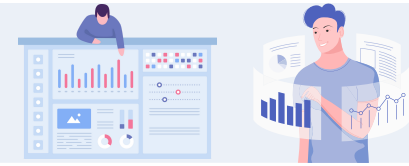# Skills Transferability Matrix

FOCAL Initiative

Information Systems Testing Technicians

Information Systems Testing Technicians have strong foundational skills in information technology. Their main task is to test that software and hardware are functioning correctly within organizations. They employ tools for networking, programming, hardware and software diagnostics and data management, which may enable them to work in other roles within information technology. Testing technicians perform administration tasks in conjunction to their computer and network tasks, which may lead to transferability to public administration roles.

Skills

Skills are developed through training and experience, and are the practical proficiencies someone possesses. The following are top key skills information systems testing technicians employ in their work:

1. Reading Comprehension
2. Writing
3. Programming
4. Monitoring
5. Critical Thinking

Technical Knowledge

Technical Knowledge is the understanding of theory and utility of modern tools in a work environment. The following tools are used by information systems testing technicians regularly:

1. Requirements analysis and system architecture software
2. Database management system software
3. Network monitoring software
4. Device drivers or system software
5. Program testing software

Tasks

Tasks are the assigned duties that an occupational group performs in their daily work. The following are the tasks information systems testing technicians most regularly encounter:

1. Analyze data to identify or resolve operational problems.
2. Compile technical information or documentation.
3. Recommend changes to improve computer or information systems.
4. Document design or development procedures.
5. Create databases to store electronic data.

Abilities

Abilities refer to the innate faculties that allow workers to carry out tasks and activities. The following are the top abilities that database information systems testing technicians possess:

1. Written and Oral Comprehension and Expression
2. Problem Sensitivity
3. Deductive and Inductive Reasoning
4. Information Ordering
5. Near Vision

Skills Transferability Matrix

FOCAL's Skills Transferability Matrices analyze the transferability of an occupation across a multitude of other occupations on the basis of similarities in **skills**, **technical knowledge, tasks,** and **abilities** as outlined by the O*Net database. It aims to show workers how to leverage their skill set in changing occupations, planning a career path, and transitioning to other industries. It also assists policy makers and educators address changing skill sets and areas of opportunity for workforce entrants in developing industries. Employers can also use this tool in reskilling or upskilling workers to circumvent skills shortages, and reduce the hiring and training challenges.

Information Systems Testing Technicians

Occupations	Skills	Technical Knowledge	Tasks	Abilities	Total
Information systems analysts and consultants	91%	100%	98%	93%	96%
Database analysts and data administrators	84%	87%	30%	89%	72%
Computer programmers and interactive media developers	81%	78%	18%	89%	66%
Computer engineers (except software engineers and designers)	84%	81%	9%	87%	65%
Computer and information systems managers	75%	72%	0%	90%	59%
Software engineers and designers	77%	46%	24%	87%	59%
Administrative officers	70%	61%	0%	87%	55%
Other administrative services managers	65%	60%	0%	88%	53%
Industrial and manufacturing engineers	83%	39%	0%	86%	52%
Electrical and electronics engineers	84%	36%	0%	85%	51%
Mechanical engineers	77%	36%	0%	83%	49%
Electrical and electronics engineering technologists and technicians	76%	39%	0%	72%	47%
Metallurgical and materials engineers	80%	22%	0%	84%	47%
Court officers and justices of the peace	70%	22%	0%	88%	45%
Contractors and supervisors, electrical and telecommunications occupations	72%	28%	0%	77%	44%

After scanning over 2,600 skills, technical competencies, tasks, and abilities of each of the 500 occupations as defined by the National Occupational Classification (NOC) system, a skills transferability matrix for information systems testing technicians is produced. In the matrix above, a high score is highlighted in green and indicates the high transferability potential of an attribute of an occupation with that of information systems testing technicians. Lower or no transferability areas are marked in red. Testing technicians have a very high degree of transferability with information system analysts and consultants, due to the similar nature of work. The use and knowledge of programming, networking and systems can help testing technicians transfer to information technology roles beyond information systems, with observed transferability to media development, software design and hardware engineering. Transferability is observed with roles in engineering, but long education and training time may make this difficult. Upward mobility is observed to computer and information systems managers, indicating that they may make suitable candidates for managerial roles.

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