

## Human Health and Disease: A Clinical Approach Section B Fall 2017

Instructors: Dr. Torben Sørensen and Dr. Troels Kjær  
Monday and Thursday, 15:30-17:30, Roskilde Hospital

### Instructors



**Troels Wesenberg Kjær**

*Instructor*

M.D. (University of Copenhagen, 1992). Ph.D. (University of Copenhagen, 1996). Chief Physician, Clinical Neurophysiology, Neurophysiology Center, Dept of Neurology, Roskilde University Hospital. Extensive research in brain function at NIH, Bethesda, MD, and John F. Kennedy Institute, Copenhagen. Since 1987, lecturer at the Medical School, University of Copenhagen, and other health education institutions in Copenhagen. With DIS since 2003.



**Torben Lykke Sørensen**

*Instructor*

Clinical Professor of Ophthalmology at the University of Copenhagen. Chief physician and Director of Research, Department of Ophthalmology, Zealand University Hospital. Doctor of Medical Sciences Degree University of Copenhagen 2004. Former research fellow at Cleveland Clinic Foundation, Cleveland, Ohio. With DIS since 2005.

### Course Assistant



**Elisabeth Mebus Meyer**

*Course Assistant*

7th semester medical student at the University of Copenhagen Medical School. B.Sc. Medicine, University of Copenhagen, 2017. Neurophysiology assistant, Department of Clinical Neurophysiology, Rigshospitalet. Nursing Substitute, FADL (The Association of Danish Medical Students) Jointly responsible for the peer-program at Pusterummet SUND. With DIS since 2017.

### Learning objectives

The objective of the course is to introduce students to the most important human diseases, their diagnoses and treatments, and to the clinical working methods of physicians as practiced at a large, Danish University Hospital (Roskilde and Glostrup Hospital) both in Copenhagen. Upon completion of this course, students will be able to:

1. Write a structured medical report
2. Explain the rationale for choice of tests and treatments in clinical practice
3. Copy basic manual skills (IV insertion, suture, and catheter insertion) and give a basic explanation of the techniques
4. Discuss knowledge of human anatomy, physiology, and scientific context
5. Describe medical practice in a social, international, and scientific context
6. Outline the epidemiology of major diseases in both the industrialized world and the developing world.

### Content

The clinical approach of the course implies studying symptoms, signs, diagnostic methods and treatment of the most important human diseases, writing patient case reviews based upon medical records, and patient interviews, visiting various clinical and diagnostic hospital departments, and performing physical examinations on phantoms or other students.

The course, however, does not provide regular medical training corresponding to that of medical students and does not include shadowing of doctors or physical examination of patients. Patient demonstrations are included in some, but not all, lectures.

### DIS Contacts

Lisbeth Borbye, Program Director

Stephanie Clemente, Project Manager, scl@dis.dk, tel. +45 3376 5477

Bethany Cucka, Program Assistant, bcu@dis.dk, tel. +45 3376 5789

Science & Health Program Office, Vestergade 10-B12

### Pre-requisites

At least one year of biology and one year of chemistry at the university level. The course is oriented towards serious students with a documented academic interest in medicine.

### Evaluation

Students will be evaluated based on participation, three theoretical patient cases, two small tests, and a final examination. There will also be a small assignment related to the study tours. The grade on this assignment will contribute to your participation grade

Tests (2 at 10%)	20%
Patient cases (4 at 7,5%)	30%
Final examination	30%
Study tour Assignment	10%
Participation	10%

### Participation covers the following areas

1. Attendance
2. Level of preparation and ability to answer questions asked in class
3. Involvement in class and group discussions
4. Level of individual research and contribution to discussions

### Policy on late papers

Late papers will be accepted, but your grade for the paper will be reduced by half a point for each day that it is late.

### Electronics

Computer is allowed for class purposes. It is not allowed for other activities such as social networks, sending personal e-mails etc. If you use a computer for other purposes, it will affect your participation grade. Cell phone usage is not allowed in class. It is distracting to both your classmates and your instructors, so please keep them turned off. Otherwise it will affect your participation grade.

### Theoretical Patient Case (TPC)

During the semester, you will be presented with three theoretical patient cases in class to work on individually. You are responsible for suggesting, based on the case you get, an appropriate course of questions to get a detailed medical history that will allow you to structure a relevant clinical exam and an appropriate course of paraclinical investigations leading to a preliminary diagnosis. More detailed information will be provided in class.

### Clinical Patient Case (CPC)

During the semester, each student will be presented with different real patients and everyone will write up their own case history about the signs, symptoms, ailments and treatments for the specific patients that are introduced to the students. It is important to note that, on these dates, attendance is mandatory. Skipping class for travel or other reasons will not be accepted. More details will be given on this activity as the time approaches for the first Clinical Case Review.

### **Important Information:**

***It is mandatory to attend all classes in which clinical case reviews are presented. Missing a class would result in a 'fail' on that paper.***

### **Tests and Final**

There will be a total of two tests throughout the semester. These tests will consist of a mix of short answer questions and essay questions. Tests may be given at the beginning of class or at the end. If the latter, the material covered in lecture that day may be on the test; so, make sure to pay close attention to the information discussed in lecture that day. Tests in class will generally last a maximum of 30 minutes depending on the amount of information covered. The final exam for this course will be cumulative and will be written in the same manner as tests. The final exam will be two hours in duration.

### **Practical Information**

Medical Practice & Policy faculty and staff have put many hours into selecting and organizing the readings for this course. Please make sure to read all the material assigned; the reading material has been carefully chosen and all of it is pertinent to your success in Human Health and Disease. You have an obligation to your fellow classmates and yourself to come prepared to class. If you have questions or need clarification about a reading or lecture material do not hesitate to speak up and/or contact the course assistant (see contact information above). This is very important as the professors for this course do not have scheduled office hours. However in the case that a meeting is needed, please feel free to set up appointments with them via email. You can contact them, the course assistant, or program assistant Bethany Cucka, ([bcu@dis.dk](mailto:bcu@dis.dk)) to set up an appointment or to ask a question.

### **DIS Policies**

***Attendance:*** You are expected to attend all DIS classes when scheduled. If you miss multiple classes the Office of Academic Support will be notified and they will follow-up with you to make sure that all is well. Absences will jeopardize your grade and your standing at DIS. Allowances will be made in cases of illness, but in the case of multiple absences you will need to provide a doctor's note.

***Academic Honesty:*** Plagiarism and Violating the Rules of an Assignment

DIS expects that students abide by the highest standards of intellectual honesty in all academic work. DIS assumes that all students do their own work and credit all work or thought taken from others. Academic dishonesty will result in a final course grade of "F" and can result in dismissal. The students' home universities will be notified. DIS reserves the right to request that written student assignments be turned in electronic form for submission to plagiarism detection software. See the *Academic Handbook* for more information (on DIS Forum), or ask your instructor if you have questions.

***Disability Resources:*** Any student who has a need for disability accommodations should contact the office of academic support ([acadsupp@dis.dk](mailto:acadsupp@dis.dk)) to coordinate this. Upon DIS approval, students should inform the instructor of accommodations within the first two weeks of class.

***Academic Excellence Award:*** Each semester we recognize one outstanding student from the Medical Practice & Policy Program with an Award of Academic Excellence. It is reserved for a student who has distinguished him- or herself through diligence, commitment, academic performance, and ideally a student who contributes to a good, collaborative learning environment in class.

### **Core Course Week and Study Tours**

Core Course week and study tours are an integral part of the core course as we take the classroom on the road and see how theory presented in the classroom is translated to practice in the field. You will travel with your classmates and DIS faculty/staff on two study tours; a short study tour during Core Course Week and a long study tour to relevant European destinations.

### **Expectations for study tours:**

- Participate in all activities
- Engage in discussions, ask questions, and contribute to achieving the learning objectives
- Respect the destination, the speakers, DIS staff, and your fellow classmates
- Represent yourself, your home university and DIS in a positive light

One of the learning objectives of Human Health and Disease: A Clinical Approach is for you, the student, to be able to describe medical practice in a social, international, and scientific context. The study tours are a way to achieve this learning objective.

### ***Learning Objectives:***

The objectives of both the short study tour and the long study tour are:

- to showcase examples of clinical practice and health care systems in different sectors and countries
- to broaden the students' view of the challenges that health care providers face
- to show examples of research with clinical relevance
- to explore and learn more about Denmark and other societies in Europe

While on a program study tour DIS will provide hostel/hotel accommodation, transportation to/from the destination(s), approx. 2 meals per day and entrances, guides, and visits relevant to your area of study or the destination. You will receive a more detailed itinerary prior to departure.

**Travel policies:** You are required to travel with your group to the destination. If you have to deviate from the group travel plans, you need approval from the program director and the study tours office.

### **Study Tour Assignment**

Before going on the short study tour, you will be divided into groups and be given a specific subject to focus on in your study tour assignment. An observation booklet should be used on both trips for notes, these notes with which should be discussed within your group. A more in-depth description of the study tour assignment will be provided closer to the short study tour. *All parts of the assignment must be completed in order to obtain full credit for the assignment which counts toward 10% of your grade.*

### **Required readings**

- **Hole JW:** Essentials of Human Anatomy & Physiology, 9th Edition. WC Brown Publishers, London 2004: Hole.
- **Ford MJ, Hennessey, I, and Japp, A:** Introduction to Clinical Examination, 8th Edition. Churchill Livingstone, London 2005: Ford.
- **O'Neill P, Dornan T, Denning DW:** Medicine. A Core Text with Self-Assessment. Churchill Livingstone, 3rd Edition, 2008: O'Neill.
- **Additional Readings will be posted on Canvas**

NOTE: Not all reading assignments will be covered in class, but all reading assignments are absolutely necessary in order to follow what is actually covered in class. In some cases, where noted, skimming the reading and picking out important points will be sufficient.

### **Canvas**

Canvas is a web-based system that allows you to access course resources and communicate with your classmates and faculty. To access Canvas, you can go to the DIS homepage and click the 'Canvas' link on the bottom of the website, or go to: <https://canvas.disabroad.org/login/canvas>. You can also download the Canvas App (By: Instructure) on iPhone and Android mobile smart phones.

### **Useful Links and Online Medical Dictionaries**

1. Medline Plus Medical Dictionary  
<http://www.nlm.nih.gov/medlineplus/mplusdictionary.html>
2. Medical Dictionary  
<http://www.medical-dictionary.com/>
3. Medicine Net  
<http://www.medicinenet.com/>
4. Inteli Health  
<http://www.intelihealth.com/IH/ihIH/WSIHW000/408/408.html>
5. UK Medical Search Engine & Health Guide  
<http://www.medic8.com/index.htm>

### Course Schedule

Day / Date	Time, Room	Title	Read	Lecturers
Wednesday, August 23 <b>Medical Practice &amp; Policy Program Orientation</b> 14:50-16:10 Kosmopol, Fiolstræde 44, 1171 København K (see arrival booklet)				
Thu 24/8	15.30-17.30  *meet CA in Vestergade 7 courtyard at 14:35 for departure to Roskilde Hospital	<b>Lecture 1</b> Course Overview <ul style="list-style-type: none"> <li>• Presentation of the course</li> <li>• Definition of health and disease and the factors that influences health and disease</li> <li>• Introduction to clinical case review</li> <li>• Standard clinical examination</li> </ul>	NA	Troels & Torben Eye Dept
Mon 28/8	15.30-17.30 Roskilde Hospital	<b>Lecture 2</b> Clinical signs, symptoms & paramedical tests <ul style="list-style-type: none"> <li>• Physical examination</li> <li>• Understanding signs and symptoms</li> <li>• Structure of medical records</li> </ul>	Ford pp 1-55	Troels Neuro Dept
Thu 31/8	15.30-17.30 Roskilde Hospital	<b>Lecture 3</b> From Diagnosis to Therapy <ul style="list-style-type: none"> <li>• From history, examination, lab. results to a diagnosis, treatment strategy and monitoring of the patient</li> </ul>	TBA	Troels Neuro Dept
Mon 4/9	15.30-17.30 Roskilde Hospital	<b>Lecture 4</b> Introduction to the Theoretical Patient Case	NA	Torben Eye Dept
Wed 06/09  DIS, F24-306	17.30-19.00	<b>Mandatory Core Course Week &amp; Study Tour Orientation</b>	The Danish Healthcare system (On Canvas) WHO Health Systems in Transition Executive Summary Only (On Canvas)	S&H Department
Thu 7/9	15.30-17.30 Roskilde Hospital	<b>Lecture 5</b> Ophthalmology I <ul style="list-style-type: none"> <li>• Anatomy &amp; Physiology</li> <li>• Diagnostic methods</li> <li>• Common diseases &amp; treatment</li> </ul>	Hole: pp. 262-272; Ford: pp. 126-129 + Lecture notes on Canvas	Torben Eye Dept
<b>Medical Practice &amp; Policy Program Social</b> Friday September 8 18:00-20:00 Location: TBA <i>*Get to know your MPP peers before CCW with some light snacks &amp; drinks*</i> <i>More information provided a week before</i>				
<b>Core Course Week</b> Short Study Tour: Odense/Middelfart Monday, September 11-Wednesday, September 13  Copenhagen Portion Thursday, September 14 – Friday, September 15 (ends at 18:30) <b>**Please note that it is mandatory to attend all scheduled core course week activities**</b>				

# DIS STUDY ABROAD IN SCANDINAVIA

Thu 14/9	TBA CCW Activities	<b>Theoretical Patient Case 1 Due</b> (upload to Canvas by 15:30))	NA	NA
Mon 18/9	15.30-17.30 Roskilde Hospital	<b>Lecture 6</b> Ophthalmology II <ul style="list-style-type: none"> <li>Anatomy &amp; Physiology</li> <li>Diagnostic methods</li> <li>Common diseases &amp; treatment</li> </ul>	Hole: pp. 262-272; Ford: pp. 126-129 + Lecture notes on Canvas	Torben Eye Dept
Thu 21/9	15.30-17.30 Roskilde Hospital	<b>Lecture 7</b> Imaging <ul style="list-style-type: none"> <li>Introduction to X-ray, CT, MRI, and medical ultrasound</li> <li>How to choose the proper imaging modality</li> </ul> <b>Test I</b>	Lecture Notes on Canvas	Torben Eye Dept
Mon 25/9	15.30-17.30 Roskilde Hospital	<b>Lecture 8</b> Diabetes I: Theoretical Overview <ul style="list-style-type: none"> <li>Epidemiology</li> <li>Diagnosis</li> <li>Treatment</li> </ul>	Hole 277-297 9 <sup>th</sup> edition, O'Neill: pp 315-326	Torben Eye Dept
Thu 28/9	15.30-17.30 Roskilde Hospital	<b>Lecture 9</b> Diabetes II: Complications  <b>Theoretical Patient Case 2</b>	Jaacks, Lindsay et al "Type 2 diabetes: A 21 <sup>st</sup> century epidemic" (on Canvas)  Chatterjee, Sudesna et al "Optimizing management of glycaemia (on Canvas)	Torben Eye Dept
Mon 2/10	15.30-17.30 Roskilde Hospital	<b>Lecture 10</b> Evidence Based Medicine  <b>Fact Sheets &amp; Preliminary Research Question</b> uploaded to <b>Canvas</b> by <b>16.00</b>	Greenhalgh, Trisha, "Evidence based medicine: a movement in crisis?" (on Canvas)	Torben Eye Dept
Thu 5/10	15.30-17.30 Roskilde Hospital	No Class, reserved for make-up class  <b>Theoretical Patient Case 2 Due</b> (Upload to Canvas by 15.30)		
<b><u>Sunday, October 8 – Friday, October 13</u></b> <b>Long Study Tour to Tallinn / Stockholm</b>				
Mon 16/10	15.30-17.30 Roskilde Hospital	<b>Lecture 11</b> Cardiovascular System I <ul style="list-style-type: none"> <li>Anatomy and physiology of the heart</li> <li>ECG</li> <li>Investigations</li> </ul>	Hole's: chapter 13 (not including section on arteries and veins)	Troels Neuro Dept
Thu 19/10	15.30-17.30 Roskilde Hospital	<b>Lecture 12</b> Cardiovascular System II <ul style="list-style-type: none"> <li>Ischemic Heart Disease</li> <li>Heart failure</li> </ul> <b>Theoretical Patient Case 3</b>	O'Neill pg 7-25	Troels Neuro Dept

# DIS STUDY ABROAD IN SCANDINAVIA

Mon 23/10	15.30-17.30 Roskilde Hospital	<b>Lecture 13</b> GI System I <ul style="list-style-type: none"> <li>Anatomy &amp; Physiology</li> <li>Diagnostic and treatment methods</li> </ul> <b>Theoretical Patient Case 3 Due</b> (Upload to Canvas by 15.30)	Ford: pp. 19-20, 25-26, 28-29, 32, 34, 98-116, Hole: Chapter 15; O'Neill: pp. 117-126, 129-134, 148-151	TBA
Thu 26/10	15:00 – 15:30  DIS, V10-A33	<b>Test II</b>	NA	CA
Depart as Group from DIS to Herlev Hospital for Emergency Medicine Simulation Session				
	16:30-20:00  Herlev Hospital  *Note time and location change*	<b>Lecture 14</b> Emergency Medicine Simulation Session (EMSS)  Emergency Medicine <ul style="list-style-type: none"> <li>The management of stopped-heart diagnosing</li> <li>Treatment of cardiac arrest</li> <li>Practical training in resuscitation</li> <li>Team training using simulation centre in various patient case scenarios</li> </ul>	On Canvas	DIS Guest Lecturer
<b>Break</b> <b>Sunday, October 29 – Sunday, November 5</b>				
Mon 6/11	15.30-17.30 Roskilde Hospital	<b>Lecture 15</b> GI System II <ul style="list-style-type: none"> <li>Anatomy &amp; Physiology</li> <li>Diagnostic and treatment methods</li> <li>Gastric and duodenal ulcers</li> <li>Inflammatory bowel disease</li> <li>Colorectal cancer</li> </ul>	Ford: pp. 19-20, 25-26, 28-29, 32, 34, 98-116, Hole: Chapter 15; O'Neill: pp. 117-126, 129-134, 148-151	TBA
Wed 08/11	<b>Study Tour Assignment Due</b> (Upload to Canvas by 16.00)			
Thu 9/11	15.30-17.30 Roskilde Hospital	<b>Lecture 16</b> CNS I <ul style="list-style-type: none"> <li>Anatomy and physiology</li> <li>Most frequent disease entities</li> <li>Diagnostic and treatment methods</li> </ul> <b>Clinical Patient Case 1</b>	Hole's: pp 202-210 and 220-233	Troels Neuro Dept
Mon 13/11	<b>16:00-19:30</b> *Note time and location change*  Gentofte Hospital Simulation & Training Center	<b>Lecture 17</b> DIS Introduction to Clinical Skills Course <ul style="list-style-type: none"> <li>IV Insertion</li> <li>Suture</li> <li>Catheter Insertions</li> </ul> <i>*Meet CA at designated location to depart for hospital by public transportation*</i>	Look on Canvas for group assignment and program	DIS + CAMES Instructors
Thu 16/11	15.30-17.30 Roskilde Hospital Meeting Room 4 (next to cantina)	<b>Lecture 18</b> Obstetrics and Gynecology <ul style="list-style-type: none"> <li>Anatomy &amp; physiology</li> <li>Menstrual cycle</li> <li>Pregnancy &amp; birth</li> </ul> <b>Clinical Patient Case 1 Due</b> (upload to Canvas by 15.30)	Hole Chapter 19 and 20 (until 20.4)	TBA

# DIS STUDY ABROAD IN SCANDINAVIA

Mon 20/11	15.30-17.30 Roskilde Hospital	<b>Lecture 19</b> CNS II <ul style="list-style-type: none"> <li>• Meningitis</li> <li>• Epilepsy</li> </ul>	Hole's: pp 218-223, 235-238	Troels Neuro Dept
<b>Break</b> <b>Wednesday, November 22 – Sunday, November 26</b>				
Mon 27/11	15.30-17.30 Roskilde Hospital	<b>Lecture 20</b> CNS lab + Macroanatomical Lab  <i>**Course Assistant will establish meeting time and location prior to class time.</i>	Ford: pp 56-59 and 117-152	Troels (Panum Institute)
Thu 30/11	15.30-17.30 Roskilde Hospital	No Class, reserved for make-up class		
Mon 4/12	15.30-20:00 Roskilde Hospital	<b>Lecture 21</b> Wrap-up <ul style="list-style-type: none"> <li>• Evaluation of the course and semester</li> <li>• Tying it all together</li> <li>• Preparation for the final</li> </ul> Concluding social	N/A	Troels & Torben Eye Dept
<b>Thursday, December 7</b> DIS End of Semester Showcase Time: 16:00-18:00 Location: DIS Invitation and more information to come closer to date.				
<b>Final Exam</b> <b>Final Exam Period: Thursday December 7 – Sunday December 10</b> Date & Time: TBA Location: DIS, TBA <i>Exact date &amp; time of Human Health &amp; Disease: A Clinical Approach Final Exam provided closer to.</i>				