Comparisons of Job Characteristics

Focus Occupation: Computer and Information Scientists, Research (15-1011)
Associated Occupation: Computer and Information Systems Managers (11-3021)

Compare Knowledge
Compare Skills
Compare Abilities
Compare Detailed Work Activities
Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 73

Focus Occupation: Computer and Information Scientists, Research (15-1011)
Associated Occupation: Computer and Information Systems Managers (11-3021)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Computers and Electronics	8.4	20.0	22.8	>	Current knowledge level is likely sufficient
Administration and Management	8.4	15.7	11.5	<<	Extensive education and/or training may be required
Customer and Personal Service	11.3	15.7	10.8	<<	Extensive education and/or training may be required
Production and Processing	6.0	11.8	4.5	<<	Extensive education and/or training may be required
Personnel and Human Resources	5.6	11.2	6.8	<<	Extensive education and/or training may be required
Telecommunications	3.9	10.9	11.9	0	Current knowledge level may be sufficient
Economics and Accounting	4.4	9.7	3.4	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 64

Focus Occupation: Computer and Information Scientists, Research (15-1011)
Associated Occupation: Computer and Information Systems Managers (11-3021)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Monitoring	9.9	13.5	11.3	<	A higher skill level may be required
Systems Evaluation	6.4	12.2	14.7	>	Skill level is likely sufficient
Management of Personnel Resources	6.9	11.1	10.2	0	Current skill level may be sufficient
Systems Analysis	6.5	10.8	13.6	>	Skill level is likely sufficient

Negotiation	6.8	10.2	6.8	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	9.6	10.6	>	Skill level is likely sufficient
Management of Financial Resources	3.3	8.8	7.8	<	A higher skill level may be required
Management of Material Resources	3.7	8.5	6.1	<<	Extensive development of skills in this area may be required
Programming	2.2	6.9	12.4	>>	Skill level is likely more than sufficient
Technology Design	2.6	5.9	10.0	>>	Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Computer and Information Scientists, Research (15-1011)
Associated Occupation: Computer and Information Systems Managers (11-3021)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Written Comprehension	11.0	15.1	13.1	<	Some improvement in abilities may be required
Written Expression	9.8	13.5	12.0	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	13.2	14.6	>	Current ability level is likely sufficient
Inductive Reasoning	10.2	13.2	14.1	0	Current ability level may be sufficient
Information Ordering	9.9	12.3	12.6	0	Current ability level may be sufficient
Fluency of Ideas	7.6	10.1	12.8	>	Current ability level is likely sufficient
Originality	7.6	10.1	11.0	0	Current ability level may be sufficient
Memorization	5.6	7.3	6.9	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 82

Focus Occupation: Computer and Information Scientists, Research (15-1011)
Associated Occupation: Computer and Information Systems Managers (11-3021)

Work Activities	Exclusivity of Activity
Consult with managerial or supervisory personnel	60
Develop policies, procedures, methods, or standards	21
Direct and coordinate activities of workers or staff	3
Follow data security procedures	77
Follow data storage procedures	75
Prepare reports	8
Test computer programs or systems	78

Use computer application flow charts	84
Use computer programming language	82
Use project management techniques	47
Work as a team member	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Computer and Information Scientists, Research (15-1011)
Associated Occupation: Computer and Information Systems Managers (11-3021)

Tools and Technologies	Exclusivity
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Industry specific software	1
Media storage devices	21
Network service equipment	47
Operating environment software	12
System Cards	51

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.