

Iowa Department of Administrative Services – Human Resources Enterprise  
Job Classification Description

## Studio Engineer Advanced

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### Definition

Performs/oversees high-level technical engineering duties in the operation, design, diagnosis, repair, and maintenance of complex broadcast, production, and IP-connected systems at the Network Operations Center (NOC) for Iowa PBS, with specialization in audio, video, digital, and computer-based engineering principals; performs related work as required.

*The work examples and competencies listed below are for illustrative purposes only and not intended to be the primary basis for position classification decisions.*

### Work Examples

Performs all duties in the Studio Engineer Senior.

Trains, and participates in the work of other studio engineers/technical personnel engaged in the operation, repair, and maintenance of NOC electronic hardware, software and networking related to the production and broadcasting of educational radio/television programs.

Advises/collaborates with other engineers and technical personnel involved in testing and repairing NOC equipment and mentors less experienced engineers in the repair of the more complex equipment.

Performs and verifies the diagnosis, testing, maintenance, and preventive maintenance of NOC electronic production/broadcasting equipment.

Researches, plans, and implements equipment and systems for the NOC.

Operates, monitors, and supports equipment used in the production and transmission of radio and television programs within the assigned engineering specialty.

### Competencies Required

Knowledge:

- Administrative – Administrative and office procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and workplace terminology.
- Communications and Media – Media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.
- Computers and Electronics – Circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.
- Design – Design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.
- English Language – Structure and content of the English language including the meaning and spelling of words, and rules of composition and grammar.

- Mechanical – Machines and tools, including their designs, uses, repair, and maintenance.
- Telecommunications – Transmission, broadcasting, switching, control, and operation of telecommunications systems.

**Abilities:**

- Control Precision – Quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- Deductive Reasoning – Apply general rules to specific problems to produce answers that make sense.
- Fluency of Ideas – Come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).
- Inductive Reasoning – Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).
- Information Ordering – Arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Mathematical Reasoning – Choose the right mathematical methods or formulas to solve a problem.
- Originality – Come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.
- Problem Sensitivity – Tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing that there is a problem.
- Speech Clarity – Speak clearly so others can understand you.
- Speech Recognition – Identify and understand the speech of another person.
- Speed of Closure – Quickly make sense of, combine, and organize information into meaningful patterns.
- Visualization – Imagine how something will look after it is moved around or when its parts are moved or rearranged.
- Written Comprehension – Read and understand information and ideas presented in writing.
- Written Expression – Communicate information and ideas in writing so others will understand.

**Skills:**

- Active Learning – Understanding the implications of new information for both current and future problem-solving and decision-making.
- Active Listening – Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Complex Problem Solving – Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Critical Thinking – Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

- Equipment Maintenance – Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.
- Equipment Selection – Determining the kind of tools and equipment needed to do a job.
- Installation – Installing equipment, machines, wiring, or programs to meet specifications.
- Instructing – Teaching others how to do something.
- Judgment and Decision Making – Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Learning Strategies – Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.
- Mathematics – Using mathematics to solve problems.
- Operation and Control – Controlling operations of equipment or systems.
- Operations Monitoring – Watching gauges, dials, or other indicators to make sure a machine is working properly.
- Reading Comprehension – Understanding written sentences and paragraphs in work-related documents.
- Repairing – Repairing machines or systems using the needed tools.
- Service Orientation – Actively looking for ways to help people.
- Speaking – Talking to others to convey information effectively.
- Systems Evaluation – Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- Technology Design – Generating or adapting equipment and technology to serve user needs.
- Troubleshooting – Determining causes of operating errors and deciding what to do about it.
- Writing – Communicating effectively in writing as appropriate for the needs of the audience.

## Minimum Qualification Requirements

Applicants must meet at least one of the following minimum requirements to qualify for positions in this job classification:

- 1) Six years of full-time work experience in operating, maintaining, or repairing complex electronic equipment.
- 2) All of the following (a and b):
  - a. Two year of full-time work experience in operating, maintaining, or repairing complex electronic equipment; and
  - b. A total of four years of education and/or full-time experience (as described in part a), where thirty semester hours of accredited college or university coursework in any field equals one year of full-time experience.
- 3) Graduation from an accredited college or university with an associate's degree in electronics technology, information technology, or a closely-related field, and experience equal to four years of full-time work in operating, maintaining, and/or repairing complex electronic equipment in a radio or television transmitter/translator or network studio.

- 4) Graduation from an accredited four-year college or university with a degree in broadcast engineering technology, information technology, or a closely-related field, and experience equal to two years of full-time work in operating, maintaining, or repairing complex electronic equipment.
- 5) All of the following (a and b):
  - a. Five years of full-time work experience in operating, maintaining, or repairing complex electronic equipment in a radio or television transmitter/translator or network studio; and
  - b. Possession of a certificate in electronics technology, information technology, or a closely-related field from a recognized technical, military, business, college, or university certificate program.
- 6) Current, continuous experience in the state executive branch that includes six months of full-time work as a Studio Engineer Senior at Iowa PBS.

*Effective date: 01/26 KC*