

SARtacs Training Courses

SAR Admin

5 day course

Course Code: SAR(Ad)

This course is designed to offer organisational training to SAR Managers or SAR Officers who aspire to management. It is of particular interest to those involved in budgeting and providing resources for SAR either for an administration, charitable organisation or private sector company. The course is heavily based on the IMO model course and covers the strategic origins and processes of the concept of co-ordinated search and rescue introduced through IMO by way of the SAR Convention 1979 and SOLAS. It examines legislative foundations and structures for a successful SAR organisation. The course is a mix of theoretical learning and reinforcement by way of practical tabletop exercises designed to enable the student to develop understanding through interaction with peers and trainers alike. It deals with the following issues:

- SAR legislation
- SAR risk assessment
 - Organisational design in context with national risk
- Search and Rescue Regions (SRR)
- National versus regional SAR organisation
- The national SAR family
- National SAR contingency plans
- Inter-organisational relationships and Memoranda of Understanding
- Rescue Co-ordination Centre (RCC) design requirements
- SAR procedures
- SAR alerting systems
- RCC equipment specifications
- SAR competence profiling
- SAR officer recruitment and selection
- SAR training strategy
- SAR Mission Co-ordination
- On Scene Co-ordination
- SAR assets

SAR Mission Co-ordination (SMC)*10 day course**Course Code: SMC*

This course is offered mainly to those staff and managers working on shift at a Rescue Co-ordination Centre (RCC). The early sessions examine the role of the SMC and processes adopted to fulfil that role. It should be stressed that computer and other electronic systems are not utilised on this course. Emphasis is placed on teamwork and decision making - the human element aspect of the role. Part of the course is dedicated to solving exercise scenarios in a table top format, where students will be offered the opportunity to take on the role of SMC heading up a small team of co-ordinators. The course covers the following content:

- IMO and strategic level Search and Rescue
- Role and responsibilities of the SMC
- Relationship SMC v SRU Commander
- Relationship SMC v OSC
 - OSC purpose and selection criteria
- SMC role and responsibilities
- Command, control & co-ordination - C³
- Impact of Human Element
 - Inter personal communications
 - Teamwork
 - Decision making
 - Effective listening and feedback loops
- Systematic approach to SAR
- Information gathering & questioning techniques
 - Communications and extended communications searches
 - Aide memoires
- GMDSS radio communications systems
- Information analysis (FFPAP model)
- Emergency phase classification
 - Types of incident
- Mission planning & forward planning
- Mission termination, hypothermia & hyperthermia
- SRU selection
- Non mobile resources available to the SMC
- Publications – the RCC library
- SAR reporting & SAR SITREPS
- The major incident
- Dealing with the media

On Scene Co-ordination*5 day course**Course Code: OSC*

The OSC course is designed specifically for the officers and selected crew members from both declared and additional Search and Rescue Units (SRUs). Whether or not the unit is appointed as On Scene Co-ordinator, an effective understanding of the SMCs plans and the relationship between the Rescue Co-ordination Centre and SAR asset will be a vital ingredient leading to successful mission outcomes. The course is a mix of theoretical training and table-top exercise scenarios which the students will work on in small groups. Depending on circumstances and the venue chosen for the training course it may be possible to introduce simulator or live exercise scenarios to an extended version of the course.

- Origins and concept of SAR operations
- Role and responsibilities of the SMC and Rescue Co-ordination Centre
- Role and responsibilities of the OSC
- SAR asset categorisation
 - Asset types and capabilities
 - Choice of assets for SAR missions
- Relationship OSC v SRU Commander
- Relationship OSC v SMC
 - Information flow and SAR SITREPS
- SAR communications plans
- Criteria for OSC platform
- Interpreting SMC plans
 - Search planning concepts
 - Area coverage
- SRU safety
- Search techniques
- Rescue techniques
- Suspension or termination of SAR activity

Search Planning (Fundamentals) 10 day course

Course Code: SP(f)

The Search Planning course is designed to introduce the theory behind the long tried and tested manual search object drift methodology described in IAMSAR. The course is suitable for students who are new to the concept of search planning and will therefore gain in depth skills and knowledge of the processes involved. The course will also include an introduction to the more modern Stochastic or Monte Carlo modelling methods adopted by up to date computer applications. Much of the course will focus on manual practical exercising where increasingly complex Search Planning scenarios are solved using paper charts and a suite of Search Planning forms.

- SAR Tables – origin and use
- Glossary of terms
- IAMSAR
- Search Area Determination (SAD)
 - SAD simple model
 - Gathering and analysing data
 - Input data & data sources
 - Output data & application of the data
- Drift Factors
 - Surface current
 - Leeway
 - Downwind & cross-wind components – divergence
 - Wind driven current
- Error values
 - Initial position error
 - Drift error
- Vector addition v chart plotting
 - Vector addition utility
- SAD forms
- Construction and application of SAD Model Types
 - Rapid Response
 - Datum Point
 - Datum Line
 - Backtrack
 - Datum Area
- “Reading” the chart
- Dynamic search object considerations
- SAC forms
- Search Area Coverage (SAC) theory
 - SAC simple model

- Input data & data sources
 - Output data
- SAC Manual methodology single unit
 - AVNST formula
- SAC multiple unit allocation
 - Multiple similar units
 - Multiple different units
- Sweep width, track spacing and coverage factor
- POC, POD and POS
- Search patterns
 - Expanding square or box search
 - Sector search
 - Parallel track search
 - Creeping line ahead search
 - Key search
 - Herring bone search
 - Goalkeeper or gatekeeper search
 - Multi-layered search
 - Escaping search object syndrome
- Search Instructions
- Survival times and termination
- Computerised techniques & Stochastic i.e. Monte Carlo Modelling
- Planning ahead and advanced concepts
- Practical exercises of all types of SAD and SAC

Search Planning (Intermediate) 5 day course

Course Code: SP(i)

Similar in structure to the SP(f) course, however, this course assumes a good existing knowledge of the theory of drift modelling and asset allocation to search areas. The course is designed as a subject refresher and will take the student from simple manual plots to more advanced concepts possible when utilising software applications to solve scenarios. Again the course is a mix of theoretical and exercise based learning where students will work in pairs to solve problems using a suitable search planning software application. Normally this course will utilise the SARIS software on offer from BMT Cordah Ltd, however, the course can be delivered utilising alternative systems by special arrangement.

- Glossary of terms
- Search Area Determination (SAD)
 - SAD simple model
 - Gathering and analysing data
 - Input data & data sources
 - Output data & application of the data
- Drift Factors
 - Surface current
 - Leeway
 - Downwind & cross-wind components – divergence
 - Wind driven current
- Error values
 - Initial position error
 - Drift error
- “Reading” the chart
- Dynamic search object considerations
- Search Area Coverage (SAC) theory
 - SAC simple model
 - Input data & data sources
 - Output data
- SAC multiple unit allocation
- Sweep width, track spacing and coverage factor
- POC, POD and POS
- Search patterns
 - Expanding square or box search
 - Sector search
 - Parallel track search
 - Creeping line ahead search
 - Key search
 - Herring bone search
 - Goalkeeper or gatekeeper search
 - Multi-layered search
 - Escaping search object syndrome

- Search instructions
- Survival times and termination
- Planning ahead and advanced concepts
- Practical exercises of all types of SAD and SAC

The aim of this course is to learn the skills and knowledge involved in chart work and various aspects of navigation, including position fixing, collision regulations and buoyage etc. The purpose of the course is to provide new or existing SAR Officers with a solid foundation of basic maritime knowledge, an ability to understand and communicate with peers in the merchant or leisure marine, and to deliver accurate and timely chart plots representing unfolding SAR scenarios at sea. Coast Guards who have previous Deck Officer experience may find the course useful as a refresher, however, the key target audience is for those Coast Guard officers who have no previous significant maritime experience.

- Maritime language
- International Regulations for Preventing Collisions at Sea
- AIS/VTS systems
- IALA buoyage
- Ship types
- Casualty culture leisure and commercial
- Safety equipment at sea
- Navigation warning and weather forecasting services
- Dead reckoning
- Tide and leeway
- Estimated position
- Running fix
- Position fixing
 - Visual fix
 - Radar fix
 - Celestial fix
 - GPS fix
- Accuracy of position fixing
- Time/distance/speed
- Route and passage planning
- Compass work
- Tidal theory
- Sunrise/Sunset and twilight calculations
- Chart projections
- Chart symbols
- Chart instruments
- Plotting symbols and reading the chart
- Plotting positions
- Laying off bearings

- Measuring distance

GMDSS Coast Station Operations

10 day course

Course Code: GMDSS (CSOC)

This course is designed to shadow the GMDSS General Operators Course (GOC). Whilst the GOC is designed for seafaring colleagues, the CSO course is specifically tailored to the needs of Coast Radio Station or Rescue Co-ordination Centre officers. The course deals not only with GMDSS electronic systems, but also with the theory and practice of radio voice communications, in particular, distress, urgency and safety broadcasting. It is estimated that the CSOC syllabus has around only 40% in common with that of the GOC therefore it is also very relevant for ex GOC qualified seafarers.

- History and origin of the GMDSS system
- Effective communications, verbal and non-verbal
- Telephone procedure
- Radio telephony procedure
- Radio wave propagation
- Voice technique
- Prowords & the language of radio
- Routine communications procedure and regulations
- Distress, Urgency and Safety procedure and regulations
- Shore station watch keeping
- GMDSS overview – Sea areas and carriage requirements
- Vessel and shore station obligations
- Digital Selective Calling (DSC)
- Satellite communications
- Cospas/Sarsat, GEOSAR & MEOSAR
 - Infrastructure and alert routing
- EPIRBs, PLBs, ELTs
- Navtex
- SART
- Alternative systems – MOB Guardian/Spot Beacons
- Databases and alert routing
- AIS, VTS and LRIT
- Implications of GMDSS to SAR
- GMDSS II – the future of GMDSS

Merchant Shipping SAR Operations*2 day course**Course Code: MSO*

This course is designed for navigating officers and key shipping company personnel who will be involved in contingency planning or operational response to accidents involving their vessels. The course is designed to raise the awareness of SAR facilities ashore and how the SAR organisation and vessel in distress or other difficulty can work together towards an efficient resolution of the situation. Topics covered in the course include:

- The IMO/ICAO Global SAR Plan
- National SAR Plans
- The Rescue Co-ordination concept
 - Systematic Approach to SAR
- The role of the SAR Mission Co-ordinator
- The role of On Scene Co-ordinator
- The role of the casualty vessel master
- Distress, Safety and Urgency communications
- Search Planning

Offshore SAR Operations*2 day course**Course Code: OSO*

This course is designed for Offshore Installation Managers, Safety Officers, Radio Communicators and company shore based emergency response personnel involved in the offshore oil and gas business. The course is designed to raise the awareness of SAR facilities ashore and how the SAR organisation and installations in distress or other difficulty can work together towards an efficient resolution of the situation. Topics covered in the course include:

- The IMO/ICAO Global SAR Plan
- National SAR Plans
- The Rescue Co-ordination concept
 - Systematic Approach to SAR
- The role of the SAR Mission Co-ordinator
- The role of On Scene Co-ordinator
- The role of the OIM
- Distress, Safety and Urgency communications
- Search Planning