KOMPETENSI INTI DAN KOMPETENSI DASAR

SEKOLAH MENENGAH KEJURUAN/MADRASAH ALIYAH KEJURUAN

Bidang Keahlian : Kemaritiman

Program Keahlian : Pelayaran Kapal Niaga

Kompetensi Keahlian : Nautika Kapal Niaga ( NKN )

Tujuan kurikulum mencakup empat aspek kompetensi, yaitu (1) aspek kompetensi sikap spiritual, (2) sikap sosial, (3) pengetahuan, dan (4) keterampilan. Aspek-aspek kompetensi tersebut dicapai melalui proses pembelajaran intrakurikuler, kokurikuler, dan ekstrakurikuler.

Rumusan kompetensi sikap spiritual yaitu, “Menghayati dan mengamalkan ajaran agama yang dianutnya”. Sedangkan rumusan kompetensi sikap sosial yaitu, “Menghayati dan mengamalkan perilaku jujur, disiplin, santun, peduli (gotong royong, kerja sama, toleran, damai), bertanggung-jawab, responsif, dan proaktif melalui keteladanan, pemberian nasihat, penguatan, pembiasaan, dan pengkondisian secara berkesinambungan serta menunjukkan sikap sebagai bagian dari solusi atas berbagai permasalahan dalam berinteraksi secara efektif dengan lingkungan sosial dan alam serta dalam menempatkan diri sebagai cerminan bangsa dalam pergaulan dunia”. Kedua kompetensi tersebut dicapai melalui pembelajaran tidak langsung (*indirect teaching*) yaitu keteladanan, pembiasaan, dan budaya sekolah, dengan memperhatikan karakteristik mata pelajaran serta kebutuhan dan kondisi peserta didik.

Penumbuhan dan pengembangan kompetensi sikap dilakukan sepanjang proses pembelajaran berlangsung, dan dapat digunakan sebagai pertimbangan guru dalam mengembangkan karakter peserta didik lebih lanjut.

| KOMPETENSI INTI 3  (PENGETAHUAN) | KOMPETENSI INTI 4  (KETERAMPILAN) |
| --- | --- |
| 1. Memahami, menerapkan, menganalisis, dan mengevaluasi tentang pengetahuan faktual, konseptual, operasional dasar, dan metakognitif sesuai dengan bidang dan lingkup kerja Nautika Kapal Niaga ( NKN ) pada tingkat teknis, spesifik, detil, dan kompleks, berkenaan dengan ilmu pengetahuan, teknologi, seni, budaya, dan humaniora dalam konteks pengembangan potensi diri sebagai bagian dari keluarga, sekolah, dunia kerja, warga masyarakat nasional, regional, dan internasional. | 1. Melaksanakan tugas spesifik dengan menggunakan alat, informasi, dan prosedur kerja yang lazim dilakukan serta memecahkan masalah sesuai dengan bidang kerja Nautika Kapal Niaga ( NKN ). Menampilkan kinerja di bawah bimbingan dengan mutu dan kuantitas yang terukur sesuai dengan standar kompetensi kerja.   Menunjukkan keterampilan menalar, mengolah, dan menyaji secara efektif, kreatif, produktif, kritis, mandiri, kolaboratif, komunikatif, dan solutif dalam ranah abstrak terkait dengan pengembangan dari yang dipelajarinya di sekolah, serta mampu melaksanakan tugas spesifik di bawah pengawasan langsung.  Menunjukkan keterampilan mempersepsi, kesiapan, meniru, membiasakan, gerak mahir, menjadikan gerak alami dalam ranah konkret terkait dengan pengembangan dari yang dipelajarinya di sekolah, serta mampu melaksanakan tugas spesifik di bawah pengawasan langsung. |

1. Mata Pelajaran: Ilmu pelayaran Datar *(Terrestrial Navigation)*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| 1. Explain definitions – earth (menjelaskan definisi bumi ) | 1. Analyze definitions – earth (menganalisis bumi) | 20 | 1.1.2.1  Earth | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| 1. Explain charts (menjelaskan peta-peta) | 1. Demonstrates a basic knowledge of chart projections (menunjukan dasar pengetahuan dari proyek peta ) | 26 | 1.1.2.2  Charts |
| 1. Explain electronic chart (menjelaskan peta elektronik) | 1. Demonstrates a basic knowledge of electronic chart projections (menunjukkan dasar pengetahuan peta elektronik) | 16 | 1.1.2.3  Electronic chart |
| 1. Explain datums (menjelaskan datum) | 1. Analyze datums (menganalisis datum) | 13 | 1.1.2.4  Datums |
| 1. Explain distances (menjelaskan jarak) | 1. Calculate distances (menghitung jarak) | 14 | 1.1.2.5  Distances |
| 1. Explain position lines and positions (menjelaskan garis posisi dan posisi) | 1. Demonstrate position lines and positions (menunjukkan garis posisi dan posisi kapal dipeta) | 20 | 1.1.2.6  Position lines and positions |
| 1. Explain sailings (menjelaskan pelayaran) | 1. Analyze sailings (menganalisi pelayaran) | 46 | 1.1.2.7  Sailings |
| 1. Explain chartwork exercises (menjelaskan latihan cara kerja peta) | 1. Use chartwork exercises (menggunakan peta latihan) | 94 | 1.1.2.8  Chartwork exercises |
| 1. Explain information from charts, lists of lights and other publications (menjelaskan informasi dari peta, daftar lampu dan buku publikas epanduan bahari) | 1. Use information from charts, lists of lights and other publications(menggunakan data informasi dari peta,daftar lampu-lampu,dan buku publikasi kepanduan bahari. | 59 | 1.1.2.9  Information from charts, lists of lights and other publications |
| 1. Explain IALA buoyage system (menjelaskan sistem –sistem pelampung ) | 1. Use IALA buoyage system(menggunakan system pelampung ) | 13 | 1.1.2.10  IALA Buoyage System |  |
| 1. Explain tides (menjelaskan daftar surut ) | 1. Use tides (menggunakan daftar pasang surut ) | 13 | 1.1.2.11  Tides |
| 1. Explain keeping a log (menjelaskan alat kecepatan kapal ) | 1. Use keeping a log(menggunakan alat kecepatan kapal ) | 14 | 1.1.2.11  Keeping a log |
| JUMLAH JAM | | 348 |  |  |

1. Mata Pelajaran: Sistem Navigasi Elektronik *(Electronic Navigation System )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| 1. Apply basic principles of hyperbolic navigation systems (menerapkan dasar hyperbolis pada sistem navigasi) | 1. Demonstrate basic principles of hyperbolic navigation systems (menunjukan dasar prinsip sistem hiperbolis navigasi ) | 9 | 1.1.3.1  Basic principles of hyperbolic navigation systems | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| 1. Apply Loran-C system (menerapkan sistem Loran C ) | 1. Demonstrate Loran – C system (menunjukan cara penggunaan Loran C) | 12 | 1.1.3.2  Loran – C system |
| 1. Apply E-Loran (menerapkan E loran ) | 1. Demonstrate E-Loran (menunjukan E-Loran ) | 9 | 1.1.3.3  E-Loran |
| 1. Apply global navigation satellite system(menerapkan Sistem satelit navigasi ) | 1. Demonstrate Global navigation satellite systems (menunjukan cara kerja Sistem satelit navigasi ) | 24 | 1.1.3.4  Global navigation satellite systems |
| 1. Explain GPS | 1. Use GPS | 18 | 1.1.3.5  GPS |
| 1. Explain augmented satellite system | 1. Use augmented satellite system | 6 | 1.1.3.6  Augmented satellite system |
| 1. Explain Glonas | 1. Use Glonas | 6 | 1.1.3.7  Glonas |
| 1. Explain Galileo | 1. Use Galileo | 6 | 1.1.3.8  Galileo |
| 1. Explain Echo-sounders | 1. Use Echo-sounders | 18 | 1.1.3.9  Echo-sounders |
| JUMLAH JAM | | 108 |  |  |

1. Mata Pelajaran : Sistem Kemudi Kompas *(Compasses and Steering System)*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| 1. Apply the magnetism of the earth and the ship‟s deviation (menerapkan sistem magnit bumi dan deviasi pada kapal ) | 1. Analyze the magnetism of the earth and the ship‟s deviation (menganalisis magnet bumi untuk mencari deviasi kapal ) | 18 | 1.1.5.1  The magnetism of the earth and the ship‟s deviation | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| 1. Apply the magnetic compass (menerapkan compas magnit ) | 1. Use the magnetic compass (menggunakan cara oprasi magnit kompas ) | 18 | 1.1.5.2  magnetic compass |
| 1. Apply the gyro-compass(menerapkan magnit gyro ) | 1. Operate the gyro-compass (cara mengoprasikan magnit gyro) | 18 | 1.1.5.3  gyro-compass |
| 1. Apply compass corrections (menerapkan koreksi kompas ) | 1. Analyze compass corrections(menganalisa koreksi kompas ) | 18 | 1.1.5.4  Compass corrections |
| 1. Explain errors of the compass and azimuths (menjelaskan kesalahan pada kompas dan azimut ) | 1. Calculate errors of the compass and azimuths(menghitung kesalahan kompas dan azimut ) | 18 | 1.1.5.5  Errors of the compass and azimuths |
| 1. Explain fluxgate compass | 1. Apply fluxgate compass | 2 | 1.1.5.6  Fluxgate compass |
| 1. Apply automatic pilot (menerapkan Kemudi otomatis ) | 1. Operate automatic pilot(mengoprasikan kemudi otomatis ) | 16 | 1.1.6.1  automatic pilot( |
| JUMLAH JAM | | 108 |  |  |

1. Mata Pelajaran: Meteorologi *(Meteorology)*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| 1. Explain shipborne meteorological instruments | 1. Identified shipborne meteorological instruments | 4 | 1.1.7.1  Shipborne meteorological instruments | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| 1. Explain the atmosphere, its composition and Physical properties | 1. Identified the atmosphere, its composition and Physical properties | 6 | 1.1.7.2  The atmosphere, its composition and Physical properties |
| 1. Explain atmospheric pressure | 1. Identified atmospheric pressure | 6 | 1.1.7.3  Atmospheric pressure |
| 1. Explain wind | 1. Identified wind | 6 | 1.1.7.4  Wind |
| 1. Explain cloud and precipitation | 1. Identified cloud and precipitation | 6 | 1.1.7.5  Cloud and precipitation |
| 1. Explain visibility | 1. Identified visibility | 4 | 1.1.7.6  Visibility |
| 1. Explain the wind and pressure systems over the ocean | 1. Identified the wind and pressure systems over the ocean | 18 | 1.1.7.7  The wind and pressure systems over the ocean |
| 1. Explain structure of depressions | 1. Identified structure of depressions | 24 | 1.1.7.8  Structure of depressions |
| 1. Explain anticyclones and other pressure systems | 1. Identified anticyclones and other pressure systems | 6 | 1.1.7.9  Anticyclones and other pressure systems |
| 1. Explain Weather services for shipping | 1. Make Weather services for shipping | 4 | 1.1.7.10  Weather services for shipping |
| 1. Explain recording and reporting weather observations | 1. Make recording and reporting weather observations | 6 | IMC 7.03 1.1.7.11  Recording and reporting weather observations |
| 1. Explain weather forecasting | 1. Identified weather forecasting | 18 | 1.1.7.12  Weather forecasting |
| JUMLAH JAM | | 108 |  |  |

1. Mata Pelajaran : P2TL & Dinas Jaga *(ColReg & Watchkeeping include Introduction to BRM & Security Awareness)*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended | 16 | IMC 7.03  1.2.1.1.1  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part A. Rule 1-3 | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part A. Rule 1-3 | 32 | IMC 7.03  1.2.1.1.2  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended part A. Rule 1-3 |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part B section I. Rule 4-10 | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part B section I. Rule 4-10 | 32 | IMC 7.03  1.2.1.1.3  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended part B section I. Rule 4-10 |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part B section II. Rule 11-18 | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part B section II. Rule 11-18 | 36 | IMC 7.03  1.2.1.1.4  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended part B section II. Rule 11-18 |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part B section III. Rule 19 | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part B section III. Rule 19 | 4 | IMC 7.03  1.2.1.1.5  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended part B section III. Rule 19 |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part C. Rule 20 - 31 | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part part C. Rule 20 - 31 | 36 | IMC 7.03  1.2.1.1.6  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended part part C. Rule 20 - 31 |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part D. Rule 32 - 37 | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part D. Rule 32 - 37 | 32 | IMC 7.03  1.2.1.1.7  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended part D. Rule 32 - 37 |
| * 1. Explain the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part E. Rule 38 | * 1. Apply the content, application and Intent of International regulation for preventing collisions at sea, 1972 as amended part E. Rule 38 | 4 | IMC 7.03  1.2.1.1.8  The Content, Application and Intent of International Regulation for Preventing Collisions at Sea, 1972 as amended part E. Rule 38 |
| * 1. Explain keeping a safe navigational watch | * 1. Implement keeping a safe navigational watch | 4 | IMC 7.03  1.2.2.1.  Keeping a Safe Navigational Watch |
| * 1. Explain keeping an effective deck watch in port under normal circumstances | * 1. Implement keeping an effective deck watch in port under normal circumstances | 4 | IMC 7.03  1.2.2.1.  Keeping an Effective Deck Watch in Port under Normal Circumstances |
| * 1. Explain implementation keeping a safe deck watch in port when carrying hazardous cargo | * 1. Implement keeping a safe deck watch in port when carrying hazardous cargo | 4 | IMC 7.03  1.2.2.1.2  Keeping a Safe Deck Watch in Port When Carrying Hazardous Cargo |
| * 1. Explain of weather routeing | * 1. Demonstrate weather routeing | 4 | IMC 7.03  1.2.4.  weather routeing |
| JUMLAH JAM | | 208 |  |  |

1. Mata Pelajaran : Olah Gerak dan Pengendalian Kapal *(Ship Manoeuvering and Handling )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| * 1. Explain the effects of various deadweights, draughts, trim, speed and under-keel clearance on turning circles and stopping distances | * 1. Analyze the effects of various deadweights, draughts, trim, speed and under-keel clearance on turning circles and stopping distances | 31 | IMC 7.03  1.9.1.1.1  The effects of various deadweights, draughts, trim, speed and under-keel clearance on turning circles and stopping distances | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| * 1. Explain effect of wind and current on ship handling | * 1. Analyze effect of wind and current on ship handling | 30 | IMC 7.03  1.9.1.1.2  Effect of wind and current on ship handling |
| * 1. Explain manoeuvres for the rescue of a man person overboard | * 1. Simulation manoeuvres for the rescue of a man person overboard | 30 | IMC 7.03  1.9.1.1.3  Manoeuvres for the rescue of a man person overboard |
| * 1. Explain squat and shallow-water and similar effects | * 1. Analyze squat and shallow-water and similar effects | 30 | IMC 7.03  1.9.1.1.4  Squat and shallow-water and similar effects |
| * 1. Describes proper procedures for anchoring and mooring | * 1. Analyze proper procedures for anchoring and mooring | 31 | IMC 7.03  1.9.1.1.3  Proper procedures for anchoring and mooring |
| JUMLAH JAM | | 152 |  |  |

1. Mata Pelajaran : Komunikasi dan Isyarat *( Isyarat and Communication )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| * 1. Explain morse symbols for the alphabet and numerals | * 1. Identifies morse symbols for the alphabet and numerals | 12 | IMC 7.03  1.8.1.1.1  Morse symbols for the alphabet and numerals | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| * 1. Explain sends and receives the distress signal SOS by flashing light | * 1. Demonstrate sends and receives the distress signal SOS by flashing light | 12 | IMC 7.03  1.8.1.1.1  sends and receives the distress signal SOS by flashing light |
| * 1. states the recommendations on sound signalling | * 1. Demonstrate the recommendations on sound signalling | 12 | IMC 7.03  1.8.1.1.1  the recommendations on sound signalling |
| * 1. Explain lists the single-letter signals which may be sounded only in compliance with the requirements of the International regulations for preventing collisions at sea | * 1. Demonstrate lists the single-letter signals which may be sounded only in compliance with the requirements of the International regulations for preventing collisions at sea | 12 | IMC 7.03  1.8.1.1.1  lists the single-letter signals which may be sounded only in compliance with the requirements of the International Regulations for Preventing Collisions at Sea |
| * 1. Explains the purpose of the International code of signals | * 1. Demonstrate the purpose of the International code of signals | 18 | IMC 7.03  1.8.2.2.1  the purpose of the International Code of Signals |
| * 1. Explains how to signal azimuth or bearing, course, date,latitude,longitude, distance, speed, time | * 1. Demonstrates how to signal azimuth or bearing, course, date, latitude, longitude, distance, speed, time | 24 | IMC 7.03  1.8.2.2.1  signal azimuth or bearing, course, date,latitude,longitude, distance, speed, time |
| * 1. explains the arrangement of the code into : * single-letter signals * two-letter signals for the general section * three-letter signals beginning with ‘M’ for the medical section | * 1. Demonstrates the arrangement of the code into : * single-letter signals * two-letter signals for the general section * three-letter signals beginning with ‘M’ for the medical section | 18 | IMC 7.03  1.8.2.2.1  Code into:   * single-letter signals * two-letter signals for the general section * three-letter signals beginning with ‘M’ for the medical section |
| JUMLAH JAM | | 108 |  |  |

1. Mata Pelajaran : Penanganan dan Pengaturan Muatan

*(Cargo Handling and Stowage include Cargo Space Inspection (Inspection & Reporting)*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| * 1. Explain cargo care, inspection and preparation of hold (menjelaskan perlindungan muatan dan pemeliharaan palkah) | * 1. Implement cargo care, inspection and preparation of hold (menganalisis persiapan, perlindungan dan pemeliharaan muatan dipalkah) | 18 | IMC 7.03  2.1.1.1  Cargo care, inspection and preparation of hold | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| * 1. Cargo care, segregation and separation of cargoes | * 1. Use cargo care, segregation and separation of cargoes | 12 | IMC 7.03  2.1.1.2  Cargo care, segregation and separation of cargoes |
| * 1. Describe cargo care, ventilation and control | * 1. Use cargo care, ventilation and control | 12 | IMC 7.03  2.1.1.3  Cargo care, ventilation and control |
| * 1. Describe cargo care, refrigerated cargo | * 1. Apply cargo care, refrigerated cargo | 18 | IMC 7.03  2.1.2.1  cargo care, refrigerated cargo |
| * 1. Explain dangerous, hazardous and harmful cargoes | * 1. Apply dangerous, hazardous and harmful cargoes | 18 | IMC 7.03  2.1.2.2  Dangerous, hazardous and harmful cargoes |
| * 1. Explain cargo handling equipment and safety | * 1. Apply cargo handling equipment and safety | 16 | IMC 7.03  2.1.2.3  Cargo handling equipment and safety |
| * 1. Explain oil tanker piping and pumping arrangements | * 1. Apply oil tanker piping and pumping arrangements | 15 | IMC 7.03  2.1.2.4  Oil tanker piping and pumping arrangements |
| * 1. Explain precautions before entering enclosed or contaminated spaces | * 1. Apply precautions before entering enclosed or contaminated spaces | 10 | IMC 7.03  2.1.2.5 |
| * 1. Apply cargo calculations and cargo plans | * 1. Make cargo calculations and cargo plans | 15 | IMC 7.03  2.1.2.6  Cargo calculations and cargo plans |
| JUMLAH JAM | | 134 |  |  |

1. Mata Pelajaran : Perlengkapan Kapal *( Deck and Machinery Equipment )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| * 1. Menjelaskan blok dan takal (jangkar, windlass, mooring, arrangement, bolder dan chqks) | * 1. Mengidentifikasi blok dan takal (jangkar, windlass, mooring, arrangement, bolder dan chqks) | 8 | SOLAS Chapter II/2  Blok dan takal (jangkar, windlass, mooring, arrangement, bolder dan chqks) | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| * 1. Menjelaskan crane sling, boat swain store dan carpenter store | * 1. Mengidentifikasi crane sling, boat swain store dan carpenter store | 8 | SOLAS Chapter II/2  Crane sling, boat swain store dan carpenter store |
| * 1. Menjelaskan penataan kemudi | * 1. Mengidentifikasi penataan kemudi | 8 | SOLAS Chapter II/2  Penataan kemudi |
| * 1. Menjelaskan alat –alat penolong (life saving appliances and arrangements) | * 1. Mengidentifikasi alat –alat penolong (life saving appliances and arrangements) | 16 | SOLAS Chapter II/2  Alat –alat penolong (Life saving appliances and arrangements) |
| * 1. Menjelaskan alat – alat semboyan | Mengidentifikasi alat – alat semboyan | 8 | SOLAS Chapter II/2  Alat – alat semboyan |
| * 1. Menjelaskan alat pencegah pencemaran dilaut | Mengidentifikasi alat pencegah pencemaran dilaut | 8 | SOLAS Chapter II/2  Alat pencegah pencemaran dilaut |
| * 1. Menjelaskan crane sling, boat swain store dan carpenter store | Mengidentifikasi crane sling, boat swain store dan carpenter store | 8 | SOLAS Chapter II/2  Crane sling, boat swain store dan carpenter store |
| * 1. Menjelaskan alat – alat penampungan limbah (reception facilities) | * 1. Mengidentifikasi alat – alat penampungan limbah (reception facilities) | 8 | SOLAS Chapter II/2  Alat – alat penampungan limbah (reception facilities) |
| JUMLAH JAM | | 72 |  |  |

1. Mata Pelajaran : Perawatan Kapal *( Ship Maintenance )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| * 1. Menjelaskan terjadinya karat | * 1. Mengidentifikasi terjadinya karat | 6 | STCW Table A- II/I  karat | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| * 1. Menjelaskan karat dan grade - gradenya | * 1. Mengidentifikasi karat dan grade - gradenya | 12 | STCW Table A- II/I  karat dan grade - gradenya |
| * 1. Menjelaskan hammersllag | * 1. Mengoperasikan hammersllag | 9 | STCW Table A- II/I  hammersllag |
| * 1. Menjelaskan cara menghilangkan hammersllag | * 1. Melakukan cara menghilangkan hammersllag | 9 | STCW Table A- II/I  menghilangkan hammersllag |
| * 1. Menjelaskan cara menggunakan cat dan peralatan cat sesuai SOP | * 1. Menggunakan cat dan peralatan cat sesuai SOP | 12 | STCW Table A- II/I  cat dan peralatan cat sesuai |
| * 1. Menjelaskan sistematika penggunaan cat | * 1. Melakukan sistematika penggunaan cat | 6 | STCW Table A- II/I  sistematika penggunaan cat |
| JUMLAH JAM | | 54 |  |  |

1. Mata Pelajaran : Kecakapan Bahari *( Seaman Ship )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| 1. Describes the use of head ropes, stern ropes, breast ropes and springs | 1. Use of head ropes, stern ropes, breast ropes and springs | 12 | IMC 7.03  1.9.1.5  describes the use of head ropes, stern ropes, breast ropes and springs | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| 1. Explain how to put a stopper on a rope or wire rope | * 1. Demonstrates how to put a stopper on a rope or wire rope | 12 | IMC 7.03  1.9.1.5  how to put a stopper on a rope or wire rope |
| * 1. Describes the use of self-tensioning winches | * 1. Use of self-tensioning winches | 12 | IMC 7.03  1.9.1.5  use of self-tensioning winches |
| * 1. Describes how to make fast tugs on towing hawsers or lashed up alongside | * 1. Make fast tugs on towing hawsers or lashed up alongside | 12 | IMC 7.03  1.9.1.5  make fast tugs on towing hawsers or lashed up alongside |
| * 1. Describes methods of mooring to a buoy | * 1. Make methods of mooring to a buoy | 12 | IMC 7.03  1.9.1.5  methods of mooring to a buoy |
| * 1. Describes how to stow mooring ropes and wires for a sea passage | 4.6 Make stow mooring ropes and wires for a sea passage | 12 | IMC 7.03  1.9.1.5  stow mooring ropes and wires for a sea passage |
| JUMLAH JAM | | 72 |  |  |

1. Mata Pelajaran : Pelayaran Astronomi *( Celestial Navigation )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| * 1. Explain solar system (menjelaskan tata surya) | 1. Implement solar system (menerapkan tata surya ) | 14 | IMC 7.03  1.1.1.1  Solar System | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| * 1. Explain celestial sphere and equinoctial system of co-ordinates | * 1. Implement celestial sphere and equinoctial system of co-ordinates | 14 | IMC 7.03  1.1.1.2  Celestial sphere and equinoctial system of coordinates |
| * 1. Explain hour angle | * 1. Calculate hour angle | 14 | IMC 7.03  1.1.1.3  Hour angle |
| * 1. Explain daily motion and horizontal system of coordinates | 4.4 Implement daily motion and horizontal system of coordinates | 18 | IMC 7.03  1.1.1.4  Daily motion and horizontal system of coordinates |
| * 1. Explain sextant and altitude corrections | * 1. Use sextant and looking for altitude corrections | 18 | IMC 7.03  1.1.1.5  Sextant and altitude corrections |
| * 1. Explain amplitude | * 1. Implement amplitude | 10 | IMC 7.03  1.1.1.6  Amplitude |
| * 1. Explain time and equation of time | * 1. Implement time and equation of time | 10 | 1.1.1.7  Time and equation of time |
| * 1. Explain nautical almanac | * 1. Use nautical almanac | 18 | IMC 7.03  1.1.1.8  Nautical Almanac |
| * 1. Explain latitude by meridian altitude | * 1. Use latitude by meridian altitude | 12 | IMC 7.03  1.1.1.9  Latitude by meridian altitude |
| * 1. Explain pole star observations | * 1. Doing pole star observations | 12 | IMC 7.03  1.1.1.10  Pole Star observations |
| * 1. Explain position fixing | * 1. Doing position fixing | 30 | IMC 7.03  1.1.1.11  Position fixing |
| JUMLAH JAM | | 170 |  |  |

1. Mata Pelajaran : Permesinan Kapal *( Ship Machinery )*

| KOMPETENSI DASAR | KOMPETENSI DASAR | WAKTU | UNIT KOMPETENSI | SKEMA SERTIFIKASI |
| --- | --- | --- | --- | --- |
| 1. Memahami klasifikasi mesin | 4.1Mengidentifikasi klasifikasi mesin | 4 | SOLAS Chapter II-I Part C dan E  klasifikasi mesin | Peserta didik menempuh seluruh kompetensi dan mengikuti ujian keahlian pelaut serta dinyatakan LULUS maka Peserta didik akan mendapatkan sertifikat kompetensi ANT IV (Ahli Nautika Tingkat IV) yang dikeluarkan oleh Direktorat Jenderal Perhubungan Laut. |
| 1. Memahami motor diesel 4 tak dan 2 tak | 4.2 Mengoperasikan motor diesel 4 tak dan 2 tak | 8 | SOLAS Chapter II-I Part C dan E  Motor diesel 4 TAK dan 2 TAK |
| 1. Memahami pompa torak dan penataanya | 4.3 Mengoperasikan pompa torak dan penataanya | 8 | SOLAS Chapter II-I Part C dan E  Pompa torak dan penataanya |
| 1. Memahami pesawat pengubah panas | 4.4 Mengoperasikan pesawat pengubah panas | 8 | SOLAS Chapter II-I Part C dan E  Pesawat pengubah panas |
| 1. Memahami kompressor udara dan purifier | 4.5 Mengoperasikan kompressor udara dan purifier | 8 | SOLAS Chapter II-I Part C dan E  Kompressor udara dan purifier |
| 1. Memahami mesin pendingin dan mesin kemudi | 4.6 Mengoperasikan mesin pendingin dan mesin kemudi | 8 | SOLAS Chapter II-I Part C dan E  Mesin pendingin dan mesin kemudi |
| 1. Memahami Fresh water generator | 4.7 Mengoperasikan Fresh water generator | 8 | SOLAS Chapter II-I Part C dan E  Fresh water generator |
| 1. Memahami oily water separation | 4.8 Mengidentifikasi oily water separation | 8 | SOLAS Chapter II-I Part C dan E  Oily water separation |
| 1. Memahami fungsi bagian baling-baling dan poros baling-baling | 4.9 Mengidentifikasi fungsi bagian baling-baling dan poros baling-baling | 8 | SOLAS Chapter II-I Part C dan E  fungsi bagian baling-baling dan poros baling-baling |
| 1. Memahami fungsi ketel Uap | 4.10Mengoperasikan ketel uap | 4 | SOLAS Chapter II-I Part C dan E  Ketel uap |
| JUMLAH JAM | | 72 |  |  |