Student Science Training Program 2026 Batch 4

3–14 August 2026

Day 1 (Monday, August 3, 2026)

08.30–09.00 Welcome & Introduction

Prof. Dr. Banthit Chetsawang

09:00–10:00 Lecture and Demonstration: Laboratory Safety Practices

Asst. Prof. Dr. Sirirat Kumarn

10.00–10.30 Laboratory session on "Pipetting practice"

Dr. Chonticha Saisawang, Dr. Phattarunda Jaree, Dr. Sukanya Pengpanich, Dr. Nattaya Srisawad, Dr. Supajit Sraphet, Dr. Piengtawan Tappiban, Dr. Phattara-orn Havanapan, Dr. Thiraphong Ho, Ms. Naraporn Sirinonthanawech and Mr. Pannaphan Makarathut

10.30–11.30 Lecture on "Polymerase Chain Reaction (PCR)"

Dr. Chonticha Saisawang

11.30–12.00 Laboratory session on "DNA amplification by PCR"

Dr. Chonticha Saisawang and team

12.00–13.00 Lunch

13.00–16.00 Laboratory session on "Agarose gel electrophoresis"

"Agarose gel setting"

"Practicing agarose gel loading"

Dr. Chonticha Saisawang and team

Day 2 (Tuesday, August 4, 2026)

09.00–10.00 Lecture on "Molecular cloning"

Dr. Chonticha Saisawang

10.00–11.00 Laboratory session on "PCR purification and DNA concentration measurement by nanodrop"

Dr. Chonticha Saisawang and team

11.00–11.30 Lecture on "Ligation"

Dr. Chonticha Saisawang

11.30–12.00 Laboratory session on "Ligation"

Dr. Chonticha Saisawang and team

12.00–13.00 Lunch

13.00–14.00 Laboratory session on "Bacterial transformation"

Dr. Chonticha Saisawang and team

14.00–15.00 Lecture on "Blue-white screening"

Dr. Chonticha Saisawang

15.00–16.00 Laboratory session on "Bacterial spreading and Culture inoculation (LB broth)"

Dr. Chonticha Saisawang and team

Day 3 (Wednesday, August 5, 2026)

09.00–09.30 Lecture on “Analysis of recombinant plasmid”
Dr. Chonticha Saisawang

09.30–12.00 Laboratory session on “Plasmid extraction”
Dr. Chonticha Saisawang and team

12.00–13.00 Lunch

13.00–13.30 Wrap-up and discussion
Dr. Chonticha Saisawang and team

13.30–14.30 Lecture on “Application of recombinant DNA technology”
Dr. Chonticha Saisawang

14:30–16:00 Campus Tour
Ms. Panutchanat Khamtonwong, Ms. Pinjutha Ratchatamethawin and
Mr. Yarnyong Kongmahaphuk

Day 4 (Thursday, August 6, 2026)

09:00 – 10:00 Lecture on “Thalassemia”
Dr. Kittiphong Paiboonsukwong

10:00 – 12:00 Laboratory session on “DNA Analysis for Alpha-Thalassemia”
Dr. Thongperm Munkongdee, Dr. Kittiphong Paiboonsukwong,
Asst. Prof. Dr. Natee Jearawiriyapaisarn, Asst. Prof. Dr. Phatchariya Phannasil,
Dr. Benjaporn Kiatpakdee, Ms. Nattrika Buasuwan, Ms. Usa Nuttapolwat and team

12:00 – 13:00 Lunch

13:00 – 16:00 Laboratory session on “DNA Analysis for Alpha-Thalassemia” (cont.)
Dr. Thongperm Munkongdee and team

Day 5 (Friday, August 7, 2026)

09:00 – 10:30 Lecture on “Plant Tissue Culture and Application”
Dr. Panitch Boonsnongcheep

10:30 – 12:00 Laboratory session on “Plant Tissue Culture”
Dr. Panitch Boonsnongcheep, Assoc. Prof. Dr. Kanokporn Triwitayakorn,
Dr. Supajit Sraphet, Dr. Nattaya Srisawad, Dr. Piengtawan Tappiban,
Ms. Nuanwan Pongtanom, Ms. Somsri Sakdee, and Ms. Nawarat Suksee

12:00 – 13:00 Lunch

13:00 – 16:00 Laboratory session on “Plant Tissue Culture”
Dr. Panitch Boonsnongcheep, and team

Day 6 (Monday, August 10, 2026)

09:00 – 10:00 Lecture on "Immunoassay"

Asst. Prof. Dr. Alita Kongchanagul

10:00 – 12:00 Laboratory session on Antibody diagnosis

Asst. Prof. Dr. Alita Kongchanagul, Ms. Kunjimas Ketsuwan, Mr. Iyacoob khunsri, Dr. Ekkarat Rodpai, Ms. Phissinee Jakaew and Ms. Surat Punyahathaikul

12:00 – 13:00 Lunch

13:00 – 14:30 Lecture on Machine Learning in Molecular Biology Applications"

Dr. Ittipat Meewan

14:30 – 16:00 Laboratory session "Tutorial on Machine Learning for Disease Prediction"

Dr. Ittipat Meewan and team

Day 7 (Tuesday, August 11, 2026)

09:00 – 10:00 Lecture on "Animal Cell culture"

Dr. Chutima Thepparit

10:00 – 12:00 Laboratory session on "Animal Cell culture"

Dr. Chutima Thepparit, Ms. Sanjira Juntarapornchai, Ms. Sasiporn Ruangdechsuwan, Ms. Surat Punyahathaikul, Mr. Ekkarat Rodpai and team

12:00 – 13:00 Lunch

13:00 – 16:00 Laboratory session on "Animal Cell culture"

Dr. Chutima Thepparit and team

Day 8 (Wednesday, August 12, 2026) (H.M. Queen Sirikit's Birthday)

09:00 – 10:00 Lecture on "Microbial Forensics"

Assoc. Prof. Dr.Soraya Chaturongakul

10:00 – 12:00 Laboratory session on "bacterial isolation and identification"

Assoc. Prof. Dr.Soraya Chaturongakul and team

(i.e., conventional method-biochem media, Gram-stain)

12:00 – 13:00 Lunch

13:00 – 13:30 Lecture on "Current methods in Microbial Forensics and Epidemiology"

Assoc. Prof. Dr.Soraya Chaturongakul

13:30 – 16:30 Laboratory session on "bacterial isolation and identification"

Assoc. Prof. Dr.Soraya Chaturongakul and team

(i.e., molecular method-DNA extraction, qPCR)"

Wrap-up lecture/iscussion on future direction of Microbial Forensics

Day 9 (Thursday, August 13, 2026)

09:00 – 10:00 Lecture on “Protein Expression and Purification”

Assoc. Prof. Dr. Chartchai Krittanai

10:00 – 12:00 Laboratory session on “Protein World: protein isolation and visualization”

(Bacterial culture, protein expression, protein preparation)

Dr. Phattara-orn Havanapan, Assoc. Prof. Dr. Chartchai Krittanai, Dr. Duangnapa Kovanich, Dr. Phattarunda Jaree, Asst. Prof. Dr. Ittipat Meewan, Mr. Pannaphan Makarathut, Ms. Nuanwan Pongtanom and Ms. Somsri Sakdee

12:00 – 13:00 Lunch

13:00 – 16:00 Laboratory session on “Protein World: protein isolation and visualization” (cont.)

Dr. Phattara-orn Havanapan and team

Day 10 (Friday, August 14, 2026)

09.00–10.00 Lecture on “Antibiotics and susceptibility testing methods”

Assoc. Prof. Dr. Poochit Nonejuie

10.00–12.00 Laboratory session on “Antibiotics and susceptibility testing”

Assoc. Prof. Dr. Poochit Nonejuie and team

12.00–13.00 Lunch

13.00-13.30 Lecture on “Bacterial cytological profiling (BCP)”

Assoc. Prof. Dr. Poochit Nonejuie and team

13.30-15.30 Laboratory session on “Antibiotics and susceptibility testing (cont.)”

Assoc. Prof. Dr. Poochit Nonejuie and team

15.30–16.30 Lecture on “Real-world applications of molecular biosciences”

Closing ceremony