16104 Engineer

Position Details

Position Information

Classification Title:	16104 Engineer
Position Competency Level:	2 - Journey
Position Number:	001517
E-Class:	S1 - SHRA FT Perm exempt
Months per year:	12
Work Schedule:	M-F
Work Hours:	8-5pm
Mandatory Position:	Yes

Qualifications

Required education/experience/skills (minimum qualifications):	Bachelor's degree in the engineering discipline related to the area of assignment; or equivalent combination of training and experience Some positions may require licensure by the North Carolina Board of Examiners for Engineers and Surveyors. All degrees must be received from appropriately accredited institutions.
License or Certification Required by Statute or Regulation:	None
Preferred Experience, Skills, Training/Education:	Bachelor's degree in the engineering discipline related to the area of assignment; or equivalent combination of training and experience. Licensure by the North Carolina Board of Examiners for Engineers and Surveyors may be required. Prefer degree in energy engineering or a buildings-related field (engineering, architecture, project management). All degrees must be received from appropriately accredited institutions. Experience in design and operational strategies for reducing energy consumption; and experience in developing, implementing and managing a comprehensive, campus-wide energy management plan strongly preferred. Strongly prefer minimum of 5 years experience in design and operational strategies for reducing energy consumption and in developing, implementing and managing a comprehensive, campus-wide energy management plan. Experience with managing energy performance contracts to include request for proposals, investment grade auditing, measurement and verification, etc is a plus. Experience with the creation or modification of energy dashboards (i.e. Lucid) is a plus. Familiarity with enterprise management metering systems (i.e. Schneider Electric's ION software) or Microsoft SQL Server software is a plus. Completion of an Energy Management program comparable to that

	offered by NC State University is preferred. Professional credentials such as: Association of Energy Engineers professional credentials: CEM, Certified Energy Manager; CEA, Certified Energy Auditor; BESA, Certified Building Energy Simulation Analyst, LEED Accredit Professional, etc. are a plus. Should be proficient in the use of the Microsoft Office suite of applications (Word, Excel, Power Point, etc.)
License or Certification Required by the Department:	None

Job Description

Position Information

Primary Purpose of Organization Unit:	Campus Operations is a broad diverse division of Administration and Finance that includes all aspects of facilities management at East Carolina University. East Carolina University is the third largest university in the North Carolina system. Campus Operations is a major division of Administration and Finance with approximately 500 employees and a budget in excess of $30 million. Campus Operations includes the Main Campus, the Health Sciences Campus, West Research Campus, and satellite locations, associated with university programs. The following departments report directly to the Associate Vice Chancellor for Campus Operations: Campus Operations administration; Facilities Services – Main Campus; Building Services: Carpentry Shop, Masonry Shop, Locksmith, Automotive Services, Paint Shop; Facilities Service Center; Grounds Services including Moving Services and Recycling Services; Utilities Services: HVAC Shop, Life Safety Shop, Electrical Shop, Plumbing Shop, Steam Plant; Facilities Services – Health Sciences Campus: Building Trades, HVAC Shop, Controls Shop, Electrical Shop, Plumbing Shop, Steam Plant; Housekeeping Services; Facilities Engineering & Architectural Services; and Risk Management. Campus Operations is responsible for university utilities production and distribution.
Primary Purpose of Position:	The Energy Manager will be responsible for developing, implementing and managing a comprehensive campus-wide energy management plan and provide advanced knowledge of best practices in energy management for existing and new facilities. Position will provide utilities engineering support to effectively influence design decisions and facilitate energy saving measures for variety of projects, ranging in size and complexity. These projects may include new buildings, infrastructure improvements, major renovations and whole building modernizations. The Energy Manager will have responsibility for developing short and long term strategies for energy reductions as well as reporting the universities status both to internal and external stakeholders. Strategies should enable the university to meet or exceed any energy reduction requirements of the UNC System, the State of North Carolina or any applicable agency of the Federal Government. Additionally, strategies should position the institution to reach other industry recognized or required reductions such as carbon neutrality or zero waste. The Energy Manager will be responsible for working in coordination with the Sustainability Director in the integration of energy conservation awareness and sustainable practices into all facets of the campus community. The Energy Manger shall be responsible for the management of all performance contracts on behalf of the institution.

Job Duties

Percentage Of Total Time:	30
Description of job responsibility/duty:	Energy Project Development & Management: The Energy Manager will develop both short and long term strategies that will position the university to achieve all required or targeted utility consumption reductions. Work will include the design of in-house energy/water conservation projects through the preparation of design concepts, calculations, drawings, specifications, and cost estimates. The Energy Manager will identify energy savings opportunities and prepare cost-benefit analyses. Working with the appropriate campus office the Energy Manager will recommend improvements to campus facilities and infrastructure that will achieve required and/or targeted reductions for campus buildings. The Energy Manager will track and report on the status of all energy/water reduction projects, to be included determining project status, energy consumption, and comparison to the performance of past projects. Data will be compiled into clear, concise, and thorough reports. The Energy Manager will provide recommendations on new technologies, processes and products for applicability to the Utility Savings Initiative (USI) program. To include evaluations of renewable energy sources such as solar PV, solar heating, geothermal, wind, etc. Recommendations on lighting technology around LED (Light Emitting Diodes) and induction lighting. Evaluation of geothermal systems, recommendations on all types of HVAC systems and which one is the most appropriate for the application. Project baseline and measurement/verification approach/analysis. Maintain an active, prioritized, list of energy conservation measures for each campus. The Energy Manager will identify, assist, or manage energy performance contracting opportunities. The Energy Manager will work with UNC System, the Community College System, the State Energy Office and other state and federal agencies and utility service providers to develop and access energy saving incentives. The Energy Manager will provide oversight, evaluation and recommendation for campus utility contracts as requested.
Percentage Of Total Time:	25
Description of job responsibility/duty:	Energy Audits Campus/Buildings: A variety of audits will be conducted on each building to evaluate the impact of the building construction and usage on energy consumption as well as the effectiveness of the major MEP components such as: chillers, boilers, AHUs, compressors, pumps, cooling towers, lighting, etc, and their associated control systems. The Energy Manager will oversee, direct and/or conduct building audits as well as develop a prioritized plan for auditing all buildings at the university. The Energy Manager will serve as the lead for all utility metering (electric, steam, condensate, etc.) and incorporation into Struxureware/ION system. Also serve as the campus contact for establishing alarms, paging, virtual meters and meter applications. The Energy Manager will establish baseline utility consumption data for the three campuses as well as each building by drawing on such resources as existing metering data, utility billing data, and B.A.S. data. If existing data is deemed either insufficient or unreliable, then tools such as data loggers and other temporary means shall be utilized to develop accurate representations of energy consumption. Energy Manager may directly supervise any Energy Analyst or interns that may become resources to this position.
Percentage Of Total Time:	30

Description of job responsibility/duty:	Utility Data acquisition, analysis, and reporting: The Energy Manager will develop and manage systems to compile and maintain accurate records of utility consumption per building. The Energy Manager will submit periodic tracking reports showing comparisons to standards for buildings of similar construction and usage. Data will be analyzed to determine the impact of variables such as weather, FTEs, building age, type, usage patterns, etc. The Energy Manager will create baseline for campus buildings by type (i.e. dorm, office, clinic, etc.). The Energy Manager will develop and implement processes to insure that the energy savings and environmental impact from ECM will be measured, tracked, verified, and documented, thus making the business case for needed improvements and documenting the actual savings that accrue from energy upgrades. The Energy Manager will develop and provide relevant and informative energy reports for both internal and external recipients as required. The Energy Manager shall insure that all submission deadlines are met for required reports to external recipients. Reports shall be clear, concise and thorough. The Energy Manager shall work closely with the University Sustainability Director to support the production of the annual Sustainability Report. The Energy Manager shall be responsible for the administration and content of utility dashboards used to convey consumption data to the campus community.
Percentage Of Total Time:	10
Description of job responsibility/duty:	Education of faculty, staff and students: The Energy Manager will establish and facilitate training programs to educate the campus community about the costs and benefits of energy efficiency and renewable energy technologies. Educational opportunities will include persuasive oral and written reports, presentations, website development and maintenance, special events and publicity campaigns. The Energy Manager will work to identify roles, strengths, and training needs for Facility Services personnel, to include identifying needed process improvements which may require the establishment of technical teams to collaborate and brainstorm solutions. The Energy Manager will support the appropriate campus offices with campus sustainability issues as needed. The Energy Manager shall take a leadership role in developing partnerships with faculty and students in the integration of energy conservation in academics.
Percentage Of Total Time:	5
Description of job responsibility/duty:	Review of Capital and R&R projects: The Energy Manager will work with Facilities Engineering and Architectural Services as well as Facilities Services to identify, plan, and monitor the implementation of best practices strategies for energy efficiencies in new and existing campus building projects. The Energy Manager will provide input into design decisions, review energy systems in building projects and facilitate energy saving measures in existing buildings.

ADA Compliance Checklist

ADA: Checklist for Determining ADA Accommodation
ADA - CHECKLIST FOR PHYSICAL ACTIVITIES & REQUIREMENTS, VISUAL ACUITY, AND WORKING CONDITIONS OF THE POSITION. The Americans With Disabilities Act of 1990 (ADA) and associated Federal regulations protect qualified individuals with disabilities from discrimination in all areas of employment. To be considered qualified; an individual must be able to perform the essential functions of a position, with or without reasonable accommodation. It is important that the physical duties associated with the essential functions be identified appropriately so that persons with disabilities can determine if any accommodation is necessary.

The physical activity of this position. Please check ALL blocks that apply:	Climbing: Ascending/descending ladders, stairs, scaffolding, ramps, poles and the like, using feet and legs and/or hands and arms. Body agility is important when the amount/kind of climbing exceeds that required for ordinary locomotion., Balancing: Maintaining body equilibrium to prevent falling when walking, standing or crouching on narrow, slippery, or erratically moving surfaces. This factor is important if the amount and kind of balancing exceeds that needed for ordinary locomotion a, Stooping: Bending body downward and forward by bending spine at the waist. This factor is important if it occurs to a considerable degree and requires full use of the lower extremities and back muscles. , Kneeling: Bending legs at knee to come to a rest on knee or knees. , Crouching: Bending the body downward and forward by bending leg and spine. , Crawling: Moving about on hands and feet. , Reaching: Extending hand(s) and arm(s) in any direction. , Standing: Particularly for sustained periods of time. , Walking: Moving about on foot to accomplish tasks, particularly for long distances or moving from one work site to another. , Pushing: Using upper extremities to press against something with steady force in order to thrust forward, downward or outward. , Pulling: Using upper extremities to exert force in order to draw, drag, haul or tug objects in a sustained motion. , Lifting: Raising objects from a lower to a higher position or moving objects horizontally from position-to-position. This factor is important if it occurs to a considerable degree and requires the substantial use of the upper extremities and back muscles., Fingering: Picking, pinching, typing or otherwise working, primarily with fingers rather than with the whole hand or arm as in handling. , Grasping: Applying pressure to an object with the fingers and palm. , Feeling: Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of fingertips., Talking: Expressing or exchanging ideas by means of the spoken word. Those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly, or quickly. , Hearing: Perceiving the nature of sounds at normal speaking levels with or without correction. Ability to receive detailed information through oral communication, and to make fine discrimination in sound., Repetitive motions: Substantial movements (motions) of the wrists, hands, and/or fingers.
The physical requirements of this position: Please check only ONE block	Medium work: Exerting 50 lbs. of force occasionally, and/or up to 20 lbs. of force frequently, and/or up to 10 lbs. of force constantly to move objects.
The visual acuity requirements including color, depth perception, and field of vision: Please check only ONE block	Close visual acuity is required for activies such as: preparing/analyzing data and figures; transcribing; viewing computer screens; extensive reading; visual inspection of small defects or parts and/or machinery operation; measurement devices.
The condition the worker will be subject to in this position: Please check ALL blocks that apply	The worker is subject to both environmental conditions. Activities occur inside and outside. , The worker is subject to noise: There is sufficient noise to cause the worker to shout in order to be heard above ambient noise level. , The worker is subject to vibration: Exposure to oscillating movements of the extremities or whole body., The worker is subject to hazards: Includes a variety of physical conditions, such as proximity to moving mechanical parts, moving vehicles, electrical current, working on scaffolding and high places, exposure to high heat or exposure to chemicals. , The worker is subject to atmospheric conditions: One or more of the following conditions that affect the respiratory system of the skin: Fumes, odors, dust, mists, gases, or poor ventilation. , The worker is subject to oils: There is air and/or skin exposure to oils and other cutting fluids., The worker frequently is in close quarters, crawl spaces, shafts, man holes, small enclosed rooms, small sewage and water line pipes, and other areas which could cause claustrophobia. , The worker is required to function in narrow aisles or passageways.