



Qwaltec Overview

November 2019

Making a difference on and off the planet

QWALTEC

Qwaltec provides **end-to-end mission control services** and control center development across the globe. As a **trusted partner** on both government and commercial missions, our **talented team** of engineers and thinkers deliver exceptional technical **solutions**.

Qwaltec is a **leader in aerospace**, bridging the gap between a mission concept and its final delivery. We are committed to **making a difference on and off the planet** by constantly looking to the future.

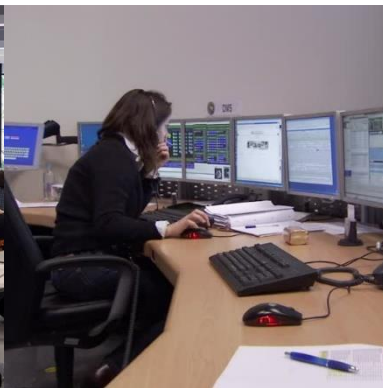
QWALTEC HERITAGE



Human
Spaceflight
Training



Satellite
Operations
Training



Mission
Simulations &
Readiness



Satellite
Operations



Operations
Control Center
Development

QWALTEC HIGHLIGHTS

- Space operations company founded in May 2001
- Based in Tempe, AZ with locations in seven U.S. states plus Guam
- 100+ employees
- Certified Women Owned Small Business
- Our customers depend on Qwaltec to manage billions of \$ of their space assets
- ***Passionate about space***



MISSION CONTROL SOLUTIONS

- **Design**

- Operations Concepts
- System Requirements
- System Architecture

- **Development**

- System Integration
- Custom Software Development

- **Readiness**

- Operations Products/Documentation
- Anomaly & Contingency Planning
- Operations Training
- Simulations & Rehearsals



- **Operations**

- Flight Operations
- Launch & Surge Support
- Anomaly & Contingency Support

MISSION READINESS AND TRAINING

- Operations Assessments
- Operations training and certification for satellite launch and on-orbit operations
- Procedure and documentation design and development
- Operations Concepts
- Ground system mission readiness
- Simulation planning, execution and evaluation
- Transition planning
- Anomaly and contingency planning



SYSTEMS AND SOFTWARE ENGINEERING

- System analysis and design
- Requirements management
- Trade studies
- Risk management
- Software design, development, testing and management
- Software integration, installation and checkout
- Ground system application software



```
break;
$("#User_logged").val(a);
function(a);
});
return c; function collect(a, b) {
  for (var c = 0; c < a.length; c++) {
    function dynamicSet(a[c], a) < b && (a[c] = "
    var b = 1; }
    " == a[0] && (b a;-1, a = a.substr(1));
    tion(c, d) {
      user(a)a] > d[a] ? 1 : 0) *
      a.c < a.length; c++
```

COMMERCIAL PROGRAMS



Extensive training program for OneWeb flight operations teams



Satellite operations training program for Iridium flight operations team

COMMERCIAL PROGRAMS



Delivered an operations center to support system testing



Flight operations support and operator training for a 30-day mission

COMMERCIAL PROGRAMS



*Partnership with ASU for a first of its kind online course for
satellite operations*
First of ten planned modules launched in September 2019



Characteristics of a Space Program

Please click the media button to view this video (2:08).

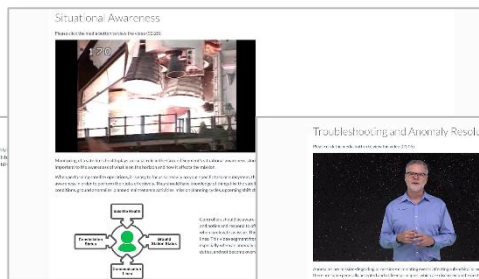
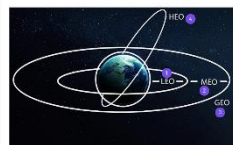


Orbit Types

Satellites with lower Earth orbits provide a specific type of service. Low Earth Orbits (LEO), Medium Earth Orbits (MEO), and Geostationary Orbits (GEO) each have unique characteristics. The purpose of this video is to provide a general overview of these orbit types and their applications.

Satellite Orbits

Click each module to learn about the orbit types.



Situational Awareness

Please click the media button to view this video (2:08).



Understanding the current state of a system is a critical component of effective decision-making. This module explores the various factors that contribute to situational awareness and how they can be used to improve system performance.



Troubleshooting and Anomaly Resolution

Please click the media button to view this video (2:08).



First of its kind satellite operations course

Please click the media button to view this video (2:08).

- First of its kind satellite operations course
- Creating a standard foundation of knowledge
- Preparing future operations workforce
- Pilot course available now
- More courses to come
- Take the course and provide feedback



Start Your Career

In the Exciting Field of Space Systems Operations
Online Courses ▪ Start Anytime ▪ New, Expanding Curriculum



&



Start Today!

Satellite Command and Control Introduction to Satellite Operations

Purpose:

Provide participants with foundational knowledge in the area of Space and Ground Operations.

Focus:

Operate and maintain one or more spacecraft following launch, early orbit, and on-orbit activities. The course presents participants with critical information in the areas of: Space program characteristics, ground operations architecture, common operator activities, and traits found in a successful satellite or ground controller.

Goal:

Provide foundational knowledge to benefit you as you start a career in the exciting and rewarding field of satellite operations!



Start:
Anytime



Location:
Online



Price:
\$499



Course:
1 of 10



Enroll Now!

bit.ly/asu-satcom

interplanetary.asu.edu
qwaltec.com



UNIVERSITY PROGRAMS



Flight and ground system software development
Backup operations center for mission



Lead systems engineering support

GOVERNMENT PROGRAMS



Complete training program on a new, modernized ground system for NASA's TDRSS constellation



*Systems requirements development
Simulations and mission readiness
Launch operations support
Anomaly & contingency planning*



GOVERNMENT PROGRAMS

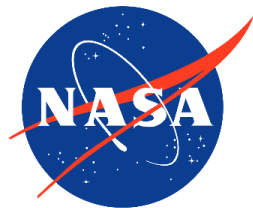


*Engineering and training support for NASA's Space Network
Antenna operations and maintenance at NASA's Wallops Flight Facility*



Satellite operations at US Navy's Naval Satellite Operations Center

CUSTOMERS



GENERAL DYNAMICS



QWALTEC COMMITMENT



- **Our Vision**

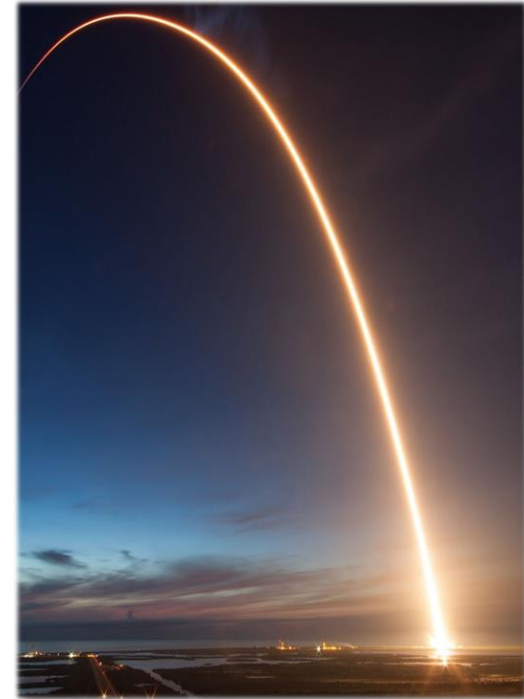
- To make a difference on and off the planet while demonstrating that the **MISSION**, the **CUSTOMER**, and our **TEAM MEMBERS** matter

- **Our Mission**

- Be a recognized leader in the aerospace industry by providing exceptional service to our customers, career opportunities for our employees, and financial stability to support growth

- **Our Values**

- Exceed expectations
- Act with integrity and compassion
- Exhibit excellence and accountability
- Be open, honest, and fair
- Invest in relationships





where **Mission** meets **Control**