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Master of Science Program in Medical Bioinformatics (International Program)

หลักสูตรวิทยาศาสตรมหาบัณฑิต

สาขาวิชาชีวสารสนเทศทางการแพทย์ (นานาชาติ) (ภาคปกติ)

Faculty of Medicine, Siriraj Hospital

คณะแพทยศาสตร์ศิริราชพยาบาล

Expected number of Students to be accepted year round: 10 Students

Admission Requirements

A candidate must:

1. Graduated in or undertaking the final semester of a Bachelor's degree in biology, biochemistry, microbiology, pharmaceutical science, computer science, or another relevant field, from an academic institute recognized by the Higher Education Commission.
2. Student should receive a cumulative GPA of at least 2.50
3. Submit a certificate of English proficiency with minimum admission score:
 - IELTS - at least 3 or
 - TOEFL INTERNET BASED - at least 32 or
 - TOEFL ITP (test arranged by Faculty of Graduate Study, Mahidol University) - at least 400 or
 - MU GRAD TEST (COMPUTER BASED) - at least 36

Important Notes:

- English proficiency score must be taken within 2 years up to the admission date.
 - Application without submitting a valid English certificate will NOT be considered.
 - MU English Competence Standards: www.grad.mahidol.ac.th
 - MU English proficiency tests, please contact the Language Center, Faculty of Graduate Studies. Tel. 0-2441-4125 ext. 221-222
4. In case your qualification does not match to the admission criteria, candidates must prior attach A Requesting Form for Examination" approved by the program director. The form must be submitted before making the application. Kindly download here:
http://www.grad.mahidol.ac.th/grad/admission/form_th.php
 5. Exemption from the above conditions may be granted by the Programme Committee under exceptional circumstances.

Written Examination

There is NO written examination for this program. Applicants must check their eligibility for interview upon the announcing date of the interview list which is scheduled for each admission round.

Curriculum Structure

credit

Plan A (A2)

Elementary Courses

-

Required Course

14

Elective Course

11

Thesis

12

credit

Elementary Courses

SIRE 507 Fundamental Computer Science for Biologist

1(1-0-2)

SIRE 508 Fundamental Genetics for Computer Scientist

1(1-0-2)

Required Course

SIRE 503 Medical Bioinformatics

3(2-2-5)

SIRE 504 Programming in Bioinformatics

3(2-2-5)

SIRE 505 Medical Genetics

2(2-0-4)

SIRE 506 Design and Analysis in Genetic Studies of Human Diseases

3(2-2-5)

SIRE 509 Seminar in Medical Bioinformatics I

1(1-0-2)

SIRE 510 Seminar in Medical Bioinformatics II

1(1-0-2)

SCID 518 Generic Skills in Science Research

1(1-0-2)

Elective Course

SIID 502 Personalized Medicine

3(1-4-4)

SIAN 506 Human Genetics

2(2-0-4)

SIBC 603 Biochemistry of Diseases

2(2-0-4)

SIBC 604 Statistics in Medical Genetics

1(1-0-2)

SIIM 612 Diagnostic Immunology

3(2-2-5)

SIIM 618 Molecular Biology Techniques

3(2-2-0)

ITCS 503 Design and Analysis of Algorithms

3(3-0-6)

ITCS 628 Data Mining and Knowledge Discovery

3(3-0-6)

ITCS 654 Parallel Computation

3(3-0-6)

GRID 521 Research Ethics

1(1-0-2)

Thesis

SIRE 698 Thesis

12(0-36-0)

*** These may be changed in case of curriculum revision**

Additional advantages of the programme

This program aims to educate students in a multidisciplinary manner via collaboration of various departments, such that the graduates can appropriately incorporate related sciences into medical bioinformatics applications. They will also be capable of providing consultations on personalized medicine and be able to liaise and convey medical knowledge to layperson, be skilled in conducting research and systematically analyzing research data, have morality and ethics, both academically and professionally.

Application Process

Application is only available via online application at www.grad.mahidol.ac.th

Required Documents

Applicants must upload all documents via online admission system. All documents must be in PDF format (maximum size 2 MB). Photograph must be in JPEG format.

- Recent photographs (1x1 inch in size)
- A copy of an applicant's degree certificate or a letter of graduation certification (for an applicant with a degree completion)
- A letter certifying that an applicant is currently in the final year prior to graduation (for an applicant seeking for a degree)
- A detailed transcript of a degree (for an applicant with a degree completion)
- A grade report with course names and grades received from the first to the current semester prior to graduation
- A copy of identification card
- A copy of house registration certification
- A copy of Certificate of English proficiency :
IELTS / TOEFL INTERNET BASED / TOEFL ITP / MU GRAD TEST(COMPUTER BASED)
- A copy of proof of payment

Job option after graduation

1. Data analyst for medical bioinformatics
2. Medical bioinformatics researcher
3. Medical bioinformatics specialist

Further information may be obtained from the Director of Graduate Studies,

Medical Bioinformatics :

1. Dr. Prapat Suriyaphol (**E-mail** : prapat.sur@mahidol.ac.th)
2. Dr. Bhoom Suktitipat (**E-mail** : bhoom.suk@mahidol.ac.th)
Room 2 , Building SiMR , Floor 2 , Faculty of Medicine Siriraj Hospital
Tel: 0-2419-2685

Program Coordinator

1. Miss Patamalux Chalermvudti (**E-mail** : patamalux.chl@mahidol.ac.th)
Room 2 , Building SiMR , Floor 2 , Faculty of Medicine Siriraj Hospital
Tel: 0-2419-2685

Notes

1. The programme of Medical Bioinformatics requires students to study the pre - requisite course:
 - SIRE 507 Fundamental Computer Science for Biologist 1 Credit or
 - SIRE 508 Fundamental Genetics for Computer Scientist 1 Credit
2. For more information : **www.grad.mahidol.ac.th**

For more Information please contact The Student Admissions Section.
Tel . 0 2441 4125 ext. 208-210 , 0 2441 9129, E-mail : gradthai@mahidol.ac.th