**Project 1 Introduction and Overview**

Hypothetically, the University is planning to partner with Health Care System ABC (HCSABC) based on the system’s expertise in robotics. Currently, HCSABC has a robotics program which includes care robots.

The Chief Nursing Officer (CNO), Chief Nursing Informatics Officer (CNIO), and Chief Dietician are the senior leadership for the implementation of food delivery robots (Starship) for students living in School housing to offer healthy meals and snack to maintain an appropriate weight or reduce weight. Students had identified this need in a recent student survey. Students living in School housing want access to healthy meals and snacks at a reasonable cost, maintain or reduce weight, avoid the cost of meal delivery services, often do not have access to a car, and prefer not to leave their resident during the hours of 10 PM – 6 AM to secure food. The food delivery service will be available 24 hours a day and 7 days a week. School plans to include the cost of the robot food delivery service in student fees. The fees will not be increased for the next two years.

The food delivery robots have been implemented for example at George Mason University (Elliott, 2019), University of Houston (Chapin, 2019), and University of Texas, Dallas (Giggy, 2020). The Informatics Nurse Specialist (INS) is designated as the project manager to investigate the feasibility of the implementation of the Starship food delivery robots. The Health Informatics Department, Network Security, and Health IT will be involved in the care robot project.

**Preparing the Report**

The INS will prepare a report addressing the following (Douglas & Celli, 2015, pp. 169-171). The report should include an introduction and conclusion. Each question should be addressed and identified in the manuscript as a heading. The introduction should be 100-150 words. The introduction should include a purpose of the project. The introduction should inform the reader as to how the report is organized. The conclusion should be 100-150 words. The conclusion should key points of the project. Review the OWL website regarding how to draft an introduction and conclusion.

The report should be supported by in the text references and a reference list. A minimum of 5 references. The report should be a minimum of 5 pages and not exceed 10 pages.

1. Introduction - 100-150 words.
   1. Include a thesis/purpose statement
2. What is the real problem to be solved and the goal to be met?
   1. What is the current state and what is the future state for School students obtaining food living in School housing? Use the phrases current state and future state. 100-150 words.
   2. Depict the workflow using swim lane diagrams. **Must create and submit swim lane diagrams for current state (As Is) and future state (To Be).** Inform the reader whythe swim lane diagrams are included. Label as a figure. Review <https://www.health.state.mn.us/communities/practice/resources/phqitoolbox/swimlanemap.html>

<https://www.youtube.com/watch?v=wQxnzLu7TqU>

for more information regarding development of swim lanes

1. What are the technical requirements/needs of the Starship food delivery robot? For example, what are the physical requirements for space, electrical needs, network requirements, Internet requirements, floor/sidewalk surface, hardware and software, interface application, battery life, length of time to charge? What is the range of the food delivery robot? What are payment methods for food (for example, credit card, bitcoin, etc.)? Use the Starship robot to complete the technical specifications.150-300 words. Inform the reader why the figure is included. **The following figure must be used to organize the content.** Add more rows as needed. For example

|  |  |  |
| --- | --- | --- |
| Feature/Functionality | Requirement | Comment and Reference |
| Height |  |  |
| Width |  |  |
| Battery |  |  |
|  |  |  |

1. How does the Starship robot recognize the student making the purchase?
2. What are the measurable criteria for determining project success (consider weight reduction, maintaining an appropriate weight measured through a wireless-scales, student satisfaction, etc)? 100-150 words
3. What are the known limitations and risks to the project? 100-150 words
4. What are risks to privacy and security including FERPA? 100-150 words
5. What are the estimated costs in dollars? **(Must include a simulated budget)**

For example, organize the budget in a figure/table format. Inform the reader why the budget is included.

|  |  |
| --- | --- |
| **Projected Expenses/Materials and Systems for 1 Robot**  **Year 1** | **Costs for 1 Care Robot**  **Year 1** |
| Cost of 1 robot as direct purchase or cost per month to lease |  |
| Maintenance for 1 robot for 1 Year (12 X Rate) |  |
| Insurance for 1robot for 1 Year (12 X Rate) against theft, rain damage, and loss (falls into bayou) |  |
| Internet (Cloud Subscription) for 1 Year (12 X Rate) |  |
| Education and training for 10 food service technicians to fill food orders and load content (20 hours of training at $15/hour) |  |
| Education and training for 1 RN (20 hours of training at $40/hour) |  |
| Education and training for 1 dietician (20 hours of training at $40/hour) |  |
| Education and training of campus security (20 hours of training at $15/hr) |  |
| Education and training of network security (20 hours of training at $30/hr) |  |
| **Total Budget** | **$** |

1. **Each question/topic should be addressed and identified in the manuscript as a heading**. The heading should be a succinct statement. Do not use the actual question. The report should be supported by in the text references and a reference list. A minimum of 5 references. A minimum of 5 pages excluding the cover page and the reference page.

**Grading Rubric**

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Points Available** | **Points Earned** | **Comments** |
| Introduction. Includes a thesis/purpose statement. 100-150 words | **10** |  |  |
| What is the real problem to be solved and/or stated goal to be met for students to obtain food living in School housing, what is the current state, what is the future state? Use the phrases current state and future state. 100-150 words. | **10** |  |  |
| Must create and submit swim lane diagrams for the current state and future state. Label each diagram as a figure following APA style. Inform the reader why the workflow swimlane diagrams are included. | **10** |  |  |
| What are the technical requirements/needs of the Starship food delivery robot? For example, what are the physical requirements for space, electrical needs, network requirements, Internet requirements, floor/sidewalk surface, hardware and software, interface application, battery life, length of time to charge? What is the range of the food delivery robot? What are payment methods for food (for example, credit card, bitcoin)? What robot(s) currently on the market is most likely to fit the technical specifications? 150-300 words. Inform the reader why the figures and tables are included in the text. Label figures and tables following APA style | **10** |  |  |
| How does the Starship robot recognize the student making the purchase? | **5** |  |  |
| What are the measurable criteria for determining project success? 100-150 words | **10** |  |  |
| What are the known limitations and risks to the project? 100-150 words | **10** |  |  |
| What are risks to privacy and security including FERPA? 100-150 words | **10** |  |  |
| What are the estimated costs in dollars? (Must include a simulated budget). Inform the reader why the budget is included and label as a figure following APA style. | **10** |  |  |
| Conclusion 100-150 words | **10** |  |  |
| APA In the text references – A minimum of 5 | **1** |  |  |
| APA Reference list | **1** |  |  |
| Professional presentation of paper:   * Grammar, spelling, punctuation * Uses headings for each question * Follows APA style for paper (margins, double spacing, ident new paragraphs) * Use a cover page * Double space * Indent each new paragraph ½ inch * Use 1inch margins * Label figures/tables in APA style and inform the reader why the tables and figures are included * A minimum of 5 pages excluding cover page and reference page. | **3** |  |  |
| Total | **100** |  |  |

**Assigned Readings**

Douglas, M., & Celli, M. (2015). Chapter 11 System life cycle: A framework. In V. Saba & K. McCormick (Eds.). *The essentials of nursing informatics* (6th ed., pp. 163-187). McGraw-Hill.

Settergren, T. J. (2015). Chapter 12 System and functional testing. In V. Saba & K. McCormick (Eds.). *The essentials of nursing informatics* (6th ed., pp. 189-202). McGraw-Hill.

Tyler, D. D. (2015). Chapter 13 System life cycle tools. In V. Saba & K. McCormick (Eds.). *The essentials of nursing informatics* (6th ed., pp. 203-214). McGraw-Hill.

Murphy, J., & Dykes, P. C. (2015). Chapter 14 Healthcare project management. In V. Saba & K. McCormick (Eds.). *The essentials of nursing informatics* (6th ed., pp. 215-226). McGraw-Hill.

References

# Chapin, A. (2019). Robots will roam the University of Houston campus delivering snacks. <https://houston.eater.com/2019/11/12/20961019/university-houston-starship-autonomous-delivery-robots>

Elliott, C. (2019). What are the rules for robots delivering food?. *Forbes.* <https://www.forbes.com/sites/christopherelliott/2019/02/03/what-are-the-rules-for-robots-delivering-food/#4f9704ea3bc6>

# Giggy, S. (2020). Order up! Robots now delivering food at UT Dallas. Retrieved from <https://www.wfaa.com/article/features/robots-now-delivering-food-at-ut-dallas/287-e7340c89-4903-4327-8616-dafb1540de76>