

PhD program Cutting Edge Microscopy (CEM)  
- How to get ECTS -

Medizinische Fakultät  
Vetsuisse Fakultät  
Phil.-Nat. Fakultät

Microscopy Imaging Center

Basic Module	ECTS
<b>4 ECTS</b> are to be earned within the basic module.	
CEM Summer School (KSL 478825) <i>Twice compulsory attendance</i>	<b>0.5 - 1.0</b> (depends on the format)
<a href="#">Lecture Series on Advanced Microscopy</a> <sup>1</sup> (KSL 9256) <i>Successful participation is mandatory</i>	<b>3.0</b>

PhD students who have successfully completed the Lecture Series on Advanced Microscopy in their master's program may not repeat this lecture. Previous successful participation entitles a candidate to enroll in the CEM PhD program. Nevertheless, these CEM PhD students still have to acquire 4 ECTS in the basic module. In this case, the PhD student can freely choose the courses listed in the advanced module to earn the missing ECTS for the basic module.

Advanced Module		ECTS
Course	Comment	
<b>4 ECTS</b> are to be earned within the advanced module.		
<a href="#">MIC Trainings</a> <sup>2</sup>	To earn ECTS at MIC trainings, active participation and a presentation at a MIC/CEM presentation event is required. Dates of upcoming presentation <a href="#">events</a> . <sup>3</sup>	<b>0.5 – 1.5</b>
MIC Journal Club (KSL 470897)	Due to a lack of requests, the MIC journal club does not take place at that moment. However, we would be happy to re-implement. Please contact the MIC administration. For a description of the MIC Journal Club format, please see <a href="#">here</a> . <sup>4</sup>	<b>1.0</b>
<a href="#">MIC Workshops</a> <sup>5</sup>	MIC workshops are offered by UniBE specialists in microscopy with a focus on their expertise area. They provide a distinct opportunity for the CEM PhD students to get into direct contact with an advanced researcher and microscopy specialist. The participant receives very personal and intense training on the chosen topic. Most MIC workshops are held only on request, therefore please contact the	<b>0.5 – 2.5</b>

<sup>1</sup>[https://www.mic.unibe.ch/studies/lecture\\_series\\_on\\_advanced\\_microscopy/](https://www.mic.unibe.ch/studies/lecture_series_on_advanced_microscopy/)

<sup>2</sup>[https://www.mic.unibe.ch/services/mic\\_trainings/](https://www.mic.unibe.ch/services/mic_trainings/)

<sup>3</sup>[https://www.mic.unibe.ch/phd\\_program/phd\\_program\\_cutting\\_edge\\_microscopy/upcoming\\_events\\_for\\_cem\\_students/](https://www.mic.unibe.ch/phd_program/phd_program_cutting_edge_microscopy/upcoming_events_for_cem_students/)

<sup>4</sup>[https://www.mic.unibe.ch/studies/mic\\_journal\\_club/](https://www.mic.unibe.ch/studies/mic_journal_club/)

<sup>5</sup>[https://www.mic.unibe.ch/studies\\_studies/mic\\_workshops/](https://www.mic.unibe.ch/studies_studies/mic_workshops/)

<b>Advanced Module</b>		<b>ECTS</b>
<b>4 ECTS</b> are to be earned within the advanced module.		
<b>Course</b>	<b>Comment</b>	
	indicated contact person. After agreeing to the format of the course, the PhD student must register via KSL. A form sheet, which is available on the MIC web <a href="#">here</a> <sup>6</sup> , must be signed by the lecturer.	
<a href="#">Courses offered by DSL or GCB</a> <sup>7</sup>	Courses covering computer skills related to image analysis and data processing are offered by DSL and recognized as important skills for microscopy. GCB offers courses in statistics. Please contact the CEM Program administration in cases of uncertainty whether the course would count for the CEM program. Some DSL trainings require a presentation at a MIC/CEM presentation event for ECTS reward. Dates of upcoming presentation <a href="#">events</a> . <sup>8</sup>	<b>0.5 – 2.0</b>
<a href="#">External summer schools or workshops</a> <sup>9</sup>	External summer schools or workshops must qualify with clear educational intent and must have a strong focus on microscopy. They must be offered by academic societies, universities or equivalent and the student has to document his/her active participation (i.e. poster presentation, oral presentation, examination or implementation into own project). The student has to apply for ECTS acceptance. This application should include a short description about the meaning of the event for his/her research project, the program of the event, the certificate of participation and a short statement of agreement by the supervisor. Upon approval by the CEM program administration, the student will be invited to give an oral presentation at a student's presentation event. ECTS will be awarded after successful presentation.	<b>up to 2.0</b>

<sup>6</sup> [https://www.mic.unibe.ch/unibe/portal/microsites/micro\\_mic/content/e1405134/e1405151/e1405266/CEM\\_program\\_FormSheet\\_MIC\\_Workshop.pdf](https://www.mic.unibe.ch/unibe/portal/microsites/micro_mic/content/e1405134/e1405151/e1405266/CEM_program_FormSheet_MIC_Workshop.pdf)

<sup>7</sup> [https://www.mic.unibe.ch/phd\\_program/phd\\_program\\_cutting\\_edge\\_microscopy/advanced\\_module/](https://www.mic.unibe.ch/phd_program/phd_program_cutting_edge_microscopy/advanced_module/)

<sup>8</sup> [https://www.mic.unibe.ch/phd\\_program/phd\\_program\\_cutting\\_edge\\_microscopy/upcoming\\_events\\_for\\_cem\\_students/](https://www.mic.unibe.ch/phd_program/phd_program_cutting_edge_microscopy/upcoming_events_for_cem_students/)

<sup>9</sup> [https://www.mic.unibe.ch/phd\\_program/phd\\_program\\_cutting\\_edge\\_microscopy/advanced\\_module/](https://www.mic.unibe.ch/phd_program/phd_program_cutting_edge_microscopy/advanced_module/)

<b>Advanced Module</b>		<b>ECTS</b>
<b>4 ECTS</b> are to be earned within the advanced module.		
<b>Course</b>	<b>Comment</b>	
<a href="#">External conferences, symposia, meetings etc.</a> <sup>10</sup>	External courses/ conferences, symposia, meetings etc. must qualify with clear educational intent and must have a strong focus on microscopy. They must be offered by academic societies, universities or equivalent and the student has to document his/her active participation (i.e. poster presentation or oral presentation). The student has to apply for ECTS acceptance. This application should include a short description about the meaning of the event for his/her research project, the program of the event, the certificate of participation and a short statement of agreement by the supervisor. Upon approval by the CEM program administration, the student will be invited to give an oral presentation at a student's presentation event. ECTS will be awarded after successful presentation.	<b>0.5</b>
<a href="#">Tutoring offer</a> <sup>11</sup>	CEM PhD students have the opportunity of tutoring students of the Microscopy course "Mikroskopische Methoden mit Praktikum" offered by Dr. Michael Brauchle. According to the kind of microscope and microscopy technique(s), the PhD student will receive an offer for participation. After the teaching event, the CEM PhD student submits to the CEM program administration a short report (2 to max 5 pages). Time investment: 2 – 3 hours preparation, 2 – 4 hours practical, 4 hours writing report.	<b>0.5</b>
<a href="#">Projects on technical issues of microscopy</a> <sup>12</sup>	PhD students of the Cutting Edge Microscopy (CEM) program are entitled to projects related to technical issues of microscopy	<b>0.5</b>

**Dates of upcoming presentation events will be published on the internet presentation of the MIC [here](#)** <sup>13</sup>

<sup>10</sup>[https://www.mic.unibe.ch/phd\\_program/phd\\_program\\_cutting\\_edge\\_microscopy/advanced\\_module/](https://www.mic.unibe.ch/phd_program/phd_program_cutting_edge_microscopy/advanced_module/)

<sup>11</sup>[https://www.mic.unibe.ch/unibe/portal/microsites/micro\\_mic/content/e970626/e970627/e1030195/e1123741/CEM\\_program\\_FormSheet\\_Tutoring\\_Offer\\_20211.pdf](https://www.mic.unibe.ch/unibe/portal/microsites/micro_mic/content/e970626/e970627/e1030195/e1123741/CEM_program_FormSheet_Tutoring_Offer_20211.pdf)

<sup>12</sup>[https://www.mic.unibe.ch/unibe/portal/microsites/micro\\_mic/content/e1405421/e1405422/e1405439/e1405455/230623\\_Individual\\_Project\\_Description\\_CEM\\_PhD\\_Program.pdf](https://www.mic.unibe.ch/unibe/portal/microsites/micro_mic/content/e1405421/e1405422/e1405439/e1405455/230623_Individual_Project_Description_CEM_PhD_Program.pdf)

<sup>13</sup>[https://www.mic.unibe.ch/phd\\_program/phd\\_program\\_cutting\\_edge\\_microscopy/upcoming\\_events\\_for\\_cem\\_students/](https://www.mic.unibe.ch/phd_program/phd_program_cutting_edge_microscopy/upcoming_events_for_cem_students/)