# StudentShapers Recruitment: Calling all Chemical Engineering 1st and 2nd year students

*Bridging the Gap: Improving student learning in Mathematics courses by designing bridging questions and resources*

**Bursary:** £325 / week for 6 weeks

**Who should apply:** 1st and 2nd year students from the Department of Chemical Engineering with an interest in improving Mathematics resources including assignments and problem sets for pre-sessional course, 1st Year or 2nd year Mathematics. Students who don't have further Maths experience prior to joining Imperial College are especially encouraged to apply for this collaboration. The project will benefit from some programming experience although it is not an essential criterion for recruitment.

**Campus/Location:** Imperial College London, South Kensington Campus (Project will be conducted remotely)

**Project details: In the Chemical Engineering Department, we have** implemented an online assessment platform (WeBWork) to deliver pre-sessional content to incoming 1st year students as well as assignments to the 1st and 2nd year students for the AY2020-21. Currently, there is a significant gap between the difficulty of some questions which appear in the assignments and those which are asked in the exams. On the other hand, in some cases, there aren't enough easy questions on a topic which can influence motivation of students and hinder their learning.

**Objectives:** This project seeks to improve student learning and experience. Students' will play an active role as partners and aid in designing helpful resources for their peers. To improve the quality of content and bridge the gap in difficulty levels, the key objectives of this project are:

1) Categorise the difficulty level of questions and identify gaps in progression

2) Identify questions which can fill the gaps

3) Identify the appropriate resources and context which can be added to the questions

4) Desirable End Product: Code in the questions and resources on the platform

**Duration of project:** 6 weeks during the summer. (Start date is flexible)

**Proposed outcomes and benefits for student experience:**

1) The problem sets and animations will be provided to the 1st year and 2nd year students and as such the results from this project will directly improve the experience of future cohorts.

2) Students will gain experience in developing content and improve their programming abilities

3) Students will also be expected to work in teams and enhance their soft-skills such as communication and teamwork

**How to apply:** You can show an expression of interest by sending an email to Dr. Vijesh Bhute at v.bhute@imperial.ac.uk with 300-500 words on why you would like to engage with this project. Shortlisted students will be invited for a meeting to discuss this further.

**Deadline:** 31st March 2021

**Contact details:** Please contact Dr. Vijesh J. Bhute at v.bhute@imperial.ac.uk.