Lab methods : histology

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<table>
<thead>
<tr>
<th>Cursus</th>
<th>Sem.</th>
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<tr>
<td>Bioingénierie</td>
<td>MA1, MA3</td>
<td>Opt.</td>
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<tr>
<td>Sciences du vivant</td>
<td>MA1, MA3</td>
<td>Opt.</td>
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**Language**: English  
**Credits**: 2  
**Withdrawal**: Unauthorized  
**Session**: Winter  
**Semester**: Fall  
**Exam**: During the semester  
**Workload**: 60h  
**Weeks**: 14  
**Hours**: 2 weekly  
**Project**: 2 weekly

**Remarque**
Inscriptions sur dossier auprès de la responsable du cours; présence aux cours obligatoire

**Summary**
Presentation of the diverse techniques to prepare samples for bright field microscopy, as well as procedures for standard histology stains and proteins detection with observation of tissues under microscope.

**Content**
**Theory**:
- Sample preparation for bright field microscopy
- Artefacts
- Special staining
- Protein detection
- Introduction to pathology

**Praxis**:
- Routine stain for pathology (hematoxylin and eosine)
- Special stain to highlight different structures
- Immunohistochemistry
- Observation and description of tissues under microscope

**Keywords**
Techniques  
Histology  
Microscopy

**Learning Prerequisites**
**Required courses**
None

**Learning Outcomes**
By the end of the course, the student must be able to:
• Choose Methods to prepare samples
• Compare Advantages and disadvantages of different techniques
• Describe Methods for protein detection
• Perform Protocols for Hematoxylin and eosin as well as immunohistochemistry

Transversal skills
• Plan and carry out activities in a way which makes optimal use of available time and other resources.

Teaching methods
Ex cathedra teaching and praxis

Expected student activities
Lecture will take place on the 21th, 22nd and 26th of September 2017

Attendance at lectures
Completing the practical part
Prepare description of tissues

Assessment methods
Written exam

Resources
Bibliography

Ressources en bibliothèque
• Theory and practice of histological techniques / Bancroft

Websites
• http://hcf.epfl.ch

Moodle Link
• http://moodle.epfl.ch/course/view.php?id=13391