**Tematica concursului pentru ocuparea postului**

**Conferențiar poziția 9.,**

**din Statul de funcții al Departamentului de Bioinginerie**

1. Cultivarea microorganismelor.
2. Sisteme de fermentatie.
3. Modelarea sistemelor de fermentatie.
4. Alimentarea cu aer a sistemelor de fermentatie.
5. Sterilizarea si dezinfectarea bioreactoarelor
6. Introducere in bioinformatica. Baze de date.
7. Proiectarea amorselor
8. Analiza secventelor de proteine
9. Modelarea proteinelor
10. Simularea interactiilor printre liganzi si proteine.

**Bibliografie:**

1. Christoph Wittmann, James C Liao, Industrial Biotechnology: Microorganisms: vol.1, Wiley-VCH, 2017
2. Christoph Wittmann, James C Liao, Industrial Biotechnology: Microorganisms: vol.2, Wiley-VCH, 2017
3. Sevella Béla: Biomérnöki műveletek és folyamatok, ”Procese de bioinginerie”, Műegyetemi kiadó, 2001.
4. Michael C. Flickinger: Encyclopedia of Industrial Biotechnology, Bioprocess, Bioseparation, And Cell Technology Volumes 1-7, A John Wiley & Sons, INC., 2010.
5. John Villadsen, Fundamental Bioengineering, Wiley‐VCH Verlag GmbH & Co, 2015
6. Rodwell, V, Bender, D., Botham, K., Kennelly, P. and Weil, P.A. Harper's Illustrated Biochemistry Thirty-First Edition, 31st Edition. McGraw Hill Education, 2018.
7. Max Kuhn, Kjell Johnson, Applied Predictive Modeling, Springer, 2013
8. Philip Compeau, Pavel Pevzner, Bioinformatics Algorithms: An active Learning Approach, 2nd Edition, Vol.I., Active learning publishers, 2015
9. Andreas D. Baxevanis, Gary D. Bader, and David S. Wishart, Bioinformatics Fourth Edition, Wiley, 2020
10. Arthur M. Lesk, Introduction to Bioinformatics, Oxford University Press, 2014
11. A. Malcolm Campbell, Laurie J. Heyer, Genomika, proteomika, bioinformatika, Medicina Konyvkiado, Budapest 2004
12. Ivet Bahar, Robert L. Jernigan, Ken A. Dill, Protein actions: principles and modeling, Garland Science, 2017