

# YACHT DESIGN

Master Course

## ANNOUNCEMENT

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1<sup>st</sup> edition

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The program of the Master courses by Quasar Design University started in 1988, among the first ones in Italy and eleven years before the university reform that with the Law 509 of 1999 established University Masters. Since then the formula didn't change even if the programs are constantly upgraded in every new edition. Strengthened by an experience of more than twenty years, today the Quasar starts courses which have a structure, duration, scientific level and professionalizing efficiency in compliance with what's established by the MIUR. The distinctive character of Quasar Masters is the attention in keeping a particular balance between theoretic-disciplinary basics that define their contents and the tight cohesion with the practice of the professions to which they give rise.

### SUMMARY

**Duration:**

from February 9 January 2017 to 20 April 2017

**Deadline to apply:**

Monday, 9 December 2016

**Organizing institution:**

Quasar Design University – [www.quasar.university](http://www.quasar.university) – Tel. 06 8557078  
Via Crescenzo 17A – 00193 ROMA

**Cordination of the master:**

Marco Amadio – [www.marcoamadio.it](http://www.marcoamadio.it)

**Scientific committee:**

Antonio Luxardo, Vittorio Mariani, Benedetto Todaro, Marco Amadio

**Teachers:**

Marco Amadio, Antonio Luxardo, Vittorio Mariani, Marco Brivio (BCOOL Engineering)

**Partners:**

- |                      |                               |              |
|----------------------|-------------------------------|--------------|
| · Bcool Engineering  | · Idroitalia                  | · Blue Roma  |
| · Cantieri Gagliotta | · Mazzer                      | · Webasto    |
| · Comar Yachts       | · NAET                        | · Nu.mid.i.a |
| · Gallinea           | · Nautica Cala Galera         |              |
| · Gammanautica       | · Naval Design and Consulting |              |

**Contacts:**

[myd.al@quasar.university](mailto:myd.al@quasar.university)

## EDUCATIONAL TARGETS

The design of a yacht entirely developed by the students is the main goal and the uniqueness of our master.

The Master will give to students:

- Competence in 3DRhino and 3D Orca software and their relative Plug-ins (3D Studio Max, Realflow, V-Ray and Phoenix).
- A good knowledge of Interior and Exterior design and styling.
- General understanding of structural issues and building materials and process.
- Basics of Hydrodynamics and Hydrostatic.

## INTRODUCTION

Teachers are high profile Architects, Designers and Engineers who currently work and collaborate with the most important national and international shipyards.

Lessons and workshops will bring from the starting concept to the completion of the project.

## PROGRAM

The Master includes the following lessons plan (modules):

### 1 • INTRODUCTION TO YACHT DESIGN (MODULE): 90 hrs of teaching

#### Subjects:

Design  
Typologies of Motor and Sailing Yachts  
Production Yachts  
Custom Yachts

Hydrodynamics: basic concepts

3D Computer Aided Design (CAD)  
Rhino 3D software - [www.rhino3d.com](http://www.rhino3d.com)  
V-Ray, 3D Studio Max, Real Flow and Phoenix software

3D Hull Design and Fairing  
Orca 3D Naval Architecture software - <http://orca3d.com>  
Intact Hydrostatic and Stability basic concepts utilising Orca 3D

Off-site visits & Lessons

- 1 daily visit to the INSEAN Towing tank
- 1 daily visit on board of a sailing yacht. Depending on weather condition, sailing day.
- 1 daily visit on board of a motor yacht. Depending on weather condition, sailing day.
- 1 daily visit to a Yacht Builder

## 2 • DESIGN DEVELOPMENT (MODULE):

11 weeks - 264 hrs

This phase is dedicated to the teaching to students how to develop the design of a yacht. The students will create groups of 3 or 4 people, each group will choose a typology of yacht up to 24 m., then they will define the requirements and goals and therefore they will start the design that has to be completed by the end of the Master and it will be the Diploma Thesis.

### Subjects:

#### Design

Requirement & Goals  
Design Concept  
Preliminary Design  
Interior layout  
Exterior style  
Deck hardware and fittings

#### Interior Furnishing

Materials  
Interior structure  
Details  
Shop Drawings

#### 3D Computer Aided Design (CAD)

Rhino 3D software - [www.rhino3d.com](http://www.rhino3d.com)  
V-Ray, 3D Studio Max, Phoenix software

#### 3D Hull Design and Fairing

Orca 3D Naval Architecture software - <http://orca3d.com>  
Intact Hydrostatic and Stability basic concepts utilising Orca 3D  
Keel and rudder

#### Engineering

Yacht up to 24 m. Classification Rules  
Weight Calculations  
Structure: general information  
Powering calculation  
Sail plan

#### Equipment Installation

Machinery layout  
Engine room layout  
Piping Runs  
Engine installation  
Deck fittings installation

#### Materials of Construction

Composite materials (resins, fibres)  
Moulds  
Interiors moulds

#### Systems

Schematics  
Fuel system

Fresh and Salt Water system  
Bilge system  
Grey & Black water system  
Air Conditioning  
Electric system  
Light system  
Hydraulic system

**Off-site visits & Lessons**

2 daily visit to Yacht Builder  
2 days visit to the SEATEC (International Exhibition of Technology, Subcontracting and Design for boats, Yachts and Ships) or Genoa Boat Show or Monaco Yacht Show

**3 - STAGE (MODULE):**

**8 weeks**

An internship in the technical department of an Italian Yacht Builder or at a Yacht Designer studio (At the end of the previous modules each student that regularly took part to them (80% of the frontal lessons and workshops), will have the possibility to make a stage of 2 months inside companies, professional studios and shipyards that work and produce in the field since years, to complete the educational path. The selection priorities of the final destinations of the period of stage is decided considering the valuations that students received during the frontal lessons and workshops.

**PARTNER COMPANIES**

Some of the following companies will host students during the period of stage (with overviews on the type of task provided for trainees)

**Azimut-Benetti s.p.a. – Divisione Atlantis Yachts:**

Shipyards of the group Azimut Benetti busy in the creation of recreational crafts from 30 to 60 feet. The student will be inserted in the style centre, directly set in the production shipyard, the resource will lead designers in the creation and execution of components for the serial production, he will have the opportunity to directly follow in the shipyard the processes that go from the project to the creation of the component.

Headquarters: 29025 Sariano di Gropparello (PC) – Italy

Website: <http://www.atlantisyachts.it>

**Bcool Engineering:**

An engineering company that works in the design and creation of technological structures, products and services in the sea, residential and industrial fields.

Headquarters: Via Arona, 9 – 20833 Giussano (MB) – Italy

Website: <http://www.bcoolengineering.com>

**Comar Yachts:**

The research will be inserted inside the technical office, directly set in the production shipyard, he will follow the production, complete building drawings that can go to the shipyard and he will follow building operations of semi custom sailing boats.

Headquarters: Viale Traiano, 27 – 00054 FIUMICINO – ROMA – Italy

Website: <http://www.comaryachts.it/>

**Cantieri Gagliotta:**

The resource will be inserted inside the technical office, in the production shipyard of Torre Annunziata, he will follow the production, complete building drawings that can go to the shipyard and he will follow building operations of serial motor boats with changes required by customers.  
Headquarters: Via Solferino, 5 – 80058 Torre Annunziata – (Napoli) – Italy  
Website: <http://www.gagliotta.com/>

**Gallinea:**

Leader company in the production and supplying of sailing accessories. The candidate will follow the production of serial components and he will collaborate for the creation of new objects and components for the interior yacht design. Furthermore, the company is interested in the creation of a technical office with a style centre.  
Headquarters: Via Perrucchetti, 4 – 25036 – Palazzolo S/O (Brescia) – Italy  
Website: <http://www.gallinea.it/>

**Gammanautica:**

Company of design and supplying of sailing accessories, upholstery and tapestry for interiors and externals. The candidate will work in the technical office during the delicate step of real-relief (reliefs of existing boats) and of creation of decorative elements such as: "tarps", upholstery, tapestry and supplying of accessories in stainless steel.  
Headquarters: Via S.M. Misericordia 1, 04020 – Itri (LT) – Italy  
Website: <http://www.gammanautica.com/>

**Idroitalia:**

Shipyard for the milling of numerically controlled stamps. The resource will be directly inserted in the production site near Pescara, and he will create a team with the production area for the creation of a technical office, following their directive he will analyze 3D models and the milling files, he will follow the finishing and producing works until the completing of production stamps. The shipyard has one of the biggest cutters of Italy.  
Headquarters: ModelleriaDiv. IdroitaliaSrl – Via Tiburtina Valeria Km. 212,500 – Manoppello scalo (PE) – Italy  
Website: [www.idroitalia.com/](http://www.idroitalia.com/)

**Mazzer s.r.l.:**

A company with more than twenty years of experience, that is the absolute protagonist of sailing furnishings and interiors. It produces stainless steel 316 components for sailing (windshields, companionways). It produces researched end exclusive furnishing complements that are born by a close collaboration between designers and customers, that together explore new shapes and materials for well-finished solutions thanks to the artisan ability of the employees of the company and to the technology of the used machines.  
Headquarters: Via Pantani da Basso, snc – 04019 TERRACINA – B.go HERMADA (LT) – Italy  
Website: [www.mazzersrl.it/it/nautica/](http://www.mazzersrl.it/it/nautica/)

**NAET s.r.l.:**

A company that focuses its work on the numerically controlled milling, set in Caserta. The main target is to provide integrated services to support the customer in the entire cycle of development of a new model, from the project to the prototype. For their activity they use the best cad/cam software integrated with the most advanced technologies of production, with 5 shafts numerically controlled machines.  
Headquarters: Via Divino Amore s.n.c. – 81039 – Villa Literno (CE) – Italy  
Website: <http://www.naetsrl.it>

**Nautica Cala Galera S.P.A.:**

A shipyard with more than 40 years of experience, that works in the field of custom and refit of medium and big dimensions. The resource will be directly integrated in the shipyard and he will follow the refit works of boats giving evaluations and projects of adjust and finishing directly to the internal companies. The apprentice will collaborate with his production and following the directive of the foreman he will follow the finishing works of the boats.

Headquarters: Località Cala Galera – 58018 Porto Ercole (Grosseto) – Toscana

Website: <http://www.nauticacalagalera.it/>

**Naval Design&Consulting s.r.l.:**

The resource will be inserted in the technical office, he will work with designers for the creation of 3D models and of all the 2D technical documentation. The company of engineering and design works since more than ten years in the fields of sailing and design and boat building where it is really known.

Headquarters: Via F. Fracanzano 25, 80127 – Napoli (NA)

Website: <http://www.navaldesignandconsulting.it/>

**OBP:**

The resource will be inserted in the technical office, directly set in the production shipyard, he will work with the direction and with the foreman for the production of Fisherman boats with high technological contents. The resource will help with the creation of a real technical office able to transfer drawings and information inside the production area.

Headquarters: Lungomare Duca degli Abruzzi, 84 – 00121 – Porto Turistico di Roma – OSTIA (RM) – Italy

**Webasto:**

Webasto is a company founded in 1901 that has more than 50 locations all round the world, and 30 of them are production sites. Today Webasto is the world leader in the production of roof and convertible systems, heating systems, systems of air-conditioning and ventilation in the automotive, camper and sailing trades. Webasto Thermo & Comfort SE

Headquarters: Friedrichshafenerstr.982205 Gilching / Germany

General website: [www.webasto.com/it](http://www.webasto.com/it) - Sailing link: [www.webasto.com/it/prodotti-mercati/nautica/](http://www.webasto.com/it/prodotti-mercati/nautica/)

**Nu.m.i.d.i.a.:**

Nu.M.I.D.I.A. was established in 1998 in Rome when its founders, a group of engineers from the Mechanical Engineering Department of the "University of Tor Vergata", that have been working for years in the automotive area doing design for several companies, decided to develop their business idea/project.

Starting from the knowledge they gained and thanks to an improvement of their methodologies and tools, they wanted to create a business activity able to address the market of service industry, starting from Italy and then addressing the European and the world market.

Our business idea has always been to improve design workflows and procedures through the development of advanced methodologies and the use of innovative tools directly provided by research activity to simplify, speed up and increase the accuracy of product design.

Nu.m.i.d.i.a works in a close cooperation with some research centres such as: ENEA, University of Tor Vergata, SCIRE research consortium, COMETA consortium, University of Tuscia, CNR.

Moreover it holds shares in MATE Laboratories, an advanced experimental laboratory in which the approaches and methodologies developed by Nu.m.i.d.i.a. are tested and validated.

Website: <http://www.numidiaonline.com/>

Quasar Design University uses its own system of training credits (QTC) that follows the model of the ECTS (European Credit Transfer and Accumulation System): a group of laws established in an European context, for the transfer and accumulation of training credits to which it totally corresponds.

## CALENDAR

The Course, provides for 360 hours of frontal education and sea trips.  
The frontal education starts on **09/01/2017** and ends on **20/04/2017**.

The lessons in the classroom take place from Monday to Friday from 9am to 12pm and from 1pm to 4pm. The specific calendar with the hours of lessons will be available within November 2016. At the end of the educational path a final exam will take place, which passing is a necessary requisite to achieve the diploma of the Yacht Design Master Course of the Quasar Design University.

The Quasar design University might modify the educational program, always respecting the hours and targets of the course, to guarantee a better efficiency of the experience, when new software are available, when testimonials of partners are set as an opportunity for students to make use of an added value.

### FREQUENCY

To achieve the Certificate and to be able to have the final exam, the **minimal obligatory frequency is of 80% of the hours** (this percentage has to be calculated on the total of hours for each module of frontal lessons and workshops, to guarantee, through the continuity and the proper concentration, the efficiency of the experience).

### DIPLOMA OF THE YACHT DESIGN MASTER COURSE

The diplomas will be given, at the end of the educational path, to students who passed the final exam and who comply with the obligations of frequency and with the payments.

### HEADQUARTERS AND EQUIPMENTS

Frontal lessons and workshops will take place at the headquarters of the Quasar Design University, in via Crescenzo 17 A – 00193 – Rome.

Each student will have a dedicated computer, equipped with specific software.

Some interventions might take place in other places: the Quasar Design University specifies that it can distribute its students in a different headquarters or modify the place where the lessons take place once the sign ins are done, without to invalidate the correct and fruitful education.

Workshops are in plan in shipyards and other technical trips to structures relevant for the subjects of the course. Furthermore sailing trips are planned, to experiment live design matters about sailing.

## ACCESS

### ACCESS REQUIREMENTS

The Yacht Design Master Course is aimed to graduates and near-graduates of first and second level in Engineering, Architecture and Design.

A first level B1 (intermediate) knowledge of the English language is required.

### ACCESS MODALITIES

**The Yacht Design Master Course wants a minimal number of 10 participants**, unless the organizing company decides differently.

People interested have to send by email at the address [myd.al@quasar.university](mailto:myd.al@quasar.university), not later than the 19 December 2016:

- **admission request** filled in all its parts (the model is available on the website of the Quasar Design University), at the page dedicated to the Yacht Design Master Course;
- **the sign in paying** of Euro 990,00 (net of bank expenses).

**To the admission request have to be attached:**

- An identification document
- Study visa (for students coming from non-European countries)
- Curriculum vitae
- Letter of motivation in which the applicant has to explain the reasons why he chose the educational path
- 1 coloured photo card format
- A copy of the diploma in possession
- Eventual other achieved qualifications

It's useful to present at the interview a portfolio of works and projects made (not necessarily relevant with the subjects of the Master Course).

The selection interviews via Skype will be organized by the Quasar Design University. Candidates will be contacted at the address given with the admission request.

Furthermore, during the interview will be verified the level of knowledge of software that will be used (AutoCAD, Rhinoceros) and of the English language. The suitability of candidates will be judged considering the curricula sent, the quality of the works presented in the portfolio and to the result of the aptitude interview.

In case of suitable candidates in a number that goes over the availability of the places, we will proceed with a selection following the order of arrival of the requests.

## SIGN IN AND INSURANCES

The cost of the Yacht Design master Course for this edition is of 15.000,00 Euros (net of bank expenses). After receiving the communication of positive result through e-mail by the QDU, it is needed to **pay for the sign in**, that has to be regulated

**within 8pm of 19 December 2016**

sending to [amministrazione@quasar.university](mailto:amministrazione@quasar.university) the copy of the down payment of the adjustment of the sign in fee of 990,00 Euros (net of bank expenses).

The participation fee of 15.000,00 Euros (net of bank expenses) has to be paid following the subscribed modalities at the moment of the subscribing of the contract.

**The sign in fee INCLUDES the Insurances** – Accidents (INAIL) and the Civil Responsibility.

The lacking of confirmation in the specified times will be considered as a renounce and the next candidate in order of presentation of the request will take his place.

For the final exam a fee of 350,00 Euros (net of bank expenses) has to be paid within the time limits of the sign in contract.



## CONTRACT

The technical organization and the economical management of the Yacht Design Master Course are taken care of by the Quasar Progetto S.r.l.

The relationship between the student and Quasar Design University (registered trade mark of the Quasar Progetto S.r.l. – VAT 04095221000 – ROMA) will be regulated by a proper contract that has to be signed with Quasar Progetto S.r.l. at the sign-in.

A copy of the contract is sent by email or certified email from the office of the Quasar Design University to the candidate who passes the admission interview, who regularly paid for the sign in.

### PAYMENT MODALITIES

bank transfer assigned to Quasar Progetto srl – Deutsche Bank

IBAN: IT55E0310403203000000822088