Plasma Measurement II

(SS7012)

Course Overview

Instructor: Chi-Kuang Chao

Graduate Institute of Space Science, National Central University

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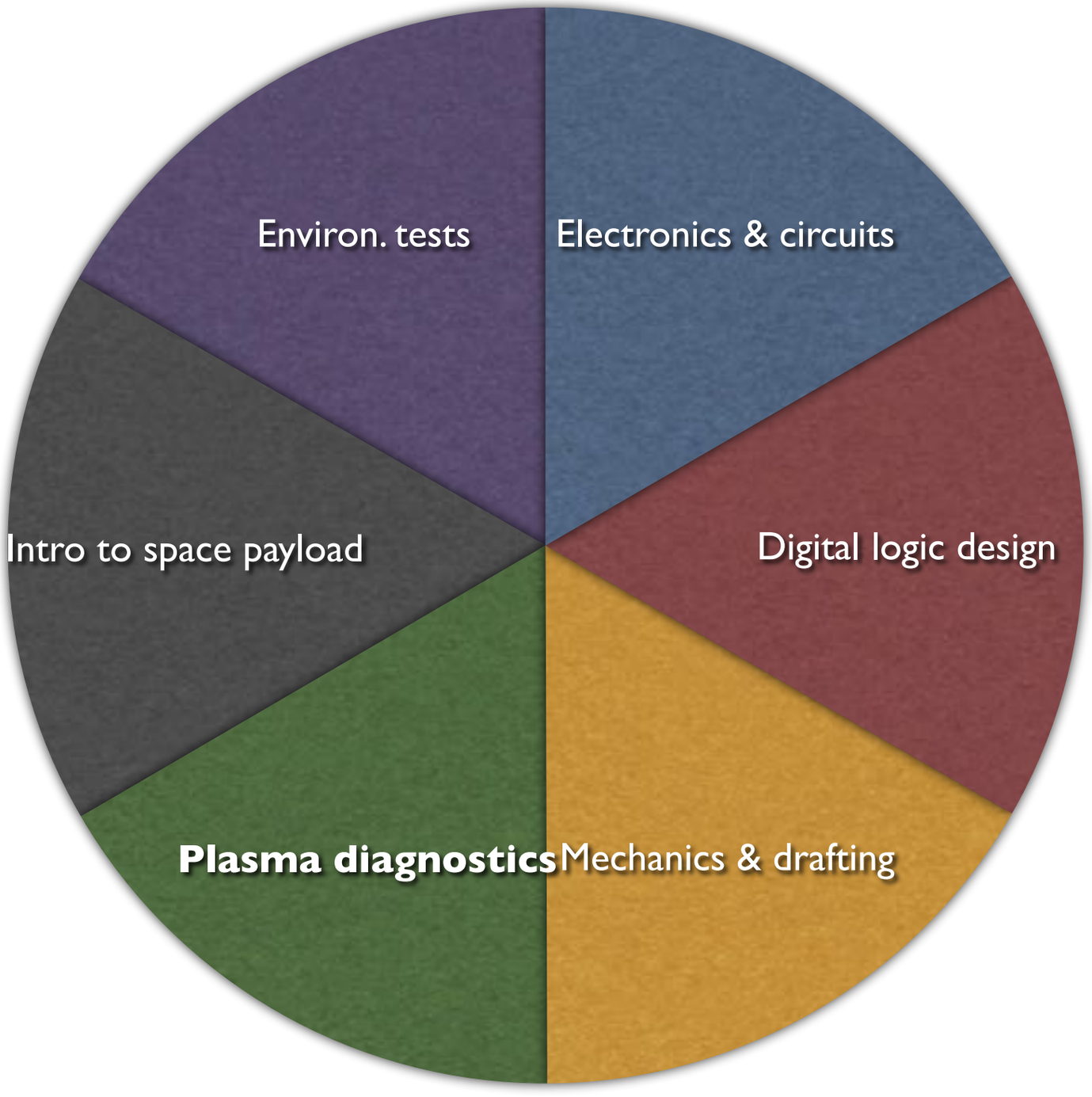
Syllabus

- Instructor: Chi-Kuang Chao
- Lecture time: 3 hours/week
- Lecture hours: 9:00 - 11:50 (WED)
- Classroom location: S4-917

Space payload



Course outline

- Basic equations of plasma diagnostics
- Langmuir probes
- Ion probes
- Missions

Ion probes

- Theory of ion fluxes
- Data fitting to I-V curves
- Coordinate transformation and data calibration

Missions

- Ionospheric Plasma Electrodynamic Instrument onboard ROCSAT-1 satellite
- Ion probes onboard SR-V
- Plasma probes onboard SR-VII
- Space Plasma Sensor Package onboard SR-IX
- Advanced Ionospheric Probe onboard FORMOSAT-5 satellite
- Other missions

Course materials

- In-class lecture slides: were presented during the session and can be downloaded before the session begins
- Downloaded them from http://athena.ss.ncu.edu.tw/

Grading

- Homework: 100%

Week #	1st session	2nd session	3rd session
1 (2/15)	Course overview	Missions - IPEI onboard ROCSAT-1 satellite	
2 (2/22)	Missions - IPEI onboard ROCSAT-1 satellite		
3 (3/1)	Ion probes - ion flux equation		
4 (3/8)	Ion probes - ion flux equation		
5 (3/15)	Ion probes - data fitting to I-V curves		
6 (3/22)	Ion probes - data fitting to I-V curves		
7 (3/29)	Ion probes - coordinate transformation and data calibration		
8 (spring break, 4/5)	Break		
9 (mid-term, 4/12)	Break		
10 (4/19)	Ion probes - coordinate transformation and data calibration		
11 (4/26)	Missions - ion probe onboard Sounding Rocket V		
12 (5/3)	Missions - ion probe onboard Sounding Rocket V		
13 (5/10)	Missions - plasma probe onboard Sounding Rocket VII		
14 (5/17)	Missions - plasma probe onboard Sounding Rocket VII		
15 (JpGU, 5/24)	Break		
16 (5/31)	Missions - space plasma sensor package onboard Sounding Rocket IX		
17 (6/7)	Missions - advanced ionospheric probe onboard FORMOSAT-5 satellite		
18 (final, 6/14)	Break		

For more information

- Please visit the course web pages at http://athena.ss.ncu.edu.tw/
- Contact me
  - By phone: 03-4227151
    - Ext.65754 at S4-804 (Office)
    - Ext.65781 at S4-805-1 (Core facilities)
    - Ext.36755 at S4-820 (Learning facilities)
- By e-mail: ckchao@jupiter.ss.ncu.edu.tw