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| **GENERAL DESCRIPTION OF WORK** | | |
| Positions in this banded class are responsible for technical and analytical work in developing, designing, and/or supporting applications for the business, research, and/or instructional functions of clients. Positions participate in the development of solutions using programming expertise for day-to-day problems to include maintenance, modification or development of complex inter-related applications/solutions. Solutions link technical knowledge with business, research and/or instructional solutions and may range from consulting services (software or hardware recommendations) to developing integrated-automated systems. Duties include client needs assessment as well as evaluating hardware availability and software requirements. Employees should be able to work independently with minimal supervision. | | |
| **CONTRIBUTING** | | |
| **Functional Competency** | **Examples of Work** | **Competencies** |
| **Technical Knowledge** | Works on several phases of applications systems analysis development.  Leads the design, test, documentation and deployment of a comprehensive software solution.  Enables security measures to protect confidential information. | Understands theory behind applications systems analysis and programming and requires some guidance to develop applications. Uses general understanding of technical theory to coordinate and consult with technical staff. Follows appropriate security protocols for systems utilized.  Technical knowledge and skills essential to fully understanding the functions, concepts and theories behind software applications, database management and university network systems and applications. |
| **Technical Solution**  **Development** | Performs analytical analysis including business process review, function design, and testing of assigned projects.  Develops logical flow of simple applications. Designs input/output and file specifications.  Evaluates code and its functionality and recommends or makes changes to improve performance of simple applications.  Develops functional specifications that are detailed, comprehensive and meet customer requirements.  Develops and performs system acceptance test plans, test scenarios and test cases to ensure that all known aspects of a system are tested thoroughly.  Assists in the development of new technologies for use within assigned areas. | Detailed understanding of assigned data and the use of its systems via developing through test plans/scenarios.  Skilled in enterprise systems and familiarity with best business practices related to systems. |
| **Technical Support** | Effectively uses available tools in problem solving and systems analysis. Resolves routine problems. Seeks out advanced level support to assist as needed.  Performs diagnostics on assigned software and/or hardware according to standard operating procedures. | Understanding of the business functions and system needs of unit to develop working specifications for software application solutions. |

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|  | Design, test, document and deploy software solutions.  Create, update and maintain documentation of code and programming.  Develop training materials and supporting documents to inform and update users on current practices related to the functional area.  Create and conduct training sessions with users. |  |
| **Planning and Organizing** | Plans for current and future growth through problem analysis, structured needs assessment, and consultancy.  Plans and organizes activities to provide the technical support necessary to ensure technical systems are in place to meet unit needs. | Understands tasks required in job and takes ownership to complete tasks.  Takes initiative to plan and organize daily activities and tasks.  Ability to work independently on tasks, develops own work schedule and monitors progress against defined parameters. |
| **Project Management** | Leads projects from inception to completion while working with others to ensure success.  Serves as a productive team member on a project team or manages a project task. Substantively contributes to project meetings. Follows agency processes and approvals for projects.  Coordinate and lead collaborative efforts to initiate, develop and implement technical projects designed to ensure the protection of confidential information. | Ability to manage timelines, financial resources, and the activities of others to achieve success.  Ability to monitor project progress and provide updates to managers. |
| **Consultation** | Translate technical processes into understandable terms for non-technical users. Support end users in the use of applications.  Initiate and develop scope of work based on input from customer while incorporating available resources. | Understands user needs through discussion with customer. Ability to convey technical information to client and promote understanding of relevant issues. |
| **JOURNEY** | | |
| **Functional Competency** | **Examples of Work** | **Competencies** |
| **Technical Knowledge** | Competent to work on most phases of application systems analysis and programming without guidance. Uses theoretical understanding of technology to translate business needs into technical specifications.  Maintain knowledgebase to keep up with current developments and trends in these areas of expertise.  Fully understands specialty areas and use of the standards, theories and practices associated with these specialties. | Fully understands, exhibits and maintains a high level of technical skill or knowledge in the area of application development and system integration. |

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| **Technical Solution**  **Development** | Devises or modifies applications to solve moderately complex problems considering computer equipment capacity and limitations. Supports technology applications by exploring and adapting to changing technologies.  Writes professional, clear, concise and complete applications and systems documentation for clients, programmers, and production control.  Create graphical representations of applications processes and database structures. Create help and how to documents for users of developed applications.  Design and implement user interface layouts, user workflow and user experience for websites and applications.  Write clear, concise, complete documentation for applications, business processes, technical procedures, and interactive systems. | Detailed understanding of assigned data and the use of its systems via developing through test plans/scenarios.  Skilled in enterprise systems and familiarity with best business practices related to systems. |
| **Technical Support** | Creates help documentation and training for users of custom applications and processes. Provides support for information architecture and user interface/experience.  Review possible solutions to problems and select the most appropriate course of action to repair the programs with the least amount of disruption for the involved clients.  Determine the source of problems. Debug programs written by other programmers and understand the program logic involved. | Knowledge of the current architecture of systems and information to troubleshoot problems.  Understanding of the business functions and system needs of unit to develop working specifications for software application solutions. |
| **Planning and Organizing** | Research, plan, design and develop interactive business intelligence interfaces. Design, develop, implement and support multi-user business applications.  Consult with and provide complex administrative systems development for the division. Perform complex analytical activities associated with enterprise-wide projects.  Performs design, analysis, planning and troubleshooting associated with multiple requests for service submitted by the user community. | Ability to set priorities and know when priorities need to be changed.  Ability to work independently and manage job with minimal supervision.  Able to adapt work to unanticipated changes.  Ability to organize and follow complex and/or detailed technical procedures. |
| **Project Management** | Develop project/task work plans for all technical activities that involve IT.  Manages one module of a larger project or responsible for projects of limited to medium complexity. Develops project plan, manages milestones and drives project of moderate complexity forward. Accountable for keeping project on track.  Monitor various assigned applications via reports and user feedback to ensure uninterrupted and accurate functioning of multiple information systems.  Document and tracks enhancement requests, development requests, processing problems | Ability to anticipate project problems and lead collaboration to avoid or manage problems.  Ability to manage timelines, financial resources, and the activities of others to achieve success.  Ability to monitor project progress and provide updates to managers |

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|  | and needed improvements.  Design project plans for information systems development/enhancements with resource estimates.  Create project specifications, develop project goals and objectives and thoroughly review and test changes and enhancements to applications.  Create and maintain documents required to aid in technical and application support of systems using various PC tools to document project plan and progress. |  |
| **Consultation** | Consult with clients and higher-level technicians and analysts to resolve technical problems and ensure client satisfaction.  Provide technology consulting and services for division.  Provide consultation to department and/or management on assigned projects.  Make technical recommendations based on analysis of business needs, integration of existing platforms/applications and evaluation of in-house developed systems.  Participate in developing team strategies related to emerging technologies. | Ability to build on-going partnerships with clients.  Ability to work with client to discuss alternative technical solutions.  Ability to convey technical information to client and promote understanding of relevant issues. |
| **ADVANCED** | | |
| **Functional Competency** | **Examples of Work** | **Competencies** |
| **Technical Knowledge** | Perform the most complex analytical activities associated with the implementation and on-going maintenance of the enterprise systems.  Serves as an experienced technical resource to technicians and analysts. Programs complex routines. Typically has significant expertise and experience. Frequently works at a high technical level of applications systems analysis and programming.  Uses detail understanding of technical issues to design architecture for stable technologies and provides direction for technicians and other analysts.  Consistently and appropriately apply advanced design patterns in the areas of code design, database structure, and user interface development.  Expand technical knowledge as relevant for current projects on own initiative and integrates new technology to improve existing code on an ongoing basis. | Expertise knowledge and experience with multiple programming languages and knowledge of various relational database platforms to include Oracle and SQL.  In-depth knowledge of multiple specialties and the ability to integrate this knowledge to solve highly complex problems.  In-depth knowledge of database administration, writing database queries, application development, and investigation and solving system related programs. |
| **Technical Solution**  **Development** | Perform analysis and design work for new systems and enhancements and modifications for enterprise systems and other oracle based existing systems, which involves extensive interaction with all levels of users in different departments.  Investigates, researches and implements new technologies in specialty or | Detailed understanding of assigned data and the use of its systems via developing through test plans/scenarios.  Skilled in enterprise systems and familiarity with best |

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|  | related area. Devises or modifies procedures to solve complex problems considering computer equipment capacity and limitations. Regularly provides guidance and suggestions to less experienced analysts/programmers. Integrate in-depth specialty knowledge, which may include in-house development, to achieve business solutions.  Develop new and complex functionality leveraging and extending enterprise architecture, code and underlying relational database structures by use of advanced applications development techniques and advanced Oracle functionality. | business practices related to systems. |
| **Technical Support** | Meet with users to recommend and implement cost effective and automated solutions.  Work on a constantly changing variety of enterprise-wide systems as priorities and the need changes.  Recommends methods of resolving problems to lower level analysts or client representatives.  Perform knowledge transfer to key clients as needed prior to major projects and after  initial implementation.  Determine the pros and cons of implementing technical modifications in assigned areas. | Ability to solve problems of high complexity with other analyst and technicians.  Advanced skills to make technology modifications. |
| **Planning and Organizing** | Perform complex analytical activities associated with enterprise-wide projects requiring specialized knowledge and skills.  Design, analyze, and plan understand programming associated with the development, enhancement and maintenance of highly complex, dynamic systems.  Perform design, analysis and high level planning and troubleshooting associated with regularly scheduled enterprise maintenance and upgrades, ensuring the continued success, reliability and availability for production. | Ability to establish work standards, standard processes and references.  Ability to provide regular day-to-day planning and organizing the work of other technician and/or analyst. |
| **Project Management** | Independently develop and manage enterprise-level project timelines estimating effort and monitoring progress on a regular basis to ensure timely delivery.  Manages complex projects.  Utilize a significant degree of latitude on actions or decisions to manage projects that often require directing and assigning work to other technical personnel and/or contractors.  Accountable for keeping multiple projects on track and meeting deadlines.  Must prioritize application problems and user requests for large scale projects that have an enterprise wide impact. | Ability to develop project plan, manage milestones and drive project forward and keep project on track.  Ability to manage timelines, financial resources, and the activities of others to achieve success.  Ability to monitor project progress and provide updates to managers |

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| **Consultation** | Consults with administrators, faculty, and staff to help improve administrative processes to identify means for developing solutions using existing technologies or through exploration of potential new technologies.  Formulate functional as well as technical software requirements and specifications. | Ability to consul on issues and requests from clients that require the implementation or creation of a custom solution. Understands the market, industry and competitors that have an impact on the customer's business.  Ability to consult with senior level decision-makers, on an on-going basis, to develop long-range strategic alternatives. Ability to promote and build client support of organization’s objectives. |
| **MINIMUM EDUCATION AND EXPERIENCE REQUIREMENTS** | | |
| • Bachelor's degree in Computer Science, Computer Information Systems, Computer Engineering, math, or Engineering or related technical degree from an appropriately accredited institution; or  • Bachelor's degree and some computer coursework from an appropriately accredited institution and one year of experience in business application consulting or development; or  • Associate's degree in Computer Programming and one year of experience in application consulting or development; or an equivalent combination of education and experience.  • Journey level requires an additional one year of experience.  • Advanced level requires an additional two years of experience. | | |
| **SPECIAL NOTE** | | |
| This is a generalized representation of positions in this class and is not intended to identify essential work functions per ADA. Examples of competencies are primarily those of the majority of positions in this class, but may not be applicable to all positions. Ability to create and maintain collegial working relationships with customers and co-workers, contribute to a positive and inclusive work environment, and serve as a productive team member is expected in all positions. | | |