

**AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)**

Faculty of Engineering

BAE 2101: Computer Aided Design and Drafting Lab

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| **1.0 Title** |  |

Design a civil plan with electrical fitting & fixture according to BNBC using AutoCAD

**2.0 Objectives**

In this experiment, students will design **the civil plan/layout of the Evercare Hospital floor (including emergency unit, patient wards, operating theatres, and nurse stations) with proper electrical fittings** in AutoCAD, according to the Bangladesh National Building Code.

**3.0 Experiment to Solve**

The experiment should be designed by the students following below mentioned requirements:

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| 1. | Draw a **Civil Plan** of a hospital floor layout covering **20000 SFT** (approx.) using AutoCAD Software. | [P1] | **20 points** |
| 2. | Draw the Fittings for the civil plan consisting of **electrical fittings and fixtures such as ward lighting, operation theatre lights, emergency backup lights, and nurse-call systems,** applying BNBC. | [P4] [P5] | **10 points** |

**4.0 Lab Project Submission**

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| **Course Name:** | Computer Aided Design & Drafting Lab | **Course Code:** | BAE 2101 |
| **Semester:** | Spring 2024-25 | **Section:** | B |
| **Faculty:** | Farzana Momtaz Mithila | **OEL/Project** | 1 |
| **Assessment:** | **OEL (CO2 & CO3), POI: P.e.1.C6** | | |
| **Submission Deadline:** | 26/05/2025 | | |

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| **Category** | **Unsatisfactory (1-5)** | **Below Average (6-10)** | **Good**  **(11-15)** | **Excellent**  **(16-20)** | **Secured Marks** |
| Railway Station Layout | The layout is either copied or very poor with major errors. | The layout is below average or incomplete with major errors. | The layout is drawn partially as per requirement with minor errors | The layout is unique and drawn as per requirements with proper dimensions |  |
| **Comments** |  | **Total Marks:** | | |  |

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| **Category** | **Unsatisfactory (0-3)** | **Below Average (5)** | **Good**  **(7)** | **Excellent**  **(8-10)** | **Secured Marks** |
| Electric Fittings | The fittings are incomplete or copied | The fittings are drawn or placed inappropriately without maintaining BNBC | The fittings are drawn and placed appropriately with partially complying to BNBC | The fittings are placed appropriately and maintaining BNBC |  |
| **Comments** |  | **Total Marks:** | | |  |

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| **Group No.: 06** | | | | |
| **SL #** | **ID** | **Student Name** | **Department** | **Marks** |
| 1 | 22-47034-1 | A.H.M TANVIR | CSE |  |
| 2 | 22-47035-1 | MOST. SAYMA KHATUN | CSE |  |
| 3 | 22-47382-2 | WASI -U-ISLAM | CSE |  |
|  |  |  |  |  |
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**INTRODUCTION:**

The design of Evercare Hospital includes all the essential facilities for modern medical services. It features a female ward and a male ward with separate treatment areas for female and male patients. There is a storeroom for storing necessary medical equipment and supplies. Separate toilets have been provided for patients as well as for doctors and nurses. To ensure convenience for healthcare staff, there is a dedicated nurses room and a doctor’s room. An emergency room is included for urgent medical care, along with a fully equipped modern operation theater for surgeries. For assisting patients and visitors, there is a help desk and a reception room. Additionally, the hospital includes an ambulance parking area, a Lift, and a staircase to ensure smooth movement throughout the building.

**The symbols to be used for Fittings and Fixture Layout**OTL = Operation Theater Light (1)  
EBL = Emergency Backup Light (5)  
T = Telephone (6)  
CS = Call System (4)

TJB = Telephone Junction Board (1)  
AJB = Antenna Junction Board (1)  
SB = Switch Board (16)  
SDB = Sub Distribution Board (1)  
MDB = Main Distribution Board (1)  
CB = Circuit Board (7)  
L = Light (21)  
k = Kind of light (4)  
T = Tube Light (7)  
TV = Television (1)  
F = Fan (14)  
3P = 3 pin Socket(10)

**ATTACH SCREENSHOTS BELOW:**

