



The full Benchmark statement can be downloaded from <http://www.qaa.ac.uk/>

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### **3 Subject knowledge and understanding**

3.4 Integration of theory, experiment, investigation and fieldwork and the development of principles into practice; quantitative and qualitative approaches to information

### **4 Abilities and skills**

4.1 Plan and execute research or development work, evaluate the outcomes and draw valid conclusions.

4.4 *Intellectual skills*: design an experiment, investigation or survey or other means to test an hypothesis or proposition; critically analyse information, synthesise and summarise outcomes.

4.5 *Practical skills*: plan, conduct and report on investigations including the use of secondary data; collect and record information or data in the library, laboratory or field, and summarise it using appropriate qualitative and/or quantitative techniques; devise, plan and undertake field and laboratory investigations in a responsible and safe manner.

4.6 *Numeracy skills*: appreciate issues of sample selection, accuracy, precision and uncertainty during collection, recording and analysis of data in the field and laboratory; prepare, process, interpret and present data using appropriate qualitative and quantitative techniques and packages.

### **5 Teaching, learning and assessment**

Programmes will contain practical classes inside and outside the laboratory; literature-based research, case studies, problem solving.

### **Performance levels in practical skills expected**

Plan, conduct and present an independent investigation; use appropriate laboratory and field equipment safely; select and apply a range of methods to solve problems; describe and record accurately in the field and laboratory; interpret practical results; present results/research finding in a number of formats.

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\*Note some of the wording has been changed slightly from the continuous mode, i.e. "plan and conduct" rather than "planning and conducting", and that under "Performance levels" a digest has been produced of the wording in the three levels specified [threshold, typical and excellent]