

UBSI Undergraduate Research Opportunity Program(UROP)

□ Purpose

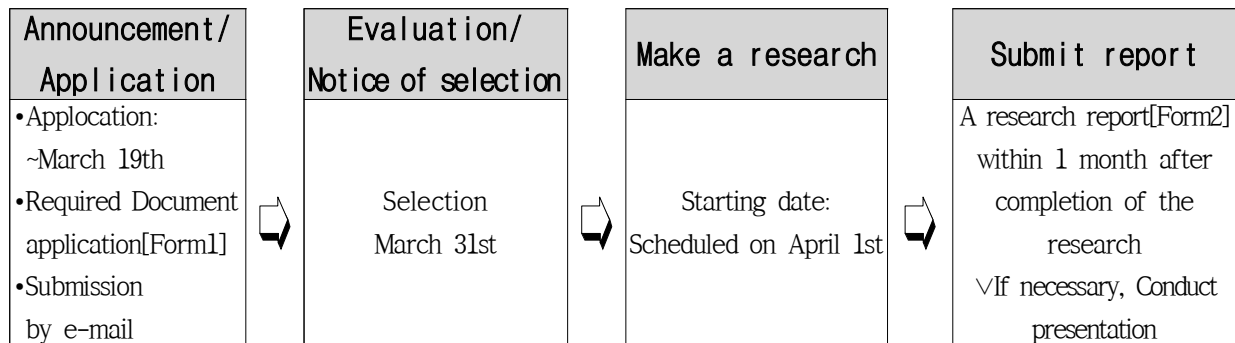
- Provide an opportunities for creative and active research activities for undergraduate students
- Foster researchers in the basic science field by providing opportunities for undergraduate students to participate in research

□ Details

1. Internal participation

- **Eligibility:** UNIST undergraduate students
- **Subject:** Select a topic from those proposed by professors[ATT 1]
- **Period:** 3 months or 6 months
- **Amount:** 300,000KRW each month(student labor cost)

○ Procedure



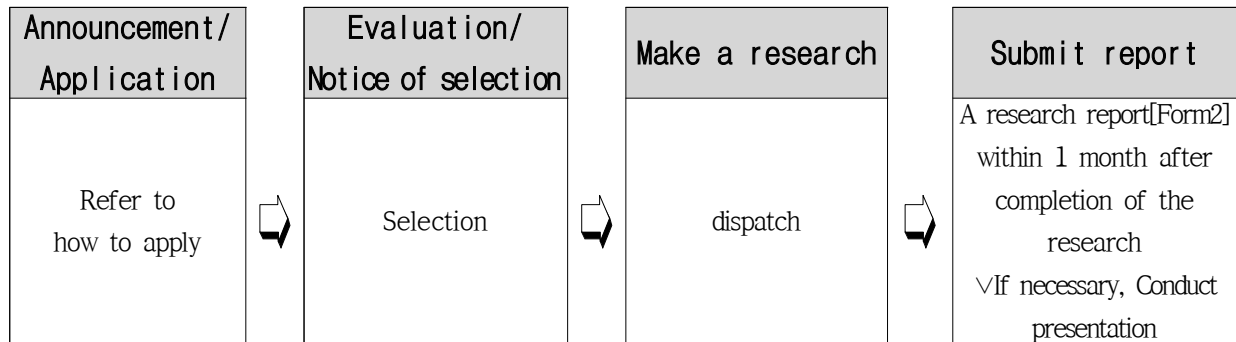
※ It can be changed depending on the situation.

2. External participation

- **Eligibility:** 1) Undergraduate at the CNS
2) Where participation in research participation programs of domestic and foreign research institutes, universities, etc. is confirmed in 2023.
- **Perform:** Dispatch to relevant domestic and international institutions

to conduct research

- o Period: 3 months or 6 months
- o Amount: 300,000KRW each month(student labor cost)
- o Procedure



※ It may be closed early when selection is completed within budget.

□ Note

- o Unable to apply participant of UIRP or AICP equal subject
- o In addition to this program, additional labor costs may be received due to participation in other projects, but the payment limit of labor costs for undergraduate students does not exceed 1,300,000 KRW per month.

□ How to apply

	Internal	External
Application	~2023.03.19	1) ~2023.5.31. 2) ~2023.09.30.
Required Document	1) 1 set of application [form1]	1) 1 set of application [form1] 2) 1 set of evidence to confirm participation in the program
Submission	by e-mail(euns@unist.ac.kr)	
Inquiry	Choi, Eunsook(euns@unist.ac.kr)	

[Attachment 1] Research Subject

Research Subject

	Advising Professor		Lab's name	Research Subject
	Affiliation	Name		
1	Physics	Hyeong-Ryeol Park	Ultrafast & Nano Plasmonics Laboratory	hydrogen production, nano fabrication, optical measurement
2		C.-M. Ghim	Physics of Complex Systems Lab	Stochastic processes of intracellular reaction networks
3		Yoon Seok Oh	Lab for Strong Correlation in Quantum Materials	Quantum correlated phenomena in quantum-grade single crystal system
4		Kyujin Kwak	Computational Astrophysics Lab.	Gravitational wave, Neutrino astronomy, High Energy Astrophysics
5		Je-Hyung Kim	Solid-state Quantum Architecture Lab	Manipulation and characteristics of single photons and single spins
6		Woo Jin KWON	Ultracold quantum gas laboratory	Designing a new quantum gas machine, laser spectroscopy
7		Changhee Sohn	Unobtainable Functional Oxides	Searching for new materials for topological quantum computations
8		Chae Un Kim	High Pressure X-ray Science Lab(HipreX)	Research design for intermediate states of protein enzymatic reaction
9		Jaeup Kim	Statistical Physics of Soft Materials Lab	Field-based Simulation of Polymers Using Deep Learning
10		Seon Namgung	Quantum Nano Device Lab	Development of High Performance Optoelectronic Devices using 2D Materials
11	Mathematical Sciences	Bongsoo Jang	Computational Mathematical Science Lab	Mathematical Modeling for fractional systems and ecology
12		Rak-Kyeon g Seong	Mathematical Physics and AI Lab	Moduli Spaces of Supersymmetric Gauge Theories in String Theory
13		Youngae Lee	Nonlinear Analysis in PDEs Lab	Variational approach on nonlinear elliptic PDE problems
14	Chemistry	Bum Suk Zhao	Molecular Motion Control Lab.	Gas phase spectroscopy, molecular motion control, cold reaction
15		Sung You Hong	Synthetic Organic Chemistry Lab	Catalytic Organic Synthesis: Selective Oxidation
16		Hyeon Suk Shin	Lab for Carbon and 2D Materials	Synthesis and energy applications of 2D materials
17		Duyoung Min	Nano Bio Dynamics Lab	Membrane protein folding studies with magnetic tweezers
18		Ja-Hyoung Ryu	Supramolecular Biomedical Chemistry Lab	Cancer-Targeted Nanomedicine
19		Jung-Min Kee	Bioorganic and Chembio Lab	Chemical biology of protein phosphorylation and dephosphorylation
20		Kyoseung Sim	Organic Soft Electronics and System Lab.	Organic semiconductor based stretchable electronic devices

[Form 1] UROP application

UBSI UROP Program application

Type	<input type="checkbox"/> Internal <input type="checkbox"/> External(Institution:)									
Research Title	Korean									
	English									
Period	<input type="checkbox"/> 3 months <input type="checkbox"/> 6 months									
applicant	student NO.	Name	Affiliation	e-mail						
Advising professor	Affiliation		Name							
<p>I confirm that all participants will faithfully participate in the program in compliance with all the matters set by the UROP program of UBSI.</p> <p style="text-align: right; margin-right: 100px;">yyyy. mm. dd.</p> <table style="width: 100%; margin-top: 20px;"> <tr> <td style="width: 30%; text-align: center; padding: 5px;">applicant</td> <td style="width: 40%;"></td> <td style="width: 30%; text-align: center; padding: 5px;">(Signature)</td> </tr> <tr> <td style="text-align: center; padding: 5px;">Advising professor</td> <td></td> <td style="text-align: center; padding: 5px;">(Signature)</td> </tr> </table>					applicant		(Signature)	Advising professor		(Signature)
applicant		(Signature)								
Advising professor		(Signature)								

To Director of the UBSI

Research Plan

※ Write the content below freely within 2 pages (Section title can be changed)

1. Research Motive and Necessity

Instructions (Delete before submitting)

- Describe the motive/necessity of the proposed research, taking the following into consideration:
 - ▶ Describe the concepts in a succinct manner based on the keyword to assist the reviewers in understanding the overall research direction.

2. Research Objective and Contents

Instructions (Delete before submitting)

- Describe the project objectives and contents, taking the following into consideration:
 - ▶ Freely describe the topic of your doctoral thesis and the final academic goal you want to achieve through this study
 - ▶ The final goal being pursued through this project
 - ▶ Freely describe the research content and scope of research you wish to conduct during your studies

3. Use of research result and expected effects

Instructions (Delete before submitting)

- describe the expected effect of taking the following into consideration
 - ▶ describe the meaning and importance of research results obtained in accordance with research promotion in various aspects
 - ▶ Be sure to describe your career plan, such as the applicability of the research for future careers.
 - ▶ describe the results and expected effects that can be obtained through research

4. Additional note

Result report UBSI UROP Program

Type	<input type="checkbox"/> Internal <input type="checkbox"/> External(Institution:)									
Research Title	Korean									
	English									
Period	<input type="checkbox"/> 3 months <input type="checkbox"/> 6 months									
Participants	student NO.	Name	Affiliation	e-mail						
Advising professor	Affiliation			Name						
<p>I participated in the program faithfully in compliance with all the matters set by the UROP program of UBSI, and I prepare and submit a report based on the facts.</p> <p style="text-align: right; margin-right: 100px;">yyyy. mm. dd.</p> <table style="width: 100%; margin-top: 20px;"> <tr> <td style="width: 30%; text-align: center;">Participants</td> <td style="width: 40%;"></td> <td style="width: 30%; text-align: center;">(Signature)</td> </tr> <tr> <td style="text-align: center;">Advising professor</td> <td></td> <td style="text-align: center;">(Signature)</td> </tr> </table>					Participants		(Signature)	Advising professor		(Signature)
Participants		(Signature)								
Advising professor		(Signature)								

To Director of the UBSI

1. Research Results Report

※ Write the content below freely within 2 pages (Section title can be changed)

1. Research Objective(Background & Necessity)

2. Research Contents & method

3. Research result

4. Additional note

II. Performance Record & Review

1. Performance Record

yyy.mm.dd.	details

2. Review

Role	Review
	including Advantages and Disadvantages