How to connect Heidelberg and Santiago de Chile?
Blended learning concepts at HCLA

Marcel Schäfer
German Cancer Research Center (DKFZ), Heidelberg, Germany
Background: Heidelberg Center Latin America (HCLA)

Center of Excellence for Research and Teaching

- Astronomy
- Geosciences
- Medical Informatics
- Medical Physics

Funding period: 2009-2024

DAAD
Deutscher Akademischer Austauschdienst
German Academic Exchange Service
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Elements of the project „Medical Physics“

2-3 days **workshops**, 2 weeks **summer schools** in Chile

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Timeline:
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- 2009: Start of the project
- 2012
- 2014: Funding confirmed by DAAD until 2019
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Successful project evaluation ➔ funding confirmed until 2024

➔ Continue with online-enhanced workshops/summer schools
➔ Establish an online-enhanced diplomado in Medical Physics?
➔ Establish a PhD Double Degree?
➔ Establish an exchange residency program?
Project Partners „Medical Physics“

Project partners in Heidelberg

[Logos of collaborating institutions]
Project Partners „Medical Physics“

Project partners in Heidelberg

Project partners in Chile
Blended Learning in a Double-Degree Master‘s Program
### Blended Learning in a Master’s Program

<table>
<thead>
<tr>
<th>Semester</th>
<th>Module</th>
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UC = on-site  
UHD = online
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7/27/20 | Seite 16  
Marcel Schäfer  
Medical Physics in Radiation Oncology (E040)

dkfz.
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Semester 3: Attendance phases in Chile ➔ HD teachers in Chile

Mar  Apr  May  Jun  Jul  Aug  Sep
Semester 3: Attendance phases in Chile ➔ HD teachers in Chile

Mar Apr May Jun Jul Aug Sep

Optional course M8.1

Optional course M8.2

Exam
Semester 3: Attendance phases in Chile ➔ HD teachers in Chile

Mar
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Written exams in Chile
Semester 3: Attendance phases in Chile ➔ HD teachers in Chile

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Semester 3: Attendance phase in Chile and Heidelberg

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Attendance phase in Chile

Exam

Attendance phase & written exams in Heidelberg
Semester 3: Studying online as active learners
Semester 3: Studying online as active learners

Video lectures
Semester 3: Studying online as active learners

- Flipped Classroom

1. Video lectures
   Introduction
   Basics
Semester 3: Studying online as active learners

- Flipped Classroom

1. Video lectures
   - Introduction
   - Basics

2. Online Session
   - Discussion

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Semester 3: Studying online as active learners

- Flipped Classroom

  1. Video lectures
     Introduction
     Basics
     Repetition

  (3. Video lectures
     Repetition
     Sample solution)

  2. Online Session
     Discussion
### Semester 3: Studying online as active learners

#### Online Journal Clubs

**Instructions:**

- **ONE** papers per student – own choice (➡️ See wiki on Moodle!), each paper only once!
- prepare a 1-page summary of the paper (NO POWERPOINT!!)
- in the journal club each paper should be introduced to other students (all main points) using the 1-page summary, with subsequent discussion by all students
- students should read all papers in order to be able to discuss each paper with class

**Papers:**


Semester 3: Studying online as active learners

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Papers:

Semester 3: Studying online as active learners

- Case Based Learning

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<td>• Presentation of clinical problems</td>
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<tr>
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<td>• Some time for thinking, literature search and online collaboration with other students: online wiki</td>
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<td>• Solution in second part of lecture after online Adobe Connect session</td>
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1. Video lectures
   Introduction of clinical cases
Semester 3: Studying online as active learners

- Case Based Learning

  1. Video lectures
     Introduction of clinical cases

  2. Case presentation
     Either online or on-site

How you should learn all this:

- Presentation of clinical problems
- Some time for thinking, literature search, online collaboration with other students, wiki
- Solution in second part of lecture after Adobe Connect session
Semester 3: Studying online as active learners

- Case Based Learning

  How you should learn all this:

  - Presentation of clinical problems
  - Some time for thinking, literature search, online collaboration with other students
  - Solution in second part of lecture after Adobe Connect session

  1. Video lectures
     Introduction of clinical cases

  3. Video lectures
     Sample solution

  2. Case presentation
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Blended Learning in Summer Schools or Workshops in Chile
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Online Phase (four weeks) → Workshop
Blended Learning in Summer Schools or Workshops in Chile

Online Phase (four weeks) ➔ Workshop

Video lectures
Repetition
Basics

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Blended Learning in Summer Schools or Workshops in Chile

Online Phase (four weeks) → Workshop

Video lectures
- Repetition
- Basics

Written discussion board
- Discussion
- Networking

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Blended Learning in Summer Schools or Workshops in Chile

Online Phase (four weeks) ➔ Workshop

Video lectures
- Repetition
- Basics

Written discussion board
- Discussion
- Networking

Choice
- Feedback
- Wishes

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Blended Learning in Summer Schools or Workshops in Chile

Online Phase (four weeks) ➔ Workshop

Session & lectures, based on online phase

Video lectures

Written discussion board

Choice

Repetition

Discussion

Feedback

Basics

Networking

Wishes

During the online course we can answer your questions concerning specific topics that you would like to discuss in more detail.

In order to make your choice, please send your feedback and wishes to be discussed during the workshop.

Choice: Entities?

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Summary and Outlook

- A curriculum design with a strong link between online and on-site phases seems to be the key for successful learning.

- Online-enhanced summer schools and workshops (blended learning)
- Online-enhanced diplomado for postgraduates
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Contact

- Marcel Schäfer
- E-Mail: marcel.schaefer@dkfz-heidelberg.de
- Web: www.dkfz.de/medphys_edu
Thank you for your attention!