



احتراف التجهيع البصري في دورة تدريبيية عمليية خطوة بخطوة



احتراف التجهيز البصري في دورة تدريبية عالية خطوة بخطوة

الرجوع: 36376_27887 التاريخ: 04 - 08 May 2027 الموقع: دبي - Road Zayed Sheikh Marriott by Inn Residence - الرسوم: Euro 6500

Course Overview:

The course is designed for professionals looking to enhance their skills in optical assembly and precision engineering. This complete program offers hands-on training in essential techniques, covering lens properties, lens aberrations, and optical stops.

Participants will also explore advanced topics such as polarized light techniques and low-reflectance lens coatings. They will develop critical skills in ray tracing, optical tolerances, and correcting aberrations through practical applications.

Focused on industries like defense, medical imaging, and telecommunications, the course includes telescope assembly, gun sight alignment, and micro-optics training. By engaging in hands-on activities like assembling binoculars and periscopes, participants will emerge as experts equipped to drive innovation in their organizations.

Tailored for engineers, technicians, and professionals, this course provides the necessary skills to design, build, and troubleshoot advanced optical systems.

Target Audience:

- Optical engineers and technicians
- Manufacturing professionals in optics
- R&D specialists in optical systems
- Defense and aerospace engineers
- Medical device technicians specializing in imaging equipment

Targeted Organizational Departments:

- Research and Development R&D
- Optical manufacturing and assembly teams
- Quality assurance in optical systems
- Precision engineering teams
- Defense and aerospace operations

Targeted Industries:

- Aerospace and defense
- Medical imaging and diagnostics
- Telecommunications and fiber optics
- Automotive optical systems
- Consumer electronics and photography

Course Offerings:

By the end of this course, participants will be able to:

- Analyze lens properties in optics for precision assembly.
- Identify and correct lens aberrations and optical tolerances.
- Implement polarized light techniques and low-reflectance coatings.
- Assemble and align binoculars, telescopes, and rangefinders.
- Apply optical design principles using ray tracing.
- Utilize machining operations and advanced coating methods in optical manufacturing.
- Troubleshoot chromatic aberrations and coma in optical instruments.

Training Methodology:

The course combines interactive lectures, group discussions, case studies, and hands-on workshops. Real-world scenarios will be simulated to teach advanced skills like aplanatic objective design and telescope optics assembly. Peer feedback and checklists will support learning and retention.

Course Toolbox:

- Comprehensive ebooks and guides
- Access to specialized optical assembly software
- Templates for optical system alignment
- Video tutorials on optics machining and casting
- Checklists for lens mountings and gears in optical assembly

Course Agenda:

Day 1: Fundamentals of Optical Systems

- Properties of lenses and their role in optical systems **Topic 1:**
- Understanding lens aberrations and their corrections **Topic 2:**
- Theory of stops and their application in optical instruments **Topic 3:**
- Brightness of images in optical instruments **Topic 4:**
- Properties of the eye and their implications in optics **Topic 5:**
- Overview of optical materials and their uses **Topic 6:**
- Review of foundational optical concepts and applications **Reflection & Review:**



Day 2: Advanced Optical Materials and Techniques

- Polarized light techniques and practical applications Topic 1:
- Low-reflectance lens coatings: methods and materials Topic 2:
- Photographic objectives: assembly and alignment Topic 3:
- Photographic shutters: design and integration Topic 4:
- Understanding and using prisms in optical instruments Topic 5:
- Hands-on activity: Practical assembly of optical components Topic 6:
- Discuss advancements in materials and assembly techniques Reflection & Review:

Day 3: Assembly of Optical Instruments

- Telescope assembly techniques Topic 1:
- Training in binoculars and commander's telescope assembly Topic 2:
- Periscope optical design and construction Topic 3:
- Gun sight optical alignment for precision Topic 4:
- Rangefinder assembly techniques and alignment Topic 5:
- Workshop: Assembling a complete optical instrument Topic 6:
- Review of practical assembly techniques and challenges Reflection & Review:

Day 4: Mechanical and Electrical Integration

- General considerations in optical instrument design Topic 1:
- Machining operations and casting methods in optical manufacturing Topic 2:
- Bearings and their importance in optical systems Topic 3:
- Gears, clutches, and couplings for optical assembly Topic 4:
- Lens mountings and parallel displacements Topic 5:
- Electrical controls and photoelectric cells in optical systems Topic 6:
- Summary of mechanical and electrical integration techniques Reflection & Review:

Day 5: Advanced Optical Design and Precision Troubleshooting

- Ray tracing in optical systems Topic 1:
- Correcting spherical aberrations for better image quality Topic 2:
- Chromatic aberration correction techniques Topic 3:
- Understanding and managing coma in optical instruments Topic 4:
- Designing aplanatic objectives and eyepieces Topic 5:
- Maintaining optical tolerances and troubleshooting issues Topic 6:
- Review of advanced optical design concepts and practical problem-solving Reflection & Review:

How This Course is Different from Other Optical Training Courses:

This course is distinguished by its emphasis on hands-on learning and real-world applications. Unlike traditional programs, it combines theoretical knowledge with practical skills in areas such as lens mountings, optical coatings, and micro-optics alignment. Through industry-specific case studies and interactive workshops, participants will acquire actionable skills relevant to the defence, medical imaging, and telecommunications sectors. The course's structured yet flexible design ensures that participants can confidently assemble and align optical systems with precision.



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أبوظبي - الإمارات العربية المتحدة



الدوحة - قطر



الدار البيضاء - المغرب



الجبيل - المملكة العربية السعودية



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المنامة - مملكة البحرين



الكويت - الكويت



القاهرة - مصر



الرياض - المملكة العربية السعودية



بانكوك - تايلند



بالي - جمهورية إندونيسيا



بأكو - أذربيجان



باريس - فرنسا

مدن التدريب



تيليسي - جورجيا



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دبي - الإمارات العربية المتحدة



جوهانسبرغ - جنوب إفريقيا



جنيف - سويسرا



جاكرتا - جمهورية إندونيسيا



سيول - كوريا الجنوبية



سان دييغو - الولايات المتحدة الأمريكية



زنجر - تنزانيا



روما - إيطاليا



طشقند - أوزبكستان



طرابزون - تركيا



شيكاغو - الولايات المتحدة الأمريكية



شرم الشيخ - مصر

مدن التدريب



فيينا - النمسا



عن بعد - منصة زووم



عمان - المملكة الأردنية الهاشمية



طوكيو - اليابان



لندن - المملكة المتحدة



لانكاوي - ماليزيا



كيب تاون - جنوب إفريقيا



كوالالمبور - ماليزيا



مونترنو - سويسرا



مسقط - سلطنة عمان



مدريد - إسبانيا



ماربيا - إسبانيا



نيس - فرنسا



نيروبي - كينيا



ميونخ - ألمانيا



ميلان - إيطاليا

WHO WE ARE

Agile Leaders is a renowned training center with a team of experienced experts in vocational training and development. With 20 years of industry experience, we are committed to helping executives and managers replace traditional practices with more effective and agile approaches.

OUR VISION

We aspire to be the top choice training provider for organizations seeking to embrace agile business practices. As we progress towards our vision, our focus becomes increasingly customer-centric and agile.

OUR MISSION

We are dedicated to developing value-adding, customer-centric agile training courses that deliver a clear return on investment. Guided by our core agile values, we ensure our training is actionable and impactful.

WHAT DO WE OFFER

At Agile Leaders, we offer agile, bite-sized training courses that provide a real-life return on investment. Our courses focus on enhancing knowledge, improving skills, and changing attitudes. We achieve this through engaging and interactive training techniques, including Q&As, live discussions, games, and puzzles.



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