**COVER PAGE**

Type of application (select one):

⭘ Initial application: This application is only to be used by programs that have **not** previously received accreditation from ASBMB.

⭘ Renewal-Previously Provisionally Accredited: This application should be used for programs **previously granted provisional accreditation** and are applying for reaccreditation. If you are unsure about whether your program was previously granted provisional or full accreditation, please refer to your prior decision letter or contact education@asbmb.org for assistance.

Name of institution:

Degree program seeking accreditation:

If you are applying for accreditation of more than one program or track, please complete this form for each program/track. Institutional data may be copied across application forms.

Degree type (e.g., B.A., B.S.):

Select one option

⭘ B.A.

⭘ B.S.

⭘ A different degree type

Degree type if not B.A. or B.S.:

Degree name/track:

Program website:

Program coordinator/primary contact person:

Name:

Title:

Email:

Phone:

Street:

Line2:

City:

Country:

State:

Zip:

[Conditionally displayed if *Renewal-Previously Provisionally Accredited* selected] In the space below, please describe any major changes to your program (for example, changes to curriculum, to courses, to assessment, to overall program or institution) since last accreditation.

[Conditionally displayed if *Renewal-Previously Provisionally Accredited* selected] In the space below, describe item-by-item how you have addressed the aspects identified as weaknesses or needing additional information in your last accreditation letter. Please also be sure to include descriptions of corrective actions taken to address prior concerns in any relevant portions of the application. For each item listed below, specify the appropriate section(s) of the application in which more information can be found. Issues raised in the previous accreditation letter must be addressed in this cover page and within the body of the application. Programs must address all issues raised in the previous accreditation decision letter. Please contact ASBMB if you need a copy of this letter. Failure to address all deficiencies specified in your previous accreditation letter may lead to your application being rejected.

**SECTION 1 – GENERAL INFORMATION**

1.1 Overview/history of program:

Provide a brief description of the history of the program and its creation within or between departments and/or other programs. Include information on how long the program has existed in its current form. Describe any substantial organizational or curricular revisions in the past five years. (For most programs, this can be covered in 250 words or fewer.)

1.2 Name(s) of the participating departments and/or schools within the university:

1.3 Size of institution:

Select one option

⭘ <2,000 students

⭘ 2,000-5,000

⭘ 5,000-10,000

⭘ 10,000-20,000

⭘ >20,000

1.4 Type of institution

1.4.a. Control

Select one option

⭘ Public

⭘ Private

1.4.b. Classification (choose one):

Select one option

⭘ Primarily undergraduate institution (The National Science Foundation defines a PUI as a four-year, master’s level and small doctoral college or university that awards on average no more than two Ph.D.s per year per department.)

⭘ Master's college or university (Carnegie classifications M1-M3 correspond to an institution that awards at least 50 master's degrees and less than 20 doctoral degrees per year.)

⭘ Doctoral university (Carnegie classifications R1-R2 and D/PU correspond to an institution that awards more than 20 doctoral degrees per year.)

1.5 Number of degrees awarded in this program for the preceding five years. Please be sure to include only those degrees awarded to students in the degree program that is seeking accreditation and not include other degrees awarded within the larger academic unit or department.

Click “Add year” and complete the following for up to five years:

Year:

Number of degrees awarded:

If the number of degrees awarded in any year is < 3, answer the following questions in the space below. How does the small program size affect the offering and conduct of program-specific courses? Specifically, how are sufficient interactions with peers maintained? Does the small number of students threaten the sustainability of the program?

1.6 Upload a letter of support from the dean or equivalent institutional authority addressing specific institutional support for the program seeking ASBMB accreditation.

[File Upload]

**SECTION 2 – FACILITIES & EQUIPMENT**

2.1 To help us assess the lab experience for students in biochemistry and/or molecular biology focused courses, provide information for up to three representative required BMB lab courses.

Click “Add Lab Course” and complete the following for up to three courses:

Lab course name and number:

Average number of students per lab section/room:

Average number of students per team e.g., individual = 1; pair = 2; 3; 4; etc.:

2.2 To help us assess the equipment available to students in the required biochemistry and/or molecular biology focused lab courses listed above, provide the following information about available equipment. If the equipment is not available in any required lab courses, indicate N/A.

It is not our intention to indicate that every piece of equipment on this list is required for accreditation.

Pipette set (Number of students sharing piece of lab equipment in average lab section)

Spectrophotometer (Number of students sharing piece of lab equipment in average lab section)

DNA electrophoresis apparatus (Number of students sharing piece of lab equipment in average lab section)

Protein electrophoresis apparatus (Number of students sharing piece of lab equipment in average lab section)

Western blot apparatus (Number of students sharing piece of lab equipment in average lab section)

Microcentrifuge (Number of students sharing piece of lab equipment in average lab section)

Thermocycler (Number of students sharing piece of lab equipment in average lab section)

Chromatography set (Number of students sharing piece of lab equipment in average lab section)

Simple pump or gravity-fed columns, not FPLC or HPLC systems. The latter are considered advanced instruments and can be addressed below.

pH meter (Number of students sharing piece of lab equipment in average lab section)

Other (specify)

2.3 Provide three to five examples of large instruments or advanced equipment/technologies that are used in required biochemistry or molecular biology lab courses. For each, briefly describe how use of this instrument/technology is integrated into a specific lab course.

Please be sure to consult the application guide and/or rubric for more information with regards to the types of advanced instrumentation listed here.

Click “Add Instruments/Technologies” and complete the following for up to five (minimum three required):

Large Instrument or Equipment/Technology:

Description of usage in required biochemistry or molecular biology courses.

2.4 Please briefly describe (<100 words) any support staff for laboratory prep, administration, and/or safety. This may include lab coordinators, student employees, stockroom staff, TAs, etc.

**SECTION 3 – SAFETY**

The ASBMB expects that research and teaching are performed in a safe and appropriate manner. For more information on laboratory safety, see <https://www.cdc.gov/niosh/docs/2007-107/> and <https://www.cdc.gov/labs/bmbl/?CDC_AAref_Val=https://www.cdc.gov/labs/BMBL.html>.

In the following section, describe university and/or department-based resources for safety training and implementation and how safety programs are conducted and assessed for each of the specified groups.

3.1.a Students in lab courses

Description of safety training activities, including frequency with which training is offered:

Is this training assessed?

Select one option

⭘ Yes

⭘ No

Brief description of how training is assessed:

3.1.b Students doing independent research

Description of safety training activities, including frequency with which training is offered:

Is this training assessed?

Select one option

⭘ Yes

⭘ No

Brief description of how training is assessed:

3.1.c Faculty and staff initial training

Description of safety training activities, including frequency with which training is offered:

Is this training assessed?

Select one option

⭘ Yes

⭘ No

Brief description of how training is assessed:

3.1.d Faculty and staff refresher training

Description of refresher training activities including frequency with which faculty/staff undergo refresher training; provide an explanation if refresher training/assessment is less frequent than every 3 years:

Is this training assessed?

Select one option

⭘ Yes

⭘ No

Brief description of how training is assessed:

3.1.e If training is not provided and assessed for each of the groups listed above, what are your plans to address this shortfall in your safety program?

ASBMB expects that all students, faculty and staff receive appropriate safety training and that this training is assessed.

**SECTION 4 – INSTITUTIONAL ENVIRONMENT**

The ASBMB expects the institution to articulate policies intended to foster An institutional culture that is a safe, supportive and welcoming learning environment for all students and faculty members.

4.1 Describe any specific institutional or BMB program activities that foster a safe and supportive learning environment for students in your program. Include your definition of success for these programs and how success is assessed.

4.2 Describe any specific institutional or BMB program resources or initiatives that promote a safe and supportive environment for faculty in your program. Include your definition of success for these programs and how success is assessed.

4.3 Please certify that your institution is compliant with Title IX requirements.

Select one option

⭘ Yes

⭘ No

**SECTION 5 – FACULTY MEMBERS**

5.1.a How many total faculty members are involved in the BMB program (i.e., contribute significantly to teaching, advising and research)? An approximate number is sufficient for large programs.

5.1.b Are all of your program faculty working for your institution full-time?

Select one option

⭘ Yes

⭘ No

If no, how many full-time faculty are involved in your program?

5.2 It is important that an accredited program has the necessary personnel to provide undergraduates with quality teaching, advising and research experiences in biochemistry and molecular biology. Complete the following faculty data table. To reduce the burden on applicants, we ask you to limit your answer to no more than 10 faculty members. NOTE: This is NOT intended to be a comprehensive list but rather a list of those faculty members who most significantly contribute to teaching, advising, and/or research experience components of the program and that demonstrate the breadth of BMB disciplines. Biochemistry and molecular biology is a diverse field of study in which many branches of science contribute. Choose representative faculty members who illustrate how your program balances both chemical and biological aspects of biochemistry and molecular biology.

Click “Add Faculty Member” and complete the following for up to 10 faculty:

Name:

Role in program (check all that apply):

administration

teaching

research

advising

Academic rank:

Department or affiliation:

Postdoctoral training (select one):

Yes

No

Research Field: Describe the faculty member’s research field in a few words (e.g., receptor structure function):

Courses taught: Provide the title of courses taught (e.g., Developmental Biology, not BMB 490). Do not include lower-level prerequisite courses (e.g., general chemistry, general biology, organic chemistry, general physics or calculus).:

Number of undergraduate BMB research students mentored in the past five years:

Number of BMB related grants in the past five years:

Number of presentations in the past five years; specify parenthetically how many of these presentations included student coauthors:

Number of publications in the past five years; specify parenthetically how many of these publications included student coauthors:

5.3 Provide biosketches or curricula vitae for all faculty members listed in the table above (section 5.2).

Individual bios may be in any format, but ensure that each contains the following information at a minimum:

* Education
* Professional appointments
* Publications within the past five years. Indicate undergraduate student authors by underline or asterisk.
* Grants and other awards over the past five years
* Other information related to BMB activities/teaching/mentoring. Examples include teaching awards, talks, membership in professional organizations and committees and placement of advisees in graduate/professional schools.

Faculty member 1: [File Upload]

Faculty member 2: [File Upload]

Faculty member 3: [File Upload]

Faculty member 4: [File Upload]

Faculty member 5: [File Upload]

Faculty member 6: [File Upload]

Faculty member 7: [File Upload]

Faculty member 8: [File Upload]

Faculty member 9: [File Upload]

Faculty member 10: [File Upload]

5.4 Describe professional-development programs (including sabbaticals) and opportunities in research and pedagogy for BMB faculty members. Indicate when institutional funds are available for these programs.

**SECTION 6 – CURRICULUM**

6.1 How is your institution’s school year divided?

Select one option

⭘ quarter

⭘ semester

⭘ other

If other, explain:

6.2 Provide a list of required courses for students in the BMB program. Include all science and math courses required for the BMB degree (e.g., physics, math, chemistry, biology). Introductory courses such as chemistry, physics or calculus should be included as required courses even if students have a choice of levels or sections, as long as essentially the same material is covered. If independent research is required for graduation, indicate this in the table below.

List courses by department first, then lowest numbered to highest numbered. (maximum of 30 courses)

Click “Add Course” and complete the following for all required courses:

Course number and course title:

Provide a brief course description for each course in the curriculum. Catalog descriptions are sufficient:

Number of hours of laboratory experience (if applicable):

Credits:

6.3 Does the BMB curriculum include “selectives” (i.e., “restricted electives,” in which students are required to take one or more courses chosen from a narrow list of options)?

Select one option

⭘ Yes – If yes, complete the following table

⭘ No - If no, skip to 6.4

Provide the following information about the courses included as “selectives” in the BMB major. (maximum of 10 **groups** of selectives)

Click “Add Group of Selectives” and complete the following for all groups students are required to choose from:

Give a name to this group of selectives:

Provide example courses (2-5 maximum) in this group:

Provide descriptions of the example courses listed above:

What is the commonality between the courses in this grouping?

Do any of the courses in this group include lab hours? If yes, please describe:

6.4 Course alignment

6.4.a Map required courses to ASBMB core concepts using the [Major Coursework Template](https://www.asbmb.org/getmedia/66446188-31b2-4bb3-8664-04acbcfb22bb/2024-major-coursework-template.pdf). Boxes should be checked as “covered” only if there is substantial time spent on the topic or skill (e.g., a line in the syllabus or coverage in one or more course hours). List courses first by department and then lowest numbered to highest numbered. Do not include electives in this template.

[File Upload]

6.4.b Describe how the program’s curriculum addresses each of the ASBMB four foundational concepts and two underlying concepts of biochemistry and molecular biology (up to 250 words each). Ensure your description demonstrates how the concepts are integrated across the curriculum. Within the context of a specific course or, ideally, multiple courses, give examples of systems or activities that are used to demonstrate these concepts. If the required coursework in your program does not cover all the topics within a given concept area, explain how selectives provide coverage of these topics.

6.4.b1 Core Concept 1: Energy is required by and transformed in biological systems (250 words maximum):

6.4.b2 Core Concept 2: Macromolecular structure determines function and regulation (250 words maximum):

6.4.b3 Core Concept 3: Information storage and flow are dynamic and interactive (250 words maximum):

6.4.b4 Core Concept 4: Discovery requires objective measurement, quantitative analysis and clear communication (250 words maximum):

6.4.b5 Underlying Concept: Evolution (250 words maximum):

6.4.b6 Underlying Concept: Homeostasis (250 words maximum):

6.5 The minimum required STEM experiential laboratory contact time is 400 hours.

Provide the total number of all required laboratory experiential learning contact hours for the BMB major. This number should correlate with the laboratory hours itemized in 6.2 and 6.3. Include all required laboratory experiences, including physics or other laboratory courses in or out of the major. Also include hours spent in any required independent research experiences. For example, if students are required to conduct 50 hours of research as part of the degree requirements, then include those hours in your description. If a laboratory meets for three hours, it is counted as a three-hour laboratory experience independent of the credits students earn for the course.

If the curriculum includes required elective courses (i.e., selectives or restricted electives) that require laboratory hours, indicate the minimum and maximum laboratory hours a student can experience in the degree, depending on the choice of electives.

6.6 Describe active learning and/or inquiry-based components used in lecture or laboratory courses in your curriculum. (250 words maximum)

For example, please list any course-based undergraduate research experiences [CUREs], problem-based learning, process oriented guided inquiry learning [POGIL], flipped classroom or other approaches of student engagement).

6.7 Describe the undergraduate research opportunities, co-op and/or internship programs available to BMB majors and/or mechanisms for assisting students in obtaining such opportunities. Include information for your university and off-campus opportunities. Include the number or percentage of BMB students who participate in each activity. (250 words maximum)

6.8 Describe how the program promotes and assesses both written and oral communication skills. (250 words maximum)

6.9 Describe the curricular activities for the development and assessment of teamwork skills in both laboratory and classroom environments. (250 words maximum)

6.10 Describe how the program incorporates the teaching of responsible conduct of research/professional code of conduct (ethics). Please include whether/how topics such as data manipulation, conflicts of interest, and a professional code of conduct are covered. Please also provide a description of plagiarism/honor code policies. (250 words maximum)

6.11 Describe the BMB-related academic and career-advising resources and programs available within the department(s) and institution. (250 words maximum)

6.12 Assessment: Address each of the following questions regarding assessment of your program.

6.12.a Describe the internal assessment methods used to evaluate student performance in the degree program. (250 words maximum)

6.12.b Describe the mechanisms and frequency of program review. (250 words maximum)

6.12.c Describe the process by which assessment data and review outcomes are used to make revisions to the curriculum and/or program. (250 words maximum)

6.12.d If you use the ASBMB exam to assess student performance and/or program success, describe how it is used. (250 words maximum)

6.13 What is your program's average time to graduation? What aspects of the program (e.g., frequency of course offerings, course capacity, course progression, etc.) might limit the ability of students to complete their degree in a timely manner? If necessary, what measures are you considering to help students graduate in a timely manner?