

ADVANCED CONSTRUCTION TECHNOLOGY –UCE702
Assessment Brief 2023 ODD SEMESTER

Assignment title	Sessional 02
Instructor	Dr Arpit Goyal
Course learning outcomes aligned to this assessment	Understand the automation processes in Construction industry including 3D printing and Robotics and get familiar with latest technologies. This is related to CLO 2,3 and 4 of the course curriculum.
Task details and instructions	You are required to answer three short essay style questions. Your work should be informed by the learning you have experienced within the taught components of the subject, supplemented by reference to relevant published literature (text book and journal articles).
Task- type	This a time limited coursework. You have four weeks in which to address the questions. It is important that you engage with all teaching material throughout the course supplemented with additional literature research in this two-weeks period to expand your evidence base for the topic. The assessment has been designed to allow you to meet the Learning Outcomes of the course and to demonstrate your ability to critically appraise current knowledge automation in construction sector.
Deadline and Submission Instructions	The submission deadline date and time is the 30th of November 2023 by 05:00pm. You should submit your work in hardcopy format.
Guidance on size/word limit	The word limit for this assignment is 4500 words (1500 words for each question) The following are included in your word allowance: <ul style="list-style-type: none"> • The text of your written work • Reference citations and reference to figures and tables within the text • Descriptive paragraphs as Figure or Table legends The following are excluded from your word allowance: <ul style="list-style-type: none"> • The title • Your student ID number, course name/code etc. • Figure and Table headings • Words, sequences and numbers associated with figures and tables • Reference list • The word count details
Penalties for overlong submissions	If you exceed this word limit by more than 10% i.e. if you exceed 4950 words, then you will be penalised by deduction of 10% of your final mark. You should state your word count at the end of your work.
Referencing	Use APA referencing style used by TIET for your assignment.
Late or non-submissions	Normal penalties for non-attendance / late / non-submission apply: Work that is submitted late will receive a mark of ZERO .
Cheating	In cases where one (or more) student has copied from another, both (all) students involved may be penalised and will be awarded zero marks.

Topics for the Essay

1. What are challenges associated with different construction methods of bridges
2. Case Studies of Successful 3D Printed building: Research and analyze real-world examples of successful 3D printed construction project(s). Highlight the materials use, construction procedure, type of 3D printed technology used, challenges faced and solutions implemented. Analyze the cost savings and efficiency gains achieved through 3D printing, drawing comparisons with similar projects using conventional methods.
3. Investigate and analyze various automation processes in the construction industry, understanding their applications, benefits, and challenges

Rubrics

Criteria/Assessment Scale	Excellent (10-8)	Good (7-4)	Poor (1-3)
Knowledge of the topic (70%)	All topics mentioned in the topic discussed.	Few topics mentioned in the topic discussed.	Major topics mentioned in the topic missing.
Organisation, structure and scientific style (20%)	Well organised and formatted. Written in technical language	Moderately organised and formatted. Minor flaws in technical language	ILL organised and formatted. Not written in technical language
Referencing (10%)	All well referenced including in-text and bibliography	Minor references missing including in-text and bibliography	Major references missing including in-text and bibliography