



## **Assignment internship Chemical Engineering, Biological Engineering, Agricultural Engineering or Biology**

### **Living Lab Biobased Brazil**

The Living Lab Biobased Brazil is a transnational Living Lab in the field of Biobased Economy, created in 2014 by a consortium of Dutch Universities of Applied Sciences in collaboration with several Brazilian universities. The Living Lab helps students with internships and graduation projects in the Netherlands with the focus on Biobased Economy. We also help students finding accommodation, and offer buddy support and some events.

For more information please see [www.biobasedbrazil.org](http://www.biobasedbrazil.org) and [www.biobasedbrazil.org/student/the-netherlands/](http://www.biobasedbrazil.org/student/the-netherlands/) or ask the International Office of your university.

### **University of Applied Sciences information:**

The universities of applied sciences (in Dutch: 'hogescholen') offer programs that focus on the practical application of arts and sciences.

Getting practical work experience through internships is an important part of the professional study programs offered at these institutions. The largest universities of applied sciences enroll 20,000 to 40,000 students. Altogether some 446,000 students are enrolled on professional programs. University of Applied Sciences have also research groups. This groups do applied research and they are so called professorships. This internship assignment is within one of the associate professorships.

### **UAS name information:**

HAS University of Applied Sciences, Den Bosch (see. [www.hasinternational.nl](http://www.hasinternational.nl))

### **Main research topic:**

Mild Processing and liquefaction of residues from the Dutch agro-food sector.

### **General background:**

In collaboration with Dutch and Belgian companies we perform studies to upgrade organic residues from food, such as leaf matter from vegetables, and sugar beet pulp. This is done at small scale, bench-scale (5L) and at pilot scale (25 - 200L+) in our laboratory facilities at Den Bosch. Certain experiments may be carried out at partner companies.

### **Goal of internship:**

Carry out protocols for targeted liquefaction and conversion of residues from dutch fruit and vegetable production processes, such as fruit pulps/skins, onion skins, and sugar beet pulp. Final goal is to develop biorefinery schemes that produce animal feedstuffs, and fibres and bio-additives from low grade plant residues

### **Activities:**

The Project involves:

- Literature study



- Develop protocols for treating organic residues in a 5 L automated Bioreactor
- Devise and carry out experiments in our laboratories
- Perform simple chemical analysis
- Analyze data from experiments, and draw conclusions
- Some local travel to companies in the region may be required

### **Final product**

The student will write a report that contains an overview of all activities and findings, and a presentation in front of students and professors at our university, and other Living Lab partners

### **Starting date**

February 2019. The length of the assignment is approximately 5 months (20 weeks). The student who will execute the assignment will receive a fee of €360,- per month, on full-time basis.

### **Desirable skills/qualities of the student**

The student should be able to carry out independent laboratory research. The preferred background is chemical engineering, biological engineering, agricultural engineering or biology. The interest in biobased economy is a pre, as well as previous experience in a laboratory setting.

Good knowledge of the English language is required. We have set minimum language requirements for foreign students. The minimum English language prerequisite is: an academic IELTS test (or equivalent\*) with an overall band score of at least 6.0. As a foreign student you must provide evidence of your language competences in the form of an official certificate: IELTS, TOEFL, TOEIC or Cambridge ESOL. It is your responsibility to ensure that you meet these requirements. **Please see the requirements on the webpage.**

### **Information of the company:**

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### **Interested?**

Please see the procedure at <https://www.biobasedbrazil.org/student/the-netherlands/>. Please be aware that the process stated at the above mentioned link applies.

**PLEASE CONTACT FOR ADDITIONAL INFORMATION THE INTERNATIONAL OFFICE OF UFMG, UFV, UFSJ, UFOP OR PUC MINAS**