

# *Master* **Biological Sciences**

**Title Awarded:** Master in Biological Sciences

**Number of credits:** 60

**Internal Rule of Creation:** Agreement No.15 of September 2, 2011

**Qualified Registration Resolution No:** 008888 of August 27, 2019

**SNIES code:** 101493

**Duration:** 2 years (4 Semesters)

**Modality:** In-person

**Methodological Strategy:** In-person with pedagogical meetings every fifteen (15) days

**Admission period:** Annual

**Headquarters:** Florencia (Caquetá)

## **MISSION AND VISION**

### **Mission:**

The Master in Biological Sciences at the Universidad de la Amazonia is a unique postgraduate program in the region with a research-based approach that focuses on training highly qualified professionals in the scientific field, promoting critical thinking, social skills and innovation. Through interdisciplinary projects, it seeks academic excellence and addresses specific challenges of the Colombian Amazon Region, contributing to regional and international development, and committing to the preservation of the Amazon as a biodiverse power on a global scale.

### **Vision (2020 – 2030):**

By 2030, the Master in Biological Sciences at the Universidad de la Amazonia will be recognized as a leader in the training of Masters with the capacity to propose, manage, implement and communicate high-level scientific research with regional, national and international impact, framed in the conservation and use of biodiversity, and the socio-environmental resilience of the territory, which strategically promote the development of the Amazon region, consolidating the Amazon as a territory conducive to good living, through its continuous research, scientific, technological and innovative development



## OBJECTIVES

### Main Objective:

To train researchers capable of developing, applying and disseminating knowledge, methodologies and techniques in the Biological Sciences, through the management and execution of basic and applied research problems, with special emphasis on the Colombian Amazon Region, which allows them to actively participate in decision-making and integrate the ecological and social complexities that they entail, to contribute to regional, national and international development.

### Specific Objectives:

- To develop competencies in professionals that allow them to carry out research projects associated with biological sciences that lead to the generation of new knowledge.
- To promote the training of highly scientific human talent with fundamental and advanced knowledge of biological sciences with a view to the development of the region.
- To promote interdisciplinary research, through the strengthening and alliances of institutional and inter-institutional groups, with the formation of national and international thematic networks, in various areas of biological sciences.

## PROFILE

### Professional Profile

The graduate of the Master in Biological Sciences from the University of the Amazon is configured as a researcher with the ability to address problems in the field of biological sciences and lead multidisciplinary groups at a regional, national and international level, offering responses to scientific, socioeconomic, cultural and environmental problems. Their ability to carry out research in various biological and environmental fields contributes directly to the sustainable development of the region. In addition, he/she stands out for his/her ability to effectively communicate, both orally and in writing, the results and interpretations of his/her research. He/she will be a well-rounded professional with critical thinking, a high sense of ethical responsibility for society and his/her profession, and the ability to face the challenges of a globalized world.



## STUDY PROGRAM

The current curriculum of the Master in Biological Sciences adopted by Agreement 52 of 2018 of the University Academic Council and Agreement 02 of 2021 of the University Academic Council

### SEMESTER I

In-depth I\*  
Univariate Statistics  
Amazonian Ecosystems  
Research Seminar I

### SEMESTER II

In-depth II\*  
In-depth III\*  
Multivariate Statistics  
Research Seminar II

### SEMESTER III

Master Thesis I

### SEMESTER IV

Master Thesis II

\*The academic spaces are aligned to the Research Lines of the Program.

## RESEARCH

### Research Lines:

- Biodiversity and Conservation
- Ecology and Environmental Services
- Natural Products and Bioprospecting.

## RESEARCH GROUPS

- **Mycology – GINMUA (COL0071015) – Líder: Dr. Armando Sterling Cuéllar**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000004516>
- **Amazonian natural products - GRIPRONAZ (COL0125269) – Líder: Dra. Liceth Natalia Cuellar Alvarez**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=000000000012662>
- **Computational Strategies in Chemistry – ESCO – Líder: Dr. Elkin Alberto Tilvez Marrugo**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=000000000015856>
- **Entomology University of the Amazon – GIEUA (COL185052) – Líder: Dr. Yardany Ramos Pastrana**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=000000000018707>
- **Biodiversity and Amazon Development – BYDA (COL0107922) – Líder: Dra. Betselene Murcia Ordoñez**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=000000000010857>



- **Materials, Environment and Development – MADE (COL0142565) – Líder: Dra. Lis Manrique Losada**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000014461>
- **Quality and Preservation of Aquatic Ecosystems –CAPREA (COL0025308) – Líder: Dr. Marlon Peláez Rodríguez**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000000649>
- **Wildlife (COL0004899) – Líder: Dr. Alexander Velásquez Valencia**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000000168>
- **Agroforestry Systems for the Amazon – GISAPA (COL0000049) – Líder: Dr. Faver Álvarez Carrillo**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000000169>
- **Agroecosystems and Conservation in Amazonian Forests – GAIA (COL0122589) Líder: Edwin Trujillo Trujillo**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000012393>
- **Biotechnology and Food Quality Control – BCCA (COL0086671) – Líder: Paola Andrea García Rincón**  
<https://scienti.minciencias.gov.co/gruplac/jsp/visualiza/visualizagr.jsp?nro=00000000007963>

## SUPPORT UNITS

- Language Laboratory
- Physical Sciences Laboratories
- Mechanics Laboratory
- Electricity Laboratory
- Quantum Physics Laboratory
- Optics Laboratory
- Physics Laboratory Warehouse
- Museum of Science, Games and Technology
- Biology Laboratory
- Chemistry Laboratory
- Atomic Absorption and HPLC Chromatography Laboratory
- Instrumental Analysis Laboratory
- Research Laboratory
- Biosciences Laboratory



## RESEARCH CENTERS

- Andean-Amazonian Biodiversity Research Center – INBIANAM

<http://www.centroinbianam.com/about.html>

- César Augusto Estrada González Amazonian Research Center – MACAGUAL

<https://www.uniamazonia.edu.co/v10/index.php/otras-dependencias/centro-de-investigaciones-macagual.html>

## ADVISORY COMMITTEE

The Advisory Committee of the The Master in Biological Sciences is established according to Agreement No. 27 of May 31, 2012 of the Faculty of Basic Sciences.

### MEMBERS:

#### President: Program Coordinator

- MSc. Yeny Rocío Virguez Díaz

#### Professor Representative:

- Dra. Paola Villegas Guzman
- Dra. Lis Manrique Losada
- Dra. Liceth Natalia Cuellar

#### Student Representative:

- Karen Yissed Anturi Herrera
- Luis Felipe Toledo Carvajal

#### Graduate Representative

- MSc. Tatiana Karolina Andrade

## ADMISSION REQUIREMENTS

1. Applicants to the Graduate Academic Program must submit the documents listed below to the master coordination:
2. -CV in Civil Service format
3. -Photocopy of scientific publications (if applicable)
4. -Photocopy of the citizenship card enlarged to 150%
5. -Original Certificate of Undergraduate Grades
6. -Certificate of affiliation and status of the EPS, ARS or SISBEN
7. -Two letters of recommendation from professionals with a minimum master degree, in which the candidate suitability to pursue the master degree is mentioned.
8. - Research proposal that will contain: Title, Summary, Problem, Justification, Objectives,
9. Methodology, Budget, Schedule and Bibliography.



10. -Two 3 X 4 photographs.
11. -Submit the completed Intellectual Property Form FO-M-IV-05-03
12. -Have an interview with the Admissions Committee.
13. -Photocopy of the candidate electoral certificate from the last national elections
14. (OPTIONAL). Once the admission process and payment of the tuition fee have been completed, the respective receipt must be submitted to the Admissions, Registration and Academic Control Division, to be attached to the student academic record.

### **COSTS**

- Registration fee: 0.25 Current Legal Monthly Minimum Wages (COL)
- Tuition fee: 6 Current Legal Monthly Minimum Wages (COL)

### **CONTACT Coordinator**

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