ENGINEER SERIES

Code No.	Class Title	Occ. Area	Work Area	Prob. Period	Effective Date	Last Action
1300	Engineer	01	032	12 mo.	03/15/11	Rev.
1301	Senior Engineer	01	032	12 mo.	03/15/11	Rev.

Promotional Line: 69

Series Narrative

Employees in this series perform professional engineering duties involved in the planning, development, construction, and supervision of buildings' installations, operations, maintenance, and repair. Some engineers also conduct preliminary surveys or studies of proposed projects and investigate legal aspects of properties.

DESCRIPTIONS OF LEVELS OF WORK

Level I: Engineer 1300

Employees at this level perform engineering work of an independently professional nature in the planning, development, and supervision of installations, operations, maintenance, and repair. They work under supervision from a senior engineer.

An Engineer typically –

1. programs, designs, implements, and improves engineered systems, devices and equipment for campus projects
2. prepares assigned sections of campus facility standards
3. assigns work to student interns, assigned trainees, and workers in their duties, and phases of work in the field as assigned
4. participates in the training of workers and student interns
5. prepares budgets, prepares cost estimates, specifications for purchase of materials and equipment, and standards
6. meets with internal and external customers to develop scope of work
7. plans and assists in the direction of relevant work while ensuring that all codes and campus mandated standards are met
8. field coordinates and inspects engineering related construction or maintenance work completed by staff, contractors, testing companies and/or consultants
9. supervises survey parties and/or the installation of any necessary equipment or utilities
10. works collaboratively with other professionals assisting with engineering advice on University issues

11. performs other related duties as assigned

Level II: Senior Engineer 1301

Employees at this level perform administrative and highly technical supervisory work of a professional engineering nature in the planning, development, and supervision of buildings' installations, operations, maintenance, and repair. They work under administrative supervision from a designated supervisor.

A Senior Engineer typically –

1. designs, implements, and improves to engineered systems, devices, and equipment

2. programs, prepares, and/or reviews engineering estimates and contract documents

3. field coordinates and inspects engineering related construction or maintenance work completed by staff, contractors, testing companies and/or consultants

4. supervises lower level engineers, assigned trainees, and workers in their duties, and phases of work in the field as assigned

5. plans work programs, determines methods and materials to be used, and establishes standards of workmanship and standards for materials

6. prepares cost estimates, specifications for purchase of materials and equipment, and standards

7. performs work related to the lower level in this series

8. performs other related duties as assigned

MINIMUM ACCEPTABLE QUALIFICATIONS REQUIRED FOR ENTRY INTO:

Level I: Engineer 1300

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Bachelor's degree from an approved college of engineering in Civil, Electrical or Mechanical Engineering as required by the position to be filled in the area of specialization inherent in the position may be required

***Applicants possessing a Master's degree, in a closely related field, meet the requirements of #1 above.*

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services

2. knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models

3. knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications

4. knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, mechanical, and electrical

5. skill in identifying complex problems and reviewing related information to develop and evaluate options and implement solutions

6. skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems

7. skill in considering the relative costs and benefits of potential actions to choose the most appropriate one

8. ability to assist in the organization, assignment and direction of work in the field of engineering

9. ability to apply general rules to specific problems to produce answers that make sense

10. ability to communicate effectively orally and in writing

11. ability to combine pieces of information to form general rules or conclusions

12. accuracy

Level II: Senior Engineer 1301

CREDENTIALS TO BE VERIFIED BY PLACEMENT OFFICER

1. Bachelor's degree from an approved college of engineering in Civil, Electrical or Mechanical Engineering as required by the position to be filled in the area of specialization inherent in the position may be required

2. Certificate of registration as a Registered Professional Engineer from the Illinois Department of Registration and Education

***Applicants possessing a Master's degree, in a closely related field, meet the requirements of #1 above.*

KNOWLEDGE, SKILLS AND ABILITIES (KSAs)

1. knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services

2. knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models

3. knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, mechanical, and electrical

4. knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications

5. skill in identifying complex problems and reviewing related information to develop and evaluate options and implement solutions

6. skill in using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems

7. skill in considering the relative costs and benefits of potential actions to choose the most appropriate one

8. ability to assist in the organization, assignment and direction of work in the field of engineering

9. ability to communicate effectively orally and in writing

10. ability to formulate high standards of workmanship and materials

11. ability to apply general rules to specific problems to produce answers that make sense

12. ability to combine pieces of information to form general rules or conclusions

13. accuracy

14. supervisory ability