

112-2 Curriculum of Institute of Precision Medicine

108學年度課程結構外審通過	111.3.23 110學年度第8次所務會議暨課程委員會審議通過
109.4.9 108學年度第6次籌備會議暨課程委員會審議通過	111.05.03 110學年度第4次校課程會議修訂通過
109.4.14 108學年度第3次理學院課程委員會審議通過	111.05.20 第172教務會議修訂通過
109.5.11 108學年度第4次校課程會議修訂通過	111.11.10 111學年度第3次所務會議暨課程委員會審議通過
109.5.28 第164教務會議修訂通過	111.11.16 111學年度第3次院課程委員會修訂通過
110.3.16 109學年度第6次所務會議暨課程委員會修訂通過	111.11.24 111學年度第2次校課程委員會核備通過
110.4.13 109學年度第3次理學院課程委員會審議通過	111.12.5 第174教務會議修訂通過
110.5.11 109學年度第4次校課程委員會修訂通過	112.4.12 111學年度第5次所務會議暨課程委員會審議通過
110.6.2 第168次教務會議修訂通過	112.4.17 醫學院111學年度第6次院課程委員會修訂通過
110.10.19 110學年度第2次所務會議暨課程委員會修訂通過	112.5.9 111學年度第4次校課程委員會會議修訂通過
110.11.4 110學年度第1次院課程委員會審議通過	112.5.24 第176教務會議修訂通過
110.12.7 110學年度第2次校課程委員會修訂通過	
110.12.8 110學年度第170次教務會議修訂通過	

Students must complete a minimum of 24 credits.

Required courses

- Introduction to precision medicine
- Seminar I (1)
- Seminar II (1)
- Seminar III (1)
- Seminar IV (1)

Core courses (Requirements: 5 units)

- Principles of artificial intelligence (3)
- Advanced biomedical statistics (3)
- Bioinformatics (3)
- Development of drug delivery (3)
- Genomics (3)
- Biochemistry and molecular biology (3)
- Cancer biology (3)

Elective courses

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| <ul style="list-style-type: none"> • Proteomics (2) • Biological modeling (3) • Epigenetics (3) • Introduction to mass spectrometry (3) • Polymer characterization (3) • Nanomedicine (3) • Epidemiology (3) • Structural biology (3) • Biological database (3) • Medical image systems (3) • Medical computer system and analysis (3) • Metagenomics (3) | <ul style="list-style-type: none"> • Pharmacogenomics (3) • System biology (3) • Mass spectrometry (3) • Practices in biochip technology (3) • Micro- and nano- materials in biomedicine (3) • Protein engineering (3) • Microbiology and immunology (3) • Computational biology (3) • Biomedical statistics (3) • Application and innovation for assistive technology (3) • Pathology (3) • Introduction to computer-aided drug design (3) | <ul style="list-style-type: none"> • Molecular device design (2) • R programming for biomedical data • Biomedical sensing (3) • Introduction to health care (2) • Design and analysis of clinical trials (2) • Signal transduction and drug development (3) • Processing biomedical information (3) • Introduction to clinical medicine (2) • Development and application of target therapy agents (3) • Patient safety management: introduction and practice (2) • Medicine electronics (3) • Mri:basic principles, clinical applications and biomedical researches (2) • Basis and clinical applications of precision medicine and cell therapy (2) |
| <ul style="list-style-type: none"> • Independent studies in simulations on protein dynamics (I) (3) • Independent studies in simulations on protein dynamics (II) (3) • Independent studies in real-world health data (I) (3) • Independent studies in real-world health data (II) (3) • Independent studies in multi-omics data analysis (I) (3) • Independent studies in multi-omics data analysis (II) (3) | <ul style="list-style-type: none"> • Independent studies in precision medicine in oncology (I) (3) • Independent studies in precision medicine in oncology (II) (3) • Independent studies in bioelectronics design (I) (3) • Independent studies in therapeutic strategies for fibrosis and cancer (I) (3) • Independent studies in therapeutic strategies for fibrosis and cancer (II) (3) | |

Biotechnology company visitation, conference attendance

Thesis Proposal

Execution

Research Presentation in conference

1st year in MS program

2nd year in MS program