Topic: PROFESSIONAL ENGLISH FOR CLINICAL MICROBIOLOGY	Unit 2: WORKING WITH BACTERIA	LESSONS: 1 - 4

TEACHING AIMS	TIMING: 11:00 h
1. To introduce bacterial identification strategies 2. To develop students´critical thinking skills about laboratory results 3. To know about susceptibility tests	

CONTRIBUTION TO COMPETENCES

- Professional skills (students will be able to …):
    - o Interpret scientific and technical information
    - o Adapt procedures to execute the activities according to established quality standards and optimizing the resources allocated
    - o Prepare and use diagnostic equipment and materials, according to the procedures.
    - o Identify bacteria
    - o Study the susceptibility to antibiotics of isolated bacteria

- Functional skills (students will be able to …):
    - o Access and communicate information using ICT tools to learn
    - o Use mathematics to solve problems and questions in laboratory
    - o Use technical information effectively in English

- Key skills or effectiveness for working life (students will be able to …):
    - o Solve problems
    - o Undertake work in a responsible manner
    - o Organise their own work and take their own initiative
    - o Do autonomous work

LEARNING OUTCOMES	CONTENT

At the end of the lesson the students will:
KNOW:
   ○ Fundamentals of speciation
   ○ Strategies for speciation
   ○ Fundamentals of biochemical tests
   ○ Fundamentals of susceptibility tests
   ○ MIC concept
   ○ Relationship between susceptibility parameters
	1. Strategies to identify bacteria
	2. Preliminary identification of bacteria
	3. Biochemical tests for speciation of bacteria
	4. Commercial identification kits
	5. Variability of bacteria
	6. Disk diffusion test
	7. MIC concept
	8. Breakpoint tables

BE ABLE TO:
   ○ Perform preliminary tests
   ○ Use identification tables
   ○ Think critically
   ○ Perform a Kirby-Bauer susceptibility test
   ○ Use breakpoint tables
	COGNITION

	1. Summarizing information 2. Identifying issues 3. Giving examples 4. Inferring facts 5. Analysing concepts and inferring characteristics

BE AWARE OF:	
○ The importance of being rigorous at work ○ The importance of order at work ○ The importance of taking care of materials and equipment ○ The importance of standardization	6. Comparing images and instructions 7. Thinking critically 8. Interpreting data 9. Interpreting graphs

COMMUNICATION

LANGUAGE OF LEARNING	LANGUAGE FOR LEARNING
○ Steps to identify bacteria ○ Characteristics for preliminary identification ○ Tests for preliminary identification: haemolysis, catalase, oxidase ○ Biochemical tests for speciation of bacteria ○ Statistics concepts: significance, false positive ○ Susceptibility categories ○ Diffusion and concentration gradient ○ Interpreting graphs: bar graph, line graph, directly proportional, inversely proportional, increase, decrease ○ Antibiotics ○ Present tense ○ Suffixes ○ Approximating: almost, over, nearly, about, under, around, half, less than. ○ Explaining starters: this is used to …, we demonstrate this by …, it means that …, if there is X, there will appear …, we may obtain …, this is important to … ○ Size adjectives: high / low, big / small, great /small, large / small ○ Comparative adjectives: low – lower – the lowest, high – higher – the highest, great – greater – the greatest, small – smaller – the smallest, big – bigger - the biggest, large – larger – the largest ○ Tables: in rows, in columns, in the boxes, at the top, on the left hand, in the middle column	○ Rounding numbers ○ Explaining the difference between physical and abstract parameters ○ Comparing physical and abstract parameters ○ Explaining procedures ○ Describing information from tables

ASSESSMENT CRITERIA

FORMATIVE ASSESSMENT	SUMMATIVE ASSESSMENT
Can the student? 1. Do a preliminary identification? 2. Give examples of how tests are used in speciation of bacteria? 3. Explain how an identification media works? 4. Think critically about identification of bacteria? 5. Validate a speciation? 6. Explain why susceptibility tests are performed? 7. Relate MICs to the rest of susceptibility parameters? 8. Interpret a susceptibility test?	1. Does the student include 10 slides? 2. Does the student develop all the suggested issues? 3. Can the student explain concepts properly? 4. Can the student link the contents presented? 5. Can the student present clear visuals? 6. Can the student use technical words correctly? 7. Does the student show self-confidence? 8. Can the student talk fluently?