ADMISSION

Direct Year 1 or Transfer in Year 2

The IRE program is an independent and separate program choice. Students can apply for the IRE program through direct selection in JUPAS, or apply for transfer from the regular Science program (US$100) at the School of Science into IRE after their first year of study. Students interested in the IRE track are encouraged to include both the IRE program (US$101) and the regular Science program (US$100) in their program choices.

To be admitted to the IRE Program, HKDSE students must fulfill the HKUST’s general admission requirements and School of Science’s specific requirements, and must pass the IRE admission interview.

Admission Requirements (JUPAS Applicants with HKDSE Results)

University General Requirements

- 4.0 x 2 (four core subjects plus three electives), or
- 4.0 x M1/M2 x 1 (four core subjects with Mathematics Extended Module 1 or 2 plus one elective)

Minimum Level Requirements

<table>
<thead>
<tr>
<th>Subject</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language</td>
<td>3</td>
</tr>
<tr>
<td>Chinese Language</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics (Compulsory Module)</td>
<td>3</td>
</tr>
<tr>
<td>Liberal Studies</td>
<td>2</td>
</tr>
<tr>
<td>Elective 1 (Science Elective)</td>
<td>2</td>
</tr>
<tr>
<td>Elective 2 (Science Elective)</td>
<td>2</td>
</tr>
</tbody>
</table>

Subject Area:

- Biology
- Chemistry
- Geography
- Physics
- Mathematics

*Note: Subject Area: The subject area is based on the JUPAS subject code.

JUPAS Score Calculation for IRE Program (US$101)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>1.8</td>
</tr>
<tr>
<td>Mathematics</td>
<td>1.0</td>
</tr>
<tr>
<td>Liberal</td>
<td>0.8</td>
</tr>
<tr>
<td>Science</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Subject Area:

- Biology
- Chemistry
- Geography
- Physics
- Mathematics

*Note: Subject Area: The subject area is based on the JUPAS subject code.

FURTHER STUDIES OPPORTUNITIES

- Examples of PhD Offers of the Class of 2017 Institute/Program
  - California Institute of Technology
  - University of California, Santa Cruz
  - Oregon State University
  - University of Chicago, Microbiology
  - Rice University, Physics
  - University of Chicago, Physics
  - Rutgers University, Physics
  - University of Pittsburgh, Physics
  - Stanford University, Applied Physics
  - University of Toronto, Biochemistry
International Research Enrichment (IRE) Program

INTERNATIONAL, RESEARCH ENRICHMENT (IRE) program is designed for students interested in pursuing a research career in science or broadening their exposure to research during their undergraduate studies. It emphasizes curiosity and grit, which are the essential attributes to a successful career in scientific research. Building upon the premise that exposure to international research environments at an early stage is essential to a fruitful research career, the program offers outstanding science students an early opportunity to nurture their research abilities and solidify their discipline-specific knowledge in regular Science programs.

POrNER STUDY TRACK FOR TOMORROW’S SCIENTISTS

Program Curriculum

The IRE program (JS5101) has the same curriculum structure as the Science students with (JS5011) of the School of Science at HKUST. However, students admitted to the IRE program can enjoy FREE choice among six major programs offered by the School: Biochemistry and Cell Biology, Biotechnology, Chemistry, Environmental Science, Mathematics, and Physics.

It further distinguishes itself from the regular Science program by guaranteeing students with:
1. Admission to The Undergraduate Research Opportunities Program (UROP),
2. Exchange to a foreign university,
3. A summer research internship opportunity in a foreign university/national laboratory.

"What unites us is a love of science and an insatiable curiosity."

WORDS FROM IRE STUDENTS

Raphaelle SO Wil Lam (Class of 2017)
BSc in Biochemistry and Cell Biology
Graduate studies offer: University of Toronto, PhD in Biochemistry

International Research Enrichment students take on research projects under faculty supervisors as early as freshman year. Through accumulating rich research background in the low-stakes environment of undergraduate studies, we can widen our perspectives and develop scientific thinking skills by experimenting with different fields and techniques.

However, IRE is not only an academic program; it is a lifestyle of its own. Not only has IRE offered me so many opportunities to push research frontiers, both on campus and overseas in the United States, but the program has also created a community of brilliant classmates and caring faculty who serve as my role models. In our study room, IRE students of all years and majors – from Life Science to Physics – gather to discuss course materials, assignments, as well as ridiculous science jokes and memes. It is through these peer interactions that I have become even more excited about science, and more determined in solving humanity’s most pressing health problems.

TAILOR-MADE RESEARCH COURSES WITH FACULTY MENTORING

Curriculum Design Philosophy

- The need for excellent supervisors and program flexibility: The program provides a nurturing environment to encourage students to interact among themselves and to delve deep into the subject of their interests without limitations.
- Incorporation of a foreign research element broadens students’ horizon in research skill development and fosters understanding of the relation between different research areas. This is essential for Hong Kong students because of the limited scope of research topics available in Hong Kong universities. The title “International Research Enrichment” emphasizes this aspect of the program.

The IRE program has offered me many research opportunities, allowing me to freely explore my research interests. I am grateful to be supervised by a number of faculty members to gain the essential background for performing cutting-edge research. Gaining research experience during my undergraduate studies has significantly sharpened my competitive edge for my PhD application. Within the IRE community, the academic atmosphere is strong. Frequent discussion about advanced materials encouraged me to study much more than regular courses. This has prepared me to pursue further studies in Physics. Being a member in the IRE program has been a fruitful experience for me.

Johnny Wu Tsz Chun (Class of 2017)
BSc in Physics
Graduate studies offer: Harvard University, PhD in Physics

It is very fruitful. I have taken advantage of the many research opportunities offered by the IRE program. In the first two years, I was in Prof. Loth’s research group doing experimental research on high-temperature superconductors. I continued my interest in this subject after I went for exchange at Columbia University and worked with a renowned theorist Prof. Andrew Mackenzie on the novel superconductor of FeAs. After returning to HKUST, I got a chance to join Prof. Vic Leung’s research group and started to train myself to be a condensed matter theorist and get to know the field of topological superconductors. HKUST has given me plenty of training to be a serious researcher. I also met many friends who share similar ambitions and interests as I do. IRE has created an ideal environment for me to interact with brilliant students, PhDs, professors and even prominent researchers from foreign institutions.

Harry TAM Pak Man
BSc in Physics - Year 3

It is wonderful. I have taken advantage of the many research opportunities offered by the IRE program. In the first two years, I was in Prof. Loth’s research group doing experimental research on high-temperature superconductors. I continued my interest in this subject after I went for exchange at Columbia University and worked with a renowned theorist Prof. Andrew Mackenzie on the novel superconductor of FeAs. After returning to HKUST, I got a chance to join Prof. Vic Leung’s research group and started to train myself to be a condensed matter theorist and get to know the field of topological superconductors. HKUST has given me plenty of training to be a serious researcher. I also met many friends who share similar ambitions and interests as I do. IRE has created an ideal environment for me to interact with brilliant students, PhDs, professors and even prominent researchers from foreign institutions.

EXPOSURE TO CONTEMPORARY RESEARCH FIELDS

Program Highlights

- Tailor-made team building camp and field trips.
- Participation in advanced research projects under the supervision of world-class professors.
- Opportunities to meet Nobel Laureates and renowned scientists.
- Individualized Research Guidance and Mentoring from experienced Faculty.
- Undergraduate Research Opportunities Program (UROP) & International Summer Research Program in collaboration with a foreign university/national laboratory.
- Exchange opportunity in a renowned foreign university.
- Summer research internship opportunity in foreign universities/national laboratories.
- Scholarship support for overseas learning trips.