

---

# Norwegian Oil and Gas training curriculum

Basic safety and emergency preparedness  
refresher course for emergency response  
personnel

---

Version no 2

Date: 7 September 2017

## FOREWORD

This training curriculum has been compiled for course providers approved by Norwegian Oil and Gas to provide the basic safety and emergency response refresher course for emergency response personnel.

The training is intended to provide competence on basis safety and emergency response offshore for emergency response personnel.

In this context, competence means *the ability to perform tasks and master complex challenges*.

The contact for this training curriculum in Norwegian Oil and Gas is the manager, expertise development.

Norwegian Oil and Gas training curricula are owned by Norwegian Oil and Gas.

See [Norwegian Oil and Gas 002 Recommended guidelines for safety and emergency preparedness training](#) and requirements for safety and emergency response training.

## Contents

FOREWORD.....	2
1 INTRODUCTION.....	4
1.1 Purpose .....	4
1.2 Learning outcomes .....	4
1.3 Target group.....	4
1.4 Refresher frequency.....	4
2 CONTENT .....	5
2.1 Parameters for conducting the course.....	5
2.2 Teaching materials.....	5
2.3 Prior knowledge .....	5
2.4 Facilities and equipment .....	5
2.5 Training curriculum .....	5
3 ASSESSMENT AND DOCUMENTATION OF TRAINING.....	13
3.1 Assessment.....	13
3.2 Documentation.....	13
4 REVISIONS.....	14

## 1 INTRODUCTION

### 1.1 Purpose

This training curriculum describes requirements for the content and execution of the basic safety and emergency response refresher course for emergency response personnel.

The training is designed to provide competence on:

- risk understanding and barriers
- helicopter evacuation
- means of evacuation
- using a survival suit in the sea

### 1.2 Learning outcomes

After completing the training, the participant must be able to:

- describe risk factors and identify barriers
- contribute to increased safety on offshore facilities
- evacuate from a helicopter
- evacuate from offshore facilities by escape chute and liferaft
- use a survival suit in the sea

### 1.3 Target group

The target group for the training is personnel performing emergency response functions in search and rescue teams and as helicopter landing officers.

### 1.4 Refresher frequency

The training must be repeated every 48th month by all personnel working offshore with emergency response functions in search and rescue teams and as helicopter landing officers.

## 2 CONTENT

### 2.1 Parameters for conducting the course

Teaching at the course centres must reflect a good safety culture.

Practical exercises: one instructor per six course participants  
one instructor per course participant during helicopter  
capsize

Duration of the course is one day.  
A minimum of six hours of practical exercises.

- One course day is eight hours with a minimum of six hours of effective training
- One hour is 60 minutes

During practical exercises, the challenges and degree of difficulty must be increased in line with the rising level of mastery.

During practical exercises, the instructor will observe the participants and give immediate feedback, and time must be allotted for feedback and guidance after the exercise is over.

### 2.2 Teaching materials

Teaching materials used during the course must be tailored to the competence objectives specified in this training curriculum.

### 2.3 Prior knowledge

Basic safety and emergency preparedness course.

Active member of the following emergency response teams: helicopter landing officer (HLO) or search and rescue.

### 2.4 Facilities and equipment

The training can be conducted through classroom teaching, e-learning, simulator use and use of other appropriate facilities and equipment.

### 2.5 Training curriculum

Participants must be given an introduction before the course starts which reviews the purpose of the course, assessments, the timetable and safety measures.

See the training curriculum set out in table 1 below.

**Table 1: Training curriculum**

<b>Topic</b>		<b>1.0 RISK UNDERSTANDING AND BARRIERS</b>		
<b>Competence objectives</b> After completing the training, the participant will be able to:	<b>Specification of competence objectives</b>	<b>Method</b>	<b>Learning environment</b>	<b>References</b>
1.1 Describe which types of risk can arise offshore	The participant must be able to; <ul style="list-style-type: none"> <li>• describe the risk</li> <li>• provide examples of offshore risks</li> <li>• describe typical conditions/near misses/injuries/damage and accidents which can occur offshore</li> </ul>	Practical exercise Experience transfer		
1.2 Identify barriers	The participant must be able to identify barriers; <ul style="list-style-type: none"> <li>• human</li> <li>• technical</li> <li>• organisational</li> </ul>	Practical exercise		
1.3 Describe the consequences of breaching barriers	The participant must be able to describe various barrier breaches and their potential consequences.	Group sessions Discussion Experience transfer		Working Together for Safety (Sfs) film
1.4 Describe security incidents and their prevention	The participant must be able to describe; <ul style="list-style-type: none"> <li>• the difference between safety and security incidents</li> <li>• definitions of safety and security</li> <li>• possible security threats                             <ul style="list-style-type: none"> <li>○ terrorism</li> <li>○ sabotage</li> <li>○ espionage</li> <li>○ information theft</li> <li>○ computer crime/IT</li> </ul> </li> <li>• Notifying and reporting of security incidents</li> </ul> The participant must be able to describe how security incidents are prevented; <ul style="list-style-type: none"> <li>• Barriers                             <ul style="list-style-type: none"> <li>○ heliport</li> <li>○ supply chain.</li> </ul> </li> </ul>	Theory lesson(s) Group discussion with two assignments		Training materials developed by Norwegian Oil and Gas

Topic	<b>2.0 HELICOPTER EVACUATION</b>			
Competence objectives After completing the training, the participant will be able to:	Specification of competence objectives	Method	Learning environment	References
2.1 Demonstrate behaviour in the event of prepared/controlled and unexpected emergency landing in the sea	The participant must be able to do the five-point preparation; <ul style="list-style-type: none"> <li>• secure loose objects</li> <li>• suit (correct dress)</li> <li>• check seat belt</li> <li>• reorientation</li> <li>• adopt brace position</li> </ul>	Practical exercise Demonstration	Classroom Pool/sea	
2.2 Describe behaviour after an emergency landing on the sea when the helicopter is floating the right way up	The participant must be able to describe the procedure; <ul style="list-style-type: none"> <li>• release the nearest escape route</li> <li>• establish emergency breathing system (EBS)</li> <li>• establish reference point (window and valve)</li> <li>• remain seated with seat belt fastened and await crew orders</li> <li>• when evacuating, concentrate on reference points</li> </ul>	Practical exercise Demonstration	Classroom Pool/sea	
2.3 Describe behaviour when evacuating a helicopter under water	The participant must be able to describe the significance of; <ul style="list-style-type: none"> <li>• activating the EBS</li> <li>• use of reference points</li> <li>• correct evacuation</li> </ul> The participant must be able to describe the procedure for/recommended approach to; <ul style="list-style-type: none"> <li>• activation of EBS</li> <li>• reference points</li> <li>• evacuation</li> </ul>	Practical exercise Demonstration	Classroom Pool/sea	

<p>2.4 Describe risks posed by an emergency landing on the sea</p>	<p>Participants must be able to describe;</p> <ul style="list-style-type: none"> <li>• risks before an emergency landing                             <ul style="list-style-type: none"> <li>○ lack of information from pilots</li> <li>○ vibration</li> <li>○ lack of time to prepare</li> </ul> </li> <li>• risks during an emergency landing;                             <ul style="list-style-type: none"> <li>○ injuries to personnel from hard landing on the sea/land</li> <li>○ water intrusion with emergency landing on the sea</li> <li>○ helicopter overturns</li> </ul> </li> <li>• risks after emergency landing/evacuation;                             <ul style="list-style-type: none"> <li>○ water intrusion in helicopter</li> <li>○ cold gasp effect from failure to close suit zip</li> <li>○ hypothermia</li> <li>○ helicopter fuel on the sea surface</li> <li>○ fire</li> </ul> </li> </ul>	<p>Practical exercise Demonstration</p>	<p>Classroom</p>	
<p>2.5 Using the EBS</p>	<p>The participant must be able to demonstrate and describe the main points in using the EBS;</p> <ul style="list-style-type: none"> <li>• readying</li> <li>• breathing technique</li> <li>• limitations</li> </ul> <p>The participant must undertake water familiarisation by doing exercises 1-4 before evacuation from the simulator.</p> <ul style="list-style-type: none"> <li>• exercise 1: hold breath for 10 seconds</li> <li>• exercise 2: use the EBS with face in the water, 20 secs minimum, 30 secs maximum.</li> <li>• exercise 3: use the EBS with face in water while pulling along on a rope</li> <li>• exercise 4: use the EBS in an overturned helicopter, 10 secs minimum, 20 secs maximum.</li> </ul>	<p>Practical exercise Demonstration</p>		<p>Brooks, Dr C J and Cunningham, W F (1978), <i>Helicopter Underwater Escape Trainees</i></p>

<p>2.6 Evacuation from helicopter/simulator</p>	<p>The participant must evacuate from a helicopter/simulator as a practical exercise,</p> <ul style="list-style-type: none"> <li>• exercise 1: emergency landing on the “sea”, helicopter stops on the surface, window removed, EBS established, helicopter sinks straight down (with stop).</li> <li>• exercise 2: emergency landing on the “sea”, helicopter stops on the surface, window removed, ESB established, helicopter rotates 180 degrees (with stop).</li> <li>• exercise 3: emergency landing on the “sea”, helicopter stops on the surface, ESB established, window removed under water, helicopter rotates 180 degrees (with stop).</li> <li>• exercise 4: emergency landing on the “sea”, helicopter moves forward slowly when it hits the water, window removed, ESB not used, helicopter rotates 180 degrees (with stop).</li> </ul>	<p>Practical exercise  Practical exercise in connection with helicopter capsize: one instructor per student inside the helicopter simulator</p>	<p>Pool/sea</p>	<p>Mills, A M and Muir, H (1999), <i>Development of training standard for underwater survival</i>. Technical report prepared for Shell Oil.</p>
<p>2.7 Prepare the helicopter raft for use on the sea</p>	<p>The participant must be able to prepare the helicopter raft for use on the sea;</p> <ul style="list-style-type: none"> <li>• demonstration of raising the raft cover</li> <li>• review and demonstration of the raft’s equipment.</li> </ul>	<p>Practical exercise Demonstration Group sessions</p>		

Topic	3.0 MEANS OF EVACUATION			
Competence objectives After completing the training, the participant will be able to:	Specification of competence objectives	Method	Learning environment	References
3.1 Evacuate via escape chute	<p>The participant must be able to describe deployment of the escape chute.</p> <p>The participant must be able to evacuate via the escape chute;</p> <ul style="list-style-type: none"> <li>• evacuate at least twice                             <ul style="list-style-type: none"> <li>○ second time walk down the final cell on the outside</li> </ul> </li> </ul> <p>The participant must be able to describe inflating and attaching the evacuation raft on the sea.</p>	Demonstration Practical exercise	The escape chute must have at least five cells	
3.2 Describe evacuation with davit-launched raft	<p>The participant must be able to describe;</p> <ul style="list-style-type: none"> <li>• principles and method for deploying the davit-launched raft</li> <li>• inflation</li> <li>• preparing</li> <li>• entering</li> <li>• weight distribution</li> <li>• lowering</li> <li>• how to behave during lowering of davit-launched raft</li> </ul>	Practical exercise Demonstration		
3.3 Board a raft from the sea	<p>The participant must be able to board from the sea with;</p> <ul style="list-style-type: none"> <li>• a boarding platform and/or ladder</li> <li>• the correct technique for boarding individually or with help from other participants</li> </ul>	Practical exercise	Pool/sea	

<p>3.4                  Prepare the raft for use in the sea</p>	<p>The participant must be able to prepare the raft by;</p> <ul style="list-style-type: none"> <li>• stabilising it, deploying the sea anchor and positioning personnel on the side towards the sea anchor</li> <li>• preventing hypothermia – clarify: close hatches, drain out water, inflate air in double bottom</li> <li>• using the right method to recover people from the</li> <li>• identifying its emergency equipment: distress flares, first-aid kit</li> </ul>	<p>Practical exercise</p>	<p>Pool/sea</p>	
<p>3.5                  Turn a capsized raft right-side-up</p>	<p>The participant must be able to right a capsized raft;</p> <ul style="list-style-type: none"> <li>• describe the method for turning a capsized raft right-side-up</li> <li>• collectively turn a capsized raft right-side-up</li> </ul>	<p>Group of no more than six people</p>	<p>Pool/sea                  Use a raft accommodating at least 12 people</p>	

Topic	4.0 USING A SURVIVAL SUIT IN THE SEA			
Competence objectives After completing the training, the participant will be able to:	Specification of competence objectives	Method	Learning environment	References
4.1 Use their survival suit as an item of rescue equipment	The participant must be able to use the survival suit; <ul style="list-style-type: none"> <li>• put on the suit</li> <li>• self-check that it is put on correctly</li> <li>• use the suit's equipment and functions</li> <li>• check the camera</li> <li>• check the suit: zipper, visor, gloves, buddy line</li> </ul> The participant must be familiar with the techniques for wearing a survival suit in the sea; <ul style="list-style-type: none"> <li>• tread water, turn from back or stomach to upright position and move nine metres, as well as change direction</li> <li>• various techniques while wearing a survival suit                             <ul style="list-style-type: none"> <li>○ chain (lie in a row against the wind)</li> <li>○ buddy line in snake</li> </ul> </li> </ul>	Practical exercise	Waves: the required height in a pool is about 0.5 metres. Wind: around 10 m/s< Water temperature: no requirement Sea spray: deluge, hose with spray nozzle or similar	Manufacturer's manual/recommendations
4.2 Drop into the sea from a height	The participant must be able to drop into the sea from a height; <ul style="list-style-type: none"> <li>• describe various opportunities available for getting to the sea surface</li> <li>• be able to use the correct technique for leaping from a considerable height by jumping into the sea with a minimum drop of one metre</li> </ul>	Practical exercise	Sea/pool  Maximum jump height is two metres	
4.3 Describe retrieval by helicopter from the sea/raft	The participant must be able to describe; <ul style="list-style-type: none"> <li>• how to act on orders</li> <li>• handling a guideline</li> <li>• preparing for retrieval</li> </ul>	Theory lesson(s) E-learning		

## 3 ASSESSMENT AND DOCUMENTATION OF TRAINING

### 3.1 Assessment

The participant must be assessed during all practical exercises.

Should the participant fail the practical exercise, they must be given a reason.

Personnel can obtain exemption for Huet when taking the safety course refresher. Chapter 3.3, [Norwegian Oil and Gas 002 Recommended guidelines for safety and emergency preparedness training](#)

Should the participant be assessed as falling short of the competence objectives, the participant must be failed.

### 3.2 Documentation

A course certificate must be issued on passing the course.

Course participants who fail to complete competence objective 2.6 Evacuation from helicopter/simulator can have their certificate endorsed with an N notation.

Personnel who have obtained exemption for Huet when taking the safety course refresher will be issued with a certificate endorsed with GSK-N. This course certificate is only valid on the NCS.

The course certificate expires on the last day of the 48th month since the most recent course was completed.

## 4 REVISIONS

The following revisions have been made to this document.

Revisions	Date
<p>Version no 2</p> <p><u>Chapters 1.1 Purpose and 1.2 Learning outcomes</u>, amended final bullet point in each chapter.</p> <p><u>Topic 1.0 Risk understanding and barriers</u></p> <p>Competence objective 1.4 on security is a new competence objective</p> <p><u>Topic 2.0 Helicopter evacuation</u></p> <p>Competence objective 2.3, improved language for specification</p> <p>Competence objective 2.4, expanded on specification of the competence objective by adding further descriptions of the three existing bullet points</p> <p>Competence objective 2.5, amended final bullet point under specification</p> <p><u>Topic 3.0 Means of evacuation</u></p> <p>Competence objective 3.1, amended competence objective and specification of competence objective</p> <p>Competence objective 3.4, improved language for competence objective and specification of competence objective</p> <p><u>Topic 4.0 Using a survival suit in the sea</u>, changed from “survival techniques in rough seas”, amended description.</p> <p>Competence objective 4.1, improved language for final bullet point under specification of competence objective.</p> <p>Chapter 3.2 Documentation</p> <p>Added the sentence: “Course participants who fail to complete competence objective 2.6 Evacuation from helicopter/simulator can have their certificate endorsed with an N notation.”</p>	<p>7 September 2017</p>