



UDDANNELSESBOG
FOR
AFSLUTTENDE SØPRAKTIK

*TRAINING RECORD BOOK
FINAL SEAGOING SERVICE*

SKIBSOFFICERSUDDANNELSEN
SHIP'S OFFICER TRAINEES

PUBLISHED BY THE DANISH MARITIME AUTHORITY
CENTRE FOR SEAFARERS AND FISHERMEN
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DATABLAD FOR ASPIRANTEN:

(Udfyldes af aspiranten)

Efternavn _____

Fornavne _____

Cpr. nr. _____

Postadresse _____

Tlf. nr. _____

Søfartsbog nr. _____ **Udstedt dato** _____

Rederi _____

Adresse _____

PARTICULARS OF TRAINEE:

(To be filled in by the trainee)

Family name _____

First name _____

Cpr. nr. _____ **Date of birth** _____
(Danish citizens only) *(Non Danish citizens only)*

Home address _____

Phone no.: _____

Seamans book no. _____ **Issue date** _____

Company _____

Address _____

Attestation for godkendelse på skolen/centret

Bogen skal forevises skolen for godkendelse efter afslutningen på praktikperioden til søs.

Efter afsluttende søpraktik (2. praktikperiode):

SKOLENS NAVN: STEMPEL	NAVN: MED BLOKBOGSTAVER	DATO OG UNDER- SKRIFT:

Evt. bemærkninger:

Certification of approval by the School/Centre

The Training Record Book must be presented to the School/Centre for review/control upon completion of the seagoing service.

After final seagoing service (2nd period of seagoing service):

SCHOOL'S NAME: STAMP	NAME: CAPITAL LETTERS	DATE AND SIGNATURE:

Remarks:

Introduktion

For at kunne fortsætte på skibsofficersuddannelsens teoridele skal aspiranten have fulgt et af Søfartsstyrelsen godkendt uddannelsesprogram for praktikperioderne.

Uddannelsesbogen, der udgives af Søfartsstyrelsen, skal udleveres og introduceres til aspiranten inden denne afslutter 2. teoridel.

Når aspiranten møder på skolen efter den afsluttende praktikperiode, skal uddannelsesbogen fremlægges på skolen, som vil kontrollere, at den er ført i overensstemmelse med denne vejledning herunder at der under emnerne (uddannelsesmålene) er kvitteret for udarbejdelsen af de obligatoriske arbejdsopgaver samt projektarbejdet.

Aspiranten har selv ansvaret for at de obligatoriske arbejdsopgaver og projektarbejdet opbevares sammen med uddannelsesbogen.

Uddannelsesbogen udgives på både dansk og engelsk.

Formålet med uddannelsesbogen

Formålet med uddannelsesbogen er, at den skal:

- styre den praktiske uddannelse under praktikperioden, så aspiranten, skibsledelsen og uddannelsesofficeren bliver vejledt om opfyldelse af målene for praktikperioden, og
- tjene som dokumentation for, at de stillede mål er nået.

Uddannelsesbogen er et vigtigt led i uddannelsen til skibsofficer. Uddannelsesbogen kræves gennemgået af alle aspiranter (skibsofficersstuderende) med henblik på at kunne dokumentere gennemførte uddannelsesmål som aspirant i den afsluttende praktikperiode, hvor den praktiske uddannelse har været i overensstemmelse med uddannelsesbogen.

Den fortsatte uddannelse vil være betinget af, at denne uddannelsesbog i udfyldt stand kan forevises. Uddannelsesbogen er aspirantens personlige ejendom, og det forventes, at bogen opbevares på en betryggende måde, således at den altid fremtræder i ordentlig stand.

Vejledning vedr. praktiktiden til søs

- Søfartsstyrelsen opfordrer skibsledelsen, uddannelsesofficeren og rederiets uddannelsesansvarlige til løbende at evaluere aspirantens uddannelse om bord.
- Den skitserede uddannelse i uddannelsesbogen må ikke opfattes som ufravigelig, idet den alene forudsættes gennemført i den udstrækning, som skibets udrustning, indretning, ladning og fart gør det muligt. De generelle punkter, herunder arbejdsopgaver og projektarbejdet, skal dog gennemføres.

Introduction

In order to continue to the theoretical modules of the ship's officer's trainee programme, the trainee must have completed practical training periods according to a training programme approved by the Danish Maritime Authority.

The Training Record Book, which is published by the Danish Maritime Authority, must be handed out and introduced to the trainee before he or she completes the 2nd period of theory.

When the trainee attends school after the final training period, he or she must present the Training Record Book to the school, which will check that it is in accordance with these guidelines, including whether completion of the mandatory tasks and the project work under the subjects (training objectives) in the Training Record Book have been signed.

The trainee is responsible for keeping the mandatory tasks and the project work together with the Training Record Book.

The Training Record Book is published in both Danish and English.

The purpose of the Training Record Book

The purpose of the Training Record Book is to:

- manage the practical training during the trainee's practical training period, so that the trainee, the ship's management and the training officer are properly informed about meeting the objectives of the practical training period, and
- serve as documentation that the objectives have been met.

The Training Record Book is an important element in the training programme for ship's officers. All trainees (ship's officer students) must complete the Training Record Book in order to document the training objectives completed as trainee in the final training period under conditions where the practical training has been in compliance with the Training Record Book.

The trainee will not be able to continue his training if he or she is unable to present the Training Record Book in completed form. The Training Record Book is the trainee's personal property, and it is expected that the book is kept in a safe manner, so that it is in good condition at all times.

Guidelines concerning seagoing service

- The Danish Maritime Authority encourages the ship's management, the training officer and the company's head of training to evaluate the trainee's onboard training on a continuous basis.
- The training outlined in the Training Record Book should not be considered mandatory, in that the only condition is that training be completed to the extent the ship's equipment, design, cargo and trade so allow. The general items, including tasks and project work, however, must be completed.

- Uddannelsesbogen skal jævnligt forevises og drøftes med uddannelsesofficeren samt for godkendelse af arbejdsopgaver/projektarbejdet. Bogen skal endvidere forevises skibsledelsen til eftersyn og kontrol mindst en gang om måneden samt ved på/afmønstring
- Aspiranten har et medansvar for, at praktiktiden udnyttes på bedste måde, så der herved sikres den bedst mulige baggrund for den fremtidige gerning som skibsofficer.

Uddannelsesofficeren skal udelukkende kvittere med dato/sign for arbejdsopgaverne når aspiranten har opnået en tilfredsstillende rutine.

Man skal dog være opmærksom på, at selvom aspiranten har opnået en tilstrækkelig rutine til, at der kan kvitteres for gennemført opgave/emne i bogen, betyder det ikke, at aspiranten absolut skal fritages for videre indlæring eller deltagelse i de enkelte emner. Som eksempel kan nævnes, at aspiranten i lighed med resten af besætningen skal fortsætte med at deltage i alle former for øvelser i sikkerhedsberedskabet under hele udmønstringsperioden, for at aspiranten opnår den størst mulige erfaring og rutine.

Skibsledelsen/Uddannelsesofficeren kan endvidere tilføje yderligere relevante arbejdsopgaver og uddannelsesmål ved at foreslå yderligere obligatoriske skriftlige arbejdsopgaver.

- Det er vigtigt, at skibsledelsen/uddannelsesofficeren omhyggeligt anfører bemærkninger i uddannelsesbogen om den opnåede indlæring og rutine i udførelse af de praktiske arbejdsopgaver om bord.

Uddannelsesbogen kan derved benyttes som en skriftlig overlevering ved udskiftning af skibsledelse/uddannelsesofficer om bord, eller hvis aspiranten skifter til andre skibe. Det er vigtigt, at der sker en grundig overlevering mellem uddannelsesofficererne, således at der bevares kontinuitet i uddannelsesforløbet, så det sikres, at oplæring i eventuelle svage punkter fortsættes i praktikperioden.

Det er vigtigt, at de anførte arbejdsopgaver udarbejdes. Ellers vil uddannelsesbogen ikke kunne godkendes ved optagelse på skibsofficersuddannelsens sidste teoridel.

Aspiranten skal huske,

- at udfylde uddannelsesbogens datablad,
- at få kvitteret for gennemført "Safety Familiarization" hurtigst muligt efter hver påmønstring, når den fornødne rutine er opnået,
- at få udfyldt skemaet 'Particulars of the Ship' i begyndelsen af udmønstringen,
- at gennemføre minimum 2 mdr.'s brovagtstjeneste for udstedelse af vagtholdsbevis i forbindelse med de første 6 måneder af søpraktikken,
- at læse rederiets interne vejledning vedr. praktiktiden til søs,
- at uddannelsesofficeren skal kvittere for gennemførte emner samt eftersyn af bogen,
- at forevise uddannelsesbogen til skibsledelsen mindst en gang om måneden for eftersyn og kontrol,

- The Training Record Book must on a regular basis be presented to and discussed with the training officer, who must approve the tasks/project work. Furthermore, the Book must be presented to the ship's management for review and check once a month and in connection with sign-on/sign-off.
- The trainee is responsible for exploiting the practical training periods in the best possible way, so that he gets the best possible basis for his future work as a ship's officer.

The training officer only has to sign for the work tasks with the date and his signature when the trainee has obtained satisfactory routine.

Note that even though the trainee has obtained enough routine for the training officer to sign for completed tasks/subjects in the book, this does not mean that the trainee is necessarily exempted from further learning or participation in the individual subjects. For example, just as the rest of the crew, the trainee must continue participating in all forms of safety emergency exercises during the entire period of seagoing service, so that the trainee may obtain the greatest possible experience and routine.

The ship's management/training officer can also add more relevant tasks and training objectives to the Training Record Book by suggesting additional mandatory written assignments.

- It is important that the ship's management/training officer are careful to note down any comments in the Training Record Book on the level of learning and routine achieved by the trainee in his or her performance of tasks on board the ship.

The Training Record Book can thus be used as written communication and documentation in case the ship's management/training officer is replaced, or if the trainee changes to another ship. A thorough transfer of information between training officers is very important in order to provide continuity in the training programme, so that training in any of the trainee's weak areas may be continued in the practical training period.

It is important that all tasks are completed. Otherwise the Training Record Book cannot be approved when seeking admission to the last theoretical module of the training programme for ship's officer.

The trainee should remember to

- fill in the data sheet in the Training Record Book,
- have someone sign for his or her completion of "Safety Familiarization" as quickly as possible after each sign-on, once the necessary routine has been obtained;
- fill in the form "Particulars of the Ship" at the beginning of the seagoing service,
- complete at least two months of bridge watchkeeping duty in order to have a watchkeeping certificate issued in connection with the initial period of seagoing service;
- read the shipping company's internal guidelines concerning onboard training;
- have the training officer sign the book in cases of completed subjects and reviews of the book;
- present the Training Record Book to the ship's management at least once every month for review and check;

- at forevise uddannelsesbogen til rederiet for eftersyn,
- at forevise uddannelsesbogen til skolen/centret efter afsluttet praktikperiode,
- at udarbejde de anførte arbejdsopgaver samt projektarbejdet,
- at få godkendt arbejdsopgaverne og projektarbejdet inden afmønstring.

Uddannelsesmål

Til beskrivelser af formål og mål i uddannelsen til skibsofficer er der så vidt muligt anvendt den samme klassifikation af uddannelsesmål.

Uddannelsesmålene skal ses som en rettesnor for den daglige indlæring, og som en hjælp til planlægningen af dagligdagen for aspiranten.

Som supplement til uddannelsesmålene ligger arbejdsopgaverne, som indeholder dele af uddannelsesmålene.

Når aspiranten har gennemført arbejdsopgaven/emnet og dermed opfylder de anførte uddannelsesmål på tilfredsstillende vis, skal uddannelsesofficeren/skibsledelsen kvittere ved at udfylde kvitteringsfeltet med dato/signatur i det dertilhørende skema.

Logbog

Aspiranten skal under hele udmønstringen under både den indledende samt den afsluttende 2. praktikperiode løbende skrive om sine erfaringer og iagttagelser han/hun møder om bord på skibet i forbindelse med følgende emner:

- Vedligehold og reparation
- Vagthold (brovagt, maskinvagt, radiovagt og dæksvagt)

Logbogen skal ikke benyttes som en egentlig dagbog. Den skal kun benyttes som aspirantens dokumentation og kontrol af, at målbeskrivelserne for emnerne vedligehold og reparation samt vagthold som angivet i uddannelsesbogen bliver opfyldt. Endvidere skal logbogen benyttes som disposition og notater i forbindelse med udarbejdelse af relevante arbejdsopgaver.

Logbogen skal bruges som dokumentation for målopfyldelse indenfor emnerne vedligehold og reparation samt vagthold samt til overlevering mellem uddannelsesofficererne således, at man kan planlægge uddannelsen om bord. Uddannelsesofficeren kvitterer for gennemgang og godkendelse af logbogen i forbindelse med hver afmønstring af enten uddannelsesofficer og/eller aspirant.

Logbogen skal føres i henhold til følgende vejledning:

- Aspiranten skal under udmønstringen løbende skrive om sine erfaringer med og iagttagelser af den praksis han/hun møder under vagttjeneste og vedligehold. Disse skrivelser bliver til en refleksionsbog (et hæfte, mappe eller ringbind), som man også kan kalde en logbog.
- I logbogen skal aspiranten skrive,
 - hvad en skibsofficer foretager sig under vagt på broen, i maskinen eller på dækket, hvorfor det gøres, og hvilken betydning det har for sejladsen.

- present the Training Record Book to the shipping company for review;
- present the Training Record Book to the school/training centre after completion of the seagoing service;
- complete all tasks listed in the Training Record Book;
- have the tasks and the project work approved before discharge.

Training objectives

For the description of the purpose and objectives of the training required to become a ship's officer the same classification of training objectives has been used as far as possible.

The training objectives are to be seen as a guideline for the daily learning and as help in the planning of the work day for the trainee.

Some of the training objectives are also found in the work tasks.

When the trainee has completed a task/subject satisfactorily and thus complies with the training objectives, the training officer/ship's management must sign (date and signature) the relevant form.

Logbook

The trainee must throughout the entire seagoing service, including both the initial and the final (second) practical training period, document his or her onboard experience and observations in relation to the following subjects:

- Maintenance and repair,
- Watchkeeping (bridge watch, engine room watch, radio watch and deck watch).

The logbook shall not serve as a diary. It must only be used in order to document and monitor that the objectives described for the subjects maintenance and repairs and watchkeeping, as stated in the Training Record Book, are met. Furthermore, the logbook should serve as an outline and notes in connection with completion of relevant working tasks.

The logbook should be used as documentation that the objectives within the subjects of maintenance and repairs and watchkeeping have been met, and to ensure proper passing on of information between training officers so that onboard training can be planned. The training officer signs for review and approval of the logbook whenever a trainee or the training officer signs off the ship.

The logbook must be kept in accordance with the following guidelines:

- Throughout the seagoing service, the trainee must write regularly about his/her experience and observations of the practices he or she is introduced to during watchkeeping duty and maintenance. These entries should become a book of reflections, a logbook.
- The trainee should write about the following areas in the logbook:
 - the tasks of ship's officers during bridge watch, when in the engine room or on deck, why they are performed, and what significance they have for sailing and navigation;

- hvad der foretages i forbindelse med vedligehold- og reparationsarbejder om bord, hvorfor, og hvilken betydning det har for skibets sikkerhed og drift..

Logbogen bliver derved et redskab i aspirantens læreproces og får aspiranten til at tænke over det, der sker.

- Logbogens sider kan have overskrifter, som er emner eller problemer fra praktiske situationer, som aspiranten deltager i. Han/hun kan f.eks. skrive om:
 - Praktisk brug af navigationsudstyret.
 - Vedligehold af hjælpemaskineriet.
 - Udførelse af sikker brovagt.
 - Udførelse af sikker maskinvagt.
 - Udførelse af sikker radiovagt.
- Aspiranten skal altså med egne ord beskrive, hvordan de enkelte elementer af vagthold, vedligehold og reparation anvendes om bord på skibet – helst med udgangspunkt i virkelige situationer og opgaver. Logbogen skal udføres under vejledning fra skibets officerer, og kan indeholde både teoretiske og praktiske betragtninger, som måtte være nødvendige for at beskrive emnet.
- Aspiranten skal arbejde med kritisk refleksion, som betyder at han/hun skal tænke over forskellige arbejdsmønstre og holdninger, og vurdere forskellige måder at gøre tingene på i forskellige situationer. Aspiranten kan på den baggrund efterhånden danne sig et grundlag for egen forståelse og oprettelse af en god og fornuftig sikkerhedskultur samt evnen til at analysere og vurdere forholdsvist komplekse situationer i forbindelse med vagthold, vedligehold og reparation.

Skriftlige opgaver

Under sin praktiktid i den **afsluttende praktikperiode** skal aspiranten som minimum udføre de opgaver og projektarbejdet der er tilknyttet denne praktikperiode.

Proceduren ved opgaveaflevering er, at:

- Arbejdsopgaverne skal benyttes som dokumentation for gennemført uddannelse om bord. Hvis uddannelsesofficeren/skibsledelsen finder det mere formålstjenligt, kan en arbejdsopgave om nødvendigt erstattes af eller kombineres med en praktisk handleprøve i emnet.
- Uddannelsesofficeren eller en specielt udpeget officer fungerer som vejleder i forbindelse med arbejdsopgaverne,
- besvarelsen afleveres til uddannelsesofficeren (eller til den udpegede officer), der evaluerer og kommenterer besvarelsen,
- hvis besvarelsen kan godkendes, påtegnes den af officeren med dato/sign.,
- uddannelsesofficeren registrerer godkendelsen i oversigten over arbejdsopgaverne,
- i tilfælde af, at besvarelsen ikke kan godkendes, må aspiranten rette denne eller udfærdige en ny besvarelse efter anvisning fra uddannelsesofficeren.

- the tasks related to maintenance and repair work onboard, why they are performed and what significance they have for the safety and operation of the ship.

The logbook thus becomes an instrument in the trainee's learning process, prompting the trainee to reflect on what goes on around him.

- The pages of the logbook can have headings that are subjects or problems in practical situations the trainee meets. The trainee could, for example, write about:
 - Practical use of the electronic navigational aids.
 - Maintenance of the auxiliary machinery.
 - Maintain a safe navigational watch.
 - Maintain a safe engineering watch.
 - Maintain a safe radio watch.
- So, the trainee should use his or her own words to describe how the individual elements of a watch, maintenance and repair task are employed onboard ship, preferably based on real situations and tasks. The logbook should be prepared under guidance of the ship's officers and could contain both theoretical and practical considerations necessary for a full description of the subject.
- The trainee must use critical reflection, which means that he or she must reflect on different working patterns and attitudes and assess different ways of doing things in different situations. On this basis, eventually the trainee will be able to form his or her own basis for understanding and for establishing a good and sound safety culture, as well as the ability to analyse and assess comparatively complex situations in connection with watch-keeping, maintenance and repairs.

Written tasks

During the **final practical training period**, the trainee must, as a minimum complete the work tasks and the project work attached to this seagoing service.

Handing in tasks

- The tasks are to serve as documentation of completed training onboard. If the training officer/ship's management finds it more advisable, tasks could, where necessary, be replaced by or combined with a practical test in the subject.
- The training officer or an appointed officer serves as a counsellor in connection with the tasks.
- Tasks are handed in to the training officer (or the appointed officer), who will evaluate and comment on these.
- If the tasks can be approved, the officer signs them off with date and signature.
- The training officer registers approval in the task list.
- Where a task cannot be approved, the trainee must amend it or prepare a new one following the training officer's instructions.

Formålet med arbejdsopgaver og projektarbejdet

- Gennem udarbejdelsen af opgaverne skal aspiranten kunne demonstrere planlægning og udførelse af almindelige sikkerhedsrutiner og arbejdsprocesser om bord.
- Det er ikke meningen, at aspiranten skal komme med vidtgående tekniske betragtninger og der anbefales derfor, at der aftales et sideantal inden udarbejdelse af hver arbejdsopgave.

Vejledning i udførelse af arbejdsopgaven

Arbejdsopgaverne består af en teoretisk og praktisk del. Den teoretiske del består i planlægning og senere beskrivelse af det udførte arbejde eller sikkerhedsrutine. Uddannelsesofficeren kvitterer for den gennemførte og godkendte arbejdsopgave i oversigten over arbejdsopgaver.

Vejledning i udførelse af projektopgaven

Det er ikke meningen, at officersaspiranten skal komme med vidtgående tekniske betragtninger og således bruge hele sin fritid til projektarbejdet i 2. praktikperiode.

- Projektarbejdet skal godkendes af uddannelsesofficeren.
- Projektarbejdet skal afleveres til godkendelse efter følgende retningslinier:

Projektarbejdet afleveres til kommentarer om bord ca. 1½ måned før afslutningen på afsluttende praktikperiode og fremsendes derefter til endelig evaluering til den maritime skole/center, hvor officersaspiranten har gennemført 2. teoridel.

Som en hjælp til beslutning om indhold og omfang af projektarbejdet, gives her en oversigt over opbygningen samt en række stikord til opgaverne:

Opbygning af projektarbejdet

- Forside m. titel, officersaspirantens navn, rederi mv.
- Indholdsfortegnelse
- Indledning herunder formål med projektarbejdet
- Beskrivelse af arbejdet herunder planlægning, udførelse samt afprøvning.
- Konklusion
- Kildefortegnelse

The purpose of tasks and the project work

- By completing the tasks, the trainee demonstrates the ability to plan and prepare normal safety routines and work processes onboard ship.
- The trainee is not required to include extensive technical considerations and it is therefore recommended that a fixed scope (number of pages) is agreed before starting on the task.

Guidelines for completion of tasks

The tasks consist of a theoretical and a practical part. The theoretical part consists of planning and, later, describing the work or the safety routine performed. There are optional tasks in connection with both the initial and the final practical training periods. The training officer signs for the completed and approved task in the task list.

Guidance in the execution of the project work

It is not the intention that the trainee should develop extensive technical accounts using all of his or her spare time for the project work during the second period of seagoing service.

- The project must be approved by the Training Officer.
- The project must be delivered as follows:

The project work must be delivered for comments on board approx. 1½ month before the final seagoing service is completed and thereafter it must be forwarded for final evaluation to the maritime school/center, where the Trainee has completed the 2nd period of theory.

As a guidance on deciding the content and extent of the project work an overview of the composition together with a few proposals are given below:

Composition of the project:

- Title, the Name of the Trainee, Company name etc.
- Index
- Introduction including objective of the project work
- Description of the work including planning, execution and testing.
- Conclusion
- List of references

Brovagts- og maskinrumstjeneste

Brovagts- og maskinrumstjenesten bør tilrettelægges således, at aspiranten også får lejlighed til at gå vagt ved kanalpassager, sejlads i trafikerede farvande samt under manøvrer, og der skal lægges stor vægt på forståelse af nødvendigheden af at overholde god disciplin på broen og i maskinen, jævnfør STCW konventionens kapitel VIII.

Vagtholdsbeviset skal erhverves i de første 6 måneder af søpraktikken.

Aspiranten skal indgå i brovagten – hvor det er relevant for oplæringen og uddannelsen - under opsyn af en kvalificeret officer i minimum 2 mdr. under de første 6 måneder af søpraktikken for at erhverve et 'Vagtholdsbevis' iht. STCW konventionens reglement II/4.

Nederst på Vagtholdsbeviset attesterer skibsføreren ved sin underskrift, når aspiranten på tilfredsstillende måde har gennemført to måneders brovagtstjeneste under opsyn, hvorefter aspiranten er fuldt kvalificeret efter reglement II/4.

Aspiranten kan under oplæringen ikke erstatte udkiggen om bord.

Bridge and engine room watchkeeping duties

Bridge and engine room watchkeeping duties should be coordinated so that the trainee stands watch during channel/canal passage, during navigation in busy shipping lanes and while manoeuvring. Emphasis should be on understanding the necessity of complying with good discipline on the bridge and in the engine room, cf. Part VIII of the STCW Convention.

The watchkeeping certificate during the first 6 months of seagoing service

In order to acquire a watchkeeping certificate in accordance with Regulation II/4 of the STCW Convention, the trainee must, where relevant for the training and his or her learning process, take part in bridge watchkeeping duty under supervision of a qualified officer for at least two months during the first 6 months of the seagoing service.

The master of the ship signs at the bottom of the Watchkeeping Certificate when the trainee has satisfactorily completed two months of bridge watchkeeping duty under supervision. Now the trainee is fully qualified according to Regulation II/4.

The trainee cannot replace the look out onboard ship during his training.

TRAINING RECORD BOOK - FOR SHIP's OFFICER TRAINEES:

STCW CODE - TABLE A-II/4

Specification of minimum standard of competence for ratings forming part of a navigational watch

Column 1	Column 2	Column 3	Column 4
COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Steer the ship and comply with helm orders also in the English language	Use of magnetic and gyro compasses. Helm orders. Change-over from automatic pilot to hand steering and vice-versa.	Assessment of evidence obtained from: .1 practical test, or .2 approved in-service experience or approved training ship experience.	A steady course is steered within acceptable limits having regard to the area of navigation and prevailing sea state. Alterations of course are smooth and controlled. Communications are clear and concise at all times and orders are acknowledged in a seamanlike manner.
Keep a proper look-out by sight and hearing	Responsibilities of a look-out, including reporting the approximate bearing of a sound signal, light or other object in degrees or points.	Assessment of evidence obtained from: .1 practical test, or .2 approved in-service experience or approved training ship experience.	Sound signals, lights and other objects are promptly detected and their appropriate bearing in degrees or points is reported to the officer of the watch.
Contribute to monitoring and controlling a safe watch	Shipboard terms and definitions. Use of appropriate internal communication and alarm systems. Ability to understand orders and to communicate with the officer of the watch in matters relevant to watchkeeping duties. Procedures for the relief, maintenance and hand-over of a watch. Information required to maintain a safe watch. Basic environmental protection procedures.	Assessment of evidence obtained from approved in-service experience or approved training ship experience.	Communications are clear and concise and advice/clarification is sought from the officer on watch where watch information or instructions are not clearly understood. Maintenance, hand-over and relief of the watch is in conformity with accepted practices and procedures.
Operate emergency equipment and apply emergency procedures	Knowledge of emergency duties and alarm signals. Knowledge of pyrotechnic distress signals, satellite EPIRBs and SARTs. Avoidance of false distress alerts and action to be taken in event of accidental activation.	Assessment of evidence obtained from demonstration and approved in-service experience or training ship experience.	Initial action on becoming aware of an emergency or abnormal situation is in conformity with established practices and procedures. Communications are clear and concise at all times and orders are acknowledged in a seamanlike manner. The integrity of emergency and distress alerting systems is maintained at all times.

STCW CODE - 24.07.1995

TRAINING RECORD BOOK - FOR SHIP'S OFFICER TRAINEES:

STCW CODE - TABLE A-II/4

Specification of minimum standard of competence for ratings forming part of a navigational watch

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STCW CODE - 24.07.1995

Brovagtstjeneste under praktikperioden.

For at opfylde STCW Reglement II/1 skal aspiranten have gennemgået minimum 6 mdr. brovagtstjeneste – hvor det er relevant for oplæringen og uddannelsen - under opsyn af en kvalificeret officer.

Maskinrumstjeneste under praktikperioderne.

For at opfylde STCW Reglement III/1 skal Aspiranten have gennemgået minimum 6 mdr. maskinrumstjeneste – hvor det er relevant for oplæringen og uddannelsen under opsyn af en kvalificeret officer.

Kravet vedrørende seks måneders maskinrumstjeneste gælder dog ikke for uddannelsen til skibsfører. Endvidere skal følgende uddannelsesmål ikke opfyldes til skibsføreruddannelsen:

- Termiske maskiner og anlæg
- Elektriske og elektroniske maskiner, anlæg og udstyr
- Procesanalyse og automation

Aspiranten skal dog deltage i almindelig relevant maskinrumstjeneste.

Vedligeholdelsesarbejder og sømandskundskaber.

- Aspirantens deltagelse i de almindeligt forekommende vedligeholdelsesarbejder om bord bør begrænses til det uddannelsesmæssigt nødvendige, og ved tildeling af arbejdsopgaver om bord skal der være et klart sigte mod den fremtidige officersgerning.
- Uddannelsen i de almindelige sømandskundskaber skal være en naturlig fortsættelse af den indlæring, der er sket på skolerne, og aspiranten skal deltage i arbejder som fortøjning, oprigning og eftersyn af lossegrej, lastbehandling, søklaring, vedligehold og reparation i maskinen såvel som på dækket, idet der samtidig må lægges stor vægt på den sikkerhedsmæssige oplæring. Det er specielt vigtigt, at man prioriterer den praktiske indlæring meget højt herunder fokuserer på emner og discipliner, der kun kan indøves om bord.

Skibstyper under praktik til søs

Der er ikke krav om, at uddannelsen skal foregå på bestemte skibstyper, men med sigte på en effektiv udnyttelse af uddannelsestiden bør skibsledelsen være opmærksom på, at aspiranten muligvis kun får en enkelt udmønstring i den pågældende skibstype.

Bridge watchkeeping duty during the seagoing service periods

In order to comply with Regulation II/1 of the STCW Convention, the trainee must have completed at least six months of bridge watchkeeping duty, wherever relevant for the training and his or her learning process, under supervision of a qualified officer.

Engine room watchkeeping duty during the seagoing service periods

In order to comply with Regulation III/1 of the STCW Convention, the trainee must have completed at least six months of engine room watchkeeping duty, where relevant for the training and his or her learning process, under supervision of a qualified officer.

The requirement regarding six months engine room watchkeeping duty is not applying for the education as Master. Further the following training objectives are not applying for the education as Master:

- Thermal machines and equipment
- Electrical and electronic machinery, plants and equipment
- Process analysis and automation

The Trainee must however participate in ordinary relevant engine room duties.

Maintenance work and seaman skills

- The trainee's participation in routine maintenance work onboard ship should be limited to what is necessary for his or her training. When delegating work tasks onboard ship, there should be a clear aim toward the trainee's future duties as a ship's officer.
- Training in ordinary seaman skills must be a natural continuation of the theoretical teaching the trainee received during theoretical training at the school, and the trainee must take part in work such as mooring, rigging and inspection of cargo gear, handling of cargo, preparations for departure, as well as maintenance and repairs in the engine room and on deck. At the same time there should be great emphasis on training in safety aspects. It is especially important that learning by doing is given high priority, including focusing on subjects and disciplines which can only be practiced onboard.

Types of ship during the seagoing service

It is not required that training take place onboard certain types of ship. However, in order to ensure efficient use of the training period the ship's management should be aware that the trainee might get only one service period onboard the specific type of ship.

Uddannelsesofficeren

- **Skibsledelsen skal udpege en uddannelsesofficer** blandt skibets officerer. Uddannelsesofficeren skal være aspirantens kontaktperson om bord, og vedkommende skal sikre, at retningslinierne for uddannelsesbogen bliver overholdt af alle parter. Uddannelsesofficeren skal i samråd med skibsledelsen tilrettelægge uddannelsen om bord, så der specielt bliver taget hensyn til aspiranternes forskellige baggrund, sejltid, alder m.v.
- Aspiranten skal jævnligt forevise og drøfte uddannelsesbogen med uddannelsesofficeren. Bogen skal endvidere forevises skibsledelsen til eftersyn/kontrol mindst en gang om måneden samt ved på- og afmønstring.

Bemærkninger og overlevering

- Det er vigtigt, at uddannelsesofficeren omhyggeligt anfører bemærkninger i uddannelsesbogen om den af aspiranten opnåede indlæring og rutine i udførelse af de praktiske arbejdsopgaver om bord.

Den korte og koncentrerede praktikperiode gør det nødvendigt med en grundig overlevering mellem uddannelsesofficererne, således at der bevares en kontinuitet i uddannelsesforløbet, så det sikres, at oplæring i eventuelle svage punkter fortsættes i praktikperioden.

Uddannelsesbogen tjener derved samtidig som en skriftlig overlevering ved udskiftning af skibsledelse/uddannelsesofficer om bord eller ved evt. skift til andre skibe i praktikperioden.

- På det enkelte skib kan det anbefales, at uddannelsesofficeren udarbejder en særlig checkliste med de punkter, der er specielle for det pågældende skib. En sådan liste vil være en stor hjælp ved afløsning af uddannelsesofficeren, idet afløseren herved lettere kan sættes ind i den enkelte aspirants uddannelsesmæssige status, og hvor der efterfølgende skal sættes ind.

Uddannelsesstruktur for skibsofficersuddannelsen

Fællesuddannelse af aspiranter til skibsofficer.

Professionsbachelorordelen er en fællesuddannelse. Uddannelsen opbygges som en vekselvirkning mellem teoretiske studier og praktiktid til søs i handelsskibe. Teoridelen er opdelt i tre perioder, og praktikdelen er opdelt i to perioder svarende til 12 måneders effektiv fartstid. Den samlede uddannelsesstruktur fremgår af diagrammet i bilag 3. Det er vigtigt at gøre sig klart, at aspiranters teoretiske forudsætninger er begrænsede i den indledende praktikperiode, og at de fleste emner derfor må videreudvikles i den afsluttende praktikperiode, hvor aspiranten naturligvis møder med bedre teoretiske forudsætninger. Dette bør der tages hensyn til ved vurdering af det niveau, hvori de forskellige uddannelsesmål opfyldes efter første henholdsvis efter anden praktikperiode.

The training officer

- **The ship's management must appoint a training officer** from among the ship's officers. The training officer must be the trainee's contact person onboard ship, and he or she is responsible for ensuring that all parties comply with the guidelines for the Training Record Book. In consultation with the ship's management, the training officer must organise onboard training so that special account is taken of the trainees' individual background, time at sea, age etc.
- The trainee must present and discuss the Training Record Book on a regular basis with his or her training officer. He or she must also present the book for review/check to the ship's management at least once a month and in connection with sign-on/sign-off.

Comments and transfer

- It is important that the training officer makes careful comments in the Training Record Book regarding the trainee's learning process and routine in execution of the practical tasks onboard.

The short and intensive practical training period necessitates a thorough transfer of information between training officers, so that it is possible to maintain continuity of the training and ensure that the trainee is provided with continuous training in any weak areas throughout the training period.

At the same time, the Training Record Book also serves as written briefing in connection with a change of the ship's management/training officer onboard, or if the trainee moves to another ship during the training period.

- On some ships, it may be advisable that the training officer prepares a check list of items special to the ship in question. Such a list will be of great help if someone has to take over from the training officer, in that the substitute will then have less difficulties understanding the training status of the individual trainee and where to direct efforts.

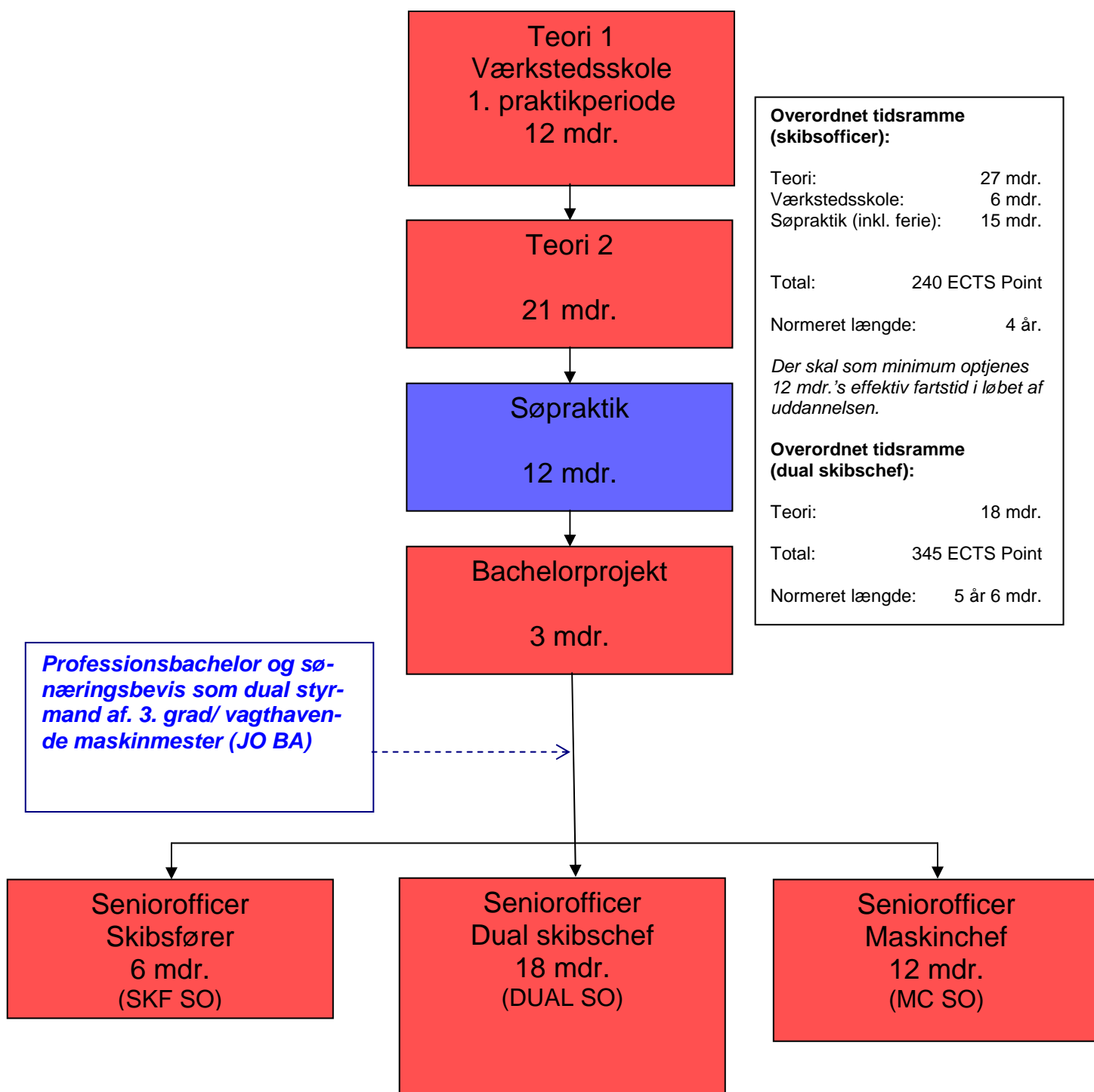
Training programme structure

Common training of ship's officer trainees

The bachelor part of the training programme for ship's officer is a common training programme. The training alternates between theoretical studies and seagoing service onboard merchant ships. The theoretical part falls into three periods and the practical part falls into two periods, corresponding to 12 months of actual seagoing service. The overall structure of the training programme is shown in the diagram. It is important to be aware that the trainee's theoretical skills will be limited during the initial practical training period, and that most of the subjects therefore will have to be elaborated during the final practical training period, where the trainee will have acquired an improved theoretical knowledge. This should be taken into consideration when assessing the level at which the different training objectives are to be met after the first and the second practical training period respectively.

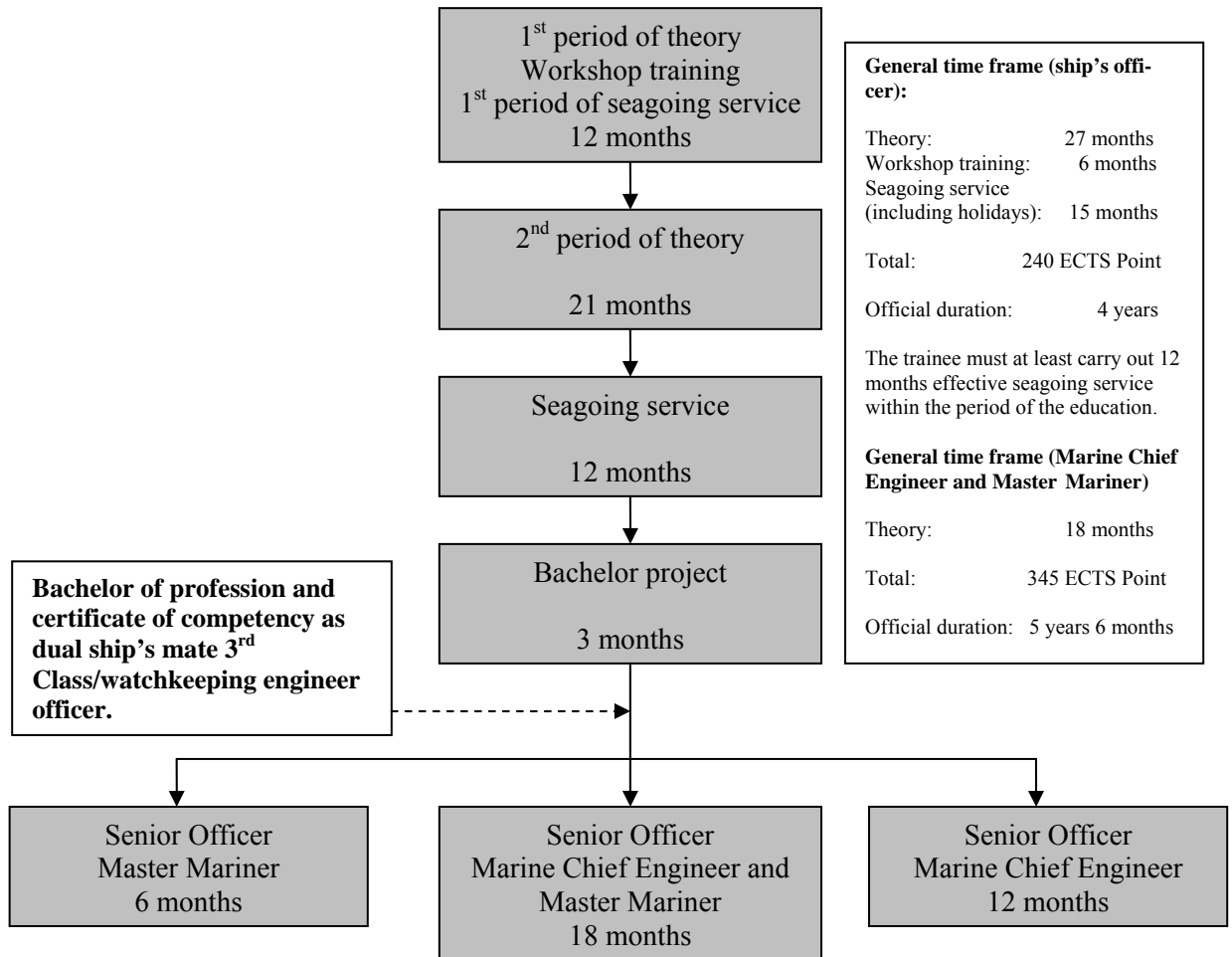
Seniorofficersuddannelsen.

Uddannelsen afsluttes med en teoretisk del, hvor aspiranten kan vælge at specialisere sig inden for maskin- eller navigatørlinien eller kombinere de to linier til dual seniorofficer. Undervisningen er projektorienteret og beskæftiger sig mere med ledelsesmæssige og administrative fag, ligesom der også her vælges nogle tilvalgsfag efter egen interesse. Rammen for uddannelsesforløbet for hele skibsofficersuddannelsen er som vist nedenfor:



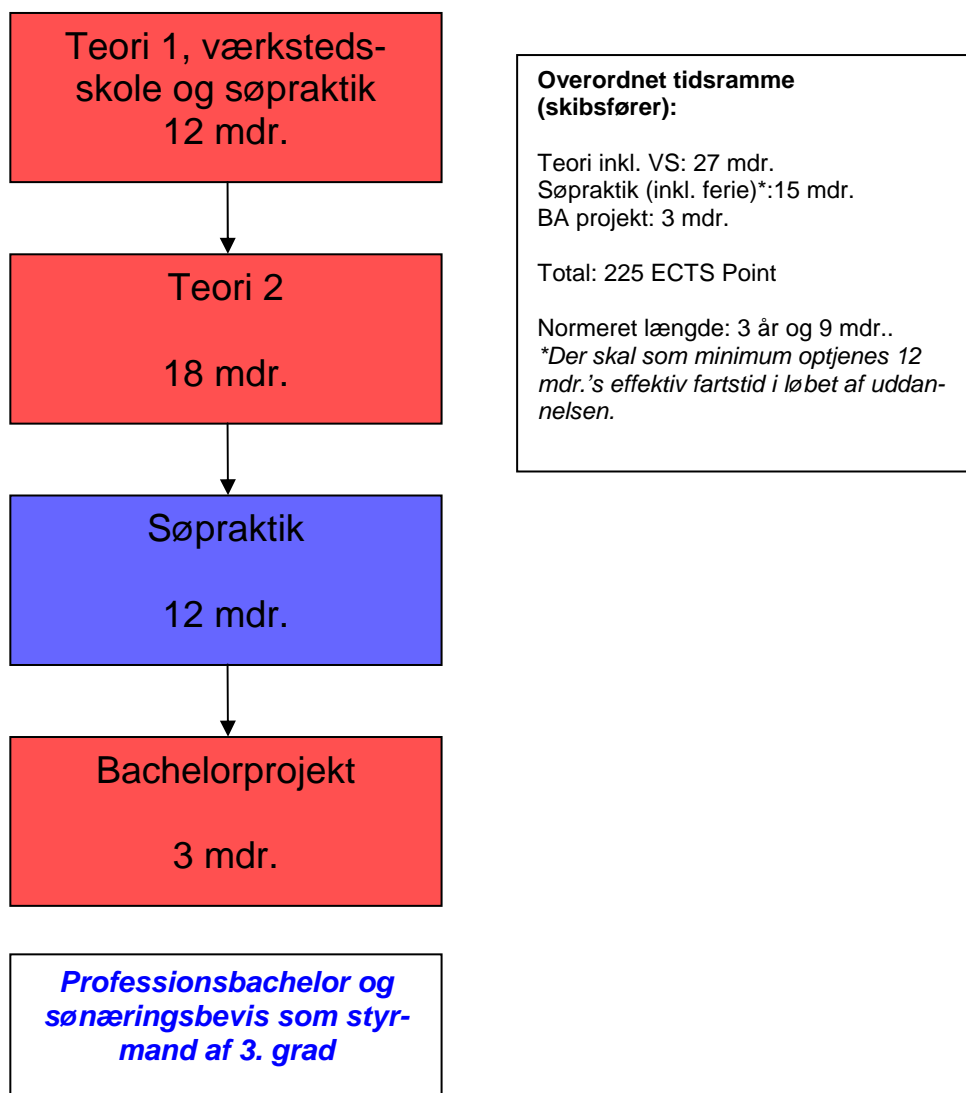
The training programme for Senior Officers

The training programme is finalised with a theoretical part where the trainee chooses to specialise in either the engine or the navigator line or to combine both lines and become a dual senior officer. The teaching is project-oriented and deals with management aspects and administration subjects, and optional subjects may be elected according to the trainee's interest. The framework for the entire training programme for ship's officer is as shown below:



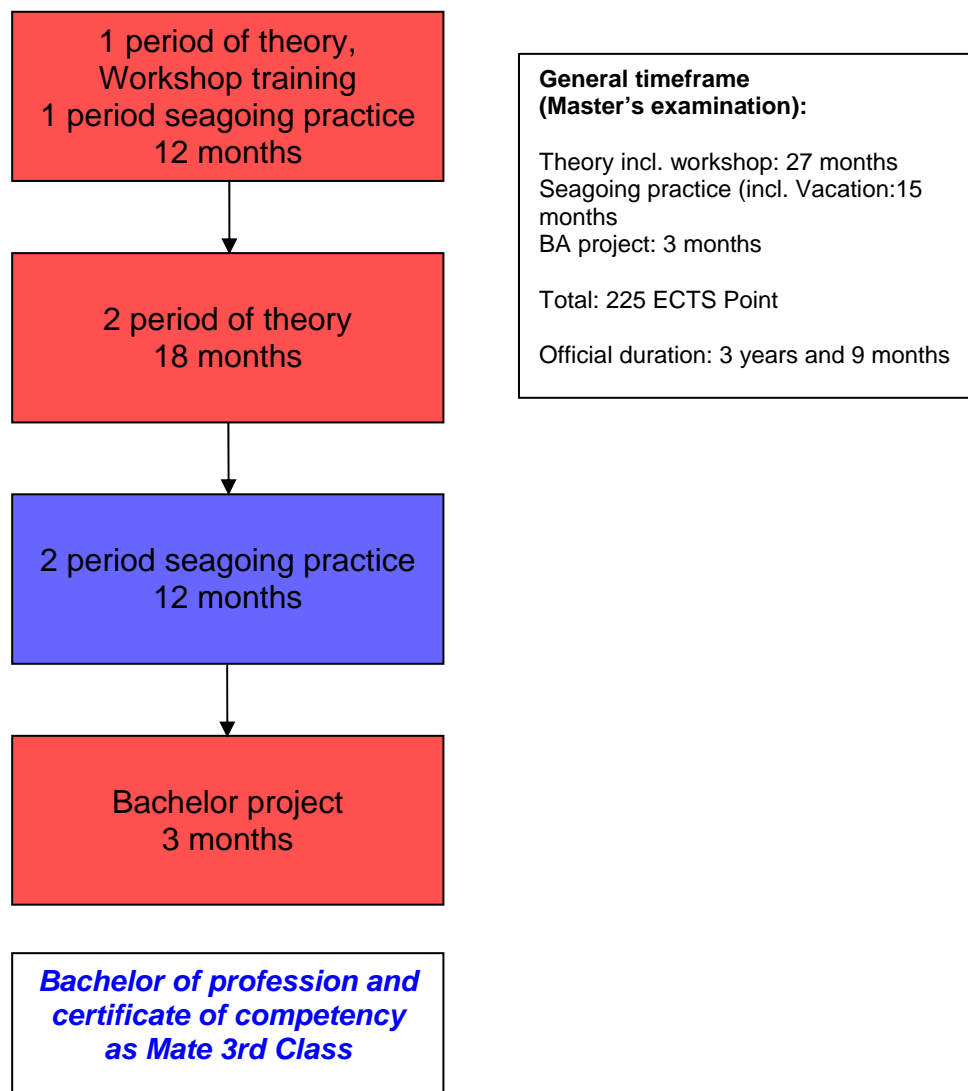
Skibsføreruddannelsen.

Undervisningen er projektorienteret og beskæftiger sig med de grundlæggende nautiske fag inklusive de ledelsesmæssige og administrative fag til skibsføreruddannelsen, ligesom der også kan vælges nogle tilvalgsfag efter egen interesse. Rammen for uddannelsesforløbet for hele uddannelsen er som vist nedenfor:



Education as Master

The teaching is project-oriented and deals with basic nautical knowledge including management aspects and administration subjects for the education as Master. Optional subjects may be elected according to the trainee's interest. The framework for the entire training programme for Master is as shown below:



Evaluering af uddannelsesbogen

Søfartsstyrelsen vil i samarbejde med skolerne, erhvervet og aspiranterne løbende tilstræbe at udvikle uddannelsesbogen for at forbedre dens kvalitet. I denne forbindelse er det vigtigt, at brugerne af den giver informationer om de erfaringer, man har haft med brug af bogen og med uddannelsen om bord. Alle forslag til forbedringer, kritik, bemærkninger o.s.v. er derfor meget velkomne, og Søfartsstyrelsen er især interesseret i at få besvaret følgende spørgsmål:

- uddannelsesbogens og opgavernes omfang i forhold til længden af praktikperioderne (1. og 2.)
- uddannelsesbogens opbygning og indhold
- uddannelsesbogens brug af målbeskrivelser og taksonomi
- værdien/indholdet af arbejdsopgaverne
- den praktiske uddannelse til søs
- aspiranternes teoretiske og praktiske forudsætninger før praktikken til søs

Skibsledelsen og/eller uddannelsesofficeren anmodes om at evaluere uddannelsesbogen.

Rederiet, som jo skal sikre sig, at uddannelsen finder sted efter de angivne retningslinier, opfordres til, at man - gennem sin uddannelsesafdeling - løbende evaluerer brugen af uddannelsesbogen, den praktiske uddannelse til søs og officerernes motivation for træning og uddannelse af aspiranterne.

Forbedringsforslag, evalueringer mv. kan afleveres på skolen eller fremsendes direkte til Søfartsstyrelsen, Center for Søfarende og Fiskere.

Evaluation of The Training Record Book

The Danish Maritime Authority in collaboration with the schools, the industry and the trainees will endeavour on a continuous basis to develop the Training Record Book in order to improve its quality. In this connection it is important that the users of the book provide information about their experience with using the book and with the onboard training programme. All suggestions for improvements, critique, comments etc. are therefore very welcome, and the Danish Maritime Authority is especially interested in answers to the following issues:

- the scope of tasks and the Training Record Book in relation to the duration of the practical training periods (first and second)
- the structure and content of the Training Record Book
- the use of training objectives and taxonomy (classification) in the Training Record Book
- the value/content of assigned tasks
- the practical training at sea
- the theoretical and practical knowledge of the trainees before seagoing practice.

The ship's management and/or the training officer are requested to evaluate the Training Record Book.

The shipping company in charge of executing the training programme according to the guidelines is encouraged to evaluate regularly how the Training Record Book is used, the practical training at sea and the officers' motivation for training and educating the trainees via the company's training department.

Suggestions for improvements, evaluations etc. may be submitted to the school or directly to the Danish Maritime Authority, Centre for Seafarers and Fishermen.

Familiarization - Particulars of the Ship

M.V.			
Port of Registry			
Type of Ship			
Call Sign		IMO Number	
Period from:		Period to:	
Dimensions		Lifesaving equipment	
Length O.A.	m	Lifeboats (number)	
Breadth	m	Life-rafts (number)	
Depth	m	MOB-boat (type)	
Summer Draft	m	Lifeboat dimensions	
Summer Freeboard	m	Capacity per boat	
Net Tonnage		Capacity per life-raft	
Gross Tonnage		Davits (type)	
Deadweight	t	Lifebuoys (number)	
Light Displacement	t	Life jackets (number)	
Fresh Water Allowance	t	Firefighting equipment	
Immersion at Load Draft	t/c m	Fire Extinguishers (Number and capacity):	
Cargo Capacity	t	Dry powder	kg
Ballast Capacity	t	CO ₂	kg
Fresh Water Capacity	t	Soda/Acid	kg
Engine Room		Foam	l
Main Engine(s) (type)		Fire hoses (number and size)	mm
Main Engine output	kW	Breathing app. (number)	
at revs per min.		Fire mans outfit (number)	
Bunker Capacity	t	Fixed Fire Fighting system:	
Daily Consumption	t	Engine (type)	
Service Speed	knt s	Deck (type)	
Aux. Engine(s) (type)		Cargo handling gear	
Boilers (type)		Derricks/Cranes (number)	
Steering Gear (type)		Type and SWL	t
Bridge Equipment		Winches (type)	
Radar(s) (type)		Other cargo equipment	
ARPA (type)		Cargo Pumps (number/Type)	
Log (type)		Cargo Tanks (number)	
Gyro (type)		Ballast Tanks (number)	
Autopilot (type)		Radio Equipment	
Echo Sounder (type)		GMDSS equipment (type)	
ISC (type)			

Udfyldes af aspiranten (to be completed by the Trainee).

Familiarization - Particulars of the Ship

M.V.			
Port of Registry			
Type of Ship			
Call Sign		IMO Number	
Period from:		Period to:	
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Engine Room		Foam	l
Main Engine(s) (type)		Fire hoses (number and size)	mm
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at revs per min.		Fire mans outfit (number)	
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Boilers (type)		Derricks/Cranes (number)	
Steering Gear (type)		Type and SWL	t
Bridge Equipment		Winches (type)	
Radar(s) (type)		Other cargo equipment	
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Log (type)		Cargo Tanks (number)	
Gyro (type)		Ballast Tanks (number)	
Autopilot (type)		Radio Equipment	
Echo Sounder (type)		GMDSS equipment (type)	
ISC (type)			

Udfyldes af aspiranten (to be completed by the Trainee).

Familiarization - Particulars of the Ship

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Log (type)		Cargo Tanks (number)	
Gyro (type)		Ballast Tanks (number)	
Autopilot (type)		Radio Equipment	
Echo Sounder (type)		GMDSS equipment (type)	
ISC (type)			

Udfyldes af aspiranten (to be completed by the Trainee).

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Length O.A.	m	Lifeboats (number)	
Breadth	m	Life-rafts (number)	
Depth	m	MOB-boat (type)	
Summer Draft	m	Lifeboat dimensions	
Summer Freeboard	m	Capacity per boat	
Net Tonnage		Capacity per life-raft	
Gross Tonnage		Davits (type)	
Deadweight	t	Lifebuoys (number)	
Light Displacement	t	Life jackets (number)	
Fresh Water Allowance	t	Firefighting equipment	
Immersion at Load Draft	t/c m	Fire Extinguishers (Number and capacity):	
Cargo Capacity	t	Dry powder	kg
Ballast Capacity	t	CO ₂	kg
Fresh Water Capacity	t	Soda/Acid	kg
Engine Room		Foam	l
Main Engine(s) (type)		Fire hoses (number and size)	mm
Main Engine output	kW	Breathing app. (number)	
at revs per min.		Fire mans outfit (number)	
Bunker Capacity	t	Fixed Fire Fighting system:	
Daily Consumption	t	Engine (type)	
Service Speed	knt s	Deck (type)	
Aux. Engine(s) (type)		Cargo handling gear	
Boilers (type)		Derricks/Cranes (number)	
Steering Gear (type)		Type and SWL	t
Bridge Equipment		Winches (type)	
Radar(s) (type)		Other cargo equipment	
ARPA (type)		Cargo Pumps (number/Type)	
Log (type)		Cargo Tanks (number)	
Gyro (type)		Ballast Tanks (number)	
Autopilot (type)		Radio Equipment	
Echo Sounder (type)		GMDSS equipment (type)	
ISC (type)			

Udfyldes af aspiranten (to be completed by the Trainee).

Familiarization - Particulars of the Ship

M.V.			
Port of Registry			
Type of Ship			
Call Sign		IMO Number	
Period from:		Period to:	
Dimensions		Lifesaving equipment	
Length O.A.	m	Lifeboats (number)	
Breadth	m	Life-rafts (number)	
Depth	m	MOB-boat (type)	
Summer Draft	m	Lifeboat dimensions	
Summer Freeboard	m	Capacity per boat	
Net Tonnage		Capacity per life-raft	
Gross Tonnage		Davits (type)	
Deadweight	t	Lifebuoys (number)	
Light Displacement	t	Life jackets (number)	
Fresh Water Allowance	t	Firefighting equipment	
Immersion at Load Draft	t/c m	Fire Extinguishers (Number and capacity):	
Cargo Capacity	t	Dry powder	kg
Ballast Capacity	t	CO ₂	kg
Fresh Water Capacity	t	Soda/Acid	kg
Engine Room		Foam	l
Main Engine(s) (type)		Fire hoses (number and size)	mm
Main Engine output	kW	Breathing app. (number)	
at revs per min.		Fire mans outfit (number)	
Bunker Capacity	t	Fixed Fire Fighting system:	
Daily Consumption	t	Engine (type)	
Service Speed	knt s	Deck (type)	
Aux. Engine(s) (type)		Cargo handling gear	
Boilers (type)		Derricks/Cranes (number)	
Steering Gear (type)		Type and SWL	t
Bridge Equipment		Winches (type)	
Radar(s) (type)		Other cargo equipment	
ARPA (type)		Cargo Pumps (number/Type)	
Log (type)		Cargo Tanks (number)	
Gyro (type)		Ballast Tanks (number)	
Autopilot (type)		Radio Equipment	
Echo Sounder (type) <input type="checkbox"/> <input type="checkbox"/> GMDSS equipment (type)	GMDSS equipment (type)		

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Udfyldes af aspiranten (to be completed by the Trainee).

Familiarization - Particulars of the Ship

M.V.			
Port of Registry			
Type of Ship			
Call Sign		IMO Number	
Period from:		Period to:	
Dimensions		Lifesaving equipment	
Length O.A.	m	Lifeboats (number)	
Breadth	m	Life-rafts (number)	
Depth	m	MOB-boat (type)	
Summer Draft	m	Lifeboat dimensions	
Summer Freeboard	m	Capacity per boat	
Net Tonnage		Capacity per life-raft	
Gross Tonnage		Davits (type)	
Deadweight	t	Lifebuoys (number)	
Light Displacement	t	Life jackets (number)	
Fresh Water Allowance	t	Firefighting equipment	
Immersion at Load Draft	t/c m	Fire Extinguishers (Number and capacity):	
Cargo Capacity	t	Dry powder	kg
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Fresh Water Capacity	t	Soda/Acid	kg
Engine Room		Foam	l
Main Engine(s) (type)		Fire hoses (number and size)	mm
Main Engine output at revs per min.	kW	Breathing app. (number)	
Bunker Capacity	t	Fire mans outfit (number)	
Daily Consumption	t	Fixed Fire Fighting system:	
Service Speed	knt s	Engine (type)	
Aux. Engine(s) (type)		Cargo handling gear	
Boilers (type)		Derricks/Cranes (number)	
Steering Gear (type)		Type and SWL	t
Bridge Equipment		Winches (type)	
Radar(s) (type)		Other cargo equipment	
ARPA (type)		Cargo Pumps (number/Type)	
Log (type)		Cargo Tanks (number)	
Gyro (type)		Ballast Tanks (number)	
Autopilot (type)		Radio Equipment	
Echo Sounder (type) <input type="checkbox"/> <input type="checkbox"/> GMDSS equip- ment (type)	GMDSS equipment (type)		

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Udfyldes af aspiranten (to be completed by the Trainee).

Vejledende målbeskrivelser for praktikperioderne

SAFETY FAMILIARIZATION

(skal opfyldes i forbindelse med hver påmønstring under både den 1. og 2. praktikperiode – husk også at udfylde ovenstående "Particulars of the Ship" ved hver påmønstring)

Formål

- umiddelbart efter påmønstring skal aspiranten ligesom enhver anden, der er beskæftiget om bord, modtage træning og instruktion i forholdsregler ved brand, evakuering af skibet og skibets øvrige nødprocedurer. Kaptajnen eller en specielt udpeget officer skal påtage oversigtsskemaet over arbejdsopgaver, efter at aspiranten har modtaget den nødvendige træning og/eller instruktioner for at kunne udføre de anførte opgaver og pligter.

Aspiranten skal

- kunne slå alarm og handle iht. skibets nødprocedurer.
- kunne anvende skibets sikkerhedsudstyr herunder personlige værnemidler.
- kunne virke iht. skibets sikkerhedsorganisation og kunne indgå i skibets båd-, brand-, MOB- og øvrige sikkerhedsruller på funktionsniveau (under hensyntagen til, at vedkommende er overtallig).
- have kendskab til skibets sikkerhedsprocedurer og rutiner.

Sikkerhedsinstruktion

Aspiranten skal:

- kunne kommunikere med de andre besætningsmedlemmer og øvrige ombordværende vedr. sikkerhed
- forstå og benytte skibets sikkerhedsruller, sikkerhedsinformationer, -afmærkninger, flugtveje og alarmsignaler
- vide, hvad der skal gøres, hvis en person falder over bord, hvis der opdages brand eller røg, eller hvis brandalarm eller alarm for at forlade skibet lyder
- vide hvordan affald om bord skal behandles for at undgå miljøforurening, og hvordan man skal forholde sig, hvis miljøforurening observeres
- vide, hvad der umiddelbart skal gøres, hvis et ulykkestilfælde iagttages
- kunne lokalisere samlingsstationer og udskibningssteder samt nødudgange
- kunne lokalisere redningsveste og tage redningsvest korrekt på
- kunne afgive brandalarm og have grundlæggende kendskab til brug af transportable ildslukkere
- kunne lukke og åbne branddøre og vejr- og vandtætte døre, som det pågældende skib er udstyret med, bortset fra åbninger i skroget

“Shipboard Familiarization”

- Aspiranten skal snarest muligt efter påmønstring modtage udførlig træning og instruktion i skibets nødprocedurer, indretning, arbejds- og vagrutiner, organisation mv.
- Aspiranten skal rundvises på broen, maskinrummet, bakken, hoveddækket, poopdækket og andre arbejdsområder.

Indicative objectives for the seagoing service

SAFETY FAMILIARIZATION

(must be fulfilled in connection with every signing on both at 1st and 2nd period of seagoing service – remember to fill in the list above ‘Particulars of the Ship’ at every signing on)

Objectives

- Immediately after joining the ship the trainee must - as everybody else on board - receive training and instructions regarding fire precautions, abandoning ship and ship's safety procedures. The Master or a designated officer must endorse the checklist below, when the trainee has received the necessary training and/or instructions.

The trainee must

- be able to raise the alarm and act in accordance with the ship's safety procedures.
- be able to use the ship's safety equipment including personal safety equipment.
- act in accordance with the ship's safety organization and in accordance with the boat-, fire, MOB, and other safety related muster lists at a functional level (taking into consideration that the trainee is supernumerary).
- have knowledge of the ship's safety procedures and routines.

Safety instructions

The trainee must:

- communicate with crew members and other persons on board on safety matters.
- understand and use the safety musters, safety information, -symbols, -signs, emergency escape routes and alarm signals.
- know what to do if a person falls over board, if fire or smoke is detected, if the fire alarm or alarm for abandon ship is sounded.
- know how garbage is to be handled to avoid pollution of the environment, and how to react in case pollution is observed.
- take immediately action, in case of an accident or other medical emergency.
- identify muster and embarkation stations and emergency escape routes.
- locate and don life jackets.
- raise the fire alarm and have a basic knowledge of using portable fire extinguishers.
- close and open fire doors and weather- and watertight doors fitted in the ship, other than those for hull openings.

‘Shipboard Familiarization’

- As soon as possible after joining the ship, the trainee must receive detailed training and instruction in ship's safety procedures, arrangements, work- and watchkeeping routines, organization etc.
- The Trainee must be familiarized with the bridge, engine room, forecastle, poop deck, main deck and other working areas.

Aspiranten skal

- læse og demonstrere forståelsen af skibets sikkerheds- og nødprocedurer.
- kunne demonstrere et nøje kendskab til skibets indretning og almindelige arbejds- og vagrutiner.
- udfylde skemaet 'Particulars of the Ship' under den første del af udmønstringen.

Instruktion efter påmønstring

Aspiranten skal kunne:

- orientere sig overalt på skibet
- kommunikere med de andre besætningsmedlemmer og øvrige ombordværende vedr. sikkerhed og almindelige arbejdsrutiner
- lokalisere og benytte førstehjælpsudstyr
- lokalisere og benytte alarmpunkter, brandslukkere, brandhydranter, brandslanger
- forstå skibets instrukser for forebyggelse mod forurening herunder procedurer for håndtering af affald mv.
- forstå skibets specielle instrukser/procedurer for rygning, påklædning, spiritus, narkotika mv.
- forstå skibets instrukser vedr. arbejdstid, udpurring, spisetider, slopkisten mv.

The Trainee must

- read and be able to demonstrate understanding of ship's safety- and emergency procedures.
- demonstrate thorough knowledge of the ship arrangements and ordinary work- and watch keeping routines.
- fill in the scheme 'Particulars of the Ship' during the first part of his or her assignment on board

Introduction after joining the ship

The trainee must:

- familiarize oneself everywhere on the ship.
- communicate with others on board regarding safety and ordinary work routines.
- locate and use first aid equipment.
- locate and use alarm activating points, alarm bells, fire extinguishers, hydrants, fire hoses.
- understand ship's instructions for prevention of pollution together with procedures on how to handle garbage etc.
- understand special instructions/procedures regarding smoking, dressing, alcohol, drugs etc.
- understand instructions regarding work hours, wake-up calls, eating time, slop chest etc.

MÅLBESKRIVELSER AFSLUTTENDE PRAKTIKPERIODE

SIKKERHED, ARBEJDSMILJØ OG MILJØBESKYTTELSE

Formål

Officersaspiranten skal opnå sådanne praktiske og teoretiske færdigheder, som er nødvendige for at den pågældende kan varetage sit sikkerheds-, miljø- og sundhedsmæssige ansvar i funktionen som skibsofficer i et handelsskib.

Uddannelsesmål

- kunne organisere og forestå forebyggelse af brand om bord i skibe, herunder kunne vurdere, evaluere og afgøre det nødvendige omfang af brandsikring i forbindelse med forskellige arbejdssituationer om bord i et skib,
- kunne træffe indledende forholdsregler vedrørende beskyttelse af ombordværende personer i forbindelse med nødsituationer, samt kunne træffe indledende forholdsregler i havari- og ulykkesituationer,
- gennemføre risiko- og arbejdspladsvurderinger (APV), og have forståelse for det psykiske arbejdsmiljø, kemiske arbejdsmiljø og risikovurderinger vedrørende sikkerhedsforholdene om bord samt kunne deltage i skibets sikkerhedsorganisation,
- kunne påse, at der udvises ansvarlig adfærd vedrørende beskyttelse af det omgivende miljø,

VEDLIGEHOOLD OG REPARATION OM BORD

Formål

Officersaspiranten skal gennem praktikken til søs opnå håndværksmæssige færdigheder, der har relevans for en skibsofficer, således at vedkommende selvstændigt kan anvende disse færdigheder såvel i planlægning som ved udførelse af maskinteknisk, og elteknisk vedligehold og reparation. Officersaspiranten skal endvidere opnå forståelse og indsigt i det for en skibsofficers relevante håndværk samt kunne bedømme den håndværksmæssige kvalitet af et udført arbejde.

Uddannelsesmål

- varetage håndværksmæssige planlagte og ikke-planlagte vedligeholds- og reparationsopgaver overalt på skibet under hensynstagen til gældende miljø- og sikkerhedsbestemmelser.
- varetage de almene sikkerheds- og miljømæssige forhold samt brugen af personlige værnemidler og kunne anvende disse værnemidler korrekt.
- varetage vedligehold af nød- og sikkerhedsudstyr, yderligere kritisk udstyr samt personlige værnemidler.

OBJECTIVES FINAL SEAGOING SERVICE

SAFETY, WORK ENVIRONMENT AND ENVIRONMENTAL PROTECTION

Objective

The trainee must acquire the practical and theoretical skills necessary to fulfil the responsibility, regarding health, safety and environment, as a ship's officer on a merchant ship.

Training objectives

- be able to organise and manage fire prevention on board ships, including assessing, evaluating and determining the extent of fire protection necessary in connection with different work situations on board a ship;
- be able to take pre-emptive measures concerning protection of persons on board with regard to emergency situations, as well as be able to take pre-emptive measures in connection with accidents or serious damage to the ship;
- carry out risk assessments and workplace evaluations, and be familiar with the psychological work environment, chemical work environment and risk assessments in connection with safety on board, as well as be able to participate in the ship's safety organisation;
- be able to ensure responsible conduct in connection with protection of the surrounding environment.

MAINTENANCE AND REPAIRS ON BOARD

Objective

Throughout the period of seagoing service, the trainee must attain the technical skills relevant for a ship's officer, giving him/her the ability to use these skills to plan and carry out maintenance and repair of machines and electrical installations.

The trainee must also attain understanding and knowledge of relevant crafts and be able to evaluate the technical quality of a certain job.

Training objectives

- carry out technical, planned and non-planned, maintenance and repair jobs in every area of the ship, observing the existing regulation on environment and safety;
- oversee the general safety and environmental conditions as well as the use of personal protective equipment and the ability to use this equipment correctly;
- perform maintenance of the emergency and security equipment, other critical equipment and personal protective equipment.

VAGTTJENESTE OG KOMMUNIKATION

Formål

Officer aspiranten skal opnå de færdigheder der er nødvendige for selvstændigt at kunne varetage funktionen som vagthavende skibsofficer (bro, radio, dæk og maskine)

Uddannelsesmål

Vagthold (bro, maskine, dæk)

- anvende 'bekendtgørelse om vagthold i skibe',
- kunne anvende og forstå de internationale søvejsregler, hvad angår nødsignaler, dagsignaler, skibsllys og vigeregler,
- kunne opfylde STCW-konventionens reg. II/4 i løbet af de første 6 måneders søpraktik,
- kunne anvende søkortet samt føre bestik og bestemme skibets position ved terrestriske og radiotekniske observationer,
- benytte elektroniske navigationsinstrumenter, herunder betjening af radar til navigationsformål samt brugen af radar/ARPA til kollisionsforebyggelse,
- kunne føre skibsdagbog og anvende checklister,
- kunne varetage rettelse af søkort og håndbøger,
- udøve 'god broprocedure',
- varetage afviklingen af den kommunikation, der forekommer om bord i et handelsskib,
- benytte maskinrummets alarmsystemer,
- varetage placering og brug af brandslukningsudstyr i maskinrummet,
- udøve proceduren vedr. skift fra bemanded til ubemandet maskinrum,
- varetage registreringer (logbog, oliejournal, maskinjournaler mv.) i forbindelse med skift af vagten,
- varetage proceduren vedr. maskinrumsrundring,
- gennemføre krav til vagten under alm. drift, under manøvre, ankring, lodssejlads, nedsat sigt mv.,
- varetage særlige driftsformer (ugunstige forhold, nødstyring mv.).

WATCH DUTIES AND COMMUNICATION

Objective

The trainee must acquire the skills necessary to work as the watchkeeping officer (bridge, radio, deck and engine).

Training objectives

Watch duties (bridge, engine, deck)

- use ‘the order on watch-keeping on board ships’ (*bekendtgørelse om vagthold i skibe*);
- be able to use and understand the International Regulations for Preventing Collisions at Sea, regarding distress signals, day signals, lights and sailing rules;
- fulfil the requirements of the STCW-convention regulation II/4 during the first period of seagoing service;
- be able to read nautical charts as well as using dead reckoning and determining the ship’s position by terrestrial and radio technical observations;
- use electronic navigation equipment, including use of radar for navigational purpose and the use of radar/ARPA for the prevention of collisions;
- keep a logbook and use check lists;
- perform correction of charts and nautical handbooks;
- exercise “good bridge procedure”;
- handle the communication on board a merchant ship;
- use the engine room alarm systems;
- determine location and manage use of fire fighting equipment in the engine room;
- perform the shift from manned to unmanned engine room;
- carry out logbook registration in connection with change of watch;
- manage the procedure for routine checking of engine room;
- meet the watchkeeping requirements under normal operating conditions, during manoeuvres, anchorage, pilotage, reduced visibility etc.;
- manage special types of operation (emergency steering, unfavourable conditions etc.).

SKIBSTEKNIK, LASTBEHANDLING OG STUVNING

Formål

Officersaspiranten skal have et sådant kendskab til skibes opbygning og til forhold vedrørende skibes stabilitet, opdrift, dybgange, trim og skrogpåvirkninger, der er nødvendige for at virke som juniorofficer i handelsskibe i henhold til gældende konventioner.

Officersaspiranten skal opnå sådanne kundskaber og færdigheder, der er nødvendige for at kunne virke som vagthavende dæksofficer i forbindelse med lastbehandling og stuvning om bord i et handelsskib i international fart herunder tankskibe (olie-, gas- og kemikalietankskibe), tørlastskibe (container-, stykgods- og bulkskibe), køleskibe, ro-ro skibe og passagerskibe.

Uddannelsesmål

- have forståelse af begreberne tyngdepunkt, opdriftscenter, flydecenter, dybgang og styr- lastighed samt - ved anvendelse af hydrostatiske oplysninger til en given lastkondition - kunne:
 - beregne skibets stilling på vandet samt kontrollere, om skibet opfylder gældende stabilitetskriterier,
 - anvende PC-baserede lastberegningsprogrammer
 - afgøre, om en foreslået lastkondition er acceptabel under hensyntagen til kraftpåvirkninger på skibsskroget herunder lokale påvirkninger, skibets stilling på vandet, skibets stabilitet og skibets forbrug under rejsen,
 - forstå og beregne de faktorer, der har indflydelse på skibes stabilitet, herunder tab af opdrift, indvirkning fra vind, sø, lækager, fri væskeoverflader og ladningsforskydning,
 - anvende tabeller eller diagrammer til beregning af kraftpåvirkninger på skibet og dets udrustning,
- i henhold til relevante internationale regler, koder og standarder herunder instruktioner, procedurer, tegninger og manualer kunne varetage en risikovurdering og relevante forekommende beregninger ved lastning, losning, stuvning, sikring og surring af lasten, opbevaring inklusive ventilation og evt. køling af ladningen.

SHIP TECHNOLOGY, CARGO HANDLING AND STOWAGE

Objective

The trainee must have adequate knowledge of the construction of ships and matters concerning the stability, buoyancy, draughts, trim and hull to work as a junior officer on merchant ships, in accordance with the conventions in force.

The trainee must attain the knowledge and skills necessary to work as a deck officer on watch, regarding cargo handling and stowage on board a merchant ship operating internationally, including tankers (oil, gas and chemical tankers), solid cargo ships (container, general cargo and bulk ships), refrigerator ships, ro-ro ships and passenger ships.

Training objectives

- attain understanding of the concepts centre of gravity, centre of buoyancy, centre of flotation, draught and trim as well as – when using hydrostatic information in a certain cargo situation – be able to:
 - calculate the ship's position in the water and control that the ship meets the existing stability requirements;
 - use PC-based cargo/stability/stress calculation programs;
 - determine whether a suggested cargo condition is acceptable considering the effect on the hull, including local effects, the ship's position in the water, the stability of the ship and consumption during the voyage;
 - understand and calculate the factors which influence the stability of the ship, including loss of buoyancy, effect from wind, sea, leaks, shift of cargo etc.;
 - use tables and charts for calculation of effect on the ship and its equipment.
- be able to make a risk assessment and relevant calculations concerning loading, unloading, stowage, securing and lashing of cargo as well as storage, including ventilation and possible cooling of the cargo, in accordance with relevant international regulations, codes and standards as well as instructions, procedures, guidelines etc.

TERMISKE MASKINER OG ANLÆG

Formål

Officersaspiranten skal have en viden om termiske maskiner og anlæg der sætter vedkommende i stand til at varetage driften og vedligehold af motor-, damp-, forbrændings- og køleanlæg med tilhørende systemer, således at disse anlæg fungerer driftsikkert og økonomisk optimalt uden fare for omgivelserne og uden skadevirkning på miljøet.

Uddannelsesmål

- varetage drift og vedligehold af dieselmotoranlæg, således at anlægget arbejder driftsikkert og driftsøkonomisk uden fare for omgivelserne og under fuld hensyntagen til miljøet.
- gennemføre driftsprøver og bestemme en motors ydelse, samt kunne analysere forbrændingen i en motorcylinder, herunder kunne gennemføre bestemmelse af olie- og luftforbrug,
- gennemføre beregning af termiske, økonomiske og mekaniske virkningsgrader,
- gennemføre beregning af køleeffekt,
- analysere smøre- og brændselsoliers brugbarhed på basis af prøveresultater og specifikationsdata,
- gennemføre opstart og varetage drift af motoranlæg, samt kunne analysere måle- og alarmværdier og foretage relevante indgreb,
- betjene, vedligeholde og udføre almindeligt forekommende fejlfindingsopgaver tank- og lænsesystemer, sanitærsystemer, brandslukningssystemer, inertgassystemer, stævnørssystemer, ventilationssystemer og ferskvandssystemer, på en sikkerheds- og miljømæssigt forsvarlig måde,
- varetage drift af hjælpe- og servicesystemer, kunne analysere måle- og alarmværdier og foretage relevante indgreb samt kunne udføre reparation og vedligehold af hjælpe- og servicesystemer,
- forstå opbygning og virkemåde af pumper, motorer, cylindre, akkumulatorer, tanke samt retnings-, tryk-, afspærrings- og mængdereguleringsventiler,
- varetage driften af hydrauliske og pneumatiske systemer, samt på grundlag af måle- og alarmværdier kunne foretage relevante indgreb,
- varetage vedligehold og reparation af hydrauliske og pneumatiske systemer,
- varetage drift og vedligehold af udstøds- og hjælpekedler samt turbogeneratoranlæg således, at de fungerer driftsikkert og driftsøkonomisk uden fare for omgivelserne og med fuld hensyntagen til miljøet,
- varetage behandling af kedelvand,
- beregne kedel-, turbine- og varmevekslereffekter, samt opstille varmebalancer for anlægget,
- gennemføre opstart og varetage drift af kedel- og turbineanlæg, samt kunne analysere måle- og alarmværdier og foretage relevante indgreb,
- udføre reparation og vedligehold på kedel- og turbineanlæg.

THERMAL MACHINES AND EQUIPMENT

Objective

The trainee must attain knowledge of the thermal machines and equipment making him/her able to handle the operation and maintenance of engine, steam, combustion and cooling plants and systems in order for these to function in a reliable and economical manner without endangering the surroundings or polluting the environment.

Training objectives

- handle the operation and maintenance of diesel engine systems and ensure that they function in a reliable and economical manner without danger to the surroundings or environment;
- carry out tests during operation and determine the performance of an engine as well as be able to analyse the combustion of an engine cylinder, including determining oil and air consumption;
- perform calculations on thermal, economical and mechanical efficiency;
- perform calculations on cooling effect;
- analyse the usefulness of lubricating oil and fuel oil on basis of test results and specification data;
- perform a start-up and handle the operation of engine systems as well as be able to analyse measured values and alarm values and take the necessary measures;
- operate, maintain and carry out general fault finding tasks in connection with tank and drainage systems, sanitary systems, inert gas systems, stern tube systems, ventilation systems and fresh water systems, in a safe and environmentally responsible manner;
- manage the operation of auxiliary systems and service systems, and be able to analyse measured values and alarm values and take the necessary measures as well as be able to carry out repairs and maintenance of the auxiliary systems and service systems;
- be familiar with the construction and mode of operation of pumps, engines, cylinders, accumulators, tanks and valves (i.e. directional valves, pressure valves, delivery valves, shutoff valves and volume control valves);
- manage the operation of hydraulic and pneumatic systems, and take necessary measures based on measured values and alarm values;
- carry out maintenance and repairs of hydraulic and pneumatic systems;
- manage the operation and maintenance of exhaust boilers, auxiliary boilers and turbo-generator facilities, ensuring that these function in a reliable and economical manner without endangering the surroundings or environment;
- handle boiler water;
- calculate the output of boilers, turbines and heat exchangers, and draw up heat balances for the facilities;
- perform a start-up and manage the operation of boiler and turbine systems, as well as be able to analyse measured values and alarm values and take the necessary measures;
- carry out repairs and maintenance of the boiler and turbine facilities.

ELEKTRISKE OG ELEKTRONISKE MASKINER, ANLÆG OG UDSTYR

Formål

Officersaspiranten skal have en viden om elektroteknik, så vedkommende kan varetage drift og vedligehold af elektriske anlæg om bord i skibe. Officersaspiranten skal være i stand til at betjene det elektriske udstyr under såvel normale som under unormale forhold, samt kunne udføre simple fejlfindingsopgaver.

Uddannelsesmål

- tilrettelægge og varetage sikkerhedsmæssigt forsvarlige arbejdsoperationer på elektriske anlæg, såfremt der i forbindelse hermed kan opstå berøringsfare, kortslutning eller brandfare,
- varetage drift og vedligehold af elektriske anlæg om bord i skibe,
- betjene det elektriske udstyr under såvel normale som under unormale forhold, samt kunne udføre simple fejlfindingsopgaver,
- anvende grundlæggende elektrotekniske begreber herunder spænding, strøm, impedanser og effekter,
- bruge relevante metoder og modeller til beregninger på jævnstrømskredsløb samt 1- og 3-fasede kredsløb,
- vælge og anvende egnede måleinstrumenter i forbindelse med målinger på elektriske anlæg, samt have forståelse vedrørende nøjagtigheden af de udførte målinger,
- anvende viden om driftsegenskaber for generatorer og motorer og kunne gennemføre beregninger i forbindelse hermed,
- forstå samspillet mellem drivmaskine, generator og magnetiseringsudstyr i forbindelse med paralleldrift, herunder udrustning for belastningsfordeling,
- forstå samspillet mellem drivmaskine, generator, synkroniseringsudstyr og beskyttelsesudstyr i forbindelse med ind- og udkobling af generatorer.

PROCESANALYSE OG AUTOMATION

Formål

Officersaspiranten skal opnå en sådan viden om dataopsamling, datalogning, regulerings- og styringsteknik, at vedkommende handler rationelt og korrekt ved overvågning og betjening af skibskontrolsystemer.

Uddannelsesmål

- varetage overvågning og betjening af skibskontrolsystemer,
- forstå virkemåden af almindeligt forekommende måleværdigivere og -omsættere,
- kendskab til grundbegreber i regulerings- og styringsteknik,
- grundlæggende forståelse vedrørende skibskontrolsystemers opbygning, herunder integrerede systemer.

ELECTRICAL AND ELECTRONIC MACHINERY, PLANTS AND EQUIPMENT

Objective

The trainee must attain knowledge of electrotechnics making him/her able to manage operation and maintenance of electrical installations on board ships. The trainee must be able to operate the electrical equipment under normal as well as unusual circumstances and be able to carry out simple fault finding tasks.

Training objectives

- plan and manage safe work operations on electrical installations, provided that this involves short circuit risks, danger of fire or contact risks;
- manage operation and maintenance of electrical installations on board ships;
- operate the electrical equipment under normal as well as unusual circumstances, and be able to carry out simple fault finding tasks;
- use basic electrotechnical concepts, including voltage, current, impedance and output;
- use relevant methods and models in the calculation of d. c. circuits as well as single-phase and three-phase circuits;
- select and use suitable measuring instruments in connection with electrical installations, and have knowledge of the accuracy of the measuring;
- use the knowledge of operation characteristics of generators and engines, and make calculations on this basis;
- understand the interaction between driving machine, generator and excitation equipment in connection with parallel operation, including equipment for load distribution.
- understand the interaction between driving machine, generator, synchronous machine and protective equipment in connection with connection/disconnection of generators.

PROCESS ANALYSIS AND AUTOMATION

Objective

The trainee must attain a level of knowledge of accumulating and processing data as well as regulation and control technology making him/her able to act rationally and correctly when monitoring and operating the ship control systems.

Training objectives

- monitor and operate the ship control systems;
- understand the mode of operation of typical measured value indicators and transducers;
- basic knowledge of regulation and control technology;
- fundamental understanding of the structure of ship control systems, including integrated systems.

ØKONOMI, SKIBS-, DRIFT- OG SIKKERHEDSLEDELSE

Formål

Officersaspiranten skal opnå en sådan viden om ledelse, at det danner grundlag for skibsofficerens virke som fremtidens leder herunder de færdigheder der er nødvendige for at kunne varetage sit miljø, sikkerheds- og kvalitetsansvar som arbejdsleder.

Uddannelsesmål

- kunne tilrettelægge og gennemføre nødvendig instruktion af personer om bord vedrørende skibets sikkerhed, miljøbeskyttelse og arbejdssikkerhed, herunder brug af nød- og sikkerhedsudstyr samt personlige værnemidler,
- have kendskab til evaluering og revision af skibets SMS (“Safety Management System”), herunder kunne anvende og identificere procedurer hertil,
- have kendskab til evaluering og revision af skibets instruktioner og procedurer vedrørende arbejdsmiljø og –sikkerhed samt vagttjeneste,
- varetage sit sikkerheds- og miljøansvar i funktionen som skibsofficer om bord på et skib,
- have kendskab til maritim national og international lovgivning, samt administrative, sikkerheds- og miljømæssige forhold, der er nødvendige for at vedkommende i sit virke som skibsofficer kan varetage sine pligter og ansvar i forbindelse med disse,
- varetage sikker og økonomisk drift gennem sin viden om belastningsmæssige forhold for fremdrivningsmaskineriet og propelleren.

ECONOMY, SHIP MANAGEMENT, OPERATIONAL MANAGEMENT AND SAFETY MANAGEMENT

Objective

The trainee must attain a level of knowledge on management giving him/her the basis skills necessary to hold a position as ship's officer, including the skills necessary to fulfil the executive responsibility regarding environment, safety and quality.

Training objectives

- plan and carry out the necessary instruction of persons on board concerning the ship's safety, environmental protection, safety at work, including use of emergency and safety equipment as well as personal protective equipment;
- be familiar with evaluation and revision of the ship's SMS (Safety Management System), including use and identification of procedures for this purpose;
- have knowledge of evaluation and revision of the ship's instructions and procedures concerning work environment and safety as well as watch duty;
- fulfil the safety and environmental responsibility as a ship's officer on board a ship;
- be familiar with national and international maritime law, as well as administrative, safety-related and environmental matters necessary to fulfil the duties and responsibility of a ship's officer;
- ensure a safe and economical operation based on the knowledge of matters concerning the load on the propelling engine and the propeller.

ARBEJDSOPGAVER OG PROJEKTARBEJDET TIL DEN AFSLUTTENDE SØPRAKTIK

(Del 1, 0 - 3 måneders udmønstring.)

Opgave 2.1: NØDBEREDSKAB, ULYKKER OG FARLIGE SITUATIONER.

Formål

Formålet med opgaven er, at aspiranten kan anvende de gældende nødprocedurer og –planer til brug for skibets nødberedskab, ulykker, farlige situationer, near-miss situationer samt den forebyggende indsats ombord.

Aspiranten skal som minimum inddrage nedenstående spørgsmål i besvarelsen:

1. Beskriv og giv samtidig en vurdering af de farlige situationer og ulykker som skibets nødberedskab tager højde for?
2. Hvad er der af kritisk udstyr om bord på skibet? Ved kritisk udstyr forstås bl.a. udstyr der har betydning for de ombordværendes sikkerhed, skibets og lastens sikkerhed samt det omgivende miljø.
3. Beskriv reservedele og back-up systemerne til det kritiske udstyr.
4. Hvad stiller myndigheden af krav til det kritiske udstyr?
5. Beskriv hvordan myndigheden/klassifikationsselskab fører tilsyn med det kritiske udstyr?

Godkendelse af opgaven:

- Besvarelsen forberedes skriftligt, og fremlægges i en samtale med en relevant officer.
- Aspiranten vurderer med baggrund i samtalen med officeren, om formålet med opgaven er opfyldt.
- Aspiranten noterer tilbagemeldingen i logbogen og officeren attesterer for den gennemførte arbejdsopgave i skemaet på uddannelsesbogens side 38.

WORK TASKS AND PROJECT WORK OF THE FINAL SEAGOING SERVICE

(Part 1, 0 - 3 months seagoing service)

Assignment 2.1: EMERGENCY PREPAREDNESS, ACCIDENTS AND HAZARDOUS SITUATIONS.

Objective

The objective of this assignment is to ensure that the trainee is capable of using the necessary emergency procedures and plans for the ship's emergency preparedness, accidents, hazardous and near miss situations and the preventive work on board.

The trainee must as a minimum include the following questions in the assignment:

1. Describe and evaluate the hazardous situations and accidents which are dealt with by the ship's emergency preparedness.
2. Which critical equipment is on board the ship? Critical equipment includes equipment important to the safety of the persons on board, the safety of the ship and cargo as well as the surrounding environment.
3. Describe the spare parts and back-up systems for the critical equipment.
4. Which requirements does the authority have to the critical equipment?
5. Describe how the authority/classification society ensures that the critical equipment fulfils the requirements.

Approval of the assignment:

- The assignment is prepared in written form, and is presented in a conversation with a relevant officer.
- On basis of this conversation, the trainee will evaluate whether the purpose of the assignment has been fulfilled.
- The trainee notes the response in the logbook, and the officer certifies the completion of the assignment in the Training Record Book page 38.

Opgave 2.2: VEDLIGEHOOLD OM BORD

Formål

Formålet med opgaven er, at aspiranten kan planlægge, instruere i og udføre vedligeholdsopgaver om bord i funktionen som skibsofficer.

Aspiranten skal som minimum inddrage nedenstående spørgsmål i besvarelsen:

1. Beskriv vedligeholdsstrategien om bord?
2. Beskriv hvordan vedligeholdsarbejde planlægges, udføres, evalueres og forbedres om bord herunder hvordan man registrerer og dokumenterer vedligeholdsarbejde om bord. Vurdér samtidig anvendelsen af de nødvendige ressourcer og kompetencer.
3. Giv eksempler på hvordan man driftsoptimerer vedligeholdsarbejdet om bord, herunder synsintervaller på maskineri og skrog, tankinspektioner, redundans, myndigheds- og klassekrav, vetting, dokning mv.?
4. Beskriv hvilke sikkerheds- og arbejdsmiljømæssige forholdsregler der skal tages i forbindelse med større vedligeholdsarbejder.
5. Beskriv hvilke miljømæssige (MARPOL) forholdsregler der skal tages i forbindelse med større vedligeholdsarbejder.

Godkendelse af opgaven:

- Besvarelsen forberedes skriftligt, og fremlægges i en samtale med en relevant officer.
- Aspiranten vurderer med baggrund i samtalen med officeren, om formålet med opgaven er opfyldt.
- Aspiranten noterer tilbagemeldingen i logbogen og officeren attesterer for den gennemførte arbejdsopgave i skemaet på uddannelsesbogens side 38.

Assignment 2.2: MAINTENANCE AND REPAIRS ON BOARD

Objective

The objective of this assignment is for the trainee to plan, instruct and carry out maintenance tasks on board in the position as a ship's officer.

The trainee must as a minimum include the following questions in the assignment:

1. Describe the maintenance strategy on board.
2. Describe how the maintenance work is planned, carried out, evaluated and improved on board, including how the maintenance work is registered and documented.
3. Give examples of how the operation of the maintenance work on board is optimised, including inspection intervals of machinery and hull, tank inspections, redundancy, authority and class requirements, vetting, docking etc.
4. Describe the necessary health and safety measures in connection with more extensive maintenance work.
5. Describe the necessary environmental (MARPOL) measures in connection with more extensive maintenance work.

Approval of the assignment:

- The assignment is prepared in written form, and is presented in a conversation with a relevant officer.
- On basis of this conversation, the trainee will evaluate whether the purpose of the assignment has been fulfilled.
- The trainee notes the response in the logbook, and the officer certifies the completion of the assignment in the Training Record Book page 38.

Opgave 2.3: VAGTTJENESTE

Formål

Formålet med opgaven er, at aspiranten opnår de nødvendige færdigheder indenfor emnet vagttjeneste herunder søvejsregler og vagthold (bro, dæk, maskine og radio) der er nødvendige for selvstændigt at kunne varetage funktionen som vagthavende skibsofficer.

Aspiranten skal som minimum inddrage nedenstående spørgsmål i besvarelsen:

1. Beskriv hvordan vagtholdet om bord planlægges, organiseres og udføres under fuld hensyntagen til overholdelse af vagtholdsbekendtgørelsen og hviletidsbestemmelserne.
2. Hvordan sikrer skibsledelsen et optimalt vagthold om bord under brug af Bridge Ressource Management (BRM), Engine Ressource Management (ERM) og ubemandet maskinrum (UMS) om bord.
3. Hvordan bidrager skibets stående ordrer og procedurer til sikring af ovenstående pkt. 1 og 2.
4. Hvordan udføres vagtholdet under skibets rejse og under land med fuld hensyntagen til kravene om maritim sikring (ISPS), de forskellige sikkerhedsniveauer og forholdsregler mod pirateri.

Godkendelse af opgaven:

- Besvarelsen forberedes skriftligt, og fremlægges i en samtale med en relevant officer.
- Aspiranten vurderer med baggrund i samtalen med officeren, om formålet med opgaven er opfyldt.
- Aspiranten noterer tilbagemeldingen i logbogen og officeren attesterer for den gennemførte arbejdsopgave i skemaet på uddannelsesbogens side 38.

Assignment 2.3: WATCH DUTIES

Objective

The objective of the assignment is to give the trainee the necessary skills within the area of watch duty, including The International Regulations for Preventing Collisions at Sea and watch duty (bridge, deck, machine and radio) necessary to fulfil the responsibility as a ship's officer on watch.

The trainee must as a minimum include the following questions in the assignment:

1. Describe how the watch on board is planned, organised and carried out, considering the requirements of 'the executive order on watchkeeping on ships' and regulations on minimum hours of rest.
2. How does the ship's management ensure the most efficient watch on board using Bridge Resource Management (BRM), Engine Resource Management (ERM) and unmanned engine room (UMS)?
3. How do the ship's standing orders and procedures help to ensure that point 1 and 2 above are fulfilled?
4. How is the watch carried out at sea and in port, in a manner fully compliant with the International Ship and Port Facility Security (ISPS) Code, the different safety levels and measures against piracy?

Approval of the assignment:

- The assignment is prepared in written form, and is presented in a conversation with a relevant officer.
- On basis of this conversation, the trainee will evaluate whether the purpose of the assignment has been fulfilled.
- The trainee notes the response in the logbook, and the officer certifies the completion of the assignment in the Training Record Book page 38.

AFSLUTTENDE PRAKTIKPERIODE

(Del 2, 3 - 6 måneders udmønstring)

Opgave 2.4: SEJLADSPLANLÆGNING

Formål

Formålet med opgaven er, at aspiranten opnår de nødvendige færdigheder til - i funktionen som skibsofficer - at kunne planlægge sejladsen med inddragelse af driftsoptimering, sikkerhed og miljø.

Aspiranten skal som minimum inddrage nedenstående spørgsmål i besvarelsen:

1. Planlæg en lastrejse herunder hvorledes der tages hensyn til eksempelvis:
 - a. sejladssikkerheden,
 - b. sikkerhedszoner, EEZ og nødruter,
 - c. brug af navigationssystemer (primære og sekundære) herunder datakvalitet,
 - d. radiosikkerhed og meldepunkter,
 - e. maritim sikring, pirateri
 - f. trim, stabilitet og skrogpåvirkninger (stress),
 - g. fart,
 - h. vejr- og strømforhold,
 - i. driftsoptimering og olieforbrug af fremdrivnings- og hjælpemaskineri,
 - j. bemanded/ubemandet maskinrum,
 - k. CO₂,
 - l. NO_x,
 - m. begroning,
 - n. ballast management.

Godkendelse af opgaven:

- Besvarelsen forberedes skriftligt, og fremlægges i en samtale med en relevant officer.
- Aspiranten vurderer med baggrund i samtalen med officeren, om formålet med opgaven er opfyldt.
- Aspiranten noterer tilbagemeldingen i logbogen og officeren attesterer for den gennemførte arbejdsopgave i skemaet på uddannelsesbogens side 38.

FINAL SEAGOING SERVICE

(Part 2, 3 - 6 months seagoing service)

Assignment 2.4: ROUTE/NAVIGATION PLANNING

Objective

The objective of the assignment is to give the trainee the skills necessary for a ship's officer to plan navigation, observing safety, environment and optimising the operation.

The trainee must as a minimum include the following questions in the assignment:

1. Plan a cargo voyage, including considering how, for instance, the following might be observed:
 - a. safety of navigation;
 - b. security zones, EEZ and emergency routes;
 - c. use of navigation systems (primary and secondary), including data quality;
 - d. radio safety and report positions;
 - e. maritime security, piracy;
 - f. trim, stability and hull stress;
 - g. sailing route;
 - h. weather and current conditions;
 - i. optimising operation and oil consumption of propelling machinery and auxiliary machinery;
 - j. manned/unmanned engine room;
 - k. CO₂;
 - l. NO_x;
 - m. fouling growth;
 - n. ballast management.

Approval of the assignment:

- The assignment is prepared in written form, and is presented in a conversation with a relevant officer.
- On basis of this conversation, the trainee will evaluate whether the purpose of the assignment has been fulfilled.
- The trainee notes the response in the logbook, and the officer certifies the completion of the assignment in the Training Record Book on page 38.

Opgave 2.5: FEJLSØGNING OG DRIFT

Formål

Formålet med opgaven er, at aspiranten kan udføre fejlsøgning og varetage driften om bord i funktionen som skibsofficer.

Aspiranten skal som minimum inddrage nedenstående spørgsmål i besvarelsen:

1. Hvordan sammenlignes en aktuel driftstilstand med den anbefalede/foreskrevne driftstilstand med henblik på at identificere en fejltilstand på teknisk udstyr.
2. Beskriv hvordan der systematisk fejlsøges i forbindelse med havari på teknisk udstyr om bord.
3. Beskriv hvordan fejlsøgningen organiseres under hensyntagen til de ombordværendes og skibets sikkerhed herunder risikovurdering af arbejder der involverer tryk, varme, vanddamp, gas, kemikalier, elektrisk spænding, lukkede rum m.m.
4. Beskriv hvordan der ved fejlsøgning tages hensyn til det omgivende miljø.
5. Beskriv hvordan en fejl på teknisk udstyr kan få indflydelse på andre systemer om bord.

Godkendelse af opgaven:

- Besvarelsen forberedes skriftligt, og fremlægges i en samtale med en relevant officer.
- Aspiranten vurderer med baggrund i samtalen med officeren, om formålet med opgaven er opfyldt.
- Aspiranten noterer tilbagemeldingen i logbogen og officeren attesterer for den gennemførte arbejdsopgave i skemaet på uddannelsesbogens side 38.

Assignment 2.5: TROUBLESHOOTING AND SHIP'S OPERATION

Objective

The objective of the assignment is to give the trainee the competencies to perform troubleshooting tasks and manage operation on board as ship's officer.

The trainee must as a minimum include the following questions in the assignment:

1. How is a comparison made between an existing mode of operation and the mode of operation recommended/prescribed with the purpose of identifying errors on the technical equipment?
2. Describe how a systematic troubleshooting process is being conducted with regard to damage on technical equipment on board.
3. Describe how troubleshooting is organised with consideration to the persons on board as well as to the ship's safety, including risk evaluation of work involving pressure, heat, steam, gas, chemicals, electrical current, closed rooms etc.
4. Describe how the surrounding environment is taken into consideration when performing troubleshooting.
5. Describe how an error on the technical equipment may influence other systems on board.

Approval of the assignment:

- The assignment is prepared in written form, and is presented in a conversation with a relevant officer.
- On basis of this conversation, the trainee will evaluate whether the purpose of the assignment has been fulfilled.
- The trainee notes the response in the logbook, and the officer certifies the completion of the assignment in the Training Record Book page 38.

Opgave 2.6: LEDELSE, TRIVSEL OM BORD, SPROG, KULTUR, SUNDHEDSLEDELSE OG HYGIEJNE

Formål

Formålet med opgaven er, at aspiranten opnår de nødvendige ledelsesmæssige færdigheder til - i funktionen som skibsofficer - at medvirke til at sikre trivsel og sundhed om bord samt tage højde for evt. sproglige og kulturmæssige barrierer.

Aspiranten skal som minimum inddrage nedenstående spørgsmål i besvarelsen:

1. Beskriv hvordan man har sikret trivslen om bord.
2. Har du oplevet kulturelle og sproglige barrierer om bord, og hvad blev der i givet fald gjort for at nedbryde disse (hvad gjorde du selv)?
3. Beskriv hvordan man løbende driftsoptimerer dagligdagen om bord herunder tager højde for forskelligartede ønsker omkring kosten, fritidsaktiviteter, motion, fødevarerhygiejne, rengøring, rygepolitik, alkohol, støj og vibrationer osv.
4. Kan du selv bidrage med nogle positive tiltag til at forbedre dagligdagen om bord?

Godkendelse af opgaven:

- Besvarelsen forberedes skriftligt, og fremlægges i en samtale med en relevant officer.
- Aspiranten vurderer med baggrund i samtalen med officeren, om formålet med opgaven er opfyldt.
- Aspiranten noterer tilbagemeldingen i logbogen og officeren attesterer for den gennemførte arbejdsopgave i skemaet på uddannelsesbogens side 38.

Assignment 2.6: MANAGEMENT, WELL-BEING ON BOARD, LANGUAGE, CULTURE, HEALTH MANAGEMENT AND HYGIENE

Objective

The objective of the assignment is to give the trainee the necessary management skills to work on ensuring a healthy and safe environment on board, taking possible language and cultural barriers into account.

The trainee must as a minimum include the following questions in the assignment:

1. Describe how to ensure well-being on board.
2. Have you experienced cultural and language barriers on board, and in that case what was done to break these down (and what did you do)?
3. Describe how the daily work on board is continuously optimised, considering different wishes regarding food, free time activities, exercise, food hygiene, cleaning, smoking policy, alcohol, noise and vibrations etc.
4. Can you contribute with any positive initiatives to improve life on board?

Approval of the assignment:

- The assignment is prepared in written form and is presented in a conversation with a relevant officer.
- On basis of this conversation, the trainee will evaluate whether the purpose of the assignment has been fulfilled.
- The trainee notes the response in the logbook, and the officer certifies the completion of the assignment in the Training Record Book page 38.

AFSLUTTENDE PRAKTIKPERIODE

(Del 3, 6 - 9 måneders udmønstring.)

PROJEKTARBEJDE

DRIFTSOPTIMERING, SIKKERHED, SUNDHED OG MILJØ

Formål

Projektarbejdets formål og indhold er at give aspiranten de nødvendige praktiske og teoretiske færdigheder til at driftsoptimere under alle forhold.

Aspiranten skal som minimum inddrage nedenstående spørgsmål i besvarelsen:

Hvordan driftsoptimeres gennem f.eks.:

- Fartsprøver på hovedmotorer og hjælpemotorer
- Justering af evt. hjælpe- og udstødskedler
- Cylindersmøreolie dosering
- Separatorers effektivitet
- Filtres effektivitet
- Skrogrønsning
- Propeller rensning
- Trim af skib for at opnå mest økonomisk fart
- Forbedre virkningsgraden f.eks. ved udnyttelse af waste heat anlæg
- Overhale enkeltkomponenter såsom brændstofventiler og cylinderenheder
- Generel justering af den programmerede vedligehold efter faktiske observationer
- Bunkersforbrug og -optimering
- Ruteplanlægning, vejrforhold med videre
- Sikkerhed, sundhed og miljø
- Organisation om bord herunder hviletiden

Godkendelse af opgaven:

- Besvarelsen forberedes skriftligt, og fremlægges i en samtale med en relevant officer.
- Aspiranten vurderer med baggrund i samtalen med officeren, om formålet med projektet er opfyldt.
- Aspiranten noterer tilbagemeldingen i logbogen og officeren attesterer for det gennemførte projekt i skemaet på uddannelsesbogens side 39.
- Projektrapporten inkl. bilag indsendes til endelig vurdering på skolen senest 1 måned før afmønstring med henblik på en tilbagemelding om evalueringen ved studiestart.

FINAL SEAGOING SERVICE

(Part 3, 6 - 9 months seagoing service)

PROJECT WORK

OPTIMISING OPERATIONS, SAFETY, HEALTH AND ENVIRONMENT

Objective

The objective of the project work and its content is to give the trainee necessary practical and theoretical skills to optimise operation under every condition.

The trainee must as a minimum include the following questions in the assignment:

How is operation optimized through, for instance:

- tests of the main engines and auxiliary engines;
- adjustment of auxiliary and exhaustion boilers;
- dosage of cylinder lubricating oil;
- efficiency of separator;
- efficiency of filters;
- hull cleaning;
- propeller cleaning;
- ship trimming to obtain the most economical navigation;
- improvement of efficiency, e.g. by utilising waste heat equipment
- overhaul of single components, such as fuel valves and cylinder parts/units
- general adjustment of the programmed maintenance on basis of actual observations
- bunker consumption and optimisation
- route planning , weather conditions etc.
- safety, health and environment
- the organisation on board, including rest periods.

Approval of the assignment:

- The project work is prepared in written form and is presented in a conversation with a relevant officer.
- On basis of this conversation, the trainee will evaluate whether the purpose of the assignment has been fulfilled.
- The trainee notes the response in the logbook, and the officer certifies the completion of the assignment in the Training Record Book page 39.
- The project work including appendices must be forwarded to the maritime school/academy/centre no later than 1 month before signing off, in order to receive a response regarding the evaluation of the task before the study begins.

Oversigt over arbejdsopgaver

Attestation for gennemførte og godkendte arbejdsopgaver. Arbejdsopgaverne skal kunne dokumentere opfyldelse af målbeskrivelserne (se ovenfor).

Opgave nr.:	Emne:	Mål Side nr.	Uddannelsesmål:	Bemærkninger:	Uddannelsesofficer Dato og underskrift
SAFETY FAMILIARIZATION – INDLEDENDE SØPRAKTIK					
Arbejdsopgave nr. 2.0	Safety Familiarization – 1. skib		Umiddelbart efter hver påmønstring skal aspiranten ligesom enhver anden, der er beskæftiget om bord, modtage træning og instruktion i forholdsregler ved brand, evakuering af skibet og skibets øvrige nødprocedurer.		
Arbejdsopgave nr. 2.0	Safety Familiarization – 2. skib		Umiddelbart efter hver påmønstring skal aspiranten ligesom enhver anden, der er beskæftiget om bord, modtage træning og instruktion i forholdsregler ved brand, evakuering af skibet og skibets øvrige nødprocedurer.		
Arbejdsopgave nr. 2.0	Safety Familiarization – 3. skib		Umiddelbart efter hver påmønstring skal aspiranten ligesom enhver anden, der er beskæftiget om bord, modtage træning og instruktion i forholdsregler ved brand, evakuering af skibet og skibets øvrige nødprocedurer.		
Arbejdsopgave nr. 2.0	Safety Familiarization – 4. skib		Umiddelbart efter hver påmønstring skal aspiranten ligesom enhver anden, der er beskæftiget om bord, modtage træning og instruktion i forholdsregler ved brand, evakuering af skibet og skibets øvrige nødprocedurer.		
Arbejdsopgave nr. 2.0	Safety Familiarization – 5. skib		Umiddelbart efter hver påmønstring skal aspiranten ligesom enhver anden, der er beskæftiget om bord, modtage træning og instruktion i forholdsregler ved brand, evakuering af skibet og skibets øvrige nødprocedurer.		

Overview of work tasks

Documentary evidence of sustained and approved work tasks. The work task must prove compliance of objectives.

Work task no.:	Subject:	Objective Side no.:	Educational objective:	Remarks:	Training officer Date and signature
SAFETY FAMILIARIZATION – PRELIMINARY SEAGOING SERVICE					
Work task no. 2.0	Safety Familiarization – 1st ship		Immediately after every signing on the trainee must, like any other who is occupied on board, receive training and instruction in precaution in connection with fire, evacuation of the ship and the ship's other emergency procedures.		
Work task no. 2.0	Safety Familiarization – 2nd ship		Immediately after every signing on the trainee must, like any other who is occupied on board, receive training and instruction in precaution in connection with fire, evacuation of the ship and the ship's other emergency procedures.		
Work task no. 2.0	Safety Familiarization – 3rd ship		Immediately after every signing on the trainee must, like any other who is occupied on board, receive training and instruction in precaution in connection with fire, evacuation of the ship and the ship's other emergency procedures.		
Work task no. 2.0	Safety Familiarization – 4th ship		Immediately after every signing on the trainee must, like any other who is occupied on board, receive training and instruction in precaution in connection with fire, evacuation of the ship and the ship's other emergency procedures.		
Work task no. 2.0	Safety Familiarization – 5th ship		Immediately after every signing on the trainee must, like any other who is occupied on board, receive training and instruction in precaution in connection with fire, evacuation of the ship and the ship's other emergency procedures.		

Opgave nr.:	Emne:	Mål Side nr.	Uddannelsesmål:	Bemærkninger:	Uddannelsesofficer Dato og underskrift
AFSLUTTENDE PRAKTIKPERIODE					
Arbejdsopgave nr. 2.1	Nødberedskabet		Officersaspiranten kan anvende de gældende nødprocedurer og –planer til brug for skibets nødberedskab, ulykker og farlige situationer.		
Arbejdsopgave nr. 2.2	Vedligehold		Officersaspiranten kan planlægge, instruere i og udføre vedligeholdsopgaver om bord i funktionen som skibsofficer.		
Arbejdsopgave nr. 2.3	Vagthold		Officersaspiranten kan selvstændigt varetage funktionen som vagthavende skibsofficer (bro, dæk, maskine og radio).		
Arbejdsopgave nr. 2.4	Sejladslanlægning		Officersaspiranten kan planlægge sejladsen med inddragelse af driftsoptimering, sikkerhed og miljø.		
Arbejdsopgave nr. 2.5	Fejlsøgning og drift		Officersaspiranten kan udføre fejlsøgning og varetage driften om bord i funktionen som skibsofficer.		
Arbejdsopgave nr. 2.6	Ledelse, trivsel og sundhed		Officersaspiranten kan medvirke til at sikre trivsel og sundhed om bord samt tage højde for evt. sproglige og kulturmæssige barrierer.		
Projektarbejde	Driftsoptimering		Officersaspiranten kan varetage driftsoptimering under alle forhold.		

Work task no.:	Subject:	Objective Side no.:	Educational objective:	Remarks:	Training officer Date and signature
FINAL SEAGOING SERVICE					
Work task no. 2.1	Emergency preparedness		The trainee is capable of using the existing emergency procedures and plans in case of hazardous situations and accidents.		
Work task no. 2.2	Maintenance		The trainee is capable of planning, instructing and carrying out maintenance work on board as a ship's officer.		
Work task no. 2.3	Watch duty		The trainee is capable of fulfilling the responsibility and work requirement of a ship's officer (bridge, deck, machine and radio) on watch.		
Work task no. 2.4	Route/Navigation planning		The trainee is capable of planning navigation, and in this process considering operation optimisation, safety and environment.		
Work task no. 2.5	Trouble-shooting and operation		The trainee is capable of planning, instructing and carrying out maintenance tasks on board in a position as ship's officer.		
Work task no. 2.6	Management, well-being and health		The trainee is able to contribute to ensuring a good physical and psychological working environment on board, and deal with potential language difficulties and cultural barriers.		
Project work	Operation optimisation		The trainee is capable of managing the optimisation of operations under every condition.		