

Do you want to work
with global real-life
challenges based in
Africa, Asia and Latin
America?

WAT-E2070 Sustainable Global Technologies (SGT) Studio 2023

CALL FOR APPLICATIONS

19.9. – 16.10.2022

WAT-E2070 Sustainable Global Technologies (SGT) Studio 10 ECTS | periods III-V

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SGT Studio is a collaborative studio course for Master’s and Doctoral students at the Aalto University. During the course multidisciplinary teams are formed to carry out projects linked to real-life global development challenges. Assignments are implemented with partners from academia, industries, governmental and civil society organizations and communities in Africa, Asia and Latin America. All students with relevant background are encouraged to apply. Priority is given to those who have completed the recommended prerequisite courses: WAT-E3020 & WAT-E2060 or have similar relevant experience.

KEY LEARNING OUTCOMES

- implementing challenge- / problem-based project (international multistakeholder project design, field study, reporting, communication and teamwork)
- understanding the role of sustainability and technology in development
- integrating diverse skills (technology, science, design, architecture & business)

CORE TEACHING / LEARNING APPROACHES

- interdisciplinary and multicultural teamwork
- problem-based learning (PBL), human-centered design and design thinking
- field study if possible, expert meetings, collaborative workshops, project clinics & mentoring

FINAL OUTCOME

- aiming to meet the needs of the case partner, outcome and deliverables are decided together by the team and the case partner/client
- short-term outputs can take many forms (e.g. manual, technical report, evaluation, game, mobile app, an idea, scenario...)
- long-term collaborations can lead for instance to project partnerships or product Implementation
- generating master’s and doctoral theses topics

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SUBMIT YOUR APPLICATION VIA ONLINE APPLICATION FORM (link in the last page)

The application documents include

- 1) CURRICULUM VITAE
- 2) MOTIVATION LETTER, and
- 3) STUDY TRANSCRIPT

1) CV

With your CV you can let us know your study and possible work history, and skills that might become relevant when we are forming the teams. Submit as pdf. Maximum 2 pages.

2) MOTIVATION LETTER

Motivation letter is the most crucial document in the application process. First mark clearly in which project case(s) you are applying for in priority order. Aim your motivation letter primarily for the highest priority option. Submit only one application.

With the motivation letter you can show your way of thinking. Describe your skills and explain how you see your role as part of a multidisciplinary team. Why you? Tell us what you can give to the project - and what the project can give to you? How do you manage the multistakeholder communication and how would you imagine the whole learning process? Describe the optimal process how you would do it from the beginning till the end. Where do you start? How do you proceed? Go briefly through the whole process including your vision for teamwork. Also tell how you will involve the community and/or partners and/or peer-students in the case locations? What is your vision and scenarios for the project? Tell also what do you think you will gain from participating in this project? What is your personal learning expectation? Indicate your possibility to travel and participate in fund raising if needed.

Write concise, well-structured text. Maximum two pages only. You can also visualize your letter, make sure the story you want to tell is clear enough to be easily understood. Motivation letter should be addressed to Prof. Olli Varis, the academic lead of the SGT Studio course. Submit as pdf.

3) STUDY TRANSCRIPT

Print and submit copy of your study transcript - also from your previous degrees. This is to approve that you are currently eligible to apply, and it will also help us understand your background and skills better. Submit as one pdf.

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SELECTION

Selection is based on the application documents, suitability of the applicant's field of study, experience and viewpoint to the project.

Those candidates with prerequisite courses or relevant similar background have priority.

Teams of 5 students per case will be formed with various disciplines.

All Master's and PhD students from Aalto are eligible to apply. Through flexible study right JOO-agreement also students from other Finnish universities can apply (DL for JOO-applications to study in Aalto is 24 October).



Photo: Stephanie Kluz, SGT20, Clay workshop in Katanga, Uganda

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CASES 2023

- #1 SGT CASE BHUTAN
- #2 ACTION LAB MEXICO
- #3 UNHCR BRAZIL
- #4 AgriSCALE / PBL BioAfrica



#1 SGT CASE BHUTAN

SUSTAINABLE ENVIRONMENT

The unknown - remote and so fascinating Bhutan! Join to find out more about the enchanting culture! You must come with an open mind!

This project is continuation of the [PBL South Asia project](#) co-funded by the Erasmus+ Programme of the European Union. PBL South Asia has developed best practices in problem-based education as a joint initiative between ten universities that are located in Finland, India, Nepal, Bhutan, the Netherlands and Lithuania. Aalto SGT team will continue to work with the Bhutanese students and mentors from Jigme Namgyel Engineering College, Royal University of Bhutan.

Focus of the case will be developed together with the Bhutanese partners in the areas of environmental, social and cultural sustainability, sustainable campus development, participation and collaborative methods. The tentative topics could include for instance following thematic areas: water distribution network, rainwater harvesting system for urban flooding mitigation, remote sensing (GIS), solar-wind farm, artificial intelligence based design, developing campus mobile apps, commercial farming, waste management & recycling among others. The final topic focus will be defined by the student teams together.

The ideal team would include students from design, environmental and construction engineering, software engineering and spatial planning. Often systems thinking, communication and teamwork skills complement the local team's competences besides solid content knowledge.

Partners:

JNEC - Jigme Namgyel Engineering College, Royal University of Bhutan <https://www.jnec.edu.bt/en/>
UEF – University of Eastern Finland
JAMK – Jyväskylä University of Applied Sciences, Professional Teacher Education

Previous SGT reports:

SGT 2020: <https://www.instagram.com/studiosajo/> [link to final **deliverables**]

SGT 2021: <https://blogs.aalto.fi/sgtbhutan2021/> [links to **final report** and **handbook**]

SGT 2022: https://sgt.aalto.fi/wp-content/uploads/2022/07/SGT22_PBLSA_ALFAS_Final_Report.pdf

Funding: Field trip is funded by [Aalto EDUCase Platform](#). Meals are at students' own cost. Daily allowance is not paid to students.

sgt.aalto.fi **A''**

EDUCase Higher Education Platform for Global Sustainability



#2 ACTION LAB MEXICO (ALM) ARCHITECTURE – WATER – HEALTH – TOURISM

ALM 10 años! New decade of ALM starting up! 10+ years of collaboration, over 100 labbers!

Action LAB Mexico (ALM), previously Aalto LAB Mexico, is an interdisciplinary and intercultural project with a Mayan community turning 50 years old called “Ejido 20 de Noviembre” (El 20) in Calakmul, Campeche state of Mexico, at its core. Each year, students from Finnish and Mexican universities form a team to collaborate in developing initiatives aiming at improving the quality of life in El 20 without endangering the subsistence of their living environment and culture.

Since 2012, ALM has developed a project ecosystem that includes the preservation of the Mayan **architectural heritage**, access to an **adequate healthcare** system, access to sufficient **clean water**, and strengthening of the current **touristic activities** and **infrastructure**.

The ALM project invites students from all fields of study to join as a labber! The focus of the student project is defined together with collaborators – there are multiple options for students with skills in architecture and design to engineering and entrepreneurial knowledge.

Collaborators:

- Ejido 20 de Noviembre, Calakmul, Campeche
- Aalto University / Sustainable Global Technologies Programme
- Universidad Nacional Autónoma de México / Postgraduate in Industrial Design
- Universidad Modelo, Campus Mérida
- Universidad Tecnológica de Calakmul
- DYA Design Your Action

Funding: Self-funded field trip to Mexico City and El 20 de Noviembre (domestic flight to Chetumal). Accommodation in Mexico City can be arranged with local students and in El20 with local families with minimal pay. Students are encouraged to apply travel grants and find sponsors to support their travel!

ALM Blog: <https://aaltolabmexico.wordpress.com/>

SGT21 final report: [Co-creating strategies to sustainable livelihoods and strengthening autonomy](#)

[Design as Freedom \(2017\) Doctoral Theses by prof. Claudia Garduño in Aaltodoc.](#)





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Aalto
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LAB



#3 SGT UNHCR BRAZIL 2023 – Next Steps (in collaboration with ARK - IoC)

Are you passionate about global humanitarian challenges and how the living conditions of the worlds displaced people could be improved?

Join the SGT BRAZIL team and work with UNHCR in refugee sites in the State of Roraima, Brazil.

UNHCR is currently undertaking a strategic exercise of the next steps of the displacement response: to support refugees out of the camps and to be integrating the community in Boa Vista. This entails the planning of new sustainable housing solutions, urban planning, infrastructure, public spaces, facilities and services. This is to be carried out through participatory approaches and in close cooperation with the various stakeholders, the refugees, municipality and government.

The objective for the SGT23-team is to develop holistic processes and tools utilized in planning and designing of housing areas and to develop improved concepts, consisting of new ways to enhance participatory approaches and design thinking, for sustainable, respectful, integrating living conditions of the refugees.

We are looking for a multidisciplinary team consisting of bold architects, urban planners, engineers, communicators and design thinkers, that are ready to act for a change.

Partner organization: UNHCR Brazil

Project mentors: Kristjana Adalgeirsdottir architect, shelter delegate and Helena Sandman, architect PhD [Aalto WiTLAB](#)

Funding: Self-funded field trip to city of Boa Vista in Roraima. Students are encouraged to apply travel grants and find sponsors to support their travel!

Previous case:
SGT UNHCR Brazil 22: [2022 Projects – Aalto Sustainable Global Technologies Final Report](#): [SGT22 Ponto Final Report.pdf \(aalto.fi\)](#)
Instagram: [Ponto de Encontro \(@sgt_ponto\)](#) • [Instagram photos and videos](#)



#4 AgriSCALE / PBL BioAfrica STUDENT CHALLENGE IN EAST AFRICA: ZAMBIA

How about learning together with Zambian, Ugandan and Kenyan peers? AgriSCALE and PBL BioAfrica projects promote problem-based learning in the field of agro-entrepreneurship and bioeconomy.

AgriSCALE and PBL BioAfrica have university partnerships of universities from Kenya, Uganda, Zambia, Finland and Italy.

In this project, **students work in multicultural teams to solve the practical challenges of local companies or industry partners.** Learning through real-life challenges equips the graduates with skills including innovation, teamwork and leadership.

SGT student team will participate in one of the student challenges with the partner universities in the **focus area of agri-business management and agricultural engineering** in Zambia. The SGT team can decide their focus to the student challenge in the beginning of the course together with partners. It can include for instance methodological, management level or practical level approaches to the challenge. The ideal team would consist of business, design and engineering students.

Partners:

Mulungushi University, Zambia

Student team:

Depending on the number of applications, two teams under these projects might be formed.

Funding: Field trip is funded by Erasmus+ or HEI-ICI project funding coordinated by Aalto Global Impact. Meals are at students' own cost. No daily allowance is paid to students.

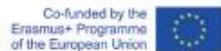
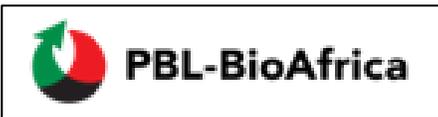
More about the overall Projects:

<https://www.agriscale.net/>

<https://www.pbl-bioafrica.net/>

SGT 2022 Final Report:

https://sgt.aalto.fi/wp-content/uploads/2022/07/SGT22_AgriSCALE_Final-Report.pdf



Project co-funded by the Erasmus+ Higher Education Capacity-Building programme

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APPLY BY 16 OCT!
<https://link.webropol.com/s/sgt23applications>



**Any questions, contact
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