**Guidelines**

**3D PRINTING/PRINTERS** **SYSTEM**

**Purpose:** This deliverable will be the initial sections of the design management plan.  It will generalize the system (**3D PRINTING/PRINTERS**) to a set of system and functional requirements, and will also include discussion of design approach and stakeholder management. Specifically, elements of a design plan that describes the design methodology, plan for identifying and managing stakeholders, incorporation of design standards and regulatory requirements and, finally, the system level requirements governing the design.

***The research paper should adhere to the following guidelines:***

**Due Date:** 1 report is due by Friday, June 23.

**Paper format:**

* No more than 3 pages
* Margin: 1-inch on all sides.
* Spacing: Double-spaced.
* Font: 12
* Each page must be numbered

**Sources:** Be sure to include references in APA style for information supporting choice of design methodology, stakeholder identification and management, design standards and development of system level requirements.

**Structure:** The paper should have the following elements. This may serve as an outline for your submission.

***Introduction*:** The information that you will need to provide at this stage of design management is at a higher level than the specific system (**3D PRINTING/PRINTERS**) you have chosen. For this you will need to “back up” to a “solution neutral” point, to describe the system you are endeavoring to design. As such, the introduction should outline the operational or customer needs that will guide the design process, including system level requirements and concept selection. So, you must think in general terms about the high-level purpose that your system is designed to serve.

***Design Methodology*:** The plan for design management starts with selection of a specific design methodology. Describe the design approach you think is most suited to the solution-neutral problem you have defined and provide rationale for your choice of design methodology. Make sure to describe how you plan to integrate models and methods into your design approach.

***Standards & Regulation Management*:** Identify specific standards that apply to your design problem and how you plan to incorporate them into the design process. Also, discuss any regulatory requirements that may be applicable (these should be incorporated as system level requirements).

***Stakeholder Management*:**  This part of the design management plan is the stakeholder management plan. List known stakeholders for your design effort and explain how any additional stakeholders will be identified. Develop the stakeholder classification matrix and explain how it will be used in managing stakeholders through the design process. Don’t forget to discuss stakeholder engagement, communication, requirements solicitation and expectation management.

***Conceptual Design Plan:*** Describe your approach to conceptual design and how it fits into the overall design methodology. Describe the need and the approach to feasibility/requirements analysis, along with discussion of any external/design constraints that may be applicable. Provide examples of system level requirements (functional, non-functional, performance, interface, verification) applicable to your design problem.

***Reference*:**  In this section, cite any references in APA format.