



# MEETING THE TRAINING NEEDS OF THE NEXT GENERATION -

## *SAA'S PERSPECTIVE*

Next Generation of Aviation Professionals Symposium

1-4 April 2010

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# About SAA

- Established in 1958, training arm of CAAS
- Four specialized schools, more than 100 programmes annually
- 50,000 participants from 190 countries
- Operational, management and specialised programmes for all levels of aviation professionals
- International conferences, seminars and meetings



# SAA Schools

School of  
Aviation  
Management



School of Air  
Traffic  
Services



School of  
Aviation  
Safety &  
Security



School of  
Airport  
Emergency  
Services



# SAA School of Aviation Management

## Airport Management & Operations

BAvMan, with Massey University, NZ

Grad Dip in Aviation Management, with National University of Singapore

Grad Dip in Airport Engineering, with Nanyang Technological University, Singapore

Airport Terminal Operations and Management

Airport Ramp Operations and Management

## Specialised & Leadership Programmes

Civil Aviation Management Programme

International Air Law : Concepts & Applications

Fundamentals of Aeronautical Information Services: Concepts and Applications



SAA School of

# Aviation Safety & Security

## Safety Oversight & Management

Aircraft Accident Investigation & Management

Auditing Techniques in Relation to  
Personnel Licensing, with JAA

Integrated Safety Management Systems

Safety Oversight Courses for Managers &  
Airworthiness Inspectors

Workshop on Human Factors in Aviation

## Security Operations & Management

Workshop on Crisis Management in  
AVSEC

Airline Security Operations, with IATA

Airport Security Operations





# SAA School of Air Traffic Services

## Operational Surveillance/ Procedural

- Primary Air Traffic Control
- Aerodrome Control
- Area Control (Procedural & Surveillance)
- Approach Control (Procedural & Surveillance)
- Aeronautical Search and Rescue Operations
- On-the-Job Training (OJT) for Instructors
- Airspace Planning and Design Workshop
- ICAO PANS-OPS Instrument Procedures Design
- Aeronautical English

## ATC & ANSP Management

- Seminar on CNS/ATM
- ATS Resource Management & Training Workshop
- SAR Administrators
- ATS Safety Management & Investigation
- Safety Audits of ATS
- Human Factors in ATS Workshop





SAA School of

# Airport Emergency Services

## Airport Fire Safety & Fire-fighting Operations

Airport Fire Officer Programme

Senior Fire Officer Programme

Operational Fire Command and Control

Aviation Fire-fighting Foam Evaluation

## Rescue & Emergency Management

Radiation Hazards & Safety Inspection Workshop

Dangerous Goods Inspector Workshop

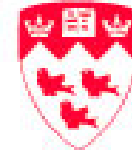
Emergency Management Workshop

Strategies and Tactics for HAZMAT Incident Management Workshop, with Texas Engineering Extension Service (TEEX), USA





# Partners



European Aviation Security Training Institute



EMBRY-RIDDLE  
Aeronautical University



FLIGHT SAFETY  
FOUNDATION



- 1977 ASEAN Centre of Excellence
- 1978 ICAO/UNDP Asia Pacific Regional Training Centre
- 1996 Flight International Aerospace Industry Award
- 2000 34<sup>th</sup> ICAO Edward Warner Award



# Benefits and Challenges of Competency-Based Approaches

SCHOOL OF ATS

## COMPETENCY BASED LEARNING

- Outcome-oriented, benchmarking required performance standards
- Assessments to validate competencies at various stages
- Feedback on competency levels and gaps
- Instructor-dependent vs material-dependent





# Benefits and Challenges of Competency-Based Approaches

SCHOOL OF ATS

## PROBLEM-BASED LEARNING

- Pre-course attachment
- Trainees given problem-based projects
- Better appreciation of real world before lessons
- Instructors able to assess level of preparedness and adjust training methods accordingly

# Benefits and Challenges of Competency-Based Approaches

SCHOOL OF ATS

## ROLE-PLAY EXERCISES

- Role-play exercises in classroom and during practical training
- Provide different role perspectives
- Prepare trainees for on-the-job training environment



# Benefits and Challenges of Competency-Based Approaches

SCHOOL OF ATS

## CASE STUDIES

- Cases presented during
  - Discussions
  - Practical Training
- Expose trainees to real world issues
- Reinforce application of concepts





# Combining Best Practices of Academia and Industry

SCHOOL OF AMS

- Collaboration with IHLs and Industry
- Combination of theories and practical experience
- Lectures, discussions, projects, site visits



# Combining Best Practices of Academia and Industry

SCHOOL OF AMS

- Joint programmes with IHLs
  - Graduate Diploma in Aviation Management (with National University of Singapore)
  - Master of Business Administration in Aviation (with Embry-Riddle Aeronautical University)

# Tailoring Programmes to Industry Needs

SCHOOL OF AMS

- Specific industry requirements and inputs
- Sharing of best practices by experts and practitioners
- Site visits to gain first-hand insight
- Industry-related programmes on
  - Airport Operations and Management
  - Safety Oversight and Management
  - Aviation Security Management



# Leveraging Technologies

## SCHOOLS OF ATS

### 360° Aerodrome Control Simulator



- Computer-generated visual scene and targets
- ICAO and national performance standards
- Electronic flight progress strips and aeronautical information
- Airfield lighting control panel, integrated voice communication and control system
- Day and night operations, all weather conditions, emergency situations

# Leveraging Technologies

SCHOOL OF AES

Airport Foam  
Tender  
Driving Simulator



- Motion platform simulator
- Hazardous driving situations in a virtual environment
- Day and night operations, all weather conditions, emergencies
- Recording function a useful learning tool

# Information Exchange and Sharing of Views

- Conferences, Seminars, Workshops, Meetings as platform for
  - Information exchange and sharing of views
  - Dialogue among authorities, regulators, operators, service providers, industry
  - Yield insights and consensus for effective action to address challenges





# Information Exchange and Sharing of Views

- Recent Conferences and Forums
  - World Civil Aviation Chief Executives Forum, August 2009
  - Aviation Leadership Summit, Feb 2010
  - Aircraft Accidents Crisis Preparedness and Management Conference, March 2010
  - International Air Law Conference, April 2010





# Conclusion

- Importance of staying relevant in training the next generation of aviation professionals, by keeping abreast of training needs, implementing new methodologies, embracing advanced technologies, and working closely with all stakeholders

THANK YOU

# SINGAPORE AVIATION ACADEMY

## **VISION**

To be the world's premier centre of learning for civil aviation

## **MISSION**

To provide the highest quality of training, and the sharing of knowledge and experiences, for the advancement of international civil aviation

