TSC Category	Ground Handling Services and Operations					
TSC	Aircraft Weight and Balance Calculation					
TSC Description	Maintain accurate aircraft weight and balance calculations to ensure safe and efficient aircraft operations					
TSC Proficiency Description	**Level 1**	**Level 2**	**Level 3**	**Level 4**	**Level 5**	**Level 6**
		ATP-GSO-2004-1.1	**ATP-GSO-3004-1.1**	**ATP-GSO-4004-1.1**		
		Interpret aircraft payload specifications to calculate aircraft weight and balance	Compute load and trim sheets based on aircraft weight and balance analyses	Review calculations and limits of aircraft weight and balance and advise stakeholders on rectification actions		
Knowledge		• Weight limits for different types of aircraft • Manufacturer's Empty Weight (MEW) of aircraft • Definitions of aircraft weight and balance such as maximum take-off, landing and zero fuel weight • Principles of Centre of Gravity (CG) and factors affecting CG of aircraft • Procedures to utilise Departure Control Systems (DCS) • Load and trim sheet documentation • Manual weight and balance calculations	• Weight limits and empty weight for different types of aircraft • Definitions of aircraft weight and balance such as maximum take-off, landing and zero fuel weight • Principles of weight and balance • Procedures to trim aircraft weight • Principles of Centre of Gravity (CG) and factors affecting CG of aircraft • Manual weight and balance calculations • Usage of weight and balance charts • Load and trim sheet documentation • Dangerous Goods Regulations (DGR)	• Procedures to audit aircraft weight and balance calculations • Principles of Centre of Gravity (CG) shifts caused by changes in load, cargo, passenger counts and weight-shifts • Procedures to implement changes to load and trim sheet documentation • New airline developments affecting aircraft weight and balance calculations • Procedures to manage and clear large and heavy items • Manual weight and balance calculations • Usage of weight and balance charts • Load and trim sheet documentation • Dangerous Goods Regulations (DGR)		

Abilities		• Identify maximum weight based on different types of aircraft • Determine fuel requirements for aircraft based on aircraft types • Acquire data to calculate weight, balance and CG • Utilise DCS to generate aircraft weight and balance calculations • Perform manual aircraft weight and balance calculations	• Review all calculations and ensure adherence to stipulated limits • Determine impact of imbalance on aircraft operations • Complete and finalise load and trim sheet documentation	• Advise relevant stakeholders on execution of actions in order to rectify aircraft weight and balance limits • Audit aircraft weight and balance calculation processes • Collaborate with airlines to review and ascertain changes to aircraft weight and balance calculation processes		