S390 Science Project Course

Are you ready for your Science Level 3 Project Course?

SXE390, SXG390, SXL390 SXM390, SXN390, SXP390

The Open University

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1 Introduction

S390 is the 'umbrella' coding for all six different discipline-specific versions of the Science Level 3 Project Course.

The version of S390 you will be undertaking will be determined by your scientific discipline interest: SXE390 for Environmental Science; SXG390 for Geosciences; SXL390 for Biology and Health Science; SXM390 for Molecular Science; SXN390 for Natural Sciences; or SXP390 for Physical Science. However, the overall aims and learning outcomes are the same for all versions - and the guidance regarding relevant preparation and further developing your skills is also relevant to them all.

The Science Level 3 Project Course aims to enable you to develop and apply the subject knowledge and skills gained during your previous undergraduate studies. You will address a specific scientific question in your discipline area and demonstrate your understanding by writing a report of your findings appropriate for a specialist audience.

Undertaking S390 is therefore rather different from studying other Science Level 3 modules. This Project Course requires you to choose an area either for literature-based or practical research, appropriate for the version you are studying. You will not have the familiar books or blocks of module materials, or a detailed study calendar, to pace your study. Instead you will have a Project Guide, electronic resources, tutorials and your personal tutor to assist you in the design and execution of your own individual project within your own time plan.

More information about the areas for investigation within each discipline version of S390 can be found in the relevant course description of SXE390 *Environmental Science*; SXG390 *Geosciences*; SXL390 *Researching Biology and Health Science*; SXM390 *Frontiers in Chemistry*; SXN390 *Science and Society* or SXP390 *Radiation and Matter*.

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2 Course Learning Outcomes

S390 provides opportunities for students to develop and demonstrate the following learning outcomes:

Knowledge and understanding (Kn)

Students of the Science Level 3 Project Course should demonstrate:

1. Knowledge and understanding of key and up to date aspects of their selected area of scientific study.
2. An appreciation of the uncertainties, ambiguities and limits of scientific knowledge.

Cognitive skills (C)

Students should be able to:

1. Apply knowledge and understanding to address familiar and unfamiliar problems.
2. Summarise, analyse and synthesise scientific information and/or data.
3. Critically evaluate arguments and data to formulate judgements in accordance with scientific theories and concepts.
4. Make sound judgements in the absence of complete data.

Key skills (Ky)

Students should be able to:

1. Locate and use scholarly reviews and primary sources appropriate to the discipline.
2. Communicate information and conclusions to specialist audiences.
3. Present report appropriately; including references, figures, tables and equations, where relevant.

Practical and/or professional skills (P)

Students should demonstrate:

1. An adaptable and flexible approach to study using feedback.
2. Skills necessary for self-managed and lifelong learning in terms of working independently, time management and organisation.

These learning outcomes are common to all versions of S390. The key aspects of knowledge and understanding for each discipline area are explained in the relevant section of the module website

3 Suggested prior study

The module team considers it essential that you should already be experienced in studying at Level 3, and have a sound knowledge base in your discipline area - hence **we recommend that S390 is the final module of your undergraduate degree. If you wish to study SXE390 or SXG390/SXL390/SXM390/SXN390/SXP390 and plan to undertake a practical project of your choice, we strongly advise that you have successfully**

completed a module that involves experimental design, an Open University laboratory school, or you are already working in a laboratory environment. Working effectively at this level is excellent preparation for the independent work that you will undertake in your Project Course.

4 Skills

The module learning outcomes list the skills that you should be able to demonstrate during and on completion of the module but we do not expect you to have mastered all of these at the start. Clearly, the higher the level of your skills at the beginning, the less you will need to work on them during the study year. We would anticipate that you will come with well-developed Cognitive skills. You will need to report specifically on your own project findings and perhaps further develop your critical evaluation skills. However, you may have little experience of initiating and carrying out project work or working with literature at the forefront of current research. You may not be very confident with all aspects of the Key skills learning outcomes, but as an experienced OU student you will have a firm foundation on which to build the appropriate practical and professional skills.

5 Areas where you can prepare

The module materials will provide guidance on:

- selecting and planning your project;
- locating information;
- reading critically;
- recording information and referencing;
- writing a report in the required format;
- monitoring and evaluating your progress through the work.

However, there are four areas where we recommend you can usefully undertake preparation, to get you off to a flying start once the module actually begins:

1 You will need to allocate around 300 hours for work on this course, so first map out your available study time for the academic year ahead - block out time for known holidays and work and personal commitments. You will then have the time framework into which you will build your detailed project plan;

2 Check that you can readily locate resources that may be relevant from modules previously studied;

3 Ensure that you are online and familiar with the Module Forums and on-line rooms system. You will be using these frequently to communicate with your tutor and other students on your version of the module;

4 Access the Open Library electronic resources and work through the Library online training to familiarise yourself with any of the aspects of searching for, organising or evaluating information with which you do not presently feel completely confident - locating and downloading abstracts or full text of articles in your discipline area would be an excellent goal to aim for in preparation for your work on the Science Level 3 Project Course.