

**College of Micronesia – FSM
P.O. Box 159
Kolonia, Pohnpei**

Course Outline Cover Page

First Aid at Sea

Course Title

MM 170

Department and Number

Course Description: To provide the learner with the knowledge and skills required to provide the immediate and ongoing treatment to the sick and injured whilst at sea and maintain that casualty until the arrival of a higher medical authority.

Prepared by: Brent Villiers

State: FSM-FMI

	Hours per Week	No. Of Weeks	Total Hours	Semester Credits
Lecture	2/4/8	4/2/1	8	0.5
Practicum	26/13	2/4	52	1
Total Semester Credits:				1.5

Purpose of Course

Degree Requirement	_____
Degree Elective	_____
Advanced Certificate	_____
Certificate	_____XX_____
Remedial	_____
Other (Workshop)	_____

Prerequisite Course(s): MSG 091 Basic First Aid

Signature, Chairman, Curriculum Committee

Date Approved by Committee

Signature, President, COM-FSM

Date Approved by the President

General Objective: To provide the learner with the knowledge and skills required to provide the immediate and ongoing treatment to the sick and injured whilst at sea and maintain that casualty until the arrival of a higher medical authority.

Learning Outcomes: On successful completion of this course the student will be able to:

1. Outline the basic concepts underlying the practice of First Aid, and describe the procedures involved in dealing with a major accident.
2. Describe and demonstrate the priorities of management in First Aid Care dealing with life threatening conditions.
3. Identify, describe and manage 5 specific conditions - heart attack, stroke, asthma, diabetes and epilepsy.
4. Describe the dangers associated with a bleeding wound, and manage blood loss.
5. Describe the dangers of and provide management for, fractures, sprains and dislocations.
6. Describe the dangers associated with and the management of burns and eye injuries.
7. Describe the dangers associated with and the management of poisoning and envenomation.
8. Describe the dangers associated with and the management of Hypothermia and Hyperthermia.
9. Explain how to recognise and manage Blast injuries.
10. Explain the implications involved in patient treatment.
11. Demonstrate and describe how to use and administer oxygen resuscitation equipment.
12. Explain the spread of infection by means of 'cross infection'.
13. Describe responsibilities regarding the medicine cabinet, first aid boxes and emergency first aid carry bag.
14. List the type of publications, processes and organisations that the ship's staff has at their disposal to assist in medical situations at sea.
15. Explain the emergency procedures for ships carrying dangerous goods.

STUDENTS SHOULD BE MADE AWARE OF OCCUPATIONAL HEALTH AND SAFETY ISSUES IN ALL SITUATIONS AND BE EXPECTED TO DEMONSTRATE SAFE WORKING PRACTICES AT ALL TIMES.

Outline of Content:

This course contains:

1. Responsibilities of the First Aider
 - DRABC Action Plan
 - Moving a casualty
2. Respiratory and circulatory systems
 - Respiratory arrest
 - Cardiac arrest
 - Near drowning
 - Five levels of consciousness
 - Causes of shock
 - Management of shock.
3. Medical conditions
 - Heart attack
 - Stroke
 - Asthma
 - Diabetes
 - Epilepsy
4. Wounds and bleeding
 - Manage amputation
 - Penetrating chest wound
 - Nose bleed
 - Internal bleeding
5. Fractures and soft tissue injuries
 - Skull
 - Spine
 - Chest
6. Burns and eye injuries
 - Dry
 - Scalds
 - Chemical

- Electrical
 - Welders flash
 - Hyphema
 - Foreign bodies
 - Avulsion
7. Poisons
- Signs and symptoms
 - Snake and spider bites
 - Marine stings/bites
 - Anaphylaxis
8. Exposure
- Hypothermia
 - Heat cramps
 - Heat exhaustion
 - Heat stroke
9. Blast injuries
10. Casualty assessment
- Secondary assessment
 - Record keeping
11. Resuscitation equipment
- Therapy mask/nasal cannula
 - Demand valve breathing
 - Demand valve resuscitation
12. Infection prevention
- Personal hygiene
 - Cross infection
 - Aseptic dressing techniques
13. Medical equipment
- Medicine cabinet
 - First aid boxes
 - Emergency first aid carry bag.
14. Sources of medical assistance
- Ships Captains Medical Guide
 - IMO publications
 - Marine Orders Part 10
 - Admiralty List of Radio Signals
 - Radio Medical Advice

- Automated Mutual Assistance Vessel Rescue System (AMVER)

15. Hazardous goods

- Emergency procedures
- International maritime Dangerous Goods Code (IMDG Code)

Learning Outcomes: On completion of this course the learner will be able to:

Learning Outcome 1 **Outline the basic concepts underlying the practice of First Aid, and describe the procedures involved in dealing with a major accident.**

Assessment Criteria	1.1	The term First Aid is defined.
	1.2	The 4 main responsibilities of the First Aider are listed.
	1.3	The 5 primary priorities of management for any casualty are listed
	1.4	The removal of a casualty from a dangerous situation is demonstrated.
	1.5	Checking for a response in an unconscious casualty.
	1.6	Positioning an unconscious casualty in a stable side position is demonstrated.
	1.7	A jaw thrust is demonstrated
	1.8	A jaw support is demonstrated
	1.9	A head tilt/neck lift is demonstrated
	1.10	A triple airway manoeuvre is demonstrated
	1.11	Checking for breathing in an unconscious casualty is demonstrated
	1.12	Checking for a carotid pulse in an unconscious person is demonstrated
	1.13	Checking for a radial pulse is demonstrated
	1.14	Checking a brachial pulse is demonstrated
	1.15	Checking a posterior tibial pulse is demonstrated
	1.16	Additional procedures required at a major accident scene are described

- 1.17 The 2 situations when a casualty should be moved are listed

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment

Learning Outcome 2

Describe and demonstrate the priorities of management in First Aid Care dealing with life threatening conditions.

Assessment criteria

- 2.1 The structure and function of the central nervous system is described
- 2.2 The 5 levels of consciousness are listed
- 2.3 The causes of an altered level of consciousness are listed
- 2.4 The possible dangers for the unconscious casualty are listed
- 2.5 The management of a casualty with an altered level of consciousness is demonstrated
- 2.6 The structure and function of the respiratory system is described
- 2.7 The signs/symptoms of a partial airway obstruction are listed
- 2.8 The signs/symptoms of a full airway obstruction are listed
- 2.9 The effects of an airway obstruction and/or respiratory arrest on the body are listed
- 2.10 The management of a casualty with a partial airway obstruction is demonstrated
- 2.11 The management of a baby with a full airway obstruction is demonstrated
- 2.12 The management of an adult with a full airway obstruction is demonstrated
- 2.13 The management of an adult in respiratory arrest is demonstrated
- 2.14 The management of a child in respiratory arrest is demonstrated
- 2.15 The management of a baby in respiratory arrest is demonstrated

- 2.16 The structure and function of the circulatory system is described
- 2.17 The effects of cardiac arrest on the body are listed
- 2.18 The causes of cardiac arrest are listed
- 2.19 The management of an adult in cardiac arrest is demonstrated
- 2.20 The management of a child in cardiac arrest is demonstrated
- 2.21 The management of a baby in cardiac arrest is demonstrated
- 2.22 The term Shock is defined
- 2.23 The 3 main causes of shock are listed
- 2.24 The signs/symptoms of shock are listed
- 2.25 The management of a casualty in shock is demonstrated

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment.

Learning Outcome 3

Identify, describe and manage 5 specific conditions - heart attack, stroke, asthma, diabetes and epilepsy.

Assessment criteria

- 3.1 The term heart attack is defined
- 3.2 The term stroke is defined
- 3.3 The term asthma is defined
- 3.4 The term diabetes is defined
- 3.5 The term epilepsy is defined
- 3.6 The effects of a heart attack are listed
- 3.7 The effects of a stroke are listed
- 3.8 The effects of asthma are listed
- 3.9 The effects of diabetes are listed
- 3.10 The effects of epilepsy are listed
- 3.11 The signs/symptoms of a heart attack are listed
- 3.12 The signs/symptoms of a stroke are listed
- 3.13 The signs/symptoms of asthma are listed

- 3.14 The signs/symptoms of Hypoglycaemia are listed
- 3.15 The signs and symptoms of hyperglycaemia are listed
- 3.16 The signs/symptoms of complex partial seizure are listed
- 3.17 The signs/symptoms of a tonic/clonic seizure are listed
- 3.18 The management of a casualty with a heart attack is demonstrated
- 3.19 The management of a casualty with a stroke is demonstrated
- 3.20 The management of casualty with diabetes is demonstrated
- 3.21 The management of a casualty with Asthma is demonstrated
- 3.22 The management of a casualty with a complex partial seizure is demonstrated
- 3.23 The management of a person with a tonic/clonic seizure is demonstrated

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment.

Learning Outcome 4

Describe the dangers associated with a bleeding wound, and manage blood loss.

Assessment criteria

- 4.1 The 5 different types of wounds are listed
- 4.2 The 3 types of bleeding are listed
- 4.3 The body's reaction to a bleeding wound is described
- 4.4 The dangers of bleeding for the casualty and for the First Aider are described
- 4.5 The signs/symptoms of an internal bleed are listed
- 4.6 The management of an external bleed is demonstrated
- 4.7 The management of an internal bleed is demonstrated
- 4.8 The management of an amputated limb is

	demonstrated
	4.9 The management of a nose bleed is demonstrated
	4.10 The management of a penetrating injury is demonstrated
Conditions and Method of assessment	As specified in the Assessment Strategy listed at the end of this outline and by a combination of: <ul style="list-style-type: none"> • Written assessment • Practical assessment.
Learning Outcome 5	Describe the dangers of and provide management for, fractures, sprains and dislocations.
Assessment criteria	5.1 The structure and function of the skeleton and connecting tissue is described 5.2 The term fracture is defined 5.3 The term soft tissue injury is defined 5.4 The signs/symptoms of a soft tissue injury are listed 5.5 The signs/symptoms of a fracture are listed 5.6 The difference between an open fracture and a closed fracture are listed 5.7 The management of a fracture is demonstrated 5.8 The management of a soft tissue injury is demonstrated 5.9 The problems associated with a fractured skull are discussed 5.10 The 5 sections of the spine are listed 5.11 Ten signs/symptoms of a spinal injury are listed 5.12 The benefit of placing the head of a suspected spinal injury casualty into a neutral position is stated 5.13 The assessment technique of a suspected spinal injury casualty is demonstrated 5.14 The management of suspected spinal injury casualty is demonstrated 5.15 The 3 common signs/symptoms of a sucking chest wound are listed 5.16 The management of a sucking chest wound is demonstrated

Conditions and Method of assessment	As specified in the Assessment Strategy listed at the end of this outline and by a combination of: <ul style="list-style-type: none"> • Written assessment • Practical assessment.
Learning Outcome 6	Describe the dangers associated with and the management of burns and eye injuries.
Assessment criteria	<ul style="list-style-type: none"> 6.1 The structure and function of the skin is described 6.2 The 3 classifications of burns are listed 6.3 The signs/symptoms of a superficial burn are listed 6.4 The signs/symptoms of a deep dermal burn are listed 6.5 The signs/symptoms of a full thickness burn are listed 6.6 The management of a burn is demonstrated 6.7 The benefit of immediately applying running water to a burn is described 6.8 The safety precautions whilst treating a casualty with chemical burns are described 6.9 The 5 common types of eye injuries are listed 6.10 The management of a foreign body in the eye is demonstrated 6.11 The management of a welding flash is demonstrated 6.12 The management of a chemical spill in the eye is demonstrated 6.13 The management of a hyphema is demonstrated 6.14 The management of an avulsed eye is demonstrated
Conditions and Method of assessment	As specified in the Assessment Strategy listed at the end of this outline and by a combination of: <ul style="list-style-type: none"> • Written assessment • Practical assessment.

Learning Outcome 7	Describe the dangers associated with and the management of poisoning and envenomation.
Assessment criteria	<p>7.1 The 4 methods by which poisons may enter the body are listed</p> <p>7.2 The dangers for the First Aider when managing a person who has been exposed to a topical poison/chemical are listed</p> <p>7.3 The common signs/symptoms of poisoning are listed</p> <p>7.4 The management of a conscious caustic poisoning casualty is demonstrated</p> <p>7.5 The management of a conscious non-caustic poisoning casualty is demonstrated</p> <p>7.6 The management of a snake bite is demonstrated</p> <p>7.7 The benefit of a pressure bandage and immobilisation when managing a snake bit envenomation is described</p> <p>7.8 The management of a spider/ant/bee exposure is demonstrated</p> <p>7.9 The management of a jelly fish sting is demonstrated</p> <p>7.10 The management of a fish spine/stingray barb exposure is demonstrated</p> <p>7.11 The term anaphylaxis is defined</p> <p>7.12 Six common signs/symptoms of anaphylaxis are listed</p> <p>7.13 The management of a casualty with anaphylaxis is demonstrated</p>
Conditions and Method of assessment	<p>As specified in the Assessment Strategy listed at the end of this outline and by a combination of:</p> <ul style="list-style-type: none"> • Written assessment • Practical assessment.
Learning Outcome 8	Describe the dangers associated with and the management of Hypothermia and Hyperthermia.
Assessment criteria	<p>8.1 The normal range of body temperature is stated</p> <p>8.2 The way that the body produces heat is described</p>

- 8.3 The 4 methods the body uses to lose heat are listed
- 8.4 The signs and symptoms of hypothermia are listed
- 8.5 The management of hypothermia is demonstrated
- 8.6 The 3 stages of hyperthermia are listed
- 8.7 The signs/symptoms of heat cramps are described
- 8.8 The signs/symptoms of heat exhaustion are described
- 8.9 The signs/symptoms of heat stroke are described
- 8.10 The management of a hyperthermic casualty is demonstrated

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment.

Learning Outcome 9

Explain how to recognize and manage Blast injuries.

Assessment criteria

- 9.1 The term blast injury is defined
- 9.2 The effect blast injuries have on the lungs is described
- 9.3 The signs and symptoms of blast injuries are listed
- 9.4 The organs most likely to be affected by blast injuries are listed
- 9.5 The management of a blast injury casualty is demonstrated

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment.

Learning Outcome 10	Explain the implications involved in patient treatment.
Assessment criteria	<p>10.1 The legal implications regarding the administration of medications are described</p> <p>10.2 The 6 routes for the administration of medications are listed</p> <p>10.3 The importance of correctly assessing a casualty at both primary and secondary levels is stated</p> <p>10.4 The term secondary survey is defined</p> <p>10.5 A secondary survey on a casualty is demonstrated</p> <p>10.6 Relevant legislation as relates to a first aider at sea is discussed</p> <p>10.7 Seven reasons why documentation is so important are listed</p> <p>10.8 Eleven things that need to be documented are listed</p> <p>10.9 Recording mechanisms on board a vessel are discussed</p>
Conditions and Method of assessment	<p>As specified in the Assessment Strategy listed at the end of this outline and by a combination of:</p> <ul style="list-style-type: none"> • Written assessment • Practical assessment.
Learning Outcome 11	Demonstrate and describe how to use and administer oxygen resuscitation equipment.
Assessment criteria	<p>11.1 The different types of oxygen resuscitation equipment available on board a vessel are described</p> <p>11.2 The safety precautions for the use of medical oxygen are listed</p> <p>11.3 Replacing an empty oxygen cylinder from a resuscitator is demonstrated</p> <p>11.4 The administration of oxygen therapy is demonstrated</p> <p>11.5 Oxygen resuscitation is demonstrated</p>

- 11.6 The safety precautions prior to and whilst performing mechanical suctioning of a casualty are listed
- 11.7 Mechanical suctioning is demonstrated
- 11.8 The proper cleaning of the oxygen resuscitator and suction unit is discussed

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment.

Learning Outcome 12

Explain the spread of infection by means of 'cross infection'.

Assessment criteria

- 12.1 The term universal precautions is defined
- 12.2 Three things which can assist with the protection from the spread of infection are listed
- 12.3 The use of universal precautions is demonstrated

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment.

Learning Outcome 13

Describe responsibilities regarding the medicine cabinet, first aid boxes and emergency first aid carry bag.

Assessment criteria

- 13.1 **The legal responsibilities for maintaining all of the above and the keeping of records are stated**

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment

Learning Outcome 14	List the type of publications, processes and organizations that the ships staff have at their disposal to assist in medical situations at sea.
Assessment criteria	<p>14.1 The content of the 'Ships Medical Guide' are summarised.</p> <p>14.2 The use of the IMO Publication 'Accidents Involving Dangerous Goods' is demonstrated.</p> <p>14.3 The content of National Medical Scales is explained.</p> <p>14.4 The use of Radio Medical is described.</p> <p>14.5 The role and function of the Automated Mutual Assistance Vessel Rescue System (AMVER) to medical situations is illustrated.</p>
Conditions and Method of assessment	As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

Learning Outcome 15	Explain the emergency procedures for ships carrying dangerous goods.
Assessment criteria	<p>15.1 The necessity that the ships staff must be aware of the hazardous properties of goods, their characteristics and the necessary precautions is stated.</p> <p>15.2 The necessity that the ships staff must be provided with information concerning safety, first aid, and emergency procedure to be followed, and action to be taken in case of an incident is stated.</p> <p>15.3 The content of the International Maritime Dangerous Goods Code (IMDG Code) is summarised.</p> <p>15.4 The way in which packages containing a dangerous substance must be marked, and the shipping documentation required for dangerous goods are explained.</p>

Conditions and
Method of assessment

As specified in the Assessment Strategy listed at the end of this outline and by a combination of:

- Written assessment
- Practical assessment.

Delivery strategy

This module is designed to be taught on or off-the-job.

This module will be delivered in full-time mode off-the-job. This module is designed on the assumption that most of the candidates will achieve the learning outcomes specified in the allocated nominal duration. Most Learning Outcomes will require an integration of theory and practical skills. Some areas of content may be common to more than one learning outcome, and thus integration may be appropriate.

Methods of instruction should include:

1. Classroom lectures
2. Handouts
3. Course notes.

Resource requirements

Delivery of the training will require:

- Appropriate cleared space,
- Resuscitation mannequins,
- Auxiliary resuscitation items,
- Anatomical charts/models,
- Disposable gloves,
- Bandages, pads, gauzes, and slings,
- Water squeeze bottle or tap.
- Pictures of venomous animals/insects and/or preserved specimens.
- Blankets, pillows and towels.
- Handouts/pictures.

Assessment Strategy

Assessment Method

A range of methods is suggested for measuring progress towards and achievement of learning outcomes in this module. Knowledge-based criteria will be satisfied through written or oral multi-choice

type questions, class questioning, handbook quiz, and diagram labeling. Skill-based criteria will be satisfied through practical demonstration by students on each other.

Condition of Assessment

Assessment may be undertaken on or off-the-job, however, where possible the off-the-job environment will simulate a real work place situation.

Evaluation:

Final Grade for this course will be based on meeting the course requirements at the following percentage rates:

96% - 100%	A – Superior
90% - 95%	B – Above Average
80% - 89%	C – Average
69% - 79%	D – Below Average
0 % - 69%	F – Failure

Attendance:

The COM-FSM attendance policy will apply.