Extended Underwater Archaeology Program (Menorca, Balearic Island, Spain)

1. General Information

The Sanisera Archaeology Institute for International Field Schools offers annual programs in archaeology. This course is designed for students from around the world interested in studying abroad, gaining knowledge in Roman cities, classical archaeology and underwater archaeology.

Over the past eight years, The Underwater School in Archaeology has researched the ancient port of Sanitja via an intensive survey program. We have discovered 18 Roman shipwrecks with cargo, including amphorae, and more than 10 anchors from different time periods.

The seabed of Sanitja is very wide and varied, with shallow and medium depth areas that facilitate the diving learning and the use of different survey methods and techniques to discover archaeological remains.

The Sanisera Archaeology Institute offers an extended underwater archaeology program consisting of four main parts during 16 days diving from shallow to deeper depth.

Part 1: Explore the Ancient Roman Port of Sanitja (Menorca, Spain)

There will be a minimum of 7 immersions focusing on underwater archaeological survey exploring the Ancient Port of Sanitja and the coast of the Cape of Cavalleria. The aim of this project is to identify structures of the Roman city of Sanisera and underwater shipwrecks, as well as the associated cargo including amphorae and anchors.

The port of Sanitja was not only occupied by Romans. There are also ruins of a Muslim mosque and an English defense tower which lead us to believe that we could find other vessels from these time periods. During the last years of survey, several anchors and three shipwrecks from the XVI-XIX centuries were discovered.

Course time dedicated: 45%.
Part 2. Record underwater archaeological objects using photogrammetry with Agisoft PhotoScan 3D

During the course we will register archaeological materials (amphora, anchors, fine tableware) using pictures and following the standard photogrammetry procedures, afterwards we will learn to handle the information in order to create 3D graphic models using Agisoft PhotoScan Professional software.

Course time dedicated: 5%.

Part 3: Explore the north coast of Menorca (Spain)

There will be a minimum of 8 immersions focusing on underwater archaeological survey exploring a submerged valley where some remains of wrecks can be found through survey techniques, and always diving between 18 and 30 meters deep.

Course time dedicated: 45%.

Part 4. Mediterranean Shipbuilding (Menorca, Spain)

This part of the course focuses on Mediterranean shipbuilding techniques, both on theoretical and practical levels. Students will put into practice their conservation skills with a ship from the 1920s.

Students will learn the basics of traditional Mediterranean shipbuilding, as well as which tools, instruments and methods are the most suitable to restore old vessels.

Course time dedicated: 5%.

Students will also attend lectures on Roman shipwrecks, Roman amphoras and Mediterranean shipbuilding techniques and handling of software Agisoft PhotoScan.

2. What you will learn

In the Fieldwork

- How to survey and which archaeological techniques are used.
- Use and handling of the tools that are used during the survey process.
- Recording data obtained during the survey.
- Objects photo-taking using photogrammetry standards.
- Practice in the recognition of archaeological materials and Roman finds from the 2\textsuperscript{nd} century B.C. to 6\textsuperscript{th} A.D.

In the Laboratory

- Recording data obtained during the survey -diary and systematic methodology sheets-.
- Study and typological classification of archaeological Roman objects discovered during the underwater survey.
Relative dating based on the classification of the archaeological objects discovered during the survey.
Handling of the pictures from the objects in order to prepare them for 3D processing with Agisoft PhotoScan.
Drawing traditional boats

**Theory**

- **Underwater Archaeological background** of Sanisera.
- **Ancient trade** in Sanisera and the Western Mediterranean Sea.
- **Ancient navigation**.
- **Modern sail merchant ships** (centuries 16th - 20th).
- History, archaeology, economy and culture of the **Roman civilization**.
- Introduction to the **History of the Sanisera Site**.
- **Minorcan archaeology** before the Roman conquest of the Balearic Islands.

3. Directed at

This course offered by the Sanisera Archaeology Institute is designed to teach with precision this field of research. **If you are interested in learning underwater survey techniques and methodology and apply them in a Roman port** where you will find amphorae, anchors and the remains of shipwrecks, then this is a good option for you. After more than 10 years of survey, our research team has new objectives, **focused in a survey that will be held underwater, more than 18 meters deep**. Located in the north coast of Menorca and nearby the Roman city of Sanisera, we consider essential to dive up to 30 meters, since there are many possibilities to discover, including more shipwrecks of Roman times or the past centuries.

During this course, you will learn how to identify archaeological remains on the seabed. In the laboratory, you will learn how to classify archaeological material found and how to determine dates and methods used to determine the location and elements of the cargos from shipwrecks. Students will also gain experience in the handle of 3D images from sunken objects.

After finishing this course, the training and experience gained will help you to decide if underwater archaeology is the area of research that you wish to focus on or if you want to continue on with underwater archaeology as a future profession.

The water is calm and mild in temperature and currant, allowing for excellent diving conditions in a natural and pristine Mediterranean atmosphere.

**Previous knowledge or experience in archaeology or computer systems is not required.**

4. Field School Life & Language

The course runs six hours per day. The day will be divided between diving in the Roman Port of Sanitja, lab work, exercises, lectures and videos. The course is taught in English and Spanish.
5. Diving certificates

To participate in diving activities, it is necessary to have a diving certificate from an internationally recognized organization (i.e. PADI) that will allow you to dive up to 18 meters in depth. In this case, you will need a certificate that allows you to dive up to 30 meters, Advanced Open Water Diver PADI.

If you want to participate in the Advanced underwater archaeology course and you only have the Open Water Diver certificate allowing you to dive up to 18 meters, no worries! We offer you the possibility of getting the title (Advanced) with our Diving Center collaborator. For only $225 extra you will be able to dive anywhere in the world.

If you don't have any previous diving experience and you want to participate in this program, we give you the opportunity of getting both certificates for only $300!! (instead of $225 each)

6. Medical Check

On the first day of the course, participants have to show a medical document stating that he/she is fit for diving activities. Participants that do not have this document on the first day will not be allowed to participate until they are able to present this document.

7. Certificates

At the end of the Field program, students will receive a certificate of participation stating the hours and activities of the course.

Participants that perform exceedingly well in the course may receive a letter of recommendation from our organization upon request.

8. Sessions & Cost

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Dates</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session #1</td>
<td>2019</td>
<td>May 01 – May 16</td>
</tr>
<tr>
<td>Session #2</td>
<td>2019</td>
<td>May 19 – June 03</td>
</tr>
<tr>
<td>Session #3</td>
<td>2019</td>
<td>June 06 – June 21</td>
</tr>
<tr>
<td>Session #4</td>
<td>2019</td>
<td>June 26 – July 11</td>
</tr>
<tr>
<td>Session #5</td>
<td>2019</td>
<td>July 14 – July 29</td>
</tr>
<tr>
<td>Session #6</td>
<td>2019</td>
<td>August 01 – August 16</td>
</tr>
<tr>
<td>Session #7</td>
<td>2019</td>
<td>August 19 – September 03</td>
</tr>
<tr>
<td>Session #8</td>
<td>2019</td>
<td>September 06 – September 21</td>
</tr>
<tr>
<td>Session #9</td>
<td>2019</td>
<td>September 24 – October 09</td>
</tr>
<tr>
<td>Session #10</td>
<td>2019</td>
<td>October 12 – October 27</td>
</tr>
</tbody>
</table>

9. Course fee includes

- Accommodation in the Student Residency in Ciutadella. Two to six per room.
- Walking distance to the historic center, port and beaches.
- Course tuition.
- Learning of Agisoft PhotoScan software.
- A complete set of diving equipment: wetsuit, jacket, mask, fins, diving booties, tanks and weights.
- Daily transportation to/from the archaeological fieldwork.
- Breakfast, lunch and dinner.
- Accident insurance at the site.
- In case of needing to process Schengen Visa the mandatory letter of invitation will be written so you can travel and participate in our courses.
- Certificate of participation

Airfare not included from the student home to/from Menorca (Spain).

Open Water or Advanced Open Water Diver certificate (PADI) not included in the course fee. You can get one certificate with our Diving Center collaborator for only $225, or both certificates for only $300!! (contact us for further information at sanisera@arrakis.es)

10. Spaces Available

The course is limited to 8 participants per session. Reservations are only effective when payment of the registration fee is received. If for any reason the course is cancelled, payment is returned according to the field school refund policy.

11. Information and Reservations
For more information, contact:
Email: info@archaeology.institute
Web page: www.archaeology.institute