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University of Barishal (BU)

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# Summary

When you hear the name biochemistry and biotechnology, the first thing that comes to mind is the chemistry of life. Its main work is about life. More specifically, biochemistry is a sector that explains all the biological work of this living world and biotechnology changes that life to human welfare. Unfortunately, we do not see any full review of biochemistry and biotechnology subjects. The reviews we usually see. It is basically a review given by the subject of Biochemistry and Molecular Biology or a review given by the subject of Biotechnology and Genetic Engineering. But the Department of Biochemistry and Biotechnology does not have a full review. The reason for this may be that except for some private universities in Bangladesh and among the public universities, only Barisal University does not have this subject. Keep in mind that biochemistry and molecular biology and biochemistry and biotechnology are not completely the same. In fact, biochemistry and molecular biology and biotechnology and genetic engineering are complementary to these two subjects, that is, biochemistry and biotechnology = biochemistry and molecular biology + biotechnology and genetic engineering. The big proof of this is that Biochemistry and Biotechnology are taught in several private universities including North South University (NSU), Independent University Bangladesh (IUB) in Bangladesh and in the top ten universities in the world such as Imperial College of London (ICL), University College of London (UCL), University of Birmingham University. All these subjects are taught in the Department of Biotechnology. So through this department, the benefits of studying in two departments and the extra advantage of two departments in the job sector !! Many people can say that what is the need to do two departments separately in other public universities of Bangladesh, such as Biochemistry and Molecular Biology and Biotechnology and Genetic Engineering? If there is a department, such as Biochemistry and Biotechnology, the answer will be if there are two departments than one department in the university, the students will be more and if there are more students, there will be expansion in various areas of work including research. For this, many subjects are currently seen to be branch subjects. So those who will be admitted to Biochemistry and Biotechnology are lucky because one subject will enjoy the benefit of reading two subjects and the expansion of the work will increase a little.

# Why Biochemistry

Why are the leaves green instead of blue? Why should I take medicine if I have a fever? Did humans really come from monkeys or monkeys? Is a four-legged chicken possible? If these bizarre thoughts rotate in someone's head from a young age, then only biochemistry and biotechnology can give its solution. If there is a desire to research someone's life at the molecular level, then this topic may be the first choice for his undergraduate. However, anyone should be interested in biology and chemistry to read about this. Especially chemistry because we explain biological issues here at the molecular level, which requires good chemistry knowledge. It is said that biochemistry is the root of life science. Anyone can build a career in different sectors if they want to read about this. Biotechnologists and biochemists are active in all biochemical fields including genetic engineering, oncology, bioinformatics, biophysics, immunology pharmacy, agriculture, ocenography.

## Scholarships and Myths

Biochemistry and biotechnology are two branches of the most heavyweight branches of life science. In today's world, the importance of research on biochemistry is increasing day by day, so students of biochemistry and biotechnology get good funding as a postgraduate subject. At the same time, the field of biochemistry research in different universities of the world is increasing day by day. There are many students from our country get the opportunity for post-graduation / research every year. However, a common lie is that as soon as they pass, the students of this background go out of the country on full scholarship. This is a misconception because we have to give the same amount of efort to the students of other departments for a scholarship outside the country. And to achieve this scholarship, you must develop some additional skills, achieve various exams, such as Zia's IELTS, you have to do well in these exams, there should be various research papers or research work.[1]

# Carrier opportunities in Bangladesh

It Is Said That This Century Is For Biochemistry. At present, it is a major field of research for scientists all over the world. Now the question may arise whether there are research opportunities in this sector in Bangladesh. The answer is yes. All of you may have heard about Dr. Maksudul Alam's jute genome project. You must also know the newly approved golden bag. Many such achievements in the biochemistry and biotechnology sector are now in the possession of Bengali scientists. Officially, the allocation for biochemical research and biotechnology in our country is increasing day by day. In addition to the field of research, there are many scopes for building the career of biochemists and biotechnologists in Bangladesh.

## Teaching at University College

Good result holders always have the opportunity to become university teachers, as well as biochemists have the opportunity to go to BCS education quota.

## Pharmaceuticals

The demand for biochemists and biotechnologists in the RND sector is increasing day by day in various pharmaceuticals or pharmaceutical companies. Biotechnology Company and Chemical Industry Chemical related industries have a job as a quality controller, quality assurance, and even quality controller in textiles.

## Food Industry

Bangladesh is thriving day by day in the food industry after clothing. At the same time, the demand for biochemists is increasing to control food processing, pathogens.

## Forensic Lab

Biochemists work in various forensic labs to identify the father or maternal identity, identify the victims of the accident or post-mortem of the body in the case of accidental death.

## Medical and Diagnostic

Biochemistry is an important subject of medical science. Biochemists or biotechnologists can build their career in the medical and diagnostic field if they want. Students studying biochemistry and molecular biology have the opportunity to work in various private medical colleges, hospitals and diagnostic labs of the country.[2]

The following institutions where biochemists and biotechnologists can build their careers in Bangladesh are:

### BCSIR

### icddr,b

### Bangladesh Atomic Energy Commission, National Institute of Biotechnology,

### Bangladesh Tea Board,

### Bardem, BCIC,

### BSMMU (PG),

### Bangladesh Diabetics Association, Ministry of Women and Children Affairs

# About BU-Biochemistry & Biotechnology

A full review of the Department of Biochemistry and Biotechnology is not available. The reason for this may be that except for some private universities in Bangladesh and among the public universities, only Barisal University does not have this subject. Keep in mind that biochemistry and molecular biology and biochemistry and biotechnology are not completely the same. In fact, biochemistry and molecular biology and biotechnology and genetic engineering are complementary to these two subjects, that is, biochemistry and biotechnology = biochemistry and molecular biology biotechnology and genetic engineering. The big proof of this is that Biochemistry and Biotechnology are taught in several private universities including North South University (NSU), Independent University Bangladesh (IUB) in Bangladesh and in the top ten universities in the world such as Imperial College of London (ICL), University College of London (UCL), University of Birmingham University and there is no department called Molecular Biology or Genetic Engineering separately in the mentioned university. All these subjects are taught in the Department of Biotechnology. So through this department, the benefits of studying in two departments and the extra advantage of two departments in the job sector can be said, then what is the need to do two departments separately in other public universities of Bangladesh, such as Biochemistry and Molecular Biology and Biotechnology and Genetic Engineering? If there is a department, such as Biochemistry and Biotechnology, the answer will be if there are two departments than one department in the university, there will be more students and if there are more students, there will be expansion in various areas of work including research. For this, many subjects are currently seen to be branch subjects. So those who will be admitted to Biochemistry and Biotechnology are lucky because one subject will enjoy the benefit of reading two subjects and the expansion of the work will increase a little. He is currently four years of Biochemistry and Biotechnology at Barisal University. Everyone is usually skeptical about the new department.

How many teachers are there? It is normal to have many such questions in mind. With these questions click through [Department of Biochemistry and Biotechnology](https://bu.ac.bd/?ref=teacher_profile_data_biochemistry)

## Lab Facilities:

Although the subject has been running for three years, two expanded labs have been prepared during the Corona period, where[3]

# Academic Plan

1. Bachelor program
2. Masters programme

## Bachelor Programme

BU-Biochemistry & Biotechnology contains Bachelor programme which include 04 years 128 credit.

|  |  |
| --- | --- |
| **Year** | **Credit** |
| 1st yea | 28 |
| 2nd year | 30 |
| 3rd year | 34 |
| 4th year | 36 |
| Total | 128 |

2nd year

3rd year

4th year

1st year

BSc certificate

### Flow chart & pie chart

## Masters Programme

|  |  |  |  |
| --- | --- | --- | --- |
| **Thesis Basic credit** | **Non Thesis Basic credit** | **Thesis with** | **Non Thesis lab** |
| 24 | 24 | 6 | 6 |
| Both will face 2 credit viva. | | | |

# Departmental Statistics

Those who will be admitted to Biochemistry and Biotechnology are lucky because one subject will enjoy the benefit of reading two subjects and the expansion of the work will increase a little.It contains[4]

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|  |  |  |  |
| --- | --- | --- | --- |
| **Running teacher** | **Teacher in Leave** | **Running Students** | **Passed Students** |
| 04 | 03 | 86 | 11 |
| **Two new teacher are in process** | |

# Conclusion

Biochemistry and biotechnology are deeply interconnected fields, crucial for understanding life processes and solving real-world problems. Biochemistry explores the molecular mechanisms within living organisms, while biotechnology leverages these insights for technological applications in areas like medicine, agriculture, and environmental conservation. Together, they drive advancements in health, genetic engineering, and sustainable industries, exemplified by research in institutions like the University of Barishal, where a strong focus on these disciplines fosters innovation and practical applications.

# Reference

1. <https://bu.ac.bd/index.php>

2. <https://www.facebook.com/groups/1449535755289268/search/?q=biochemistry%20%26%20Biotechnology>

3. <https://www.facebook.com/groups/1449535755289268/permalink/2549597665283066/>

4. <https://bu.ac.bd/index.php?ref=teacher_profile_data_biochemistry>