



## Center for International Programs and Sustainability Studies

Course name: Ecological Photography

Course code: PHOT 2100

Total contact hours: 60

### DESCRIPTION

This foundation course is designed to introduce and enhance students' knowledge of the fundamentals of photography. Through exploratory and practical knowledge students will discover the importance and impact of a technical methodology within a conceptual framework to deliver effective visual communication with a viewing public. The basics of image creation will be properly understood and polished by students, who will also gain the confidence to apply their newfound knowledge to a variety of photographic circumstances and mediums. We will cover a broad range of fundamental principles, from camera control to composition and creativity. The basic photography skills that will be seen shall provide students with a foundation to grow upon, while strengthening their capabilities to take on photography projects related to their individual needs, whether practical or purely expressive, while emphasizing issues related to nature and ecology.

In addition, students will have the opportunity to explore Costa Rica's diverse ecosystems with the goal of understanding its importance and the resources that make it unique. Terms like "Exposure Triangle" "Aperture, Shutter Speed & ISO" and the importance of photography in the processes of environmental conservation will be seen in the course. All the basic needs of using a camera as well as the documentation of the direct damages of development and its corresponding consumerism.

## **COURSE PRE-REQUISITES**

A DSLR (digital single-lens reflex) digital camera that has interchangeable lenses and full manual control of aperture, shutter speed, depth of field and focus functions is recommended. It should meet the following criteria: Minimum of 10 megapixels, full manual control of aperture, shutter speed, focus and flash, capability for interchangeable lenses, zoom lens (18mm-55mm) (up to 135 mm preferred), Photo tripod, Memory card.

Common “point-and-shoot” and smartphone cameras with fixed lenses (lenses that may not be removed and changed for other lenses) are not ideal for course use, as they do not typically offer manual control of basic camera functions or adequate range of aperture control. This lack prevents users of such cameras from completing required course assignments.

## **OPTIONAL RECOMMENDATIONS**

The following items are not required but are recommended to facilitate flexibility, usability, and protection of your camera:

- Neutral density filter.
- Polarizing filter (Highly Recommended).
- Skylight or UV filter.
- Carrying case.
- Spare Battery.
- Extra SDHC memory cards.
- Photo tripod.
- While you may use any digital camera, please make sure any DSLR camera selected has manual control of aperture, shutter speed and focus.

## **AUDIENCE**

This course is structured for international students attending the Study Abroad Program at an LCI Education university campus. However, courses are not exclusive to foreigners so local degree-seeking students may enroll in this course. Some of the courses are also taught

in Spanish as part of our Bachelor's in Sustainability Management or Business Administration programs.

This is a theoretical-practical course and explores/responds to the following inquiry according to the professional/disciplinary profile:

**How do I capture an image in a natural context which, in addition to documenting the beauty of nature and promoting the conservation of the environment, also manages to elicit an emotional reaction in the viewer?**

To answer this question, the following **generative topics** will be studied:

- Basic knowledge of the functions of the camera and fundamental concepts of photography (ISO, aperture, shutter speed, exposure control, depth of field, focal length, among others).
- Understanding of the basis of design and photographic composition.
- Color psychology and its uses in contemporary photography.
- Ethical foundations of photography.
- Importance of photography in the processes of conservation and preservation of the environment.
- National Parks and conservation policies of Costa Rica.
- Technological innovation, Bioethics and Sustainability.
- Editing basics for beginners
- Practical application of ecological photography in the Costa Rican context.

Throughout the course the following **skills** will be promoted:

- Ability to properly use a semi-professional camera.
- Ability to promote the correct and ethical use of photography.
- Ability to observe and analyze the environment in greater detail.

- Ability to analyze the impact of ecological photography on the processes of conservation of the world's natural heritage.
- Ability to apply basic photography technique like exposure, rules of composition, editing, etc., in order to obtain an effective photograph.

Among the **values** and **attitudes** that will be promoted among students are the following:

- Creative thinking.
- Observation skills.
- Collateral thinking.
- Communication intelligence.
- Environmental awareness.
- Interest in learning to learn.

### **COMPETENCIES, CRITERIA AND EVIDENCE**

Competencies for the VERITAS University are reflexive and integral actions that respond to a professional profile and to the problems of a specific context, with suitability and ethical commitment, integrating the know how to be, the know-how do to, and the knowledge to know in a perspective of improvement.

Below are both the disciplinary and general competencies, linked to their criteria and evidence of performance for this course.

<b>Competencies</b>	<b>Key competences</b>	<b>Learning Assessments</b>
<p><b>Photographic Technique</b></p> <p>Integrates the technical knowledge of the camera with</p>	<p>Ability to technically handle the basic concepts of photography, both in editing and in shooting.</p>	<p>Practical exercises.</p>

the rules of composition and study of the subject in order to obtain an effective photograph.		
<b>Academic Discipline</b> The creative uses of the medium, critical framework for the interpretation of creative images to further visual literacy.	Discusses the work of both national and international photographers working on ecological photography and conservation.	Study of photographers Investigation report.
	Promotes the review of ethical issues related to photography.	Participatory workshop on ethics, bioethics, and sustainability.
<b>General</b>		
Integrates the knowledge, skills and attitudes necessary to learn continuously taking into consideration effective development in the knowledge society.	Learn to learn.	Daily in-class photography practices.
Develops the knowledge, skills and attitudes necessary to learn to communicate through images.	Communicate disciplinary thoughts in iconic form.	Thematic discussion record.
Integrates the knowledge, skills and attitudes necessary to learn the techniques of teamwork and leadership.	Team work and leadership.	Collaborative work record.
Develops the skills and attitudes necessary to learn interpersonal communication techniques.	Connect well with others. Manage and resolve conflicts. Negotiate knowing how to inspire confidence and empathy. Speak responsibly, listen in depth.	Research Presentation Participatory workshop on regulatory frameworks and their practical application.

## **COURSE CONTENTS:**

### **TOPIC 1. BASIC KNOWLEDGE OF THE FUNCTIONS OF THE CAMERA AND FUNDAMENTAL CONCEPTS OF PHOTOGRAPHY**

- a) Brief history of photography and its impact.
- b) Theoretical foundations of photography (ISO, aperture, shutter speed, exposure control, depth of field, focal length, overexposed, under exposed, dynamic range etc.).
- c) Practical examples of photography.

### **TOPIC 2. UNDERSTANDING THE BASIS OF PHOTOGRAPHIC COMPOSITION**

- a) The theoretical and conceptual bases of composition in history.
- b) How do we apply the rules of composition and study of the subject in order to obtain an effective photograph?
- c) Practical aspects of photographic composition.23

### **TOPIC 3. PSYCHOLOGY OF COLOR AND ITS USES IN CONTEMPORARY PHOTOGRAPHY**

- a) Implications of color in contemporary photography.
- b) The behavior of light, the visible spectrum, human vision.
- c) Psychology and color: how can we use color to tell stories.
- d) Conscious integration of color in photography.

### **TOPIC 4. ETHICAL FOUNDATIONS AND LEGALITY OF THE IMAGE AND PHOTOGRAPHY**

- a) Fundamentals of Copyright in Photography.
- b) Photography and the law.
- c) Case studies that present ethical-photographic problems.

## **TOPIC 5. IMPORTANCE OF PHOTOGRAPHY IN THE PROCESSES OF CONSERVATION AND PRESERVATION OF THE ENVIRONMENT.**

- a) Fundamentals of ecological photography, conservation photography, tourist photography and environmental portrait.
- b) Raising Awareness through Photography.
- c) Aiding Citizen Science-based Research.
- d) Influence of photography on conservation processes worldwide.

## **TOPIC 6. NATIONAL PARKS AND CONSERVATION POLICIES OF COSTA RICA.**

- a) Brief study of Costa Rica's conservation policies.
- b) Analysis of the natural resources of the National Parks of Costa Rica.

## **TOPIC 7. TECHNOLOGICAL INNOVATION, BIOETHICS AND SUSTAINABILITY**

- a) Aspects related to photography and technological advances at the environmental level.
- b) Study of bioethical aspects.
- c) Implications of sustainability in the development of a country.

## **TOPIC 8. EDITING SKILLS**

- a) Essential Lightroom editing.
- b) Insider secrets and skills to Photoshop retouching.

## **TOPIC 9. PRACTICAL APPLICATION OF ECOLOGICAL PHOTOGRAPHY IN THE COSTA RICAN CONTEXT**

- a) Guided tours to practice ecological photography.

## **METHODOLOGY**

This course implements a methodology that integrates the manual functions of the camera to enhance students' knowledge of the fundamentals of photography. Through exploratory and practical knowledge students will discover and analyze the importance and impact of the environment and Costa Rica's ecosystems within a university context, applying an ethical framework.

During this process the professor's role will be to guide and facilitate the teaching and learning process, allowing students to create and self-regulate their own learning.

This methodology is supported epistemically in the learning model by comprehensive competences and promotes communication, research and exploration skills, through participatory workshops to solve problems and practical cases.

## **LEARNING STRATEGIES**

The following learning strategies will be developed:

- The case study consists of providing a series of descriptions of a specific situation that may be real or hypothetical but constructed with characteristics analogous to those presented in reality for clear purposes, presented through written material, enabling participants to initially raise divergent problems that do not have a single solution, followed by generating solutions. The topics to be analyzed are: children's photography, commercial photography, ethical foundations of photography, use of images and publication of photographs on social networks.
- Research allows us to acquire new knowledge in the world around us, as it generates complex reactions and allows us to draw conclusions from the phenomena we study.
- The participative Workshops facilitate the learning process through the discussion and exposure of different points of view and different resources that integrate and complement the knowledge imparted in the course.
- Practices of each of the topics discussed and analyzed in class to reinforce learning and to solve possible doubts that arise during the process.



## EDUCATIONAL RESOURCES

Among the didactic resources that will be used in the course, the following are cited: Bibliographic resources that are available both in the library of the institution, and on the internet to carry out documentary research and multimedia equipment. The student must allow extra class time to do the final work and take advantage of the theoretical classes to attend the teaching orientations and clarify doubts. The University provides the facility of free access to the Internet and the use of computers. The student will be able to make use during the hours of independent work of the library of the institution, of the study rooms or of the computer labs, as well as of any other areas that he / she decides in the campus of the University, since it is equipped with free wireless Internet to use by all students, teachers and administrative staff.

## LEARNING EVALUATION

Evaluation compiles and evaluates evidence by taking into account feedback providing pre-established criteria. The course evaluation must be aligned with the competencies and the teaching mythology. There is a rubric for each evaluation resource. Even though the rubric grants a grade, it is also a quantitative and qualitative description of the students' performance. The rubrics include the core and discipline key competences.

ASSIGNMENTS	PERCENTAGE VALUE
<p><b>Exercises and after class work: (5% each)</b></p> <ul style="list-style-type: none"> <li>○ Long exposure (slow shutter speed).</li> <li>○ Freezing exercises (fast shutter speed).</li> <li>○ Aperture priority.</li> <li>○ Rules of composition.</li> <li>○ Exposure Triangle.</li> <li>○ Street and cultural photography.</li> <li>○ Self-portrait vs. Selfie.</li> <li>○ Conceptual photography.</li> </ul>	<p><b>50%</b></p>

<ul style="list-style-type: none"> <li>○ Editing with Lightroom.</li> <li>○ Applying Photoshop.</li> </ul>	
<p><b>Class work (5% each)</b></p> <ul style="list-style-type: none"> <li>○ Case study analysis – Workshops.</li> <li>○ Participation in class.</li> <li>○ Attendance.</li> </ul>	<b>15%</b>
<ul style="list-style-type: none"> <li>○ <b>Investigation: (7% each)</b> Finding and examining the work of a Costa Rican photographer.</li> <li>○ Exposition and presentation of an international photographer who works in the field of ecological photography and conservation.</li> <li>○ Report on James Nachtway.</li> </ul>	<b>20%</b>
<ul style="list-style-type: none"> <li>○ Final Project</li> </ul>	<b>15%</b>
<b>TOTAL POINTS</b>	<b>100%</b>

## **LEARNING STRATEGIES**

To assess the resolution of practical exercises:

### **1. Case study**

The case study method promotes in the students three basic aspects: knowledge management, reflective practice, and adaptation to changes. With knowledge management, students are expected to acquire the strategies and techniques that allow them to learn by themselves; this implies the awareness of the assimilation, reflection and internalization of knowledge so that, finally, it can value and deepen from a personal option. Ten practical exercises will be evaluated, each with a value of 5% for a total value of 50%.

## 2. Research Project:

The research project allows us to learn new knowledge in the world around us, as it generates complex reactions and allows us to draw conclusions from the phenomena we study. One research is valued, with a total value of 10%.

## 3. Participatory workshop:

The participatory workshop is focused on the discussion of issues related to photography and sustainability from different points of view, integrating the knowledge offered in class. This process makes it possible to take responsibility for the facts, develop a critical attitude and put into practice the ability to make decisions during the process of learning to learn. Value 10%

## ATTENDANCE

### Regarding classes:

1. Students are only allowed a two (2) **non-consecutive (back-to-back) class absences**. A student shall fail the course if more than two absences are registered by the professor. Administration does not control attendance.
2. Three **late arrivals** to class (arrival after the first 15 minutes) are treated as one absence. Attending class 30 minutes late without an official justification will also count as an absence.
3. In the case of an **absence from any assignment evaluated in class** (presentations, evaluations, field trips, etc.) a student will be given a grade of zero unless an official document is presented within **one week** of the absence.
4. If a student presents an official document to excuse the absence, the missed assignment is to be presented on that same day.

### Regarding field trips:

5. An unjustified **absence on a field trip** will immediately result in the loss of all points assigned to that specific trip. However, if an official document justifying the absence is presented, 50% of the assignment points may be obtained upon presentation of a complementary research assignment, to be agreed upon with the professor, within one week of the field trip.
6. An absence on a field trip may be justified should two course field trips coincide. In such a case, and to avoid losing points, students shall be able to opt for carrying out a research assignment.

### CODE OF CONDUCT

Professors have the right to expel a student from the classroom should he / she/ they:

1. Be disruptive in the classroom.
2. Behave in a disrespectful way.
3. Be under the influence of alcohol.
4. Be under the influence of any illegal drug.
5. Shows hygiene or odor problems that may disturb other students.

### ELECTRONIC DEVICES

The use of cell phones, smartphones, or other mobile communication devices is disruptive and is therefore prohibited during class. **Please turn all devices OFF and put them away** when class begins. Devices may be used only when the professor assigns a specific activity and allows the use of devices for internet search or recording. Those who fail to comply with the rule must leave the classroom for the remainder of the class period. Using devices

while the professor or other peers are lecturing, or presenting is perceived as a lack of interest and disrespectful.

## **STUDY ABROAD PROGRAM POLICIES**

The student must comply with the provisions of the Study Abroad Program Policies available on the Canvas/Omnivox platform.

## **BIBLIOGRAPHY :**

**Azoulay, P.** (1998). *The adventure of **photography**. 150 years of the photographic imagen.* Estados Unidos. [DVD.DOC.EU 0020]

**Evening, M.** (2009). *Adobe Photoshop **CS4** for Photographers. A Professional Image Editor's Guide to the Creative use of Photoshop for the Macintosh and PC.* United States: Focal Press. [IMF.W 0061]

**London, B.** (2002). *Photography (7<sup>a</sup> ed.).* Estados Unidos: Prentice Hall. [IMF.T 0055]

**McCollough, F.** (2008). *Complete Guide to High Dynamic Range Digital Photography.* United States: Lark Books. [IMF.W 0056]

**Varis, L.** (2001). *Digital **Photography** for Creative Professionals: From photo shoot to image output.* Estados Unidos: Rockport. [IMF.W 0002]

**Tarantino, C.** (2003). *Step by Step 004. Digital Photo Retouching.* Cambridge, England: ILEX

## CHRONOGRAM

WEEK	SUB-COMPETENCIES	CONTENTS	LEARNING STRATEGY
1	PHOTOGRAPHY TECHNIQUE.	Topic 1: Basic knowledge of the camera functions and core concepts for photography.	Presentation of the course. Topic analysis.
2	PHOTOGRAPHY TECHNIQUE: UNDERSTANDING THE MANUAL MODE.	A brief history of photography and its impact. Learning the basics: What is Manuel Mode, why should we use it.	Lecture. Practice Exercises.
3		Learning the fundamentals: Shutter, shutter speeds. Aperture and "F" numbers, depth of field. ISO sensitivity, grain and noise. Focal distance. Sharpness and focus. Exposure control.  Practical examples of photography.	Lecture. Practice Exercises.
4	PHOTOGRAPHY TECHNIQUE: EXPOSURE.	Review last weeks topics. Exposure, overexposure, underexposure. Long exposure and the effects this has in our photographs.	Lecture. Practice Exercises.
5	PHOTOGRAPHY TECHNIQUE: COMPOSITION, THE BASICS.	Topic 2: The theoretical and conceptual basis of the composition; the law of the thirds and golden points, concept of plans, rhythm, and perspective.	Lecture. Practice Exercises.

6	<b>PHOTOGRAPHY TECHNIQUE: COLOR PSYCOLOGY.</b>	<p>Topic 3: Color Psychology and its uses in contemporary photography.</p> <p>The behavior of light, the visible spectrum, human vision.</p> <p>Psychology and color: how can we use color to tell stories.</p> <p>Conscious integration of color in photography.</p> <p>Consenting color integration in photography as a compositional resource.</p>	<p>Lecture.</p> <p>Practice Exercises.</p>
7	<b>ACADEMIC DISCIPLINE: PHOTOGRAPHY ETHICS.</b>	<p>Topic 4. Ethical Fundamentals of Image and photography fundamentals of copyright in photography</p> <p>Photography and the law: who, what and when is it ok for me to take photos.</p> <p>Case studies presenting ethical-photographic problems</p>	<p>Topic analysis</p> <p>Participatory workshop about ethics, bioethics, and sustainability.</p>
8	<b>ACADEMIC DISCIPLINE: ECOLOGICAL PHOTOGRAPHY AND CONSERVATION.</b>	<p>Topic 5. Importance of photography in the processes of conservation and preservation of the environment.</p>	<p>Presentation and research paper</p> <p>Identification of conservation processes where photography has played an important role.</p>

9	<b>ACADEMIC DISCIPLINE: ECOLOGICAL PHOTOGRAPHY AND CONSERVATION.</b>	Continuation Topic 5. Fundamentals of ecological photography, conservation photography, tourist photography and environmental portrait.  Influence of photography on conservation processes worldwide  Student presentation on photographers	Presentation and research paper
10	<b>ACADEMIC DISCIPLINE: A BRIEF STUDY OF COSTA RICA</b>	Topic 6. National parks and conservation policies of Costa Rica.  A brief study of Costa Rica's conservation policies  Analysis of the natural resources of Costa Rica's national parks.	Lectures  Topic analysis
11	<b>GENERAL: PHOTOGRAPHY AND TECHNOLOGICAL ADVANCES</b>	Topic 7. Technological innovation, bioethics, and sustainability  Aspects related to photography and technological advances at the environmental level  Study of bioethical aspects implications of sustainability in the development of a country.	Lecture  Participatory workshop about ethics, bioethics, and sustainability.
12	<b>PHOTOGRAPHY TECHNIQUE: LIGHTROOM EDITING</b>	Topic 8. Editing: Lightroom  Introduction to lightroom, how to import images, develop tab navigation, exposure, and histogram, adjust white balance & learn to tone landscapes, clone and heal, adjustment brushes, walkthrough part 1, walkthrough part 2, how to export images	Lecture  Participatory workshop  Practice Exercises



13	<b>PHOTOGRAPHY TECHNIQUE: PHOTOSHOP EDITING</b>	Continuation Topic 8. Photoshop  General retouching, pen mask, Dodge & Burn, Perspective distortion, Brightness & Contrast, Patching & Blending, Color & Gradients Overlays, Type Editing.	Lecture  Participatory workshop  Practice Exercises
14	<b>ACADEMIC DISCIPLINE: PRACTICAL APPLICATION</b>	Topic 9. Practical application of ecological photography in the Costa Rican context  Guided tours to practice ecological photography	Practice Exercises
15	<b>GENERAL: GUIDED TOUR</b>	Continuation Topic 9. Practical application of ecological photography in the Costa Rican context  Guided tours to practice ecological photography	Practice Exercises