**課程概述:**
This course aims to discuss what solar storms are, how they occur, and how they may affect us. Rather than describing only the solar storm phenomena, the course utilizes basic concepts in plasma physics to explain how changes in the geospace (near-Earth space) environment can be triggered by solar storms. As these changes include processes that are related to space weather, the course also discusses how observations of solar storms are used in space weather forecast.

**課程進度：**

<table>
<thead>
<tr>
<th>堂次</th>
<th>時數</th>
<th>進度說明</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>Phenomena of solar storms; physics of solar storms; do solar storm harm humans? why or why not?</td>
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<tr>
<td>2</td>
<td>3</td>
<td>Effects of solar storms in geospace; basic concepts in plasma physics</td>
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<td>3</td>
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<td>Effects of solar storms in geospace; basic concepts in plasma physics</td>
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<td>4</td>
<td>3</td>
<td>Effects of solar storms in geospace; basic concepts in plasma physics</td>
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<tr>
<td>5</td>
<td>3</td>
<td>What is space weather? Relation of solar storms with space weather forecast</td>
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</tbody>
</table>
課程學習目標：
完整性：The knowledge of plasma physics that is required for the topic will be taught in this course.
聚焦性：Although the physical mechanisms in geospace are very complicated, this course focuses on those mechanisms related to the effects of solar storms only.
跨域性：This course covers the fields of space physics and plasma physics. It provides basic knowledge to make it easier for students to pursue further study in these two fields.
當代性：The materials of the course are based on our current understanding of the topic.

課程的重要性、跨域性與時代性：
1. To understand what solar storms are and how they occur
2. To understand how solar storms can affect us
3. To understand why observations of solar storms are important to space weather forecast

其他備註：
課程教材：
Lecture notes in English to be presented on the blackboard or in PowerPoint. Only notes that are in PowerPoint will be provided to students as handouts.

參考書目：
Physics of Space Plasmas: an Introduction, George K. Parks