**Course Code & Title:** COMP9602 - Convex Optimization

**Semester:** One  
**Academic Year:** 2024-25

This is a Graduate Course. MPhil/PhD students in the Department of Computer Science should read the Coursework Requirement.

**Instructor(s):** Prof. C WU

**Syllabus:**
This course presents the theory, algorithms and applications of convex optimization. Main topics to be included:
- convex functions; linear programming; quadratic programming, semidefinite programming, geometric programming; integer programming; duality and Lagrangian relaxation;
- Newton’s method; Simplex algorithm; interior point method;
- a brief introduction to game theory.

**Topics:**
- 

**Pre-requisites:** Linear algebra

**Compatibility:** 

**Instructors’ website:** [https://i.cs.hku.hk/~cwu/](https://i.cs.hku.hk/~cwu/)

**Assessment:** * In-course assessment

**Timetable:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Start Time</th>
<th>End Time</th>
<th>Venue</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>15:30</td>
<td>17:20</td>
<td>MWT4</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>15:30</td>
<td>17:20</td>
<td>MWT3</td>
<td></td>
</tr>
</tbody>
</table>

Teaching Period: Sep 2 - Nov 30, 2024  
Reading Week: Oct 14 - 19, 2024