## Summary
This course provides a detailed description of the organization and operating principles of mobile communication networks.

## Content
- Introduction to wireless networks
- Organization of the MAC layer
- Wireless Local Area Networks - WiFi
- Cellular networks
- Mobility at the network and transport layers
- Security and privacy in mobile networks

## Keywords
Communication networks, protocols, mobility

## Learning Prerequisites
**Required courses**
- Computer Networks

**Recommended courses**
- Principles of Digital Communications
- Network security

## Important concepts to start the course
Operating principles of communication protocols and layer organization.

## Learning Outcomes
By the end of the course, the student must be able to:
- Synthesize the way a mobile network operates
- Interpret the behavior of such networks
- Propose evolutions to existing protocols
- Identify weaknesses, bottlenecks and vulnerabilities

## Teaching methods
Ex cathedra lectures
Weekly quizzes
Exercise sessions
Hands-on exercises

**Expected student activities**
Class participation, quizzes, homework, hands-on exercises

**Assessment methods**
Quizzes + final exam

**Supervision**
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<tbody>
<tr>
<td>Office hours</td>
<td>No</td>
</tr>
<tr>
<td>Assistants</td>
<td>Yes</td>
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<td>Forum</td>
<td>No</td>
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<tr>
<td>Others</td>
<td>The lecturer will be present at most of the exercise sessions.</td>
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**Resources**

**Bibliography**
Handouts, recommended books (see course URL)

**Ressources en bibliothèque**
- Fundamentals of Mobile Data Networks / Miao

**Websites**
- http://mobnet.epfl.ch/