ASBMB

EVALUATION RUBRIC FOR ASBMB ACCREDITATION: OVERVIEW

Renewal Categories		
Critical	**Desirable**	**Feedback Only**
Addressing prior concerns		

Infrastructure Categories		
Critical	**Desirable**	**Feedback Only**
Laboratory facilities	Evidence of institutional support for faculty and students	Degrees awarded
Safety programs	Faculty – postdoctoral training	Laboratory support staff
Faculty – number & expertise	Professional-development activities for faculty	Title IX compliance and description
Faculty – scholarship & research		

Curriculum Categories		
Critical	**Desirable**	**Feedback Only**
Experiential learning – quantity & breadth	Inquiry components	
Core curriculum: Energy	Data collected on internship/research participation	
Core curriculum: Structure & Function	Communication skills	
Core curriculum: Information Storage	Teamwork skills	
Core curriculum: Quantitative	Assessment of student performance	
Underlying concept: Evolution	Mechanisms for program review	
Underlying concept: Homeostasis	Course timeliness	
Internship and research opportunities		
Ethical conduct of research		
Career and academic advising		

EVALUATION DECISIONS

For full applications:
Out of the 15 critical categories:
>   1 "unsatisfactory" = reject
>   3 or more "improvement needed" = provisional
>   7 or more "improvement needed" = reject

Out of the 10 desirable categories:
>   5 or more "unsatisfactory" = provisional
>   5 or more "improvement needed" in total across both desirable AND critical categories = provisional

For streamlined renewal applications
Out of the 15 critical categories:
>   1 "unsatisfactory" = deferred decision; program must submit a full application in the following application cycle
>   3 or more "needs improvement" = deferred decision; program must submit a full application in the following application cycle

Out of the 10 desirable categories:
>   3 or more "unsatisfactory" = deferred decision; program must submit a full application in the following application cycle
>   5 or more "needs improvement" in total across both desirable AND critical categories = deferred decision; program must submit a full application in the following application cycle

For all applications:
Feedback-only categories do not have any impact on the accreditation decision and are present only to help provide useful feedback to applicants. Scoring "strong" in any category does not counterbalance any deficiencies. The "strong" score is only to help provide positive feedback.

Although programs will not receive individual scores across all criteria in their decision letters, categories that are scored "unsatisfactory" or "improvement needed" are noted as areas of weakness or concern in the decision letter.

ASBMB

DETAILED EVALUATION RUBRIC

Category	Strong	Appropriate	Improvement Needed	Unsatisfactory
RENEWALS				
Addressing prior concerns		All prior weaknesses and/or concerns have been fully remediated and sufficiently described in both the cover page of the application as well as any corresponding section of the application.	Describes how most previously noted weaknesses and/or concerns have been addressed in the program. However, not all weaknesses have been fully remediated, and a plan of action to address remaining issues has not been provided. OR All prior weaknesses and/or concerns have been addressed by the program, but the application does not clearly articulate these remedies in both the cover page and in the appropriate section of the application.	Fails to acknowledge or describe how previously noted weaknesses and/or concerns have been addressed since the last accreditation decision.

ASBMB

INFRASTRUCTURE				
Degrees awarded		[Program awards 3 or more degrees per year] OR [(Accommodations made to engage BMB majors with other STEM students to provide communication and team-building experiences) AND (Program articulates commitment to continuing program or outlines realistic plans for increasing the number of students enrolled.)]	Program awards fewer than 3 degrees per year AND Curriculum lacks provisions for engaging BMB majors with other STEM students, especially during years 3 & 4 OR Small/declining student numbers adversely affect course availability and faculty commitment to program.	
Laboratory facilities	Students work in pairs (with the exception of exercises intentionally designed as team-building experiences). Equipment exceeds "Appropriate"; additional high-end equipment is integrated into laboratory courses.	Teams of 2 to 3 students. Sufficient laboratory equipment is available to allow hands-on experiences. Six of 9 listed items, or others appropriate to lab exercises, available and per team. OR Previous accreditation application met threshold for appropriate and have not undergone infrastructure changes that significantly reduce equipment or increase team size.	Less than "Appropriate" category. Six of 9 listed items, or others appropriate to lab exercises, available, but insufficient quantities. OR Infrastructure changes since previous accreditation application significantly reduce equipment availability or increase team sizes.	Important items are missing. Fewer than 6 listed items available, and no other equivalent.

Laboratory support staff		Program has access to and utilizes support staff (loosely defined to include lab coordinators, student employees, stockroom staff, and/or TAs) for preparation of laboratory materials, administration of laboratories and/or laboratory safety.	Program does not utilize any support staff (loosely defined to include lab coordinators, student employees, stockroom staff, and/or TAs) in the preparation, administration, or safety of laboratories. OR Changes to the program since the previous accreditation decision limits or eliminates the use of laboratory support staff.	
Safety programs	All 4 training requirements (formal training for: students in lab courses; students doing independent research; faculty and staff initial; faculty and staff refresher) and assessments are in place for all four types of training. Faculty and staff refresher training occurs at least every 3 years. OR All 4 training requirements with appropriate assessment previously in place and not changed since previous accreditation decision.	Formal safety training for all groups is provided, but not all assessed. However, a corrective plan to implement assessment where missing has been provided. OR If training and assessment is in place for all four categories, faculty and staff refresher training does not occur as frequently as every 3 years but does occur at least every 7 years. OR Program previously met threshold for "appropriate" and no changes made to safety programs since the previous accreditation decision.	Some component(s) of safety training, including faculty and staff refresher training at least every 7 years, and assessment of such training are missing. Corrective plan does not adequately address how training and assessment will be institute for all groups. OR Changes to safety programs since previous accreditation decision reduce safety training or assessment of training for any of the groups noted. OR Program's safety training previously flagged by accreditation reviewers as needing improvement but no corrective steps have been taken since previous decision.	No safety training is available. None of the safety requirements are met. No corrective plan provided.

Evidence of institutional support for faculty and students	Institution-wide programming in place and utilized by BMB program to support students and faculty. Meets "Appropriate" category requirements, and program outcomes are documented.	Application cites institutional support programs for both faculty and students.	Pro forma commitment to creating a safe, supportive, and welcoming environment for all students and faculty.	
Title IX compliance		Compliant with Title IX requirements.		Not compliant with Title IX.
Faculty: number and expertise	Three or more BMB faculty. Faculty expertise is representative of both biology and chemistry. Biology and chemistry expertise is relevant to BMB. Large number of faculty members relative to program size.	Three or more BMB faculty. Faculty expertise is representative of both biology and chemistry. Biology and chemistry expertise is relevant to BMB. Ratio of students to full-time faculty in the program is 25:1 or less.	Three or more BMB faculty members, but range of expertise lacks balance across chemistry and biology. OR Ratio of students to full-time faculty in the program is greater than 25:1.	Fewer than three BMB faculty members. OR Expertise is so unbalanced that loss of a single faculty member would jeopardize the program.
Faculty: postdoctoral training	Greater than 60% of listed faculty members have postdoctoral training in BMB disciplines.	30-60% of listed faculty members have postdoctoral training.	Less than 30% of faculty members have postdoctoral training.	No faculty members have postdoctoral training.

Faculty: scholarship & research	Most (2/3 or more) listed faculty members have recent (past 5 years) BMB-related publications in refereed journals and/or current grants. Strong evidence of undergraduate student involvement in research. OR Since previous accreditation decision, additional faculty brought into program that have strong track records of research activity and engagement of undergraduate student involvement in research.	Multiple (1/3 or more) listed faculty members have recent (past 5 years) BMB-related publications, grants, invited talks, and/or poster presentations. Some evidence of undergraduate student involvement in research.	Few faculty have recent publications, recent grants, or other evidence of scholarly activity. Little or no evidence of student involvement in research. OR Faculty changes since previous accreditation decision significantly reduce research activity within the program and undergraduate student involvement in research.	No evidence of scholarship activity in any form.
Professional development activities for faculty (includes research, scholarship, and pedagogical development)	Institution provides formal mechanisms and generous funds for faculty development around research/scholarship/ pedagogy.	Formal mechanisms in place for faculty to engage in sabbaticals or other professional-development activities. Some funding available.	Mechanisms in place but funds are lacking.	No funds and mechanisms, release time or programs are available.

CURRICULUM				
Experiential learning: quantity & breadth	400 hours across STEM, integrated across courses.	400 hours minimum across STEM in required courses for every major in program (either hands-on or *in silico,* as appropriate). Must include a laboratory in biochemistry and molecular biology.	Meets 400 hours minimum but not balanced across STEM.	Below 400 hours.
Core curriculum: Energy	Covered at introductory and advanced levels and is integrated across BMB courses.	Covered at introductory and advanced levels.	Covered at an introductory level only.	Is missing.
Core curriculum: Structure & Function	Covered at introductory and advanced levels and is integrated across BMB courses.	Covered at introductory and advanced levels.	Covered at an introductory level only.	Is missing.
Core curriculum: Information Storage	Covered at introductory and advanced levels and is integrated across BMB courses.	Covered at introductory and advanced levels.	Covered at an introductory level only.	Is missing.
Core curriculum: Quantitative	Covered at introductory and advanced levels and is integrated across BMB courses.	Covered at introductory and advanced levels.	Covered at an introductory level only.	Is missing.
Underlying concept: Evolution	Covered at introductory and advanced levels and are integrated across BMB courses.	Covered at introductory and advanced levels.	Covered at an introductory level only.	Is missing.
Underlying concept: Homeostasis	Covered at introductory and advanced levels and are integrated across BMB courses.	Covered at introductory and advanced levels.	Covered at an introductory level only.	Is missing.

Inquiry components	Extensive opportunities for open-ended projects or discovery (active learning) in both lab and classroom.	Opportunities for open-ended projects or discovery (active learning). OR Previous accreditation application met appropriate threshold for inquiry components, and changes made to the program since the prior decision have not significantly reduced these opportunities for students.	Few or no opportunities for open-ended projects or discovery (active learning). OR Changes to the program since the previous accreditation decision significantly reduce active learning opportunities for students.	Program previously cited for limited inquiry components and has not remedied this issue since previous accreditation decision.
Internship / research opportunities	Research/internship experience is required for every student in the program, and sufficient opportunities exist for such experiences in BMB.	Mechanisms are in place to ensure sufficient opportunities for every student to have research/internship experience of some kind, with opportunities in BMB available. OR Previous accreditation application met appropriate threshold for research/internship opportunities and no changes made that would reduce these opportunities for students.	Some opportunities for research/internship, but mechanisms are not in place to enable every student required or interested to take advantage. OR Program has reduced opportunities for research/internship experiences for students since the previous accreditation decision.	Few or no opportunities.

Data collected on internship / research participation		Data provided on % or number of students undertaking research / internship as BMB majors OR Data provided on the number of BMB students supervised by participating BMB faculty. OR Previous accreditation application provided appropriate data on research/internship participation and no changes made to internship/research opportunities that would significantly decrease student participation in such opportunities.	Few or no opportunities described OR no data provided. OR Changes made to the program since the previous accreditation application significantly reduce participation in research/internship opportunities.	Program previously cited for lack of data and has not taken steps to collect or report such data in the renewal.
Communications skills	Curriculum features several assignments that assess writing and speaking, scaffolded throughout the curriculum. Could include participation in a capstone.	Curriculum has assignments that assess both writing and speaking. OR No changes made to the program since the previous accreditation decision would severely limit assignments that assess both writing and speaking.	Curriculum has assignments that assess writing or speaking but not both. OR Changes made to the program since the previous accreditation decision that severely limit assessment of either writing or speaking.	Curriculum does not require assignments that assess either writing or speaking.

Teamwork skill opportunities	Curriculum has several assignments that address and assess teamwork, scaffolded throughout the curriculum. Could include participation in a capstone event.	Curriculum has one or more required assignments that address and assess teamwork. OR Previous accreditation application provided examples of assignments to address and assess teamwork and no changes made to the program that would diminish these opportunities.	Curriculum lacks required assignments that address and assess teamwork.	Program previously cited for lack of assignments to address and assess teamwork and has not introduced teamwork opportunities into the program since the previous accreditation decision.
Ethical conduct of research	Professional code of conduct is addressed coursework and research program, including data manipulation, conflicts of interest and plagiarism.	Professional code of conduct is addressed in either coursework or research program, at a minimum plagiarism. OR Previous accreditation application appropriately addresses ethical conduct of research and no changes made to the program that would reduce student exposure to training in this area.	Professional code of conduct is addressed solely through student agreement with an honor code.	Some or no attention paid to code of conduct. OR Program previously cited for limited training in ethical conduct of research and no corrective actions have been taken since the prior accreditation decision.

Career and academic advising	Provides evidence of academic advising, and BMB program provides career-advising activities in addition to institutional resources.	Provides evidence that both career and academic advising are available. Career advising is limited to institutional resources. OR Program previously met threshold for appropriate career and academic advising and no changes have been made to reduce opportunities for students to receive both career and academic advising.	Provides evidence of academic advising or career advising but fails to include evidence of both types of advising available to students.	Insufficient evidence that career and academic advising is available. OR Program previously cited for limited evidence of both career and academic advising available for students and has not addressed this limitation since the previous accreditation decision.
Assessment of student performance	Criteria for "Appropriate" are met, and evidence provided that learning outcomes are used to modify program.	Some attention to student learning outcomes outside of course grades.	Course performance is the only measure of student performance.	Program previously cited for limited assessment of student performance and no actions taken to incorporate additional mechanisms of assessment.
Mechanisms for program review	Criteria for "Appropriate" are met, and evidence provided that review outcomes are used to modify program. OR Changes to program since previous accreditation decision are a result of regular review.	Active mechanisms for regular review of programs ($\geq$ every 10 years) are in place at the institution. OR Previous application describes regular review of program and no changes have been made since the previous accreditation decision that would reduce program review.	Limited or no regular review of programs is in place at the institution.	Program previously cited for limited program review but has not taken corrective action to increase frequency of review.

Course timeliness and time to completion		Based on program structure, all students can complete degree requirements on time. OR No changes to program since previous accreditation decision that would negatively affect students' ability to complete degree requirements on time.	Due to program structure, some students have difficulty completing degree requirements on time but program is considering or intends to implement measures to reduce programmatic barriers to timely graduation. OR Program previously indicated some students have difficulty in completing degree requirements on time and program has not implemented any measures to reduce barriers since the previous application.	Some students have difficulty completing degree requirements on time due to programmatic barriers. Program is not considering additional measures to reduce these barriers.