Introduction

The following list comprises the WMO ICAO Aviation Meteorological Observer Competencies.

There are four main competencies, with each main competency being subdivided into more detailed requirements.

During the next four weeks, you will be working through these requirements in preparation for the two-week face-to-face sessions where you will be compiling your own Portfolio of Evidence (PoE).

Please work through the content of these MOODLE pages on your own, and please feel free to email me on colleen.rae@weathersa.co.za if you have any queries about any of the content and/or requirements. You will be also be required to complete tasks (please ensure that this is your own work and so do not copy from your colleagues – rather email me with your inquiry).

For this first topic we will be looking at the actual competencies in more detail before addressing each of them individually.

ICAO Competency Criteria for AMOs

1 CONTINUOUSLY MONITOR THE WEATHER SITUATION

- 1.1 Analyse the existing local weather conditions
- 1.2 Describe the existing local weather conditions

2 PERFORM AND RECORD ROUTINE AND NON-ROUTINE OBSERVATIONS

- 2.1 Surface wind direction and speed, including spatial and temporal variations.
- 2.2 Visibility for aeronautical purposes, including spatial and temporal variations.
- 2.3 RVR, including spatial and temporal variations.
- 2.4 Significant weather phenomena (as defined in ICAO Annex 3).
- 2.5 Cloud amount, height of base, and type, including spatial and temporal variations.
- 2.6 Vertical visibility.
- 2.7 Temperature and humidity.
- 2.8 Pressure; determining QFE and QNH.
- 2.9 Supplementary information, wind shear and special weather phenomena.
- 2.10 **Interpret** automatic observed parameters to ensure observations remain representative of local conditions when variations result from differences between automatic sensors and manual observing techniques.
- 2.11 Ensure that observations are prepared and issued in accordance with ICAO Annex 3, WMO-No.49, regional and national formats, codes and technical regulations on content, representativeness and timeliness.

3 ENSURE THE QUALITY OF THE PERFORMANCE OF SYSTEMS AND METEOROLOGICAL INFORMATION

- 3.1 Apply the organization's quality management system and procedures.
- 3.2 Check and confirm the quality of meteorological observations before issuance, including relevance of content, time of validity and location of phenomena.
- 3.3 In accordance with prescribed procedures: identify errors and omissions in meteorological observations.
- 3.4 In accordance with prescribed procedures: correct and report errors and omissions.
- 3.5 In accordance with prescribed procedures: make and disseminate corrections in a timely manner.

4	**COMMUNICATE METEOROLOGICAL INFORMATION TO INTERNAL AND EXTERNAL USERS**
4.1	Ensure that all observations are disseminated through the authorized communication means and channels to designated user groups.
4.2	Present aeronautical meteorological data and information in a clear and concise manner using suitable terminology.
4.3	Alert forecasters to observed conditions or to imminent significant changes in the weather within the local area.

Let's look for now at Competency 2, which deals with performing and recording routine and non-routine observations. Can you see the link between the AMO criteria 2 and the METAR / SPECI formats

Comparing the ICAO competency criteria with the METAR/SPECI code format

Competency criteria description		Aviation code format
Continuously monitor the weather situation		
Analyse and explain the existing local weather conditions	Criteria 1.1 & 1.2	Observation 10 to 15 mins beforehand
Perform and record ROUTINE (METAR) and NON-ROUTINE (SPECI) messages		
Wind	Criteria 2.1	$dddffG_fm_fmKT$ $d_nd_nd_nVd_xd_xd_x$
Horizontal Visibility	Criteria 2.2	VVVV $V_nV_nV_nV_nD_v$
RVR	Criteria 2.3	$RD_RD_R/V_xV_xV_xV_xi$ $RD_RD_R/V_xV_xV_xV_x$ v $V_xV_xV_xV_xi$
Present weather	Criteria 2.4	w^lw^l
Clouds	Criteria 2.5	$N_sN_sN_sh_sh_sh_s$
Vertical visibility	Criteria 2.6	$VVh_sh_sh_s$
Temperature and dew point	Criteria 2.7	TT T_dT_d
Pressure	Criteria 2.8	$QP_HP_HP_HP_H$
Supplementary information	Criteria 2.9	REw^lw^l WS RWYDRDR WS ALL RWY
Interpret automatic observed parameters to ensure observations remain representative of local conditions when variations result from differences between automatic sensors & manual observing techniques.	Criteria 2.10	Linked with parameters derived via electronic sensors
Ensure observations are prepared & issued in accordance with ICAO Annex 3, WMO-No.49, regional & national formats, codes & technical regulations on content, representativeness & timeliness.	Criteria 2.11	Coded in the correct format

See how the order of the criteria follow the order of the METAR/SPECI format