



FATIGUE TRAINING SYLLABUS

Delivery method: Lecture and facilitated discussion

Suggested pass rate: 80%

Assessment methodology: Facilitator assessment of appropriate level of engagement during sessions; and multiple choice knowledge test/assessment (any incorrect answers to be reviewed via facilitated discussion during post-test debrief)

Training materials:

- Electronic presentation media
- Fatigue/ops manual
- White board
- CAO 48.1
- CAAP 48-01

Note: Test should have sufficient questions to ensure participants have adequate understanding of all topics covered

Fatigue knowledge	Notes
Session 1—Causes and consequences of fatigue (Module 1) Duration: 1.5 hrs (2 x 40 min sessions with 10 min break)	Note: suggested session timings only
1.1 What is fatigue? <ul style="list-style-type: none">➤ Define fatigue➤ Achieve an understanding of the types of fatigue➤ Describe how the quantity and quality of sleep affects fatigue➤ Sleep debt and recovery<ul style="list-style-type: none">• develop an understanding of how a sleep debt can occur• describe link between repeated minor sleep loss and substantial sleep debt• describe how sleep debt must be repaid• develop an awareness of the potential need for multiple nights of recovery sleep to regain optimum performance	Session 1
1.2 Causes of fatigue <ul style="list-style-type: none">➤ Identify major factors affecting fatigue including:<ul style="list-style-type: none">• time of day (circadian rhythm effects)• work schedule and shift work impacts on sleep and performance• type of task• work environment• non work-related issues	Session 1
1.3 The body clock <ul style="list-style-type: none">➤ Describe circadian rhythms<ul style="list-style-type: none">• develop an understanding of the biological rhythms that affect alertness and sleepiness• achieve an understanding of the impact of daylight on setting or resetting of circadian rhythms• develop an awareness of the sleepiness curve and the differences in individual circadian rhythms	Session 1
Session 2—Sleep Duration: 1.5 hrs (2 x 40 min sessions with 10 min break)	Note: suggested session timings only
2.1 Sleep <ul style="list-style-type: none">➤ Achieve an understanding of the physiological need for sleep<ul style="list-style-type: none">• develop an awareness of average and individual minimum sleep needs➤ Describe the normal sleep cycles<ul style="list-style-type: none">• achieve a basic understanding of sleep cycles and structure	Session 2
2.2 A serious safety hazard <ul style="list-style-type: none">➤ Understanding the impact of fatigue on the effective performance of tasks<ul style="list-style-type: none">• identify high-risk times for fatigue• develop an awareness of the effects of sleep deprivation to performance degradation	Session 2



Fatigue knowledge	Notes
2.3 Consequences for health <ul style="list-style-type: none">➤ Identify the range of signs and symptoms associated with fatigue including:<ul style="list-style-type: none">• physical• mental• emotional➤ Develop an awareness of the potential difficulties balancing work schedules and sleep with family, social life and the impact of modern technology	Session 2
2.4 Commuting <ul style="list-style-type: none">➤ Develop an awareness of high-risk times for commuting➤ Identify strategies to commute safely	Session 2
Session 3—Fatigue management (Module 2) Duration: 1.5 hrs (2 x 40 min sessions with 10 min break)	
3.1 Fatigue management <ul style="list-style-type: none">➤ Develop an understanding of the fatigue management approach including:<ul style="list-style-type: none">• organisational fatigue risk management policies appropriate for the individual's position and duties• fatigue risk assessments and safety hazards for each work group• hazard controls in place• training and education requirements• continuous improvement of fatigue management strategies	Note: suggested session timings only Session 3
3.2 Joint responsibility for fatigue <ul style="list-style-type: none">➤ Develop an understanding of both organisational and employee responsibilities for managing fatigue:<ul style="list-style-type: none">• discuss work-related fatigue risks<ul style="list-style-type: none">• hours of work• length and timing of shift• shift breaks• time off• workload• environment• discuss non work-related fatigue risks• social/family<ul style="list-style-type: none">• wellbeing (of all members)• lifestyle• illness (of all members)• psychological<ul style="list-style-type: none">• stress• mental health• physical illness• sleep disorders	Session 3
3.3 Employer responsibilities <ul style="list-style-type: none">➤ Develop an understanding of organisational processes and procedures including:<ul style="list-style-type: none">• the application of flight and duty time limits• extensions and exceedances• management of fatigue reports• rostering and recording system• use of organisational forms	Session 3





Fatigue knowledge	Notes
3.4 Employee responsibilities <ul style="list-style-type: none">➤ Develop an awareness of obligations regarding individual fatigue management➤ Develop an understanding of organisational processes and procedures including:<ul style="list-style-type: none">• use of alertness / fatigue tables or applications• fatigue reporting• just culture	Session 3
Session 4—Hazard control model Duration: 1.5 hrs (2 x 40 min sessions with 10 min break)	Note: suggested session timings only
4.1 Hazard control model <ul style="list-style-type: none">➤ Distinguish the difference between latent and active errors➤ Develop an understanding of the different levels of defences used to reduce possibility of fatigue-related error or incident:<ul style="list-style-type: none">• Level 1 controls<ul style="list-style-type: none">• sleep opportunity• scheduling – length and timing of shifts and breaks, crew augmentation, delayed reporting, extensions• Level 2 controls<ul style="list-style-type: none">• prior sleep obtained• measuring employee fatigue• Level 3 controls<ul style="list-style-type: none">• fatigue symptoms – identifying the signs• Level 4 controls<ul style="list-style-type: none">• fatigue proofing strategies• Level 5 controls<ul style="list-style-type: none">• error and incident – reporting, investigating and reviewing controls	Session 4
Session 5—Personal fatigue countermeasures (Module 3) Duration: 1.5 hrs (2 x 30 min sessions with 10 min break)	Note: suggested session timings only
5.1 Alertness strategies <ul style="list-style-type: none">➤ Discuss the strategies used by individuals to stay alert	Session 5
5.2 Get the sleep you need <ul style="list-style-type: none">➤ Describe setting up a bedroom or sleeping facility to aid in achieving quality sleep	Session 5
5.3 Good sleeping habits / sleep hygiene <ul style="list-style-type: none">➤ Understand how to develop habits beneficial to quality sleep	Session 5
5.4 Napping <ul style="list-style-type: none">➤ Describe the benefits of napping / controlled rest periods➤ Develop an understanding of how napping can reduce the impact of fatigue during duties➤ Describe effective napping techniques<ul style="list-style-type: none">• achieve an understanding of controlling napping duration to reduce sleep inertia	Session 5
5.5 Hydration <ul style="list-style-type: none">➤ Develop an understanding of the effects of dehydration on fatigue➤ Describe causes of dehydration	Session 5



Fatigue knowledge	Notes
<p>5.6 Caffeine</p> <ul style="list-style-type: none"> ➤ Describe the effect of caffeine on alertness ➤ Develop an understanding of the benefits and limitations of the strategic use of caffeine to mitigate fatigue ➤ Describe the caffeine content of common foods/drinks 	Session 5
<p>Session 6—Personal fatigue countermeasures Duration: 1.5 hrs (2 x 40 min sessions with 10 min break)</p>	
<p>6.1 Drugs and alcohol</p> <ul style="list-style-type: none"> ➤ Develop an understanding of the effects of alcohol on the quality of sleep ➤ Describe common prescription and over the counter sleeping pills and sedatives, and other medications that may cause drowsiness ➤ Understand the use, limitations and risks associated with the use of sleep aids <ul style="list-style-type: none"> • develop an understanding of the health and performance effects of sleeping pills and sedatives ➤ Describe the concept of clearance times associated with the use of sleep aids 	Session 6
<p>6.2 Nutrition and eating right</p> <ul style="list-style-type: none"> ➤ Describe how appropriate nutrition can aid in mitigating fatigue and impact sleep <ul style="list-style-type: none"> • develop an understanding of food types and nutrition strategies that maintain energy without causing undue drowsiness • timing, size, and types of meals and their influence on sleep 	Session 6
<p>6.3 Physical exercise</p> <ul style="list-style-type: none"> ➤ Describe how exercise can assist in mitigating the impact of fatigue ➤ Describe how increased fitness can improve individual resistance to the onset of fatigue ➤ Describe how exercise can aid in sleep and stress 	Session 6
<p>6.4 A healthy, balanced life</p> <ul style="list-style-type: none"> ➤ Develop an awareness of the importance of a healthy, balanced lifestyle ➤ Develop an awareness of the role of social relationships on fatigue ➤ Discuss strategies to manage work schedules and social activities and their impact on sleep opportunities 	Session 6