

BOOTCAMP COMMUNITY COLLEGE 2020

# GREEN INNOVATION IN INDUSTRY, SCIENCES AND FOR ALL.

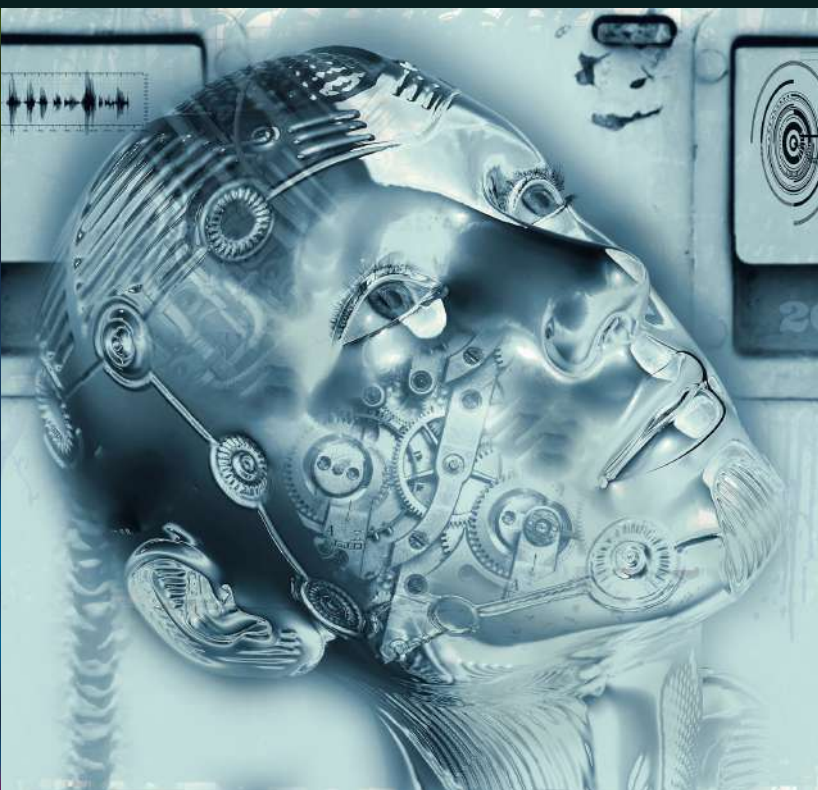


**From May 25th to June 7th,**

Bootcamp combining the humanities and social sciences (SHS) and the hard sciences (STEM) to discover green innovations.

At the agenda :

- **Business visits** (Alstom, Michelin, Framatom, Torcy Waste Recovery Center, Curgy Ecocenter, ...)
- **Cultural excursions** (Beaune, Dijon, Autun, Le Creusot)
- **Teaching workshops** (film workshop, creative challenge, discovery of a research laboratory, conferences...)



## **Program Description :**

From May 25th to June 7th, we propose a Bootcamp combining Humanities and Social Sciences (SHS) and Hard Sciences (STEM) to train American students in green innovation.

During these two weeks, students will immerse themselves in our territory to discover the challenges of innovation and the role of local actors in the preservation of resources.

This immersion will be realized through :

- Business visits (Alstom, Michelin, Framatome, Torcy Waste recovery center, Curgy Ecocenter, ...)
- Cultural outings (Beaune, Dijon, Autun, Le Creusot)
- And teaching workshops (creative challenge, discovery of a research laboratory, conferences...)

In collaboration with the IMVIA Research Laboratories (Imaging and Artificial Vision <http://imvia.ubourgogne.fr/>) and ICB (<https://icb.ubourgogne.fr/>), as well as the UFR Languages and Communication (LEA Bachelor and LLCER Bachelor), our program takes a multidisciplinary dimension and offers a comprehensive approach to sustainable innovation with an emphasis on ethical, social and sustainable values.

The research laboratories of the Creusot university site offer initiation times piloted by:

- Franck Marzani (Professor of Universities and Director of the ImVIA Laboratory)
- Rodolphe Bolot (University Professor and Head of the ICB LTM Team)
- David Fofi (University Professor, Deputy Director General of ImVIA and coordinator of the international training courses in vision and robotics and Erasmus Mundus programs of the uB (University of Burgundy).

The conference linking the two disciplinary fields of SHS and STIM will be conducted by Peter STURM, Research Director INRIA, and his STEEP team (Sustainability Transition, Environment, Economy and Local Policy <https://team.inria.fr/steep/>) specialized in the development and management of local green innovation.

Finally, the UFR Languages and Communication is partnering with our project, through Will Noonan, Senior Lecturer, Co-Head Master Multimedia Translation (T2M) and member of the TIL - Text Image Language Laboratory, and Teaching Manager of the AfterLang project (<http://blog.ubourgogne.fr/apreslang/>), an educational innovation project funded by the RITM-BFC system and supported by the UFR Languages and communication.

As part of this project, a group of LEA and LLCER Bachelors students will take over :

- the support of American students during visits and other activities planned at the uB and in the region,
- the preparation of joint activities such as the film workshop,
- language mediation for these non-francophone students during visits and other activities planned in French, including city visits.

Throughout this Bootcamp, teachers and volunteer students will accompany American students, all from a wide variety of backgrounds :

- International training ([www.vibot.org](http://www.vibot.org))
- Language Training (LEA Bachelor: Applied Foreign Languages and LLCER Bachelor : Languages, Literature and Foreign Civilizations)
- Commercial Training (DUT TC (Marketing Techniques) and GTTI Professional Bachelor : Territorial and International Tourism Management)

The language skills of our teams and English-speaking students will enable us to integrate U.S. students in the best possible conditions to establish working and exchange times in multicultural groups.

Through this program, we want to propose an integrative pedagogical model that puts action at the center of learning. Our priority is not to disseminate information in a sterile way, but to teach students how to think and deploy an eco-innovation approach.

Finally, this program is perfectly in line with the Campus Projects association (<http://www.campusprojets.com/>) which wishes to develop a virtuous ecosystem in our territory by bringing students closer to businesses through

the development of collective and innovative working times on current issues. Convinced that young people carry great ideas, I wish to put them into action and give them the opportunity to express themselves and to develop. The vision of the American students will give an international dimension to this approach, which must be confronted with our own approach in order to enrich it.

In conclusion, I have put a point of focus on the quality of the activities proposed as I give a lot of importance "in the sense of learning". As a former business manager, I too often faced the widening gap between education and the reality of the company.

By immersing ourselves in the heart of the organizations, we will be able to become aware of the realities of the ground and the opportunities available to us.

Currently a PhD in marketing at the CREGO laboratory (<http://crego.u-bourgogne.fr/actualitescrego.html/>), Head of Internships and International Mobility in the Marketing Techniques Department and President of the Campus Projects Association, I saw this project as a huge opportunity for our respective students.

For all these reasons and thanks to the trust of all the above-mentioned people that I have the opportunity to offer you our program for the 2020 edition of Bootcamp Community College.

### **The objectives of the bootcamp:**

- Discovery of sustainable development issues at national level;
- Awareness of sustainable innovation opportunities and their impact
- Discovery of the multisectoral commitment (industry, tourism, agri-food, ...) in the development of innovation for sustainable development.
- Development of the skills needed to take a sustainable approach to everyday life
- Imagining tomorrow's innovations in sustainable development and learn how to promote them

### **Learning outcomes :**

- Knowledge and understanding
- Knowledge and understanding translation:
  - o Develop creativity
  - o Offer solutions to complex new issues
  - o Adopt a comprehensive vision of the sustainable development with its eco-, environmental and societal aspects.
  - o Initiate a change of perspective (on the world and carry out an introspection of ones own practices)
- Capacity to make judgments: Developing critical thinking
- Communication skills: Communicate and convince

### **Assessment Procedures:**

- Creative Challenge: disruptive invention
- Evaluation of analytical and reflective work on the content of the program

## Associated institutions and enterprises

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### List of potential partners:

- **CUCM** (Mr. Jérémy PINTO (jerem.pinto@gmail.com))

A local player essential for making the most of the region's assets (economic, cultural, tourist)

- **REGION Bourgogne Franche Comté** (Mrs. Laëtitia Martinez - Vice-President of the Franche-Comté Burgundy Region and Municipal and Community Councilor of Creusot)

Special support for the development of youth projects, international relations in higher education.

- **UFR Languages and Communication , TIL Laboratory - Text Image Language (M.Will Noonan Lecturer/Senior Lecturer, Co-Manager Master Multimedia Translation (T2M), UFR Languages and Communication , TIL Laboratory - Text Image Language will.noonan@u-bourgogne.fr )**

Integration as a tutored project involving L3 LEA and LLCER students in the framework of the Project AfterLang' (<http://blog.u-bourgogne.fr/apreslang/>), an educational innovation project funded by the RITM-BFC and supported by the UFR Languages and Communication

Linguistic mediation, joint activities, support for American students.

- **ImViA Research Laboratory = Imaging and Artificial Vision Laboratory (Mr. David FOFI david.fofi@u-bourgogne.fr)**

The Imagerie et Vision Artificielle laboratory (ImViA) is the product of the Laboratoire Electronique, Informatique et Image (Le2i), a research laboratory under tutelage of the University of Burgundy from 1996 to 2018, the ParisTech Arts et Métiers between 2014 and 2017 and the CNRS of 2011 to 2017.

The ImViA laboratory, composed of about 50 teaching and research staff, has the theme of Artificial Vision. It is organized around three teams: CORES, IFTIM and VIBOT.

- **STEEP Research Laboratory (Sustainability Transition, Environment, Economy and Local Policy) (Mr. Peter Sturm)**

STEEP started in January 2010, initially as Action Exploratory (Inria)

STEEP is an interdisciplinary research team dedicated to systemic modeling and simulation of interactions between environmental, economic and social factors in the context of a transition to sustainability at the local (sub-national) level. Their goal is to put in place mathematical and computer tools that enable us to partly address the challenges of how to manage sustainable development at the local level and what local governance for environmental public policies.

STEEP's work follows several lines of research covering different fields of application; these are described in the sections "Scientific Foundations" and "Areas of Application": <https://team.inria.fr/stEEP/research/>

The intervention of this team of researchers brings an exceptional scientific dimension to our program based on innovation and sustainable development.

## Description of scheduled activities

| Business visit |   |  |
|----------------|---|--|
| BV 1           | <p><b>Framatome (ex Areva) :</b><br/> <a href="http://www.framatome.com/FR/accueil-57/index.html">http://www.framatome.com/FR/accueil-57/index.html</a></p>           | <p>Framatome is a major international player in the nuclear industry, recognized for its innovative solutions and high value added technologies for the design, construction, maintenance and development of the world's nuclear fleet. The company designs and manufactures components, fuel, control-command systems and offers a range of services for reactors. Sustainable innovation is an integral part of its strategy, and through a visit to its website, we will discover a sector that is not well known to the general public and we will try to understand what is at stake in this sector.</p> <p>The visit will be the subject of a two-hour "information and security" training prior to the visit.</p>   |
| BV 2           | <p><b>Alstom :</b><br/> <a href="https://www.alstom.com/fr">https://www.alstom.com/fr</a></p>   | <p>"A global player in the transportation sector, in the digital age.<br/> As a promoter of sustainable mobility, Alstom designs and offers systems, equipment and services for the transport sector. Alstom offers a complete range of solutions (from high-speed trains to metro, tram and e-bus), personalized services (maintenance, modernization...) as well as special offers for passengers, infrastructure solutions, digital mobility and signage. Alstom is a world leader in integrated transport systems."</p> <p>Alstom's new commitment: Mobility by Nature<br/> Its priority: To be the most innovative global player in the market for sustainable and intelligent mobility.</p> <p>This visit is perfectly in line with our theme of sustainable innovation and will allow us to discover a second key sector in sustainable development: that of transport.</p> |
| BV3            | <p><b>Michelin (</b><br/> <a href="https://transport.michelin.fr/Vos-avantages/L-environnement">https://transport.michelin.fr/Vos-avantages/L-environnement</a> )</p> | <p>An essential player in pneumatic manufacturing. Michelin is 7 R&amp;D centers worldwide, 69 production sites for the tire sector, a commercial presence in 171 countries, and the Michelin group is now established on all continents.</p> <p>"Because transport cleaner becomes essential, MICHELIN has been contributing for more than 100 years to sustainable development by innovating through its products while reducing the environmental impact<sup>1</sup> of its European plants certified ISO 14001. MICHELIN offers products that consume less raw materials such as MICHELIN REMIX2 retreaded tires.<br/> MICHELIN has reduced the environmental footprint of its sites by 33% in 6 years (source: 2011 progress and sustainable development report)."</p> <p>Innovation and ecological impact are values that Michelin has endorsed.</p>                         |
| BV4            | <p><b>Creusot Monceau Recyclage - Waste recovery center</b><br/> <a href="https://www.cmr-torcy.fr/visite-2">https://www.cmr-torcy.fr/visite-2</a></p>                | <p>To respond to the evolution of our society and to the changes of our time in social, economic and environmental terms: sustainable development is a challenge for all people on the planet.</p> <p>Its ability to anticipate regulation, standards, and technologies but also thanks to the support of contributors like ADEME ... Our site Creusot Montceau Recyclage assists local authorities in the implementation of the overall management of their waste.</p> <p>This proximity solution ensures control of the risk to public health and the environment. Security, traceability, quality and performance are the foundation and motto of our ambition.</p>   |

| Cultural outings  |   |  |
|---|---|--|
| CE1   | <p><b>Écocentre pédagogique</b> de Curgy (<a href="https://www.alosnys.com/">https://www.alosnys.com/</a>)</p>  | <p>EDUCATIONAL CENTER FOR AGRO-ECOLOGY AND PERMACULTURE</p> <p>Live in the heart of nature, in Burgundy-Franche-Comté, close to the Morvan, great moments with family, group, green class, wellness or training.</p> <p>On the ancient lands of the Count of Alosne, in Curgy in Burgundy, the bird Colibri, the totem of the eco-center, is pleased to welcome you on a 3.5 ha estate with its pedagogical garden in agro-ecology and permaculture (plan), its magnificent landscapes, its collections of aromatic and vegetable plants, its animal parks, its playgrounds and well-being well-being, learning and exploration... for a great moment of openness of the senses and certain discoveries!</p> <p>Objective: discovery of agro-ecology and permaculture.</p> |
| CE2   | <p><b>Bibracte</b> (<a href="http://www.bibracte.fr/fr/approfondir/les-actions-educatives">http://www.bibracte.fr/fr/approfondir/les-actions-educatives</a>)</p>  | <p>In the heart of the preserved landscape of Morvan, in Burgundy, Bibracte, Great Site of France, invites you to discover the daily life of the Gauls, on the program of this day: visit the site, Gaulish workshop and meals !</p> <p>Objective: Discover the remains of Bibracte and the techniques of preservation of the site.</p>  |
| <p>Cultural or pedagogical activities awaiting: on Dijon, Beaune or Dole.</p> <p>In the context of Environment Day and European Sustainable Development Week, the program is likely to evolve as I am waiting for the confirmation of the 2020 activities.</p> <p>June 5th: World Environment Day <a href="https://www.un.org/fr/events/environmentday/">https://www.un.org/fr/events/environmentday/</a></p> <p>Initiated by the UN since 1972, it aims to focus on the environmental issues facing our planet: biodiversity and climate change. This issue is of increasing concern to citizens. This global day aims to inform public opinion and to raise awareness. It is an opportunity for states and individuals to consider what measures they can put in place to preserve nature. It is also an opportunity to publicize the preservation of the environment.</p> <p>From 30 May to 5 June: European Sustainable Development Week - MINISTRY OF TRANSITION ECOLOGY AND SOLIDARITY<br/> <a href="http://evenements.developpement-durable.gouv.fr/campagnes/sedd2019/presentation-semaine-europeenne-du-developpement-durable">http://evenements.developpement-durable.gouv.fr/campagnes/sedd2019/presentation-semaine-europeenne-du-developpement-durable</a><br/> Call for proposals submitted, which will allow us to open some of our workshops to a wider audience (English speaking).</p> <p>Edition 2019: Bourgogne Franche Comté: <a href="https://france3-regions.francetvinfo.fr/bourgogne-franche-comte/cote-d-or/dijon/latitude-21-participe-journee-mondiale-environnement-1681194.html">https://france3-regions.francetvinfo.fr/bourgogne-franche-comte/cote-d-or/dijon/latitude-21-participe-journee-mondiale-environnement-1681194.html</a></p> <p>Objective: To give a European and global dimension to our project in order to open the time of a day or half a day our program to the general public. Further develop the immersion of U.S. students.</p> |   |  |
| CE4   | <p>Example of an activity during Sustainable Development Week:</p> <p><b>ESCAPE GAME "SAUVER DEDE"</b></p> <p>(<a href="http://evenements.developpement-durable.gouv.fr/campagnes/evenement/11542">http://evenements.developpement-durable.gouv.fr/campagnes/evenement/11542</a>)</p> | <p>By team, professionals have to solve a series of sustainable development puzzles to save Dédé, who is suffering from a disease caused by air pollution.</p> <p>This game aims at offering agents a moment of escape that is conducive to team cohesion, and at raising their awareness of the good practices of everyday life respectful of the environment.</p> <p>(Center Hospitalier Louis Pasteur Dole)</p>   |

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| CE5  | AFEI 71: family welcome for international students                        | The AFEI family welcome is intended to welcome young people who come to study in Creusot to break their isolation by creating links with local families.  |
| CE6  | <b>Creative workshop and transfer of know-how Cap'récup</b><br>Le Creusot | As part of the Cap Recup project, bring your recovery equipment and give a second life to everyday objects: Make a "tawashi" (an ecological sponge) from socks, or a "totebag" in a T-shirt.<br>You can bring your raw materials, socks, sticks, teeshirts or used leather, and leave with a totebag or tawashi.<br><br>Objectives: practice advice on recycling and reuse. A practical approach to the concept of circular economy.        |
| <p><b>SHS Activities</b><br/>Social Sciences and Humanities</p> <p>The bootcamp SHS program will deal in a practical and fun way with the different aspects of sustainable development at both the corporate and individual levels. We will study the marketing and strategic aspect of innovations in this field and will take students in real life situations as soon as possible to get them to take a different look at this topic.</p> |   |   |
| SHS1   | <b>Film Workshop</b>  | Content to be confirmed with UFR LANGUAGES AND COMMUNICATION and the Dijon film center.<br><br>Objective: discovery of cinematography from an educational point of view (the reverse of the decor)<br>Proposed link to the theme: the levers of cinema to promote an eco-citizen awareness.   |
| SHS2   | <b>Immersion with the 1st year DUT TC "Coffee debate"</b>                 | Exchange of news topics with first-year students<br><br>Objectives: promote questioning of the problem of the Bootcamp by establishing a time of exchange between students of different formations, cultures...   |
| SHS3   | <b>Educational Challenge</b>  | Composed of 3 tests during which students will have to challenge themselves (if possible mixed groups (FR/USA)<br>Step 1: marketing sustainable development (imagine an innovative product or service and promote it as a pitch)<br>Step 2: talent competition (artistic test)<br>Step 3: eco-citizen sport challenge: Clean'up!<br><br>Objective: developing creativity and a fun approach to sustainable development around art and sport |
| SHS4   | <b>Pedagogical Workshop "Me and Innovation"</b>                           | Reflective work on sustainable innovation, return of the Bootcamp summary<br><br>Objective: adopting a problem-solving approach through innovation  |

**STIM Activity**

Science, Technology, Engineering and Mathematics

The bootcamp's science and technology program will be organized around four complementary axes, each of which will address the issue of sustainable development from the perspective of their respective fields of competence.

|               |  |   |
|---------------|--|---|
| STIM1         | <b>Robotic Workshop</b><br><br>Laboratory ImViA / Team VIBOT, international Program<br>David Fofi<br>Le Creusot                                  | <p>We will offer two talks on robotics and its environmental issues and an active visit to the robotic plateau of the Center Universitaire Condorcet. On the university site, we have ground, aerial and submarine mobile robots, a humanoid, computer and software platforms and a recognized expertise in agricultural robotics.</p> <p>Objectives: the discovery of robotics and its societal and environmental impact from research examples.</p>   |
| STIM 2        | <b>Atelier Matériaux</b><br><br>Laboratory LTM, Dépt. MP<br>Rodolphe Bolot<br>Le Creusot   | <p>The LTM (Laser Treatment of Materials) team of the ICB (Institut Carnot de Bourgogne) specializes in welding metals and alloys. It has arc and LASER welding equipment, as well as the necessary characterization (optical microscopy, MEB, etc.). Research activities are oriented towards dissimilar welding, including the implementation of technological solutions to remove or limit the formation of fragile inter-metallic phases, which may limit the mechanical handling of the assemblies made.</p> <p>This workshop will offer a visit to the laboratory and its equipment, and a visit to the Materials Room of the IUT du Creusot.</p> <p>Objectives: discovery of the science of materials, perspective of the associated environmental issues.</p> |
| STIM3         | <b>Atelier Image, Santé et IA</b><br><br>Laboratory ImViA / Team CORES and IFTIM, CHU Dijon<br>Franck Marzani Dijon                              | <p>We will offer a visit to the Dijon premises of the ImViA laboratory. Demonstrations on artificial intelligence, image processing and their medical and biomedical applications will be presented to the participants. A question-and-answer session will end the visit. In a second step, we will propose a visit to the equipment of excellence of the Dijon CHU and laboratory demonstrators: MRI, tissue stretching test ban, etc.</p> <p>Objectives: discovery of medical and biomedical research activities from a scientific point of view for the engineer.</p>   |
| STIM4         | <b>Conference Sustainability Workshop, Territories, Environment, Economics and Politics</b><br><br>Team INRIA STEEP<br>Peter Sturm<br>Le Creusot | <p>To conclude the STIM session of the bootcamp, we will welcome Peter Sturm and his team, who will deliver talks on sustainability and the environment, climate issues, from a "computer" and "data science" perspective. Peter Sturm will tell us about environmental issues and the blocking of action.</p> <p>Objectives: link STIM and SHS to address environmental issues.</p>  |
| <b>Others</b> |  |   |
| O1            | <b>"Higher education"</b>  | <p>Introduce American students and their accompanying persons to the educational opportunities available to them in France.</p> <p>Time for presentation of higher education to be confirmed according to the final schedule.</p>   |
| O2            | <b>"International relations"</b>   | <p>Working Group on the establishment of a common partnership for international mobility of our students (semester and/or internship).</p> <p>Presence of the International Relations department.</p>   |



## Program BOOTCAMP - IUT CREUSOT 2020

| Week 1       | Monday, 25 May        | Tuesday, 26 May  | Wednesday, 27 May  | Thursday, 28 May   | Friday, 29 May   | Saturday, 30 May       | Sunday, 31 May  |
|--------------|-----------------------|--|--|--|--|------------------------|---|
| 9AM          | Arrival in Lyon       | <b>STIM 1</b> Robotic Workshop<br>the discovery of robotics and its societal and environmental impact from research examples.<br><br><i>Working group on the development of a common partnership + presentation of higher education TO CONFIRM</i> | Visit Dijon (Tourist Office and/or Students LEA and LLCER) | <b>SHS3</b> Educational Challenge<br>Sustainable development theme<br>3 events:<br>-SD marketing (imagine a product/service and promote it in pitch form)<br>- talent contest (art, music...)<br>- Ecocitizen sports challenges: Clean up! | <b>(SHS/STEM)</b><br><b>CE1</b> Educational center for agro-ecology and permaculture.<br><br><i>Working group on the development of a common partnership + presentation of higher education TO CONFIRM</i> | Free time host family. | <b>CE5 AFEI 71 Association</b><br>International Student Cohesion Day<br>To be confirmed, otherwise the host family. |
| 5PM - 6PM    | BV1 FRAMATOME         |  | <b>SHS1</b> Film Workshop<br>UFR LANGUES ET COMMUNICATION  |  |  |                        |   |
| Lunch Meal   | University Restaurant |  | Pic Nic Traitor  |  |  |                        |   |
| Evening meal | Host family           | Host family  | Host family  | Host family  | Host family  | Host family            | Host family   |

| Week 2       | Monday, 1 June  | Tuesday, 2 June                     | Wednesday, 3 June   | Thursday, 4 June  | Friday, 5 June  | Saturday, 6 June            | Sunday, 7 June      |
|--------------|---|-------------------------------------|---|---|---|-----------------------------|---------------------|
| 9AM          | BV4 Waste recovery center - Torcy   | <b>CE2</b> Bibracte                 | <b>STIM 2</b> Artificial intelligence, image processing and their medical and biomedical applications | <b>STEM 3</b> Science of materials<br>discovery of robotics and its societal and environmental impact from research examples. | <b>CE4</b> Activiy<br>From 30 May to 5 June: European Sustainable Development Week<br><br>June 5th: World Environment Day               | Free time host family.      | Departure from Lyon |
| 5PM - 6PM    | (OT Creusot)<br>Château de la Verrerie,<br>Pavillon de l'industrie,<br>Discovery of the industrial development of the city, past, present and future challenges | BV2 ALSTOM                          | <b>SHS2</b> Immersion with the 1st year DUT TC<br>"Coffee debate"                                     | <b>STIM 4</b><br>Conference<br><b>Sustainability Workshop, Territories, Environment, Economics and Politics</b>               | <b>SHS 4</b><br>Pedagogical Workshop<br>"Me and Innovation" : Reflective work on sustainable innovation, return of the Bootcamp summary | Farewell<br>(dinner buffet) |                     |
| Lunch Meal   | Pic Nic Traitor   | Repas Restaurant Gaulois "Bibracte" | RU (Dijon)  | University Restaurant   | Pic Nic Traitor   | Host family                 |                     |
| Evening meal | Host family   | Host family                         | Host family   | Host family   | Host family   | Buffet dinatoire            |                     |

Légende :

|                        |
|------------------------|
| Business visit         |
| SHS or STIM Activities |
| Free Time              |
| Cultural outings       |
| Other                  |