

BME 300 – Writing in Biomedical Engineering

Course Description: All degree candidates must demonstrate skill in written English at a level acceptable for engineering majors. All Biomedical Engineering students must complete the writing course BME 300 concurrently with a selected BME 300-level course. The quality of writing in technical reports submitted for the course is evaluated, and students whose writing does not meet the required standard are referred for remedial help. Satisfactory writing warrants an S grade for BME 300, thereby satisfying the requirement.

Prerequisites: WRT 102; U2, U3 or U4 standing; BME major

Co-requisites: Any 300- or 400-level BME course, or permission of the Undergraduate Program Director.

BME 300 Outcomes (ABET)

- 3 an ability to communicate effectively with a range of audiences
- 4 an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
- 7 an ability to acquire and apply new knowledge as needed, using appropriate learning strategies

Process to enroll in BME 300

1. Determine which 300 or 400 level BME course you will take BME 300 with (not senior design)
2. Ask that faculty member for permission via the online form (see permission form, this website: <https://www.stonybrook.edu/commcms/bme/undergraduate/courses.php>)

Faculty members will only enroll up to 5 students in their 300 section, so request early.

3. Permission is given by faculty and Jessica immediately knows about this. She will unlock to permit you to enroll.

Outcome Measures

Attend mandatory meeting with the Undergraduate Program Director: The meeting will be held as a group with other BME 300 enrollees immediately after the add/drop deadline. Expectations and the process of completing BME 300 will be discussed. Failure to attend this meeting means you will have an incomplete in BME 300.

The Report: This report will be at least 10 pages in length, double spaced, with references on a topic agreed upon by the instructor and student. Two forms of this report are acceptable: Critical Analysis of one study; Synopsis of at least 3 articles to describe a key aspect of the field. A draft of the report is due at mid-semester. The final report will be due by the last day of regular classes. A copy of the report will be sent to the undergraduate program director. The grammar and writing skill will address (3), the report content will address (4), the student's demonstrated depth of exploring other literature will address (7), and through both the review of literature and process of referencing the literature, (4) will be addressed.

A paper based on *Critical Analysis*, will include background pertinent to the study, methodology or approach taken, will identify key data and supportive control data, and will give a summary of the discussion. Finally, the student will provide their analysis of the study's conclusions.

A paper based on a *Synopsis* will provide comparison / contrast of various views within a field. It will include a summary of each view, outline at least 2 points of direct comparison between studies, critical analysis of these points of comparison, and a summary of the student's conclusions regarding these points of view as it pertains to the field as a whole.

Grading:

For each of 6 items shown in the grading rubric, the instructor will assign a numerical score of 1 through 4 where 1 is unsatisfactory, 3 is satisfactory and 4 is exemplary. At least 15 points need to be obtained to pass the course.

The grading rubric is attached.

All 300 Reports will be secondarily read by the Undergraduate Program Director (UPD). The UPD will not grade the papers, but will examine them for consistency across the program.

Student:

PI:

Date:

	Unsatisfactory 1	Developing 2	Satisfactory 3	Exemplary 4	Points
Specific Aims of the Critical Analysis / Synopsis	Aims are missing	Aims are trivial, and/or non-specific	Aims are somewhat original and specific	Aims are original and specific	—
Research Gathering / Information	Collects minimal background information only about the specific paper(s). No information on related topics	Collects adequate information about the specific paper(s) but not much on related ones	Collects adequate information about specific paper(s) as well as the related ones	Delivers breadth and depth of information, follows leads all the way, and comes up with exhaustive information within the space constraints	—
Discussion	Offers simplistic , undeveloped, or cryptic support for the ideas. Inappropriate or off-topic generalizations, faulty assumptions, errors of fact	Offers somewhat obvious support that may be too broad. Details are too general, not interpreted, irrelevant to the objective, or inappropriately repetitive	Offers solid but less original reasoning. Assumptions are not always recognized or made explicit. Contains some appropriate details or examples	Substantial, logical, & concrete development of the synopsis. Assumptions are made explicit. Details are convincingly interpreted	—
Organization	Little evidence of organization or any sense of wholeness & completeness.	Little completeness & wholeness , though organization was attempted	Organization supports objective and purpose . Transitions are mostly appropriate. Sequence of paragraphs /ideas could be improved	Fully supports objective & purpose. Sequence of ideas is effective. Transitions are effective	—
Style	Limited or inappropriate vocabulary for the intended audience & purpose. Does not follow the rules of standard English.	Limited & predictable vocabulary, perhaps not appropriate for intended audience & purpose. Generally does not follow the rules of standard English.	Uses effective language & appropriate word choices for intended audience & purpose. Generally follows the rules for standard English.	Uses effective language; makes engaging, appropriate word choices for audience & purpose. Consistently follows the rules of standard English.	—
Use of References	Very small number of references. Neglects important references. Possibly uses source material without acknowledgement (plagiarism)	Limited number of references. Uses relevant sources but lacks in variety of sources and/or the combination of sources. Style of referencing may be inconsistent	Appropriate number of references. Uses sources to support, extend, and inform. Conforms to accepted styles and format.	Large number of references. Uses sources to support, extend, and inform, but not substitute writer's own development of idea. Combines material from a variety of authoritative sources.	—

Total Points:**Grading Scale:**1-14: *Unsatisfactory*15-24: *Satisfactory*