



## Information Technology Job Family: **Software Engineer Progression**

These generic job title summaries are intended to indicate the kinds of tasks and levels of work complexity that will be required of positions classified to any of these titles and are not intended to be construed as declaring the specific duties and responsibilities of any particular position. The use of particular expressions or illustrations describing functions within a specific job title does not exclude other duties of a similar kind and/or level of complexity. Positions are classified to a particular job title based upon the predominant level of expected work complexity. ***A position that is classified into this title and band must meet the Cornell requirements for exemption under the FLSA***

### GENERIC JOB PROFILE SUMMARIES

<b>Software Engineer IV INDIVIDUAL CONTRIBUTOR</b>	<b>Software Engineer V INDIVIDUAL CONTRIBUTOR</b>
May use programming languages such as, but not limited to: ASP/.NET, PHP, JavaScript, DHTML, Perl, SQL, MySQL, XML, XSL, AJAX, ColdFusion, C#, Java	May use programming languages such as, but not limited to: ASP/.NET, PHP, JavaScript, DHTML, Perl, SQL, MySQL, XML, XSL, AJAX, ColdFusion, C#, Java
Works with and may be responsible to users for needs analysis and provide resolution for software systems.	Responsible for users needs analysis and resolution for software systems.
Develop a detailed program specification through discussion with clients.	Develop and/or approve extremely complex detailed program specification through discussion with clients.
Design, analyze, code, test, debug, document and maintain highly complex third party systems; develop enhancements that enable a positive end-user experience.	Design, analyze, code, test, debug, document and maintain extremely complex third party systems; develop enhancements that enable a positive end-user experience.
Formulate, define system scope and objectives to develop or modify highly complex third party software systems.	Formulate, define system scope and objectives to develop or modify extremely complex third party software systems.
Analyze and amend software errors in a timely and accurate fashion and provide status reports where required.	
Define projects, organize a project team and direct project activities; provide technical guidance to less experienced programmer/ analyst; may instruct, direct and check the work of other application developers.	Define project, organize a project team and direct project activities; apply the highest level of technical skill/literary over multiple areas; instructs, directs and checks the work of other application developers; provide technical consulting on complex projects.
Research, analyze, design, document, and modify software specifications throughout the production life cycle.	Research, analyze, design, document, and modify software specifications throughout the production life cycle.

Software Engineer IV INDIVIDUAL CONTRIBUTOR	Software Engineer V INDIVIDUAL CONTRIBUTOR
	Act as team leader for projects with large budgets of extended duration.
Creates and implements project specifications/plans for projects with significant inter-dependency with other third party systems and/or projects.	
	Create, implement and defines project standards and methodologies.
Modifies complex application programs from specifications.	Modify extremely complex application programs from specifications.
Develop or modify procedures to solve complex problems considering computer equipment capacity and limitations, operating time and form of desired results.	Develop or modify procedures to solve the most complex problems related to computer equipment capacity and limitations, operating time and form of desired results.
Develop, validate test routines and schedules, evaluate code to ensure that it is valid, is properly structured, meets industry standards and is compatible with browsers, devices, or operating systems.	
	Provide leadership to project team members including project manager, business analysts, subject matter experts, other developers and quality assurance specialists.

## JOB FACTOR PROFILE TABLE

FACTOR PROFILE	11477 SOFTWARE ENGINEER IV, BAND G	11478 SOFTWARE ENGINEER V, BAND H
<b>MINIMUM EDUCATION AND EXPERIENCE EQUIVALENCY</b>	Bachelor's degree; more than 5 year and less than 7 years experience or equivalent	Bachelor's degree; more than 7 year and less than 10 years experience or equivalent
<b>IMPACT</b>	Substantial impact	Substantial impact
<b>CONTACTS - INSIDE</b>	Persuade others to take particular course of action Coordinate major activities	May involve sensitive issues Coordinate major activities
<b>CONTACTS - OUTSIDE</b>	Develop and make presentations and negotiate with others	Develop and make presentations and negotiate with others
<b>CONTACTS - STUDENTS</b>	Limited contact	Limited contact

FACTOR PROFILE	11477 SOFTWARE ENGINEER IV, BAND G	11478 SOFTWARE ENGINEER V, BAND H
<b>SUPERVISION</b>	Provide on-the-job training, guidance, advice and counsel to other employees in the group and others in a similar position	Provide on-the-job training, guidance, advice and counsel to other employees in the group and others in a similar position
<b>COMPLEXITY</b>	Continually required to develop new innovative solutions, services, products, processes, & programs. Work requires conceptual and imaginative thinking in a highly complex environment	Continually required to develop new innovative solutions, services, products, processes, & programs. Work requires conceptual and imaginative thinking in a highly complex environment
<b>LEVEL OF DECISION MAKING</b>	Assist in and influence decisions concerning policy-setting, research, planning, or students	Responsible for making decision regarding policy-setting, research, planning, or students
<b>FREEDOM OF ACTION</b>	Very general supervision Interpretation of work policies and procedures, and, at times deviation from standard work practice	Little direct supervision Considerable latitude for exercising judgment and self-direction
<b>EFFECT OF DECISION MAKING</b>	Directly effects several depts within a college Significant effect on students and employees	Directly affect entire college or school administrative unit Critical effect on students and employees
<b>WORKING CONDITIONS</b>	Normal working conditions, including limited or no exposure to hazardous conditions/ materials/equipment. Safety gear may sometimes be required	Normal working conditions, including limited or no exposure to hazardous conditions/ materials/equipment. Safety gear may sometimes be required