

Researcher | Educator

JOB DESCRIPTION

MANY RESEARCH SCIENTISTS in arboriculture are employed as professors at universities, although some work in the tree care industry, federal agencies or botanical gardens. Fields of study may include arboriculture, urban forestry, plant physiology, horticulture, entomology, and plant pathology. By examining trees scientifically, researchers find better ways for caring for trees and enhancing ecosystem services. Many professors also teach undergraduate and graduate classes in various subjects within their fields of study. Most present workshops for professionals and speak at conferences.

TYPICAL BACKGROUND

With few exceptions, most research professors have obtained a Ph.D. It is also common for these individuals to have worked in various aspects of arboriculture (such as monitoring and assessment of urban forests and trees) as they were working towards their graduate degree.



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EDUCATION/TRAINING NEEDS

- ✓ Computer skills using spreadsheets, word processing, and databases
- ✓ Diagnostic skills
- ✓ Familiarity with forestry software (such as i-Tree)
- ✓ Hazard tree recognition and assessment
- ✓ Proficiency in statistical analysis
- ✓ Protection of trees on construction sites
- ✓ Pruning principals and techniques
- ✓ Public communication skills
- ✓ Strong organizational skills
- ✓ Teaching proficiency
- ✓ Transplanting of trees
- ✓ Tree biology
- ✓ Tree identification

EDUCATION TRAINING MATERIALS

- ✓ *A Consultant Guide to Writing Effective Reports* (ASCA)
- ✓ *ANSI A300 Standards for Tree Care Operations* (or applicable national standards)
- ✓ *Arboriculture & Urban Forestry* (ISA journal)
- ✓ *Arboriculture and the Law* (Merullo and Valentine)
- ✓ *Arboriculture: Integrated Management of Landscape Trees, Shrubs, and Vines* (Harris et al.)
- ✓ *Arborists' Certification Study Guide* (ISA)
- ✓ *Best Management Practices Series* (ISA)
- ✓ *Diseases of Trees and Shrubs* (Sinclair and Lyon)
- ✓ *Introduction to Arboriculture Training Series* (ISA)
- ✓ *The Practical Science of Planting Trees* (Watson and Himelick)
- ✓ *Tree Risk Assessment Manual* (ISA)
- ✓ *Up By Roots: Healthy Soils and Trees in the Built Environment* (Urban)

ELIGIBILITY REQUIREMENT

Most research professors have a Ph.D. Some college-level educators have a master's degree. At least three years of practical experience is desired.

CERTIFICATION/LICENSES

ISA Certified Arborist[®] and ISA Board Certified Master Arborist[®] credentials, and State Pesticide Applicator License are recommended.

TYPICAL FUTURE CAREER PATHS

Researchers/educators often stay at this level for their entire career. Some may become involved as department chairs or in college administration. Many also do consulting on the side. Some may author books, and many devote time to speaking at seminars.