



THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Department of Electronic & Computer Engineering

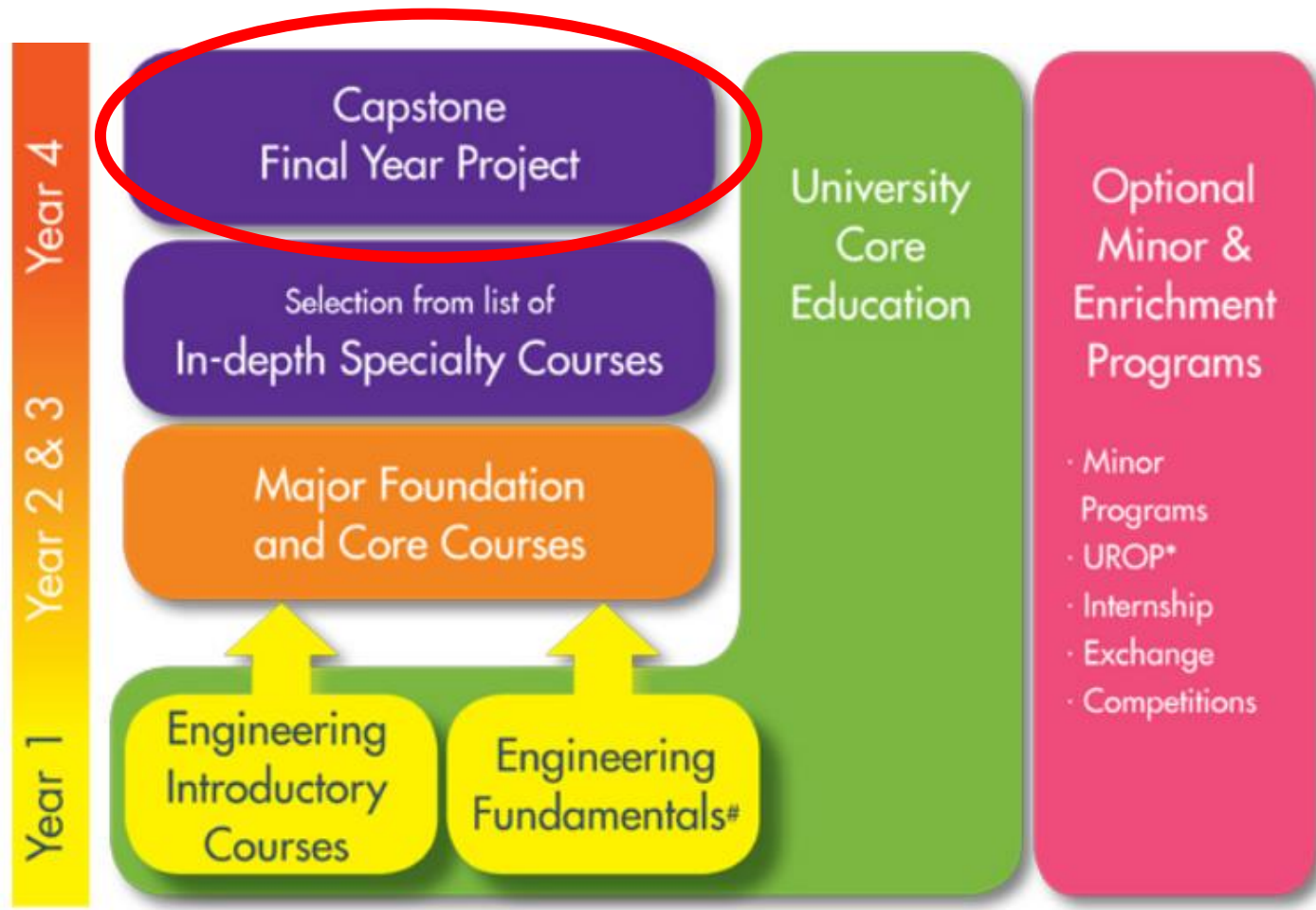
電子及計算機工程學系

Planning for your FYP/FYT
Prof. Levent YOBAS,
FYP Coordinator



12 APR 2024

School of Engineering Curriculum



FYP/FYT Learning Outcomes

ELEC 4900 / **ELEC 4901**

L01 - Recognize the importance and difficulties in applying learned skills/knowledge to solve practical problems

L02 - Understand the steps in solving a practical problem from background research to problem solution

*L03 - Execute a complete project from problem formulation, design/implementation, up to verification, documentation/**thesis preparation** and presentation*

L04 - Work in a team environment: learn and practice effective project and time management

*L05 - Identify the **novelty**/contribution of the project/**thesis***



FYP and FYT

	FYP	FYT – Research Option
Course Code	ELEC4900 / CPEG4911 / ENGG4901/4902	ELEC4901/ CPEG4912/ ENGG4903/4904
Credit	6 Credits	
Group Size	1-3 students	1 student
Study Period	Summer (1 credit), Fall (2 credits) and Spring (3 credits)	
Pre-requisite	<ul style="list-style-type: none">completed three out of four 2000 level courses + one 3000 level coursedemonstrate capability and basic background knowledge for the project	

Eligibility

- Year 3 students who have not taken FYP/FYT before should start your project in Summer 2024.
- Students must have completed:
 - at least three out of four 2000 level courses +
 - one 3000 level course +
 - demonstrate capability and basic background knowledge for the project.
- Students who are taking 2000 or 3000 level courses will be given “Conditional Pass” to take FYP/FYT. The eligibility will be reviewed in Summer/ Fall 2024.

Important Dates

Spring

April 15

- Project Descriptions released

April 22

- Project Selection (registration opens)

May 10

- Project Registration deadline

Summer

Jun 17

- Course Commencement

Fall

Sept 13

- Proposal Report Due

Spring

Jan 10

- Progress Report Due

Jan 24

- FYP/T Midterm Progress Day

Apr 18

- Final Report and Self-Assessment Report Due

Apr 18

- Poster Due

Early-May

- FYP Industry Day

Early-May

- Oral Presentation / Thesis Defense

Early-May

- Poster Presentation

Course Registration

- **Students who have committed to FYP/FYT projects by end of Spring 2024**
 - **Pre-enrollment for Summer 2024, Fall 2024 and Spring 2025.**
- **Uncommitted students**
 - **Obtain consent from supervisor**
 - **Forward it to Venus (venusfung@ust.hk)**
 - **No pre-enrollment**
 - **Register the course in SIS during class enrollment period.**

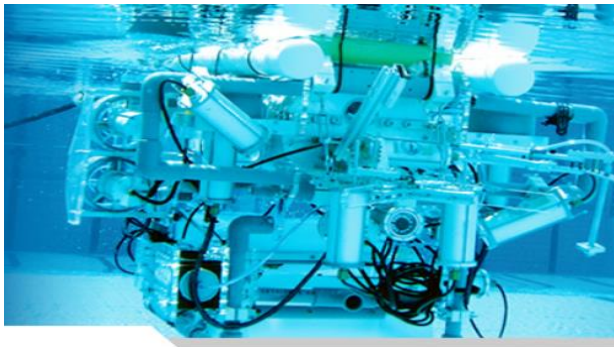


Course Grading

- **"PP" (Permitted to Proceed)**
given to students who have fulfilled supervisor's requirements & submitted the required deliverables at the end of Summer and Fall.
- **"F"(Unconditional Failure)**
given to those who haven't.
- The **"PP"** grades are superseded by letter grades (from A+ to F) at the end of the FYP period.



Project Selection



Things to Do in April/May

STEP 1

Form a Team

- *if you are planning to take FYP, you should now look for groupmates*
- *For FYT student or student who would like to work on “1 person” FYP project, you can skip this step*

STEP 2

View FYP Project and Description on FYP Management System (FYPMS)

- *login with your ITSC account and password (if you encounter any difficulty, please check with eehelp@ust.hk)*
- *approach project supervisors for more information and express interest*

STEP 3

Bid for Project at FYPMS

- *Supervisors commit projects*

To Form a Team in FYPMS

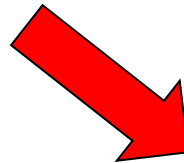
<https://fypms.ece.ust.hk/2024/>

Please login to FYPMS 2019-2020 with ITSC username and password

Username:

Password:

1. Choose a group representative
2. Group representative login using his/her ITSC account



3. Click on "Group"
4. Other groupmate input their ITSC account and password in the table
5. Click "Submit"

PROJECTS GROUP STATUS SEARCH LOGOUT... Student: stu2
ECE FYP 2019-2020

Member	Email account(@connect.ust.hk)	Password
1	stu2	
2		
3		

How to create a group:

Please gather all group members together and input all account name and password at the same time.
!! Don't share you password with your groupmates !!

The system do not allow you to add any new members after a group is formed.
To add a new member, you have to delete your group first and form a new group again under "Group" menu.

Notes:

Commit to a Project

<https://fypms.ece.ust.hk/2024/>

PROJECTS GROUP STATUS SEARCH LOGOUT... Student: stu2
ECE FYP 2019-2020

LIST

APPLY/REMOVE

project on this page.
projects you are interested in.
any project yet until a supervisor do so. **
You may wish to contact the supervisor directly and ask him/her to commit his/her project to you.

When you bid for a project, you are making a commitment to undertake the project. This is the case regardless of the priority that you assign to it. The priority only matters if the supervisor decides to contact you before committing. However, some supervisors might not do that.

Selected project by stu2[ECE]

No selected project

Please select individual project with priority 1

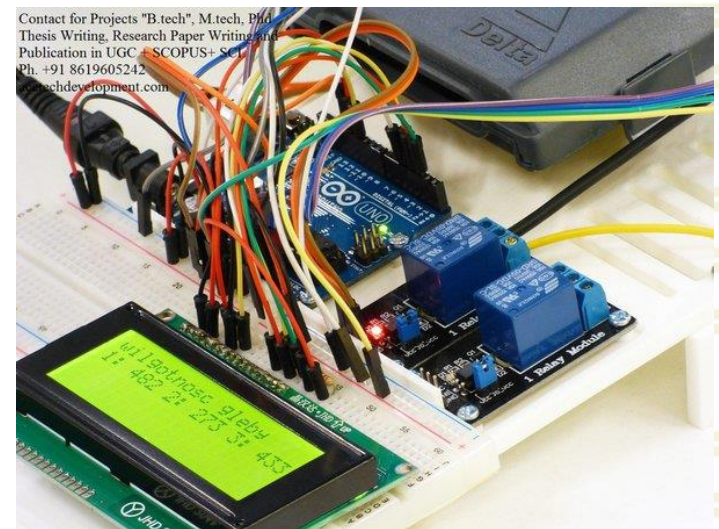
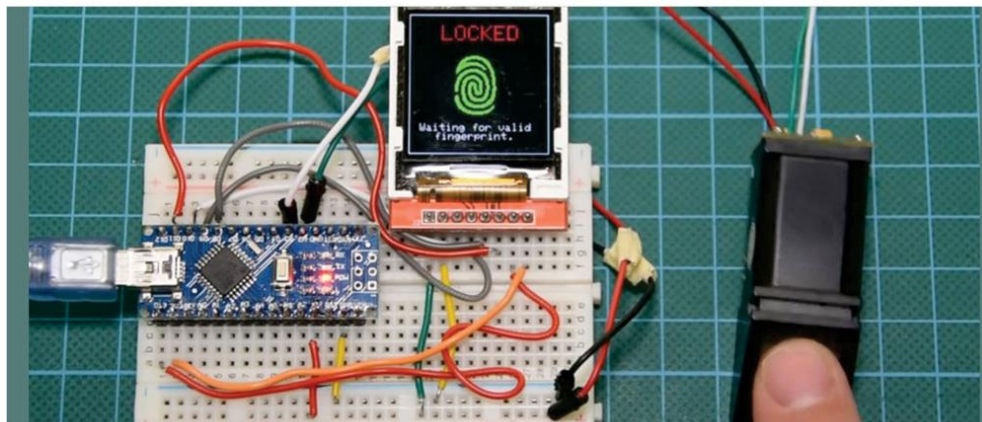
Select	Project Code	Faculty	Title	No. of Student(s)
<input type="radio"/>	AW01	sup1, eelyobas, eeshsong	terminator II	1 to 3
<input type="radio"/>	S102	sup1, sup3	Pilib controlled car new XX yy	1 to 3
<input type="radio"/>	S201	sup2, sup3	mini car	1 to 1
<input type="radio"/>	S401	sup4, eeshsong	alien	1 to 3

Select

- Select “Project” and “List” to view a list of project
- Select “Apply/Remove” to apply for or remove from a project
- Add projects according to your preferred priority
- Once project supervisor selected you, a project cannot be uncommitted without mutual consent

Self-Proposed FYP Projects

- Highly encouraged.
- Approach faculty members in your project area to mentor you.
- For interdisciplinary projects, you can have multiple faculty members to co-mentor you with one faculty member as the primary supervisor.



Capstone/Final Year Project

- Important part of your engineering education. Universal. Without it, your engineering education is incomplete.
- Gateway to your career and your first job as an engineer. Companies look for project experience in fresh graduates. Add value to your CV!
- Help you discover your passion within ECE/CPEG and gain confidence in your engineering education
- Help you build up your soft skills; teamwork, time and project management, project planning and execution, communication skills...

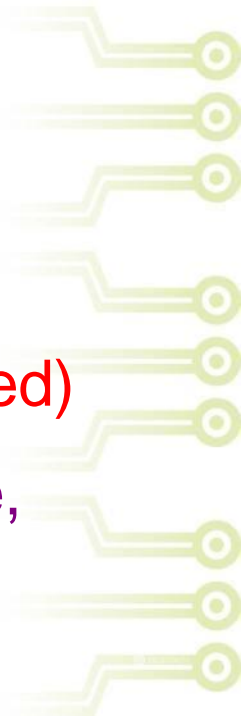
Capstone/Final Year Project

- What counts as capstone/FYP ?
- Does the project have to fulfill certain criteria ?
- It is NOT capstone/FYP if your project:
 - entirely outside your discipline (ECE/CPEG)
 - does not utilize a good portion of your knowledge accumulated through the ECE/CPEG coursework
 - requires you to learn entirely new “advance” knowledge, instead
 - research project unless you work on UROP or FYT
 - does not add value to your education (does not challenge you)



Capstone/Final Year Project

- Requires consolidating and applying knowledge & skills LEARNED in your ECE/CPEG courses to SOLVE PRACTICAL PROBLEMS
- Comes in two flavors
 - FYP: Design Project (Engineering design)
 - FYT: Thesis (Engineering research; hypothesis-driven)
- Chosen from a list of projects offered by the faculty
- **Can be self-initiated/proposed by you (highly encouraged)**
- Should have 3 SMART objectives (specific, measurable, achievable, relevant, and time-bound)



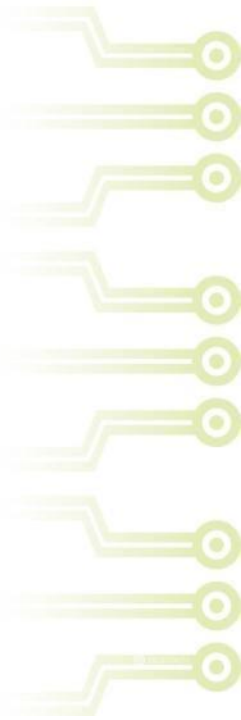
Tips for a successful FYP

- Have a plan
- Identify your area of interest
 - Be proactive; talk to professors and ask key questions
- Identify teammates who share the same passion or interest with you
- Identify a supervisor whom your team can work with
- Have your SMART objectives
- Own your project. Supervisor is there to guide/assist you



Grading Elements

- Project Formulation & Execution
- Proposal Report
 - WHAT you will do ? And WHY (Significance) ?
 - Must have clear and measurable (SMART) objectives
 - HOW you will do it ? PLAN ?
 - ANTICIPATE challenges and prepare BACKUP PLAN
- Progress Report
 - WHAT you HAVE DONE to date (RESULTS!)
- Final Report
 - A complete account of your project



Grading Elements

- Bear in mind that engineering is not only about executing and delivering projects but also capturing projects in written reports (documentation)
- 50% of your FYP grade comes from your supervisor based on how well you performed your project and whether you regularly met and updated your supervisor
- 50% of your FYP grade comes from judges who have no information on how well you performed the project except for what you have presented in your progress and final reports
 - You might have done an excellent job but if you don't communicate your results and achievements clearly in your written reports then you will lose a portion of your grade

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NO.	GRADING ITEMS	FACULTY SUPERVISOR WEIGHT	GRADING ITEMS	JUDGE 1	JUDGE 2	READER	TOTAL (100%)
1	Proposal Report	10%	Proposal Report	N/A	N/A	N/A	10%
2	*Execution (Progress)	20%	Progress Report	N/A	N/A	10% (from Communication Tutor)	30%
3	*Execution (Final)	20%	Final Report	5%	5%	10% (from Communication Tutor)	40%
4	Oral Presentation/ Thesis Defense (FYT)	N/A	Oral Presentation/ Thesis Defense (FYT)	10%	10%	N/A	20%
	Total	50%	Total	15%	15%	20%	100%

*Supervisor grades only proposal report whereas judges and reader grade progress and final reports.

- Monthly reports and video/poster presentations must be submitted/completed but do not directly contribute to the overall grade.
- Penalties apply for late submissions including monthly reports.

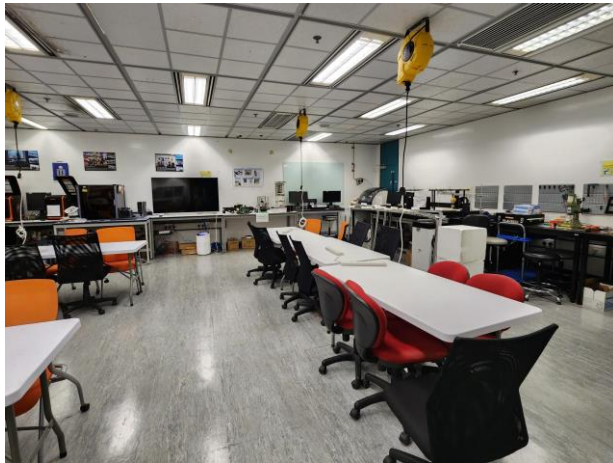
- To ensure the quality of the report, you are strongly encouraged to meet with your allocated Communication Tutor and have your report reviewed before submission.
- As an FYP/FYT student, you are required to meet with your Communication Tutor twice to check your reports before the submission of the Final Report.
- Please check with a Communication Tutor if you are unsure of any specific case in your reports.
- Penalty: any of the following items lead to the lowering of your FYP letter grade (e.g. from A to B) or failure of the FYP:
- Missing or invalid monthly reports (invalid means inadequately filled)
- Any late submission of the proposal or other reports, including monthly reports
- **Plagiarism refers to paraphrasing or quoting of other people's work and/or using others' ideas without appropriate acknowledgement.** Be extra careful about rephrasing or excessive quoting from other sources and make sure to cite all sources. Reports will be checked through Turnitin. Those suspected of containing plagiarized material, including unreferenced diagrams, will be referred to the department for investigation and will be penalized accordingly, including failure of the FYP.

FYP pitfalls arise due to

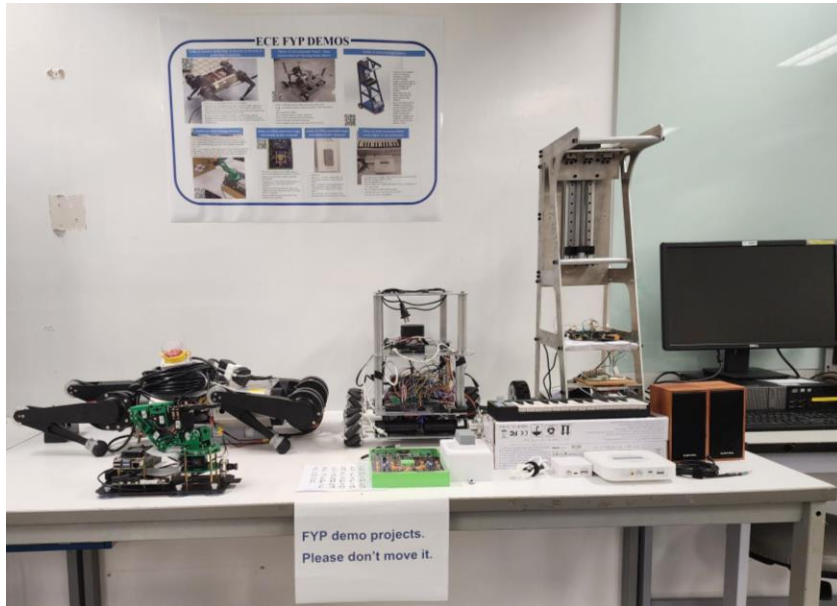
- Not having regular meeting with your Supervisor
 - It's your responsibility to contact your supervisor and schedule regular meetings
- Poor PLANNING
- Good planning but poor EXECUTION
- Lack of DISCIPLINE & TEAMWORK
- Lack of COMMUNICATION
- Good execution but poor REPORTS
 - No credit for your work done if NOT in your REPORT
 - Inadequate RESULTS in your REPORT



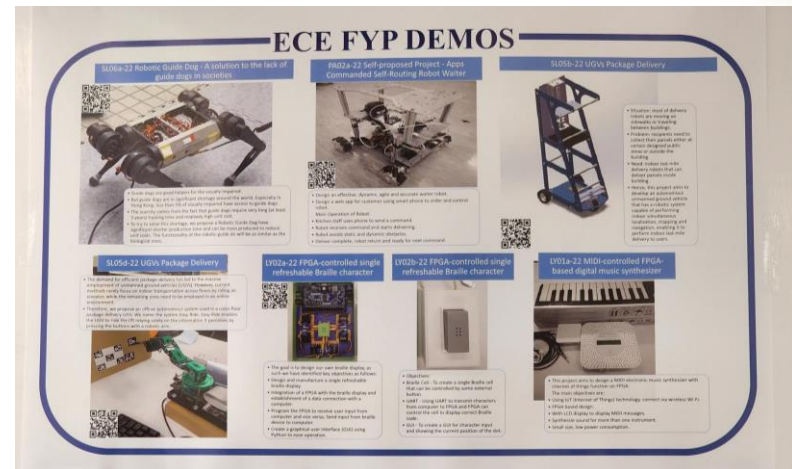
ECE Makerspace (Rm 3125)



FYP demos from AY22-23 exhibited in Makerspace



- Robotic guide dog
- Robot waiter
- UGV package delivery
- FPGA-controlled single refreshable Braille character
- Digital music synthesizer



Lab Access

- *Students can use their student smart card to enter the Makerspace (Room 3125A) and the PC Lab. (Room 4225C).*

Technician	Makerspace	Mr. Peter Nam
	PC Lab	Mr. Joseph Cheng

- *If you need to access to other labs, you are required to fill out the "Lab Door Access Authorization Form" and submit it to Room 3130 for further process.*



Departmental Support (Budget)

- Regular Support (per student)
 - HK\$500 for consumable items
 - HK\$2500 for returnable items
- FYP/T Grant Scheme (up to HK\$20,000 per project)
 - For projects that have great potential to deliver a demo and/or participate in external competitions
 - Application form to be submitted along with FYP proposal in September



Consumable and Returnable Items

If you need something,

- Check FYP website!
- ECE storeroom keeps a list of **Returnable Item** and **Consumable Item** for loan to students
- **Talk to Yin** (rm3127, lift 19/22) before making purchase



Making Purchase:

- Follow Purchase Guideline
- **Talk to Rita** (rm2457, lift 25-26) for budget limit and reimbursement procedure



Departmental Support (Awards)

- FYP Midterm Progress Awards
 - a certificate and a cash prize \$\$
- FYP Final Best FYP Awards
 - a certificate and a cash prize \$\$
- FYP Industry Day Awards
 - best demo award \$\$ & best poster award \$\$



Annual Competitions*

- The HKIE Innovation Award
 - Champion: HK\$ 15,000
- Innovate for Future by HKETA
 - Champion: HK\$ 8,000
- HK Electronics Project Competition
 - Champion: HK\$ 10,000
- ASM Technology Award
 - Gold: HK\$30,000
 - Silver: HK\$20,000
 - Bronze: HK\$10,000

**based on the academic year 2021-2022*



Incentives for Competitions

- Participating teams receive a sponsorship from the department to help develop their projects.
- Successfully delivered projects, with and without winning a prize, will be displayed at the ECE Student Lounge and the ECE makerspace (FYP Lab).
- For FYP entries, we will shortlist the projects for the FYP Industry Day Awards.
- For FYP projects being shortlisted for or winning a prize, we will shortlist their projects for FYP Awards.

Corporate FYP

- Identify a company who agrees to employ you so that you can undertake your FYP project under the company's supervision
- Need also an academic supervisor from your department and you are required to meet your professor once a month
- Take a study break during the period (at least for 5 months)
- Submit an application form once you identified the company

Visit the website for more information:

https://ece.hkust.edu.hk/enrichment/coop_program

	Name	Contact Information
ELEC Co-op Coordinator	Prof. Patrick Yue	eepatrick@ust.hk
Admin	Catherine	eecatsoong@ust.hk (ECE Office)

Admin Support

	Name	Contact Information
FYP Coordinator	Prof. Levent Yobas	eelyobas@ust.hk
Admin	Venus	venusfung@ust.hk (ECE Office)
Expense Reimbursement	Rita	eerita@ust.hk (ECE Office)
Technician (Senior Project Lab)	Peter	eekwnam@ust.hk Tel: 2358 8518
Technician (PC Lab)	Joseph	cscheng@ust.hk Tel: 2358 7086
Senior Storekeeper	Yin	eehym@ust.hk Tel: 2358 8518
Communication Tutors	Shaneli BHARWANEY David SCHNEIDER	<u>eeshaneli@ust.hk</u> <u>eeschneiderd@ust.hk</u>



FINAL YEAR PROJECT/THESIS

For more information:

<https://ece.hkust.edu.hk/programs/enrichment/fyp>

	Name	Contact Information
FYP Coordinator	Prof. Levent Yobas	eelyobas@ust.hk
Admin	Venus	Venusfung@ust.hk(E CE Office)

Q & A



Study Leave – Summer (except for co-op program)

- *Obtain written agreement from supervisor and groupmate to continue the project.*
- *Explain how you would work on the project during your leave*
- *Send the agreement*
 - *To: Prof. Levent Yobas / FYP Coordinator*
 - *Cc: Venus, Vicky (CPEG student only)*
- *Browse [FYP website](#) for more detail*

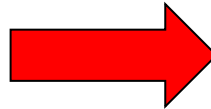


Study Leave – Fall (except for co-op program)

Before Result Announce

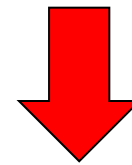
Apply for project!

- ✓ “One-man” project
- ✓ Let supervisor know you may go for internship /exchange



Internship/Exchange in Fall

- **Course enrollment will be cancelled automatically!**
- NOT advise to continue FYP project!



Student who opt to continue his/her FYP project...

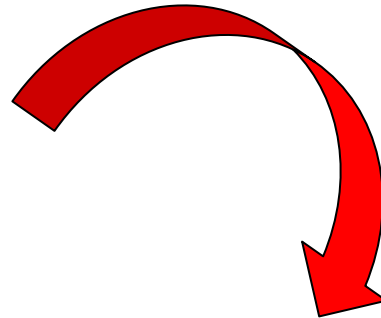
- Obtain written agreement with your supervisor and groupmates
- Follow the due dates for various reports
- Email the written agreement to Prof. Levent Yobas and Venus/Vicky
- Browse [FYP website](#) for more detail

Study Leave – Fall & Spring or Spring only (except for co-op program)

Before Result Announce

Apply for project!

- ✓ “One-man” project
- ✓ Let supervisor know you may go for internship /exchange



Internship/Exchange in Spring

- **Course enrollment will be cancelled automatically!**
- **NOT allowed to continue FYP project!**
- In case of extenuating circumstances, please check with your supervisor and FYP Coordinator
- Browse [FYP website](#) for more detail

Tuition Fee

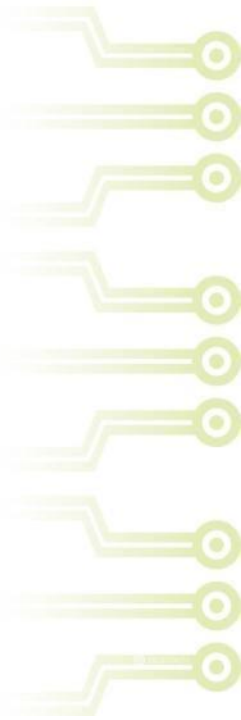
- For students who have taken leave from study paying no tuition in regular term (i.e. Fall or Spring),
- a per-credit tuition fee will be charged when resume study in Winter or Summer, with the maximum amount not exceeding the prevailing tuition fee for a regular term.
- **ARR website:**
http://arr.ust.hk/reg/pr/pr_std_fees/fees_partial.html

Study pattern (2 majors in BEng)

ENGG4901/4902 (FYP)

ENGG4903/4904 (FYT)

- **6-credit year-long courses spread across Fall (3) and Spring (3).**



Corporate FYP

- For students who use internship to satisfy FYP requirement.
- Students should look for internship opportunities on their own.
- Students may visit IEI and ECE's website for job postings
- Application form