MAINTAIN YOUR KNOWLEDGE
RAMBOLL MAINTENANCE ACADEMY 2019 AND 2020
WELCOME TO RAMBOLL MAINTENANCE ACADEMY

We live in a time when the demands for efficiency and resource utilisation are greater than ever. Companies must compete under tough market conditions while taking environmental challenges, safety, image and customer expectations into account.

Life is a journey and change is a necessary part of that. The same goes for our knowledge and approach to work. Without change and a drive to move forward we become stagnant, conservative and - in a global business perspective - incapable of competing.

Being proactive and competitive is a choice that we make, it’s not an imposed symptom of time. It is our belief that, by using the right methods and by having constant focus on the corporate culture, it is the path to higher efficiency without compromising safety, health, environment and costs. But it is a choice that we make!

Betterments can be done without major investments, but it requires good planning, a joint effort, transparent goals and well-considered asset strategies. Ramboll Maintenance Academy (RMA) wants to be your professional travel partner on your journey to operational assurance, predictability and improved efficiency. With our courses we will load your backpack with all the knowledge and inspiration that you need in an ever-changing world. And we will do our very best to share our, valuable and global, experience to the benefit of your company.

Welcome to our course season 2019-2020.

Peter Esbjerg Hejn

Business Development Director
About Ramboll Maintenance Academy

Ramboll Maintenance Academy (RMA) is an independent provider of maintenance and Asset Management courses. With dedicated employees in Ramboll, we operate all over the world and constantly gain new knowledge within Asset Management, maintenance and continuous improvements.

Our dedicated goal is to give our course participants a theoretical understanding of the course subjects and the practical skills needed to execute the knowledge in real life.

The instructors

The instructors at the academy are highly qualified experts within Maintenance Management and Asset Management.

The instructors at Ramboll Maintenance Academy are a combination of Certified European Experts in Maintenance management, PAS55 certified experts and technical experts. They possess a high theoretical knowledge combined with many years of practical experience. On a daily basis, all instructors are involved in improvement projects worldwide. The team at our Maintenance Academy will pass on their experience within maintenance as well as optimisation and provide the opportunity to bring back good ideas for the benefit of your organisation’s overall performance.

Why participate?

Insight, commitment and motivation are intertwined. Without insight, motivation becomes slack. At the same time, insight sparks the desire for change. Most people are open towards change when they understand the reasoning. Therefore, our courses pay a lot of attention towards “understanding the benefits” as well as “choosing the right solutions”.

Today, it is a great challenge to navigate in and make the right decision among the many concepts, ideas and tools that exist on the market. In principle, all recognised tools and methods work if they match the company’s culture and are applied in the correct way. And it is our mission to deliver the required insight and help you avoid making costly mistakes.

Target group

Ramboll Maintenance Academy is targeted at everybody who works with maintenance and Asset Management. The course participants are managers, planners, technicians, smiths, electricians, executives, Asset Managers and other people employed within maintenance and production.

Customised courses

Ramboll offers to host all the courses as customised courses for your organisation. This is relevant for both Asset owners, operators as well as service providers. In this way, you will have the opportunity to tailor-make your own training programme and include assignments from your own organisation in the course.
Practical information
The instructor team will be formed approx. 4 weeks before the course is rolled out and based on the participants background and competencies.

Ramboll hands out all course material. Lunch and refreshments are included as well. We can assist in arranging accommodation when the course duration exceeds a day. We ask that the course participants bring a calculator to all courses.

Courses are held at:
Ramboll
Hannemanns Allé 53
2300 Copenhagen S
Denmark

Your company premises or other locations can always be arranged.

You can sign up by contacting:
Ramboll Maintenance Academy
Peter Esbjerg Hejn
Business Development Director
Phone +45 5161 8716
pth@ramboll.com
Courses held at the customer’s site will be arranged by appointment. This is an opportunity for tailoring the content exactly to your actual needs.

Ramboll reserves the right to make changes, but all changes will be communicated to course participants. All prices are excl. VAT; course materials are included. Ramboll reserves the right to cancel courses if the number of subscribed participants is not sufficient. Registration is binding from two weeks prior to course start. In case of cancellations later than that, 50% of the course price must be paid.

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<th>COURSE</th>
<th>DATE</th>
<th>PRICE</th>
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<tr>
<td>INTRODUCTION TO MAINTENANCE</td>
<td>28 March 2019</td>
<td>520 Euro</td>
<td>8 March 2019</td>
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<td>ASSET MANAGEMENT</td>
<td>8 May 2019</td>
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<td>RELIABILITY CENTRED MAINTENANCE (RCM)</td>
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<td>29 May 2019</td>
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<td>COMPUTERISED MAINTENANCE MANAGEMENT SYSTEMS (CMMS)</td>
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<td>STRATEGIC MAINTENANCE &amp; OPTIMISATION</td>
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<td>LIFE CYCLE COSTS (LCC)</td>
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<td>31 October 2019</td>
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<td>MAINTENANCE PLANNING &amp; SPARE PART MANAGEMENT</td>
<td>3-4 December 2019</td>
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<td>19 November 2019</td>
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<td>INTRODUCTION TO MAINTENANCE</td>
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COURSES

INTRODUCTION TO MAINTENANCE

Purpose
Maintenance is not just about repairing facilities when they break down. The right maintenance is about combining proven methods, experience and theory in an effective way. At this course, the course participants will learn basic methods for reducing the number of unplanned stops. Furthermore, the participants will be introduced to the maintenance disciplines and opportunities provided when working with maintenance in a structured way. The course participants will obtain a common language for concepts and terminologies that will make the participant capable of applying the principles of maintenance in their own organisation.

Course content
• Maintenance types and terminologies
• Utilisation of CMMS
• Failure theory
• Active and passive maintenance time
• Reliability and availability
• KPIs and introduction to standards
• Introduction to RCM
• Assignments and cases during the course

Duration 1 day, Price 520 EUR.
Please contact us for customised courses held at your own company.

ASSET MANAGEMENT

Purpose
Asset Management is not so much about ‘doing things to assets’ but about using assets to deliver value to your business. The purpose of this course is to introduce the participants to Asset Management and give them a solid basis for starting an Asset Management programme in their own organisation. We will go through the concept and basic principles including an overall introduction to life cycle activities.

Course content
• Introduction to ISO55000, ISO55001, ISO55002 and PAS55
• Policy, goals and strategy
• Risk Management
• Asset management anatomy
• Organising work
• Introduction to selected tools
• Assignments, exercises and cases

The course can be supplemented with individual sessions or extended courses as agreed.

Duration 1 day, Price 520 EUR.
Please contact us for customised courses held at your own company.
### COMPUTERISED MAINTENANCE MANAGEMENT SYSTEMS (CMMS)

**Purpose**
Optimal use of CMMS is a prerequisite for efficient operation of assets. It is important that the right data is created and used efficiently in order to optimise long term as well as short term planning. This can only be done if the organisation ensures consistent use of the system amongst managers, employees and other stakeholders.

The purpose of this course is to give the participants a thorough introduction to the basic modules and how it can be used in an optimal way. We will go through the acquisition phase as well as specification of requirement to the CMMS.

In addition, the course will give an introduction to maintenance planning, reporting and optimisation.

**Course content**
- Introduction to terms and terminologies
- Basic modules
- Guide on usability, ISO 9241-11
- Maintenance planning
- Acquisition of a CMMS
- Building up a specification of requirements
- Reports and KPI management in CMMS
- Assignments, exercises and cases

**Duration 1 day, Price 520 EUR.**  
Please contact us for customised courses held at your own company.

### RELIABILITY CENTRED MAINTENANCE (RCM)

**Purpose**
RCM is a method to determine the optimum maintenance strategy seen from a consequential perspective. The method excels by transferring the employees’ experiences into a risk based approach which can be used to improve your overall economy. In this way – when applied correctly – it will also be a way to significantly improve the organisation’s maintenance while reducing operational risks. Carrying out RCM analyses is a process that requires competencies and a joint decision to work with continuous improvements.

At this course the participants will be able to successfully plan, analyze and ensure future operation of the assets. Place yourself among the best in class and let Ramboll lead the way through this course.

**Course content**
- Basic maintenance theory
- Functions (functions, failures, cause and effect of failure)
- Maintenance planning
- Failure theory (failure patterns and PF-intervals)
- Problem solving methods
- Criticality analyses and FMECA
- Failure analysis and improvements
- Running an RCM with success
- Assignments, exercises and cases

**Duration 2 days, Price 1,000 EUR.**  
Please contact us for customised courses held at your own company.
**STRATEGIC MAINTENANCE & OPTIMISATION**

**Purpose**
Your organisation only works effectively when you know your vision, mission and goals and have analysed how to reach these goals. The maintenance organisation holds a key position when it comes to delivering uptime, efficiency and ability to deliver on time. Therefore “maintenance” must be integrated with the other activities in the organisation in order to achieve an efficient unity.

After the course, the participants will be capable of defining a policy, goals and strategies for maintenance. Furthermore, the participants will be able to define and prioritise a result-oriented improvement programme.

**Course content**
- Policy, goals and strategy
- Organisational models
- Change management
- Interaction between operation, maintenance and stakeholders
- KPIs (Key Performance Indicators)
- Initiation and running of improvement processes within maintenance
- Availability and risk reduction
- Assignments, exercises and cases

**Duration 2 days, Price 1000 EUR.**
Please contact us for customised courses held at your own company.

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**LIFE CYCLE COSTS**

**Purpose**
LCC is rapidly becoming the standard method for the long-term cost appraisal when it comes to investments in assets. Investments must result in value for money in the desired lifetime. It is therefore even more important than ever to make the right decisions in consideration of economy, risks and benefits.

At this course we will give the course participants an introduction to the fundamental principles within LCC and LCP. The course will enable the participants to evaluate the long-term consequences of an investment. This ensures that the company capital is utilised as efficiently as possible. During the course we will also include basic principles within budgeting, risk management and equipment reliability.

**Course content**
- Introduction to terms and terminologies
- LCC content and budgeting
- LCC calculation methods and areas of application
- Short introduction to LCP (Life Cycle Profit)
- Reliability evaluation
- Life cycle maintenance and identification of improvements
- Assignments

**Duration 1 day, Price 520 EUR.**
Please contact us for customised courses held at your own company.
MAINTENANCE PLANNING & SPARE PART MANAGEMENT

Purpose
Companies have different needs and not all equipment requires the same attention. Maintenance planning and spare part management must therefore be done according to the actual needs. It is key to find the right level for an organisation in order to avoid costly mistakes. This can only be done if we prepare our efforts in a predefined specific order by using proven methods. Good planning also requires effective communication, execution and reporting amongst key stakeholders during the entire process. We will therefore work with some of the dilemmas that typical occurs along the way.

The course participant will obtain a shared understanding of “performing good planning and trimming the spare parts” through well-documented and recognised methods.

Course content
• Maintenance terms according to ISO 13306
• Availability optimisation and calculations
• Failure theory
• Maintenance strategies
• Coordination with stakeholders
• Establishment of a spare part strategy
• Classification of spare parts and Inventory analyses
• Defining optimum inventory size
• Assignments, exercises and cases

Duration 2 days, Price 1000 EUR.
Please contact us for customised courses held at your own company.

COURSES CAN BE HELD AT:

Ramboll Denmark
Hannemanns Allé 53
DK-2300 Copenhagen S
Denmark

Ramboll UK
240 Blackfriars Road
London SE1 8NW
United Kingdom

Ramboll Norway
Hoffsveien 4
Postal address: P.O. Box 427 Skøyen,
NO-0213 Oslo
Norway

Ramboll Sweden
Krukmakargatan 21
Box 17009
104 62 Stockholm
Sweden

Ramboll Finland
PL 25, Säterinkatu 6
FI-02601 Espoo
Finland

Ramboll Germany
Chilehaus C – Burchardstraße 13
20095 Hamburg
Germany