



## 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
PAO02073L	Introduction to Landscape Architecture	Landscape Arts and Techniques	5	Semester	130
PAO02074L	Introduction to Ecology	Environment and Ecology Sciences	5	Semester	130
PAO02075L	Drawing I	Visual Arts	6	Semester	156
ARQ02076L	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
PAO02077L	Landscape Theory and Design I	Landscape Arts and Techniques	5	Semester	130
BIO02078L	Applied Phytodiversity	Biological Sciences	6	Semester	156
GEO12326L	Physical Geography II	Geography	5	Semester	130
PAO02079L	Drawing II	Visual Arts	4	Semester	104
HIS02080L	History of Art	History of the Art	5	Semester	130
PAO02081L	Terrestrial and Aquatic Ecosystems	Environment and Ecology Sciences	5	Semester	130

### 2nd Year - 3rd Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
PAO02082L	Theory and Landscape Design II	Landscape Arts and Techniques	9	Semester	234
PAO02083L	Landscape Interpretation I	Landscape Arts and Techniques	12	Semester	312
PAO02084L	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
PAO02176L	Landscape Architecture in Portugal	Landscape Arts and Techniques	2.5	Semester	65
PAO02177L	Introduction to Soil and Water Bioengineering	Landscape Arts and Techniques	2.5	Semester	65
PAO02175L	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
PAO02086L	Training Period I	Landscape Arts and Techniques	5	Semester	130

## 2nd Year - 4th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
PAO02085L	Theory and Landscape Design III	Landscape Arts and Techniques	14	Semester	364
PAO02087L	Landscape Interpretation II	Landscape Arts and Techniques	11	Semester	286
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Component code	Name	Scientific Area Field	ECTS	Duration	Hours
PAO02086L	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
PAO02176L	Landscape Architecture in Portugal	Landscape Arts and Techniques	2.5	Semester	65
PAO02177L	Introduction to Soil and Water Bioengineering	Landscape Arts and Techniques	2.5	Semester	65
PAO02175L	Construction Techniques with Vegetation	Landscape Arts and Techniques	2.5	Semester	65
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## 3rd Year - 5th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
PAO02089L	Theory and Landscape Design IV	Landscape Arts and Techniques	12.5	Semester	325
PAO02091L	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
PAO02088L	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
PAO02176L	Landscape Architecture in Portugal	Landscape Arts and Techniques	2.5	Semester	65
PAO02177L	Introduction to Soil and Water Bioengineering	Landscape Arts and Techniques	2.5	Semester	65
PAO02175L	Construction Techniques with Vegetation	Landscape Arts and Techniques	2.5	Semester	65
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### 3rd Year - 6th Semester

Component code	Name	Scientific Area Field	ECTS	Duration	Hours
PAO02090L	Theory and Landscape Design V	Landscape Arts and Techniques	10	Semester	260
PAO02092L	Landscape Characterization and Assessment II	Landscape Arts and Techniques	12.5	Semester	325
SOC02093L	Elements of Sociology	Sociology	2.5	Semester	65
*** TRANSLATE ME:Estágio II ***					
Component code	Name	Scientific Area Field	ECTS	Duration	Hours
PAO02088L	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
PAO02176L	Landscape Architecture in Portugal	Landscape Arts and Techniques	2.5	Semester	65
PAO02177L	Introduction to Soil and Water Bioengineering	Landscape Arts and Techniques	2.5	Semester	65
PAO02175L	Construction Techniques with Vegetation	Landscape Arts and Techniques	2.5	Semester	65
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## 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:

1<sup>o</sup> Ano

1<sup>o</sup> Semestre:

6 UC Obrigatórias num total de 30 ECTS

2<sup>o</sup> Semestre

6 UC Obrigatórias num total de 30 ECTS

2<sup>o</sup> Ano

3<sup>o</sup> 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

4<sup>o</sup> Semestre

2 UC Obrigatórias num total de 25 ECTS

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

3<sup>o</sup> Ano

5<sup>o</sup> 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

6<sup>o</sup> Semestre

3 UC Obrigatórias num total de 25 ECTS

Estágio II no caso de não ter optado por o realizar no 5<sup>o</sup> 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



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### **Introduction to Landscape Architecture (PAO02073L)**

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### **Drawing I (PAO02075L)**

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### **Geometry and Architectural Drawing (ARQ02076L)**

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### **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.

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### **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).

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### **Landscape Theory and Design I (PAO02077L)**



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### **Applied Phytodiversity (BIO02078L)**

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.

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### **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.

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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.

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### **Drawing II (PAO02079L)**

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### **History of Art (HIS02080L)**

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### **Terrestrial and Aquatic Ecosystems (PAO02081L)**

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### **Theory and Landscape Design II (PAO02082L)**

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### **Landscape Interpretation I (PAO02083L)**



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### **Landscape and Garden Art (PAO02084L)**

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### **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.

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### **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

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### **Landscape Architecture in Portugal (PAO02176L)**

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### **Introduction to Soil and Water Bioengineering (PAO02177L)**

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### **Construction Techniques with Vegetation (PAO02175L)**

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 .

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### **Training Period I (PAO02086L)**

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### **Theory and Landscape Design III (PAO02085L)**



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**Elements of Sociology (SOC02093L)**