



Directions for Undergraduate Program Director Reports:

1. Talk to students in your major, ask around if there are any current academic issues.  
(ex: class conflicts within the major, issues with professors, etc)
2. Look at Degree Navigator, write down the course requirements
3. Formulate a list of things you would like to know about the program (corporate connections with the university, current research projects, opportunities for students to get involved, etc)
4. Email Undergraduate Program Director and Arrange Appointment
5. Fill out Undergraduate Report Sheet
6. email to [vicepresident@sgc.rutgers.edu](mailto:vicepresident@sgc.rutgers.edu) and complete by December 4th

Name: Kim DiazMajor: BiochemistryDate: 03/13/2019Semester: Spring 2019Undergraduate Program Director: Dr. Lori White

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I. Major Options - What options are offered within the major? How do they differ?

**Biochemistry of Microbial Systems**

This option blends biochemistry with microbiology, allowing students to become proficient in the biochemistry of microbial organisms and systems.

**Biochemical Toxicology**

This option consists of the study of toxic compounds in food and nutrition, the environment, and pharmacological science.

**Biochemistry of Plant Systems**

This option allows for the understanding of the biochemistry of plants.

**Protein and Structural Biochemistry**

This option involves studying the small molecular interactions of proteins and their functions.

**General Option**

The General Option is the study of the overall chemical and physiochemical processes that occur within living organisms

II. Total number of students within the major  
127

III. Goals within the major - What are expectations of students post-graduation?

Many students choose this major as it is good preparation for medical school. Others choose to go into academic or industrial research.

IV. Major Courses - What is the goal of each course? What should students be learning?

1. Contemporary Issues in Biochemistry

This course is designed to familiarize students with current topics and methodologies in biochemistry research, and to introduce students to the areas of expertise of department faculty.

2. General Biochemistry I & II: Students will gain a fundamental understanding of what makes living systems tick at the molecular level. They will also gain an understanding of the experimental methods which give rise to biochemical knowledge. This course will impart a thorough grasp of the relationship between biochemical structure and function.

3. Experimental Biochemistry I & II: This course sequence is intended to provide a comprehensive understanding of basic theories, techniques, and methods practiced in biochemistry laboratory.

4. Principles of Biophysical Chemistry or Physical Chemistry-Biochemical Systems: The course focuses on the application of physical theory and selected experimental methods to biochemical processes.

5. Problem Solving in Biochemistry: This course involves modern instrumentation and analytical techniques used in biochemistry research, and the observation of experiments followed by discussion of techniques and problems.

V. Concerns/Student issues with classes? How to resolve, suggestions?

Students are highly concerned with the limited number of electives/courses within the different major options. They would like to see more of a variety within each option.

Students also think a statistics class should be a requirement because a lot of research uses a variety of statistics to display data.

VI. Things going on within the major (Research, Visitors, Talks, Seminars within the major)

There are frequent seminars from visiting professors, current researches, and visiting scientists. Each seminar is a discussion on current biochemical issues and research that these presenters are involved in. A schedule of seminars and events can be found at <http://dbm.rutgers.edu/index.html>.

#### VII. Research Opportunities

There are always research opportunities available to students. If one would like to be involved in research, the student must contact the scientists involved in a specific laboratory that they are interested in.

#### VIII. Job Outlook, suggestions for students in this major (ex: organizations to join, news

to pay attention to)

Biochemistry is not a limiting major, as there are many fields to choose from. However, jobs directly related to a biochemistry degree include:

- Analytical chemist
- Biomedical scientist
- Healthcare scientist, clinical biochemistry
- Clinical research associate
- Forensic scientist
- Research scientist (Life Science)
- Scientific laboratory technician
- Toxicologist

Students are highly encouraged to be involved in research.

#### IX. Changes within the major in the upcoming year?

There may be few changes in course availability in each option. Check with the course's department head to clarify.

#### X. Other Suggestions