Algorithmic Trading (COMP0051)

**Description**

**Aims:**
The module aims at introducing algorithmic trading or risk premia strategies, their rationales, properties, design and use. These are presented as an introduction to the primary strategies and common themes in algorithmic trading, together with areas for further study and development, including the latest machine-learning methodologies. The goal is to give a broad overview of strategies in common use, so students can be equipped with methods for implementing these and exploring their known and provable properties.

**Learning outcomes:**
On successful completion of the module, a student will be able to:
1. Analyse statistically trading strategies;
2. Research, design, and develop new strategies;

**Content:**
- Introduction to trading;
- Trading industry;
- Data sources;
- Trading strategies;
- Order book dynamics;
- Portfolio theory;
- Statistical analysis of strategies;
- Evaluating strategies;
- Sharpe Ratio and other metrics;
- Multiple hypothesis testing and model validation;

**Requisites:**
In order to be eligible to select this module, a student must be registered on a programme for which it is a formally-approved option or elective choice.

**Key information**

<table>
<thead>
<tr>
<th>Year</th>
<th>2019/20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit value</td>
<td>15 (150 study hours)</td>
</tr>
<tr>
<td>Delivery</td>
<td>PGT L7, Campus-based</td>
</tr>
<tr>
<td>Reading List</td>
<td><a href="#">View on UCL website</a></td>
</tr>
<tr>
<td>Tutor</td>
<td><a href="#">View on UCL website</a></td>
</tr>
<tr>
<td>Term</td>
<td>Term 1</td>
</tr>
<tr>
<td>Timetable</td>
<td><a href="#">View on UCL website</a></td>
</tr>
</tbody>
</table>

**Assessment**

**Find out more**

For more information about the department, programmes, relevant open days and to browse other modules, visit [ucl.ac.uk](http://ucl.ac.uk).

**Disclaimer:** All information correct as of August 2019. Please note that aspects of the module may be subject to change. UCL will make best efforts to inform applicants of major changes.