ISARA-Lyon is a specialized university offering courses on Agriculture, Food and Environmental Sciences. Our summer school is open to international undergraduates with a Science or Humanities major from beginning of June to mid-July. It is a comprehensive program of French language and culture lessons and scientific courses on Agroecology and Sustainable Agriculture in English, excursions, visits and hands-on learning opportunities.

Make the world your classroom. Perfect your intercultural skills while savoring the beauty Lyon and its surroundings has to offer. Student accommodation as well as ISARA-Lyon, are in the heart of town, enabling easy access and multiple opportunities to discover different facets of the city.

France’s strong agrarian tradition together with its appreciation of fine food and wine makes it an ideal destination to learn how French and European agriculture is managed dealing with the many challenges facing the preservation of natural resources and sustainable food systems.

More information on our [website](#) or you could contact the coordinator: sverneret@isara.fr

<table>
<thead>
<tr>
<th>Total of ECTS</th>
<th>Contact hours</th>
<th>Project work</th>
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<tbody>
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<td>Tutorials</td>
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Personal work = Contact hours x2

* ECTS= European Credit Transfer System
Sustainable Agriculture and Food System (ISARA-Lyon) *

<table>
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<tr>
<th>Aurélie FERRER</th>
<th>Lectures</th>
<th>Tutorials</th>
<th>Practicals</th>
<th>Field Trips</th>
<th>Supervised work</th>
<th>Evaluation</th>
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<td>35h</td>
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OBJECTIVE :

The programme aims to provide students with a comprehensive overview of agroecology and sustainable food systems. It presents:
- The different definitions of agroecology across the world (movement, science, practices)
- The different agroecological practices and their implementation in today’s agriculture
- The stakes and challenges of the implementation of agroecological practices in various contexts and on various territories (large scale field crops, areas of dairy production, mountains area…)
- The different conditions (agronomic, zootechnical and socio-economic) necessary to achieve good agroecological performance in the production systems and the consequent multidisciplinary approach needed to make production systems enter into an agroecological transition.

Then the link is made between food production and supply chain organization as well as between production processes/modes and product quality. The program presents the sustainable food systems through the study of local and short food supply chains, their role in the agroecological transition of the production systems and their link with territory. The question of local, national and European policies concerning agroecology and food systems is also addressed.

PROGRAMME

GENERAL INTRODUCTION AND PRESENTATION OF GUIDELINES (30 min lecture) - Aurélie Ferrer

This introductory session presents the objectives and organization of the summer school and the evaluation process.

INTRODUCTION TO AGROECOLOGY (1h30 lecture) - Alexander Wezel

Students are provided with an overview of the different definitions, interpretations, and approaches of agroecology existing today. More specifically, students discuss the scientific approaches and the situation of agroecology in their home countries. In addition, an overview of agroecological practices is given and some country cases presented to better understand the history and evolution of agroecology in the world.

AGROECOLOGICAL PRACTICES FOR PEST CONTROL (0.5h lecture + 7h field trip +1h practicals) - Aurélie Ferrer

Pest management is a crucial challenge for sustainable agriculture. Based on agroecological management principles, several practices aim to improve crop pest control and could be combined, e.g. crop rotation, cultivar mixing, use of natural pesticides, push pull systems, biological control with conservation of pest natural enemies.

Biological control practices produce promising results especially in horticultural farms. The goal of the lecture and the field trip is to discover different agroecological infrastructures (e.g. landscape elements, “natural enemies’ production units”) and practices implemented by a market gardener on his farm to favour local population of natural enemies to protect his crops from pests. An insect field sampling at the end of the visit enables students to better assess insect diversity on the farm, and...
especially the diversity in natural enemies. This field trip is also an opportunity for students to meet and discuss with the farmer and to share and compare their experiences and knowledge of biological control practices in different parts of the world.

FISH POND SYSTEMS IN AGRICULTURAL LANDSCAPSES (3hpracticals+ 8h field trip)- Benoit Sarrazin - Joël Robin

Fish pond systems, their characteristics and surrounding agricultural systems are illustrated through a case study taken from the Dombes region, close to Lyon. This didactic activity includes two different parts:
- first, students attend a preparatory lecture. They learn to use spatial analysis of land use data generated by remote sensing in a geographical information system (GIS) to assess ecological risks for fish ponds in agricultural landscapes. They use spatial analyses to locate pond exposed to agricultural nonpoint source pollution
- then students and professors go on a field trip in the Dombes area. The influence of pond fisheries and agricultural practices on biodiversity as well as methods of biodiversity evaluation (through the presence of aquatic plants, dragonflies and amphibians) are investigated during this visit.
This course also involves a socio-economic approach with the analysis of the technical and socio-economic characteristics of farms and the study of local stakeholders and their implication in the conservation and management of pond biodiversity.

AGROECOLOGY IN LIVESTOCK FARMING SYSTEM: case study in mountain area in France (2 days field trip+ 1h lecture + 1h practicals) – Robin Collombet

This activity addresses the crucial question: how can agroecology be implemented in livestock farming system? To discover the principles which shape agroecological farming system, students visit farms and meet different stakeholders of the environment in the breathtaking landscape of French mountains. This two-day tour gives a large overview on the diversity of principles and practices implemented in different types of farming systems: dairy cows, goat or sheep farming, beekeepers, poultry or pig production. The visits are organized to examine different farming practices contributing to the sustainability of livestock farming system in this area: feeding system, animal health and welfare management, recycling nutriments. Furthermore, discussions with stakeholders and managers of the surroundings landscapes (e.g. natural parks) bring more insight on the costs and benefits of maintaining livestock farming activities in mountains areas: biodiversity preservation, cohabitation with wild life, tourism, inhabitants, overgrowing control, maintaining territory vitality, and the beauty of the landscape are at stake.

SOCIOLOGICAL & ECONOMIC ADAPTATION AT DIFFERENT SCALES
Going organic in mountains: barriers and motivations, a sociological approach
-3h lecture + 4h field trip - Jacques Godet

This lecture aims at presenting the challenges faced by the producers engaged in environmentally low impact production systems, regarding their own knowledge and the system governance (stakeholders, policies, outlets…). Organic farming is one of these an alternative ways and the so-called “Rhône-Alpes region” is well-known in France as a leading area for that. However this rise of organic farming occurred mainly in the lowlands despite most of the region is mountainous. It is therefore relevant to enhance conversion to organic farming in these highlands, not only for their natural and ecological assets but also because there is a strong demand from the neighboring towns and resorts. This lecture is based on an action-research project that investigated the profile of the applicants to organic farming conversion in 3 mountainous areas and why so few actually started this conversion process till now. We will seize the opportunity of a field-trip in Savoia to update these results and find answers to the questions they raised.
SOCIOLOGICAL & ECONOMIC ADAPTATION AT DIFFERENT SCALES
Alternative food systems - 2h lecture + 3h practicals - Céline Michaud

Food systems are currently evolving. Despite the dominance of the global agro-industrial food system, alternative forms of production, processing, distribution and consumption are spreading. This course focuses on alternative food systems with a particular emphasis on some French cases. Short food supply chains, local food, community supported agriculture and geographical indications are presented with sociological and economical concepts. The course allows students to put in perspective the various field trips of the summer school and it provides them with an analytic framework for the observations made during the field trips. Students have to analyse their visits, to report their observations and to discuss alternative food systems in class.

INTERCULTURAL SESSION (3H)
Mairi Beaton

SUPERVISED WORK (19h) and PROJECT WORK (15h)

Each student chooses a topic related to agroecology and/or sustainable food system and carries out throughout the summer school a personal work on that topic. Helped by a supervisor (usually a professor specialized on the topic) the student has to search for literature on the topic and to take the opportunities of the different lectures and visits to deepen his/her knowledge and thoughts on the topic. At the end, each student writes a report (a mini-review) and orally presents his/her work to other students and instructors during a seminar. This seminar provides an opportunity for students to share knowledge, discover a large set of topics related to agroecology and food systems and discuss collected information.

TEACHING METHODS:
Priority is given to an inductive approach to arouse curiosity and encourage critical thinking. The pedagogic strategy is based on the constant combination of theoretical inputs and practical application with case studies and field trips. Lectures are given by researchers specialized on the topic who are therefore particularly able to provide students with up to date information. Lectures are designed to either introduce or consolidate knowledge. Lectures are explicitly linked to different visits and field trips to favour student appropriation of the knowledge and stimulate personal thinking.

PREREQUISITES:
Student must have a background in ecology, agronomy and/or sociology

EVALUATIONS DETAILS:
Evaluation is performed through the supervised project work. The scheduled time allocated to this personal work enables student to carry out this project and to produce a written report and an oral defence. The written report should be between 5 and 7 pages long. The oral presentation lasts 15 minutes followed by 15 minutes of questions from the audience (students and teachers).
OBJECTIVE:

- improve your command of French as foreign language (speaking, listening and writing skills)
- understand French culture and share differences, similarities your own culture
- discover Rhône-Alps territories, economic and cultural activities

PROGRAMME:

- Classes of French as foreign language.

Students will be divided into 2 groups according to their knowledge in French:

Beginner group:

Concept of class:

Sessions will allow students to work primarily on oral French while always being sure to keep a written record of content learned in order to review, memorize, and apply concepts.

Subjects covered will include the following:

- Presenting yourself: identity, nationality, age (numbers), place of residence
- Talking about your family: the members of the family – some professions
- Placing yourself in time and space: days, months – adverbs to indicate place – understanding directions – city and transportation vocabulary
- Food: meals – vocabulary about food and the different specialized shops
- The body: physical description – colors – basic health vocabulary – talking about something that hurts, etc. – a few elements about personality
- Various extracurricular activities – personal taste – sports, music…

All sessions will have clear and precise language objectives adapted to the theme.

Some examples: verbs and tenses, negative form, adjectives, articles, vocabulary adapted to the theme, numbers, name of week days, months, foods…

At the end of the class, each student should be able to produce a written document in which she or he introduces herself or himself as completely as possible, using all the elements seen in the previous classes.

Intermediary group:

Usually students have already good knowledge in French but sometimes they are lacking of practices. This prevents them from using as much as they can their knowledge. This course will help them to feel more comfortable, deepening and enlarging their knowledge already existing.

Work will be writing and speaking in order to improve both skills.
Syllabus (depending on the level and the interests of students, taking into account the progress of the group as a whole):

- The city of Lyon / comparison with students' home towns – relation to the city tour done at the beginning of the program
- French eating habits, French gastronomy, going to a restaurant / comparison with the countries and regions that students come from – relation to each student's personal experience
- Traveling: work focusing on students’ weekend plans: transportation, lodging, tourist sites
- Observation work during the weekend will include collecting photos, audio clips and other documents. These will be used for a class presentation about a tourist site, which may serve as the oral component of the final evaluation
- Study a literary text by a Francophone author and a song
- A lesson on wine in relation with the visit to the winery: economic and sanitary aspects, representations and cultural aspects
- Higher education in France: presentation of the different programs, fields of study, degrees and institutions. Focus on Lyon:
  - How to prepare to study in France
  - Student lodging
  - Health
  - Activities outside of school: associations
  - Access to culture
- Partial in-class preparation of the oral presentation for the final evaluation
- Grammar review (depending on the needs of the group)

Along with the French courses, you will be visiting various places in the Rhône-Alps region, such as:

- Lyon, UNESCO World Heritage, Pérouges Medieval City, Annecy…
- Vineyards
- Chocolate factory
- Cheese makers in the Alps
- Regional companies and industries: textile industries
- CERN (European Centre for Nuclear Research), etc.

TEACHING METHODS:
- Lectures
- Visits

EVALUATIONS DETAILS:
- Continuous evaluation and final exam