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# UND SMHS Strategic Plan Individual Unit Report for 2021

## GOAL 1 for **BIOMEDICAL SCIENCES**

### **LEARNING**

**One UND Strategic Plan Goal 1: *Provide a strong undergraduate liberal arts foundation***

**UND SMHS Strategic Plan Goal 1: *SMHS Units that offer educational programs will expand their curricula to include learning outcomes that align with UND's Essential Studies goals.***

- *Critical Inquiry and Analysis*
- *Quantitative Reasoning*
- *Written Communication*
- *Oral Communication*
- *Information Literacy*
- *Intercultural Knowledge and Skills*

### **1. Describe if/how your unit has addressed this goal.**

**BIMD518.** This is an advanced graduate grant proposal writing and oral presentation course. The objectives of this course are to challenge students: (1) to critically evaluate their own research in an effort to clearly define the significance and innovation of their research projects, (2) to begin to develop novel ideas based on their research efforts that have the potential to significantly impact their field of study, and (3) to prepare students to present these ideas orally and in writing in a manner that is both logical and convincing.

**BIMD 220/221 + Labs.** These new Human Anatomy and Physiology courses (replacing ANAT 204 & PPT 301) are certified as Diversity of Human Experience (D) breadth of knowledge and Math, Science, & Technology (MST) special emphasis essential studies courses. They address the goals of intercultural knowledge and skills and quantitative reasoning. These courses are the ONLY courses across UND campus that cover both MST & D.

**BIMID 494 Intersession.** In response to a call for novel intersession courses for the winter holiday break over 2020-2021 our department developed a special topics course on the life of Henrietta Lacks and her role in biomedicine. This course was certified through a special process as a Diversity of Human Experience course.

**BIMD 301 and BIMD 401.** These serve as required or elective courses for multiple undergraduate majors housed in the SMHS, Arts and Sciences, Engineering, and Nursing. The courses are rigorous and provide excellent pre-health professional preparation in biochemistry and molecular biology. The courses emphasize critical inquiry and analysis, quantitative reasoning, and written and oral communication. Less so in the areas of information literacy and intercultural knowledge. These courses, however, are not classified as Essential Studies courses.

The department is developing a plan for a biomedical sciences 4+1 major that is aligned with the SMHS strategic plan including Goal 1.

## 2. Describe how your efforts are measured/assessed.

**BIMD518.** Students demonstrate proficiency as evaluated by 4 scored writing assignments (4 x 125 pts) and 2 in-class student practice defense presentations (2 x 100 pts). Thirty percent of the grade (1 x 300 pts) is determined based on a priority score assigned by at least three Biomedical Sciences faculty members invited to evaluate the final written proposal and to participate in the students' oral defense of the proposal. Grades are earned based on the following scale (1000-933 pts (A), 932-867 (B), 866 and below (C)).

**BIMD 220/221 + Labs.** These courses were approved by the essential studies committee. They are continually assessed by SELFI surveys. The instructor of record is pursuing grant funding to do additional assessment of their unique components.

**BIMID 494 Intersession.** This course was approved by the special intersession committee and was assessed by the SELFI survey.

**BIMD 301 and BIMD 401.** These are also assessed by SELFI survey.

All undergraduate courses and graduate courses have the opportunity to be evaluated annually by the departmental undergraduate and graduate education committees, respectively.

## 3. How were the data analyzed and what were the outcomes?

**BIMD 220/221 + Labs.** These courses just launched in fall 2020 so there has been limited time to analyze the data, but the instructor did receive a course development award for the SPEA versions and was nominated for the undergraduate teaching excellence award for Founder's Day.

**BIMID 494 Intersession.** This course was offered once so far, wrapping up in January 2021. There has been limited time to analyze the SELFI data.

**BIMD 301 and BIMD 401.** These are ongoing with limited time to analyze the SELFI data.

The annual course evaluations includes review of course syllabus and course objectives, grade outcomes, DFW rates, SELFI evaluations, reflective statements and goals for next year by the instructor, and peer feedback.

## 4. Describe how your unit will implement any further changes and what barriers may exist.

Course evaluations inform future changes with the aim of striving for best practices. One significant barrier is the inability to schedule SMHS classrooms on a schedule that is observed by the main campus.

**PROVIDE A RATING OF YOUR PROGRESS ON THIS GOAL:**  **X** On Track;  Delayed;  Behind  
(additional space for text is provided on page 2 if needed)

## **Additional Information on Goal 1 (optional):**

### **BIMD518 Course Goals:**

1. To provide students with a structured, interactive learning environment in which they can begin to develop and refine ideas into testable hypothesis.
2. To increase student immersion in their own research projects with an emphasis on communicating ideas, reading the scientific literature, formulating hypotheses, and designing experiments.
3. To prepare Students in the Biomedical Sciences Graduate Program for the written component of their comprehensive exams.
4. To help students prepare a complete draft of a proposal that may be suitable for submission to both public and/or private extramural granting agencies.

### **BIMD518 Course Objectives:**

1. Students will demonstrate depth and integration of knowledge in specific subject areas of their choice to support their research and to allow them to make meaningful contributions that advance the discipline.
2. Students will demonstrate the ability to develop clearly stated meaningful hypotheses and research questions that lead to scientific investigation in areas relevant to the biomedical sciences.
3. Students will demonstrate the ability to select, design, and implement experimental approaches to rigorously test their hypotheses.
4. Students will demonstrate the ability to present their research clearly, concisely, and accurately in both oral and written form to experts in the field and to a general scientific community.
5. Students will demonstrate the ability to effectively communicate their scholarly work to a lay audience in a way that illustrates the accomplishments and importance of scientific research.