

HENDRIX COLLEGE
BCMB PROGRAM RESEARCH GUIDELINES
(Approved in September 2009 – updated September 2019)

All students working towards a Biochemistry and Molecular Biology (BCMB) major are required to participate in a comprehensive laboratory research experience. This document contains information describing the:

1. Types of research experiences that can satisfy the BCMB research requirement;
 2. Application process for ensuring that a specific research experience will satisfy the BCMB research requirement;
 3. Components required for successful completion of a BCMB research experience;
 4. Standard options available for students for documenting their research experience.
 5. "Unusual circumstances" routes for satisfying the BCMB research requirements.
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The BCMB research requirement can be satisfied in one of the following ways:

On-campus research: Scientific projects supervised by a Hendrix College faculty member, carried out on the Hendrix campus, and approved by the BCMB faculty can take place either during a summer or an academic year as follows:

- *Summer research:* students are expected to work on a full-time basis (40 hrs/week) for a minimum of eight weeks during the summer months on their projects;
- *Academic year research:* students are expected to work at least two full academic year semesters on their projects. During this time, students can generally anticipate working in the laboratory for ~10hrs/week.

Off-campus research: Many research projects carried out during a summer at a research institution other than Hendrix College can qualify for BCMB credit. Students are expected to work on a full-time basis (40 hrs/week) for a minimum of eight weeks during the summer months on their projects. Students choosing this option are required to obtain approval by the BCMB faculty (see "Off-campus research" application instructions below) prior to engaging in the research to ensure that the experience will qualify for BCMB research credit. In addition, these students are required to identify a Hendrix Research mentor who will be able to assist them as they complete their research requirements after the research project is concluded.

Before starting a research project intended to satisfy the BCMB research requirement, students are required to submit a complete application form to the chair of the BCMB Program. The application will then be reviewed by members of the BCMB faculty in order to establish if the projected experience is appropriate for satisfying the BCMB research requirement. The following documents should be included in the application:

For on-campus research projects: Students are required to submit the following document (both as a hard-copy and an electronic copy) to the BCMB Program chair

All students involved in an approved BCMB research experience will need to officially document the completion of this requirement. Most students will do so by signing up for either BCMB X99 (which carries course credit) or BCMB 498 (a non-credit course). Which one is chosen will depend on specific circumstances. Below is a guide to help determine which of the two choices is appropriate for each specific case:

Students doing on-campus summer research can choose one of the two options below:

- If a student wants to continue the research as part of a course, he/she can sign up for BCMB X99 in one of the two semesters following the summer in which the research was done. Such students would sign-up for BCMB X99 as one of their four courses they are taking during either the Fall or Spring semester. This course will therefore count towards the 32 required courses for graduation but will not count as an elective for the BCMB major requirement. Note: if you choose this option you will be expected to work in the lab at least 10 hours a week during the semester that you are signed up for BCMB X99. Your Hendrix mentor will assign a letter grade for this course at the end of the semester for which you are signed up based on:
 - Quality of work done by the student in the lab
 - Quality of the lab notebook
 - Quality of a research presentation on the research the student did - this can be from the BCMB senior seminar or a presentation (poster or oral) at a scientific meeting.

- If a student does not want to continue the research as part of a course, he/she can sign up for BCMB 498 as a non-credit course during the Spring semester of their senior year. Such students would add BCMB 498 as a fifth course during the Spring semester of the senior year (regardless of when the research has been done), but it will not count as credit towards graduation. Your Hendrix mentor will assign a CR (or no CR) grade for this course at the end of the semester based on:
 - Quality of work done by the student in the lab
 - Quality of the lab notebook
 - Quality of a research presentation on the research the student did - this can be from the BCMB senior seminar or a presentation (poster or oral) at a scientific meeting.

Students doing on-campus research during the academic year:

- Students can sign up for BCMB X99 as one of the four courses they are taking during one of the two semesters in which they are doing the research. This course will therefore count towards the 32 required courses for graduation but will not count as an elective for the BCMB major. As indicated earlier, students are expected to work in the lab at least 10hrs/week during *both* semesters. Your Hendrix mentor will assign a letter grade for this course at the end of the semester for which you are signed up based on:

Quality of work done by the student in the lab
Quality of the lab notebook
Quality of a research presentation on the research the student did -
this can be from the BCMB senior seminar or a presentation
(poster or oral) at a scientific meeting.

- Students can sign-up for BCMB 498 as a non-credit course during the Spring semester of their senior year (regardless of when the research is carried out). Your Hendrix mentor will assign a CR (or no CR) grade for this course at the end of the semester based on:

Quality of work done by the student in the lab (based on the feedback from the PI with whom the student did the research)
Quality of the lab notebook
Quality of a research presentation on the research the student did -
this will in most cases be from the BCMB senior seminar.

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Students doing off-campus summer research:

- Students can sign-up for BCMB 498 as a non-credit course during the Spring semester of their senior year (regardless of when the research is carried out). As indicated earlier, students are expected to work in the lab at least 10hrs/week during *both* semesters. Your Hendrix mentor will assign a CR (or no CR) grade for this course at the end of the semester based on:

Quality of work done by the student in the lab
Quality of the lab notebook
Quality of a research presentation on the research the student did -
this can be from the BCMB senior seminar or a presentation
(poster or oral) at a scientific meeting.

BCMB X99, BCMB 498 normal registration process:

- To sign up for BCMB X99 or BCMB 498, students should complete an "Independent St

Application Form for Satisfying the BCMB Research Requirement through Off-Campus Research

(Please submit this form and the 2-page document both as a hard copy and in electronic format to the BCMB Program Chair)

Name:

Date Submitted:

Academic Standing at time of proposed research:

Hendrix College Research Mentor:

Proposed Dates of Project:

Site of Project:

Off-Campus Mentor Information:

Name:

Title:

Mailing Address

Phone & email

Have you received 792 re