INFORMATION TECHNOLOGY PERSONNEL SYSTEM FOR INDIANA STATE UNIVERSITY

Information Technology Personnel Study Committee

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Personnel system proposal submitted to Provost Steven K. Pontius December 7, 2001;peoposal approved by vote of the vice presidents December 19, 2001; implementation plan revised January 31, 2002

INFORMATION TECHNOLOGY PERSONNEL SYSTEM
FOR
INDIANA STATE UNIVERSITY

EXECUTIVE SUMMARY

The comprehensive personnel system for information technology professionals at Indiana State University described in this document and presented in Appendices A through G is designed to address the unique issues surrounding recruiting, developing, and retaining employees who provide information technology expertise and service to the ISU community. The charge to the information technology personnel study committee was to propose a personnel system focused on nine specific elements:

- A distinct and broadband classification system for information technology professional positions that is flexible to respond to changes in this rapidly evolving career field
- Identification of all positions—EAP and support staff—to be assigned to the information technology professional group
- Generic descriptions for all information technology professional positions, including, in addition to job functions, the specific qualifications, level and type of training, and industry certifications required for each position
- Identification of appropriate higher education market comparisons in this geographical region for each information technology professional position
- Evaluation of each information technology professional position for purposes of classification
- Career paths that reward information technology professionals based upon accomplishment of training benchmarks and demonstrated improvements in their skills portfolio
- Individualized professional development plan for each information technology professional to meet the specific requirements of the position he or she currently holds, as well as the positions he or she aspires to hold
- Recommended modifications to ISU recruitment policies and procedures that, within federal law and guidelines, will increase the likelihood of successful searches for vacant information technology professional positions
- A retention plan for information technology professionals that takes into account such elements as paths for career advancement, access to training, job rotation options, working conditions, participation in information technology decision making, and opportunities to work with faculty members and students on leading edge technology projects

The personnel system was developed by the information technology personnel study committee over a 10 month period from February to December 2001 and submitted to Provost and Vice President for Academic Affairs Steven K. Pontius on December 7, 2001. Following a presentation to the members of the President's Cabinet, the personnel system was approved by vote of the vice presidents on December 19, 2001, with full implementation scheduled for July 1, 2002. The personnel system includes the following features:

- An explicit definition of an *information technology professional* is presented that will identify those to be included within the information technology professional personnel system.

- A recruitment plan is presented that is designed to provide a method of quickly responding to employment needs while maintaining the university's diversity objectives. It provides a centralized employment administration function that interacts efficiently with the operational department's staffing requirements.
- It is proposed that each information technology professional, working proactively with their supervisor will propose an individual training and development plan that will lead to competency development and career progression, incorporating immediate, short-term, intermediate, and long-range needs and goals. A training retention contract is presented that requires the individual to remain employed with the university for a reasonable period after the completion of specialized information technology training.
- An information technology classification system is presented that includes positions in the computing infrastructure, data and voice communications, media, and academic and department-based technology. The classification system comprises six classes representing distinct information technology career groups, plus a seventh class representing an information technology managerial career group and an eighth class representing an information technology executive career group. Work within each class is organized into class concepts/functions with typical duties and competencies/skills. Additionally, a position may have cross functions and project/lead functions assigned to meet specific university needs. Definitions of three broad skill levels for the information technology classification system are presented. These skill level definitions can be applied to all the information technology professional classes within the job classification system, generating a rich matrix of classes and skill levels.
- An information technology job evaluation team (IT-JET) is proposed, comprising seven employees who will review all position descriptions for EAP positions and all position analysis questionnaires for all support staff positions to determine the appropriate information technology professional class and skill level to recommend to the chief information officer and the appropriate division vice president.
- A salary structure is proposed to support the personnel system's broader concept of information technology work, as exemplified by the classification system, and the broader view of the job, as exemplified by the competency levels. A broad pay range for each class is proposed, together with a minimum, midpoint, and maximum pay rate for each class pay range with no interim steps. Each competency level within an information technology professional class has its own minimum-to-maximum internal range defined. Pay ranges will be developed and maintained using salary survey data that include public and private sector employers, both educational and business. Market surveys will be conducted periodically, and other market data evaluated, to ensure that pay ranges remain market competitive. Progression through the pay ranges occurs primarily because of individual performance-based increases, acquiring and applying higher-level competencies, and salary changes from technical certification.
- Three skill dimensions have been identified that are critical to successful job performance in information technology: technical expertise, critical thinking, and interactive skills. Performance planning, evaluation, and rewards are tied to the extent to which employees demonstrate the acquisition and application of these essential skills.

A proposed work schedule for the remaining tasks is presented that will allow all aspects of the proposed comprehensive personnel system for information technology professionals to be implemented by July 1, 2002, including approved appropriate salary adjustments for FY03 for information technology professionals who have successfully completed the goals in their individual professional development plan.

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INDIANA STATE UNIVERSITY[1]

INTRODUCTION

The Information Technology Personnel Study Committee was created in 1999 to study and recommend salary market adjustments that were implemented in FY00 for information technology[2] professionals. The committee was reestablished in February 2001 by Interim Provost David Hopkins and Associate Vice President for Information Services Ellen Watson. The committee's charge was to develop a comprehensive employment plan for information technology professionals and to make recommendations concerning appropriate market adjustments for the FY02 salaries of information technology professionals.

Committee Members

John Gedrick (chairperson), Assistant Vice President for Human Resources
Richard Antonak, Associate Vice President of Academic Affairs
Pamela Dwenger, Systems Coordinator, Office of Student Affairs
Bob Jefferson, Executive Director, Information Technology
Diann McKee, Chief Budget Officer
Bruce McLaren, Professor and Chairperson, Organizational Department, School of Business
Jeffery Pohlen, Director, Advancement Services, University Advancement

Committee Charge

With the uncertainty of the state's support for public higher education, the reallocation of 3% of the FY01 base operating budget to meet the reallocation targets set for the Division of Academic Affairs, and the vacancy in the executive position essential to lead the accomplishment of the information technology mission at ISU, Interim Provost Hopkins, on April 25, 2001, directed the committee to suspend the work necessary to develop FY02 salary market adjustment recommendations. He modified the committee's charge, directing the committee to develop for his consideration by January 1, 2002, a comprehensive information technology personnel system focusing on nine specific elements[3]:

- A distinct and broadband classification system for information technology professional positions that is flexible to respond to changes in this rapidly evolving career field
- Identification of all positions—EAP and support staff—to be assigned to the information technology professional group
- Generic descriptions for all information technology professional positions, including, in addition to job functions, the specific qualifications, level and type of training, and industry certifications required for each position

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[1] Submitted to Provost Pontius December 7, 2001; approved for implementation by the President's Cabinet December 19, 2001.

[2] It is essential to distinguish between the professional domain called information technology (lowercase "i" lowercase "t"), and the personnel group at ISU located within the Division of Academic Affairs called Information Technology (uppercase "I" uppercase "T"). In order to avoid any possible confusion, the acronym IT will not be used in this document.

[3] Provost Steven Pontius confirmed this revised committee charge upon his arrival at ISU in July 2001, maintaining the due date of January 1, 2002.

- Identification of appropriate higher education market comparisons in this geographical region for each information technology professional position
- Evaluation of each information technology professional position for purposes of classification
- Career paths that reward information technology professionals based upon accomplishment of training benchmarks and demonstrated improvements in their skills portfolio
- Individualized professional development plan for each information technology professional to meet the specific requirements of the position he or she currently holds, as well as the positions he or she aspires to hold
- Recommended modifications to ISU recruitment policies and procedures that, within federal law and guidelines, will increase the likelihood of successful searches for vacant information technology professional positions
- A retention plan for information technology professionals that takes into account such elements as paths for career advancement, access to training, job rotation options, working conditions, participation in information technology decision making, and opportunities to work with faculty members and students on leading edge technology projects

Committee Accomplishments

The committee began by reviewing and revising the definition of *information technology professional* proposed by the earlier committee (see Appendix A). The committee then identified all EAP and support staff personnel in all divisions of the university who meet the revised definition. Confirmation by division vice presidents will be required, and division vice presidents will be asked to propose any other personnel who may meet the definition.

Following detailed study of the job evaluation system and the salary adjustment process for EAP employees at ISU, the committee determined that:

- The current job evaluation system has difficulty accommodating to the unique duties and responsibilities required by information technology professionals
- The current salary adjustment process focuses solely on base salaries and does not have a component to study career development benchmarks and to reward accomplishments with short term and long term monetary and non-monetary rewards
- Compensation budgets and the monitoring of salaries and hire rates for information technology professionals are not centralized, creating inequities within and among the five university divisions

The committee decided that a new job evaluation system, a new job evaluation team, and a new salary adjustment process needed to be designed and implemented for information technology professionals at ISU. To assist in this work, a subcommittee identified and studied the comprehensive job evaluation systems of comparable universities in Indiana and other states. After considerable effort, the model presented in this report was structured for ISU that has the flexibility necessary to address the recruitment, hiring, classification, retention, and compensation needs of information technology professionals in this rapidly changing career field.

Prompt action in recruiting and filling information technology professional positions is critical in a field that has high demand and short supply. The current search procedures and hiring requirements at ISU often result in:

- Difficulty promoting from within the university information technology professionals who have achieved professional development milestones
- Failure to compete effectively with local and national employers for the available talent because of inability to interview and make offers quickly
- Leaving critical positions unfilled for extended periods of time
- Difficulty recruiting and hiring ISU students and graduates

A subcommittee studied the current recruitment and hiring systems and has proposed modifications to the current ISU policies and procedures that have the potential to overcome these difficulties (see Appendix B).

One of the building blocks of the proposed comprehensive information technology personnel system is a set of generic position descriptions broad enough to accommodate all information technology professionals at ISU (see Appendix D). A set of six generic position descriptions have been written and tests have been conducted to determine if randomly selected information technology professional positions at ISU can be slotted correctly and consistently. The results of the tests are encouraging and suggest the generic descriptions do capture job functions, specific qualifications, level and type of training, and industry certifications required for each information technology professional position at ISU. Three skill levels were then defined to apply to all six generic position descriptions (see Appendix E).

With the proposed broadband classification system and the development of generic position descriptions and skill levels, the evaluation of each information technology professional position at ISU can be achieved. It will be necessary for supervisors to prepare individual position descriptions and supplemental position analysis questionnaires for all information technology EAP and support staff positions (see Appendix F). These forms will be submitted for review and classification to an information technology job evaluation team (IT-JET) to be appointed by the president and provost. After each information technology professional position at ISU has an appropriate position description prepared and is correctly classified into the comprehensive information technology personnel system, the review of the qualifications, skill sets, level and type of training, and industry certifications of each individual in all information technology professional positions throughout the university will be conducted. The results of these reviews will be used to develop a specific individualized professional development plan for each information technology professional at ISU.

The information technology professional position descriptions will provide job functions, specific qualifications, level and type of training, and industry certifications required for each position. These position descriptions will be used to specify career paths within each class of generic positions. Model information technology career pathing systems at several comparable universities have been identified and will be used to develop a comprehensive career pathing system for ISU. Preliminary data essential for making higher education market salary comparisons have been obtained. The work necessary to complete the comparisons for each information technology professional position will be undertaken after each position at ISU has been evaluated and correctly classified. This will yield a salary structure for information technology professionals that will provide a minimum, midpoint, and maximum salary value for each class and each skill level (see Appendix G).

The committee concluded that it is essential to identify short-term and long-term organizational and departmental needs in all divisions of the university to project information technology professional

staffing needs. Employee career path and professional development plans should help to meet these staffing needs, enhance employee job and career satisfaction, and reduce employee turnover. The committee reviewed the literature and discussed with information technology managers the efforts at other institutions that are aimed at the retention of information technology professionals. It is the committee's conclusion that:

- Short and long term organizational and departmental succession planning can identify potential staffing needs and determine if current employees are capable of filling those needs
- Career path plans for each information technology professional will assist current employees to identify the requisite skills and training requirements needed for potential career advancement at ISU
- An organizational structure must be developed that allows for an employee to progress along either an information technology technical career path or an information technology managerial career path
- Career paths must be flexible to meet changing organizational, department, and personal needs
- Cross training for essential information technology professional positions must be in place to prevent the disruption of critical systems and the timely accomplishment of priority projects

PROPOSED WORK SCHEDULE FOR SYSTEM IMPLEMENTATION

December 7, 2001	Draft of information technology personnel system for ISU presented to the provost
	Report of KPMG Consulting, Inc. team received by president and provost concerning the information technology mission and information technology organizational and administrative functions at ISU
December 19, 2001	Provost presents draft of information technology personnel system and list of information technology professionals to president and executive staff; proposed personnel system approved by vote of the vice presidents for full implementation on July 1, 2002
January 1, 2002	Human Resources assumes responsibility for recruitment and hiring of information technology professionals using new personnel system policies and procedures
January 14, 2002	President and provost appoint an interim information technology job evaluation team (IT-JET) to serve until June 30, 2002 during personnel system implementation phase
	Interim IT-JET begins development of proposed list of all information technology professional positions
	Development of information technology career pathing plans begin
February 15, 2002	List of all information technology professional positions completed and distributed to division vice presidents for review and comment
February 22, 2002	Supervisors begin preparation of position descriptions for all information technology professional positions using information technology professional career group classification system
March 8, 2002	Position descriptions for all information technology positions presented to interim IT-JET for review and recommended classification
March 22, 2002	Evaluation of all information technology professional positions completed and each position fit into the comprehensive information technology personnel system
	Review of the skill sets, qualifications, industry certifications of each individual in all information technology professional positions begins
April 5, 2002	Information technology career pathing plans completed
	Information technology professional retention plan and cross training plan proposed
April 26, 2002	Review of each individual in every information technology position completed
	Specification of individual professional development plans for appropriate information technology professionals begins
May 6, 2001	Information technology professional market comparisons completed
	Information technology professional compensation system proposed and budget implications developed
July 1, 2002	President and provost appoint IT-JET
	New information technology professional job titles and classifications take effect
	Professional development activities for information technology professionals initiated

PERSONNEL SYSTEM ELEMENTS

The personnel system elements described in this document and presented in Appendices A through G are designed to address the unique issues surrounding recruiting, developing, and retaining employees who provide information technology expertise and service to the ISU community. Information technology is a career field that is rapidly changing and requires those in the field to be constantly updating their knowledge and skills. It is also a highly competitive career field for those who remain current in their field of expertise.

Information Technology Professional

An explicit definition of an *information technology professional* is presented in Appendix A. When applied to all employees of ISU, this definition will identify those to be included within the information technology professional personnel system.

Recruitment

The recruitment plan presented in Appendix B is designed to provide a method of quickly responding to employment needs while maintaining the university's diversity objectives. It provides a centralized employment administration function located in the Office of Human Resources (HR) that interacts efficiently with the operational department's staffing requirements.

Employee Career Development

Training and Career Development Plan

An individual training and development plan will be developed for each information technology professional. It is to be a collaborative effort between the employee and the supervisor with assistance available from HR. The plan will incorporate immediate, short-term, intermediate, and long-range needs and goals. The plan will be reviewed at least annually.

Career Progression

Career development, progression, and planning are responsibilities shared by both the employee and the immediate supervisor. Employees are encouraged to work proactively with their supervisor to plan the activities and functions that will lead to competency development and career progression. Employees are encouraged to set and follow through with training and development goals.

Employees are encouraged to communicate openly and frequently with their immediate supervisor to meet competency development goals. At a minimum, training, development, and career progression are discussed annually as part of the performance appraisal process. An unofficial meeting during the performance cycle is encouraged to facilitate communication between supervisors and employees about current performance, progress toward competency development and career plans.

Employees may take advantage of opportunities for on-the-job training, formal training, performing higher level duties, applying for position vacancies that expand on their knowledge base, and other opportunities to demonstrate increased competencies.

To support career progression in as equitable a manner as possible, supervisors, managers, and directors will announce opportunities within the work area that will allow interested and qualified employees to

benefit from internal competency development opportunities. Qualified internal candidates will be given the first opportunity to apply for vacancies that occur.

Through demonstrating increased competencies employees increase their value to ISU and become eligible for salary increases. The underlying philosophy of the program is to reward performance and productivity among current employees.

Training and Retention

The level of investment in training for individual information technology professionals may be substantial. For example, the cost of obtaining certification as a Microsoft Systems Engineer or a Novell Network Engineer is typically near $10,000, and the investment of time away from the job may reach 100 or more hours. It is not unreasonable to suppose that the university attempt to recoup some of the costs of specialized training opportunities offered to information technology professionals by requiring the individual to remain employed with the university for a reasonable period after the completion of the training: namely, 18 months for training that exceeds $5,000 in cost. Employees who fail to meet the retention period stipulation would be required to repay the cost of the training according to a schedule based upon the number of months employed if it is less than 18 months. A proposed information technology training retention contract is presented in Appendix C.

Job Classification System

The information technology classification system includes positions in the computing infrastructure, data and voice communications, media, and academic and department-based technology. Each class includes the multiple information technology disciplines of data, voice, and video technologies.

Positions classified within information technology are directly responsible for developing, providing, integrating, or supporting information technology-based solutions and systems. The system is intended for positions whose primary functional purpose and requisite skill sets are information technology-based.

In determining whether a position is appropriate for an information technology class, the following questions are important to consider:

- What is the primary functional purpose of the position? Is it to develop, provide, or support technology-based solutions or systems, or does it use these systems as tools to achieve results?

- What are the critical skill sets to perform the position's responsibilities? Are the primary skill sets information technology-based? What is the relative importance of subject matter expertise in other functional areas?

Information Technology Professional Career Groups

The classification system for information technology professionals will comprise six classes representing distinct career groups:

- Class 1: Applications Analyst
- Class 2: Operating Systems Analyst
- Class 3: Network Analyst
- Class 4: Operations Specialist

- Class 5: Equipment/Application Specialist
- Class 6: Information Technology Analyst

The classification system also includes a seventh class representing an information technology managerial career group:

- Class 7: Information Technology Manager

And an eighth class representing an information technology executive career group:

- Class 8: Information Technology Executive

Detailed descriptions for each of these seven classes are presented in Appendix D. The system is structured to meet continuing changes in information technology and organizational structure. Work within each class is organized into class concepts/functions with typical duties and competencies/skills. Additionally, a position may have cross functions and project/lead functions assigned to meet specific university needs.

The essential components of the information technology classification system are defined in the following sections.

Class Concepts/Functions

Each of the six classes has identified concepts/functions. A concept/function is a major category of work within each broadly defined class. Each concept/function includes descriptions of typical work activities and core technical skills without regard to value or skill level. A position in an information technology class has the majority of its ongoing work assignments in one or more of the concepts/functions defined for that class; however, work assignments from a related class in the information technology series may also be included.

Cross Function

Cross functions are work assignments outside of the class where the majority of work is performed. They are core functions from another class within the information technology series that may be used to promote skill development or meet unique department needs.

Project Coordination/Lead Functions

Project coordination/lead functions include responsibilities for technical coordination of projects or providing work direction to others. These responsibilities are in addition to those included in the core skills and concepts/functions of the individual class. Assignment of these functions will be based on the following criteria:

- **Technical Project Coordination:** The project assignment must include the full scope of responsibility and accountability for a technical project including feasibility studies; project design and planning; ongoing resource, materials, and time management; and implementation. The project must have a tangible, measurable outcome, duration of six months or more, and a scope that is moderately complex to complex involving interdepartmental and multidisciplinary coordination.

- **Lead:** Lead work assignments must include direction to ongoing regular administrative, technical, or professional staff (this excludes student assistants). Lead work direction must

include the full scope of responsibilities: evaluating and setting work priorities; scheduling and assigning work; reviewing work against standards and providing performance feedback; and determining training needs and training staff.

Skill Level Definitions

Appendix E presents definitions of three broad skill levels for the information technology classification system. These skill level definitions can be applied to all of the seven classes within the job classification system, generating a matrix of classes and skill levels. The factors used to determine different skill levels include technical expertise, critical thinking skills, and interaction capabilities. A position is placed at a skill level based on the skill requirements of the position. An individual may be working at different skill levels in various work assignments or skill dimensions; however, the overall skill level determination is based on where the majority of the skill requirements fall in the skill level continuum.

Classification Process

The classification process requires an analysis of both a position's work assignments and the skills required to perform the work. The essential steps in the classification and skill level determination process are:

- Review the position's primary work assignments and categorize them into appropriate core functions. The position is then assigned to one of the six classes in the information technology series based on where the majority of work assignments fall.
- Identify work assignments that fall outside of the designated class. If appropriate, these work assignments may be categorized as cross functions or project coordination/lead functions.
- Identify the skills necessary to perform all work assignments and determine the appropriate skill level based on the total set of skills required for the position compared against the skill level definitions.

An information technology job evaluation team (IT-JET) will be established. This panel of seven employees will review all position descriptions and all position analysis questionnaires for all for EAP and support staff positions to determine the appropriate information technology professional class and skill level to recommend to the chief information officer and appropriate vice president. A majority of the panel members will be information technology professionals. A proposed position description for information technology professionals is in Appendix F, together with a completed example for an information technology analyst. Appendix F also presents a proposed supplemental position analysis questionnaire for information technology professionals.

Salary Structure

The salary structure is designed to support the personnel system's broader concept of information technology work, as exemplified by the classification system, and the broader view of the job, as exemplified by the competency levels. The shift to broader classes and levels in the information technology professional job classification system requires a change to broader salary ranges.

Pay Range for Each Class

The information technology professional salary structure is composed of a broad pay range for each class (see Appendix G). Minimum, midpoint, and maximum pay rates will be established for each class pay range with no interim steps. Each competency level within an information technology professional class has its own minimum-to-maximum internal range defined.

The pay ranges will be developed and maintained using salary survey data that include public and private sector employers, both educational and business. Market surveys will be conducted periodically, and other market data evaluated, to ensure that pay ranges remain market competitive.

The internal competency ranges are calculated similarly for each class pay range. The Skill Level 1 internal range is equal to 25% of the entire class pay band. The Skill Level 2 internal range is equal to 80% of the entire class pay band and is anchored around the range midpoint. In addition, the Skill Level 3 internal range is equal to 30% of the entire class pay band. No employee will be paid less than the pay range minimum for his or her class.

The internal ranges corresponding to competency levels serve as a guide for pay decisions, such as annual equity adjustments and starting pay for new hires. They are not a guarantee of pay nor do they imply a minimum rate of pay.

The 80% internal pay range for Skill Level 2 has the advantage of giving most employees access to a large portion of the pay range with less likelihood of "capping out" in pay.

The internal salary ranges overlap adjoining internal ranges. The overlap with a lower competency range recognizes varying entry skills and capabilities and provides promotional opportunities. The overlap with a higher competency offers continued recognition for performance of increasingly complex or diverse work assignments at the lower competency level while advancement to the higher level might not yet be appropriate.

Progression through the Salary Structure

Progression through the pay ranges occurs primarily because of individual performance-based increases, acquiring and applying higher-level competencies, and salary changes from technical certification.

Acquiring and applying higher-level competencies can result in pay changes even without formal advancement to a higher competency level. The ability to perform higher-level work can be demonstrated by being assigned work that is more complex, project coordination, or lead work functions.

Formal recognition of competency advancement occurs when an employee has met the criteria for the higher-level competency as described by the competency determination criteria. This is done as part of the annual performance review in order to give the supervisor and employee a full performance cycle to ensure that the advancement to a higher competency level is appropriate. Management reserves the right to determine the need for positions at higher competency levels.

Progression through the pay ranges is affected by an employee's competency level and salary placement within the pay range. Within each class, the top of the competency level two internal pay range is a "control point." The use of control points in pay systems is common compensation practice and serves a number of purposes. Employees have access to almost all of their class's pay range before reaching the top of Skill Level 2 internal range. Above this point, it is more equitable and prudent to base salary increases on competency advancement to the Skill Level 3 level, both to encourage competency development and to reward employees who are performing the most complex work of the university.

On the annual performance, evaluation, Skill Level 1 and Skill Level 2 employees are eligible to receive base pay increases up to the top of the Skill Level internal range for their class. Skill Level 3 employees are eligible to receive base pay increases up to the maximum of their class pay range.

Employees who cannot receive the full annual increase as a base pay adjustment—because their salary is too close to the top of the Skill Level 2 internal range or too close to the pay range maximum, whichever is applicable—will receive a base pay adjustment up to the control point

Managers also have the flexibility during the annual performance evaluation to recommend to the CIO and the appropriate vice president salary increases in order to correct internal and external pay inequity. Because this pay structure is developed and maintained at a market competitive rate, it is unaffected by changes that may be made to the university's EAP classified salary structure.

Performance Management

Since the information technology compensation program is competency-based, the performance management process is closely linked to competencies. Three skill dimensions have been identified that are critical to successful job performance in information technology: technical expertise, critical thinking, and interactive skills. In general, performance planning, evaluation, and rewards are tied to the extent to which employees demonstrate the acquisition and application of these essential skills. Annual performance increases are variable to provide the flexibility to reward individual performance, recognize incremental changes in work complexity, recognize formal competency level changes, and to meet other compensation needs.

The performance plan sets individual performance expectations and establishes the training and developmental plan for the performance cycle. The performance groupings include the three critical skill dimensions—technical expertise, critical thinking, and interactive skills—as well as universal performance expectations. Technical expertise also includes supervisory skills for employees with supervisory responsibilities.

Performance Groupings and Attributes

The performance groupings and their attributes are as follows:

- **Technical know-how and supervisory skills:** Depth, breadth and integration of technical knowledge and skills
- **Critical thinking:** Problem solving, future and creative thinking, organizational and project management skills
- **Interactive:** Listening, communications, team and leadership skills
- **Universal performance expectations:** Customer service, safety, attendance, contribution to unit mission

As part of the performance plan, there is an annual review of employee training and development goals and objectives. Supervisors are encouraged to involve employees in making these plans. This is particularly important given the role that competencies play in employee career development.

Multi-source Assessment

Supervisors may choose to use feedback from peers and customers as part of the performance evaluation process. Authorization to use multi-source assessments is given by each Executive or IT Manager. If this optional program feature is used, Human Resources should be consulted to assist in assessment design.

APPENDIX A:

INFORMATION TECHNOLOGY PROFESSIONAL

An *information technology professional* is an administrative, professional, or support staff employee in any division and unit of ISU who:

- Manages, develops, provides or supports information technology based solutions or systems;
- Has 80% of his or her work assignment in computing infrastructure, data and voice communication, instructional systems design and development, broadcasting, academic and administrative systems, and programming technology; and
- Whose job function requires a skill set that is information technology based.

Examples:

Employees who perform, to the level indicated above, some, all or a combination of the following duties would be considered information technology professionals:

- Translates user system needs into technical solutions by writing applications software, integrating systems, and/or developing databases.
  - Systems analysis and development
  - Applications programming
  - Database administration
- Installs, maintains, and modifies operating systems, database management systems, utilities and related software.
  - Operating systems analysis
  - Database management system administration
- Plans, designs, engineers, programs, maintains and manages networks carrying voice, data and/or video transmissions.
  - Network design and implementation
  - Network administration and support
  - Network operations
- Provides consultation or training to faculty, staff, and students in the use of technology and the development of technological tools.
  - User consultation
  - Sole or lead department consultation
  - Responsible for installing, repairing, troubleshooting, maintaining, and/or modifying information technology equipment and/or systems which typically are integrated with larger systems.
  - Equipment/systems support
  - Applications support
  - Site administration
- Responsible for the operation, monitoring, and control of multi-system information processing or transmission equipment.

APPENDIX B:

EXTERNAL EMPLOYMENT PROCESS FOR INFORMATION TECHNOLOGY PROFESSIONALS

If the determination is made that a vacant position is not to be filled by the internal promotion or transfer process, the Office of Human Resources (HR) will be responsible for the recruitment of information technology professionals. Recruitment is defined as the process necessary to identify and refer those people who are qualified to be considered for employment. The process involves advertising, communicating, and coordinating the activities of the applicant and the hiring department. Two processes will be implemented for the positions that are included in this group.

Employees below the department head level

Authorization for HR to begin the recruiting process is the notification from the chief information officer (CIO) and the appropriate vice president's office that a position needs to be filled. This is normally done with an approved position request. The following activities will then take place.

- The HR recruiter will contact the department to determine the requirements of the position and the desired attributes of the person to fill the position.
- The recruiter, the affirmative action officer and the hiring official will review affirmative action objectives based on the requesting department, job title and salary grade. Objectives are set where there is under representation of members of affected groups in the university's work force. Affirmative recruitment efforts will be made in order to achieve affirmative action (AA) plan objectives.
- Appropriate recruiting sources will be discussed.
- HR and the department will determine the appropriate means to attract the applicants and contact will be initiated by the recruiter.
- Initial review of resumes and applications will been done by the recruiter and those applicants meeting the qualifications will be forwarded to the department for selection of those to be interviewed.
- HR will coordinate the arrangements with the applicants and the department and will be the university contact for the applicant about general information.
- Interviews will be conducted by the hiring department and others deemed appropriate for the position.
- Reference checks will be conducted by the hiring department and HR.
- The decision to hire must be approved by the chief information officer and the appropriate vice president's office.
- Salary offers are to be the result of discussions between the hiring department, the human resources department, the CIO, and the appropriate vice president's office.
- The human resources department will be responsible for maintaining applicant flow information and providing an analysis of recruiting sources that provide a diverse applicant pool.

Employees at the executive or department head level

Authorization for HR to begin the search process is the notification from the CIO and the appropriate vice president's office with an approved position request that a position needs to be filled. The following activities will then take place.

- Using the university's guidelines for the establishment of search committees, the human resources department will assist and coordinate, with the CIO and the appropriate vice president's office, the search for applicants.
- HR will identify recruiting sources, advertising, coordinating interviews, and reference checks.
- The decision to hire must be approved by the appropriate vice president's office and the CIO.
- Salary offers are to be the result of discussions between the hiring department, the human resources department, the CIO, and the appropriate vice president's office.

- The human resources department will be responsible for maintaining applicant flow information.

APPENDIX C:

PROPOSED INFORMATION TECHNOLOGY TRAINING RETENTION CONTRACT

This contract is entered into by and between Indiana State University information technology services (hereinafter referred to as "employer") and _____.

In consideration of the mutual exchange of services contained herein, the parties agree to the following terms and conditions:

A. As a condition of employment, the employer may choose to provide training to the employee for purposes deemed necessary by the employer. In return for such training, the employee will agree to continue employment with the employer for a period of 18 months following the completion of each training occurrence.

B. If the employee does not continue employment with the employer for a period of at least 18 months, as specified herein, the employee shall be liable for repayment in accordance with the following schedule:

Less than 6 months	70%
Six months to 1 year	40%
One year to 18 months	10%

C. Training repayment is contingent upon each training occurrence, which is an expense to the employer of at least $5,000 or more.

D. This contract will not apply to conditions in which the employee does not successfully complete the probationary period.

E. This contact may be canceled or terminated by the employer upon such cause as deemed sufficient.

F. Any modification or amendment to this contract shall be made in writing and approved by the parties thereto.

_____ _____

Employee Date

_____ _____

Employer Representative Date

APPENDIX D:

INFORMATION TECHNOLOGY PROFESSIONAL CAREER GROUPS

Class 1: Applications Analyst

Class Concept/Function

The majority of duties performed in this class include translating user systems needs (systems analysis and development) into technical solutions by writing applications software, integrating systems, and/or developing databases. Positions in this class typically *are not* involved in maintaining operating system software or providing hardware support as a majority function.

Positions in this class may reside in a central computing department, individual administrative departments, or schools.

Within this class, a full continuum of position complexity and incumbent competency from entry level to expert is represented. Within this class there will be positions of varying levels of technical complexity based on department needs. Positions may also function as *working* supervisors with a full range of permanent supervisory responsibilities or may act as team or project leaders. Positions may direct or supervise positions in this class or in other classes.

Typical Duties

The following are typical activities of positions in the Applications Analyst class. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this class has the majority of its ongoing work assignments in one or more of the following functions.

Typical Systems Analysis and Development Functions

- Analyze user system and application needs, determine and evaluate alternative solutions and approaches to meetings those needs, and select the optimal technology solution
- Consult with users to identify and document software/system purpose, work flow issues, output needs and to determine overall system requirements and specifications.
- Conduct feasibility studies.
- Evaluate the procurement of third party software and troubleshoot new software installations.
- Develop specifications and requirements for the optimal integration of systems and equipment and evaluate requirements against available systems.
- Design fully integrated systems that may include applications, databases, networks, and related systems.
- Develop program specifications and review them with the user to ensure that requirements are met.
- Design user-friendly interfaces to systems, applications, and databases.
- Recommend modifications to third party software to meet user needs.

- Act as a software vendor liaison.

Systems analysis core skills:

- Ability to use systems work flow and logic flowchart techniques.
- Knowledge of formal data flow analysis methodologies.
- Ability to apply and use operations analysis and structured design analysis techniques.
- Knowledge of campus-defined systems, applications, and standards.
- Ability to identify hardware/software interface problems.
- Knowledge of system/equipment capability, design restrictions, and security requirements.
- Knowledge of system development life cycle and structured systems development concepts.
- General knowledge of network connectivity, integration, configuration, and protocols.
- Understanding of and ability to integrate all systems including operating systems, applications, network, and databases, as well as knowledge of distributed processing technology.
- Knowledge of client/server technologies.
- Ability to communicate effectively.
- Ability to apply consultative skills to assess user needs and communicate technology systems and solutions.
- Ability to perform systems and applications needs analysis, prepare requests for proposals, and conduct feasibility studies.
- Ability to use project management tools.
- Ability to research and evaluate the functionality of vendor software to meet user needs, assess vendor proposals, and serve as a technical/vendor liaison.

Typical applications programming functions

- Develop succinct, timely programming code that is logical and optimizes programming resources and meets user requirements.
- Work with users to test and debug programs.
- Write documentation to provide user support for new or modified programs and production/operations procedures.
- Maintain and support assigned systems to ensure minimal downtime and loss of productivity and service.
- Evaluate and enhance the efficiency of existing programs in meeting current and future user needs.
- Maintain and support associated databases.
- Install new, modified or third party software releases and/or updates.
- Evaluate and supplement vendor supplied documentation for third party software.

Applications programming core skills

- Ability to use one or more industry standard programming languages and various report/screen generators as required by the position.
- Ability to use applications software, data structures and utilities, operating systems, and communication interfaces within the computing environment.
- Ability to perform interactive debugging and to test and analyze program failures.

- Knowledge of structured programming techniques and the ability to use appropriate productivity tools to provide for more rapid development of applications.
- Ability to write/modify programs using multiple applications and databases.
- Ability to develop program implementation plans, install software, and apply fixes.
- Understanding of technical and vendor documentation and ability to maintain internal documentation.
- Knowledge of network configuration, programming, and protocols.
- Specialized skills in new systems and programming technologies.

Typical database administration functions

- Structure and implement database to optimize data access and security.
- Design database systems and programs which include access methods, access time, file structure, device allocation, validation checks, and statistical methods.
- Work with user community to understand data access and integration needs.
- Ensure the integration of systems through the database structure.
- Monitor database standards and procedures, system usage and performance.
- Troubleshoot and resolve database and data problems.
- Develop and administer disaster recovery plans.
- Ensure data and its sources are accurate and easily accessible to the user community.
- Monitor, analyze, and verify data to ensure data integrity; develop assigned databases to support specific applications.
- Maintain the database archives by acquiring and installing data sets and documentation. • Assist in data transfers or sharing of files.
- Develop policies and procedures to access or interact with remote resources.
- Conduct file maintenance.

Database Administration core skills

- Knowledge of formal data structure design, relational database design, and file structure.
- Ability to design data structures to maximize efficiency and flexibility.
- Ability to perform database maintenance tasks, develop access routines, and maintain dictionary.
- Knowledge of data administration principles and data modeling concepts.
- Ability to identify and resolve software/hardware interface problems, data requirements, and access methods.
- Ability to establish and execute data security standards and procedures and disaster recovery plans.
- Knowledge of distributed processing and client/server technologies.
- Ability to perform database backup and recovery procedures as part of database management system utilities.
- Ability to use data resource and productivity tools applicable to the database management system.
- General knowledge of network configuration, programming, and protocols.
- Ability to provide database support in a multiple hardware platform and operating system environment.

- Ability to work and communicate with users to define and meet database needs and requirements.

Qualifications Guide

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary. Incumbents in this class will typically possess knowledge and/or applied skills and abilities in systems development and analysis; systems integration including operating systems, applications, networks, and databases, as well as knowledge of distributed systems and client-server technologies; formal data structure design, relational database design, and file structure; applications software; operating systems and utilities; communication interfaces; interactive debugging and testing; and identifying and resolving software/hardware interface problems. Depending on department needs and the specific work assignment, a working knowledge of specific industry standard applications programming languages and report/screen generators, advanced knowledge of systems analysis and design, and/or supervisory or significant project management experience may be required.

Class 2: Operating Systems Analyst

Class Concept/Function

The majority of duties performed in this class include installing, maintaining, and modifying operating systems, database management systems, utilities, and related software. Other essential duties include ensuring the availability, integrity, and reliability of assigned systems. Positions in this class are primarily responsible for large-scale operating systems and database management systems that typically serve the entire campus. Positions in this class typically *do not* write applications software as a majority function.

Positions in this class will exist only in a central computing department or large administrative departments or schools that have responsibility for their own internal operating systems or database management systems *and* where the operating system(s) or database management systems are sufficiently complex in terms of technical support and administration required.

Within this class, a full continuum of position complexity and incumbent competency from entry level to expert is represented. Within this class there will be positions of varying levels of technical complexity based on department need. Positions may also function as *working* supervisors with a full range of permanent supervisory responsibilities or may act as team or project leaders. Positions may direct or supervise positions in this class or in other classes.

Typical Duties

The following are typical activities of positions in the Operating Systems Analyst class. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this class has the majority of its ongoing work assignments in one or more of the following functions.

Typical operating systems analysis functions

- Ensure operating systems software is properly installed, tested, and tuned to maximize operating efficiency.

- Develop and implement plans for fully integrated systems, including operating systems, network systems, database systems and applications.
- Develop plans, schedules, and requirements for the installation and maintenance of new and/or revised software.
- Install, configure, and tune operating system software for optimal performance. Integrate operating systems with other systems.
- Evaluate and recommend hardware and system software procurement.
- Assess the impact of new software on existing systems and users and develop modification plans as needed.
- Plan and implement modifications and upgrades to system configurations to improve utilization based on analysis of application and production requirements.
- Plan system capacity and develop expansion plans.
- Allocate and organize data storage.
- Write and develop efficient software and code for operating systems.
- Develop system utility programs and procedures to enhance operations, applications, and general system usage.
- Document operations procedures and installation methodologies and modifications.
- Evaluate level of systems operations and recommend measures to improve overall performance.
- Conduct analytical studies of system processing time and resource capacity, measuring system performance against predetermined or standard benchmarks (e.g., operating time, error rates, and types).
- Determine system compatibility and performance, and impact of integration with new systems or upgrades.
- Perform analysis, testing, and/or simulation of equipment and software configurations.
- Research and identify system expansions to meet anticipated future workload.
- Monitor and maintain operating and related systems to ensure minimal interruption of production systems and to maintain system availability.
- Diagnose and resolve operating systems failures.
- Develop and execute test schemes and diagnostic procedures.
- Work with maintenance vendor to develop and implement solutions specific to the campus needs.
- Provide technical support to computer operations and applications programming staff to ensure availability of production and on-line systems.
- Analyze application failures and work with computer operations and applications programming staff to develop solutions.
- Provide guidelines for applications development structure and security.
- Develop, implement, and execute disaster recovery plans.
- Develop rules for system restoration.
- Evaluate the adequacy of controls and security measures.
- Provide procedures training and support.
- Assist in resolving production problems.

Operating systems analysis core skills

- Knowledge of internal operating system technology, computer operations and hardware, and network communications theory.
- Ability to use operating system languages as defined by the campus and ability to perform systems level programming in a distributed, networked environment.
- Ability to use performance monitoring software and interpret results.
- Ability to perform preventative and remedial maintenance to operating system(s).
- Ability to interface/integrate campus defined operating system(s) with software and other systems.
- Ability to evaluate existing and proposed systems and recommend upgrades and/or modifications.
- Knowledge of applications programming techniques and procedures.
- Understanding of job control and production procedures with an ability to troubleshoot and isolate production problems and applications code.
- Ability to research and survey new products and/or releases, such as productivity tools.
- Ability to establish and document operations procedures.
- Knowledge of network operating system and network architecture, configuration, and protocols.
- Knowledge of client server technologies.

Typical database management system administration functions

- Ensure that database systems are well managed.
- Install, structure, tune, and maintain database management systems and software on mainframe and/or mini-computers.
- Manage database organization and data storage.
- Monitor database system usage and performance.
- Troubleshoot and resolve database problems.
- Create database and/or migrate database between machines.
- Support client/server database access tools.
- Develop benchmarks for testing new software releases.
- Provide consultation to programmers on relational database design.
- Oversee vendor software fault resolution.
- Run checks on data integrity.
- Develop system backup and archival methodology.
- Maintain data security and integrity by developing system access standards and procedures.
- Work with users to understand their security needs and evaluate level of security required.
- Conduct virus avoidance procedures.
- Design data storage capacity to provide for efficient and timely response and operating time.
- Calculate data storage media and cost alternatives.
- Specify sources and methods of data storage.
- Plan for efficient allocation of system storage capacity.

Database management system administration core skills

- Knowledge of system management and security/control procedures.
- Knowledge of database design, structure development, features, operations, programming, and data access principles.
- Knowledge of data communication network architecture, configuration, protocols, and interfaces.
- Knowledge of operating systems and storage capacity, including ability to perform capacity planning.
- Ability to identify and implement critical maintenance fixes and to isolate and correct malfunctions, including interface problems.
- Ability to develop and execute disaster recovery plans.
- Ability to establish data security standards and procedures.
- Ability to tune database systems and maintain database software.

Qualifications Guide

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary. Incumbents in this class will typically possess knowledge and/or applied skills and abilities in internal operating system technology, computer operations and hardware, systems analysis, systems level programming in a distributed networked environment, job control and production procedures, network operating system and architecture, client-server technologies, and database design. Depending on department needs and the specific work assignment, supervisory experience or advanced project management, systems analysis and design, programming, and/or database design and management experience may be required.

Class 3: Network Analyst

Class Concept/Function

The majority of duties performed in this class involve support of voice, data, and/or video networks in differing stages of development, maintenance, and modification. Specific duties will vary according to the life cycle and the technical complexity of the network and associated hardware and software. The range of duties may include the planning, design, engineering, programming, maintenance, and management of networks. Networks may include wide area, local area or comparable transmission networks, but positions in this class typically do not provide day to day support of local area networks as a majority function. Positions in this class are primarily responsible for the design and implementation of networks as opposed to service coordination of externally developed and owned systems.

Positions in this class typically reside in a central computing department, instructional media areas, or in the telecommunications department. Network Analyst positions may also be located in administration or academic departments based on need and the complexity of the network system.

Within this class, a full continuum of position complexity and incumbent competency from entry level to expert is represented. Within this class there will be positions of varying levels of technical complexity based on department need. Positions may also function as *working* supervisors with a full range of permanent supervisory responsibilities or may act as team or project leaders. Positions may direct or supervise positions in this class or in other classes.

Typical Duties

The following are typical activities of positions in the Network Analyst class. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this class has the majority of its work assignments in one or more of the following functions.

Typical Network Design and Implementation Functions

- Plan, design, and engineer network installations to meet information processing and traffic needs.
- Develop systems and/or network configurations, including hardware, software, and integration requirements.
- Determine network architecture, topology, and transmission media appropriate for the installation.
- Develop/recommend network standards and protocols.
- Design networked facilities (e.g., studios, classrooms, teleconference facilities).
- Evaluate user needs, systems, and new technologies to recommend the most effective communication and transmission systems.
- Research and evaluate network/systems, performance capacity, and compatibility with existing systems.
- Analyze and recommend system elements such as system cabling and software and expansion capacity.
- Coordinate network development activities with systems as appropriate.
- Act as the technical liaison for network product or system vendors.

Network Design and Implementation Core Skills

- Knowledge of network architecture, configuration, protocols, and interconnectivity requirements for internal/external information transmission.
- Ability to use engineering techniques in the design of network and transmission systems.
- Computer/video skills on specific applicable hardware and software; understanding of system functionality and components.
- Specialized vendor training or licensing to met a specified departmental need.
- Ability to interpret data on system usage and develop engineering specifications to support changing service levels.
- Ability to interpret and apply broad regulatory standards and technical specifications to assignments.
- Ability to monitor and manage vendor relationships to ensure responsiveness and quality.

Typical Network Administration and Support Functions

- Administration of assigned network to optimize services and access to telecommunications and related networks.
- Install, configure, maintain, and support network equipment and network operating systems (e.g., routers, bridges, servers, switches, and/or port connectors).
- Provide (or order) network connectivity, ensuring appropriate integration of data, voice, and video networks.
- Recommend and modify network configuration to improve efficiency and cost effectiveness.
- Configure network and/or third party software application programs to provide improved response time, quality, or cost effectiveness.

- Recommend network database policies and procedures.
- Ensure that the network is operational and appropriately integrated for access with other systems.
- Customize or develop reports from network control or billing databases.
- Develop interface programs.
- Ensure compliance with industry regulations (e.g., FCC) and with industry and campus standards.

Network Administration and Support Core Skills

- General knowledge of telecommunication network design, topology, systems interface, and protocols to meet support requirements.
- Understanding of telephone switching technology support, data/video communications, and transmission media and their performance capabilities.
- Knowledge of telecommunications and video industry standards.
- Ability to use specified software application packages and query, utility, or report generation features and database systems.
- Ability to translate user-defined requirements into telecommunication specifications and features.
- Ability to install network subsystems and to modify local, customized software programs/features (e.g., voice mail, electronic mail, and telecom features).
- Ability to interpret variance reports and resolve connectivity, traffic, and congestion problems as they affect services provided.
- Knowledge of communication transmission technologies (e.g., circuit and packet switching, satellite uplink, etc.).
- Knowledge of network traffic and performance parameters to interpret variance and service impact to users.
- Ability to analyze network/systems problems using appropriate test structures and related diagnostics (e.g., protocol analyzer, T-bert analyzer, spectrum analyzer, etc.).
- Ability to operate applicable network equipment and application software programs.
- Understanding of information distribution systems access and security systems (e.g., e-mail, digital voice processing equipment, electronic media distribution systems, etc.).
- Ability to resolve impaired service conflicts.
- Understanding of connectivity, system integration, and traffic issues.
- Ability to determine most cost-effective structure and design for network.

Typical Network Operations Functions

- Analyze and monitor network activity to ensure optimal network operation.
- Monitor network traffic, usage, and performance.
- Assist in monitoring network database integrity.
- Run diagnostics to forecast performance thresholds.
- Perform analysis of network efficiency (e.g., channel, trunks, etc.) and traffic routing and troubleshoot system failures, referring to vendor or technicians as appropriate.
- Maintain network security and implement disaster recovery procedures.
- Perform file conversions and system backups.
- Ensure adequate inventory of network supplies.

Qualifications Guide

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary. Incumbents in this class will typically possess knowledge and/or applied skills and abilities in technical information network systems, telecommunications and transmissions technologies, including network architecture, topologies, protocols, programming applications and interfaces appropriate to the defined work area and assignments. Depending on department needs and the specific work assignment, a background and/or vendor training or licensure in computer operating systems, broadcast network functions, or telecommunications switching systems may be required. Position assignment also may require significant experience in supervision, project management, advanced network systems analysis and design, and/or advanced telecommunications systems experience.

Class 4: Operations Specialist

Class Concept/Function

The majority of duties performed in this class involve the operation, monitoring, and control of multisystem information processing or transmission equipment. Types of systems and equipment supported may include mainframe consoles, on-line terminals, peripheral equipment (e.g., tape drives, printers), micro/mini computers, super computers, network devices, file servers, telecommunication systems and devices, and media production and broadcast equipment. Positions in this class typically *do not* install, repair, or maintain equipment or devices; they may, however, provide telephone help-desk problem diagnosis. Positions may also modify systems in the production process.

Positions in this class typically reside in central computing, telecommunications, network, or media operations. In some cases, this class may be found in administrative or academic departments where complex, integrated systems have been developed independent of centralized operations requiring dedicated technical operations support staff.

Within this class, a full continuum of position complexity and incumbent competency from entry level to expert is represented. Within this class there will be positions of varying levels of technical complexity based on department need. Positions may also function as *working* supervisors with a full range of permanent supervisory responsibilities or may act as team or project leaders. Positions may direct or supervise positions in this class or in other classes.

Typical Duties

The following are typical activities of positions in the Operations Specialist class. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this class has the majority of its ongoing work assignments in the following functions:

- Operate multiple systems (e.g., mainframe consoles, peripheral equipment, telecommunications devices, broadcast equipment), and/or operate and monitor network devices (e.g., multiplexors and router, file and print servers, port selectors, and other communication devices), and/or operate media origination and transmission or broadcast equipment (e.g., video recorders, cameras, switches, modulators, transmitters).
- Verify systems and network availability, and respond to error messages.

- Monitor overall system or operation performance, utilization, and response time. Calibrate, adjust, and align equipment.
- Perform backup/recovery procedures.
- Ensure that operations documentation and procedures are accurate and current, and maintain event log.
- Maintain user accounts.
- Update system messages.
- Maintain line location records.
- Ensure that physical equipment, systems, and data or products are secured and undamaged.
- Monitor authorization levels for system access and/or equipment usage.
- Develop or recommend department security policies and procedures.
- Schedule computer jobs and maintain production run schedules. Prioritize or rearrange job/work order sequence to optimize efficient use of computing resources. Communicate with users on scheduling requirements and job status.
- Provide for network access and timesharing.
- Maintain quality assurance using appropriate test and system monitoring procedures.
- Identify system aborts and/or equipment failure and take corrective action.
- Reset malfunctioning lines or connections.
- Provide telephone help desk to conduct remote diagnostics of equipment or system failures.
- Obtain and interpret error messages. Determine if equipment and/or system problem is related to software, hardware, communications lines, or user-related. Determine points of equipment and/or program failure and work with analysts, specialists, or vendors to resolve. May guide users through remedial procedures. Request repair service or refer to appropriate technician as required.
- Ensure materials, inventory, records, storage, and distribution systems are properly maintained.
- Plan and implement methods for storage, retrieval, and processing or applicable materials and inventories.
- Initialize and prepare storage media (e.g., tapes, cartridges, film). Maintain library and archive storage.
- Provide electronic or physical distribution of instructional media to classrooms.
- Issue equipment loans to faculty and students.
- Provide video copying services.

Core Skills

- Knowledge of applicable system and related technical terminology, applications, features, and/or services.
- Ability to interpret applicable reference manuals and apply department procedures.
- Understanding of procedures for setting up and operating assigned systems and/or equipment.
- Ability to perform regular preventative maintenance and service on assigned equipment/systems, including ability to identify, solve, and prevent problems.
- Ability to use basic diagnostic and test equipment and interpret and document operations-related malfunctions.
- Ability to interpret system status reports and messages.

- Familiarity with network and operating system requirements.
- Ability to monitor and adjust environmental and security systems.
- Knowledge of production job flow and required inputs and outputs.
- Ability to interpret, communicate, and act on scheduled job/work orders.
- Ability to maintain work order and inventory record systems.
- Ability to run the material and/or equipment distribution function
- Ability to develop schedules for materials and personnel resources based on estimates of resource allocations.
- Demonstrated competence in service and/or product delivery.
- Ability to manipulate jobs, queues, timeshare sessions, or electronic distribution to meet client needs.
- Ability to interpret equipment/system output, detect errors, and take corrective action.
- Ability to use applicable procedural and/or application software.
- Demonstrated ability to work and communicate with users to effectively identify and efficiently meet their requirements.
- Knowledge of operating system and/or equipment features and ability to take appropriate action in response to system failures or inaccessibility.
- Demonstrated ability to perform remote diagnostics and ability to perform analysis and tuning of system.
- Ability to apply statistical techniques and simulation in measuring and resolving performance problems.
- Ability to use performance monitoring software and interpret results; basic knowledge of database management software.
- Ability to distinguish operational performance trends and recommend modifications to improve performance.
- Demonstrated ability to schedule and monitor projects and coordinate with others to achieve desired outcomes.

Qualifications Guide

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary. Incumbents in this class will typically possess knowledge and/or applied skills and abilities in applicable system and related technical terminology, applications, features, and/or services; production job flow and required inputs and outputs; information processing and/or transmission equipment; and reading and interpreting descriptive and quantitative information (e.g., technical manuals, equipment diagrams, and specifications). In addition, a basic knowledge of mathematics and written and oral communication skills is necessary to communicate and document operational information. Depending on the specific work assignment, supervisory experience of a multi-shift data processing operation may be required.

Class 5: Equipment/Applications Specialist

Class Concept/Function

The majority of duties performed in this class are in one or more of the following technical areas: providing support for information technology equipment and/or systems (e.g., computer and peripheral equipment**,** telecommunications and network devices, audio and video equipment, and related transmission equipment and systems) which typically are integrated with or interconnected to larger systems; providing user application support by developing software solutions using PC-based and/or mainframe applications and database management systems or by modifying existing software programs; and site administration of technology-based facilities.

Positions in this class typically *do not* independently perform network planning, design and engineering functions. They do, however, assist with implementation and other basic network functions, such as recommending equipment purchases, modifying system configuration, changing system/equipment specifications, assigning passwords, defining attached devices, performing backups, etc. Positions in this class *do not* independently perform applications planning, design, and engineering. They may, however, use software packages (such as statistical, database and spreadsheet applications) to analyze and manipulate data. Positions in this class *are not* responsible for laboratory, medical, scientific, civil engineering or other non-information technology equipment, machines, devices or instruments.

Positions in this class typically reside in a computer center, telecommunications, multimedia, and administrative or academic department.

Within this class, a full continuum of position complexity and incumbent competency from entry level to expert is represented. Within this class there will be positions of varying levels of technical complexity based on department need. Positions may also function as *working* supervisors with a full range of permanent supervisory responsibilities or may act as team or project leaders. Positions may direct or supervise positions in this class or in other classes.

Typical Duties

The following are typical activities of positions in the Equipment/Applications Specialist class. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this class has the majority of its ongoing work assignments in the following functions:

Typical Equipment/Systems Support Functions

- Install, repair, troubleshoot, maintain, and/or modify information technology equipment and/or systems.
- Ensure that equipment and systems in assigned areas are in good condition and are properly maintained.
- Perform equipment and system set up (including necessary interconnections) and performance monitoring.
- Maintain and repair media/video production equipment systems and facilities.
- Provide technical set up of teleconferencing systems.
- Maintain technical shop facilities, inventory, repair logs and/or work order systems.
- Diagnose equipment and/or system malfunctions and perform corrective action.
- Research system/equipment malfunction history.
- Analyze and adjust equipment to restore proper operation.
- Coordinate repair, maintenance and/or equipment or system modifications through vendor resources.

- Repair voice and data circuit problems.
- Test and configure equipment and/or systems following service procedures.
- Assist in planning and implementing installations and/or facility layouts.
- Assist with determining routing and placement of cabling, wiring, etc.
- Perform physical installation (e.g., wiring, cables, microwave/satellite communications modules, components, and necessary interface cards).
- Document and/or log equipment and/or system installations and/or modifications.
- Act as vendor liaison.
- Move or relocate equipment.
- Plan, estimate, and order equipment and materials necessary for project completion.
- Construct multimedia production sets (e.g., lighting systems, monitors, displays).
- Configure systems to optimize operations, meet connectivity needs and future expansion requirements.
- Recommend equipment/system configuration and interface alternatives.
- Participate in system enhancement and equipment evaluation and planning.
- Prepare equipment purchase recommendations and cost justification.
- Reconfigure and test newly installed systems.
- Provide PC/workstation support for hardware and systems software interfaces.
- Install and configure standard operating systems and integrate them with related systems.
- Ensure system integrity between hardware and operating systems.
- Troubleshoot errors in system operations and related networks.
- Perform software and hardware modifications.
- Maintain and support hardware and software for stand-alone systems.
- Perform local area network (LAN) and systems backups.
- May administer and maintain a LAN, file server, network operating system and/or mainframe as a part of position duties.

Core Skills

- Ability to differentiate between hardware and software problems.
- Ability and manual dexterity to assemble components and parts, and/or cable or wiring, by reading and interpreting reference manuals and schematics.
- Familiarity with materials, methods, and techniques used in the completion of equipment service assignments. Adept at using required tools, including computer systems, to accomplish tasks.
- Knowledge of applicable industry and safety codes and/or standards that apply to work environment and equipment.
- May possess specialized vendor training or licenses as required.
- General knowledge of digital and analog theories (or relate technical areas) and ability to apply these in resolving equipment repair and system performance problems.
- Ability to use a variety of test equipment and diagnostic software to ensure system operation.
- Machine tooling capability and/or ability to work at the component level.

- Ability to physically install and configure equipment, connections, wiring, and cable as required working from layout or plans.
- Ability to read and understand technical manuals and related documentation for equipment/systems that interconnect with or interface to installed equipment base.
- Basic knowledge and ability to use operating system features and network protocols as applicable to equipment area. Able to use common package application programs.
- Basic knowledge of programming concepts; has the technical understanding to work with vendors and/or subject experts in system programming to isolate and solve equipment related problems.
- Ability to track system performance and ensure system/equipment reliability using knowledge of system/equipment operation thresholds and optimal performance levels.
- Ability to use specialized software utilities and features in assigned equipment, and install and configure standard software.
- Ability to create system layout and develop operating procedures.
- Familiar with cable and wiring standards as defined by the institution and industry standards and configure systems to meet requirements.
- Ability to prepare network diagrams or system schematics with an understanding of component functionality.

Typical Applications Support Functions

Provide user support for off-the-shelf software application programs, including installing, configuring, modifying and troubleshooting applications, and training users. Evaluate and recommend off-the-shelf software to meet user needs. May write applications or automated routines, or create other ad hoc applications solutions for users. Modify existing or third party software programs to meet user needs. Create, manage, or manipulate databases, using PC-based database software or mainframe database management systems/packages. Modify database report output according to user needs. Provide hardware and software training as needed.

Typical Site Administration Functions

Ensure lab, studio, classroom, and/or stand-alone systems are operational and secure. Coordinate multimedia components for lab or classroom use. Coordinate lab or media operations and projects. Schedule facilities use and ensure appropriate staffing. Establish facility security and operational policies and procedures. Ensure proper maintenance and support of assigned lab/classroom/stand-alone systems. Re-install damaged or deleted software. Troubleshoot errors in system operation and initiate repairs. Configure media components and/or local area networks (LANs). Administer site LAN including maintenance or related hardware and software. Maintain file/network servers and all lab stations.

Qualifications Guide

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary. Incumbents in this class will typically possess knowledge and/or applied skills and abilities in technical systems and equipment, electronic (digital and analog) theories, mechanical design, and the operation and use of the equipment and systems commonly utilized in the assigned area. Depending on department needs and the specific work assignment, supervisory experience may be required.

Class 6: Information Technology Analyst

Class Concept/Function

The majority of duties performed in this class are in one or more of the following technical areas: consultative support of hardware and/or software; multimedia development; and sole or lead positions in departments with responsibility for independently developing and maintaining their own integrated, diverse and complex information technology systems. Positions in this class may perform applications programming to accomplish some duties.

Positions in this class may reside in administrative or academic departments, schools, or central information technology departments.

Within this class, a full continuum of position complexity and incumbent competency from entry level to expert is represented, and positions typically assume varying levels of technical complexity based on department needs. Positions may also function as *working* supervisors with a full range of permanent supervisory responsibilities or may act as team or project leaders. Positions may direct or supervise positions in this class or in other classes.

Typical Duties

The following are typical activities of positions in the Information Technology Consultant class. Actual functions performed will differ from position to position and will be determined by specific work assignment. A position in this class has the majority of its ongoing work assignments in one or more of the following functions.

Typical User Consultation Functions

- Provide consultative, technical and training support and services to the user community to ensure problem resolution, system/data access, and optimal system performance.
- Assist users to develop or use applications and software packages and their features. Install, configure, and modify applications, networks, databases, and other systems.
- Act as a liaison between faculty, staff, students, and information systems resources and staff.
- Provide technical advice and expertise to faculty, staff, and students in the evaluation, selection, purchase, upgrading, and maintenance of software, hardware, and/or database system resources to meet user needs.
- Prepare requests for proposals, cost estimates, and justifications.
- Provide training and communication materials to users that maximize their ability to use system capabilities, features, and other resources.
- Develop and/or conduct training programs, lab/equipment orientations and demonstrations, and self-guided tutorials on equipment, applications, databases, and related systems.
- Write user documentation, user guides, instructor guides, training outlines, and technical training publications.

Core Skills

- Ability to apply consultative skills to assess user needs and provide appropriate support.
- Knowledge of information technology systems and/or applications, including campuswide systems and multimedia environments, access procedures, networks, and/or databases.

- Ability to integrate multiple applications and/or systems.
- Proficiency using standard software packages.
- Ability to analyze data requirements and research data availability and access methods.
- Knowledge of data administration principles and techniques.
- Knowledge of network administration.
- Ability to coordinate and implement data exchanges and conversions.
- Knowledge of training theory and practices demonstrated by an ability to develop and deliver technical training and user documentation.
- Demonstrated interpersonal and communication skills in working with users to interpret needs and provide appropriate solutions.
- Knowledge of statistical and/or research databases.
- Subject matter expertise in a specialized discipline or body of knowledge.

Typical Multimedia Development Functions

- Develop instructional and/or research techniques using technology to enhance and facilitate academic and educational objectives.
- Devise methods for integrating technical tools and applications into faculty instructional delivery and student projects.
- Develop models and prototypes for research projects using appropriate software packages, utilities, and product features.
- Develop coursework and curriculum software tools.
- Aid faculty in researching computing and media software materials.
- Conduct needs analysis and monitor instructional/research needs on campus.
- Create multimedia programs that meet academic and administrative goals.
- Develop and execute multimedia presentation proposals that incorporate appropriate technical and media elements.
- Develop detailed production plans for multimedia projects including staff, budget, facility, contracted services and production schedules.
- Develop multimedia and/or computer-based interactive instructional applications and materials that include such elements as moving video, sound, computer animation, and text for faculty use in classrooms and teleclassrooms.
- Function as a producer and director for multimedia projects ensuring coordination of all media and technical elements including narration, computer graphics, audio and visual effects, recording, mixing, and transmission as appropriate to the project.

Core Skills

- Knowledge of instructional design theories and methodologies and ability to apply them.
- Knowledge of database sources and large-scale computing and information resource networks.
- Knowledge of and ability to evaluate instructional software, courseware development, and multimedia applications.
- Ability to perform research design using statistical methodology and application resources.
- Knowledge of systems design and technology integration techniques.
- Ability to provide software development and programming support for instructional applications.

- Knowledge of user interface design principles and applications.
- Ability to develop and create multimedia/video productions.
- Demonstrated ability to work and communicate with users to effectively identify and efficiently meet their requirements.
- Ability to design, develop, and implement instructional applications.
- Subject matter expertise in a specialized discipline or body of knowledge.

Typical Sole or Lead Department Consultation Functions

- Work as the sole or lead information technology position in departments whose function or mission requires a full array of integrated, diverse and complex information technology, developed and supported independently of a central computer center.
- Such departments assume complete responsibility for on-going systems development, integration, maintenance, and support and require their own dedicated technical staff.
- Position functions typically include support of operating systems, applications, databases, networks, hardware, and/or software.
- Develop and implement plans for fully integrated systems.
- May write, test, and debug program code, including applications to permit or enhance systems integration.
- Determine impact of integration with new systems, upgrades, or software.
- Assist users to develop or use applications, software packages, networks, databases, and systems; provide technical advice and expertise.
- Act as department liaison to central information technology department.
- Troubleshoot system failures, referring to vendor or technician as appropriate.
- Maintain network and database security.

Core Skills

- Ability to apply consultative skills to assess user needs and provide appropriate support.
- Knowledge of information technology systems and/or applications, including campuswide systems and multimedia environments, access procedures, networks, and/or databases.
- Ability to integrate multiple applications and/or systems.
- Proficiency using standard software packages.
- Ability to analyze data requirements and research data availability and access methods.
- Knowledge of data administration principles and techniques.
- Knowledge of network administration.
- Ability to coordinate and implement data exchanges and conversions.
- Knowledge of training theory and practices demonstrated by an ability to develop and deliver technical training and user documentation.
- Demonstrated interpersonal and communication skills in working with users to interpret needs and provide appropriate solutions.
- Knowledge of statistical and/or research databases.
- Subject matter expertise in a specialized discipline or body of knowledge.

Qualifications Guide

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary. Incumbents in this class will typically possess working knowledge and/or applied skills and abilities in common software application packages, equipment platforms, database systems, training methods, network data communication, multimedia systems and applications, operating systems and hardware, instructional design theories and methodologies, and large-scale computing. Depending on department needs and the specific work assignment, advanced knowledge of information technology systems and applications, or supervisory experience, may be required.

Class 7: Information Technology Manager

Class Concept/Function

The majority of duties performed in this class include functioning as the senior administrative official in an information technology leadership role for a large section or team of an organization. Positions in this class typically manage operations by providing overall direction and guidance to one of the following areas: computer operations, applications development, operating systems, data administration, networking, or end user support.

Positions in this class are full-time managers rather than working supervisors and spend the majority of time managing and performing administrative functions. Positions frequently have subordinate managers and/or supervisors. Typically reports to an executive director or other senior information technology administrator.

Typical Duties

The following are typical activities of positions in the Information Technology Manager class. Actual functions performed will differ from position to position and will be determined by specific work assignment.

All positions in this class perform administrative functions as their primary responsibility, including:

- Reviews all project requests and coordinates schedules and related departmental activity.
- Assigns, reviews and evaluates work of subordinate staff and prepares performance reports.
- Prepares activity and progress reports.
- Controls revenue and/or expenses within an operating unit and has responsibility for meeting budget goals and objectives. Responsible for capital purchases, and long and short range planning.
- Provides input to policy level direction regarding standards, budget, constraints, etc.
- Evaluates and enhances the efficiency of existing programs in meeting current and future user needs.
- Develops and awards requests for proposals, negotiates and maintains vendor contracts, and assists in strategic planning and development.
- Advises management of concepts and capabilities of the responsibility area.
- Evaluates and forecasts staffing needs; hires subordinate managers and staff; determines or approves personnel policies and performance standards for the division or department.

In addition to administrative responsibilities, a position in this class manages one or more of the following technical functions.

Typical Computer Operations Management Functions

- Directs the operation of the organization's main computer facility, including operating systems, communications software and hardware, and the operations section.
- Plans, organizes and controls multi-shift computer operations section in the operation of the computer and peripheral data processing equipment for the organization's main computing facility. Functions include supervision of production control, operations documentation, personnel allocation, remote user work areas, held desk, and tape inventory system.
- Maintains mainframe hardware, plans capacity needs and develops operations procedures and disaster/recovery plans.

Typical Applications Development and Programming Management Functions

- Directs computer applications analysts and application programmers who are engaged in the full range of applications design, maintenance, and programming for several large and complex systems.
- Schedules, manages, and allocates resources to multiple programming projects.
- Responsible for all applications programming activities. Applications generally are large-scale administrative and/or clinical systems that support the entire organization or large segments of the organization, such as financial, human resources, payroll, student, patient care, diagnostic, patient billing, or similar systems and related interface software.
- Develops standards for all applications and provides technical guidance to the applications staff.
- Develops long-range programming plans and requirements, including needs assessment and software products evaluation.

Typical Operating Systems, Systems Analysis and Development Management Functions

- Manages all functions associated with large-scale computer operating systems and related software, including database management, system security and communications.
- Responsible for all software systems programming activities. Applications generally affect the overall operating system, such as sophisticated file maintenance routines, advanced scientific software, large telecommunications networks and computer accounting.
- Projects software and hardware requirements in conjunction with other information systems managers.
- Develops standards for all software system applications and provides technical guidance to the information systems staff.
- Directs the interface of software systems with the hardware configuration and the applications systems.
- Additional areas of responsibility include: configuration/capacity planning, software product evaluation, systems performance analysis and optimization. Develops long-range automation plans, including operating system release upgrades and capacity planning.

Typical Data Administration Functions

- Directs and controls the activities related to data planning and development and the establishment of policies and procedures pertaining to its management, security, maintenance and utilization.

- Provides effective and efficient storage, retrieval, customization, and archiving of data, managing multiple sets of data to assure an integrated data base system for all users.
- Responsible for maintaining data integrity as maintenance and modification projects to existing application are undertaken.

Typical Network Management Functions

- Responsible for all aspects of the daily operation for data, voice or video/audio network(s).
- Manages and coordinates the day-to-day planning, design, operations and maintenance of the voice, data and/or video/audio networks including client server support.
- Supervises and participates in network strategic and tactical planning, communications equipment evaluation, and communications equipment integration into the network; coordinates with customers, vendors and corporate management; responsible for department resource allocation.
- Interfaces with senior/executive management to coordinate network plans with organizations business plan.
- Manages the communications network system.
- Manages the design, implementation, and use of network software to configure network architecture, and test information for budget planning for data communications software and hardware needs.

Typical End User Support Management Functions

- Responsible for the integration of the microcomputer and/or minicomputer, work processing, mainframe, and telecommunication activities of the organization.
- Analyzes, develops and maintains software library.
- Provides support and direction for user groups in the selection and use of software/hardware systems and programs to support an integrated system.
- Maintains broad knowledge of cost-effective application of state-of-the-art data processing activities; monitors new and future developments in data processing.
- Coordinates the purchase, installation, maintenance, and consulting for the use of microcomputers.
- Responsible for the definition of the support environment, user needs analysis, hardware and software evaluation, departmental consultation, troubleshooting, and establishment of support controls.

Qualifications Guide

Specific qualifications including knowledge, skills, abilities and education will differ from position to position as work assignments vary. Incumbents in this class will possess knowledge and/or applied skills and abilities sufficient to perform the duties and responsibilities of their technical areas.

APPENDIX E:

INFORMATION TECHNOLOGY SKILL LEVELS

The following skill level definitions apply to all six classes within the series. It is important to note these definitions do not delineate entry requirements at each level, but are composites of the typical incumbent at each level. Entry qualifications are identified within each standard for initial entry into each class at Skill Level 1.

Skill Level 1

Incumbents at this level meet the entry qualifications as defined by the individual class. The incumbent may be inexperienced or have limited experience in the specific technical field, but usually possesses the general education, training, license, or certification pertinent to the body of knowledge encompassed by the technical specialty. Typically, the incumbent works under direct supervision and is able to demonstrate a basic understanding of the standard principles and terminology associated with the technical specialty, address common problems of limited scope, and demonstrate work-ready communication skills.

Skill Level 2

The career level is broad and includes intermediate through senior level positions. Incumbents at this level work relatively independently and possess the experience to be fully proficient in performing most or all of the work assignments defined for their position. Typically, incumbents have acquired the requisite skills and knowledge through a combination of education, training, and progressive work experience to be able to demonstrate competence in independently applying technical judgment to standard and nonstandard applications and systems, solving a wide range of problems and developing practicable and thorough solutions, and using effective communication and listening skills.

Skill Level 3

Incumbents at the expert level work almost completely independently on the most complex problems and work assignments. They possess an advanced and comprehensive knowledge of the technical specialty and a working knowledge of related specialties and are able to apply this extensive expertise as a generalist or specialist. Experts are proactive, understand problems from broad, interactive perspective, and are able to develop solutions that combine information and ideas in new, unprecedented ways. Incumbents at this level are capable of leading teams and implementation efforts for assigned projects using advanced communication and listening skills.

APPENDIX F:

PROPOSED IT POSITION DESCRIPTION FORM AND PAQ SUPPLEMENT FORM

Proposed Position Description Form

I. POSITION INFORMATION			
Classification:	(e.g. Application Analyst)	Position Title:	(e.g. Programmer Analyst)
Job Level:	(e.g. Level 2)	Pay Grade:	
Survey Title:	(e.g. Programmer Analyst II)	Department:	
Reports To (title):		Revision Date:	

II. BASIC PURPOSE AND SCOPE

III. RESPONSIBILITIES

	% of Time
1.	
Performs other related duties as required.	

The University reserves the right to add, delete, or otherwise alter assigned duties at any time. To perform this job successfully, an individual must be able to perform each duty satisfactorily. Reasonable accommodations may be made to enable individuals with disabilities to perform the functions. The minimum qualifications listed below are representative of the knowledge, skill, and/or ability required. The specific requirements listed may be waived at the University's discretion.

IV. MINIMUM QUALIFICATIONS

Required

A. Education:

B. Experience:

C. Skills:

D. Certifications/Licensing

Desired/Preferred Knowledge, Skills, and/or Abilities

V. POSITION DIMENSIONS

A. Employees Supervised

	Direct	Indirect
Exempt Full-time		
Exempt Part-time		
Nonexempt Full-time		
Nonexempt Part-time		
Student		

B. Impact on the University

C. Job Complexity

D. Working Relationships

Internal Contacts

External Contacts

E. Budget Accountability $

F. Equipment Used

G. Work Schedule

H. Working Conditions

I. Place within the University:

Manager (Title)

IT Peer Title	Non-IT Peer Title	IT Peer Title
Reporting Position	Reporting Position	Reporting Position

COMPLETED EXAMPLE

Position Description Form for Information Technology Analyst

I. POSITION INFORMATION

Classification:	Information Technology Analyst	Position Title:	Microcomputer/Network Consultant
Job Level:	Level 2	Pay Grade:	
Survey Title:	PC Specialist	Department:	User Services/Information Technology
Reports To (title):	Assistant Director, User Services	Revision Date:	

II. BASIC PURPOSE AND SCOPE

Responsible for providing microcomputing and networking end-user support services as requested by faculty, staff and students to enable them to more effectively and efficiently utilize the campus computing infrastructure and the computer resources available. This position performs moderate to complex problem resolution, evaluation, testing, and implementation of projects concerning current and future software applications, computing platforms or networks on campus.

III. RESPONSIBILITIES	**% Time**
1. Provide first level end-user support for hardware, software, and network problems and requests. Diagnose and resolve user software problems. Perform initial diagnosis of hardware and network problems and refer these to the appropriate staff. Install and troubleshoot software. Evaluate, test, maintain, and monitor dial-in technology and services. Monitor and report activities and status via internal tracking system.	65%
2. Maintain and monitor servers and their status. Provide administrative support for user accounts. Monitor and report activities and status via internal tracking system.	10%
3. Evaluate and test software packages intended for use in university labs, offices, and on the network.	10%
4. Create and publish documentation on use of software, hardware, and network services.	4%
5. Provide computer skills training to end-users on use of various software packages, computing basics and/or network services. Present Information Technology information overviews for campus orientations.	4%
6. Evaluate and advise on user or department's hardware and software needs. Perform computing needs assessments and requirements analysis. Assist in development of specifications for purchase of desktop systems and software. Recommend strategies.	2%
7. Performs other related duties as required.	5%

The university reserves the right to add, delete, or otherwise alter assigned duties at any time. To perform this job successfully, an individual must be able to perform each duty satisfactorily. Reasonable accommodations may be made to enable individuals with disabilities to perform the functions. The minimum qualifications listed below are representative of the knowledge, skill, and/or ability required. The specific requirements listed may be waived at the university's discretion.

IV. MINIMUM QUALIFICATIONS

Required

A.	Education:	B.A. or B.S.
B.	Experience:	Two years experience with a broad range of computing platforms, workstations, and their connectivity.
C.	Skills:	Strong problem solving and troubleshooting skills. Strong interpersonal and communication abilities. Fluent written and spoken English. Ability to "translate" between technical resources and non-technical staff. Proficient in use of standard Microsoft Office applications. Knowledge of desktop computer technology, Microsoft Windows operating systems, and networking.
D.	Certifications/Licensing:	A+, Network+, MOUS/Access/ Excel/Word

Desired/Preferred Knowledge, Skills, and/or Abilities

Degree in Computer Science or MIS. Critical thinking and strong technical aptitude. Service-oriented with an emphasis in quality assurance, process control, and process improvement. Self-motivated and self-directed.

V. POSITION DIMENSIONS

A. Employees Supervised

	Direct	Indirect
Exempt Full-time	0	0
Exempt Part-time	0	0
Nonexempt Full-time	0	0
Nonexempt Part-time	0	0
Student	0	0

B.	Impact on the university	Accountable for activities that have a significant impact on university operations. Requires interaction at various levels on matters affecting teaching, research, and administration of the university.
C.	Job Complexity	Required to assist in developing new, imaginative or innovative solutions, services, products, and programs. Duties are numerous, diverse, and include a variety of processes and work methods. Work requires conceptual and imaginative thinking in a highly complex and constantly changing environment.
D.	Working Relationships	
	Internal Contacts	Internal contacts include faculty, students, and departmental administrators and staff at all levels. Interacts to resolve problems and determine needs.
	External Contacts	External contacts include vendors associated with provision of hardware and software products and services.
E.	Budget Accountability	$0
F.	Equipment Used	Desktop and laptop personal computers; servers; personal productivity hardware

G. Work Schedule	Standard, with occasional periods where evening/weekend work is required.
H. Working Conditions	Requires lifting, bending, stooping, walking, and standing. Work may require an awkward or straining position to be assumed for short periods in lifting or handling heavy objects. Wear of safety equipment may be required. Must not have limitations on days of the week available for work.

I. Place within the University:

	Assistant Director, User Services Manager (Title)	
IT Peer Title	Non-IT Peer Title	IT Peer Title
Reporting Position	Reporting Position	Reporting Position

Proposed Position Analysis Questionnaire Supplement

Employee Name:	Primary Job Focus (Check the box or boxes that most closely describes your functional area)
SSN:	r Systems Development r Systems Maintenance r Operations r End-user Support r Evaluation of Office Computing Needs r Other r Planning
Department:	
Job Title:	
Position Start Date:	
Supervisor Name:	

Indicate below the number of end-users you support and the specific technologies you work with:

How many end-users do you support? Please describe: What specific technology or technologies (hardware and software) do you work with on the job? Please describe:

Indicate below the number of IT professionals you support and the specific technologies you work with:

How many IT professionals do you support? Please describe: What specific technology or technologies (hardware and software) do you work with on the job? Please describe:

Indicate below your current formal education level, information technology training taken, and professional certifications you hold:

What is your education level? Include your major course of study. What information technology training have you completed, other than through your major course of study? What professional information technology certifications do you currently hold?

Indicate below what other positions you held before joining the University (last 3)

Company Name	Position Title	Type of Work Performed	Years
1			
2			
3			

Indicate below what other positions you have held within the University (last 3)

Department	Position Title	Type of Work Performed	Years
1			
2			
3			

SKILLS INVENTORY

Check the box for each skill level that most closely matches your own skill level **as it applies to your current position**. If you check ***Not Applicable***, please indicate if your own skill level falls into one of the other three levels regardless of whether you are using this skill in your current job.

Skill		Not Applicable	Developing	Proficient	Excel
Planning	Evaluate new technologies				
	Establish School/University-wide architectures, standards, strategies				
	Establish School/University-wide technology implementation plans				
	Design server platforms				
	Design data, voice or video networks				
	Design project plans				
	Evaluate computing needs				
	Negotiate and maintain campus site licenses and volume purchase agreements				
	Establish or enforce policy				
System Develop-ment And Mainten-ance	Analyze business processes or system requirements and prepare specifications				
	Database Administration (design, implementation, monitoring, backup and recovery				
	Data Modeling & Design				
	Code/test/debug/install/modify software				
	Integrate commercial and public domain software into University systems				
	Document proposals, applications, or processes				
	Assess information security requirements				

Operations	Configure and maintain server operating system and/or application				
	Configure and maintain server operating system and/or applications software				
	Monitor, troubleshoot, and improve operation of server platform				
	System Security (backups, patches/upgrades, integrity/configuration)				
	Monitor, troubleshoot, and improve operation of network electronics				
	Supervise production operations				
	Dispatch technicians for installation or repair				
End-User Support	Perform hardware installation or repair				
	Design, install and maintain audio/visual equipment				
	Provide primary technical support to end-users				
	Provide second level technical support to primary support providers				
	Perform hardware or software installation or repair				
	Design, implement, and/or manage workgroup LAN server and network				
	Document end user processes or operations				
	Provide instructional support to Faculty				
	Provide end-user training				

COMPETENCY INVENTORY

Check the box for each competency level that most closely matches your own competency level **as it applies to your current position**. If you check ***Not Applicable***, please indicate if your own competency level falls into one of the other three levels regardless of whether you are using this competency in your current job.

Competency		Not Applicable	Developing	Proficient	Excel
Project Manage-ment	Administer, control and manage multiple and large, multi-organizational projects				
	Incorporate recommendations into ongoing operations				
	Complete projects in an accurate and timely manner				
	Seek out and tackle new assignments going beyond required results				
	Influence complex networks of others whose cooperation is needed for one's organization to succeed				

Interpersonal Skills	Deal effectively and professionally with all internal and external contacts				
	Use tact in dealing with others				
	Communicate in a clear, accurate, and well organized manner				
	Demonstrate responsive and expressive communication skills that encourage and stimulate an open exchange of ideas				
	Establish relationships with and influence complex networks of others				
Adapt-ability and Flexibility	Utilize time effectively to meet demands of various projects and deadlines				
	Transition easily from one task to another				
	Initiate tasks on their own, doesn't need to wait for direction				
	Develop new techniques, approaches and/or procedures in the accomplishment of broadly defined objectives				
Strategic Thinking	Take individual initiative in keeping current on general business and technical issues through self-study				
	Create and support a learning environment which encourages experimentation strategic response				
	Understand rapidly changing environmental trends, market opportunities, and strengths and weaknesses of their own organization to identify the optimum				

Employee Signature		Date	
Supervisors' Signature		Date	

APPENDIX G:

INFORMATION TECHNOLOGY SALARY STRUCTURE

Example

Class	Title	Minimum*	Midpoint*	Maximum*
Class 1	Applications Analyst	10	30	50
	Skill level 1 (25%)	10	15	20
	Skill level 2 (80%)	14	28	41
	Skill level 3 (30%)	38	44	50
	Applications Manager	TBD	TBD	TBD
Class 2	Operating Systems Analyst	TBD	TBD	TBD
	Skill level 1 (25%)	TBD	TBD	TBD
	Skill level 2 (80%)	TBD	TBD	TBD
	Skill level 3 (30%)	TBD	TBD	TBD
	Operating Systems Manager	TBD	TBD	TBD
Class 3	Network Analyst			
	Skill level 1 (25%)	TBD	TBD	TBD
	Skill level 2 (80%)	TBD	TBD	TBD
	Skill level 3 (30%)	TBD	TBD	TBD
	Network Manager	TBD	TBD	TBD
Class 4	Operations Specialist	TBD	TBD	TBD
	Skill level 1 (25%)	TBD	TBD	TBD
	Skill level 2 (80%)	TBD	TBD	TBD
	Skill level 3 (30%)	TBD	TBD	TBD
Class 5	Equipment/Applications Specialist	TBD	TBD	TBD
	Skill level 1 (25%)	TBD	TBD	TBD
	Skill level 2 (80%)	TBD	TBD	TBD
	Skill level 3 (30%)	TBD	TBD	TBD
Class 6	Information Technology Analyst	TBD	TBD	TBD
	Skill level 1 (25%)	TBD	TBD	TBD
	Skill level 2 (80%)	TBD	TBD	TBD
	Skill level 3 (30%)	TBD	TBD	TBD
Class 7	Information Technology Manager	TBD	TBD	TBD
Class 8	Information Technology Executive	TBD	TBD	TBD

* Actual rates to be determined by market survey