**Toyhouse at SUTD-IDC**

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**1. Background of Proposal**

Toyhouse at Tsinghua University provides an environment that can bring design research projects into learning activities, in which both learning activities and design research can be enriched. This document is to propose collaboration of Tsinghua-Toyhouse and SUTD-IDC, specifically from two aspects:

1. Co-develop Design-Centered Learning Activities at Tsinghua and SUTD-IDC.
2. Cooperation on Engineering Education Research.

In addition, we invite students and researchers from SUTD-IDC to visit Tsinghua University during the summer. For long-term, we propose to build collaboration to encourage research at Tsinghua University and SUTD-IDC.

**2. Co-develop Design-Centered Learning Activities**

Based on the background topic of “Sustainable Digital Nation”, students from interdisciplinary background need to study and work together during the design process of learning activities. Three workshops will be organized between July and September: International Summer Student Program (August 3 – August 10), XLP Junior (August 8 – August 20), Lego2Nano (September 1 – September 8).

The preparation phase starts from July. We invite **3+ students and researchers** from SUTD-IDC to come to Tsinghua University during **July and August** to design the activities with students at Tsinghua University. Potential projects that can be integrated into the learning activities include (not limited to these):

1. Chinese culture and language study
2. Sustainable architecture design
3. Urban and suburban living environment design
4. ICT-based intelligent device and product design
5. Engineering education evaluation policies
6. Low-cost and high-efficient instruments for nanotechnology research

**3. Engineering Education Research**

We invite **2+ students and researchers** from SUTD-IDC to co-conduct Engineering Education research at Toyhouse. Currently, a distributed learning-workflow has been designed into a professional business process.

Further research collaboration includes (not limited to these):

1. Cultivate innovations by design research in developing countries.
2. Design effective evaluation systems for engineering education.
3. Integrate design into Engineering Education.
4. Build computation models for learning workflow.
5. Design universities as a digital organization based on ICT.

**4. Project Schedule at Toyhouse**

Jun 1 – Aug 2 Preparation Phase of Summer Learning Activities

Aug 3 – Aug 11 Tsinghua Summer International Student Program

Aug 8 – Aug 20 XLP Junior

Aug 21 – Aug 31 Preparation Phase of Lego2Nano

Sep 1 – Sep 8 Lego2Nano Workshop

Jun 1 – All Related Engineering Education Research

**5. Invitation Summary**

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| --- | --- | --- |
| Date | Student/Researcher | Project |
| Jun 15 – Sep 10 | 3+ from IDC | Learning Activity Design |
| Jul 1 – Aug 30 | 2+ from IDC | Research Collaboration |

**6. Fees and Costs:**

Tsinghua University will cover the program fee. The program fee does not cover other expenses, such as airfares, accommodation, health insurance, dining costs, visa application or any other expenditure incurred during the stay in China.

**7. Health Insurance:**

*Participants should purchase a health insurance that covers all medical and hospital costs during your stay in China. You will be asked to provide proof of insurance coverage during the first day of registration.*