

Name *

Is this a renewal application? *

Select one option

- Yes
- No

a. Was your last accreditation provisional or full?

Select one option

- Provisional
- Full

b. . 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.

* c. 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.

Programs must address all issues raised in the previous accreditation decision letter. Please contact [ASBMB](#) if you need a copy of this letter.

Page: SECTION 1 – GENERAL INFORMATION

1.1 Name of institution: *

1.2 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:

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

1.4 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.)

1.5 Program coordinator/primary contact person: *

Name:

* Title:

* Email:

* Phone:

* Street Address:

Line 2:

City:

Country:

State:

Zip:

1.6 Size of institution: *

Select one option

- <2,000 students
- 2,000-5,000
- 5,000-10,000
- 10,000-20,000
- >20,000

1.7 Type of institution: *

a. Control

Select one option

- Public
- Private

* 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.)

1.8 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.

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?

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

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Page: 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. *

Lab Courses

2.2 To help us assess the equipment available to students in the required biochemistry and/or molecular biology focused lab courses listed above, complete the following table of 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.

Instruments/Technologies

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. *

Page: 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 <http://www.cdc.gov/niosh/docs/2007-107/pdfs/2007-107.pdf> and <https://www.cdc.gov/labs/BMBL.html>.

3.1 Describe university and/or department-based resources for safety training and implementation and how safety programs are conducted and assessed for each of the following groups: *

a. Students in lab courses (description of safety training activities):

* Is this training assessed?

Select one option

- Yes
- No

* Brief description of how training is assessed:

* b. Students doing independent research (description of safety training activities):

* Is this training assessed?

Select one option

- Yes
- No

* Brief description of how training is assessed:

* c. Faculty and staff initial training (description of safety training activities):

* Is this training assessed?

Select one option

- Yes
- No

* Brief description of how training is assessed:

* d. Faculty and staff refresher training (description of refresher training activities and 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:

* e. If deficient in any of the above categories, describe plans for corrective action.

Page: SECTION 4 – DIVERSITY AND INCLUSION

The ASBMB expects the institution to articulate policies intended to foster a culture that values diversity in all dimensions and provide mechanisms for promoting a safe, supportive and welcoming learning environment for all students and faculty members.

4.1 Provide data on the diversity of students in the institution. Describe any specific institutional resources or programs to increase diversity of students.

*

4.2 Provide data on the diversity of faculty members within the institution. Describe any specific resources or programs that support and encourage faculty member diversity.

*

4.3 Provide data on the diversity of faculty members within the BMB program. Describe efforts to support and encourage diversity among faculty members within the program.

*

4.4 Describe any specific institutional or BMB program activities that support underrepresented or first-generation college students or increase diversity among students in the program. Include your definition of success for these programs and how success is assessed.

*

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

Select one option

- Yes
- No

4.6. Helping to build a diverse, inclusive and respectful environment is important to ASBMB, and to the scientific enterprise. Has your institution developed and shared clear policies on Title IX compliance, sexual harassment, and standards of behavior? Please describe some of your institution's efforts aimed at improving the environment for all students, faculty, and staff. *

Page: SECTION 5 – FACULTY MEMBERS

5.1 How many 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. *

5.2 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. *

Faculty Members

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.

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. *

Page: 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 as a separate file the progression of courses required for the BMB major organized by year or semester in which the students take them. Provide the curricular requirements in any format (e.g., list, table, figure, or text), clearly distinguishing elective courses and/or selective options (options chosen from a select list). Include course names and numbers that allow correlation with listings in the tables in questions 6.3 and 6.4.a. *

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6.3 Provide a list of courses required for students in the BMB program. Include all science and math courses required for the BMB degree (e.g., physics, math, chemistry, biology). Include electives only if they are required as "selectives" or "restricted electives" (i.e., the curriculum requires that one or more courses be chosen from a list of options). If independent research is required for graduation, indicate this in the table below. *

- List all required courses first, lowest numbered to highest numbered.
- Following required courses, list electives (if applicable), first grouped within the cluster from which students may select one (or more), then lowest to highest numbered.

Courses

6.4 Course alignment *

6.4.a Map courses to ASBMB core concepts using the **Major Coursework Template** and include as supplementary material. 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 all required courses first**, lowest numbered to highest numbered. Following required courses, list electives (if applicable), first grouped within the cluster from which students may select one (or more), then lowest to highest numbered.

* 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.

6.4.b1 Core Concept 1: Energy is required by and transformed in biological systems:

* 6.4.b2 Core Concept 2: Macromolecular structure determines function and regulation:

* 6.4.b3 Core Concept 3: Information storage and flow are dynamic and interactive:

* 6.4.b4 Core Concept 4: Discovery requires objective measurement, quantitative analysis and clear communication:

* 6.4.b5 Underlying Concept: Evolution:

* 6.4.b6 Underlying Concept: Homeostasis:

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 Table 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. *

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. *

6.8 Describe how the program promotes and assesses both written and oral communication skills. *

6.9 Describe the curricular activities for the development and assessment of teamwork skills in both laboratory and classroom environments. *

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. *

6.11 Describe the BMB-related academic and career-advising resources and programs available within the department(s) and/or institution. *

EXAMPLE FORM DO NOT SUBMIT

6.12 Address each of the following points regarding assessment. *

- Describe the internal assessment methods used to evaluate student performance in the degree program.
 - Describe the mechanisms and frequency of program review.
 - Describe the process by which assessment data and review outcomes are used to make revisions to the curriculum and/or program.
 - If you use the ASBMB certification exam to assess student performance and/or program success, describe how it is used.
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6.13 Based on frequency of course offerings, course caps, and other factors, what is the typical time to completion for students in your program? Are students able to complete their degree in four years? *
