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Информация о владельце:

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## Summary of the work program of the discipline (module)

| Fundamentals of Biochemistry and molecular biology                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| Name of the discipline                                                                      | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Summary                                                                                     | The structure, biochemical properties and metabolic pathways of transformation of the main classes of biomolecules of a living cell, the basics of bioenergetics and the processes of energy transformation in living organisms, as well as the relationship and regulation of metabolic processes in the body. The mechanisms of action of enzymes and their role in metabolic processes are considered; metabolic reactions in human, animal and plant tissues, mechanisms of regulation of metabolism and cellular homeostasis; processes of energy transformation in living organisms; mechanisms of transmission of hereditary information.                                                                                                                                                                                                                                                                                             |
| The results of mastering the discipline (module)                                            | Understands the essence of physical, chemical, biochemical, biotechnological, microbiological, thermophysical processes occurring in the production of biotechnological products for the food industry<br>He is able to study, analyze and use specific types of biological objects in real processes and transformations; to use knowledge of mathematical, physical, chemical, biological laws, patterns and their interrelations for analysis<br>Can study and analyze the main types of biological objects, use them in individual processes and transformations; possess techniques and methods based on mathematical, physical, chemical, biological laws and patterns both for studying biological objects themselves and for processes involving them.                                                                                                                                                                               |
| Labor intensity, p.e.                                                                       | 9 p.e.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Reporting form                                                                              | Exam<br>Exam                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| The list of basic and additional literature necessary for the development of the discipline |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Basic literature                                                                            | <ol style="list-style-type: none"><li>1. Glukhareva, T. V.&lt;BR&gt; Biochemistry. At 2 p.m. 2. Basic regulators and biological fluids of the human body Electronic resource : Textbook for SPO / T. V. Glukhareva, I. S. Selezneva; ed. Yu. Yu. Morzherin. - Saratov, Yekaterinburg : Vocational Education, Ural Federal University, 2019. - 113 p. - The book is in the premium version of EBS IPR BOOKS. - ISBN 978-5-4488-0492-2, 978-5-7996-2794-2</li><li>2. Skvortsova, N. N.&lt;BR&gt; Fundamentals of biochemistry and molecular biology. Part I. Chemical components of the cell Electronic resource : Textbook / N. N. Skvortsova. - Fundamentals of biochemistry and molecular biology. Part I. Chemical components of the cell, 2022-10-01. - St. Petersburg : ITMO University, 2016. - 154 p. - The book is in the premium version of EBS IPR BOOKS. - ISBN 2227-8397</li></ol>                                                |
| Additional literature                                                                       | <ol style="list-style-type: none"><li>1. Biochemistry and molecular biology : an educational method. manual : Specialty 020200.62 (06.03.01) – Biology. Bachelor's degree / comp.: S. F. Andrusenko, E. V. Denisova ; Sev.-Cav. feder. univ.&lt;/font&gt;. - Stavropol : NCFU, 2015. - 94 p.</li><li>2. Kuzmicheva, V.N.&lt;BR&gt; Biochemistry of food products and their metabolism Electronic resource : educational and methodical manual / N.A. Kashirina / I.Yu. Ventsova / V.N. Kuzmicheva. - Voronezh : Voronezh State Agrarian University named after Emperor Peter the Great, 2015. - 247 c. - The book is in the basic version of EBS IPRbooks. - ISBN 978-5-7267-0819-5</li><li>3. Shamraev, A.V.&lt;BR&gt; Biochemistry : a textbook / A.V. Shamraev ; Ministry of Education and Science of the Russian Federation ; Federal State Budgetary Educational Institution of Higher Professional Education "Orenburg State</li></ol> |

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|  | University". Orenburg : OSU, 2014. - 186 p. : ill., schematics. - <a href="http://biblioclub.ru/">http://biblioclub.ru /</a> . - Bibliogr.: from 167 |
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