JOB ANALYSIS

California Department of Human Resources
Selection Analyst Training Program
1810 16th Street
Sacramento, CA 95811
916.445.1547
www.calhr.ca.gov

CALIFORNIA DEPARTMENT OF HUMAN RESOURCES
JOB ANALYSIS COURSE

TABLE OF CONTENTS

Chapter 1 - WHAT IS A JOB ANALYSIS? 1
WHY CONDUCT A JOB ANALYSIS? 2
Meet Legal and Professional Standards 2
Select the Best-Qualified Candidates 2
Use Job Analysis to Make Employment and Management Decisions 2
LEGAL BACKGROUND 4
Title VII of the Civil Rights Act of 1964 4
Case Law 4
The Uniform Guidelines on Employee Selection Procedures 5
Professional Standards 5
The Americans with Disabilities Act 6
Recent Awards for Discriminatory Employment Practices 7
CONTENT VALIDITY AND JOB ANALYSIS 7
Chapter 2 – THE JOB ANALYSIS PROCESS 8
Chapter 3 – COLLECTING JOB ANALYSIS INFORMATION 12
Archival Research 12
Job Audits 12
Committee-Based Data Collection 15
Work Observation Data Collection 15
Chapter 4 – DEVELOPING TASK AND KSAPC STATEMENTS 17
TASK STATEMENTS 17
Example Task Statements 17
KSAPC STATEMENTS 20
Knowledge 22
Example Knowledge Statements 22

Skills 22
Example Skills Statements 22
Abilities 23
Example Ability Statements 23
Example KSAPC Statements 23
Personal Characteristics (Willingness) 24
Example Personal Characteristics Statements 24
Job Analysis Finalization Meeting 25
Chapter 5 – GATHERING JOB ANALYSIS RATINGS 26
JOB ANALYSIS SURVEY (JAS) 26
RATING TASK STATEMENTS 28
Importance 29
Frequency 30
RATING KSAPC STATEMENTS 31
Importance 32
Expected at Entry 33
Relationship to Job Performance 33
COMMITTEE BASED CONSENSUS 33
Chapter 6 – ANALYZING JOB ANALYSIS SURVEY DATA 35
Cut-off Scores for Task 35
Example Importance Scale Ratings for Task 36
Cut-off Scores for KSAPC 37
Example Importance Scale Ratings for KSAPC 38
Example Expected at Entry Scale Ratings 38
Chapter 7 – LINKING TASK AND KSAPC STATEMENTS 40
Chapter 8 – DEVELOPING AN EXAMINATION PLAN 42
Weighting 42
SME Input Method 42
Choosing a Selection Plan 43
Written Examinations 43
Structured Interview 44

Performance-Simulation Test/Work Sample Test.....44
Training and Experience Evaluations 45
EXAMINATION SELECTION MATRIX.....46
References 47
Exercises 48
Exercise #1 – Legal & Court Case Exercise.....48
Exercise #2 – Small Group Exercise – Job Analysis Preparation 49
Exercise #3 – Writing Good Task Statements.....52
Exercise #4 – Write Task Statements 53
Exercise #5 – Writing Good KSAPC Statements 54
Exercise #6 – Write KSAPC Statements.....55
Exercise #7 – Review.....56
Exercise #8 – Evaluate Job Analysis Data.....58
Exercise #9 – Job Analysis Results 60
Exercise #10 – Selection Options Matrix – Group Exercise 62
Appendices 63
Appendix 1 – Job Analysis Internet and Literature Review 63
Appendix 2 – Job Analysis Checklist.....64
Appendix 3 – Action Verbs for Writing Task Statements.....66
Appendix 4 – Job Audit Interview Form.....69
Appendix 5 – Guidelines for Committee-Based Job Analysis.....85
Appendix 6 – Work Observation Method.....86
Appendix 7 – Job Analysis Survey 95
Appendix 8 – Selection Options Matrix 108
Appendix 9 – Checklist for Validity Verification of a Job Analysis
Study to Determine Adequacy of Documentation*.....109
Appendix 10 – Online Survey Tools 112

Objective:

Describe the importance of job analysis, its legal implications for selection, and its application to the content validation approach for developing employment **selection instruments.**

Chapter 1 – WHAT IS A JOB ANALYSIS?

While a simple job description or class specification contains information about the primary duties and requirements for a job, a **job analysis** is typically thought of as a comprehensive, rigorous approach to highlighting ALL important aspects of a job. A job analysis may be defined in a number of ways, and in fact it may take several forms. Several professional definitions have been included below:

- A detailed statement of work behaviors and other information relevant to the job (Uniform Guidelines on Employee Selection).
- A purposeful, systematic process for collecting information on the important work-related aspects of the job (Gatewood & Field, 2001).
- The systematic study of a job or job family. Specifically, it is the collection of information about tasks and observable work behaviors that are performed on a job and that can be verified either directly or indirectly by inference (Harvey, 1991).

While these definitions vary in detail and level of specificity, they share a commonality in their emphasis of systematically collecting, analyzing, and evaluating the important aspects of a job. The primary goal is to describe worker behavior in performing the job, along with the essential requirements of the job – in great detail.

Just as job analysis can take on many forms, the methods and activities of data collection vary widely, and come from a variety of sources, including archives, observations, job audits, and workshops. By quantifying information, evaluating and comparing its relative importance, the job analysis process can be used to make important employment decisions.

While there are many methods of conducting job analyses, the information contained in this course satisfies the legal requirements and the principles promoted through the *Uniform Guidelines on Employee Selection Procedures* and satisfies their recommendations for the choice and use of content valid selection instruments.

WHY CONDUCT A JOB ANALYSIS?

Collecting job analysis data guarantees that an organization has the most reliable and up-to-date information about a job from which to make and legally defend important employment and management decisions.

Meet Legal and Professional Standards

Laws, legal precedent, and governmental agencies all acknowledge the importance of validating the use of selection instruments. A thorough job analysis is recognized as evidence to document the content-validation process. By adhering to the principles of the *Uniform Guidelines* and the requirements of relevant case law, job analyses enable organizations to make valid and cost effective employment-related decisions while helping to avoid adverse impact.

Select the Best-Qualified Candidates

By using selection instruments that accurately measure critical characteristics of the job, employment decisions can be made with confidence. Selection procedures derived from a job analysis are designed to identify the most qualified candidates for a position, in that they capture the elements of the job that best discriminate top performers from marginal ones.

Use Job Analysis to Make Employment and Management Decisions

Recruitment

Including critical tasks and the knowledge, skills, abilities, and personal characteristics (KSAPCs) in your recruitment material will increase job-relatedness and will give a more accurate representation of the essential responsibilities.

Screening

Knowing which job elements are required by candidates at the time of hire separates qualified from non-qualified applicants.

Selection

Basing selection instruments on the critical KSAPCs ensure that the most important qualities of the job are measured.

Performance evaluations

The essential job elements can be used as the basis for performance evaluations and can be tailored to assess both new and experienced staff.

Training

Much of what employees need to know to perform successfully on the job is learned after they are hired. Training is the process by which such learning takes place. Job analysis sets the foundation for training needs analyses.

Workforce planning

Anticipated organizational demands create a need to effectively manage and base employment decisions on job elements.

Workplace accommodation

The essential functions of a job must be identified to determine accommodations that may be required by persons with disabilities.

Appeals

The Appeals Division of the California State Personnel Board responds to alleged violations of law or rule brought by employees, applicants, and members of the public by reviewing allegations of unfairness in the selection process. That Division is responsible for investigating the job relatedness of existing employment practices; therefore, relies heavily upon the information provided through job analyses. Departments can help verify the legal defensibility of the selection processes by

providing documentation that their job analyses followed professionally-accepted principles and methods of assessment.

LEGAL BACKGROUND

Title VII of the Civil Rights Act of 1964

Title VII of the Civil Rights Act of 1964 addresses Equal Employment Opportunity and specifically prohibits making any employment-related decisions based on an employee's race, color, religion, sex, or national origin. The Act further prohibits the use of a selection procedure that results in adverse impact unless the employer can demonstrate the job-relatedness of such a procedure.

Case Law

Several pivotal court decisions have had an impact on the employee-selection process. In the 1971 Supreme Court case of **Griggs v. Duke Power Company**, African American employees charged that their preclusion from promotional opportunities was based on their lack of a high school diploma and their performance on an intelligence test, both of which were unrelated to any aspect of the job. The Court ruled that employment selection instruments had to be job-related. The Court further ruled that employers could not use arbitrary practices that resulted in adverse impact even in the absence of intent.

In the 1975 Supreme Court decision in **Albemarle Paper Company v. Moody**, African American employees claimed that their collective-bargaining agreement held them locked into lower-paid job classifications. The Court ruled that selection instruments must be "predictive of or significantly correlated with important elements of work behavior which comprise or are relevant to the job or jobs which candidates are being evaluated." The Court found that the Defendant's validation study could not stand without a job analysis.

In the 1983 case of **Kirkland v. New York State Department of Correctional Services,** the court ruled that identifying critical tasks and skills as well as the competency required to fulfill the various aspects of the position was an essential part of job analyses. They concluded that the foundation of a content valid examination is the job analysis.

The Uniform Guidelines on Employee Selection Procedures

The *Uniform Guidelines* were developed by the Department of Labor, the Equal Employment Opportunity Commission, the Civil Service Commission, and the Department of Justice in 1978. Their purpose was to promote a uniform set of principles to help employers comply with Federal laws that prohibit discrimination. To that end, the *Uniform Guidelines* established procedures for the proper validation and use of selection procedures.

The *Uniform Guidelines* requirements for conducting job analyses include identifying the critical work behaviors or tasks and KSAPCs that comprise successful performance of the job. Only those tasks and KSAPCs deemed important should be used as the basis of selection.

The *Uniform Guidelines* provide a framework for the proper use of selection instruments. While they do not require that employers conduct validation studies in the absence of evidence of adverse impact, they do advocate the use of valid selection procedures.

Professional Standards

The Standards for Educational and Psychological Testing (1999), developed by the American Psychological Association, American Educational Research Association and the National Council on Measurement in Education, and the *Principles for the Validation and use of Personnel Selection Procedures (2003)*, developed by the Society of Industrial/Organizational Psychology, advocate the use of Job Analyses and

provide assessment professionals with guidelines for the evaluation, development and use of testing instruments.

Although not legislation or law, the *Standards* and *Principles* are referenced in a number of judicial decisions and have been identified by the courts as a source of technical information that are given deference in litigation concerning employment issues.

The Americans with Disabilities Act

The passage of the Americans with Disabilities Act (ADA) in 1990 further emphasized the importance of conducting job analyses. The ADA requires employers to evaluate candidates' capabilities to perform the essential functions of the job. The ADA considers the preparation of a written description (job analysis) of the essential functions before advertising or interviewing applicants as evidence of those essential functions.

Recent Awards for Discriminatory Employment Practices

The penalty for disregarding the validation requirements for selection instruments can be costly. Recent jury awards based on discriminatory employment practices include the following:

Employer	Award	Basis of discrimination
Shony's Restaurants	$132 million	Race
Seattle City Light	$1.4 million	Race
Vacation Sales Associates	$7.7 million	Age and gender
C.H. Robinson Worldwide	$15 million	Gender
Stanford University	$545,000	Gender (1 person)
Federal Express	$50 million	Race

CONTENT VALIDITY AND JOB ANALYSIS

In psychological and employee testing, validity is defined as the extent to which a test instrument measures what it purports to measure. There are multiple methods for establishing validity, but job analysis is primarily connected to the content validation approach.

Content Validity is the extent to which a measurement reflects the specific intended domain of content. In the case of employment, the content is the job, as exemplified by the job analysis. Content validity requires that the important tasks and the KSAPCs required to perform those tasks are identified and that they comprise a representative sample of the behaviors measured on the selection instruments used.

Objective:
Describe the step-by-step process for conducting a job analysis in compliance with the *Uniform Guidelines on Employee Selection Procedures* and State Personnel Board (SPB) requirements.

Chapter 2 – THE JOB ANALYSIS PROCESS

The specific procedures used for each phase of a job analysis may vary depending on the circumstances. The following steps are usually included in the job analysis process.

Step 1: Determine the scope of the job analysis in accordance with the department's requirements, goals, and resources. Factors affecting the procedures to be used in the job analysis may include:

- Number of incumbents working in the job/classification in question.
- Geographical locations of worksites for a specific job/classification.
- Number and criticality of vacant positions to be filled.
- Number of subject matter experts (SMEs) available to assist in the process.
- Deadlines to complete the processes of advertising, testing, and hiring for vacant positions.

Step 2: Determine the procedures to be used for the job analysis. The conclusions regarding the scope of the job analysis may affect the way of carrying out any of the required steps of the process.

Step 3: Draft preliminary Task and KSAPC statements by collecting information currently available regarding the position or job in question. This may include the position description, class specifications, recruitment information, past job analyses, current exams, and website information (e.g., O*Net, opm.gov, job-analysis.net). Refer to Appendix 1 for a list of resources for drafting task and KSAPC statements.

Step 4: Identify subject matter experts (SMEs) who will participate in the job analysis and function as job-content experts. SMEs used in the job analysis process should include top performing job incumbents as well as first-level supervisors or hiring managers. Additionally, previous employees or trainers may be appropriate. A good SME has direct knowledge of the job and knows what is required to succeed in the job.

Step 5: Conduct job audits, which are vital to the job analysis process and can be conducted in many different ways depending on the nature of the job. Field jobs, for example, lend themselves to job observations and can be conducted at the worksite. Valuable information can be obtained by simply observing the employees while performing their job duties. Job observations can be supplemented with job interviews using structured or open-ended questionnaires. For certain jobs such as jobs requiring working at a desk, job observations may not be suitable and it is best to ask SMEs questions about the job under consideration. These interviews can be conducted either face-to-face or via phone. A predetermined list of questions is helpful in achieving consistency of the information being solicited and in keeping SMEs focused.

Step 6: Edit previously drafted Task and KSAPC statements after all job-related information is identified and compiled, and make certain that there is at least one KSAPC for each task statement.

Step 7: Finalize Task and KSAPC statements and have a second SME-panel review them. Such a review increases the accuracy of the statements and adds validity to the job analysis process. The finalized lists of both task and KSAPC statements should be comprehensive and include all important aspects of the job.

Step 8: Organize the task and KSAPC statements into logical content area or domains. Examples of content areas may include oral and written communication, program management, problem solving, decision making, training, and supervision.

Step 9: Obtain SME ratings regarding task and KSAPC statements and compile the resulting lists of job tasks and KSAPCs into a Job Analysis Survey (JAS). The JAS is then administered to SMEs requiring them to individually rate the job tasks and KSAPCs. For each task, SMEs are asked to rate (1) how important the task is to successful job performance, and (2) how frequently the task is performed. In a similar vein, SMEs rate KSAPC statements in terms of (1) how important the KSAPC is to successful job performance, (2) whether the KSAPC is required at entry (i.e., on the first day of the job and prior to receiving any additional training), and (3) whether more possession of the KSAPC leads to better job performance.

After SME ratings are obtained, establish cut-off criteria to determine all tasks and KSAPCs necessary to successfully perform the job. In addition, identify the tasks and KSAPCs with ratings that did not meet the cut-off criteria. These statements cannot be used for the purpose of developing selection instruments, but may be useful for other purposes (e.g., training needs analyses).

Step 10: Link critical Task and KSAPC statements and instruct SMEs to come to a consensus on which individual KSAPCs can be linked to one or more tasks. This step helps to ensure that only KSAPCs that relate directly to performing the job will be used in the choice and implementation of selection instruments.

Step 11: Select employment selection method(s) by establishing which assessment methodology would be the most effective way to measure each retained KSAPC. It is possible to measure a KSAPC using a variety of methods. For example, a person's ability to review information and take appropriate action may be measured using a written test (i.e., a multiple choice test), a structured interview, or a job simulation activity, among other methods. Use an examination selection matrix to determine the best method to test for the essential KSAPCs.

Step 12: Create an examination outline determining content areas and using SME evaluations to decide what percentage of the selection instrument should be devoted to each content area.

Step 13: Write a job analysis report summarizing the specific methodology used to gather all relevant information about the job, how the job content was analyzed, and how appropriate selection modalities were identified to assess job candidates in terms of KSAPCs relevant to successful job performance. A complete checklist of the steps involved in the job analysis process can be found in Appendix 2.

The job analysis report is considered valid and current for five years from the month and year of project completion. Prior to examination development activities the job analysis data should be reviewed by SMEs and qualified selection analysts to ensure that the information is a current and accurate representation of the classification as utilized by the department. Some jobs may require job analysis updates with even greater frequency, for reasons that may include, but are not limited to, changes in technology, legislation, policies or procedures. If there is an indication that the job has changed in any matter, the job analysis should be updated.

Objective:

Outline the methods for collecting and analyzing job analysis data using relevant cutoff criteria.

Chapter 3 – COLLECTING JOB ANALYSIS INFORMATION

Archival Research

Archival research includes any relevant source of written information collected prior to meeting with subject matter experts. Archival research may include manuals, class specifications, duty statements, previous job analyses, as well as internet and other non-organizationally-specific job sources (i.e. Dictionary of Occupational Titles). The purpose of this data collection method is to familiarize yourself with the job and to draft as many preliminary questions as possible, prior to meeting with SMEs.

Job Audits

One of the more widely used methods of gathering job analysis data is through job audits. Job audits consist of face-to-face meetings or phone interviews with SMEs to discuss the important components of their jobs. SMEs selected to participate in job audits should have "thorough knowledge of the work behaviors, activities, and responsibilities of job incumbents, and the prerequisite [KSAPCs] for effective job performance. The SMEs should include persons who are fully knowledgeable about relevant organizational characteristics such as shift, location, type of equipment used, and so forth."

There is no prescribed number of SMEs to include in this phase of the job analysis process, though one should take special care to ensure a representative sample of incumbents in the job. A general rule of thumb developed for job audits follows:

Number of Incumbents	Job Audits
1 – 10	100%
11 – 20	50%
21 – 30	50%
31 – 50	20%
51 - 100	15%
101 and over	10%

Job audits are typically conducted at the SMEs' work location and consist of a pre-determined set of open-ended questions for consistency and to focus the discussions. Schedule the audits in advance and allow about one and one-half hours for each interview to ensure adequate time to thoroughly discuss the job. To ensure productive meetings, tell the selected SMEs how much time you require, the purpose of the audit, and provide a brief explanation of what you plan to accomplish during the appointment.

Prepare for the audit appointment by reviewing the relevant archival information pertaining to the job. This may include position descriptions, class specification, preliminary task and KSAPC statements etc. At the beginning of the audit, be prepared to spend a few minutes introducing yourself and answering questions regarding the job audit procedure. Maintain a professional demeanor, and be responsive to questions, as SMEs will often be curious about the reason for the audit as well as about their own participation in the study.

Decide the best way of taking notes before the audit. If typing is preferred, taking a laptop often facilitates the procedure and you can have all the questions loaded into the computer along with the SME's identification and contact information. Otherwise,

take a printed list of questions to the appointment to ensure all important questions are covered.

Begin by asking SMEs to identify the four to six broad areas of responsibility into which they would categorize the tasks they perform in their jobs. Ask subsequent SMEs if they agree with those areas of responsibility; once these content areas or domains are identified, begin to classify the tasks and KSAPCs accordingly.

For example, an office technician position can be logically divided into four content areas with each generating distinctive tasks and KSAPCs:

Example:

	Content Areas
1.	Correspondence
2.	Telephone inquiries
3.	Employee records
4.	Office supplies

Frame the audit questions in an open-ended format to allow SMEs to give complete answers, and ask follow-up questions on any responses that require clarification. Since you will be transcribing your notes into task and KSAPC statements, make certain that the SMEs' responses provide enough information to write complete statements.

Toward the end of the appointment give the SMEs an opportunity to consider their answers and to add anything not covered in the audit to that point.

It is recommended that you write the task and KSAPC statements as soon after the audit as possible. This will reduce the effects of memory decay, and ensure that job audit information is accurately converted into formal job analysis statements.

As the audits progress, evaluate your task and KSAPC lists for comprehensiveness. Identify areas that may require more information and be more direct in your

questioning to ensure breadth of coverage in each content area. There is no prescribed number of task and KSAPC statements that should result from job audits.

Once the job audits are completed, have SMEs review the list of tasks and KSAPCs to modify and refine statements and delete nonessential or duplicated statements.

Appendix 4 provides a complete outline for the job audit interview.

Committee-Based Data Collection

If there are few or no incumbents assigned to the job under study, or the goal is to develop a new classification, the organization may opt to convene a panel of SMEs to collect job information. These committees may edit and review job analysis statements for accuracy and comprehensiveness. See Appendix 5 for guidelines to follow for committee-based job analyses. If there are incumbents currently employed within the organization, they should be included in the Committee-Based Data Collection Process.

Work Observation Data Collection

You might also decide to observe SMEs for a given period of time in their day-to-day activities while making detailed notes of the observations. See Appendix 6 for a Work Observation Form and guidelines for collecting information through observing incumbents.

Job Observations are most appropriate for jobs that consist of the following activities:

- Field work
- Manual labor
- Interpersonal communication

The table below outlines the number of observations that should be performed based on the number of incumbents:

Number of Incumbents	Percent of Observations
1 – 10	50%
11 – 20	33%
21 – 30	33%
31 – 50	25%
51 - 100	15%
101 - 200	10%
200 & over	10%

Objective:
Write task and KSAPC statements for a specific job position based on information gathered through an appropriate data collection technique.

Chapter 4 – DEVELOPING TASK AND KSAPC STATEMENTS

TASK STATEMENTS

A task statement is a discrete sentence containing one action verb that concisely describes a single observable activity performed by an incumbent. Task statements should be confined to addressing important aspects of the job; avoid including statements that could be considered trivial.

To develop a list of tasks, you will want to collect data from a variety of sources, including archival information (e.g., job descriptions, duty statements etc.), job audits observations, workshops (e.g., brainstorming sessions) and so forth.

Each statement should be a clear recitation of a work activity, and should contain enough information to address the following five elements:

1. Action verb
2. Object of the verb
3. Expected output (purpose) or work product
4. Materials, tools, procedures, or equipment used
5. Under what direction or guidelines

Example Task Statements:

Task Components

1. Action verb
2. Object of the verb
3. Expected output (purpose) or work product
4. Materials, tools, procedures, or equipment used
5. Under what direction or guidelines

I. Transcribe (1) minutes of board meetings (2) to maintain Record of Minutes (3) using transcription equipment (4) at the request of the Manager. (5)

II. Direct (1) staff in emergency evacuation drills (2) to clear premises quickly (3) using departmental disaster procedures (4) while meeting Homeland Security requirements. (5)

III. Interview (1) subject matter experts (2) to compile a list of job tasks performed (3) by incumbents using pre-selected interview questions (4) in compliance with legal and professional job analysis standards. (5)

Task statements should be written at the same level of specificity. Avoid being overly broad or overly specific.

What is insufficient information in a task statement. . .

Poor	Answer office correspondence.
Fair	Write replies to letters asking for job information using the computer.
Better	Compose written responses to inquiries regarding job openings using word processing software to provide application information within departmental eligibility guidelines.

Poor	Inform staff of benefit changes.
Fair	Give employees information on benefit changes through oral presentations.
Better	Provide employees with information regarding changes in benefits options using PowerPoint presentations in accordance with management instructions.

. . . and what is too much?

Poor	Prepare travel form #625(a) in triplicate giving airline flight numbers and hotel contact information to obtain travel advances and distribute one copy each to supervisor, manager, and file twelve days prior to departure date using #2 lead pencil at the request of staff.
Better	Complete travel forms in a timely manner to obtain travel advances following departmental guidelines at the request of staff.

Poor	Add, subtract, multiply, and divide figures to compare and contrast current and previous year's monthly departmental expenses with a hand-held digital calculator using only data gathered from forms submitted by unit staff by deadline dates posted on unit calendar when asked by unit supervisor.
Better	Compute monthly departmental expenses to compare to previous year's expenses and identify cost increases using spreadsheet software in accordance with generally accepted accounting principles.

Essentially, a task is a clear verbal description of the work performed by a job incumbent. The goal for writing tasks is to clearly describe all essential job functions. Individuals reading the job analysis for the first time should have a clear understanding of the nature and level of complexity of the job. Keeping that in mind, consider the following.

Tasks should:

- Start with an action verb.
- Describe work done by one person only.
- Give mention to an identifiable product or outcome.
- Be specific enough to derive associated KSAPCs

KSAPC STATEMENTS

After identifying the essential tasks for a job, the analyst needs to identify and develop KSAPC statements that address the information or inherent capabilities required to successfully perform those tasks.

KSAPC statements address a single related knowledge, skill, ability, or personal characteristic. A single task statement may generate several KSAPCs, and each KSAPC statement may apply to more than one task. Every task should have a minimum of one KSAPC.

KSAPC statements are not merely task statements with “Knowledge of,” “Skill to,” or “Ability to” tacked onto the front, but rather describe a specific characteristic. They are operationally defined, meaning they provide enough information to be consistently understood by any reader, with minimal ambiguity or confusion.

Operationally defined KSAPCs should include enough information to address the following three elements:

1. The knowledge, skill, ability, or personal characteristic required
2. Degree of proficiency or level used
3. How/why the KSAPC is used or under what circumstances (context)

Example KSAPC Statements:

1. The knowledge, skill, ability, or personal characteristic required
2. Degree of proficiency or level used
3. How/why the KSAPC is used or under what circumstances (context)

Before diving into the specific definitions of knowledge, skills, abilities, and personal characteristics respectively, consider the following statements.

I. Knowledge of multivariate statistics (factor analysis, discriminant analysis, logistic regression) to identify population characteristics and make relevant predictions.
(1) (2) (3)

II. Ability to interpret and explain policies, procedures, and regulations to non-technical individuals (e.g. departmental employees, the public, vendors, other State agencies).
(1, 2) (3)

III. Skill to mince various food products such as garlic, onion and ginger using standard kitchen cutlery to assist in food preparation.
(1, 2) (3)

Knowledge

Knowledge is defined as a body of information applied directly to the performance of a function. The required information can be comprised of facts or procedures that make performance of a task possible.

Example Knowledge Statements:

1. Knowledge of basic spreadsheet software functions to create formulas and automate calculations.

2. Knowledge of the basic laws contained in the Department of Motor Vehicle's Driver Handbook to maintain a driver's license free of moving violations.

3. Knowledge of cardiopulmonary resuscitation (CPR) procedures to assist victims of disasters.

Skills

A skill is defined as a present observable competence to perform a learned psychomotor act. Skill statements describe the capacity to perform manual tasks with precision. They indicate a level of competence in performing a task that can be observed and measured.

Example Skill Statements:

1. Skill to drive a van equipped with a stick shift transmission to deliver mail to the Post Office.
2. Skill to type a minimum of 45 words per minute, making fewer than two typographical errors to transcribe diction or information from various other sources.

Abilities

An ability is defined as a present competence to perform an observable behavior or a behavior that results in an observable product. Ability statements describe the capacity to perform activities or behaviors at the present time that are similar to those required on the job.

Example Ability Statements*:*

1. Ability to work outdoors in temperatures that may exceed 100 degrees.
2. Ability to organize work assignments to ensure timely completion of projects.
3. Ability to assign staff daily work assignments to ensure uninterrupted work flow.

Example KSAPC Statements:

- **Knowledge of** the Americans with Disabilities Act regulations on reasonable accommodation relevant to modifying office space.
- **Knowledge of** generally accepted accounting principles to conduct complex auditing procedures.
- **Ability to** access information on the Internet to advance technical research projects.
- **Ability to** lift and move office furniture weighing up to 50 pounds during cleaning and maintenance of premises.
- **Ability to** physically restrain individuals being taken into custody to prevent their escape.
- **Skill to** accurately cut small incisions on patients to perform basic surgeries.
- **Skill to** fire handguns at the intended target without inadvertently hitting surrounding area or objects.

Personal Characteristics (Willingness)

In the process of conducting job audits you may learn aspects about the position that are relevant to the requirements and/or conditions of the position. This other information may include:

- Unique working conditions
- Unusual job locations
- Physical demands
- Personality traits

This information can be categorized as "Personal Characteristics" or the "PC" in KSAPCs and may be used in your recruitment material to gauge the willingness of applicants to accept the conditions of the job.

Example Personal Characteristics Statements:

- Willingness to work nights, weekends, and holidays.
- Willingness to travel and work away from home for periods up to two months.
- Willingness to work outdoors in all weather conditions.
- Stress tolerant: Calm under pressure; retains composure and ability to function in the face of anxiety-provoking circumstances.
- Conscientious: Takes responsibility for completing work in a timely manner with an appropriate focus on details.
- Honest: Refrains from making statements or taking actions that are knowingly false, deceptive, or fraudulent.

KSAPCs should:

- Address only one worker trait or human characteristic
- Be operationally defined
- Be related to one or more task or job dimension
- Be observable
- Be easy to read and understand

JOB ANALYSIS FINALIZATION MEETING

After gathering relevant job information from various sources (archival research, job audits, job observations) and forming this information into proper task and KSAPC statements, it is now time to have these statements validated or confirmed by SMEs at the Job Analysis Finalization Meeting. The Job Analysis Finalization Meeting is an essential step in the job analysis process, and must not be skipped under any circumstances.

It is important to have a representative sample of SMEs attend the Job Analysis Finalization Meeting, based on:

- Gender
- Race
- Age
- Length of time at job
- Work location
- Division or work unit
- Work shift

Depending on the size of the classification, it is generally recommended to have anywhere from 8 to 12 SMEs attend the Job Analysis Finalization Meeting. With smaller classifications, even fewer SMEs may be appropriate.

The object of the Job Analysis Finalization Meeting is to have SMEs review and edit your lists of tasks and KSAs to ensure that they are accurate, thorough, and well-worded. Each task and KSAPC statement is to be reviewed on an individual basis. It is the selection analyst's job to elicit feedback from the attending SMEs to ensure that each task and KSAPC statement is accurate and well-crafted. SMEs should review the lists of tasks and KSAPCs as a group in order to facilitate discussion and achieve consensus. The Job Analysis Finalization Meeting is also a chance to eliminate any statements that do not apply to the job, and to add any statements that may have been overlooked in the earlier stages of the job analysis process.

Objective:

Outline the methods for collecting data on task and KSAPC statements.

Chapter 5 – GATHERING JOB ANALYSIS RATINGS

There are two methods for gathering the job analysis ratings. The first method is through the development and administration of the Job Analysis Survey. The second is through Committee Based Consensus.

JOB ANALYSIS SURVEY (JAS)

Task and KSAPC statements must be evaluated by SMEs to determine their relative importance to performance on the job. Only those tasks and KSAPCs considered essential should be used as a basis of selection. Once the task and KSAPC statements have been reviewed and finalized, and after ensuring there is at least one KSAPC for each task, enter the statements onto a survey for distribution to SMEs. This table provides general guidelines for selecting SMEs for job analysis research.

Number of Incumbents	Job Analysis Survey
1 – 10	100%
11 – 20	85%
21 - 30	80%
31 – 50	75%
51 - 200	50%
201 & over	25% - 50% (with a maximum of 400)

Please note, this table only provides statistical guidelines. Other factors such as shifts, functional work areas, and stratified sampling issues should also be considered, and may increase the number of respondents required for the survey.

If the JAS is not sent to every incumbent, be sure to send the survey to a representative sample. Information to consider when assuring that your sample is representative of the overall job includes:

Gender
Age
Race
Length of time at job
Different divisions or work units
Shift work, i.e., morning, swing, evening (if applicable)
Work Location (e.g., field office, headquarters)

A letter of explanation should accompany each survey to inform SMEs about the job analysis, their role in the process, and the importance of completing and returning the surveys. The letter should provide contact information in the event that SMEs have questions, clear instructions for the return of completed surveys, and return postage-paid envelopes if distributing paper copies of the survey.

Select a deadline date that allows ample time for delivery and for SME completion. Include the deadline date in a prominent place on both the letter and the first page of the survey.

Begin the survey with a page requesting demographic information from the respondents. This information should include job classification, length of time spent in that classification and other qualifying information that identifies the respondent as a SME. Information on gender, race and age is also collected but they are optional and a statement should be included that individuals' responses are confidential and are used only to track the demographics of respondents.

Divide the tasks and the KSAPCs into separate lists on the survey. If content areas have been identified, the tasks and KSAPCs may be listed accordingly to help focus the SMEs' attention onto related groups of statements. Task and KSAPC lists are separated because SMEs are asked to rate them using different sets of rating scales.

Track the number of returned survey. One week to ten days prior to the deadline date, it may be necessary to send a reminder (e.g., post cards, an email message) reiterating the importance of the job analysis, requesting their return by the given deadline.

RATING TASK STATEMENTS

SMEs are asked to rate each task statement according to the following two scales:

1. Importance
2. Frequency

There are many different options in how to evaluate the importance and frequency of job tasks. The following scales are utilized and recommended by the California Department of Human Resources' (CalHR) Test Validation and Construction Program. The scales provide clear anchors describing every potential rating that a SME could provide for the job tasks.

Importance

The Importance scale asks SMEs to evaluate the tasks according to their criticality to the job using a five-point scale.

Importance
How important is this task to successful job performance?
(0) Does Not Apply This task is **not an essential function** of the job, or is not performed on the job, or is trivial to successful job performance. An inability to perform this task has **no effect on job performance**. **(1) Moderately Important** Satisfactory performance of this task is moderately important to successful job performance. An inability to perform this task **will affect** job performance however **it will not lead to failure on the job.** **(2) Important** Satisfactory performance of this task is important to successful job performance. An inability to perform this task **will have a noticeable effect** on job performance **resulting in an inability to perform some aspects of the job.** **(3) Very Important** Satisfactory performance of this task is very important to successful job performance. An inability to perform this task **is likely to result in failure** on the job and **may result in negative consequences on the department, the public and other constituencies.** **(4) Critical** Satisfactory performance of this essential task is critical to successful job performance. An inability to perform this task **will lead to significant failure** on the job and **will seriously affect the department, the public and other constituencies.**

Frequency

The Frequency scale asks SMEs to evaluate the frequency of performing each task using a five-point scale.

Frequency
How often is this job task performed?
(0) Does Not Apply This task is not an essential function of the job, or this task is not performed on the job. **(1) Less than Once a Month** This task is performed at least one time a year, but less than once a month (Includes quarterly). **(2) Monthly** This task is typically performed at least one time a month but less than once in a typical week. **(3) Weekly** This task is typically performed once to several times each week but less than once a day. **(4) Daily** This task is performed one or more times a day.

RATING KSAPC STATEMENTS

The KSAPC statements are evaluated according to three scales.

1. Importance
2. Expected at Entry
3. Relationship to Job Performance

There are many different options in how to evaluate the Importance, Expected at Entry, and Relationship to Job Performance of KSAPC. The following scales are utilized and recommended by the CalHR's Test Validation and Construction Program. The scales provide clear anchors describing every potential rating that a SME could provide for the KSAPCs.

Importance

The Importance scale asks SMEs to evaluate the KSAPCs according to their criticality to the job using a five-point scale.

Importance
How important is this task to successful job performance?
(0) Does Not Apply This KSAPC is **not required** in order to perform the job, or is trivial to successful job performance. A lack of this KSAPC has **no effect on job performance**. **(1) Moderately Important** This KSAPC is moderately important to successful job performance. A lack of this KSAPC **will affect** job performance however **it will not lead to failure on the job.** **(2) Important** This KSAPC is very important to successful job performance. A lack of this KSAPC **will have a noticeable effect** on job performance **resulting in an inability to perform some essential aspects of the job.** **(3) Very Important** This KSAPC is very important to successful job performance. A lack of this KSAPC **is likely to result in failure** on the job and **may result in negative consequences on the department, the public and other constituencies.** **(4) Critical** This KSAPC is critical to successful job performance. A lack of this KSAPC **will lead to significant failure** on the job and **will seriously affect the department, the public and other constituencies.**

Expected at Entry

The Expected at Entry rating scale asks for a determination of the amount of the KSAPC that is required at the time of hire versus whether it can be learned on the job or in training.

Expected at Entry
How much of this KSAPC is a person expected to have at entry?
(0) Not Needed This KSAPC is not needed on the first day of the job. It is either learned on the job or through training, or is not an essential component of the job. **(1) Needed** Possession of this KSAPC is needed and expected on the first day of the job. Possession of **MOST** of this KSAPC is needed and expected upon entry to the job. **(2) Essential** Possession of this KSAPC at entry to the job is essential. Possession of **ALL** of this KSAPC is expected upon entry to the job.

Relationship to Job Performance

The Relationship to Job Performance scale determines how strongly the possession of the KSAPC in question is related to actual job performance. That is, whether or not more of the KSAPC leads to better performance.

Relationship to Job Performance
Does possession of more of this KSAPC beyond minimum requirements lead to a better job performance?
(0) No This KSAPC is not required to perform the job, or possession of more of this KSAPC (beyond the minimal level required) does not result in better job performance. **(1) YES** Possession of more of this KSAPC (beyond the minimal level required) **does** result in better job performance.

See Appendix 7 for a sample printed survey format.

COMMITTEE BASED CONSENSUS

When the number of incumbents and SMEs within a job under study is sufficiently small (<20), ratings can be provided through consensus. Studies comparing committee-based and field job analyses have found that there is a high degree of agreement in terms of task and KSAPC ratings between the two groups. Steps for gathering consensus ratings are provided below.

1. Select and meet with a panel of qualified SMEs who represent all levels of the department. When incumbents exist within the organization, refer to the guidelines provided in chapter 5 to determine the number of SMEs to include in the committee. When there are no incumbents, use managers and other subject matter experts who have a clear expectation of the requirements of the job in questions.
2. Instruct the panel to identify the standards of performance they would expect from an ideal employee.
3. Ask the panel to rate the tasks and KSAPCs for criticality, frequency, expected at entry etc. In this phase, they will use the same rating scales as in the JAS, however, they are tasked with collectively arriving at one rating - agreed upon by all committee members.

Objective:

Outline the methods for analyzing job analysis data using relevant cut-off criteria.

Chapter 6 – ANALYZING JOB ANALYSIS SURVEY DATA

After Job Analysis Survey (JAS) data have been collected from SMEs, the next step is to analyze the data. The data from the JAS is analyzed by evaluating the SMEs task ratings, using the scales:

- Importance
- Frequency

And KSAPC ratings, using the scales:

- Importance
- Expected at Entry
- Relationship to job performance

Ensure that survey data is current and accurate prior to analyzing final results. For each of the scales, all of the SMEs ratings are combined and the mean (average) is calculated. The *Uniform Guidelines* state that tasks retained in a job analysis should only represent important or critical functions of the job. The *Uniform Guidelines* also state that KSAPCs should be important or critical to the job and be required at entry to the position. Before the data is analyzed, it is important to establish appropriate cut-off scores for every relevant scale:

Cut-off Scores for Task

Importance
How important is this task to successful job performance?
(0) Not important/trivial
(1) Moderately important
(2) Important
(3) Very important
(4) Critical

(Note: the above scales are simplified. See Chapter 5 for full scales with descriptions)

A generally accepted procedure for establishing a cut-off is to use the scales midpoint, which should also correspond to a rating of “important”. As can be seen in the table below, a rating of “2” corresponds to “important” for successful job performance. Any task mean lower than the midpoint is flagged as not appropriate for selection purposes.

Note: If a task statement receives a “Frequency” rating of 0 (Does not apply) it should be eliminated from the final job analysis.

The Uniform Guidelines state that those work behaviors selected for measurement should be important or critical and constitute most of the job. So only those tasks that have the highest IMPORTANCE and are performed most FREQUENTLY are appropriate for use in selection procedures. There are, however, circumstances where this general rule does not apply. For example, if successful performance of a task is “critical” and failure to perform the task could result in personal injury or injury of others—even if the task is only rarely performed, it is appropriate for inclusion in the assessment procedure. An example could be a peace officer’s ability to make effective decisions regarding use of deadly force. Even though it may be rarely performed, when it must be performed it must be done correctly or serious harm may result.

Example Importance Scale Ratings for Task

SME ID #	Task #1	Task #2	Task #3	Task #4
001	2	3	4	3
002	1	4	4	3
003	2	2	4	2
004	1	3	4	1
Mean	**1.5**	**3**	**4**	**2.25**

In the previous example, using a cut-off score of 2 (which is the midpoint of the Importance scale, corresponding to “important”), Task #1 would be removed from consideration for selection because it did not reach the required cut-off score. That is, SMEs did not collectively identify the task as important for successful performance of the job.

Cut-off Scores for KSAPC

Importance
How important is this KSAPC to successful job performance?
(0) Not important/trivial
(1) Moderately important
(2) Important
(3) Very important
(4) Critical

Expected at Entry
How much of this KSAPC is a person expected to have at entry?
(0) Not needed
(1) Needed
(2) Essential

(Note: the above scales are simplified. See Chapter 5 for full scales with descriptions)

As with task statements, a generally accepted procedure is to use the midpoint of the scale as the established cut-off score. Any KSAPC not meeting the established cut-off is flagged as not appropriate for selection purposes.

As can be seen in the above tables, a rating of “2” corresponds to “important” for successful job performance, and a rating of “1” corresponds to “needed” at entry.

Note: While Relationship to job performance is considered in the exam development phase, there is no formal cut-off score for the scale. It is instead used to determine the appropriateness of ranking candidates based on their results in the examination

process. For example, when a relationship to performance rating exceeds ".5", the midpoint on the scale, it can be assumed that possessing more of that KSAPC would relate to better job performance and supports the use of ranking applicants who obtain a higher score on a selection instrument then those who score lower.

Example Importance Scale Ratings for KSAPC

SME ID #	KSAPC #1	KSAPC #2	KSAPC #3	KSAPC #4
001	4	1	3	4
002	4	0	3	3
003	3	1	2	2
004	3	0	3	4
Mean	**3.5**	**0.5**	**2.75**	**3.25**

Example Expected at Entry Scale Ratings

SME ID #	KSAPC #1	KSAPC #2	KSAPC #3	KSAPC #4
001	1	2	0	2
002	1	2	0	1
003	2	2	1	2
004	1	1	0	1
Mean	**1.25**	**1.75**	**0.25**	**1.5**

In the above example, information from both rating scales are used to determine which KSAPCs are appropriate for selection consideration. In the Importance rating scale, a cut-off score of 2 (which is the midpoint of the Importance scale, corresponding to "important") was used and as a result KSAPC #2 would be removed. For the Expected at Entry scale, a cut-off score of 1 (which is the midpoint of the Expected at Entry scale, corresponding to "needed") was used and as a result KSAPC #3 would also be removed for consideration for selection, even though it met the importance cut-off criteria.

It is worth noting at this point that just because a task or KSAPC statement is removed from the analysis, it doesn't necessarily imply they are unimportant to individual job incumbents or to specialized job assignments. Rather it implies that they do not generalize well enough to be considered as representative of the job position overall. Typically, there are core tasks and KSAPCs that all incumbents must possess, and these are most appropriate for representing the worker requirements in the job. Also tasks and KSAPCs that have been removed can still provide valuable information in other areas such as training and the development of performance evaluation dimensions.

After all of the tasks and KSAPCs have been analyzed the remaining tasks and KSAPCs are placed into a finalized list that is ready to be inserted into the Job Analysis Report.

Objective:

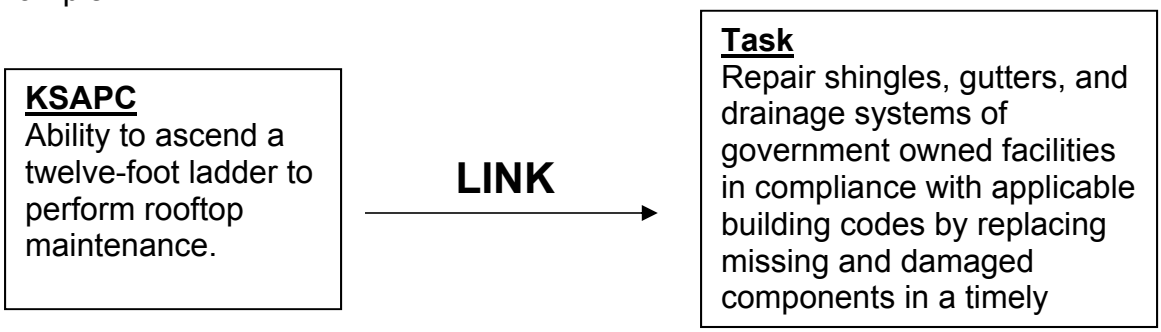
Outline the methods for linking KSAPC statements to their relevant task statements.

Chapter 7 – LINKING TASK AND KSAPC STATEMENTS

Linking is the process of identifying the job tasks that utilize specific KSAPCs in the job analysis. As stated in the *Uniform Guidelines,* the relationship between each KSAPC and job task, as well as the method used to determine this relationship, should be provided in the final Job Analysis Report. Linking KSAPCs to specific job tasks demonstrate that these KSAPCs are in fact needed and utilized in the completion of critical and important functions of the job. If a KSAPC does not link back to a specific task it is dropped from the final job analysis.

During the linking process SMEs are presented with the edited list of tasks and KSAPCs. For each KSAPC, SMEs are instructed to read through every task and identify those which require or utilize the specific KSAPC. With this process, one KSAPC may be linked to several tasks.

Example:



SMEs can complete this process individually or in a group setting. In an individual setting, each SME completes the entire linking process using their knowledge of the job. After the SMEs have finished the linking process, an analyst reviews the linkage data and looks for agreement among them. Agreement is generally found if two or more SMEs endorse the linkage. If a group setting is used, the SMEs agree upon and reach a consensus on which KSAPCs link to which tasks.

Once the linkage is complete, review the list for “orphan” statements; i.e., task statements without KSAPCs and vice versa. SMEs should review all orphaned statements carefully since KSAPCs that do not link should be deleted.

Linked KSAPCs become the basis of the examination plan and may be used to select testing methods. These KSAPCs can also be used for many other employment decisions outlined in Chapter 1.

Objective:
Choose a **selection instrument** based on results from a job analysis.

Chapter 8 – DEVELOPING AN EXAMINATION PLAN

Job analysis forms the basis for choosing and developing an appropriate selection plan. There are many selection methods that can be used to test job applicants' qualifications to successfully perform on the job. The goal of selection is to determine whether an applicant possesses the KSAPCs required for the job in question. The content of the selection method(s) should therefore reflect the content of the job (i.e., KSAPCs) to provide supporting evidence that the selection instrument(s) used is/are valid (i.e., job-related).

Weighting

Once the job analysis has been completed, the question may arise as to how to decide what KSAPCs should be assessed, AND how much weight and consideration should be given to each KSAPC. There is no specific generally accepted method for developing a weighting system – only that a logical and rational approach be used and reported in the final job analysis or validation report. The California State Personnel Board utilizes the SME input method which is describe below.

SME Input Method

The SME Input method is a logical approach to determine exam component weightings which involves few mathematical computations, if any. The logic behind the method is that qualified subject matter experts possess sufficient knowledge of the job to make valid inferences about the appropriateness of relative weightings of each exam component within a selection plan. The steps for gathering SME input may also vary, but a general listing is provided on the following page.

1. Gather a panel of SMEs and managers that are highly familiar with the requirements of the job and the goals of the organization.

2. Review the job analysis data – highlight the importance ratings of the KSAPCs and the relative number of linkages to important and critical tasks. It may be useful to categorize the KSAPCs into groupings so that the data are more easily read and interpreted.
3. Discuss exam options – At this point you may want to provide recommendations for weighting components, based on the considerations listed in step 2. That is, KSAPC groupings with generally high ratings, which link to several important and frequently performed tasks in comparison to others, are more appropriate for selection.
4. The final decision for exam component weighting is usually left to management – and gathering input and consensus across qualified subject matter experts will ensure that a more appropriate weighting schema is selected.

Choosing a Selection Plan

The remainder of this chapter is intended to provide a brief overview of selection methods frequently used in employment testing. More detailed information about each selection instrument will be covered in subsequent classes of the Selection Analyst Training Program.

Written Examinations

Written examinations refer to a general group of assessment tools in which applicants read questions and respond in writing, or by making choices on-line or on pre-determined forms. The most common formats are multiple-choice, short answer or essay questions, true / false, checklist / matching and written performance.

Knowledge is most typically assessed in a written test format. Written tests may also be used to assess skills such as analysis, problem solving, and written communication. Written tests may be efficient where they can be administered to a larger number of applicants early in the employment process. Certain test formats require less time for applicants to complete and/or panel members to score. Some of these test formats may also be delivered on-line and scored automatically.

Structured Interview

Structured interviews assess an applicant's ability to successfully perform in a given job on the basis of applicants' oral responses to oral inquiries. Interview panel members ask the same series of questions of applicants and apply pre-determined assessment criteria consistently across all applicant interviews. This makes it easier for the interviewers to evaluate and compare candidate responses. Typically structured interview questions cover job knowledge, experience/background, hypothetical job-related situations or scenarios, and job-related past behaviors. Some interviews may include exercises, such as:

- Pre-exposed questions in which applicants are given identical questions just prior to the interview to allow them to prepare their responses.
- Pre-interview exercises in which applicants are given an assignment prior to the interview (e.g., 30 min.) to prepare and which are then discussed in the actual interview.
- Oral presentations
- Role Play Exercises

Performance-Simulation Test/Work Sample Test

Performance-Simulation or Work Sample tests are based on the premise that the best predictor of future behavior is observed behavior under similar situations. These tests require the examinee to perform tasks that are similar to those that are performed on the job. Examples may include:

- In-basket exercises that present a stack of materials that entail prioritization or other actions by the applicants.

- Oral presentations that assess an applicant's communication skills where they are asked to speak for a set length of time on a selected topic.
- Writing exercises that test an applicant's ability to prepare and present their thoughts in writing using correct spelling, grammar, and punctuation.

Training and Experience Evaluations

A Training and Experience Evaluation(T&E) is a structured, unassembled exam used to evaluate an applicant's job-related training, experience, accomplishments (e.g., educational degrees, certificates, licenses, specific courses taken), and relevant KSAPCs. This type of selection instrument is based on the assumption that the best predictor of future performance is past performance. The questions are not geared towards assessing physical abilities, psychomotor skills, reasoning, numerical ability, reading comprehension, oral communication, personality characteristics or cognitive abilities (i.e., intelligence), but how much experience in a particular job an applicant has accrued over time that could be applied to the job in question. T&Es can be used to select applicants for managerial, technical, professional, and supervisory jobs as well as skilled trades above entry-level.

In terms of choosing the appropriate selection method, the Examination Selection Matrix can assist in identifying the testing method(s) most appropriate to asses each of the KSAPCs on the examination plan. The examination matrix consists of various columns indicating KSAPCs relevant to the job, Importance ratings, and a variety of selection methods. An example of such a matrix is shown on the following page.

In conclusion, selection methods are designed to identify competent candidates and accurately match them to the job and/or organization. The use of proper selection instruments will increase the probability that the right person will be chosen to fill a particular position or job.

EXAMPLE:

Position _____

Department _____

Examination Selection Matrix

KEY
X = Possible Test Modality
XX = Recommended Test Modality

KSAPC #	Importance Rating	**Critical KSAPCs** Total number of KSAPCs: ____	**Training and Experience Evaluation**	**Written Test**	**Structured Interview**	**Work Sample/ Performance Test**
1	2.59	Ability to effectively communicate in writing to management, other government agencies, and the public about departmental projects and safety issues.	**X**	**X**		**XX**
2	2.59	Ability to write reports using appropriate English grammar and spelling.	**X**	**X**		**XX**
3	3.02	Knowledge of appropriate English grammar and spelling in order to write and edit documents.	**X**	**XX**		**X**
4	3.06	Ability to read and understand departmental guidelines and policies to hold staff accountable for their behavior when necessary.		**XX**		**X**

REFERENCES

Society for Industrial and Organization Psychology (SIOP) (2003). *Principles for the Validation and Use of Personnel Selection Procedures*. (Fourth edition) College Park, MD: Author.

Uniform Guidelines on Employee Selection Procedures. (1978). *Federal Register*, 43, 38290-38315.

Harvey, R.J. (1991) Job Analysis. In M.D. Dunnette & L.M. Hough (Eds), *Handbook of Industrial and Organizational Psychology (2nd ed., Vol. 2, 71-163). Palo Alto, CA: Consulting Psychologists Press.*

Gatewood R.D., & Field H.S. (2001) *Human Resources Selection (5th ed.).* Orlando, Fl: Harcourt, Inc.

Exercise # 1: Legal & Court Case Exercise

Place the letter In Column A with the correct corresponding paragraph in Column B.

Column A	Column B
A. Principles for the Validation and use of Personnel Selection Procedures (2003)	The Court ruled that the foundation of a content valid examination is the job analysis. _____
B. Uniform Guidelines on Employee Selection (1978)	Company conducted an insufficient validation study and no Job Analysis. _____
C. Griggs v. Duke Power (1971)	Several Government Agencies provided a set of standards for validating selection measures _____
D. Standards for Educational and Psychological Testing (1999)	Developed by the several professional agencies to help practitioners develop valid and legally defensible selection measures. _____
E. Kirkland v. New York State Department of Correctional Services (1983)	Developed by the Society of Industrial Organizational Psychology to assist in validating selection measures _____
F. Albemarle Paper Co. v. Moody (1975)	Land mark, first case that stated that adverse impact was illegal. _____
G. Americans with Disabilities Act (ADA)	States that reasonable accommodation must be provided for individuals who require it. _____

Exercise #2: Small Group Exercise – Job Analysis Preparation

For each of these five situations, determine the important issues that need to be considered prior to conducting a Job Analysis. Be prepared to site reasons to support your decisions.

1. **Associate Black Smith**

   0 incumbents currently in class

   Job class has not been used since 1943, very little previous research exists

   Purpose of study: Selection, need to bring job classification back into use, anticipate desire for a performance test

2. **Clinical Nurse Assistant**

   137 incumbents currently in class

   15 supervisors

   5 work locations (Sacramento, San Diego, Los Angeles, San Francisco and Lodi) 3 work shifts (Morning, Swing and Night)

   Purpose of study: Selection, Previous Job Analysis conducted in 2000

3. **Lion Tamer**

   9 incumbents currently in class, 3 incumbents are on medical leave

   1 supervisor

   2 positions available

   Purpose of study: Selection

4. **Highway Maintenance Worker**

224 incumbents currently in class

32 supervisors

52 open positions

5 work locations (Sacramento, San Diego, Los Angeles, San Francisco and Galt) *Purpose of study*: Selection and Classification. Anticipate Manager desire for a written exam. Also interested in learning if incumbents should be allocated to several smaller classes.

5. **Police/Fire Dispatcher**

14 incumbents currently in class

1 supervisor

Employees work shift schedules

Supervisor has expressed concerns that an on site analyst may interrupt the work flow and increase the chance of errors

Purpose of study: Develop on-the-job training program

SME Requirement Table

Number of Incumbents	Job Audits	Percent of Observations	Committee Interview
1 – 10	100%	50%	1 session
11 – 20	50%	33%	1-2 sessions
21 – 30	50%	33%	1-2 sessions
31 – 50	20%	25%	2 sessions
51 - 100	15%	15%	2 sessions
101 - 200	10%	10%	2-3 sessions
201 and over	10%	10%	3 sessions

Exercise #3: Writing Good Task Statements

Review the following tasks statements. Identify the major components included in each task, and revise the statement as necessary to include all five (5) components.

1. Respond to public media inquiries.

2. Supervise staff by delegating and monitoring current project assignments to ensure appropriate workloads.

3. Prepare claims (i.e. payment requests) for the California Victims Compensation and Government Claims Board to resolve payment issues in accordance with the State Administrative Manual.

4. Monitor contracts by auditing invoices and maintaining contract tracking log to ensure contract work is performed within time period and monetary limits of contract.

5. Record meeting minutes at the direction of Division Manager.

6. Write technical reports, project summaries or complex documents using various software applications at the request of management.

7. Address disagreements and conflicts involving staff members and vendors or other stakeholders to achieve a harmonious, productive workplace.

Exercise #4
Write Task Statements

Consider some of the critical aspects of the job from Exercise #2, and write three task statements describing some of the important tasks you perform. Identify the elements of your statements by numbering them as in the example provided below. (See Appendix 3 for a list of active verbs.)

#1 One descriptive action verb
#2 The object of that verb
#3 The rationale or expected output
#4 The materials, tools, procedure, or equipment
#5 Under what direction or guidelines

Example:

#1	**#2**	**#3**	**#4**	**#5**
Compose	task statements	to describe essential job elements	using data from job audits	in accordance with SPB

guidelines for conducting job analysis.

1. _____

_____

2. _____

_____

3. _____

_____

Exercise # 5: Writing Good KSAPC Statements

Review the following knowledge, skill, ability and personal characteristic (KSAPC) statements. Identify the major components included in each KSAPC, and revise the statement as necessary to include all three (3) components.

1. Knowledge of the merit system.

2. Ability to establish and maintain cooperative relationships with departmental employees, contractors, the public, and other stakeholders.

3. Knowledge of statistics (e.g. averages, frequency, variation) for analyzing the impact and effectiveness of programs, policies, and/or procedures.

4. General knowledge and understanding of scientific research principles and investigatory methods as applied to waste and compost management.

5. Skill to transcribe.

6. Skill to cut.

Exercise #6
Write KSAPC Statements

Refer to the task statements you wrote in Exercise #4, and write two KSAPC statements for each of your task statements. The KSAPC should provide insight into what it takes to perform those important aspects of your job. Remember to include:

- An important knowledge, skill, or ability
- The degree of proficiency or the level of KSAPC required to perform the task
- How/why the KSAPC is used or under what circumstances

Examples:

- Knowledge of basic personnel policies regarding leaves of absence to respond to staff inquiries
- Ability to edit technical articles to condense information while retaining all relevant information
- Ability to remain calm when representing the department at hostile public meetings

Task #1

Task #2

Task #3

Exercise # 7: Review

A. Number the following Steps in the Job Analysis process in the correct order.

The Job Analysis Process	#
Conduct job audits.	
Draft preliminary Task and KSAPC statements.	
Determine the procedures.	
Obtain SME ratings regarding Task and KSAPC statements.	
Finalize Task and KSAPC statements.	
Determine the scope.	
Link critical task and KSAPC statements.	
Create an examination outline.	
Identify subject matter experts (SMEs).	
Organize Task and KSAPC statements into logical content area.	
Select Employment Selection Method(s).	
Write a job analysis report.	
Edit previously drafted Task and KSAPC statements.	

B. List the five parts of a properly constructed Task Statement and then create a task statement for the job of **Office Assistant** (e.g., typing reports, filing papers, answering phone calls).

1.

2.

3.

4.

5.

C. List the three parts of a properly constructed KSAPC Statement and then create a knowledge, skill and ability statement for the job of **Office Assistant** based on the Task statement you created above.

1.

2.

3.

Knowledge

Skill

Ability

Exercise #8
Evaluate Job Analysis Data

For the following exercise calculate the mean (average) rating for each of the SMEs responses to the scales. Determine which tasks should not be considered for selection purposes based on the results, using the scales midpoint as the cut-off. Round each answer to two decimal places. Refer to the task scales in Chapter 5.

#1

SME	**Task #1**		**Task #2**		**Task #3**		**Task #4**		**Task #5**		**Task #6**	
Name	Imp	Freq	Imp	Freq	Imp	Freq	Imp	Freq	Imp	Freq	Imp	Freq
Michelle	2	1	1	3	3	1	1	2	4	4	3	1
Jerimiah	3	1	1	3	3	2	1	2	4	4	3	3
Monika	2	2	2	2	3	1	3	4	4	3	2	1
Ryan	2	1	3	3	3	1	2	3	3	2	4	1

Which Tasks are retained based on the analysis of the data? Place your answer and explanation in the space provided below.

#2

For the following exercise calculate the mean (average) rating for each of the SMEs responses to the scales. Determine which KSAPCs should not be considered for selection purposes, based on the results, using the scales midpoint as the cut-off. Round each answer to two decimal places. Refer to the KSAPC scales in Chapter 5.

SME	**KSAPC #1**			**KSAPC #2**			**KSAPC #3**			**KSAPC #4**		
Name	Imp	Expect	Rel	Imp	Expect	Rel	Imp	Expect	Rel	Imp	Expect	Rel
Bruce	0	1	1	1	2	1	2	1	0	1	2	0
Clark	2	1	0	2	2	1	2	1	1	2	1	0
Oliver	1	2	1	4	2	1	2	0	1	2	1	1
Dick	3	1	0	3	1	1	3	2	0	3	1	0

SME	**KSAPC #5**			**KSAPC #6**		
Name	Imp	Expect	Rel	Imp	Expect	Rel
Bruce	2	0	1	1	2	0
Clark	2	1	0	1	2	1
Oliver	2	0	1	1	2	1
Dick	3	1	0	1	2	1

Which KSAPCs are retained based on the analysis of the data? Place your answer and explanation in the space provided below.

Exercise #9: Job Analysis Results

Essential Task Ratings

1. Write the task statements that your group developed in the space provided
2. Individually rate the task statements using the IMPORTANCE and FREQUENCY scales provided.
3. Average the ratings for your group for all of the Tasks.
4. Determine which Tasks should be included in the Final list of Task statements

Scale A Importance (Mean Rating)		**Scale B Frequency** (Mean Rating)		**Task Statements (Number =)**	
				1	
				2	
				3	
				4	
				5	
				6	

Essential
Knowledge, Skill, Ability and Personal Characteristic Statements Ratings

1. Write the KSAPC statements that your group developed in the space provided
2. Individually rate the task statements using the IMPORTANCE and EXPECTED AT ENTRY and RELATIONSHIP TO JOB PERFORMANCE scales provided.
3. Average the ratings for your group for all of the KSAPCs.
4. Determine which KSAPCs should be included in the Final list of KSAPC statements
5. Link each retained KSAPC back to the essential tasks that utilizes the KSAPC.

Scale A Importance (Mean Rating)		**Scale B Expected at Entry** (Mean Rating)		**Scale C Relationship** (Mean Rating)		**KSAPC Statements**		**Linking Task #**
						1		
						2		
						3		
						4		
						5		
						6		

Exercise #10: Selection Options Matrix – Group Exercise

KEY
X = Possible Test Modality
XX = Recommended Test Modality

KSAPC #	Importance Rating	**Critical KSAPCs** (Number = ##)	**Training & Experience Assessment**	**Written test**	**Structured Interview**	**Work Sample/ Performance Test)**

1. Place KSAPCs your group has developed in the space provided. Include the average Importance rating that your group gave the KSAPC.
2. Place an X in the column that represents a possible testing method for the KSAPC.

Appendix 1

JOB ANALYSIS INTERNET AND LITERATURE REVIEW

A job analysis literature review is the process of reading, evaluating, and summarizing published or online articles, reports, or Internet items to obtain information regarding a specific job or job family. There are a number of resources you can consult when familiarizing yourself with a job as you prepare to draft task and KSA statements. Some sources provide statements that can be tailored to suit your needs and circumstances. Online and other resources include:

*Occupation Information Network (O*Net Online)*

- Select a job from their drop-down boxes to obtain a list of tasks, KSAPCs, work activities, and work context.
- **online.onetcenter.org/find/**

Dictionary of Occupational Titles (DOT)

- The DOT gives a brief summary of the tasks performed in a number of job classifications
- **www.wave.net/upg/immigration/dot_index.html**

Job specifications

- Job specifications include a definition of the duties, levels, and scope of the job as well as the minimum qualifications for the position. They also provide information on some of the knowledge and abilities required.

Previous job analyses for the relevant or similar job

- Tasks, KSAPCs, examination plan for the selection instrument(s). Can be a useful tool to identify how the job has changed.

Policies and Procedures Manuals

- Departmental guidelines on a variety of job-related topics.

Departmental training manuals

- Duties, equipment used, reporting responsibilities.

Duty statements, examination bulletins

- Current responsibilities, minimum qualifications, willingness statements.

Appendix 2

Job Analysis Checklist

Organization: _____

Job classification: _____ Date: _____

Date Completed	Steps
	Make decisions about the scope and goals.
	Develop work plan with timeline.
	Obtain management's agreement with the plan.
	Begin identifying SMEs.
	Create system to document elements for inclusion in the validation report.
	Conduct literature/Internet review to find sources of preliminary lists of tasks and KSAPCs.
	Draft tasks and KSAPCs while separating them into logical content areas or domains.
	Identify SMEs and audit teams.
	Schedule job audits.
	Conduct job audits.
	Finalize tasks and KSAPCs.
	Draft surveys for tasks and KSAPCs.
	Verify survey comprehensiveness with SMEs.
	Finalize survey.
	Distribute surveys using software or hard copies.
	Track returned surveys; send follow-up reminders if necessary.
	Enter data as surveys are returned.
	Analyze data.
	Determine and apply critical cutoff scores.

Date Completed	Steps
	Link tasks and KSAPCs with input from SMEs.
	Complete examination selection matrix.
	Finalize examination plans.
	Assemble documentation for validation report.
	Write validation report.

Appendix 3

ACTION VERBS

…for Writing Task Statements

"Action Verbs" specify what is being carried out and the context in which it is done. The most effective task statements use action words that illustrate the work behaviors being completed. Some examples of effective action words are found below, separated by different categories. Remember that this list is meant as a starting point and is not exhaustive of all action words.

COMMUNICATION

Address	*Convince*	*Interview*	*Recommend*
Advertise	*Correspond*	*Lecture*	*Reconcile*
Apprise	*Counsel*	*Market*	*Refer*
Arbitrate	*Define*	*Mediate*	*Report*
Attest	*Draft*	*Negotiate*	*Respond*
Clarify	*Edit*	*Officiate*	*Suggest*
Communicate	*Explain*	*Persuade*	*Summarize*
Compose	*Express*	*Present*	*Synthesize*
Condense	*Inform*	*Promote*	*Translate*
Contact	*Interpret*	*Publicize*	*Write*

RESEARCH

Analyze	*Decipher*	*Gather*	*Rate*
Ascertain	*Deliberate*	*Identify*	*Research*
Assess	*Determine*	*Integrate*	*Review*
Collect	*Devise*	*Invent*	*Scrutinize*
Compare	*Diagnose*	*Investigate*	*Solve*
Compute	*Estimate*	*Justify*	*Study*
Conceptualize	*Evaluate*	*Locate*	*Substantiate*
Conclude	*Examine*	*Measure*	*Survey*
Conduct	*Extract*	*Prescribe*	*Systemize*
Confirm	*Forecast*	*Prioritize*	*Test*
Critique	*Formulate*	*Project*	*Validate*

ORGANIZATION

Arrange
Catalogue
Categorize
Centralize
Chart
Classify
Code
Compile
Correlate
Distribute
File
Generate
Link
Maintain
Orchestrate
Organize
Orient
Plan
Prepare
Prioritize
Process
Provide
Record
Regulate
Review
Schedule
Sort
Submit
Standardize
Tabulate
Update

LEADERSHIP

Administer
Allocate
Allow
Appoint
Approve
Assign
Authorize
Chair
Delegate
Designate
Educate
Elicit
Employ
Empower
Enable
Encourage
Endorse
Enforce
Enhance
Establish
Evaluate
Execute
Facilitate
Foster
Guide
Hire
Improve
Incorporate
Increase
Influence
Instruct
Institute
Judge
Lead
Manage
Moderate
Motivate
Oversee
Recommend
Recruit
Sanction
Schedule
Strengthen
Supervise
Train

TEAMWORK

Accommodate
Adapt
Adjust
Aid
Alter
Amend
Assist
Collaborate
Contribute
Cooperate
Foster
Improvise
Instruct
Mediate
Motivate
Participate
Partner
Stimulate
Support
Tailor
Unify

TECHNICAL

Assemble
Build
Compute
Conserve
Construct
Develop
Install
Operate
Program
Upgrade

PROBLEM SOLVING

Alleviate
Ameliorate
Augment
Customize
Debug
Elevate
Enlarge
Extend
Extract
Finalize
Fulfill
Generate
Implement
Intercede
Lighten
Polish
Procure
Rectify
Reduce
Refine
Reform
Rehabilitate
Reinforce
Rejuvenate
Relieve
Remedy
Remodel
Repair
Restore
Retrieve
Revitalize
Revive
Settle
Solicit
Streamline
Strengthen
Supplement
Transform

FINANCIAL

Appraise
Audit
Balance
Budget
Calculate
Compute
Estimate
Market
Purchase
Project
Reduce

CREATIVITY

Act
Brainstorm
Design
Draw
Engineer
Entertain
Envision
Fashion
Illustrate
Model
Perform
Produce
Shape
Visualize

Appendix 4

JOB AUDIT INTERVIEW FORM

ORGANIZATION: _____

JOB/CLASSIFICATION: _____

NAME OF INTERVIEWEE: _____

TELEPHONE NUMBER OF INTERVIEWEE: _____

LENGTH OF TIME IN CURRENT POSITION: _____

FACILITY & LOCATION: _____

INTERVIEWER(S):

DATE(S): _____

_____

_____

QUESTIONS:

(1) What is the overall purpose (or responsibility) of your job?

(2) When you think about a typical day, please summarize the top three to five major areas of responsibility assigned to your position.

	Major Responsibilities
1.	
2.	
3.	
4.	
5.	

(3) What are the tasks within each area of responsibility (i.e., sub-grouping) that you perform in your job starting with the most important first?

Responsibility #1	
Task 1	
Task 2	
Task 3	
Task 4	
Task 5	
Task 6	

Responsibility #2	
Task 7	
Task 8	
Task 9	
Task 10	
Task 11	
Task 12	

Responsibility #3	
Task 13	
Task 14	
Task 15	
Task 16	
Task 17	
Task 18	

Responsibility #4	
Task 19	
Task 20	
Task 21	
Task 22	
Task 23	
Task 24	

Responsibility #5	
Task 25	
Task 26	
Task 27	
Task 28	
Task 29	
Task 30	

(5) For each major activity, what knowledge, skills, abilities and personal characteristics (KSAPCs) are required?

Knowledge	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Skills	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	

Abilities	
21.	
22.	
23.	
24.	
25.	
26.	
27.	
28.	
29.	
30.	

Personal Characteristics	
31.	
32.	
33.	
34.	
35.	
36.	
37.	
38.	
39.	
40.	

(6) What physical characteristics are required to perform the tasks of the _____ classification?

Physical Characteristics:	
41.	
42.	
43.	
44.	
45.	
46.	
47.	
48.	
49.	
50.	

(7) To perform this job, what level of education is needed?

(8) To perform this job, what experience is needed?

(9) What are the working conditions in this job (e.g., living in remote areas)?

(10) What kind of hazards are in the job?

(11) What equipment (including protective equipment) or tools do you use to perform the job?

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

(12) How long and what type of training must a new employee get in this job to be reasonably proficient in it?

(13) What KSAPCs differentiate someone who is a better performer from someone who is less qualified? (Provide an example of a task requiring each applicable KSAPC.)

(14) What aspects of the job would you like to include that were missed in the previous questions?

(15) In general, how do your job duties differ from those in the classification(s) below yours?

(16) In general, how do your job duties differ from those in the classification just above yours?

(17) What manuals and reference materials are used on the job? (And when are such materials used?)

☐ **Departmental manual and guides:**

☐ **Other manuals and guides:**

(18) Notes:

Appendix 5

GUIDELINES FOR COMMITTEE-BASED JOB ANALYSIS

There are times when a lack of staff or SMEs prevent a typical job analysis from being conducted. In this case the committee-based job analysis method may be used. Studies comparing committee-based and field job analyses have found that there is a high degree of agreement in terms of task and KSAPC ratings between the two groups.

A committee-based job analysis can be conducted in several ways. H.L. Ammerman (1965) invented one such technique, which involved the following steps:

1. Select and meet with a panel of qualified SMEs who represent all levels of the department.
2. Instruct the panel to identify the standards of performance they would expect from an ideal employee.
3. Have the panel develop a list of specific tasks and KSAPCs for each of the standards.
4. Ask the panel to rate the tasks and KSAPCs for criticality.
5. Implement selection instruments based upon the essential KSAPCs for each of the critical tasks.

Appendix 6

WORK OBSERVATION METHOD

In the work observation, observe SMEs who are actively performing the job and gather data, on tasks and KSAPCs, by recording their work activities. Follow the same pre-interview steps as in the job audit method. Record your observations on the Work Observation Form provided here.

Refer to the table to determine the number of SMEs to observe.

Number of Incumbents	Percent of Observations
1 – 10	50%
11 – 20	33%
21 – 30	33%
31 – 50	25%
51 - 100	15%
101 - 200	10%
200 & over	10%

Rouleau and Krain 1975

WORK OBSERVATION FORM

SUBJECT MATTER EXPERT INFORMATION	
Name of Interviewee	Department
Current Civil Service Classification	Division/Work Unit
Working Title (if different)	Work Location
Telephone Number	Name and Job/Classification of Immediate Supervisor
Length of Time in Current Job/Classification	□ Incumbent □ Supervisor □ Other _____
Name of Interviewer	Date and Location of Interview

1. **<u>List of the Work Behaviors/Tasks Observed:</u>**

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	

2. <u>Identify the Physical Working Conditions:</u>

(Physical location, noise level, weather conditions, etc.)

3. <u>Record any Materials, Equipment, Tools, Manuals, and/or Reference Materials Used</u>:

4. <u>Degree of Supervision Received</u>:

(How is work assigned, reviewed and approved? What is the frequency and duration of direct supervision?)

5. **<u>Interaction with Others</u>:**

(With whom does the incumbent interact, including departmental employees, personnel from other state agencies/departments, consultants, vendors, and/or public? What is the purpose of the interaction?)

6. <u>Acquisition of Job Skills</u>:

(How does an incumbent typically learn how to do this job?)

7. **<u>Identify the Essential Knowledge, Skills, Abilities and Personal Characteristics</u>:**

(What knowledge, skills, abilities, and personal characteristics are needed to perform the job?)

Knowledge	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Skills	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	

Abilities	
21.	
22.	
23.	
24.	
25.	
26.	
27.	
28.	
29.	
30.	

Personal Characteristics	
31.	
32.	
33.	
34.	
35.	
36.	
37.	
38.	

8. **<u>List any Essential Physical Requirements</u>:**

(What physical requirements must an incumbent possess to perform the job?)

Appendix 7

Job Analysis Survey
for
JOB TITLE

The purpose of this survey is to identify the tasks, as well as the knowledge, skills, abilities and personal characteristics (KSAPCs) that are required for successful job performance of **JOB TITLE** at the **DEPARTMENT or COMPANY**. This information is necessary to ensure that selection procedures for this classification are appropriate, job-related, and in compliance with federal and State laws regarding employment testing.

The information about the specific tasks of the job and the knowledge, skills, abilities, and personal characteristics (KSAPCs) required to perform those job tasks is being collected from individuals, such as yourself, who are very familiar with the job of **JOB TITLE** (i.e., those individuals who currently perform the job, recently performed the job, or supervise those who perform the job). If you are an **JOB TITLE**, you will be completing the survey for your current job assignment. If you have recently been promoted, complete the survey based on your assignment as a(n) **JOB TITLE**. If you are a supervisor of employees who are classified as **JOB TITLE**, you will be completing a survey based on your understanding of the jobs of those you supervise.

Please take the time to provide thorough, well-thought-out responses to each item in the survey. Thank you for your participation in this survey process.

If you have any questions regarding the completion of this survey, please contact:

PROJECT LEAD [(###) ###-###] or PROJECT BACK-UP [(###) ###-###]
DIVISION
DEPARTMENT or COMPANY

This job analysis survey must be completed and returned by
DUE DATE
in the envelope provided, to: PROJECT LEAD – ADDRESS OF WHERE TO SEND

INSTRUCTIONS

The survey is divided into three parts:

PART 1: Demographic Data
PART 2: Task Ratings
PART 3: Knowledge, Skill, Ability, and Personal Characteristic (KSAPC) Ratings

Part 1 of the survey asks for demographic information in order to document that you are familiar with the work performed by **JOB TITLE** at **DEPARTMENT or COMPANY**. Parts 2 and 3 solicit information regarding the job tasks performed, as well as the knowledge, skills, and ability requirements of *newly hired* **JOB TITLE on their first day of the job**.

Important
Mark your responses to all three parts of the survey in the answer booklet that you received with this questionnaire unless specifically instructed otherwise. *Your individual responses will be kept confidential. Only overall results from all respondents will be compiled and used.*

Before beginning Part 1, please complete the top portion of the answer booklet as shown in the example below.

PART ONE
DOCUMENTATION OF RATER'S EXPERTISE

Instructions: Answer questions "A" through "I" by circling the correct response. Please circle only one response to each question.

A. What is your present position?

(0) JOB TITLE
(1) Supervising JOB TITLE
(2) Other (Please Specify)
_____

B. In this survey, you will be providing ratings for the **JOB TITLE**. Are you completing this survey as an incumbent or supervisor of this position?

(0) Incumbent
(1) Supervisor

C. How long have you worked in this position?

(0) 0 – 6 months
(1) 7 – 12 months
(2) more than one year, but less than two years
(3) at least two years, but less than three years
(4) at least three years, but less than five years
(5) at least five years, but less than ten years
(6) ten years or more

D. What is the highest level of education you have completed?

(0) Some high school
(1) High school graduation or GED
(2) Up to two years of college with no degree
(3) Two-year college degree (i.e., A.A. degree)
(4) Three to four years of college with a two-year college degree
(5) Three to four years of college with no degree
(6) Four-year college degree (i.e., B.A. degree)
(7) Master's degree
(8) J.D./Ph.D./Ed.D. Doctorate

E. What division within **DEPARTMENT or COMPANY** do you report to?

(0) ADD DEPARTMENT or DIVISION as APPROPRIATE
(1) ADD DEPARTMENT or DIVISION as APPROPRIATE
(2) ADD DEPARTMENT or DIVISION as APPROPRIATE
(3) ADD DEPARTMENT or DIVISION as APPROPRIATE
(4) ADD DEPARTMENT or DIVISION as APPROPRIATE
(5) ADD DEPARTMENT or DIVISION as APPROPRIATE
(6) ADD DEPARTMENT or DIVISION as APPROPRIATE
(7) ADD DEPARTMENT or DIVISION as APPROPRIATE
(8) Other (Please Specify)
_____

The following three questions are voluntary. This information is being collected to document the representativeness of the respondents to this survey.
Individual responses will remain confidential.

F. What is your gender?

(0) Female
(1) Male

G. What is your age?

(0) 18 - 20
(1) 21 - 29
(2) 30 - 39
(3) 40 - 49
(4) 50 - 59
(5) 60 or over

H. Of which ethnic group do you consider yourself a member?

(0) Caucasian
(1) African American
(2) Hispanic
(3) Asian
(4) Filipino
(5) Native American/Alaskan Native
(6) Pacific Islander
(7) Other (Please Specify)
_____

PART TWO
TASK RATINGS

INSTRUCTIONS

This part of the survey lists the tasks that a **JOB TITLE** might perform. The list of tasks begins on page **##.**

Rate each of the tasks using the two scales provided on the attached sheet entitled "TASK RATING SCALES." PLEASE BE SURE TO RESPOND TO BOTH SCALES FOR EVERY TASK STATEMENT.

Starting with Task 1, first rate the **IMPORTANCE** of Task 1 to successful job performance using Scale A. Next, using Scale B, rate the **FREQUENCY OF PERFORMANCE** for the task. Then, using Scale C, rate whether the task is **FUNDAMENTAL** for the job. When you have finished rating Task 1 using all the scales, continue to rate each of the remaining tasks in the same manner. ***Be sure to rate <u>every</u> task.***

If you are a **JOB TITLE** incumbent, use your own first-hand knowledge of the job to rate each of the tasks based upon the tasks you actually perform in your current assignment. Do not consider other job assignments you may have had, any possible changes to your current work assignments, or the work performed by other **JOB TITLE** incumbents.

If you are the supervisor of one or more **JOB TITLE** incumbents, rate each task based on the tasks performed by the incumbents you supervise. Do not consider possible workload changes that may impact tasks assigned to this job in the future or the work performed by **JOB TITLE** incumbents whom you do not supervise. If you have recently been promoted, complete the survey based on your assignment as a **JOB TITLE.**

<u>EXAMPLE</u>
Suppose that being able to "**Use word processing software**" was critical and was something you do daily, you would fill out the answer sheet as shown below:

TASK RATING SCALES

Instructions: Use these scales to rate the tasks on this survey. Enter the number that corresponds to your answer in the column provided on the survey. Please write clearly and provide a rating for every tasks statement.

(Scale A) IMPORTANCE: How important is this task to successful job performance?

(0) Does Not Apply
This task is **not an essential function** of the job, or is not performed on the job, or is trivial to successful job performance. An inability to perform this task has **no effect on job performance**.

(1) Moderately Important
Satisfactory performance of this task is moderately important to successful job performance. An inability to perform this task **will affect** job performance however **it will not lead to failure on the job.**

(2) Important
Satisfactory performance of this task is important to successful job performance. An inability to perform this task **will have a noticeable effect** on job performance **resulting in an inability to perform some aspects of the job.**

(3) Very Important
Satisfactory performance of this task is very important to successful job performance. An inability to perform this task **is likely to result in failure** on the job and **may result in negative consequences on the department, the public and other constituencies.**

(4) Critical
Satisfactory performance of this essential task is critical to successful job performance. An inability to perform this task **will lead to significant failure** on the job and **will seriously affect the department, the public and other constituencies.**

(Scale B) FREQUENCY: How often is this job task performed?

(0) Does Not Apply
This task is not an essential function of the job, **or** this task is not performed on the job.

(1) Less than Once a Month
This task is performed at least one time a year, but less than once a month (includes quarterly).

(2) Monthly
This task is typically performed at least one time a month but less than once in a typical week.

(3) Weekly
This task is typically performed once to several times each week but less than once a day.

(4) Daily
This task is performed one or more times a day.

FUNDAMENTAL: Is this task Fundamental in that it can not be changed without changing the essential nature of the job? This scale is to meet the regulations as set forth by the American Disability Act (ADA). To better understand this scale, consider the following example: For the task that requires one to produce a report using Microsoft Word, can a person still perform this task effectively (without changing the essential nature of the job) if the person has a disability that makes it impossible for him/her to type using the keyboard? Can the person use a voice activated software or other methods that would assist the person in producing the report without having to type using the keyboard? If the person can still perform the task with the disability then your response for the task should be "No," the task is not fundamental to the job and changing it will not alter the essential nature of the job.

(0) No
This task is **not fundamental** to the job, if it is changed it will **not alter** the essential nature of the job.

(1) Yes
This task is **fundamental** to the job, if it is changed it will **alter** the essential nature of the job.

JOB TITLE
Task Statements

In this section, provide three ratings for each task statement. First, use Scale A to rate the *Importance* of the task. Then, use Scale B to rate the *Frequency the task is performed*. Both scales are provided on the previous pages (Page 6-7). Please detach these pages and refer to them as you proceed through this section of the survey. Write all your answers in the column for the appropriate scale.

	Task Statements (Number = ##)	**Scale A Importance**	**Scale B Frequency**	**Scale C Fundamental**
Insert Title of Content Area #1				
1				
2				
3				
4	**etc., until all tasks are listed**			
Insert Title of Content Area #2				
5				
6				
7				
8	**etc., until all tasks are listed**			
Insert Title of Content Area #3				
9				
10				
11				
12	**etc., until all tasks are listed**			

PART THREE
KNOWLEDGE, SKILLS, ABILITIES, and PERSONAL CHARACTERISTICS (KSAPCs) RATINGS

INSTRUCTIONS

This part of the survey lists the knowledge, skills, abilities, and personal characteristics (KSAPCs) that may be required to successfully perform the job you are rating. The list of KSAPCs begins on the following page.

Rate each of the KSAPCs using the three scales provided on the attached sheet entitled "KSAPC RATING SCALES." *Please note that these rating scales have changed somewhat from those used for rating the tasks.* PLEASE BE SURE TO RESPOND TO ALL THREE SCALES FOR EVERY KSAPC STATEMENT.

Starting with KSAPC 1, first rate the **IMPORTANCE** of KSAPC 1 to successful job performance using Scale A. Next, using Scale B, **EXPECTED AT ENTRY TO THE JOB**, rate how much of this KSAPC is required upon appointment to this job. Finally, using Scale C, rate the **RELATIONSHIP** of possession of this KSAPC to overall job performance. When you have finished rating KSAPC 1 on all three scales, continue to rate each of the remaining KSAPCs in the same manner.

If you are an incumbent in the job you are rating, use your own first-hand knowledge of the job to rate each of the KSAPCs based upon the requirements and qualifications of your current assignment. Do not consider other job assignments you may have had, possible changes to your current work assignments, the work of other incumbents in your classification, or the requirements and qualifications of other classifications within the **JOB TITLE class series.**

If you are the supervisor of the job you are rating, rate each KSAPC based on the current qualifications required of your staff; do not consider qualifications that may have been required in the past, proposed changes to job requirements in the future, or the requirements and qualifications of other classifications within the **JOB TITLE class series**. If you have recently been promoted, complete the survey based on your assignment as **JOB TITLE.**

KSAPC RATING SCALES

Instructions: Use these scales to rate the KSAPCs on this survey. Enter the number that corresponds to your answer in the column provided on the survey. Please write clearly and provide a rating for every KSAPC statement.

IMPORTANCE: How important is this KSAPC to successful job performance?

(0) Does Not Apply
This KSAPC is **not required** in order to perform the job, or is trivial to successful job performance. A lack of this KSAPC has **no effect on job performance**.

(5) Moderately Important
This KSAPC is moderately important to successful job performance. A lack of this KSAPC **will affect** job performance however **it will not lead to failure on the job.**

(6) Important
This KSAPC is very important to successful job performance. A lack of this KSAPC **will have a noticeable effect** on job performance **resulting in an inability to perform some essential aspects of the job.**

(7) Very Important
This KSAPC is very important to successful job performance. A lack of this KSAPC **is likely to result in failure** on the job and **may result in negative consequences on the department, the public and other constituencies.**

(8) Critical
This KSAPC is critical to successful job performance. A lack of this KSAPC **will lead to significant failure** on the job and **will seriously affect the department, the public and other constituencies.**

EXPECTED AT ENTRY: When is a person expected to have this KSAPC: Is it required before being hired or do they learn it on the job?

(0) Not Needed
This KSAPC is not needed on the first day of the job. It is either learned on the job or through training, or is not an essential component of the job.

(1) Needed
Possession of this KSAPC is needed and expected on the first day of the job. Possession of **MOST** of this KSAPC is needed and expected upon entry to the job.

(2) Essential
Possession of this KSAPC at entry to the job is essential. Possession of ALL of this KSAPC is expected upon entry to the job.

RELATIONSHIP TO JOB PERFORMANCE: Does possession of more of this KSAPC beyond minimum requirements lead to better job performance?

(0) No
This KSAPC is not required to perform the job, **or** possession of more of this KSAPC (beyond the minimal level required) **does not** result in better job performance.

(1) YES
Possession of more of this KSAPC (beyond the minimal level required) **does** result in better job performance.

JOB TITLE
Knowledge, Skill, Ability, and Personal Characteristic (KSAPC) Statements

Instructions: For each KSAPC statement, provide three ratings. First, use Scale A to rate the *importance* of the KSAPC. Then, use Scale B to rate the amount of the KSAPC that is *expected at entry to the job*. Lastly, you will use Scale C to rate the *relationship to job performance* for the KSAPC. All three scales are provided on the previous pages (Page 10-11). Please detach these pages and refer to them as you proceed through this section of the survey. Write all your answers in the columns for the appropriate scales.

	KSAPC Statements (Number = ##)	**Scale A Importance**	**Scale B Expected at Entry**	**Scale C Relationship**
Knowledge, Skills and Abilities				
1				
2				
3				
4				
5				
6				
7				
8	**etc., until all knowledge, skills and abilities are listed**			
Personal Characteristics				
9				
10				
11				
12	**etc., until all personal characteristics are listed**			

THANK YOU FOR YOUR PARTICIPATION IN THIS SURVEY!
YOUR TIME AND EFFORT ARE APPRECIATED.

If you used this page, please submit it with your answer booklet in the return envelope.

Appendix 8

CLASSIFICATION DEPARTMENT

Selection Options Matrix

KEY
X = Possible Test Modality
XX = Recommended Test Modality

KSAPC #	Importance Rating	**Critical KSAPCs** (Number = ##)	**Training & Experience Assessment**	**Written test**	**Structured Interview**	**Work Sample/ Performance Test (e.g., in-basket exercise, role play, presentation)**

Appendix 9

Checklist for Validity Verification of a Job Analysis Study to Determine Adequacy of Documentation*

1. **User(s), location(s) and date(s) of study**
   Dates and location(s) of the job analysis should be shown (Essential).

2. **Problem and Setting**
   An explicit definition of the purpose(s) of the study and the circumstances in which the study was conducted should be provided. A description of existing selection procedures and cutoff scores, if any, should be provided.

3. **Job Analysis - Content of the job**
   (A) A description of the method used to analyze the job should be provided (Essential).
   (B) The work behavior(s), the associated tasks, and if the behavior results in a work product, the work products should be completely described (Essential).
   (C) Measures of criticality and/or importance of this work behavior(s) and the method of determining these measures should be provided (Essential).
   (D) Where the job analysis also identified the knowledges, skills, and abilities used in work behavior(s), an operational definition for each knowledge in terms of a body of learned information and for each skill and ability in terms of observable behaviors and outcomes should be provided (Essential).
   (E) The relationship between each knowledge, skill, or ability and each work behavior as well as the method used to determine this relationship should be provided (Essential).
   (F) The work situation should be described, including the setting in which work behavior(s) are performed, and where appropriate, the manner in which knowledges, skills, or abilities are used, and the complexity and difficulty of the knowledge, skill, or ability as used in the work behavior(s).

4. **Selection procedure and its content**
   (A) Selection procedures, including those constructed by or for the user, specific training requirements, composites of selection procedures, and any other procedure supported by content validity should be completely and explicitly described or attached (Essential).
   (B) If commercially available selection procedures are used, they should be described by title, form and publisher (Essential).
   (C) The behaviors measured or sampled by the selection procedure should be explicitly described (Essential).
   (D) Where the selection procedure purports to measure a knowledge, skill, or ability, evidence that the selection procedures and is a representative sample of the knowledge, skill, or ability should be provided (Essential)

(E) A requirement for or evaluation of specific prior training or experience based on content validity, including a specification of level or amount of training or experience should be justified on the basis of the relationship between the content of the training or experience and the content of the job for which the training or experience is to be required or evaluated. The critical consideration is the resemblance between the specific behaviors, products, knowledges, skills, or abilities required on the job, whether or not there is close resemblance between the experience or training as a whole and the job as a whole.

5. **Relationship Between the Selection Procedure and the Job**

(A) The evidence demonstrating that the selection procedure is a representative work sample, a representative sample of the work behavior(s), or a representative sample of a knowledge, skill, or ability as used as a part of a work behavior and necessary for that behavior should be provided (Essential).

(B) The user should identify the work behavior(s) which each item or part of the selection process is intended to sample or measure (Essential).

(C) Where the selection procedure purports to sample a work behavior or to provide a sample of a work product, a comparison should be provided of the manner, setting, and the level of complexity of the selection procedure with those of the work situation (Essential).

(D) If any steps were taken to reduce adverse impact on a race, sex, or ethnic group in the context of the procedure or in its administration, these steps should be described.

(E) Establishment of time limits, if any, and how these limits are related to the speed with which duties must be performed on the job, should be explained.

(F) Measures of central tendency (e.g., means) and measures of dispersion (e.g., standard deviations) and estimates of reliability should be reported for all selection procedures if available. Such reports should be made for relevant race, sex, and ethnic subgroups, at least on a statistically reliable sample basis.

6. **Alternative Procedures Investigated**

(A) The alternative selection procedures investigated and available evidence of their impact should be identified (Essential).

(B) The scope, method, and findings of the investigation, and the conclusions reached in light of the findings, should be fully described (Essential).

7. **Users and Applications**

(A) The methods considered for use of the selection procedure (e.g., as a screening device with cutoff score, for grouping or ranking, or combined with other procedures in a battery) and available evidence of their impact should be described (Essential).

(B) This description should include rationale for choosing the method for operational use, and the evidence of the validity and utility of the procedure as it is to be used (Essential).

(C) The purpose for which the procedure is to be used (e.g., hiring, transfer, promotion) should be described (Essential).
(D) If the selection procedure is used with a cutoff score, the user should describe the way in which normal expectations of proficiency within the work force were determined and the way in which the cutoff score was determined (Essential).
(E) In addition, if the selection procedure is to be used for ranking, the user should specify the evidence showing that a higher score on the selection procedure is likely to result in better job performance.

8. **Contact Person**
The name, mailing address, and telephone number of the person who may be contacted for further information about the validity study should be provided (Essential).

9. **Accuracy and Completeness**
The report should describe the steps taken to assure the accuracy and completeness of the collection, analysis, and report of data and results.

* *Uniform Guidelines on Employee Selection Procedures* (8/25/78) Requirements for Documentation of Content Validity

Appendix 10

Online Survey Tools

Collecting and analyzing job analysis data can be a lengthy and time consuming process. Creating surveys, having them mailed out and then waiting for responses can take weeks, or even months. Once the data has been received, it must be entered into computer software so that it can be analyzed (to determine the critical tasks and KSAPCs).

The Internet has resources that can be utilized to prepare surveys online and speed up the job analysis process. These online survey tools allow you to send out the job analysis survey (JAS) electronically to the Subject Matter Experts (SMEs) who are participating in the study. They provide several advantages to collecting job analysis data:

1. **Collects demographic and job information from SMEs** –Online survey tools make it easy to collect SME information and calculate frequency, graphs and tables to help represent the data.
2. **Collects rating information For Tasks and KSAPCs** – Tasks and KSAPCs can be cut and pasted into the online survey tool from word processing or spreadsheet software. Rating scales can then be created in the software that allows SMEs to rate your tasks and KSAPCs online.
3. **Disseminate the JAS to hundreds of SMEs simultaneously** – The JAS can be sent to an almost limitless number of SMEs.
4. **Eliminates the use of the Postal Service** – Using the online process saves time and money, ensuring that all of your SMEs received your survey and that you receive their responses.
5. **Track Respondents-** Online survey tools can resend the JAS to individuals who have not finished the survey within a specified timeline.
6. **Improve data quality –** By reducing the amount of data entry, errors due to miss keying or carelessness are minimized.

7. **Analyze data –** Online survey tools can provide means (averages) of the SMEs responses to your scales. These responses can then be downloaded into spreadsheet software.