TRAINAIR PLUS

Aeronautical Safety College

Ministry of Land, Infrastructure, Transport and Tourism

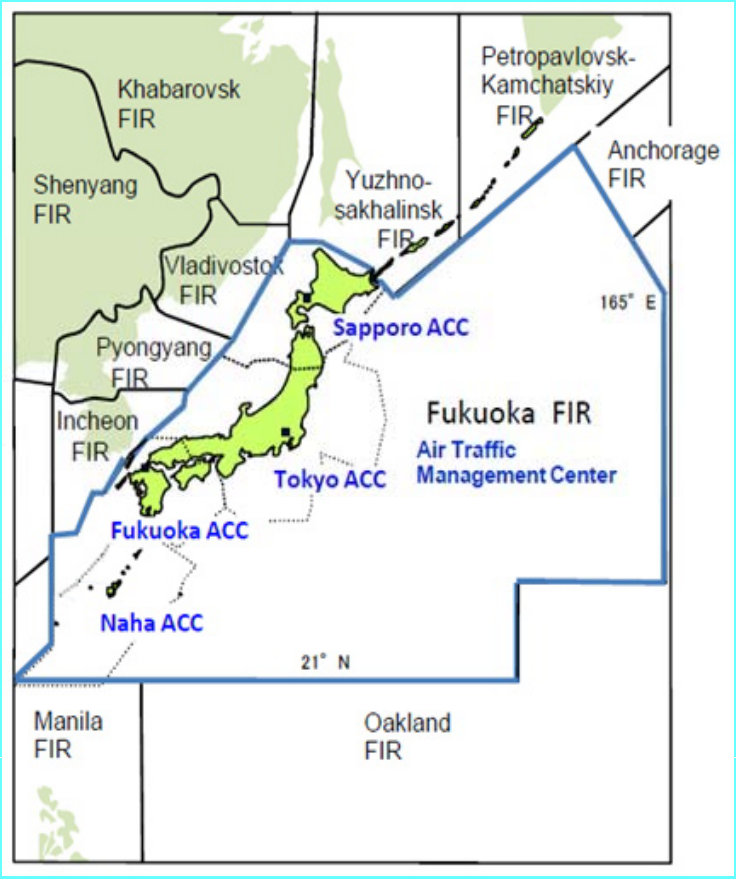
Air Traffic Services promote Aviation Safety

It is one thing to see the gleaming silver wings of an aircraft flying freely overhead, but it is quite another to know the fact that many ATS specialists are working behind the scenes to ensure round the clock safety of air traffic.

In aviation network covering all over Japan, there are approximately 3,800 flights a day, and 150 million passengers and 4.3 million tons of freight are carried a year.

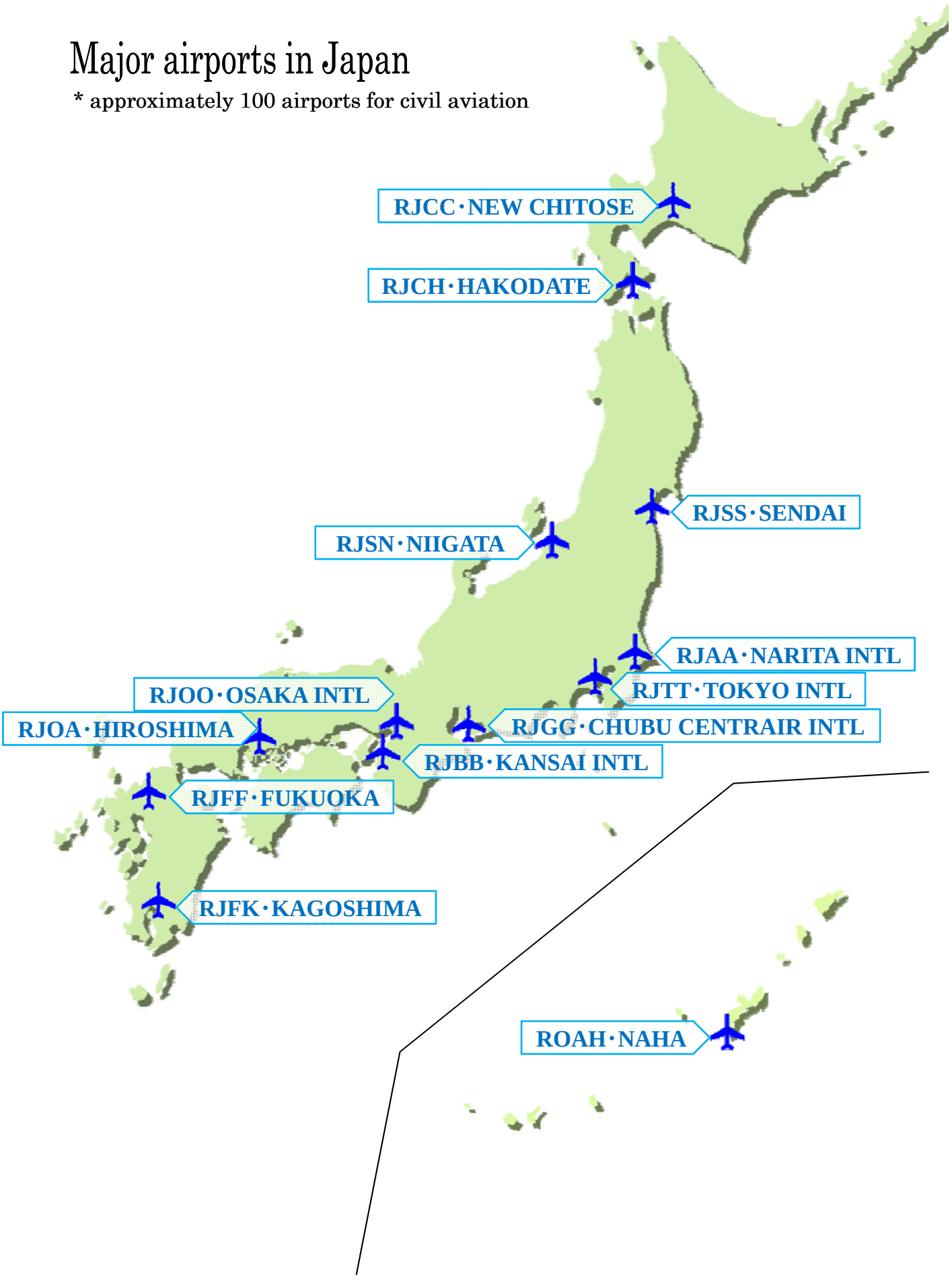
In order to ensure the safe operation of air transportation, it is essential to establish the comprehensive ground supporting system, such as Air Traffic Control, Flight Information Service, Radio Engineering Service.

Air Traffic Services in Japan



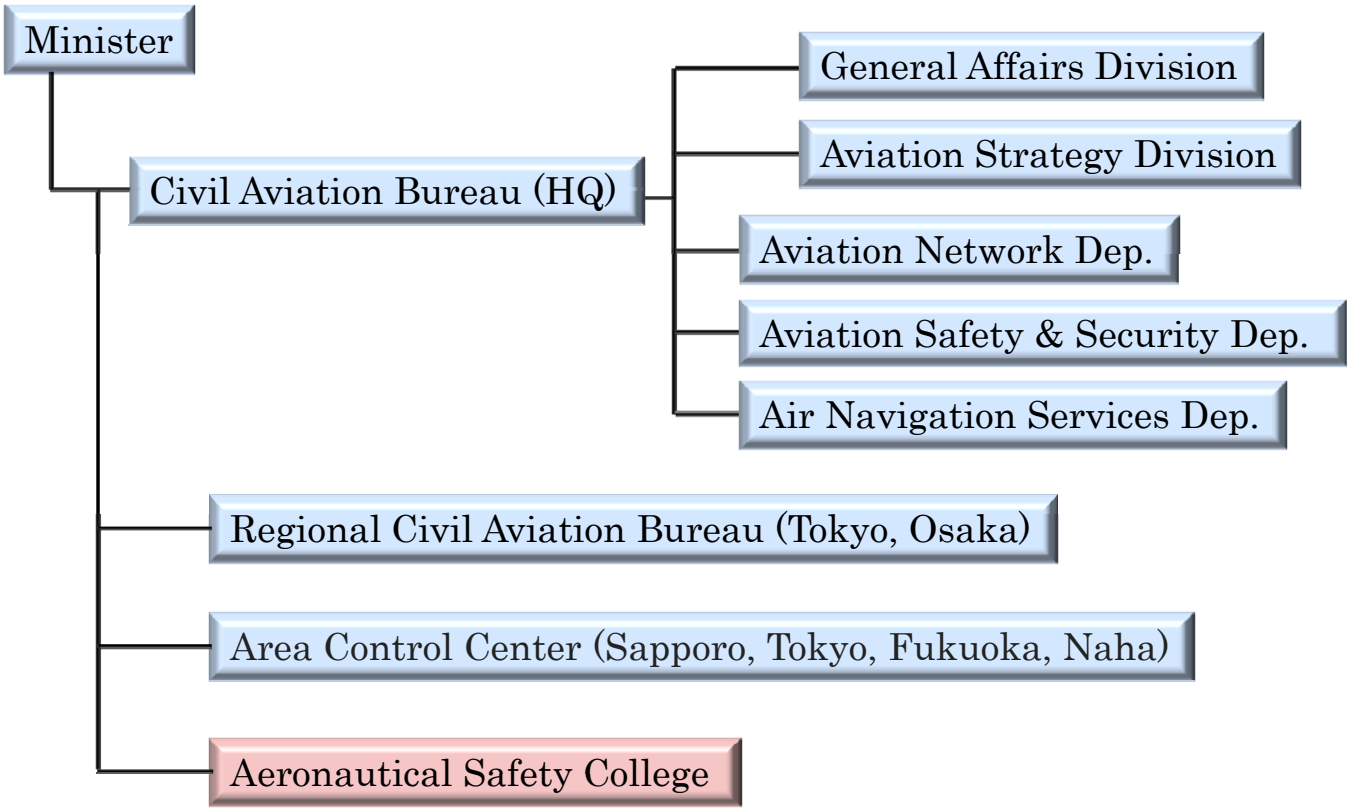
Major airports in Japan

* approximately 100 airports for civil aviation



Organization chart of the Ministry of Land, Infrastructure, Transport and Tourism

(showing only civil aviation section)



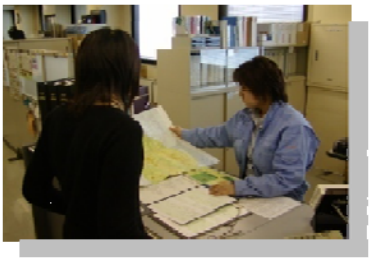
The number of Civil Aviation Personnel

Air Traffic Controller	・・・・・	1,881
ATS Flight Information Officer	・・・・・	693
Air Traffic Communications Specialist	・・・・・	45
Air traffic Safety Electronics Personnel (ATSEP)	・・・・・	1,327
Aeronautical Lighting System Engineer	・・・・・	163
Aeronautical Satellite Operations Specialist	・・・・・	111
Total	・・・・・	4,220

They are working in the fields such as …….

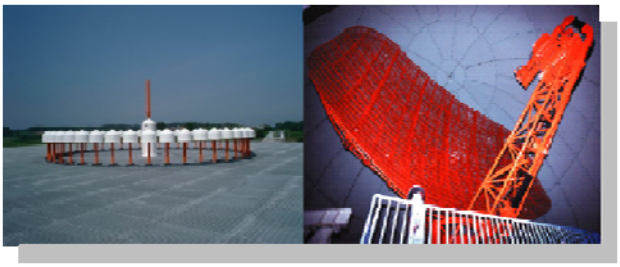
Thousands of personnel are engaged in several kinds of CNS/ATM operations listed below. And many others also support the safety of the sky in such fields as flight inspection, security and disaster prevention, civil engineering, architecture, electric and mechanical engineering.
They all enjoy their jobs and work firmly in;

Air traffic control



ATS flight information Service

Air traffic communications for overseas flights



CNS and ATC facilities engineering

Satellite system operation

Visual aids (lighting system)

Flight inspection of NAVAIDS and Visual aids

Outline of Air Traffic Service officer

Personnel who engage in Air Navigation Services are government employees working for the Civil Aviation Bureau, Ministry of Land, Infrastructure, Transport and Tourism. They support the safe and efficient operation of aircrafts. An outline of the specialists directly linked with the aircraft operation are described below. Other air traffic services officers include management for evaluation of development, flight inspectors, aircraft inspectors, security guards, firefighters, and civil engineering, construction, electric and mechanical technicians.

Air Traffic Controller (ATC)

They serve to prevent collisions between aircrafts and obstructions on the maneuvering area. They also issue instructions and clearances to expedite and maintain an orderly flow of air traffic.

Air Traffic Services Flight Information Officer

Aeronautical Information Specialist and Air Traffic Communications Specialist were consolidated and reorganized. They serve the operation services(Flight Operation and Information Service, Aeronautical Mobile Communication and Information Service, Aerodrome Operation and Information Service).

Air Traffic Communications Specialist

They offer the weather information and the aeronautical information to Airmen required for safe operation of an aircraft. They also relay control clearances, instructions and position reports between ATCs and pilots.

Air Traffic Safety Electronics Personnel (ATSEP)

They provide management, operation and reliability management service of ATC facilities(radar, etc.), radio air navigation equipments (ILS,VOR, etc.) and ATC information processing system (ARTS,RDP, etc.)

Aeronautical Satellite Specialist

They provide observation, management and orbital analysis of the aeronautical satellite, and operation of the navigation satellite reinforcement system. They also provide operation, observation and management of the ground station, and operation of the satellite-based data communication network by the satellite.

Air Traffic Management Specialist, etc

They serve to manage air traffic(air traffic flow management, airspace management, oceanic control, etc.)at the ATM Center.

Aeronautical Lighting and Electricity Specialist

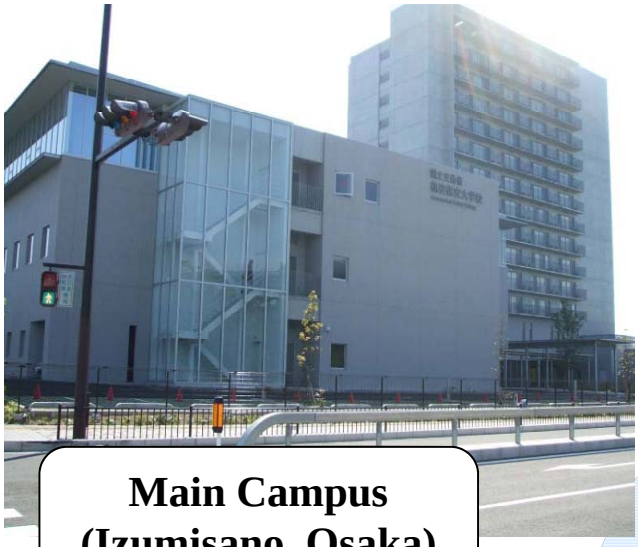
They provide installment, management and maintenance service of aeronautical lighting and electricity.

History of Training for Air Traffic Service officer

The training of future air traffic controllers, communication and information specialists and air traffic engineering specialists had been the main function of the Tokyo campus of Aeronautical safety college (ASC). In 1971 after the mid-air collision between a civil aircraft and a JSDF fighter jet over Shizukuishi in northern Japan, an urgent need arose to replace the nation's of air traffic control and air navigation with a modern one. Based on the 2nd Five-Year Plan for aerodrome modernization, the upgrades of en route and airport radar systems had started all over the country. To meet these challenges, the immediate training of many, competent air traffic services personnel in a limited period of time was required. ASC Tokyo campus was no longer able to fill the demand since both its instructors and facilities were insufficient.

In response, ASC Iwanuma branch was established in April 1974 in the vicinity of Sendai Airport, Miyagi Prefecture. In April 2002 Iwanuma branch was reorganized to Iwanuma Training Center to enrich the training.

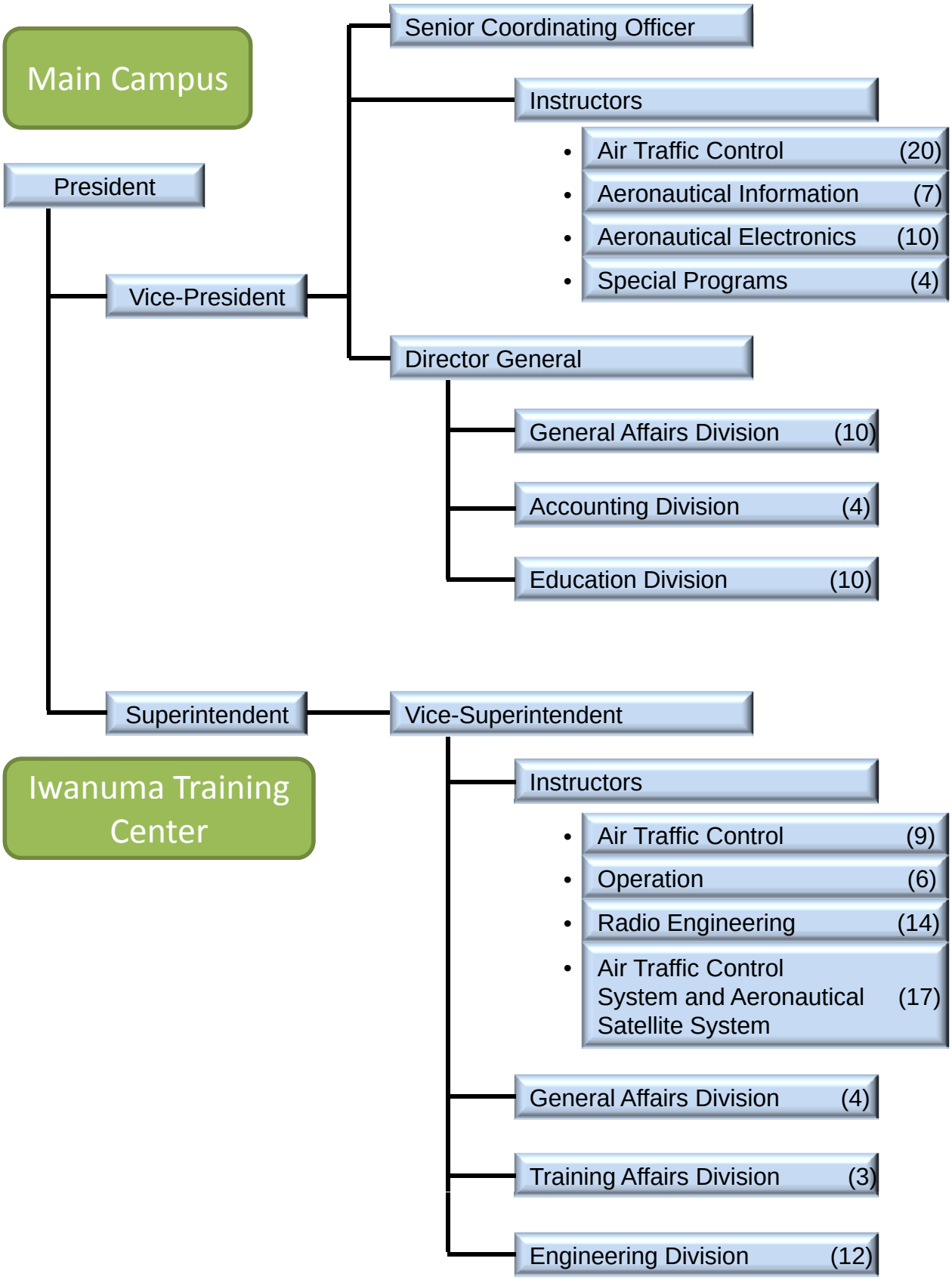
In 2008, Tokyo main campus was transferred to Izumisao city in Osaka Prefecture, near Kansai International Airport.



Main Campus
(Izumisano, Osaka)

IWANUMA
Training Center
(Iwanuma, Miyagi Prefecture)

Organization of ASC (2014)



The Basic Training Courses for Air Traffic Service Officer

The ASC is a unique training institute in Japan for those who are to be Air traffic Service Officer.
The courses in the main campus in Osaka are;

1) Air Traffic Control Course
2) Aeronautical Information Regular Course
3) Aeronautical Electronics Regular Course

—Admission :
completed college or equivalent, less than 30 years old for Air Traffic Control Course
completed secondary school or equivalent, less than 21 years old for Regular Course

Every trainee becomes government employee on the entrance to the ASC, and that is required to engage in those jobs referring to CNS/ATM after graduation.

Regular course trainees learn liberal subjects such as Mathematics, Psychology, English and so on as well as their major subjects.

The basic training courses are;

Air Traffic Control Course →

Aeronautical Information Regular Course ←

Aeronautical Electronics Regular Course →

Besides, ASC offers short-term courses concerning the outline of Air Traffic Services for personnel being engaged in administration, radio engineering, flight information, architecture, aeronautical lighting, security and disaster prevention.

Iwanuma Training Center offers more advanced courses on all kinds of CNS / ATM operations for all Air Traffic Service Officers.

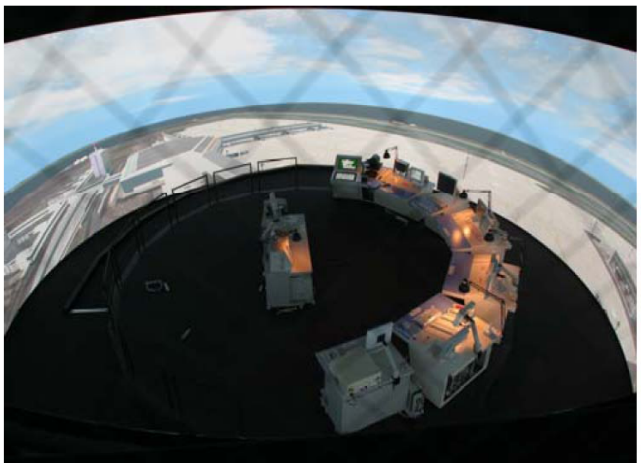
— *MAIN CAMPUS* —

Training Course for Air Traffic Controller

Course title: Air Traffic Control Course
Duration: one year
Trainees: approximately 70 trainees a year

The trainees are provided with basic knowledge and technical skills on both Aerodrome and En-route Control.

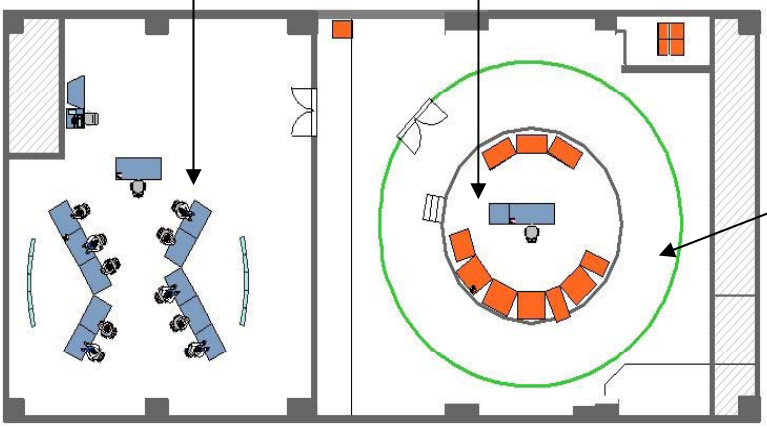
Tower Simulator with
360-degee view



A view from the cockpit
can be displayed

Pilot / ATC
operators

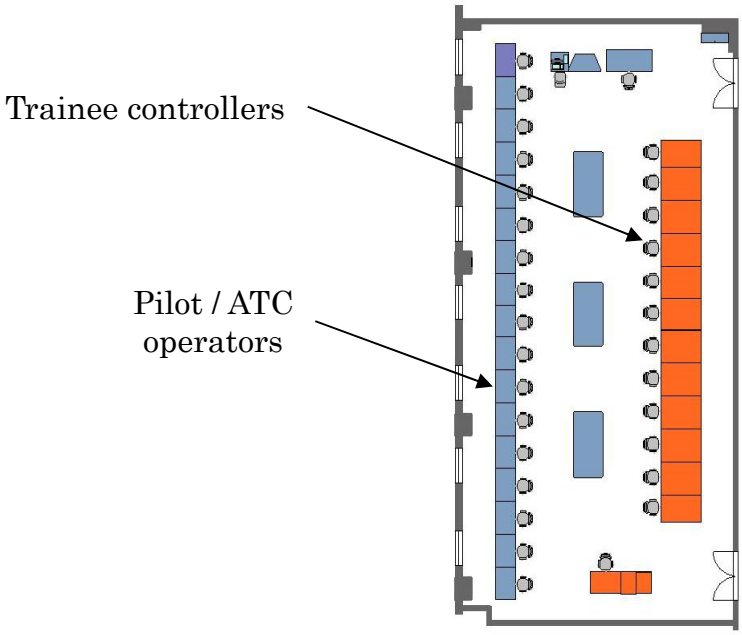
Trainee
controllers



360-degee screen

— *MAIN CAMPUS* —

Radar Simulator



Radar display is selectable

Analogue display mode

Digital display mode

— *MAIN CAMPUS* —

Training Course for Flight Information Officer and Air Traffic Communications Specialist

Course title: Aeronautical Information Regular Course
Duration: two years
Trainees: approximately 20 trainees a year

In this course, we provide the trainees with the basic knowledge and skills so that they will work as “Air Traffic Services Flight Information Officers” or “Air Traffic Communications Specialists” after graduation from ASC.

In addition to providing pilots and aircraft operators with necessary information for the flight, those ATS Information Office manage flight plans, and perform both aerodrome management for the safety of aircraft as well as search and rescue services.

Air Traffic Communications Specialist relays ATC clearances and provide information to the pilots of overseas flight by using HF and VHF radios.

— *MAIN CAMPUS* —

Training Course for Air Traffic Safety Electronics Personnel

Course title: Aeronautical Electronics Regular Course
Course duration: two years
Trainees: approximately 25 trainees a year

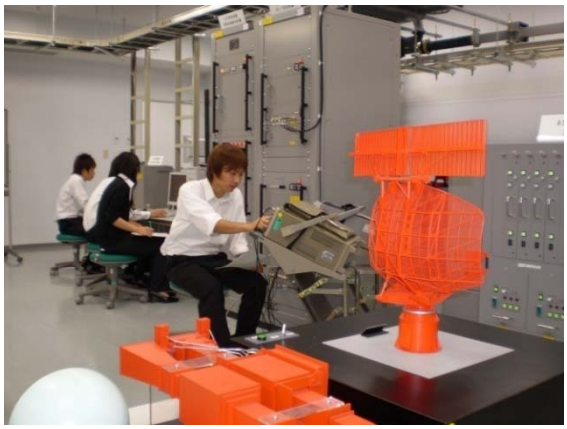
The major subjects that the trainees learn are electronics, radio engineering, digital circuit engineering. Based on these, they learn the details of VOR, ILS, Radar, Data Processing System, etc.

ASC has various training equipments for the trainees to acquire further comprehensive knowledge of CNS.

Communication control system

ILS equipment

Radar system



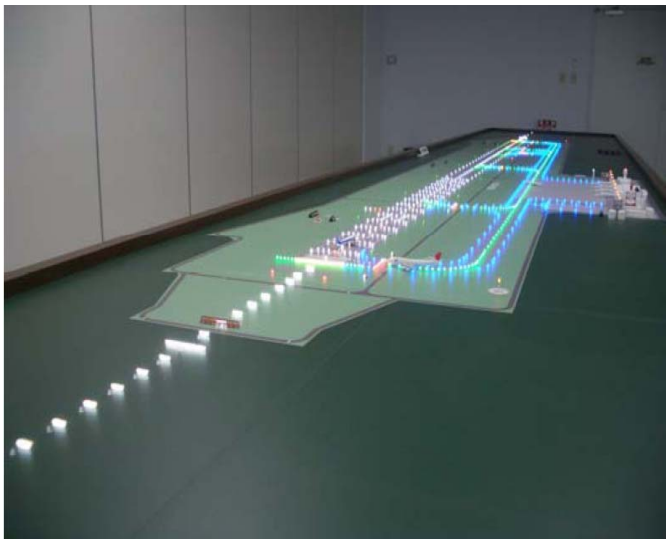
— *MAIN CAMPUS* —

Training Course for Aeronautical Lighting and Electricity Specialist

Course title: Curriculum for Aeronautical Lighting and Electricity Specialist
Course duration: about 4 weeks in each of three separate courses a year
Trainees: approximately 10 to 15 trainees per course

This curriculum consists of three courses; basic, intermediate and supervisor course. The subjects they learn in each course are;

1) Basic course: basis of ATS, airport lighting system, electric power supply, etc.
2) Intermediate course: safety management, lighting system management, etc.
3) Supervisor course: risk management, education of electrical personnel, etc.



Airfield lighting simulator

Adjustments to Precision Approach Path Indicator (PAPI)

— *MAIN CAMPUS* —

Seminar for Foreign Trainees

CNS Seminar （October, 2010) hosted by JICA

ATM Seminar （July, 2009 ） hosted by JICA

Asia-Pacific PBN Seminar (March, 2009) hosted by ICAO

Symposium on ATS Personnel Training (February, 2010) hosted by JCAB

CNS Seminar （October, 2010) hosted by JICA

Flight Procedure (RNAV) Design course (February, 2012) hosted by JICA

Instructor Training on New CNS/ATM Systems Training “Basic Course” (Jun, 2012) hosted by JICA

Flight Procedure (RNAV) Design course (February, 2013) hosted by JICA

Flight Procedure (RNAV) Design course (February, 2013) hosted by JICA

— *MAIN CAMPUS* —

TRAINAIR *PLUS* Programme

April, 2010
ASC established Course Development Unit.

January, 2011
On-site assessment by ICAO.

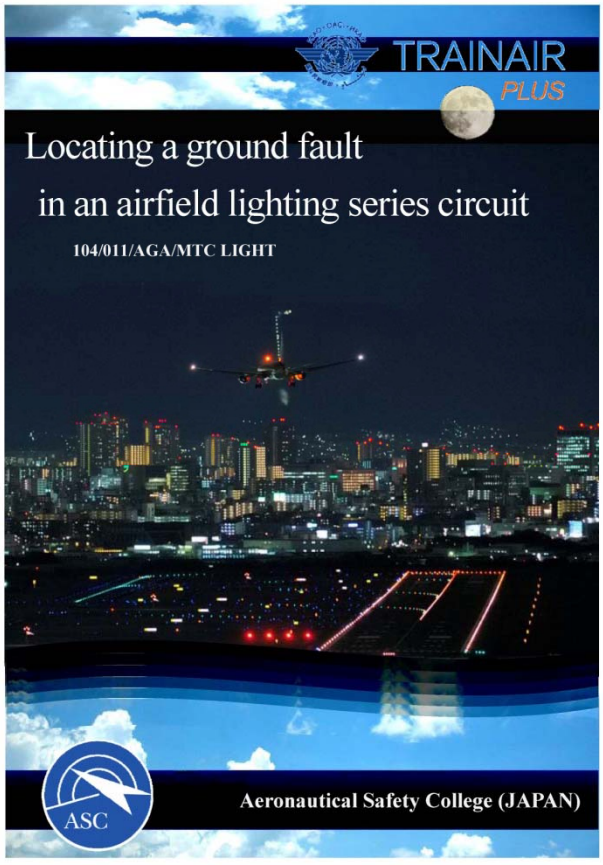
March, 2011
ASC became an associate member.

December, 2012
The first STP development was completed.

January, 2013
ASC became a full member.

December, 2013
Re-assessment by ICAO

The first STP
"Locating a ground fault
in an airfield lighting series circuit"



— *IWANUMA TRAINING CENTER* —

Aeronautical Safety College Iwanuma Training Center (ASCI) which is located near Sendai Airport is a major contributor of the advanced and specialized technology knowledge for personnel at worksites.
ASCI has the same installations as those used at ACC (area control center) or airports to deliver hands-on trainings.

Staff and instructors: 73
Courses: 31
Trainees: approximately 600 trainees a year

Iwanuma Training Center

Trainee Residences

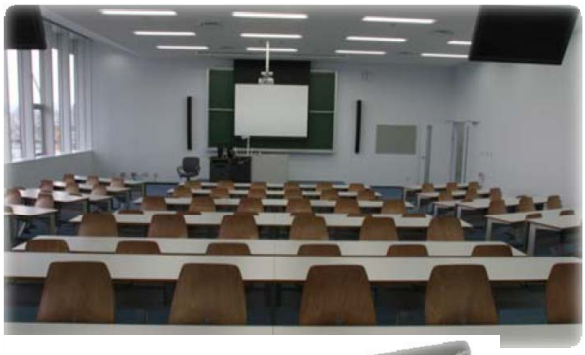
Campus & Facilities (Main campus)

The ASC has the following facilities:

- 10 classrooms
- 8 laboratories
  (navigation system, surveillance system, etc)
- English language laboratory
- 2 computer laboratories
- Airfield lighting simulator and electrical facility laboratory
- Air Traffic Control simulators for:
  - ☆360-degree tower simulator
  - ☆180-degree tower simulator
  - ☆Radar simulator for approach control
  - ☆Radar simulator for area control
- Library
- Auditorium
- Gymnasium
- Playground and Tennis courts
- Trainee Residence

Patio

Auditorium



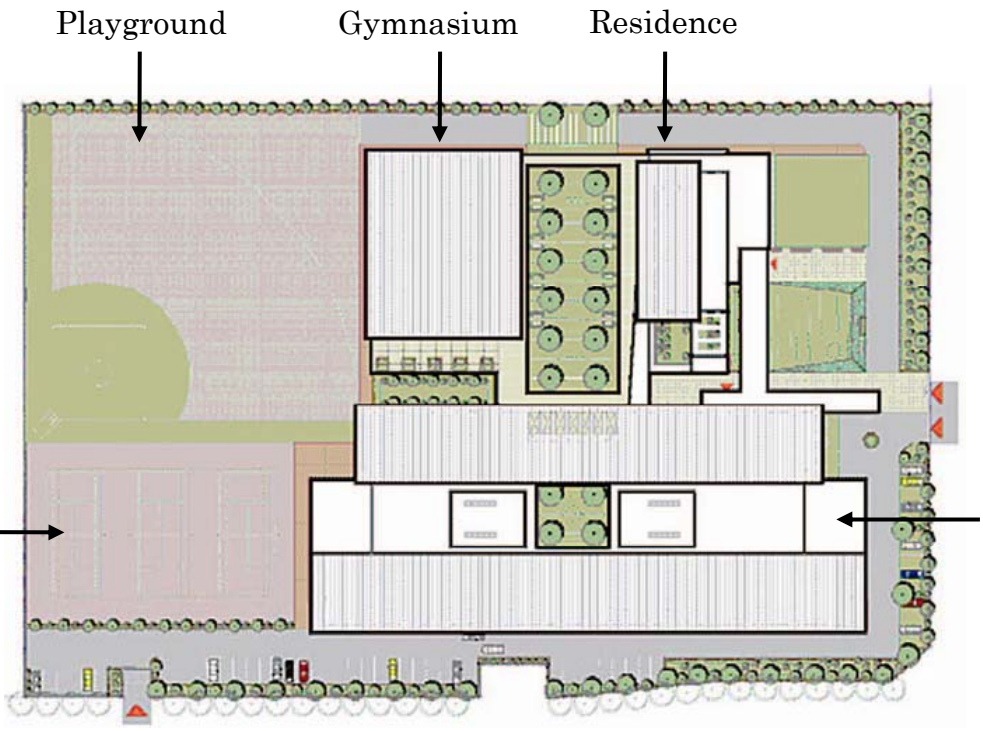
Trainee Residence

Computer laboratory

Library

Cafeteria

Gymnasium



Aeronautical facilities around Osaka

RJOO・Osaka Int'l Airport

Kobe Aeronautical Satellite Center

(SDECC)
System Development, Evaluation and Contingency Management Center

RJOY・Yao Airport for general aviation

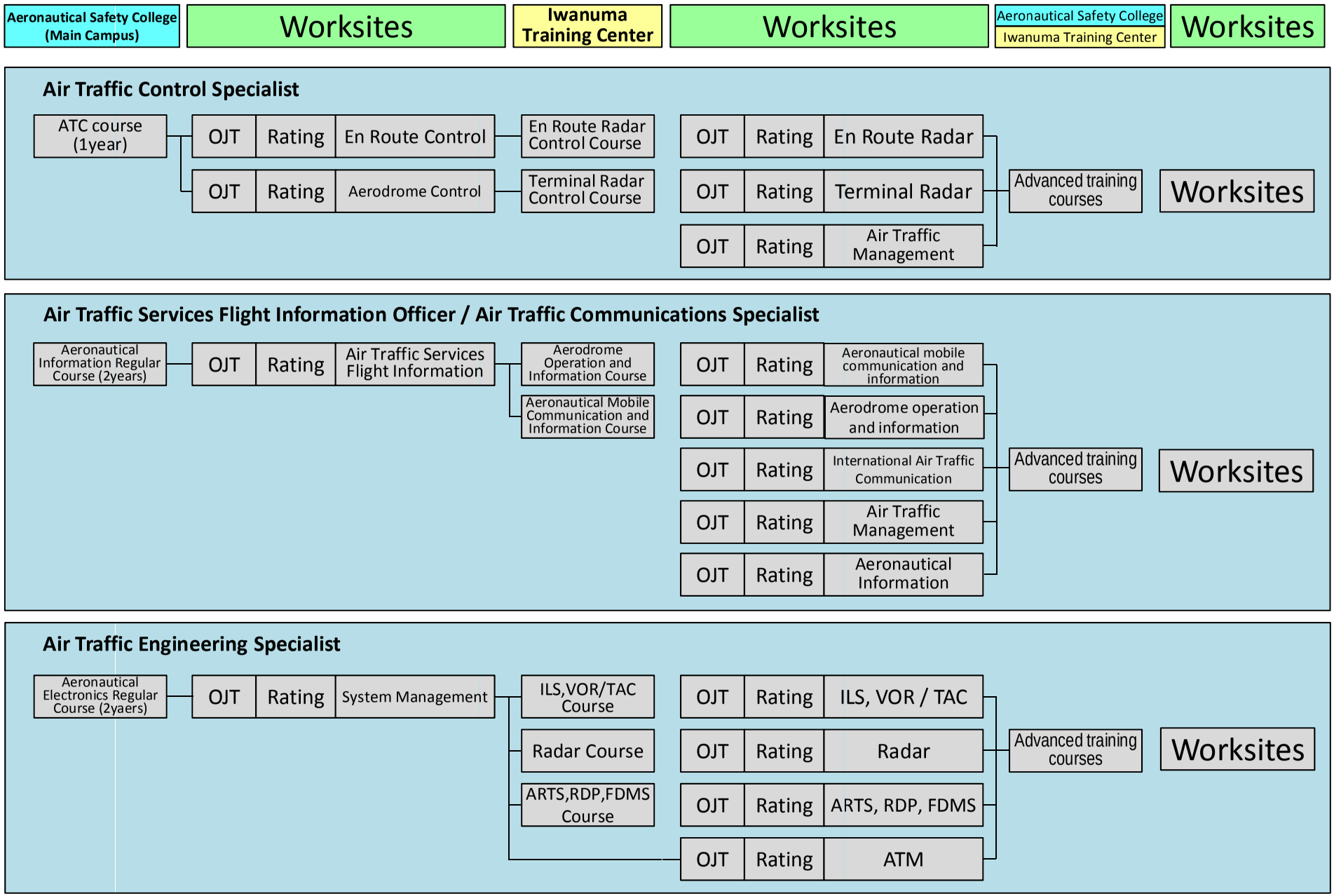
RJBE・Kobe Airport

Mikuniyama ARSR / SSR

RJBB・Kansai Int'l Airport

RJBD・Nanki-shirahama Airport

TRAINING PROGRESSION



From Kansai Airport Station,use either JR line or Nankai Railway to Rinku Town Station.
From Rinku Town Station on JR and Nankai Railway,5 min. Walk

AERONAUTICAL SAFETY COLLEGE
http://www.kouho-dai.ac.jp

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■Iwanuma Training Center
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