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<th>Course Code</th>
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<th>Instructor</th>
<th>Credits</th>
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<tr>
<td>14C026</td>
<td>TRANSITION METALS IN ORGANIC SYNTHESIS AND CATALYSIS</td>
<td>Clément MAZET</td>
<td>MSc-chimie</td>
<td>2h/sem, total 28h</td>
<td>4 ECTS</td>
<td>Liste A</td>
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**Objectives:**
Organometallic reagents and catalysts play a pivotal role in organic synthesis. This course will focus on the fundamental principles of organometallic chemistry. It will then highlight the use of transition metal catalysts in organic synthesis with reference to the most recent literature. This includes fundamental aspects of asymmetric catalysis illustrated by recent achievements.

**Contents:**
1. Basics and fundamental principles
2. Mechanisms
3. Cross-coupling
4. Heck reactions
5. Olefin metathesis
6. Hydrogenation
7. Asymmetric hydrogenation
8. CO insertion chemistry
9. Cycloadditions
10. Wacker-type reactions
11. p-allyl chemistry
12. C-H activation

**Documentation and bibliography:**

**E-learning:** https://chamilo.unige.ch/home/courses/14C026/

**Pré-requis:** Chimie organique II (13C003), Chimie organique III (13C004)

Préparation pour le MSc en chimie

Sessions d'examen: Janvier-février + août-septembre

Evaluation: Ecrit (4h)

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<td>TRANSITION METALS IN ORGANIC SYNTHESIS AND CATALYSIS</td>
<td>Clément MAZET</td>
<td>MSc-chimie</td>
<td>1h/sem, total 14h</td>
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**Contents:**
Exercises related to course 14C026 (Transition metals in organic synthesis and catalysis).

**E-learning:** https://chamilo.unige.ch/home/courses/14C026/

Evaluation: -