ECG Complex

Use of Systematic Interpretation Tool to identify:

- Rhythm Interpretation
- Arrhythmias
- Ischaemia and Infarction
- Bundle Branch Blocks
- Congenital Abnormalities
- STEMI Mimics
- Axis Deviation

- Hypertrophy
- Electrolyte Imbalances

Treatment and Management of:

- Bradyarrhythmias
- Tachyarrhythmias
- Ischaemia and Infarction
- Congenital Abnormalities and Causes of Sudden Cardiac Death

Part 3: Teaching and learning methods

Teaching and learning methods: Scheduled Learning includes lectures, seminars and case-based learning.

Independent Learning includes hours engaged with essential reading, interactive online learning materials including weekly “knowledge checks” and an “ECG Interpretation Workbook”.

Teaching will typically be delivered through a number of interactive lecture and seminar days. Students are also given access to bespoke, interactive learning resources for the module, containing audios and quizzes, giving opportunities to develop knowledge and understanding as they progress through the module.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 Describe cardiac physiology in relation to the electrocardiogram, and the principles of electrocardiography.

MO2 Distinguish between the different causes and mechanisms of altered cardiac electrical activity.

MO3 Interpret a range of electrophysiological disorders using a systematic approach.

MO4 Employ Electrocardiogram (ECG) interpretation to outline appropriate treatment and management of related cardiac conditions.

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 114 hours

Face-to-face learning = 36 hours

Total = 150

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/index.html) via the following link <https://uwe.rl.talis.com/index.html>

Part 4: Assessment

Assessment strategy: Summative assessment of the module will be a 2 hour unseen examination in which the student is expected to demonstrate an understanding of ECG interpretation in Paramedic Practice.

This assessment format will ensure students can demonstrate their knowledge and understanding of the key concepts as outlined in the learning outcomes, including an ability to independently interpret 12-Lead ECG's - an essential skill for a paramedic practice.

Formative assessment will take place through "knowledge checks" and an "ECG Interpretation Workbook".

Assessment tasks:

Examination (First Sit)

Description: 2 hour unseen exam.

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Examination (Resit)

Description: 2 hour unseen exam.

Weighting: 100 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Part 5: Contributes towards

This module contributes towards the following programmes of study: