**BMD300 level: Health Disparities in Biomedical Sciences:** This course will introduce students to the multi-layered issues of health disparities and equity in healthcare and biomedical science.  Students will be led through a discussion on the health burdens that arise when systemic and institutional challenges socially marginalize and economically disenfranchise individuals based on, but not limited to, race, class, gender, ethnicity, ability, language, culture and sexual orientation.  Through the lens of biomedical sciences, students will consider approaches to eliminating barriers that prevent access to care for medically underserved communities.  (NEW course; there will be a pre-req of BMD201: Bioethics in BMD)

*Learning outcomes:*

Upon completion of this course and completion of all required readings and assignments, students will be able to:

1. Identify terms, theories and principles related to health disparities and health equity
2. Evaluate and apply principles and theories of bioethical reasoning surrounding health care inequities to modern healthcare scenarios.
3. Build skills in considering and proposing strategies for eliminating barriers to quality healthcare access
4. Describe socio-historical foundations of health disparities

*Potential Assignments*:

Ethics Case Study Analysis (LO2, LO3 and LO4)

Topic Quizzes (LO1 and LO4)

Journal Presentation (LO1 and LO2)

Team Activity (LO2, LO3 and LO4)

**BMD 400 level course: Diversity in Pathophysiology:** Problem-oriented study of general disease processes and the major subdivisions of pathology in diverse populations.  The course will focus on three to five pathophysiologies and students will understand the physiological and social implications regarding these disorders. This course will be taught through **Team Based Learning**. (Modification of our current Pathophysiology course BMD420)

*Learning outcomes:* Upon completion of this course, the student will be able to discuss principles involved in

1. Identify and discuss alterations impacting the some of the following body systems and/or functions:

1. inflammation and tissue repair
2. altered fluid, electrolyte, and acid-base balance
3. altered neuronal transmission
4. altered somatic sensory function
5. altered hormonal and metabolic regulation
6. altered ventilation and diffusion
7. altered perfusion
8. altered reproductive systems
9. altered elimination
10. degenerative changes in aging
11. neoplasms and cancer

2. Discuss how physical changes in a primary body system impact other body systems.

3. Describe the etiology and clinical manifestations of selected diseases.

4. Describe how the normal mechanisms of compensation and feedback can lead to pathophysiological changes.

5. Integrate the role of health disparities in they pathophysiology in selected body systems and/or functions. (i.e. Cancer pathogenesis, Cardiovascular disease, Reproductive pathophysiology—including neonatal development, Aging)

*Potential Assignments:*

1. Individual Assignments
   1. Examination (LO1)
   2. Individual Readiness Assessments (iRATs). (LO1 and LO3)
2. Team Assignments:
   1. Team Readiness Assessments (LO2 and LO3)
   2. Graded Team Activities/Case Studies (LO2, LO4, and LO5)
      1. Cases will focus on both health disparities and the science related to pathologies.
   3. Public Service Announcement—focused on health disparities (LO5)
      1. Teams will also design and produce a public service announcement (PSA) video and pamphlet related to prevention, diagnosis, treatment, and/or recovery from a pathological condition that directly impacts healthcare disparities.

**BMD 490 Directed Readings in BMD focus on the Science of Healthcare Disparities:** This course will be a deep dive in existing texts (both popular and scientific) that highlights the impact of human uniqueness on both science interpretation and/or healthcare delivery. Each semester will utilize both primary literature and popular text to investigate a scientific issue guided by the Instructor’s interest and expertise. Topics for the course will include, but are not limited to: eugenics – is it really history or just evolved with modern medical knowledge?, social determinants of health regarding a specific disease/system/sub-population, Moralism & Economics in healthcare treatments, Ownership of Genetic Information in the Era of “23 and Me”. (editing existing Course)

By its very nature, this course will include readings, presentations and discussions on difficult topics that affect human relations and feelings. Mutual respect and sensitivity are essential, as well as the strong consideration of privacy and tolerance. The classroom should be experienced as a “safe/brave zone”, where participation, conversation and discussion lead to learning and understanding, not to confrontation.

From Existing BMD 490 course description and learning outcomes – that still apply.

*Directed Readings involves pursuit of an independent literature research problem in a sub-discipline of the Biomedical Sciences under the direction of a faculty mentor. This course is meant to provide students with the opportunity to study a topic area covered in an existing BMD course more extensively. Alternatively, this course can also be used to study a related topic area that is not covered within the BMD curriculum*.

*Upon completion of this course, the learner should be able to:*

1. *Develop a journal article presentation on a topic within a sub-discipline of the Biomedical Sciences.*
2. *Apply appropriate methodologies to find, evaluate and analyze current literature in an area of study.*
3. *Disseminate the results and knowledge gained from this directed readings experience.*

Additional Learning outcomes:

1. Student can recognize ethical issues when presented in a complex, multilayered (gray) context AND can recognize cross- relationships among the issues.

List of Potential Assignments (Designate LO associated with—QM standard):

1. **Directed Readings Presentations: LO1, LO2, LO3**

This course is discussion/presentation intensive. This assignment will require an integrative evaluation and summarization of the literature reviewed on the chosen project topic. (Briefly, the presentation should include a Title Page, Background Slides (3-5slides), Experimental Design, Each Figure on its own slide, & Conclusion that indicates **how does it contribute to the discussion within the course TOPIC**). PowerPoints must be submitted to the course instructor for content evaluation. These presentations will be evaluated with the “*Directed Readings Presentation Grading Rubric”*.(Briefly, you will be assessed for oration skills, content understanding, & required components of the presentation)

1. **Annotated Summary of Readings/Presentations throughout the course. LO2 and LO4**

Student will be required to submit an annotated summary of each article read for this directed reading experience (approximately ½ - 1 page per article). Each annotation should summarize the content of the article and highlight the major findings in the article. The annotation should also summarize any strengths and/or weaknesses of the articles. This assignment will be evaluated utilizing the “*Annotated Bibliography* *Grading Rubric*”.(Briefly, each annotation will present the question/hypothesis, experimental design, results, did it answer the question, and **how does it contribute to the discussion within the course TOPIC**).

1. **News Assignment. LO3 and LO4**

Three times during the semester, each student must find a news article that is related to diversity, equity & inclusion and science/health/medicine, preferably related to the course TOPIC but can stretch outside the direct TOPIC area, if needed. Students must write a brief report describing the news item and how it is related to some aspect of diversity, equity or inclusion. The source (or URL) of the news article must be cited in the report to receive credit. These news reports will be graded on a scale of Zero/Check Minus/Check/Check Plus system and you can drop the lowest score. We will be discussing news articles many times in class so you should always come prepared to give a brief, 2 – 3 minute presentation on your news item.

**BMD 495. Practicum in Biomedical Sciences**: Course combines the practical workplace experience gained through an internship or service-learning activity with an instructor guided reflective assessment of the total experience. Students will engage with the community and identify a partner that has a mission to impact health disparities. Pre-approval by instructor is necessary to register for this practicum. (NEW course, Pre-req BMD300 level course)

*Learning outcomes:* Upon completion of this course, the student will be able to discuss principles involved in

1. Possess awareness of purpose of service, including need for reciprocity, understanding of social issues, and ability to see those issues from multiple perspectives.
2. Explore and/or affirm possible career aspirations.
3. Relate, communicate, and work effectively with others.
4. Develop professional skills and abilities and be able to communicate them effectively to potential employers and or graduate and professional schools.
5. Create and implement a project addressing a need in healthcare disparities.

*Potential Assignments*:

1. Internship or Service-Learning Plan that expresses how the experience and project will impact healthcare disparities. (LO5)
2. Conduct an Internship project (LO2, LO3, LO4 and LO5)
3. Mid-term and Final – Reflective Papers (LO1 and LO2)
4. Mid-term and Final Evaluation - Evaluation is key in continued growth and improvement. Preceptors/Community Partners will be asked to confidentially evaluate the students and students will evaluate the company/community partner (LO1, LO3 and LO5)

**BMD115: Understanding the Link Between Social Determinants of Health and Health Disparities:** This course will explore and define social determinants of health, health disparities and expose students to disparities in healthcare in our own state, both in rural and urban environments.  Traditional FYE content will be incorporated throughout the semester assisting students with adjustment to college while reflecting on the implications of healthcare disparities.

*Learning outcomes:* Upon completion of this course, the student will be able to discuss principles involved in

1. Define social determinants of health and health disparities
2. Discuss top causes of death
3. Student’s will develop a deeper understanding of First-Year-Experience content throughout the semester including: Team Based Learning, Academic planning and career exploration, Academic success strategies, Health and wellness, Intercultural competence, diversity, knowledge of and connection with the institution/campus
4. Careers to explore that are associated with health disparities research
5. A significant portion of this class will focus on reflection and helping students develop a deeper understanding of civic engagement, personal and social responsibility.

*Potential Assignments*:

1. iRAT (Individualized Readiness Assessment Test) (LO1 and LO2)
2. tRat (Team Readiness Assessment Test) (LO1 and LO2, and LO5)
3. Application activities (case studies, discussion posts and team writing assignments) (LO3 and LO5)
4. Team Multimedia Assignments (LO1, LO2, LO3, and LO5)
5. Cumulative final exam (LO1 and LO2)

**BMD 201. Contemporary Issues in Biomedical Sciences.** A survey of current policy topics and industry trends in biomedical sciences, health, and medicine. In addition to principles and theories in bioethical reasoning, students will be introduced to:

* Reproductive Technology
* Human Research
* Psychiatric Considerations
* LGBTQIA Treatment Issues
* Genetic Choices
* Euthanasia

*Learning outcomes:*

Upon completion of this course and completion of all required readings and assignments, students will be able to:

1. Identify terms, theories and principles related to ethical issues in biomedical sciences.
2. Evaluate and apply principles and theories of bioethical reasoning to modern healthcare scenarios.
3. Build skills in developing and explaining one’s position in addressing ethical dilemmas
4. Describe historic and modern moral and ethical issues in health

*Potential Assignments:*

1. Ethics Case Study Analysis (LO2, LO3 and LO4)
2. Topic Quizzes (LO1 and LO4)
3. Ethics Committee Team Activity (LO2, LO3 and LO4)