



Canada-France-Hawaii Telescope

Business and Administration

Jobs

Director of Finance
Administration specialist
Finance Manager
Safety officer

What is the administration group's role?

The administration group handles all the business, accounting and scheduling tasks for CFHT. They work with vendors to order parts, equipment and other supplies, often dealing with customs paperwork on international orders. They manage payroll and healthcare benefits, organize travel, visas, and everything needed to keep CFHT running smoothly.

Is the administration group for you?

Do you like working with people?

Are you organized?

Are you good at math?

Do you like working with computers?

Do you enjoy fast paced work?

Are you good at multi-tasking?

What schooling do you need?

The administration group has different positions with different educational needs. A bachelor's or associate's degree in accounting, finance, human resources, or business is a good start.

Suggested Courses

Accounting
HR management
Business
Economics
Math

More Information

www.cfht.hawaii.edu
laychak@cfht.hawaii.edu



Jane Rodgers
Finance Manager

Job Description

Develops, prepares and analyzes budget reports and financial statements. Performs accounting functions such as account reconciliations, payroll, and maintaining internal control. Ensures CFHT is compliant with federal and state rules.

Areas of Expertise

- Taxation
- Payroll regulations and policies.

I first became interested in my career...

My career path had a few twists and turns. I initially chose to become a Registered Nurse because I was interested in all aspects of health and nutrition. While working at a doctor's office, I discovered that I really liked the work involved in organizing financial records, accounting and tax preparation. Health and nutrition became more of a hobby and less of a career. I began taking accounting courses at our local college and eventually had enough credits to take (and pass!) the CPA exam. I later returned to school to earn a Master's degree in Human Resource Management

My role model or inspiration was...

If at first you don't succeed or find what you want, just keep on trying! It's an interesting journey. Learning new things makes every part of your life more enjoyable. Fortunately, my parents made sure that I understood the importance of college and life-long learning and happiness.

My education and training is...

I have a nursing degree, a Bachelor's in Business Administration, a Master's in Human Resource Management, and a CPA license. Each of life's experiences paved the way for another step. It was just a matter of keeping an open mind and looking for possibilities and continuing to learn.

The most awesome part about my job is..

The most awesome part of my job has to be the people that I work with and the "corporate culture" that encourages everyone to do their best. Management practices at CFHT support the knowledge and creativity that are necessary for the ever-changing technology that is utilized in cutting-edge scientific research.

What I don't like about my job...

There really isn't anything that I don't like. I feel incredibly fortunate to be a part of astronomical research, have a job that I love, and live in a beautiful environment.

Advice for students interested in my job...

Proficiency in accounting requires the knowledge you get from college courses as well as hands-on experience. As is the case with many careers, the actual work is quite different from the classroom experience. A great source of work experience is finding employment or internships in accounting departments in any industry or service. Working in CPA firms is another way of obtaining invaluable experience. My advice is to fulfill all the requirements to become a CPA. Working at a CPA firm provides insight and experience that is useful in most aspects of all other accounting jobs. It also gives you an idea of the endless opportunities and career paths available.



Canada-France-Hawaii Telescope

Astronomy

Jobs

Executive Director
Director of Science
Astronomer
Remote Observer
Science Operations Specialist
Outreach Manager

What is the astronomy group's role?

The astronomy group is responsible for the science operations of CFHT. They coordinate, plan and execute all the night time observations at the telescope. They work with astronomers from around Hawaii and the world to ensure the data CFHT provides meets their needs. CFHT astronomers also conduct their own research into topics in astronomy that interest them.

Suggested Courses

Astronomy
Physics
Math
Chemistry
Electronics

Is the astronomy group for you?

Are you good at and enjoy math and science?

Do you have a good imagination?

Are you interested in how the universe works?

Do you like solving mysteries or problems?

Do you enjoy learning new things?

Are you interested in designing new instruments to help observe the stars?

Do you want to operate a state of the art camera and telescope?

More Information

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What schooling do you need?

CFHT's astronomers all have PhDs in astronomy or physics. The other members of the astronomy group have bachelor's or master's degrees in astronomy, physics, or other related fields.



Lisa Wells
Remote Observer

I first became interested in my career...
during the space race. I wanted to be an astronaut but settled into astronomy

My role model or inspiration was...

Alan B. Shepard, the first American to be launched into space on a rocket.

My education and training is...

I have a B.A. in Math, Computer Science, and Physics from a liberal arts College and a M.S. in Astronomy from the University of Arizona. I have also worked for Steward Observatory, Cerro Tololo Inter-American Observatory, and Kitt Peak National Observatory in various capacities before coming to CFHT

Job Description

I observe for the astronomers who are assigned time with our telescope while ensuring the safety of the telescope, instruments and electronics. I assist with instrument exchanges, update webpages, manage the library at CFHT and participate in outreach activities.

The most awesome part about my job is..

I get to observe the night sky with our 3.6 Meter telescope.

What I don't like about my job...

Shifting my schedule from the night to the day and back to nights. It is getting harder as I get older.

Advice for students interested in my job...

Try to get into a summer program where you will be exposed to a telescope and see if you enjoy it enough to make it a career. Also study computer science, math and physics along with astronomy and you will be well grounded.

Areas of Expertise

- Data reduction
- Photometry, spectroscopy
- Radio, Optional, Solar and Infrared Observing
- Supernovae Light curves



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Lison Malo
Resident Astronomer

Job Description

My main duties are to carry out astronomical observations and research. I also support visiting users, participate in the development of scientific instruments and participate in outreach activities

Areas of Expertise

- Evolution of young, low mass stars
- Census of young stars near the sun.
- Spectroscopy
- CFHT's project scientist for the joint CFH-Gemini GRACES project

I first became interested in my career...

In 1997 (12 years-old), when I saw the Hall-Bopp comet from Montreal (Canada) South shore. I was impressed to see a comet with my eyes.

My role model or inspiration was...

When I became passionate about astronomy, my role models were Julie Payette and Marc Garneau, two Canadian astronauts.

My education and training is...

I did my baccalaureate in Physics and then I studied Astrophysics during my doctorate degree at the University of Montreal. During the summers of my baccalaureate degree, I worked for a science center at Mont-Megantic Observatory. This training was essential for my broad knowledge in Science and Astronomy.

The most awesome part about my job is..

Each day, I'm part of the actual research done by international researchers. From extragalactic universe research to a better understanding of the planets of our Solar System, I'm helping these researchers to receive the most powerful images to reach their scientific goals.

What I don't like about my job...

As an astronomer, I have to understand the scientific goals of the researcher who asks for the observations. Sometime it's not obvious which are the priorities on the whole project. The researchers don't travel to the observatory, so I don't like having to guess the priorities on these scientific projects. I would love to have more face-to-face conversations with the researchers.

Advice for students interested in my job...

Be always passionate and curious about Physics and Astrophysics. Don't be self-conscious to ask internship in worldwide observatories, even if there is no advertisement of internship projects. Last, do not forget to get involve into outreach activities about sciences and astronomy



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Instrumentation

Jobs

Director of Engineering
Instrument Engineer
Optical Engineer
Instrument Specialists

What is the instrumentation group's role?

The instrumentation group is responsible for the maintenance, repair and development of CFHT's instruments. They work with astronomers to design, build, and maintain instruments. They also work with the other groups at CFHT to ensure that the instruments and telescope work together well.

Suggested Courses

Engineering Technology
Design Technology
Electronics
Electrical engineering
Math
Science (physics, bio, chemistry)
Computer programming

Is the instrumentation group for you?

Are you good at math?

Do you like to solve problems?

Are you interested in how things work?

Do you like working with computers?

Do you like to take things apart and put them back together?

Do you like to take existing things and make them work better?

What schooling do you need?

The minimum education for an engineer is a bachelor's degree. Engineering degrees are generally offered in electrical, mechanical, aerospace, civil and optical engineering. Not all of the members of CFHT's instrumentation group have degrees in engineering, some have degrees in physics or astronomy. They all share a love of solving problems and figuring out how things work.

More Information

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Grant Matsushige
Sr. Instrument Specialist

I first became interested in my career...

I first became interested in this field of work when I realized fixing cars for a living was not going to be as much fun as I first thought. I realized from working on cars that my weakest area of knowledge was electronics.

My role model or inspiration was...

My role model was my dad. He grew up in mid 30's here on the Big Island. Back then growing up on the Big Island, who would even think about leaving Hawaii to go to the mainland to learn how to maintain airplanes? He did and worked for Pan Am and was able to take us on many trips around the world. The biggest inspiration was seeing how he could fix anything. Many nights were spend in the living room thumbing through a 707 or 747 service manual.

My education and training is...

My education is in the field of electronics and electrical engineering. However, as a child and my young adult life, I learned to work with my hands and have a knack for mechanical systems

The most awesome part about my job is..

Everyday is arts and crafts day. We invent. We solve problems with geeky people like myself.

What I don't like about my job...

Sometimes the politics. It's not so simple to go and jump in and solve the problem. We often have to work with others to convince them that a particular solution is the right solution or which projects are higher priority.

Advice for students interested in my job...

No negativity. Saying "I can't" or "it's too hard" are not the right answers. Also, listening to others is very important because they may have great ideas too. Remember, they are usually just as passionate as you are at wanting to solve the problem.

Job Description

The observatory is made up of many different systems interfaced to computers. My job is to design, plan and coordinate these systems as well as troubleshoot them when they're not working.

Area of Expertise

- Low level hardware and software controls
- Problem solving
- Ability to visualize mechanical systems to figure out how they work.



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Operations

Jobs

Mechanical Engineer
Mechanical Technician
Instrument Maker
Mechanical Design Engineer
Automotive Mechanic
Electrician

What is the operations group's role?

The operations group keeps the telescope, dome and physical summit building running smoothly. They often work with large pieces of equipment, cranes and design software to maintain, repair and design features. Many of the operations group members work full time at the summit.

Is the operations group for you?

Are you good at math?

Do you like to solve problems?

Are you interested in how things work?

Do you like working with computers?

Do you like to take things apart and put them back together?

Do you like to fix things?

Do you like the idea of working with large mechanical systems?

Suggested Courses

Building and Construction
Electrical installation
Design Technology
Electronics
Electrical Engineering
Mechanical Engineering
Metal Working
Automobile Technology
Metals Technology
Math

What schooling do you need?

The instrumentation group has a wide variety of jobs with different required schooling. The engineering positions require a bachelor's degree in engineering. The electrician, mechanical technician and some other jobs require technical or trade school classes or an AA from a community college.

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Greg Green
Instrument Designer

Job Description:

As an Instrument Designer/Machinist at CFHT, I do everything it takes to bring a design (created by myself or someone else) to a finished component or assembly

Areas of Expertise:

- 3D computer aided design
- machining (cnc and manual)
- fabrication
- welding
- race car fabrication
- custom motorcycle fabrication
- journeyman electrician

I first became interested in my career...

My father was a Ford parts manager at a small dealership, so I spent my entire life growing up around parts and all things mechanical.

My role model or inspiration was...

Frederik Meijer. He was born to a middle class Greenville, Michigan family and at the time of his death, in 2011, was the 60th richest person in the United States. I respect him for his active involvement in philanthropy and pioneering 'one-stop shopping' in 1962 with the launch of Meijer Thrifty Acres, ever changing the way we all shop.

My education and training is...

I was accepted to the College for Creative Studies (essentially where all automotive designers come from), but even with Grants and Scholarships the cost of education forced me to look to the military for assistance. I ended up with a criminal justice degree through the Community College of the Air Force. Everything else has been self taught. There is nothing out there you can't learn from a book, job shadows and hard work.

The most awesome part about my job is..

Watching raw material evolve into a finished part that previously only existed in my head.

What I don't like about my job...

Paperwork

Advice for students interested in my job...

Listen to and respect those who have come before you. Very little in this world is truly innovative and new. Sometimes the greatest teachers are the old guys building race cars in their home garages or the old mechanics at small airports servicing 50 year old aircraft. These guys have hands on, practical knowledge of all things engineering and mechanical learned by decades of inadvertent 'destructive testing'.



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Software

Jobs

System Administrator
Software Engineer
Data Base Specialist
System Programmer

Suggested Courses

Computer networking
Computer electronics
Computer programming
Math
Science
Electronics

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What is the software group's role?

The people in the software group create the computers and the software that run the telescope. That includes controlling instruments and moving the telescope structure, monitoring thousands of systems for potential problems, planning and executing observations for astronomers around the world, and processing those observations afterwards.

Is the software group for you?

Do you enjoy working with computers?
Are you good at reasoning and logic?
Do you like to solve problems?
Are you good at math?
Do you pay close attention to details?
Are you patient?

What schooling do you need?

A bachelor's degree in Computer Science, Information Technology, Math, Engineering or a similar subject. It's helpful to know how to program in multiple languages like Java, C++ or Python.



Blaise Kuo Tiong
System Administrator

I first became interested in my career...

When my family bought our first computer while I was in middle school. I found out I could play games on it and connect to friends computers through the phone lines.

My role model or inspiration was...

My parents who taught me the value of an education and hard work. For someone you can look up, read about Ernest Shackleton and Rear Admiral Grace Hopper.

My education and training is...

I got my Bachelors of Science in Mathematics from UCLA and also studied History. Recently I went back to school to get a Masters in Engineering. There's always new things to learn.

Job Description

A system administrator works on the "big picture" of an organization's computers. They make computers work together by building networks, keeping track of security threats, and upgrading systems as new technology becomes available. They also build and repair a lot of computers from parts.

The most awesome part about my job is..

I got to spend a year looking for neutrinos at South Pole Station in Antarctica. For a few years I also worked on a team that navigated the Cassini Spacecraft around Saturn. Of course the summit of Mauna Kea is nice too! Working on computing systems takes you to some surprising places.

What I don't like about my job...

I wish our computers would last longer, but we demand a lot from them and they get faster every year.

Areas of Expertise

- Linux servers
- Software
- Networks
- Computer Hardware.

Advice for students interested in my job...

Pack light, remember where all the screws go and take lots of pictures! Also take the opportunity to do internships, a student job, or fellowships, it'll be a revelation seeing lessons in practice.