

Course content for MT3090, Mathematics in the Classroom

Prerequisites:

Either at least five Mathematics half units *or* at least three Mathematics half units and three Physics or Psychology half units taken in the previous year.

Aims:

- to develop a range of communication and teaching skills appropriate to a particular Key Stage;
- to act as a role model to pupils;
- to gain confidence in communicating mathematics;
- to learn how to develop projects and teaching methods suitable for pupils at school.

Learning outcomes:

On completing the scheme, students should be able to:

- understand the needs of the individual pupils;
- answer questions on mathematics with the appropriate vocabulary at the selected level up to A-level;
- assess and devise appropriate ways to communicate principles and concepts;
- prepare lesson plans and teaching materials;
- report on what they have learnt.

Course content:

Mathematics in the Classroom is offered as part of the Undergraduate Ambassadors Scheme (UAS). UAS is endorsed by the DTI and DfES joint project 'Science and Engineering Ambassadors Scheme'. The Mathematics Department at Royal Holloway is one of a number of university departments across the country presently offering a course under the scheme, though the aim of the scheme is to have most university science and engineering departments participating. The scheme provides an opportunity for third year undergraduates to gain valuable transferable skills by giving them first-hand experience of science education.

There will be an initial one day of training in the first term, including an introduction to working with children and conduct in the school environment. To assist with the selection process students will be asked to apply for the course and subsequently to give a ten minute mock lesson. Each successful candidate will be matched with a specific teacher in a school, who will act as trainer and mentor and will help to determine the tasks and responsibilities of the student. There is a course handbook prepared along UAS guidelines.

Teaching and Learning Methods:

Each student spends half a day each week for the second term in a local school under the supervision of a teacher, and writes a report on the experience. The students will also meet weekly with the course coordinator.

An end of course report of about 5000 words will have to be prepared by the student, and a 30 minute oral presentation.