

Competency	Essex Graduate	Skill	Skill Level	Evidence	Notes
Professional	Literacy, Communication, Language Skills	Express information effectively to technical and non-technical audiences	Expert	Achieved distinction (70%+) in both Software Engineering Project Management (SEPM) and Research Methods and Professional Practice (RMPP) module oral presentations	
		Create documents to aid your communication (reports, diagrams, legal descriptions, plans, manuals and charts)	Proficient	Used Universal Modelling Language (UML) in all programming modules (Object Oriented Programming (OOP) and Secure Software Development (SSD))	
	Commercial Awareness	Keep current with tools of the industry, as well as emerging technology	Proficient	Have narrowed down my research topic to incorporate graph technologies, as it is an emerging technology, and wrote Launching into Computer Science (LCS) module assignment on cloud providers	
		Seek opportunities to improve and share knowledge of tools and technology that may improve productivity	Proficient	experience in using and evaluating Generative AI tools for productivity gains	
		Participate in scientific and professional organisations	Aware	No experience in this	
		Emphasise quality, customer satisfaction and fair application of policies.	Proficient	experience as a senior data science consultant	
	Subject understanding, research, critical thinking, time management	Demonstrate familiarity with codes of conduct for the Computing field.	Proficient	codes of conduct in my research assignments through RMPP and other modules	
		Critically analyse complex ideas in concepts in the field of Computer Science	Proficient	Have written 1000+ word assignments across areas such as Generative AI, Cloud Computing and Machine Learning for Customer Profiling	
		Recognise inconsistencies and gaps in information, and search for additional information when needed...	Proficient	Have achieved distinction in RMPP literature review on Machine Learning for Customer Profiling	
		Explore complex real-world problems in a Computing context	Trained	Wrote a 1000+ word on Generative AI and ethics implications for RMPP module	
Ethical		Explore and apply software project management techniques	Proficient	Learned through SEPM module and also have professional experience	Added
		Comply with the letter and spirit of applicable laws	Trained	Have completed multiple mandatory ethics trainings at work	

Legal and	Ethical Awareness	Maintain privacy and confidentiality of company, co-worker and customer information	Proficient	Have completed multiple mandatory ethics and integrity trainings at work	
Social (inc. Teamwork)	Cultural Awareness	Act in the best interest of the community at large - Social (Community) Responsibility	Proficient	I mentor multiple women in the field of technology via my professional work	
	Teamwork, Leadership and Resilience, Time Management	Collaborate effectively in diverse teams to achieve team goals	Expert	Groups achieved distinction (70%+) in both SEPM and SSD module group assignments	
		Meeting team objectives using teamwork skills	Proficient	As above	
		Demonstrate skills in leadership and team building	Proficient	assignments for demonstrated leadership	
		Give and receive constructive feedback	Expert	Introduced a peer review process in latest group assignment (SSD) and I always participate in collaborative discussions	
Technical (Computer Science)	IT and Digital, Numeracy	Create, discuss and deliver strategies for sustainability for all stakeholders (company, community and environment)	Proficient	Professional experience via work communities on ethics and sustainability	
		Able to make a decision on a complex matter/scenario using multiple sources of information	Proficient	Have led complex analytical projects for clients via work	
		<i>Technical skills relevant to your degree programme:</i>			
		SQL for database querying	Proficient	Both academic and professional experience in using SparkSQL flavour	
		Python Programming	Proficient	Both academic and professional experience, and distinction achieved in all Python assignments	
		Scripting Language (Python)	Proficient	As above	
		Statistical Language (R)	Trained	undergraduate degree and some professional experience	
		maintenance	Proficient	experience	
		Moodle (VLE)	Proficient	Academic experience	
		Spreadsheets	Expert	experience	
		Effective use of e-library resources	Proficient	Academic experience	
Technical (Computer Science)	Tools	Interactive Development Environments (IDEs) such as PyCharm	Proficient	academia for committing changes to GitHub	Added
		Network Analysis Tools (NMAP)	Trained	module	Added
		Penetration Testing Tools (ZAP)	Trained	module	Added
	Software Design	UML	Proficient	Learned and applied in OOP and SSD modules, achieving merit and distinction across the modules	Added
		Design Patterns	Trained	Learned and applied in OOP and SSD modules, achieving merit and distinction across the modules	Added
		Linters and Formatters	Proficient	Learned and applied in OOP and SEPM modul assignments, achieving distinction across all	Added

	and Quality	Software Architecture	Trained	Learned and applied in OOP and SSD modules, achieving merit and distinction across the modules	Added
		Unit and Integration Testing	Proficient	Academic experience via OOP and SSD modules, and professional experience	Added
		Cryptography (algorithms, and encryption methods and libraries)	Trained	achieving distinction in all assignments	Added
Subject Application	Global Citizen, Teamwork, Leadership, Emotional Intelligence	Take into account other people's perspectives	Proficient	Effective work through SEPM and SSD module group assignments	
		Work constructively with differences in viewpoints	Proficient	As above	
		Actively participate in a range of community activities as an informed citizen	Proficient	work and engaging in all collaborative discussions in all modules as necessary	
	Decision Making, Initiative, Emotional Intelligence, Ethical Awareness	Develop, articulate and clarify your personal values and ethics	Proficient	As above	

This is by no means a comprehensive list of Professional skills required for your programme.

It is meant to be used as a guide for your SWOT analysis/action plan as part of your Professional Development Plan.

As you progress through the course, you will discover other skills you need to develop or currently have.

These can be described in further detail in your SWOT analysis/action plan.

As this is required in various modules, you may end up with different versions of this Matrix.

You can collate them in your Learning Loop as part of your final PDP at the end of your programme.

Adapted from BCS guidelines and Essex graduate

Skill Level Key

Aware General understanding
and basic knowledge

Trained Able to apply knowledge,
able to work
independently under
certain conditions

Proficient Broad and in-depth
knowledge, able to work
independently with very
little supervision

Expert Seen as a subject matter
expert, able to lead and
train others.