

1	Title	Space Systems Engineering	
2	Lecturer, Units	Kuniaki Shiraki	2
3	Purpose	We study the space systems engineering referring to a spacecraft example. It covers the mission analysis and design, system design approach, systems engineering process and methodology, and management needed for space development.	
4	Lecture schedule	<ol style="list-style-type: none"> <li>1. Space Systems Engineering Process</li> <li>2. Mission Analysis and Design</li> <li>3. System Requirements and Constraints</li> <li>4. System Design and Definition</li> <li>5. Life Cycle Analyses</li> <li>6. Function Allocations</li> <li>7. Project Planning</li> <li>8. Spacecraft System Design</li> <li>9. Subsystem Design and Trade-offs</li> <li>10. Technology Development</li> <li>11. Operational Concept</li> <li>12. System Integration</li> <li>13. Verification and Testings</li> <li>14. Safety and Mission Assurance</li> <li>15. Transition to Operations</li> </ol>	
5	Evaluation	Home works and discussion in the class	
6	Note	This lecture is provided in English. It is desirable for students to take "Introduction to Satellite Engineering".	
7	Textbook Reference	References <ol style="list-style-type: none"> <li>1. Applied Space Systems Engineering, edited by W.J. Larson et al., Space Technology Library.</li> <li>2. Space Mission Analysis and Design, edited by J.R. Wertz and W.J. Larson. Space Technology Library.</li> <li>3. Spacecraft Systems Engineering, edited by Peter Fortescue et al., Wiley</li> </ol>	