APPENDIX D

APPRENTICE METOC ANALYST FORECAST SUPPORT CHECKLIST

RANK: _____ NAME: _____ SSN: _____

METOC INSTRUCTOR: _____ LOCATION: _____

DATE CERTIFICATION BEGAN: _____ METOC CHIEF: _____

DATE QUALIFICATION AWARDED: _____ METOC OFFICER: _____

Tie-in	**Description**	**REQUIREMENT**			
FSC-406	Verbally define and discuss the atmospheric fundamentals.	MAI Init	Date	Qual Board	Date
FSC-406a	Long/short wave trough/ridges.				
FSC-406b	Pressure systems.				
FSC-406c	Frontal systems.				
FSC-406d	Jet features.				
FSC-406e	Vorticity.				
FSC-406f	Thickness				
FSC-406g	Condensation/evaporation/sublimation.				
FSC-406h	Convergence/confluence.				
FSC-406i	Divergence/diffluence.				
FSC-406j	Types of baroclinic/barotropic low-pressure systems.				
FSC-406k	Types of baroclinic/barotropic high-pressure systems.				
FSC-406l	Gradient wind.				
FSC-406m	Geostrophic wind.				
FSC-406n	Relative/absolute/specific humidity				
FSC-406o	Pressure gradient.				
FSC-406p	Cloud identification/formation.				

Tie-in	**Description**	**REQUIREMENT**			
FSC-407	To certify knowledge of analyzing and interpreting upper atmospheric weather charts.	MAI Init	Date	Qual Board	Date
	Given reference materials, analyze and interpret the 925/850/700/500/300/250/200 mb constant pressure charts for features, without violating data and analyzation rules, within 6 hours, to exhibit application of upper atmospheric dynamics and physics.				

Tie-in	Description	REQUIREMENT			
FSC-408	To certify knowledge of analyzing and interpreting a surface pressure chart.	MAI Init	Date	Qual Board	Date
FSC-408a	When given a surface chart, apply analytical techniques and depict the meteorological features listed.				
FSC-408b	Discuss meteorological reasoning for placement of features.				

Tie-in	Description	REQUIREMENT			
FSC-409	To certify knowledge of analyzing and interpreting a thickness chart.	MAI Init	Date	Qual Board	Date
FSC-409a	When given a thickness chart, apply analytical techniques and depict the meteorological features listed.				
FSC-409b	Discuss meteorological reasoning for placement of features.				

Tie-in	Description	REQUIREMENT			
FSC-410	To certify knowledge of analyzing and interpreting a vorticity chart.	MAI Init	Date	Qual Board	Date
FSC-410a	When given a vorticity chart, apply analytical techniques and depict the meteorological features listed.				
FSC-410b	Discuss meteorological reasoning for placement of features.				

Tie-in	Description	REQUIREMENT			
FSC-411	To certify knowledge of conducting streamline analysis.	MAI Init	Date	Qual Board	Date
FSC-411a	When given a wind chart, conduct a streamline analysis.				
FSC-411b	Discuss meteorological reasoning for placement of features.				

Tie-in	Description	REQUIREMENT			
FSC-412	To certify knowledge of analyzing and forecasting atmospheric conditions from the Skew-T, Log P Diagram.	MAI Init	Date	Qual Board	Date
FSC-412a	Analyze a SKEW-T LOG P diagram for forecasted elements.				
FSC-412b	(1) Compute indices. (a) Lifted index (b) KI index (c) Sweat index (d) Showalter’s index (e) Total Totals (2) Analyze negative/positive energy areas. (3) Analyze for equilibrium levels.				

	(4) Compute turbulent areas. (5) Compute tops of convective activity. (6) Compute contrails. (7) Compute icing types and levels. (8) Compute maximum and minimum temperatures. (9) Compute hail. (10) Compute thunderstorm gusts. (11) Analyze freezing level. (12) Analyze for areas of moisture. (13) Compute D-Values. (14) Compute Relative humidity.				
FSC-412c	Discuss how the analyzed elements are applicable to current and forecasted weather phenomenon.				

Tie-in	**Description**	**REQUIREMENT**			
FSC-413	To certify knowledge of applied meteorological reasoning in the forecasting of movement and intensity of synoptic scale features. When given required charts, forecast intensity and movement of features listed in the performance steps and provide meteorological justification for forecast.	MAI Init	Date	Qual Board	Date
FSC-413a	Forecast movement and intensity changes in major short wave troughs/ridges.				
FSC-413b	Forecast movement and intensity in upper level high and low pressure system.				
FSC-413c	Forecast isotherms in major short wave features.				
FSC-413d	Forecast moisture in major short wave features.				
FSC-413e	Forecast movement and intensity in minor short waves.				
FSC-413f	Forecast cyclogenesis of baroclinic low-pressure systems.				
FSC-413g	Forecast cycloysis of baroclinic low-pressure systems.				
FSC-413h	Forecast anticyclogenesis of baroclinic high-pressure systems.				
FSC-413i	Forecast anticyclolysis of baroclinic high-pressure systems.				
FSC-413j	Forecast movement and intensity changes in surface pressure systems.				
FSC-413k	Forecast movement and intensity changes in surface frontal systems.				
FSC-413l	Forecast synoptic scale precipitation.				
FSC-413m	Forecast long wave patterns.				
FSC-413n	Forecast movement of jet maxes.				

Tie-in	Description	REQUIREMENT			
FSC-414	To certify knowledge of forecasting severe weather. When given required charts, analyze and forecast for severe weather elements listed and provide meteorological reasoning for each.	MAI Init	Date	Qual Board	Date
FSC-414a	Vertical and horizontal wind shear gradients.				
FSC-414b	Severe Icing				
FSC-414c	Severe/Extreme Turbulence				
FSC-414d	Tornadic activity.				
FSC-414e	Thunderstorm activity.				
FSC-414f	Winter Storms.				

Tie-in	Description	REQUIREMENT			
FSC-415	To certify briefing of METOC features from (re)analyzed products. Analyze and brief (formally or informally) atmospheric dynamic fundamentals depicted on the following products.	MAI Init	Date	Qual Board	MAI Init
FSC-415a	Synoptic weather charts.				
FSC-415b	Thickness charts.				
FSC-415c	Vorticity charts.				
FSC-415d	Constant pressure charts.				
FSC-415e	Tropical cyclone warning displays.				
FSC-415f	Skew-T, Log P diagrams.				
FSC-415g	Streamline charts.				
FSC-415h	Satellite imagery:				
FSC-415i	Radar imagery:				

Tie-in	Description	REQUIREMENT			
FSC-416	To certify knowledge of Terminal Aerodrome Forecast (TAF) content and format. In accordance with the references and utilizing local, regional, and global meteorological models, assess the determine current and forecast meteorological elements and prepare a Terminal Aerodrome Forecast. Complete the following tasks.	MAI Init	Date	Qual Board	MAI Init
FSC-416a	Minimum altimeter setting.				
FSC-416b	Cloud types, amounts and layer heights				
FSC-416c	Precipitation types.				
FSC-416d	Surface visibility.				
FSC-416e	Weather and obstruction to visibility.				
FSC-416f	Maximum/Minimum temperatures.				
FSC-416g	Wind Speed, Direction, and character.				
FSC-416h	Icing type, height, and intensity.				
FSC-416i	Turbulence type, height and intensity.				
FSC-416j	Encode forecast meteorological elements in accordance with reference.				

Tie-in	Description	REQUIREMENT			
FSC-417	To certify knowledge of Weather warnings. assess and forecast conditions phenomenon requiring generation of the listed weather warnings. Generate (live or simulated) each warning 5 times.	MAI Init	Date	Qual Board	MAI Init
FSC-417a	Thunderstorm warnings.				
FSC-417b	Severe Thunderstorm warnings/watches.				
FSC-417c	Tornado warnings/watches.				
FSC-417d	Wind warnings.				
FSC-417e	Storm warning.				
FSC-417f	Gale warning.				
FSC-417g	Flood warning.				
FSC-417h	Flash flood warning.				
FSC-417i	Freeze/Hard Freeze warning.				
FSC-417j	Small craft warnings/advisories.				

Tie-in	Description	REQUIREMENT			
FSC-418	To certify knowledge of Flight Weather Briefing. When given a DD175 or like flight weather request, graphic METOC products, alphanumeric meteorological products, appropriate software and hardware, and knowledge of forecasting rules and theories, prepare a minimum of 20 flight weather briefings and 5 VFR Stamp flight weather briefings.	MAI Init	Date	Qual Board	MAI Init
FSC-418a	Evaluate current atmospheric parameters along the flight path.				
FSC-418b	Forecast the atmospheric impacts along the flight path.				
FSC-418c	Forecast the meteorological conditions at destination(s) and alternate(s).				

Tie-in	Description	REQUIREMENT			
FSC-419	To certify knowledge of flight weather packets. Given a flight weather packet request, prepare and brief a flight weather packet. Flight weather packet shall include the following products.	MAI Init	Date	Qual Board	MAI Init
FSC-419a	Construct a horizontal weather depiction.				
FSC-419b	Construct a ditch-heading chart.				
FSC-419c	Construct an altimeter setting chart.				
FSC-419d	Construct an upper-level wind chart.				
FSC-419e	Construct sea surface temperature chart.				
FSC-419f	Prepare DD-175-1 flight weather brief.				
FSC-419g	Prepare an OPNAV 3140/25 flight forecast folder.				

FSC-419h	Include mission essential products as applicable.				

Tie-in	Description	REQUIREMENT			
FSC-420	To certify knowledge of verifying meteorological model output.	MAI Init	Date	Qual Board	MAI Init
FSC-420a	Through practical application, verify meteorological model output by identifying strengths and weaknesses of global, regional, and mesoscale numerical models.				