

MD3B4-15 Digital technology & Health

26/27

Department

Warwick Medical School

Level

Undergraduate Level 3

Module leader

Frances Griffiths

Credit value

15

Module duration

9 weeks

Assessment

100% coursework

Study location

University of Warwick main campus, Coventry

Description

Introductory description

During this module, students are introduced to the varied uses of technologies in health and care settings. Furthermore, challenges associated with big data and artificial intelligence will be explored as well as their benefits for managing local and global health problems.

[Module web page](#)

Module aims

An in-depth understanding of the barriers and challenges associated with digital innovation in health and care settings.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

During this module students will be introduced to the potential benefits and barriers of using digital technologies in problem solving for health. The technologies covered will vary from year to year according to contemporary developments. This module will explore the digital landscape in

healthcare including digital wearables, communication, and health records, how these are changing and implications for health inequalities. During this module students will engage with concepts of big data, analytic algorithms, and emerging digital technologies. They will cover the challenges of big data, such as data structure, security, data standardisation, storage and transfers, and data governance. Students will explore how artificial intelligence is being developed and applied in health care and consider issues of bias and impact on the healthcare workforce. The application of several technologies in various health disciplines will also be discussed. For example, students could focus on use of sensors for health and care monitoring, artificial intelligence used in triage and diagnostics, or the potential use of extended reality.

Learning outcomes

By the end of the module, students should be able to:

- To critically review the current digital landscape in health and care locally and globally and analyse impact on inequalities and access
- To demonstrate a deep understanding of concepts of big data, analytic algorithms and other emerging digital technology/analytics and their application in health
- To assess and critique the use of artificial intelligence in health and care with use of an example
- To formulate recommendations for application of emerging digital technologies in relation to local and global health problems as well as their potential consequences/challenges/limitations

Indicative reading list

[Reading lists can be found in Talis](#)

Subject specific skills

Knowledge and understanding of the concepts of big data, analytic algorithms and other emerging digital technology/analytics and their interaction with digital health.

Transferable skills

The transferable skills gained from the completion of this module include ability to gather and interpret information, ability to analyse data including analysis that informs understanding of inequalities, oral communication skills, ability to make decisions and solve problems, written communication skills, ability to learn quickly, and creative/innovative thinking.

Study

Study time

Type	Required
Lectures	10 sessions of 1 hour (7%)
Seminars	5 sessions of 1 hour (3%)
Practical classes	6 sessions of 1 hour (4%)
Other activity	9 hours (6%)
Private study	75 hours (50%)
Assessment	45 hours (30%)
Total	150 hours

Private study description

Students would be expected to engage in 120 hours of self-directed learning (45 hours for assessments) outside other learning and teaching activities outlined above.

Other activity description

Technology-enhanced learning, including the use of online interactive presentations and videos, quizzes (9 hours)

Costs

No further costs have been identified for this module.

Assessment

You must pass all assessment components to pass the module.

Assessment group A3

	Weighting	Study time	Eligible for self-certification
Assessment component			
Digital Health Technologies in the Patient Pathway: A Critical Evaluation for Health and Care Professionals	100%	45 hours	Yes (extension)

Students are required to submit a 10-minute recorded video presentation focused on a specific digital health technology of their choice, directed toward a defined health and care professional audience. Students should clearly identify their chosen professional group and tailor the content and recommendations accordingly. There should be some use of AI within the chosen

Weighting

Study time

Eligible for self-certification

technology.

The presentation must outline and critically evaluate where the chosen technology can be applied effectively within a specific healthcare patient pathway. Students should explain how the technology works, when it is used, and for whom, alongside the proposed or actual health benefits. This includes consideration of how data are used and how artificial intelligence or learning algorithms are trained and deployed.

Students are expected to draw explicitly on learning from across the module and adopt a critical, evidence based, and person centred approach. Presentations should be discursive in nature, critiquing claims made about the technology rather than accepting them at face value. Students must also consider issues of access, equity, and health inequalities, and reflect on how such technologies may influence future developments in health and care. The presentation should conclude with reasoned and justified recommendations for the intended professional audience. Following submission of the video presentation students will be scheduled to attend a live 10-minute question and answer session with their markers, which will explore their work to clarify their depth of understanding about their exploration, discussion, critique, reasoning and recommendations.

Reassessment component is the same

Feedback on assessment

The presentation and Q and A will be marked using a single standardised proforma. Feedback to the students (including individualised feedback) in line with WMS assessment criteria will be given to the students. Further verbal feedback will be available to students on request.

Availability

Courses

This module is Core for:

- UMDA-B990 Undergraduate Health and Medical Sciences
 - Year 3 of B990 Health and Medical Sciences
 - Year 3 of B990 Health and Medical Sciences
 - Year 3 of B990 Health and Medical Sciences
 - Year 3 of B992 Health and Medical Sciences (with Summer Term Study Abroad)
 - Year 3 of B991 Health and Medical Sciences (with intercalated Year)