



User Needs (40 points) - Due 1/21/2026 11:59PM

Management requests a draft of the User Needs section for your final design report. You and the other teams will be working in parallel on these assignments. Note that there is no competition between teams.

You will be evaluated on your ability to collect the information necessary to define the User Needs. For this assignment we ask that you **research and report the background information necessary to develop a Need Statement for your project**. This includes:

- Clinical Need / Disease State Background
- Existing Products & Regulation
- Stakeholder Analysis
- Market Analysis of your future device
- Summary, Needs Statement, and Scope

The Need(s) Statement for your project should be written without solution bias. Remember that a proper Need(s) Statement includes the problem, population, and outcome that you intend to address. Further, the reader should not be able to tell what your solution is after reading the Need(s) Statement. Please *then follow* that Need(s) Statement with a listing of the specific constraints of the project as provided to you (e.g. “bypass graft” or “hip implant”, which should not be present in a formal Need(s) Statement), to fully define your scope.

See the **User Needs Rubric** for more detailed requests for each section.

Submission Logistics:

This is a group assignment. Each team will submit only one report for this assignment. However, team members should meet and actively collaborate to complete this assignment.

Consider “User Needs” to be the main section header, and the different topics (such as Disease/Injury state, Stakeholder analysis, Market Analysis, Existing Solutions, and Conclusion) to likely be subsection headers. Creative liberties are allowed so long as they are clear and consistent with your chosen formatting/style of presentation. All information presented must have proper and consistent citations (IEEE, Nature, or MLA preferred), with in-text citations and an end-of-paper bibliography. The bibliography must start on a new page.

Arial, Calibri, or Times New Roman 12 pt font for the main body of the report; headings can be larger, and captions can be as small as 10pt. The report should be single-spaced. Margins can be between 0.5 and 1 inch. Include page numbers.

There is 2500±300 word limit. This constraint is designed to help you learn to distill a large volume of information into clear, concise, and thorough text that presents the most essential information to justify your Needs Statement. In other words, the word limit is designed not to limit your breadth and depth of research, but instead to ground your information gathering in typical workplace practices, where different teams/departments expect clear communication. If the suggested word limit is exceeded *and* management identifies multiple areas that could easily be shortened, minor deductions will be assessed on a case-by-case basis.

We will apply up to a 10% deduction if the paper does not meet these logistical criteria. Late submissions will receive a 20% deduction per day late, per the syllabus policy.

Please reach out (VMO.management@umich.edu) if you have any questions or concerns.