

# CS1D2-15 Professional Skills (DA)

**22/23**

**Department**

Computer Science

**Level**

Undergraduate Level 1

**Module leader**

Andrew Hague

**Credit value**

15

**Module duration**

8 weeks

**Assessment**

100% coursework

**Study location**

Distance or Online Delivery

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## Description

### Introductory description

This module will enable students to:

- read, critically appraise, and summarize a report
- demonstrate their skill in technical writing including appropriate referencing
- reflect on and critically assess both their own writing and that of others
- develop and deliver a fluent oral presentation demonstrating clarity of argument and using appropriate visual aids
- work effectively as part of a team
- demonstrate their understanding of the relevance for professional computing practice of basic computer law, standards and professional bodies, and demonstrate awareness of those issues related to their practice
- demonstrate their understanding of computer ethics, the frameworks that are applicable, and its relevance to their own area of professional practice
- understand the social impact of computer technology
- understand basic principles of commercial aspects of industry and organisational structure
- apply their knowledge from this course to reflective assessment of, eg, ethical and legal concerns and compliance in their own area of organisational structure
- demonstrate the ability to identify and analyse sources of knowledge and evidence relevant to the planning and conduct of negotiated learning in a specific work context

- demonstrate the ability to identify learning from experience and present a written programme plan for the workplace as well as an academic audience

## **Module aims**

This module aims to introduce the key skills and knowledge required of a computing professional. Students will develop proficiency in written and oral communication and gain experience of working in a team. They will develop awareness of professional aspects of computing practice such as computing ethics, legislation, and basic security principles. They will develop an understanding of how these topics apply and are managed in their own work place and investigate aspects of professional practice that apply particularly to their specific area of work. Basic coverage of business organisation, structure, and management will also be introduced.

The module will also enable the learner to reflect upon their experience in identifying learning and to lead in the development of the three-way learning agreement designed to meet their personal and professional needs while adding value to the employer and meeting University academic standards.

## **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.

This module will give students access to relevant communication skills, namely:

- the process of writing
- comprehension of, critical analysis of, and writing a summary of a report
- referencing and avoiding plagiarism
- technical writing skills
- appraising writing
- writing a technical report
- preparing and delivering an oral presentation
- preparing a poster

The module will also give students access to relevant professional knowledge, namely:

- professional bodies and professional standards
- legal aspects of computing and relevant legislation
- ethics in computing
- social aspects of computing
- the organisational structure and commercial aspects of industry

## **Learning outcomes**

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

- Summarize and critically appraise a report.
- Demonstrate skill in technical writing including appropriate referencing.

- Reflect on and critically assess both their own writing and that of others.
- Develop and deliver a fluent oral presentation demonstrating clarity of argument and using appropriate visual aids.
- Effectively work as part of a team.
- Demonstrate an understanding of the relevance for professional computing practice of basic computer law, standards and professional bodies, and demonstrate awareness of those related to their practice.
- Demonstrate an understanding of computer ethics, the frameworks that are applicable, and its relevance to their own area of professional practice.
- Demonstrate familiarity with the basic principles of computer security and understand the relevance to their own area of professional practice.
- Understand the social impact of computer technology.
- Understand basic principles of commercial aspects of industry and organisational structure.
- Apply knowledge of professional considerations to their own area of organisational structure.
- Demonstrate an awareness of reflective practice and how to apply it to undertake a review of their learning.

## **Indicative reading list**

Barrass, R., "Scientists Must Write", E & Fn Spon (1982)

Higham, NJ, "Handbook of writing for the mathematical sciences", SIAM (1998)

Swan, M., "Practical English usage", Oxford (1995)

Pears, R., and Shields, G., "Cite them right: the essential referencing guide", Palgrave Study Skills (2013)

Zanders, E., and MacLeod, L., "Presentation skills for scientists: a practical guide", Cambridge (2018)

van Emden, J., and Becker, L., "Presentation skills for students," Palgrave (2016)

Duquenoy, P., et al., "Ethical, legal and professional issues in computing," Thompson (2008)

Ayres, R., "The essence of professional issues in computing," Prentice Hall (1999)

Bott, F., et al., "Professional issues in software engineering," Taylor & Francis (2001)

## **Research element**

Teaching students basic research skills

## **Subject specific skills**

- Can identify, analyse and evaluate security threats and hazards to planned and installed information systems or services (e.g. Cloud services)
- Follow a systematic methodology for initiating, planning, executing, controlling, and closing technology solutions projects
- How business exploits technology solutions for competitive advantage
- How teams work effectively to produce technology solutions
- How to deliver a technology solutions project accurately consistent with business needs.
- The issues of quality, cost and time for projects, including contractual obligations and resource constraints

- Report on conclusions gained from analysing data using a range of statistical software tools
- Summarise and present results to a range of stakeholders making recommendations
- The range of data protection and legal issues

## Transferable skills

- Fluent in written communications and able to articulate complex issues
- Makes concise, engaging and well-structured verbal presentations, arguments and explanations.
- Able to deal with different, competing interests within and outside the organisation with excellent negotiation skills.
- Is able to identify the preferences, motivations, strengths and limitations of other people and apply these insights to work more effectively with and to motivate others.
- Competent in active listening and in leading, influencing and persuading others.
- Able to give and receive feedback constructively and incorporate it into his/her own development and lifelong learning
- Able to put forward, demonstrate value and gain commitment to a moderately complex technology-oriented solution, demonstrating understanding of business need, using open questions and summarising skills and basic negotiating skills
- Able to conduct effective research, using literature and other media, into IT and business related topics
- Have demonstrated that they have mastered basic business disciplines, ethics and courtesies, demonstrating timeliness and focus when faced with distractions and the ability to complete tasks to a deadline with high quality.
- Flexible attitude
- Ability to perform under pressure
- A thorough approach to work

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## Study

### Study time

Type	Required
Tutorials	14 sessions of 1 hour (9%)
Work-based learning	96 sessions of 1 hour (64%)
Online learning (independent)	40 sessions of 1 hour (27%)
Total	150 hours

### Private study description

No private study requirements defined for this module.

## Costs

No further costs have been identified for this module.

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## Assessment

You do not need to pass all assessment components to pass the module.

### Assessment group A1

	Weighting	Study time
Reflective report on negotiated learning activity	60%	
Moodle unit evaluations	20%	
Video presentation of negotiated workplace learning activity	20%	

### Feedback on assessment

Automatic feedback on Moodle quizzes, written/verbal otherwise

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## Availability

## Courses

This module is Core for:

- Year 1 of DCSA-I112 Undergraduate Computer Science and Technology Solutions (Data Analyst) (Degree Apprenticeship)