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| <b>Award Title</b> | ASET Level 3 Certificate in Geographical Information Systems |
| <b>Status</b>      | NQF-listed Vocationally Related Qualification                |
| <b>Length</b>      | 60 Guided learning Hours                                     |
| <b>Mode</b>        | Full or part-time  |

## Introduction to GIS

The ASET Certificate in GIS is the first course of its kind in the country. It is designed for students who wish to learn about how computers can help us to make sense of the world around us.

The award was developed to compliment A level studies, and to provide a vehicle for training of staff from specialised industry employers. Central to the award is the development of skills in the use of computers to process geographical data, explore relationships, solve problems and make decisions.

The course will provide a broad-based and highly practical introduction to the interesting field of GIS. Learners will gain valuable knowledge and skills in the following areas:

- environmental problems and issues
- modern computer applications
- data presentation and communication
- image interpretation
- business decision making
- team-work and problem solving

GIS is a new, exciting and rapidly expanding branch of Geography. It involves the application of information technology to the task of understanding and managing our environment.

Rapid developments in computing and a wealth of data about every aspect of our society have propelled GIS into the forefront of modern information handling. This has enabled GIS to play a crucial role in addressing many of the most pressing of issues confronting the world today.

The management of natural resources, the location of new public facilities such as schools and hospitals, responding to natural disasters and urban planning are all examples of fields where GIS plays an important role in making decisions that matter to us all.

No previous experience of computers is required or expected for the programme.

## Who is it for?

The course is primarily designed to be followed by 16-19 year old students in schools sixth forms, sixth form colleges and colleges of further education alongside other level three qualifications such as A-level (at AS or A2 level) and AVCE's.

For students following A-level qualifications, The ASET Certificate in GIS introduces a vocational strand into their learning programme and is an ideal vehicle for the development of key skills.

The course is most appropriate for students following A-levels or AVCE's in Geography, Environmental Science, Business Studies, Computing or Information Technology.

The qualification is also appropriate for adult learners following access programmes before progressing to higher education. It provides such students with an opportunity to develop IT skills in an applied context.

The Certificate can provide an appropriate basis for an intensive short training course for employees or organisations using spatial data such as local authorities, planning organisations, construction companies, environmental organisations and utility companies.

## Progression

The introduction of a Level 3 qualification in this field reflects major growth both within the geographical information industry and the growth of HND and BSc qualifications in GIS available within the higher education sector.

There are presently eight universities in the UK providing single honours degree programmes in GIS with a far larger number offering combined degrees with Geography and Information Technology/Information Systems/Computing. A number of higher education establishments also run HND programmes in GIS or closely related subjects.

Although the ASET Introduction to GIS course

would provide an ideal element in the learning programmes of those students wishing to study GIS at university, the majority of students will use the course as a basis for progression to a broad range of higher level programmes such as degree programmes in business management, marketing, information systems, conservation, environmental management, earth science, operational research, land management, town planning and public administration.

## Structure

The award comprises two compulsory 30 hour units:

### Unit 1: Principles of Geographical Information Systems

Unit One provides an overview of the underlying concepts behind GIS. It outlines the principles involved in the capture, storage, manipulation, analysis, presentation and output of digital geographical data in a computer-based GIS and provides opportunities for the development of practical skills in processing data with a GIS.

### Unit 2: Applications of Geographical Information Systems

Unit Two develops an awareness of the contemporary application of GIS in addressing issues and questions in the world around us. It outlines the wide range of organisations which are involved in the processing of digital geographical data using GIS and examines the role these organisations have in tackling environmental problems.

## Assessment

The outcomes of the qualification are assessed through a combination of external testing and internal assignment assessment.

Unit one (Principles of GIS) is externally assessed through a written examination. This contributes 50% to the total assessment of the qualification. Unit two (Applications of GIS) is internally

assessed through two pieces of work, each contributing 25% towards the total assessment. The first item is be a report exploring the application of GIS to the solution of an environmental issue, question or problem. The second item is a presentation outlining the benefits and limitations of using GIS to solve the environmental issue, question or problem. Both assessment items must relate to practical work undertaken by the students.

## Additional outcomes

In addition to developing knowledge, understanding and practical skills in the field of geographical data handling, work towards this award will promote a range of other broader developments in students. These include:

- An enhanced awareness of the problems facing our environment, the interaction of elements in the natural and human environment and the role society can play in addressing and managing these issues.
- An appreciation of the broader context of information and communications technologies as a critical element in modern culture.
- An appreciation of the diversity of cultures, peoples and places through the retrieval , querying and examination of information contained in geographical databases.
- An awareness of the social and ethical issues relating to the collection, storage, analysis and application of socio-economic data relating to the population.
- An understanding of the scope for examining issues, solving problems and promoting mutual understanding across internal and international boundaries through the application of information technology.

## Further information

For more full details of this award, visit the ASET website at [www.aset.ac.uk](http://www.aset.ac.uk) and download the Award Specification booklet.

ASET's customer services team can be contacted at the address below