So in principle we have 7 occasions (14 hrs) left of the microbiology course. Now it is clear that it cannot be done the classic way in the next two weeks that we have. Therefore, let’s do the following if you agree.

The microbiology course that we have does not have to be a medically in-depth course, but one that conveys information that may be fundamental and important in nursing practice.

This material is factually covered by the thematics that you can find below and in a separate file.

So what I did, I tried to cover that basic information with available youtube videos, instead of recording my own videos. This is done by rather basic search and review of the results.

So here for every topic of the thematics you will find a link to the related youtube list based on an easy search. In all cases when there is more than one video in the list I made sure that the first few videos are covering the topics sufficiently.

So here you have a choice which one of the first two-five videos you want to watch, or all of them, or two of them and so on.

If you go through the whole tematics and watch at least one video from the list you should be able to answer the test questions at the very end of the exam period.

If you prefer to read a book the book that forms the basis of the tematics (see at the bottom of the file) is one that I can warmly recommend, but it is by no means obligatory or necessary.

There are also other fine books like „Microbiology for dummies”, „Clinical microbiology made ridiculously simple”, „Microbiology made easy”.

I believe watching the videos is a win-win: the individual videos mostly are rather short and comprehensive, you can watch them at your convenience (whenever suits you) and they must contain all the knowledge you may need now.

I will then announce an exam date that you will have to sign up to, and then you will have an MCQ link with a test that you will have plenty and flexible time to solve (so there will be a longer time interval to start the MCQ whilst you will have an hour to solve it.

Let me know if you’re all right with this plan, also never hesitate to ask questions.

Greetings from St Louis, see you later  
  
Tamás

Bonus video: <https://www.youtube.com/watch?v=6wGAVxe7cik>

Importance of Microbiology in Health and disease

https://www.youtube.com/results?search\_query=importance+of+microbiology+in+health+and+disease

Microbial Diversity and Classification

<https://www.youtube.com/playlist?list=PLq1ozc4_2M7Kn7e0Q8qMbPvqRZ4GYZcaM>

https://www.youtube.com/results?search\_query=microbial+diversity+and+classification

Roles of Microbes in the Environment

https://www.youtube.com/results?search\_query=roles+of+microbes+in+the+environment

Branches of Microbiology

https://www.youtube.com/results?search\_query=branches+of+microbiology

Basics of Microbial Genetics

https://www.youtube.com/results?search\_query=basics+of+microbial+genetics

(Microscopy)

(https://www.youtube.com/results?search\_query=microscopy)

Aseptic techniques

sterilization

disinfection

https://www.youtube.com/watch?v=w-k-HkJVha4

Microbial cell structure and Function

cell wall

plasma membrane and transport

prokaryotic vs eukaryotic cells

cytoplasmic structures

structures on the cell surface

https://www.youtube.com/results?search\_query=microbial+cell+structure+and+function

Microbial taxonomy and classification

classification systems

three domains

environmental factors influencing microbial growth

(same as the link way above for the classification)

Microbial genetics

DNA replication

Transcription and translation

Gene regulation mechanisms

gene editing techniques

(same as the link above for the microbial genetics, basics)

Genetic transfer and microbial evolution

horizontal gene transfer

plasmids (and their role in Adaptation

antibiotic resistance

https://www.youtube.com/results?search\_query=genetic+transfer+and+microbial+evolution

Prions

structure, function and associated diseases

https://www.youtube.com/results?search\_query=prions

Viruses

https://www.youtube.com/results?search\_query=viruses

structure and classification

https://www.youtube.com/results?search\_query=viral+structure+and+classification

replication cycle

https://www.youtube.com/watch?v=RTF-lP3WSNA

types of viral infection and pathogenesis

https://www.youtube.com/results?search\_query=types+of+viral+infection+and+pathogenesis

Microbial Ecology and Symbiosis

microbes in natural environment: soil, water and air

interactions: Mutualism, commensualism, parasitism

biofilms, microbial communities

<https://www.youtube.com/results?search_query=microbial+ecology+and+symbiosis>

https://www.youtube.com/watch?v=-IEOxfIPWsk

Immunity, host defense

antigens, antibodies and Immune cells

vaccination and Immunological memory

<https://www.youtube.com/watch?v=k9QAyP3bYmc>

Pathogenic Microorganisms and disease mechanisms

pathogenesis: how microbes cause disease

types of infections: Bacterial, viral, fungal, parasitic

virulence factors and toxins

epidemiology of infectious diseases

<https://www.youtube.com/results?search_query=microorganism+disease+mechanism>

Antimicrobial Agents and Resistance

types of antimicrobial agents

mechanisms of action and spectrum of activity

development and spread of antibiotic resistance

<https://www.youtube.com/watch?v=PV_bhprrbA4>

Medical microbiology and diagnostic techniques

methods for identifying pathogens

microbial culturing techniques and clinical labs

molecular techniques

<https://www.youtube.com/results?search_query=medical+microbiology+diagnostic+techniques>

Emerging trends and Applications in Microbiology

CRISPR and gene editing

https://www.youtube.com/results?search\_query=crispr

microbiome and human health

https://www.youtube.com/watch?v=XCaTQzjX2rQ

(synthetic biology)

(https://www.youtube.com/watch?v=5\_z1gG-m96A)

Based on: Robert Murray: Microbiology Step by Step. A structured Guide to Microbiology Fundamentals, 2024, by Robert Murray

+ basic youtube search