EP305-30 Introduction to Secondary Physics Education

21/22

Department
Centre for Teacher Education
Level
Undergraduate Level 3
Module leader
Holly Heshmati
Credit value
30
Assessment
100% coursework
Study locations
University of Warwick main campus, Coventry Primary
A Warwick Partnership School

Description

Introductory description

This module takes place in term 2 and is specially designed to introduce you to Science-Physics curriculum and pedagogy in the Secondary school age range. You will explore your subject from a new perspective through engaging sessions at university led by teaching fellows and visiting teachers and have opportunity to support teaching and learning in practice through activities in a school or online learning setting with secondary age pupils. Through engagement in Science-Physics education you will have the opportunity to raise awareness of and encourage engagement with Science-Physics education within the local community.

The module is hosted by the Centre for Teacher Education (currently rated 'Outstanding' by OFSTED). Anyone who completes the module is automatically eligible for an interview for the Postgraduate Certificate in Education (PGCE) initial teacher training course (providing all entry requirements for Initial Teacher Training are met).

Module web page

Module aims

1. To develop knowledge and understanding about the UK education system and what it is like

to be a secondary Science-Physics teacher.
2. To develop knowledge and understanding of Science-Physics education.
3. To provide a professional experience in supporting the teaching of Science-Physics.
4. To develop key transferable skills through engagement with 11-18 education.
5. To develop skills in personal reflection on professional practice.
6. To relate educational theory to education practice.
7. To raise aspirations of school students and encourage access to the study of Science-Physics in Higher Education.

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.

The theory which underpins the practice of Science-Physics teaching is explored through seminars led by CTE Teaching Fellows. The seminars begin by discussing the current context of the UK education system and national curriculum before exploring a range of key themes in education such as how students learn, how ideas develop in the school curriculum and using assessment for learning and specific aspects of pedagogy relating to the teaching of Science-Physics.

As part of the module you engage in Science-Physics education through contributing to support for secondary age Science-Physics students, either through online learning support or a short placement in a school. Whilst engaged in supporting Science-Physics learning you will develop your practical understanding of the teaching of Science-Physics. Indicative activities might include: developing learning resources, observing experienced teacher, supporting lessons, 1 to 1 or small group teaching, supporting school students in preparation for Higher Education.
To prepare for and support you for this you will participate a series of workshops at the university. These are highly interactive, practice based sessions, delivered by visiting teachers from local secondary schools. Sessions cover topics such as effective management of learning environments, developing resources to support learning and effective questioning

Learning outcomes

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

- LO1 Critically analyse and reflect on key issues in Science-Physics education in school.
- LO2 Critically reflect on practice in teaching Science-Physics in school.
- LO3 Apply learning theory to school Science-Physics teaching practices
- LO4 Demonstrate engagement with supporting the teaching and learning of Science-Physics.
- LO5 Demonstrate professional skills in collaboration and effective communication with young people.
- LO6 Demonstrate engagement with raising the aspirations of school students towards study in Higher Education

Indicative reading list

Reading lists can be found in Talis

Interdisciplinary

Through exploring the teaching and pedagogy of your subject you will consider and build connections between your subject, educational theory, the psychology of learning and cognition and also consider elements of policy, society and sociology. You will develop your written communication skills in producing both academic and professional evidence-informed rationales for practice.

Subject specific skills

You will develop skills relevant for teaching and the development of practice such as communication, collaboration and reflection. You will also develop skills relevant to the academic study of education such as analysis and critique. The module will also develop your skills in the pedagogy of your subject.

Transferable skills

Critical Thinking
Reasoning and Problem Solving
Active Lifelong Learning
Communication (verbal and written)
Teamwork and working effectively with others
Information literacy (research skills)
ICT Literacy
Citizenship (local and global)
Ethical Values
Inter-cultural learning and diversity awareness
Professionalism
Organisational awareness

Study

Study time

Type	Required
Lectures	2 sessions of 1 hour (7%)
Seminars	7 sessions of 2 hours (47%)
Total	30 hours

Type	Required
Practical classes	7 sessions of 2 hours (47%)
Total	30 hours

Private study description

No private study requirements defined for this module.

Costs

Category	Description	Funded by	Cost to student
Other	In the UK, anyone working with children is required to have a Disclosure & Baring Services (DBS) check. The Centre for Teacher Education will cover the costs of this, however, you will need to provide the relevant proof of identification and address prior to the start of the module.	Department	£0.00
Field trips, placements and study abroad	The module may provide the option for a short physical placement in a local school. You will be responsible for your travel arrangements to the placement. Placements are assigned to align with bus routes and opportunities for car share where possible. When possible, you will have the option to choose an alternative online teaching experience which will provide access to similar experiences and learning outcomes with no travel requirements.	Student	

Assessment

You must pass all assessment components to pass the module.

Assessment group A

	Weighting	Study time	Eligible for self-certification
Assessment component			
Critical review on an issue in Science-Physics Education	35%	60 hours	Yes (extension)

A short (1000 word, approximately 4 sources) annotated bibliography on a chosen issue in Science-Physics Education followed by a 500 word discussion and conclusion on the implications

	Weighting	Study time	Eligible for self-certification

for teaching Science-Physics.

Reassessment component is the same

Assessment component

Evidence-based Science-Physics teaching presentation	35%	75 hours	Yes (extension)

A recorded teaching presentation designed to support children's learning in Science-Physics with a 500-word teacher note, discussing the rationale relating to secondary Science-Physics curriculum, learning intentions or pedagogic theory.

Reassessment component is the same

Assessment component

Academic Poster- what should future of science-physics y education look like?	30%	60 hours	Yes (extension)

An academic poster to synthesise ideas from the module learning and demonstrate their application by exploring what future of science-physics education should look like. This draws together concepts students will have developed at school/tutoring, as well as those they have encountered at the university through critical engagement with both theory and practice.

Reassessment component is the same

Feedback on assessment

Formative: During the course of the module students will have the opportunity to submit one annotated bibliography and their planning sheet for the academic poster for either written or audio feedback.
Summative: A written feedback sheet and in-text comments will be provided on each component.

Availability

There is currently no information about the courses for which this module is core or optional.