The Curriculum Map of the Graduate Institute of Space Science and Engineering, National Central University

Research Fields
(Recommended Curriculum)

Science:

A. Upper Atmospheric Science and Ionospheric Physics (32,#)

B. Magnetospheric Physics (32,#)

C. Solar Physics and Solar-Terrestrial Relation (32,#)

D. Planetary Science and Heliospheric Physics (32,#)

E. Fundamental Space Plasma Physics (32,#)

Technology:

F. Radar and Electromagnetic Wave Remote Sensing (32,#)

G. Space Payload and Small Satellite (32,#)

H. Satellite Remote Sensing (32,#)

#: courses recommended by the thesis advisor

Required Courses and Core Courses

Required Courses for Master-Degree Program:

- Seminar I for Master-Degree Program
- At least two courses in "Space" core-course and one course in "Mathematics" core-course.

Required Courses for Doctor-Degree Program:

- Seminar I, II for Doctor-Degree Program

Core Courses

(i) Space: (choose two from four)

1) Space Plasma Physics I
2) Space Environment and Exploration
3) Space Mission Design I
4) The Principle of Radar Remote Sensing I

(ii) Mathematics: (choose one from two)

5) Advanced Applied Mathematics I
6) Random Process and Spectral Analysis I

Elective Courses

7) Atmospheric waves and coupling I, II
8) Atmospheric Electricity I, II
9) Space Mission Design II
10) Application for space optics instrument I, II
11) Space Plasma Physics II
12) Calibration and Test for Space Instruments I
13) Principle of Space Remote Sensing
14) Solar structure and atmosphere
15) Heliospheric Physics I
16) Optical Remote Sensing
17) Nonlinear Space Plasma Physics I
18) Advanced Space Science I
19) Advanced Ionospheric Physics I, II
20) Advanced Computer Programming I, II
21) Astrodynamics
22) Detection and Estimation
23) Magnetospheric Physics I,II
24) Magnetohydrodynamics
25) The Principle of Radar Remote Sensing II
26) Classical Electrodynamics I, II
27) Plasma Measurement I, II
28) Electromagnetic Wave
29) Digital image processing
30) Numerical Calculation and Simulation I
31) Digital Image Processing for Remote Sensing I
32) Special Topics on …

Prospects

- Study Abroad
- NSPO
- NARL
- CSIST
- NCHC
- Space Technology Industries
- Information Technology Industries
- Electronic Communication Technology Industries
- Educational Institutes in Taiwan and Overseas
- Research Institutes in Taiwan and Overseas

For New Graduate Students in Fall 2019