



Payload Scientist



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Payload Scientist

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I help develop and manage biological experiments targeted for Space Shuttle and International Space Station (ISS) flights. I work with the principal investigators and NASA to define and advocate on-orbit experiment requirements, identify and monitor ground studies, and determine spaceflight equipment that will satisfy the experiment requirements. These steps help to advance the experiment through several phases of development so it will one day fly in space.

Areas of expertise:

- Cell and molecular biology
- Vertebrate embryology
- Microbiology

How I first became interested in this profession:

My interest in biology began during high school, and became even stronger during college. I considered becoming a physician or a college professor, but during my masters' program, I realized I wanted a nontraditional science-related career. Although I did not know what I would end up doing, I was fortunate that NASA Ames offered me a terrific opportunity right at the end of my graduate work. My career "path" has never been defined, and I have learned that it does not have to be. You truly can make the career you desire.

What helped prepare me for this job:

Having a graduate degree is a definite advantage. The skills I learned in college provided me with a solid foundation in science, but my graduate school experience was paramount to improving my analytical and scientific reasoning skills. I felt more at ease asking scientific questions after graduate school, and it was where I learned how to present and discuss science as a professional.

My role models or inspirations:

I am sort of a free-spirited scientist in that I did not have any people in the field that I aspired to be. I knew that I loved the field of Biology and I knew that somehow I would make a career for myself doing the things I enjoyed.

My education and training:

- B.S., Microbiology, with a minor in Chemistry, San Francisco State University
- M.A., Cell and Molecular Biology, San Francisco State University

My career path:

- Graduate student at San Francisco State University for 2 years (1998-2000)
- Scientist/Biologist with Lockheed Martin at NASA Ames for 2 years (2000-current)

What I like about my job:

The fact that my efforts will help to launch several biological experiments into space is the best part of my job. I also really enjoy science writing, giving science presentations, and learning about different biological systems.

What I don't like about my job:

The launch delays! Many factors are involved in a shuttle launch, so things do not always happen on schedule. Sometimes it is challenging to work on a project that always seems far from completion.

My advice to anyone interested in this occupation:

Earn a good college education and an advanced degree. Be open-minded and do not be afraid to ask questions or make mistakes. That is how we learn. Be your own leader and build the career you want, even if it seems off the beaten path.

Additional Resources:

- American Institute of Biological Sciences
<http://www.aibs.org>
- American Physiological Society
<http://www.faseb.org/aps>
- American Society for Biochemistry and Molecular Biology
<http://www.biophysics.org/biophys/society/biohome.htm>
- American Society for Microbiology
<http://www.asmsusa.org>
- Astrobiology Summer Academy
<http://academy.arc.nasa.gov/>
- Biotechnology Industry Organization
<http://www.bio.org/welcome.html>
- Education Pays Calculator
<http://www.educationpays.org/calc.asp>
- Earth to Orbit: Engineering Design Challenges
<http://eto.nasa.gov/>
- Graduate Student Researchers Program
<http://spacelink.nasa.gov/Instructional.Materials/NASA.Educational.Products/Graduate.Student.Researchers.Program.Brochure/.index.html>
- MATHCOUNTS Competition
<http://mathcounts.org/>
- Minority University Research and Education Programs
<http://mured.nasaprs.com/>
- NASA Cooperative Education Program for college students
<http://spacelink.nasa.gov/Educational.Services/NASA.Education.Programs/Student.Support/NASA.Cooperative.Education.Program/.index.html>
- NASA Jobs
<http://nasajobs.nasa.gov/>
- NASA Office of Life and Microgravity Sciences and Applications
<http://www.hq.nasa.gov/office/olmsa/>
- NASA SHARP Internship Program for high-schoolers
<http://www.mtsibase.com/sharp/>
- NASA Student Employment
http://nasajobs.nasa.gov/stud_opps/employment/index.htm
- NASA Student Involvement Program student contests
<http://www.nsip.net/index.cfm>
- Order NASA career videos such as "Engineers: Turning Ideas into Reality," "Careers: Aerospace Engineer" or "Reaching for the Stars" from NASA CORE.
<http://core.nasa.gov>
- Revolutionary Vehicle Concepts and Systems student competition
<http://avst.larc.nasa.gov/competitions.html>
- Student's Guide to Astrobiology
<http://www.astrobiology.com/student.html>
- Tech-Interns.com
<http://www.tech-interns.com/>

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Thank you.

