knowledge and expectation

1. Which of the following are the four main classes of biological macromolecules?

23 risposte corrette
de 25 intervistati

✓	Proteins, lipids, carbohydrates, and nucleic acids	92%	23 voti
	Proteins, vitamins, hormones, and nucleic acids	0%	0 voti
	Amino acids, fatty acids, sugars, and nucleotides	4%	1 voto
	Enzymes, DNA, RNA, and polysaccharides	4%	1 voto

2. Which bond is responsible for maintaining the secondary structure of proteins (α-helices and β-sheets)?

17 risposte corrette
de 23 intervistati

	Disulfide bonds	17%	4 voti
✓	Hydrogen bonds	74%	17 voti
	Ionic bonds	4%	1 voto
	Hydrophobic interactions	4%	1 voto

3. The isoelectric point (pI) of a protein is the pH at which:

17 risposte corrette
de 22 intervistati

	The protein carries its maximum negative charge	14%	3 voti
	The protein has its highest solubility	5%	1 voto
✓	The net charge of the protein is zero	77%	17 voti
	All acidic residues are fully deprotonated	5%	1 voto

4. Which organelle is the primary site for the synthesis and initial folding of secreted and membrane proteins?

22 risposte corrette
de 23 intervistati

	Mitochondrion	0%	0 voti
	Lysosome	4%	1 voto
✓	Rough endoplasmic reticulum	96%	22 voti
	Nucleus	0%	0 voti

5. Which of the following best describes the primary driving force for the hydrophobic collapse during protein folding?

11 risposte corrette
de 22 intervistati

	Formation of covalent bonds between hydrophobic side chains	23%	5 voti
✓	Burial of hydrophobic residues to minimize their contact with water	50%	11 voti
	Electrostatic attraction between oppositely charged residues	18%	4 voti
	Hydrogen bonds between hydrophobic side chains	9%	2 voti

6. Disulfide bonds in proteins form between the side chains of which amino acid?

19 risposte corrette
de 23 intervistati

	Methionine	0%	0 voti
✓	Cysteine	83%	19 voti
	Serine	9%	2 voti
	Histidine	9%	2 voti

7. Which statement about protein quaternary structure is correct?

18 risposte corrette
de 21 intervistati

	It describes the sequence of amino acids in a polypeptide chain	0%	0 voti
	It refers to the local folding into α-helices and β-sheets	10%	2 voti
✓	It involves the association of two or more polypeptide subunits	86%	18 voti
	It is stabilized exclusively by disulfide bonds between subunits	5%	1 voto

8. The Ramachandran plot shows:

17 risposte corrette
de 23 intervistati

	The distribution of hydrophobic residues in the protein core	13%	3 voti
✓	Sterically allowed combinations of φ and ψ backbone dihedral angles	74%	17 voti
	The relative stability of α-helices versus β-sheets	4%	1 voto
	The pattern of disulfide bonds along the polypeptide chain	9%	2 voti

9. Phosphorylation as a post-translational modification most commonly targets which amino acid residues?

18 risposte corrette
de 21 intervistati

	Alanine, glycine, and valine	5%	1 voto
	Leucine, isoleucine, and phenylalanine	10%	2 voti
✓	Serine, threonine, and tyrosine	86%	18 voti
	Aspartate, glutamate, and asparagine	0%	0 voti

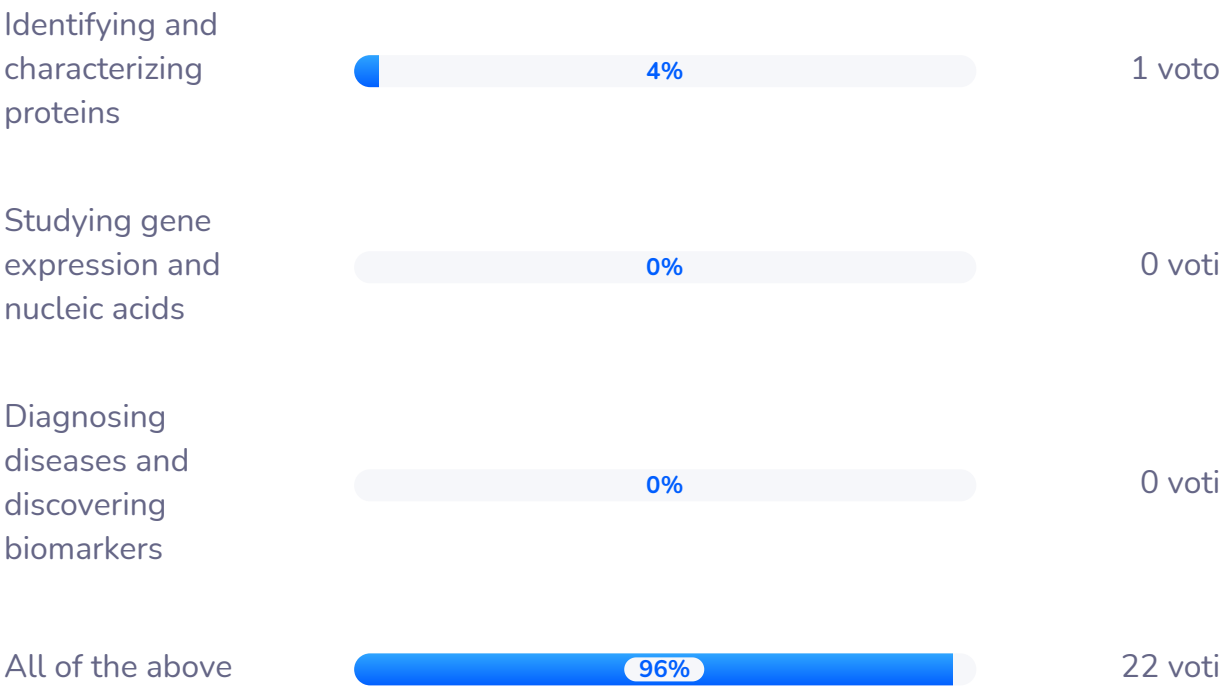
10. N-linked glycosylation in eukaryotes attaches a sugar chain to which amino acid residue?

7 risposte corrette
de 24 intervistati

	Serine	8%	2 voti
	Threonine	8%	2 voti
✓	Asparagine	29%	7 voti
	Lysine	54%	13 voti

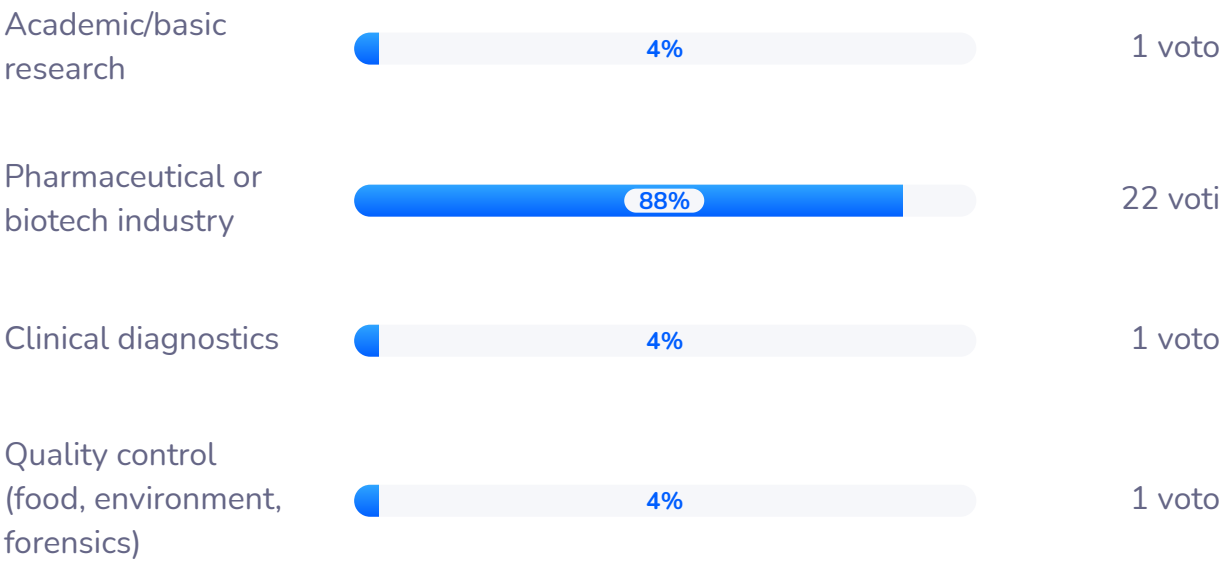
11. What do you think biochemical methodologies are mainly used for?

23 intervistati



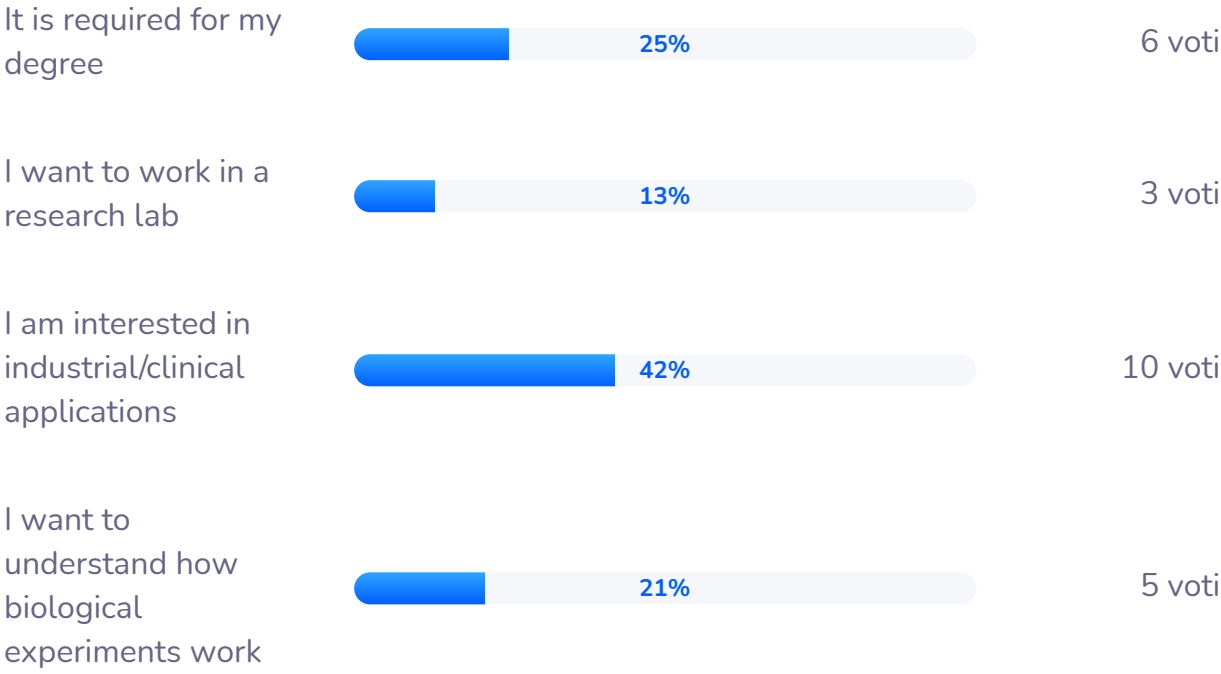
12. In which professional context do you think you will most likely use biochemical techniques?

25 intervistati



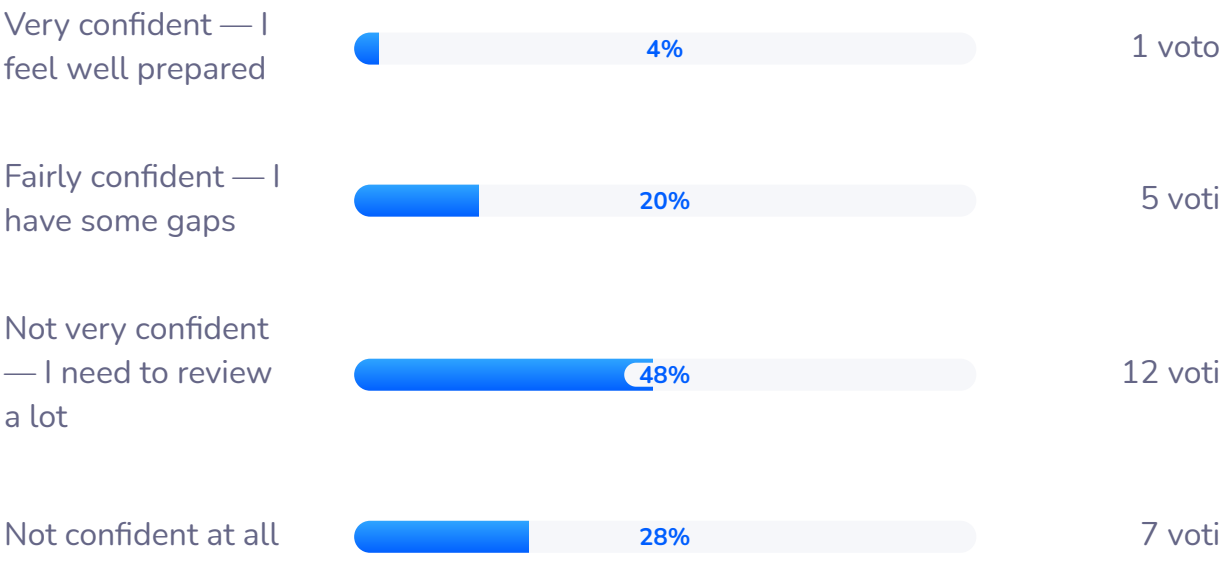
13. What is your main motivation for taking this course?

24 intervistati



14. How confident do you feel about your biochemistry background before starting this course?

25 intervistati



15. In one sentence, what do you expect to be able to do at the end of this course that you cannot do now?

23 intervistati

Pass the exam

To achieve more about the lesson on it serves

Master those calculations 😜

To be able to control experiment by myself And pass the exam

To learn more about biotec And to have the certificate and get married

I expect to understand and apply basic biochemical techniques

. Pass the exams

apply new knowledge and skills effectively

I want to be the part of research lab so I want to get experience in this lab in order to gain better knowledge to apply while working.

Everything

Passing the exam :D

I want to work in research lab confidently

Trust my knowledge and improve my background in biochemistry

To learn more about biochemical methodologies

Be able to identify chemicals

Gain hands on experience

To be more experienced how to use the tools and the techniques in the lab for this subject

Answer biochemistry questions

Pass...

At least learn to do one more thing in the lab if not nothing.

Making sure I do the calculations well 😭 😭 😭 I'm always confused on how we do them and why we do them

Produce lab reports

be able to write lab reports effortlessly