THE PEARL PROGRAM

دانات
DANAT
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BAHRAIN INSTITUTE FOR PEARLS & GEMSTONES

THE PEARL PROGRAM

A course that combines the everything on natural, cultured and imitation pearls with a snorkeling expedition and a visit to the Pearling Path (a UNESCO World Heritage Site) in the Kingdom of Bahrain. Course attendees will gain a better understanding of pearls, with a focus on natural pearls, the instrumentation used for their identification, as well as extensive hands-on experience in DANAT's laboratory.

These technical studies will be complimented by a snorkeling day trip, which will be led by a fully qualified scuba diving instructor. A once-in-a-lifetime experience for attendees to develop practical experience and a better understanding of the pearl diving process. Finally, the visit to Bahrain's historic Pearling Path Trail will offer attendees insights into Bahrain's millennia old pearling heritage and its contribution to the global natural pearl market from economic and social perspectives.

Date	March & September
Timing	9:00 AM to 3:00 PM
Duration	6 days • Theory classes (3 days) • Practical in the laboratory (2 days) • Snorkeling trip & tour of Pearling Path (1 day)
Total Price	BHD 880 (*Incl.*VAT)

Course Structure

The course will offer a holistic approach to pearl studies. This will include analysis of pearls using basic gemmological tools and fundamental scientific instruments to characterize pearls such as X-ray microradiography, X-ray microcomputed tomography, X-ray luminescence and EDXRF. Studies will be accompanied by laboratory sessions and practical experience with samples from DANAT's collection. The snorkeling day trip and Pearling Path visit will enable attendees to contextualise natural pearl studies beyond the laboratory, through experiencing the marine environment within which pearls are formed, as well as, the significance of pearling as an industry in Bahrain and beyond.

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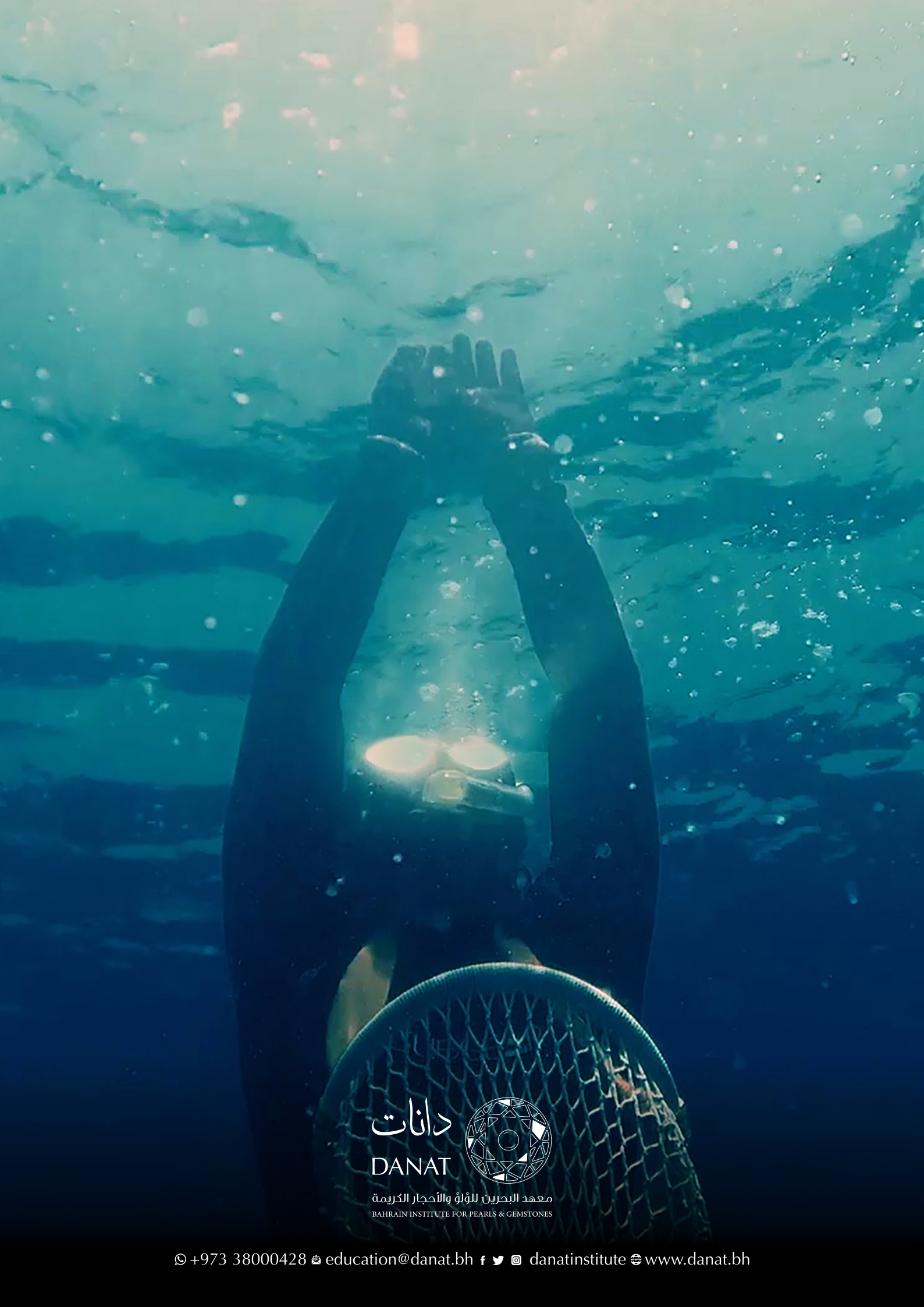
Key Features

Duration	6 days
Language	English
Qualification	Certificate of Attendance (5 day pearl course)

Lesson Plan

Day 1	◦ General introduction to pearls and taxonomy basics. ◦ Natural pearl history. ◦ Natural nacreous pearl (formation, animals hosting nacreous pearls, freshwater and saltwater natural pearls, microscopic structures). ◦ Natural non-nacreous pearls, their host animals and microscopic structures. ◦ Practice with various shells of natural pearl producing molluscs (nacreous and non-nacreous), half-cut natural pearls for their internal structures, use of microscope and examples of nacreous and non-nacreous natural pearls.
Day 2	◦ Introduction to cultured pearls (molluscs and methods used for pearl cultivation). ◦ Treatments applied on natural and cultured pearl Imitations. ◦ Classification of natural pearls and to cultured pearls grading. ◦ Introduction and explanation to commercial terminology applied to natural and cultured pearls. ◦ Practice with various shells of molluscs used for pearl cultivation, half-cut cultured pearls for their internal structures, examples of treated samples and imitations.
Day 3	◦ Introduction to pearl testing. ◦ Principles of microscope and UV lamps and application to pearl testing. ◦ Practice with various natural and cultured pearls using microscope and UV light. ◦ Principles of X-Ray microradiography and application to pearl testing. ◦ Presentation of the instrument and practice with X-ray radiographs (part I).
Day 4	◦ Practice with X-ray radiographs (part II). ◦ Principles of X-Ray micro-computed tomography (CT) and application to pearl testing. ◦ Presentation of the instrument and practice with micro-CT images. ◦ Principles of X-Ray luminescence & Energy Dispersive X-Ray Fluorescence and application to pearl testing. ◦ Principles of Raman and Photoluminescence spectroscopy and application to pearl testing. ◦ Presentation of the instruments and practice with spectra.
Day 5	◦ Principles of UV-Vis-NIR Spectroscopy and application to pearl testing. ◦ Principles of LA-ICP-MS and application to pearl testing. ◦ Presentation of the instruments and examples. ◦ New methods applied to pearl testing. ◦ General discussions, conclusions of the course and course certificates.
Day 6	◦ Snorkeling day trip to one of Bahrain's 'Heyrs' oyster beds. ◦ Oyster shucking experience. ◦ Guided tour of Bahrain's Pearl Path Trail (a UNESCO World Heritage Site).



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