



## Study Plan

**School:** School of Sciences and Technology

**Degree:** Bachelor

**Course:** Landscape Architecture (cód. 639)

### 1st Year - 1st Semester

| Component code | Name                                   | Scientific Area Field            | ECTS | Duration | Hours |
|----------------|--|----------------------------------|------|----------|-------|
| PAO2073L       | Introduction to Landscape Architecture | Landscape Arts and Techniques    | 5    | Semester | 130   |
| PAO2074L       | Introduction to Ecology                | Environment and Ecology Sciences | 5    | Semester | 130   |
| PAO2075L       | Drawing I                              | Visual Arts                      | 6    | Semester | 156   |
| ARQ2076L       | Geometry and Architectural Drawing     | Architecture                     | 5    | Semester | 130   |
| GEO12324L      | Physical Geography I                   | Geography                        | 5    | Semester | 130   |
| ERU12325L      | Surveying                              | Rural Engineering                | 4    | Semester | 104   |

### 1st Year - 2nd Semester

| Component code | Name                               | Scientific Area Field            | ECTS | Duration | Hours |
|----------------|------------------------------------|----------------------------------|------|----------|-------|
| PAO2077L       | Landscape Theory and Design I      | Landscape Arts and Techniques    | 5    | Semester | 130   |
| BIO2078L       | Applied Phytodiversity             | Biological Sciences              | 6    | Semester | 156   |
| GEO12326L      | Physical Geography II              | Geography                        | 5    | Semester | 130   |
| PAO2079L       | Drawing II                         | Visual Arts                      | 4    | Semester | 104   |
| HIS2080L       | History of Art                     | History of the Art               | 5    | Semester | 130   |
| PAO2081L       | Terrestrial and Aquatic Ecosystems | Environment and Ecology Sciences | 5    | Semester | 130   |

### 2nd Year - 3rd Semester

| Component code | Name                           | Scientific Area Field         | ECTS | Duration | Hours |
|----------------|--------------------------------|-------------------------------|------|----------|-------|
| PAO2082L       | Theory and Landscape Design II | Landscape Arts and Techniques | 9    | Semester | 234   |
| PAO2083L       | Landscape Interpretation I     | Landscape Arts and Techniques | 12   | Semester | 312   |
| PAO2084L       | Landscape and Garden Art       | Landscape Arts and Techniques | 4    | Semester | 104   |



## 2nd Year - 3rd Semester

| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
|-------------------------------------|--|-------------------------------|------|----------|-------|
| <b>Options</b>                      |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO12327L                           | Techniques of digital expression and representation in landscape architecture. | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO12328L                           | Techniques of construction and management of green spaces                      | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2176L                            | Landscape Architecture in Portugal   | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2177L                            | Introduction to Soil and Water Bioengineering                                  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2175L                            | Construction Techniques with Vegetation  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| *** TRANSLATE ME:Optativa livre *** |  |                               |      |          |       |
| *** TRANSLATE ME:Estágio I ***      |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO2086L                            | Training Period I  | Landscape Arts and Techniques | 5    | Semester | 130   |

## 2nd Year - 4th Semester

| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
|-------------------------------------|--|-------------------------------|------|----------|-------|
| PAO2085L                            | Theory and Landscape Design III  | Landscape Arts and Techniques | 14   | Semester | 364   |
| PAO2087L                            | Landscape Interpretation II  | Landscape Arts and Techniques | 11   | Semester | 286   |
| *** TRANSLATE ME:Estágio I ***      |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO2086L                            | Training Period I  | Landscape Arts and Techniques | 5    | Semester | 130   |
| <b>Options</b>                      |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO12327L                           | Techniques of digital expression and representation in landscape architecture. | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO12328L                           | Techniques of construction and management of green spaces                      | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2176L                            | Landscape Architecture in Portugal   | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2177L                            | Introduction to Soil and Water Bioengineering                                  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2175L                            | Construction Techniques with Vegetation  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| *** TRANSLATE ME:Optativa livre *** |  |                               |      |          |       |

## 3rd Year - 5th Semester

| Component code | Name  | Scientific Area Field         | ECTS | Duration | Hours |
|----------------|---|-------------------------------|------|----------|-------|
| PAO2089L       | Theory and Landscape Design IV              | Landscape Arts and Techniques | 12.5 | Semester | 325   |
| PAO2091L       | Landscape Characterization and Assessment I | Landscape Arts and Techniques | 12.5 | Semester | 325   |



### 3rd Year - 5th Semester

| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
|-------------------------------------|--|-------------------------------|------|----------|-------|
| *** TRANSLATE ME:Estágio II ***     |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO2088L                            | Training Period II   | Landscape Arts and Techniques | 5    | Semester | 130   |
| <b>Options</b>                      |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO12327L                           | Techniques of digital expression and representation in landscape architecture. | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO12328L                           | Techniques of construction and management of green spaces                      | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2176L                            | Landscape Architecture in Portugal   | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2177L                            | Introduction to Soil and Water Bioengineering                                  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2175L                            | Construction Techniques with Vegetation  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| *** TRANSLATE ME:Optativa livre *** |  |                               |      |          |       |

### 3rd Year - 6th Semester

| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
|-------------------------------------|--|-------------------------------|------|----------|-------|
| PAO2090L                            | Theory and Landscape Design V  | Landscape Arts and Techniques | 10   | Semester | 260   |
| PAO2092L                            | Landscape Characterization and Assessment II                                   | Landscape Arts and Techniques | 12.5 | Semester | 325   |
| SOC2093L                            | Elements of Sociology  | Sociology                     | 2.5  | Semester | 65    |
| *** TRANSLATE ME:Estágio II ***     |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO2088L                            | Training Period II   | Landscape Arts and Techniques | 5    | Semester | 130   |
| <b>Options</b>                      |  |                               |      |          |       |
| Component code                      | Name   | Scientific Area Field         | ECTS | Duration | Hours |
| PAO12327L                           | Techniques of digital expression and representation in landscape architecture. | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO12328L                           | Techniques of construction and management of green spaces                      | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2176L                            | Landscape Architecture in Portugal   | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2177L                            | Introduction to Soil and Water Bioengineering                                  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| PAO2175L                            | Construction Techniques with Vegetation  | Landscape Arts and Techniques | 2.5  | Semester | 65    |
| *** TRANSLATE ME:Optativa livre *** |  |                               |      |          |       |



## Conditions for obtaining the Degree:

\*\*\* TRANSLATE ME: Para obtenção do grau de licenciado em Arquitetura Paisagista, é necessário obter aprovação a 170 ECTS em unidades curriculares obrigatórias e 10 ECTS em unidades curriculares optativas, distribuídas da seguinte forma:

1º Ano

1º Semestre:

6 UC Obrigatórias num total de 30 ECTS

2º Semestre

6 UC Obrigatórias num total de 30 ECTS

2º Ano

3º Semestre

3 UC Obrigatórias num total de 25 ECTS

Estágio I ou UC optativa a escolher do "Quadro das UC's optativas por área científicanum" total de 5 ECTS

4º Semestre

2 UC Obrigatórias num total de 25 ECTS

Estágio I no caso de não ter optado por o realizar no 3º semestre ou UC optativa a escolher do "Quadro das UC's optativas por área científicanum" num total de 5 ECTS

3º Ano

5º Semestre

2 UC Obrigatórias num total de 25 ECTS

Estágio II ou UC optativa a escolher do "Quadro das UC's optativas por área científicanum" num total de 5 ECTS

6º Semestre

3 UC Obrigatórias num total de 25 ECTS

Estágio II no caso de não ter optado por o realizar no 5º semestre ou UC optativa a escolher do "Quadro das UC's optativas por área científicanum" num total de 5 ECTS

Quadro das UC Optativas por área científica:

Áreas científicas

Sigla

Créditos

Artes e Técnicas da Paisagem (optativas do plano do curso)

ATP

2,5



## Program Contents

[Back](#)

### **Introduction to Landscape Architecture (PAO2073L)**

[Back](#)

### **Introduction to Ecology (PAO2074L)**

[Back](#)

### **Drawing I (PAO2075L)**

[Back](#)

### **Geometry and Architectural Drawing (ARQ2076L)**

[Back](#)

### **Physical Geography I (GEO12324L)**

The lighting of the terrestrial sphere: annual and diurnal variation of the height of the Sun; variation of the Earth illumination rhythms with latitude. The climate system. Solar radiation. Insolation over the globe, world latitude zones. The Atmosphere (composition and structure). Solar radiation and temperature. The long wave radiation. The global radiation budget. Annual cycle of air temperature. Land and oceans temperature contrasts. Atmospheric pressure and winds. Air masses and cyclone storms. Cold and warm fronts. Global distribution of surface pressure systems. Regional pressure systems and winds. Atmospheric moisture and precipitation. Condensation and the adiabatic processes. The hydrologic cycle and the soil-water balance. The distribution and diversity climatic zones of the Earth; the Köppen climate classification. The extreme climatic events and the natural hazards. Climatic global changes, prediction and mitigation.

[Back](#)

### **Surveying (ERU12325L)**

The main programmatic lines are:

A-Reviews (scales, angular units and it's conversions; elementary trigonometry);

B-Introduction to the concepts of geoid, ellipsoid, geographic coordinates, map projection systems, geodetic datum, geodetic network; rectangular plane coordinates (distance and direction calculations, coordinates transportation, orientation), introduction to notions of altimetry and planimetry for the interpretation and use of topographic maps, terrain cross sections and longitudinal cross sections, calculation of cut and fill volumes;

C-surveying: with optical level (geometric), with a theodolite (trigonometric) and topographic GPS (DGPS).

D-Introduction to Surveying software (Autodesk LandDesktop).

[Back](#)

### **Landscape Theory and Design I (PAO2077L)**



[Back](#)

### **Applied Phytodiversity (BIO2078L)**

Module I (8 weeks):

The basic structure of a higher plant;

Flow of water, nutrients and carbon within the plant;

The plant development and perception of the surrounding environment;

The adaptations of plants to environmental stress situations.

Module II (7 weeks):

Knowledge of morphological diversity of Spermatophyte and interpretation of adaptations to the environment.

Knowledge of the Rules of Botanical Nomenclature.

Knowledge of characteristics and evolutionary lines of the major taxonomic categories of Spermatophyta.

Acquisition of technics for handling plant material.

[Back](#)

### **Physical Geography II (GEO12326L)**

Theoretic

Tectonic provinces at the World (shields, platforms, continental basin, orogens).

Plate tectonics. Volcanism, the global pattern of volcanism, earthquakes and tectonic landforms. Folds and

faults. Landforms and rock structure. The ocean currents. The hydrologic cycle. Runoff, streams and

ground water. Landform made by running water and river systems. Marine erosion of coast. Main type of

coastlines. The sea level oscillations. Process and forms of glacier erosion and deposition. The ice age.

Fundamental causes of glaciations. Erosion of the wind. Landforms made by wind erosion and deposition.

.

Practical

Contours and topographic maps. Geographic and cartographic coordinates. Map scale. Relationship

between scales and areas. Contour interval and slope. Topographic profiles. Longitudinal river profiles.

Hypsographic curve, hipsometric curve. Geologic maps and structure sections.

[Back](#)

### **Drawing II (PAO2079L)**

[Back](#)

### **History of Art (HIS2080L)**

[Back](#)

### **Terrestrial and Aquatic Ecosystems (PAO2081L)**

[Back](#)

### **Theory and Landscape Design II (PAO2082L)**

[Back](#)

### **Landscape Interpretation I (PAO2083L)**



[Back](#)

### **Landscape and Garden Art (PAO2084L)**

[Back](#)

### **Techniques of digital expression and representation in landscape architecture. (PAO12327L)**

Introduction to the development of the first skills to use: Photoshop, Illustrator and CAD.

Essays the use of digital tools at different stages of the creative process:

- development of ideas (jumps) perspective of study;
- contribution in the production of the technical drawing;
- 3D modeling, rendering, manipulation of images and production of final perspectives;
- printing and / or viewing.

[Back](#)

### **Techniques of construction and management of green spaces (PAO12328L)**

- Planting and establishment of different kind of plant material
- Transplantation of large specimens
- Selection of plant material according to the specificity of the technical plans (planting design and technical specifications)
- Landscape maintenance schedule according to the specificity of the areas
- To evaluate the stability of arboreal specimens-diagnostic techniques
- Determining the patrimonial value of the arboreal species-Norma of Granada
- Management plans applied to studies case

[Back](#)

### **Landscape Architecture in Portugal (PAO2176L)**

[Back](#)

### **Introduction to Soil and Water Bioengineering (PAO2177L)**

[Back](#)

### **Construction Techniques with Vegetation (PAO2175L)**

Application of theoretical concepts to practical cases: Planting and establishment of different kind of plant material (trees, shrubs, herbaceous and lawns). Plant propagation techniques (seeding, cutting and split).

Management techniques adapted to a specific situation : weeding, hoeing, replacements of plants, pruning, replacement of stakes, pruning hedges,, fertilizing, mowing and improving soil aeration; Cleaning water features and cleaning of pavements.

Elimination of invasive plants.

Landscape maintenance schedule according to the specificity of the areas .

[Back](#)

### **Training Period I (PAO2086L)**

[Back](#)

### **Theory and Landscape Design III (PAO2085L)**



[Back](#)

**Landscape Interpretation II (PAO2087L)**

[Back](#)

**Theory and Landscape Design IV (PAO2089L)**

[Back](#)

**Landscape Characterization and Assessment I (PAO2091L)**

[Back](#)

**Training Period II (PAO2088L)**

[Back](#)

**Theory and Landscape Design V (PAO2090L)**

[Back](#)

**Landscape Characterization and Assessment II (PAO2092L)**

[Back](#)

**Elements of Sociology (SOC2093L)**