Activity Name	"Lecture on Computational Design"
Date of Activity	1stNovember,2022(Tuesday)
Mode of Conduct	Online, Google meet
Time	3:30PMto5:00PM
Mandatory/Elective	Elective
Participants	**No. Of Student participents: 79** **No. Of Faculty participents: 24**
Description	

About the speaker:

Mr. Firas S. Noori is an Architect since 1999. He has M.Des. in sustainable design from the University of Sydney (2013). He also has another M.Sc. in Architectural Engineering from the University of Technology (2004). He has more than 16 years of rich academic experience. He is currently working as an instructor at Ajman University - UAE. He is also a certified professional

from Autodesk in Revit Architecture. His fields of interest are Sustainability, Parametric Design, Built Environment, Energy Consumption and Simulation. He is writing his first textbook in Parametric Design in Autodesk Revit Architecture. He is Autodesk expert elite - USA, 2020 and cofounder Autodesk expert elite – Arabia, 2021.

Brief Description of the session:

A Live Session was conducted on "Computational Design" on 1stNovember, 2022 on Google Meet. The session was started by Mrs. MadhuriAgarwal, Convener, GBU. She welcomed the key notespeaker of the day i.e.,Mr. FirasSalimNoori,Senior Lecturer, College of Architecture, Art and Design, Ajman University, UAE and all the participants and Students who joined the program. She also welcomed other eminent guests. Dr. Kirti Pal, Dean SOE, GBU who emphasized on the value of the topic in present time and importance of such lectures.

Mr. FirasSalimNoori started the lecture with the topic Evolution of Computational Design which he explained through a timeline table from 1960s to 2020s. According to him the process started from white paper, tracing paper then computer aided drafting (CAD) then came building information modeling (BIM) followed by algorithmic modeling (computational Design), Interoperability, Generic Design, Robotics and now towards Internet of Things (IoT). Thereafter he highlighted some major limitations in software such as AutoCAD and 3D Max as the don't have smart elements, no smart links between shapes, no smart views, each AutoCAD file allows only one designer to work so the design process existed only in designer's head, too many error possibilities.

Then he explained about the building information modeling (BIM) and strongly suggested Autodesk Revit and ArchiCAD as revolutionary software as they are require plenty of skills, a lot of users can work on a single file which is shared on cloud, from the central 3D model the plans, elevations& sections can be generated in no time with ease, smart link between elements, elements based on modules. He emphasized that using BIM with parametric design can result in creating other dimensions for a project such as 4th dimension – Time, 5th dimension – Cost, 6th dimension and so on. This provides crucial quantity data such as how much brick work is done or required, no. of fenestrations, area, volume, no. of fixtures etc. He explained how changing one single module can change the whole building model so quickly and efficiently.

After that he introduced some advance tools such as Dynamo and MEP which implements clash detection systemto find out the clash, false intersection and overlapping of different building service lines as water pipes, shafts, ducts, hydrant line etc. He also explained other relevant points such as interior design, furniture design, energy analysis, automation. At last he explained about the roads and parking around buildings. The session was followed by a short interactive question and answer round. The session was concluded by a Vote of Thanks by Ar. MadhuriAgarwal. The faculty coordinator Ar. RadhikaGoelplayed a key role in the successful completion of the event.

LearningOutcomes:

The Students, Faculties, Research Scholars etc. gained in depth knowledge on computational design. Students found the session very revealing.