جامعة الحسين التقنية
Al Hussein Technical University

Assignment Brief

Student Name/ID Number/Section	
HTU Course Number and Title	00103101, STEM LAB I
Academic Year	2024/2025 - Fall
Assignment Author	Eng. Mohammad Alzubi, Eng. Omar AlDabbas, Eng. Nisrein AlMansi, Eng. Razan Bader, Eng. Mohammad Khirfan, Eng. Ibrahim Hjeij
Course Tutor	Eng. Mohammad Alzubi, Eng. Omar AlDabbas, Eng. Nisrein AlMansi, Eng. Razan Bader, Eng. Mohammad Khirfan, Eng. Ibrahim Hjeij
Assignment Title	Assignment 1 (Project Expo)
Issue Date	Dec 5, 2024
Formative Assessment dates	Dec 8, 2024 – Jan 22, 2025
Submission Date	Jan 23, 2025
IV Name & Date	Dr. Muhannad Al-Tarifi, Dec 4, 2024

Submission Format

This assignment is a practical implementation of a STEM project through teamwork (each team is 3 or 4 members) to accomplish several stages in 8 weeks, as follows:

- End of week 1 (Dec 12): teams are formulated (by the students themselves) and officially declared to the instructor for approval. Students who couldn't join a team will be assigned to a team by the instructor.
- End of week 3 (Dec 26): last day for each team to submit a detailed draft of the plan to accomplish the project.
- Week 6 (Jan 16): teams present their constructed/functioning prototypes to the instructor as formative sessions *during lab time*.
- End of week 7 (Jan 23): teams present their final prototypes at a University EXPO competition.

Unit Learning Outcomes

LO1 Develop a complete STEM project through all its stages

جامعة الحسين التقنية
Al Hussein Technical University

Assignment Brief and Guidance

Construct a self-contained robot that travels through a race path defined by parallel walls, starting from the START square, and finishing at the FINISH square. It is possible that the path contains right and left turns, as well as U turns (left-left or right-right).

The ultimate goal is to go from START to FINISH at the least amount of time. Touching and hitting the wall slightly is allowed. You will be provided with the main technical details of the path (such as width, height, colour, etc…) but you will not be provided with the exact turn patterns and exact arena layout.

At the day of the EXPO, you will be requested to show the performance of your robot on a simple arena pattern. Based on your performance, you might be eligible to advance to the exhibition stage to achieve a higher grade and compete towards winning top-performance rewards.

Learning Outcomes and Assessment Criteria

Learning Outcome	Pass	Merit	Distinction
LO1 Develop a complete STEM project through all its stages	**P1** Formulate all steps required to complete a given STEM project **P2** Construct a simple prototype that accomplishes portions of the required project functions	**M1** Implement the project on exhibited setups to show accurate integration of hardware and software functionalities of the given project	**D1** Demonstrate full functionality of the constructed prototype in line with all requirements of the given project

جامعة الحسين التقنية
Al Hussein Technical University

STUDENT ASSESSMENT SUBMISSION AND DECLARATION

When submitting evidence for assessment, each student must sign a declaration confirming that the work is their own.

Student name: **Student ID:**		**Assessor name:**
Issue date: Dec 5, 2024	**Submission date:** Jan 23, 2025	**Submitted on:** Jan 23, 2025
Programme:		
HTU Course Name: STEM Lab I **BTEC UNIT Title: NA** **HTU Course Code: 00103101** **BTEC UNIT Code: NA** **I AM REPEATING THIS UNIT:** **(YES)** **(NO)**		

Plagiarism

Plagiarism is a particular form of cheating. Plagiarism must be avoided at all costs and students who break the rules, however innocently, may be penalised. It is your responsibility to ensure that you understand **correct referencing practices**. As a university level student, you are expected to use appropriate references throughout and keep carefully detailed notes of all your sources of materials for material you have used in your work, including any material downloaded from the Internet. Please consult the relevant unit lecturer or your course tutor if you need any further advice.

Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that making a false declaration is a form of malpractice.

Student signature: **Date:**