MD3B5-15 From Bench to Bedside: Impact through Scientific Research

26/27

Department
Warwick Medical School
Level
Undergraduate Level 3
Module leader
Craig Thompson
Credit value
15
Module duration
10 weeks
Assessment
100% coursework
Study location
University of Warwick main campus, Coventry

Description

Introductory description

During this module, students will explore how scientific discoveries are moved along a virtual path from the laboratory/data collection stage into real-world practice, leading to improved human health and health promotion. During this module, students will learn important concepts such as what is scientific communication and how to successfully disseminate scientific findings from a variety of perspectives and for a variety of purposes. Furthermore, students will be introduced to the concept of innovation and how innovation is needed to address some of the challenges faced by healthcare systems.

Module web page

Module aims

To provide students with an in-depth understanding of what is meant by translational science, different communication styles and requirements, and the importance of innovation in science and research.

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.

In this module students will explore a variety of ways in which science and research can extend knowledge, improve practice and answer questions about the world. A theme in the module will be how different aspects of scientific research and its findings can be communicated in a meaningful way to different audiences. A further aspect will be about evidence-based practice and how leadership can be important in these areas. In addition, students will be introduced to various types of innovation, strategies for managing innovation as well as the importance of networking and open innovation.

Learning outcomes

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

- 1. To communicate scientific topics effectively to a diverse range of audiences, making scientific research more accessible
- 2. To describe a pathway to impact from fundamental discovery and primary research to policy and/or practice
- 3. To evaluate the impact and limits of scientific research for health promotion
- 4. To demonstrate understanding of some of the challenges faced by healthcare systems and the need for constant innovation
- 5. Understand the legal framework surrounding scientific invention and discovery.

Indicative reading list

Reading lists can be found in Talis

Subject specific skills

In-depth understanding of what is meant by translational science and conducting high-impact research.

Transferable skills

The transferable skills gained from the completion of this module include communication skills and presenting information to various audiences, creative thinking, troubleshooting. management skills.

Study

Study time

Type	Required
Lectures	11 sessions of 1 hour (11%)
Seminars	10 sessions of 1 hour (10%)
Other activity	9 hours (9%)
Private study	70 hours (70%)
Total	100 hours

Private study description

The students should spend 50 hours of private study time to prepare for their assessments.

Other activity description

Technology enhanced learning, including the use of online interactive presentations and videos, quizzes

Costs

No further costs have been identified for this module.

Assessment

You do not need to pass all assessment components to pass the module.

Assessment group A2

	Weighting	Study time	Eligible for self-certification
Assessment component			
Impact case study	50%	30 hours	No

Summative assessment: Preparation of an impact case study covering how discovery research has led to a major improvement in human health and steps involved in bringing about change, including analysis of research and identifying challenges and solutions. Students are required to prepare their impact case study on a health topic relevant to the course. The case study needs to be written for a scientific audience (Total word count: 1000)

Formative assignment: Feedback on assessing the impact of scientific research and communicating the findings to various audiences.

	Weighting	Study time	Eligible for self-certification

Reassessment component is the same

Assessment component

Start-Up Pitch to Investors	50%	20 hours	No

Summative assessment: Groups will prepare and pitch a healthcare idea to a panel of hypothetical investors. Groups will propose a product or service addressing an important healthcare need, addressing its commercialisation and impact, the healthcare challenges and solutions surrounding it, as well as market size and competition. Pitches will be up to 10 slides presented in 15 minutes, followed by 10 minutes of questions by the panel.

Formative assessment: Feedback on assessing the impact of scientific research and communicating the findings to various audiences.

Reassessment component

Presentation on Aspects of a Pitch			No

The student will prepare and pitch healthcare ideas to a panel of hypothetical investors. They will then be questioned about their pitches by the panel. The pitches will cover 1 - 2 specific areas of research commercialisation and impact, identifying challenges and solutions, as well as market size and proposed improvements.

Pitches will be up to 10 slides undertaken in 10 minutes, followed by 5 minutes of questions by the panel.

Feedback on assessment

The impact case study will be marked using standardised rubrics. Feedback to the students (including individualised feedback and statement regarding unfair means) in line with WMS assessment criteria will be given to the students. Further verbal feedback will be available to students on request. Every student who fails an element of assessment will be offered an appointment for face to face feedback.

The scientific concept startup pitches will also be marked using standardised rubrics. Feedback to the students (including individualised feedback and statement regarding unfair means) in line with WMS assessment criteria will be given to the students. Further verbal feedback will be available to students on request. Every student who fails an element of assessment will be offered an appointment for face to face feedback.

Availability

Courses

This module is Core for:

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