

Esteem Pavilion

WORK EXPERIENCE STUDENT GUIDE



HERIOT
WATT
UNIVERSITY
UK | DUBAI | MALAYSIA


ESTEEM

classofyourown[®]
WORK EXPERIENCE MADE EASY



LET'S GET STARTED

OPPORTUNITY AWAITS

Without a doubt, everyday life as you knew it is very different now.

You probably thought the chance to experience working life in the construction industry would be taken away, now that all the Architects, Surveyors, Engineers, Project Managers and other professionals are having to work from home.

Think again!

We're giving you - the professionals of the future - the chance to do the same!

DEC* the Esteem Pavilion...at home!

You and your team mates (if you are in a team) will have a whole week to digitally design, engineer and construct the 'Esteem Pavilion' - a sustainable building to teach a local community how to take care of their planet.

But not just any community - this community lives in Dubai in the United Arab Emirates!

- You'll discover what it's like to build in the desert from Heriot Watt University's 'Team Esteem' undergraduates and experts at the Emirates Green Building Council.
- You'll meet a wide range of amazing construction industry professionals who'll be on hand EVERY DAY to give you some helpful hints and tips.

- You'll discover an industry that you probably don't know much about and new careers, some you've never even heard of.
- You'll learn a range of new skills and knowledge, how to work in a team, how to research facts and apply them to a project
- And when you've completed all your tasks, you'll have a great addition to your CV and get a 'DEC CONNECT Award' to show your future employer (and show off to your mates!)

So, turn the pages, and get ready to **design...engineer...construct!**

OVERVIEW:

Project Introduction

- Esteem Pavilion
- End User



AGENDA & TASKS:

09:30: START

09:30-10:00:

Ice breaker:

[Complete the GoConstruct Quiz](#)

10:00-10:30:

LearnLive

GUIDANCE:

Think about the bigger picture

What would you teach a whole community of Esteem House buyers to 'think green'?

How would you teach a whole community of Esteem House buyers to 'think green'?

Who might buy an Esteem home?

Remember, a community is made up of lots of different types of people with a range of needs.

TASK CHECKLIST:

- ☐ Complete the Go Construct quiz
- ☐ Identify what a Pavilion is
- ☐ Produce and conduct a questionnaire to establish the end users' needs
- ☐ Collate your results to understand the community needs for the project

What is a Pavilion?

A Pavilion is a flexible free-standing building that invites people to come in and spend time in it.

Look at these amazing examples:



<https://www.expo2020dubai.com/en/discover/pavilions>



LUNCH - 12.30-13.30

OVERVIEW:

- Location
- Site
- The Project Team

AGENDA & TASKS:

14:00-14:15:

LearnLive

16:00:

Team Meeting - Reflection

16.30: FINISH

GUIDANCE:

The terrain is flat desert. The maximum area allocated for the Esteem Pavilion and grounds: 20m x 20m = 400m².

Find out about the roles below and how they get involved in the design of a building. Focus on them when designing your Pavilion:

- | | |
|------------------------------|------------------------------|
| • Architect | • Building Services Engineer |
| • Architectural Technologist | • Facilities Manager |
| • Land Surveyor | • Interior Designer |
| • Civil Engineer | • Project Manager |
| | • Quantity Surveyor |

TASK CHECKLIST:

- ☐ Research and analyse the location and project site
- ☐ Research and document the different Project Team roles and responsibilities

Discover more about the location:



<https://youtube/8Ikcz4UA5mI>

OVERVIEW:

- Concept Design
- Room/spaces
- Materials

AGENDA & TASKS:

09:30: START

09:30-10:00:

Team meeting to review next steps

10:00-10:15:

LearnLive

GUIDANCE:

The key spaces/rooms/zones are explained and justified.

Bubble diagrams should be used to proportion and develop the proximity of the rooms and spaces.

Things to consider:

- How big is it?
- How does it cater for ALL the community?
- What is it made of?
- What happens when the building comes to the end of its life?

TASK CHECKLIST:

- ☐ Identify the different rooms/spaces for the Pavilion
- ☐ Produce a bubble diagram to develop your room sizes and proximities
- ☐ Research and analyse the building materials for the Pavilion

What is a Bubble Diagram?

A bubble diagram is a freehand diagrammatic drawing made by Architects and Interior Designers to be used for space planning and organisation at the preliminary phase of the design process.



LUNCH - 12.30-13.30

OVERVIEW:

- Energy
- Heating, Ventilation and Air Conditioning (HVAC)
- Lighting

AGENDA & TASKS:

14:00-14:15:

LearnLive

16:00:

Team Meeting - Reflection

16:30: FINISH

GUIDANCE:

There are a few things to consider:

1. The Esteem Pavilion is in the desert. It's generally hot and arid but temperatures can change throughout the year. What design, engineering and construction challenges might you face?
2. It must be inclusive.
3. It must promote sustainable everyday living.
4. It could showcase technology to improve people's lives - what might you include, or even invent?

TASK CHECKLIST:

- ☐ Research and analyse the renewable energy options for the Pavilion
- ☐ Identify an appropriate lighting and HVAC (Heating, Ventilation and Air Conditioning) strategy with the location and climate in mind.

Variations of the building design should be considered and compared to ensure the spaces flow and space is maximised.

Think about your community - what does inclusive mean?

OVERVIEW:

- Developing a final idea
- Floor plan

AGENDA & TASKS:

09.30: START

09.30-10.00:

Team meeting to review next steps

10.00-10.15:

LearnLive

GUIDANCE:

Using the bubble diagrams as guidance, introduce a sketch design and develop a floor plan. This will help you to visualise and identify the shape of, and space available within, the building.

It's recommended that you produce variations of the floor plan to compare and contrast. This should ensure you explore all options and are able to justify your decisions.

TASK CHECKLIST:

- ☐ Produce a floor plan
- ☐ Check your floor plan against the design brief

Each space must reflect its use and some spaces may need to be flexible for different uses.



LUNCH - 12.30-13.30

OVERVIEW:

- Mood board

AGENDA & TASKS:

14.00-14.15:

LearnLive

16.00:

Team Meeting - Reflection

16.30: FINISH

GUIDANCE:

Create a mood board for your Pavilion, look at each room/space and identify furniture layouts, colour samples etc.

TASK CHECKLIST:

- ☐ Produce a mood board for each room/space

Understand how the shape, size and location of spaces can affect how we feel just as much as colourful furniture/decoration/texture can.

OVERVIEW:

Delivering Pavilion design

- Developing a 3D model
- Scale

AGENDA & TASKS:

09.30: START

09.30-10.00:

Team meeting to review next steps

10.00-12.30:

Working on Pavilion design

GUIDANCE:

Present your final idea by creating a 3D model of your final design. Choose a software package you are familiar with or have used at school. You may wish to use a game like Minecraft, which has powerful modelling tools too. You choose!

If you aren't able to access digital software or the internet, don't worry! Create a 3D physical model instead. Consider a scale to work to and what materials you will use.

TASK CHECKLIST:

- ☐ Develop a final digital model or physical model
- ☐ Check the design meets the design brief - this is really important

How does your building make people feel?

Well designed buildings can make us feel happy, safe, secure and comfortable, but poorly designed buildings can make us feel miserable and can actually be bad for our health! The Esteem Pavilion should be a beacon of great design.



LUNCH - 12.30-13.30

OVERVIEW:

- 3D rendering
- Formal drawings
- Dimensions

AGENDA & TASKS:

13.30-16.00:

Working on Pavilion design

16.00:

Team Meeting - Reflection

16.30: FINISH

GUIDANCE:

Produce rendered images that showcase your final design and its main features.

Produce a scale floor plan and elevation views. These can often be produced directly from your digital model.

Produce a site plan to define the position and orientation (the position of the Pavilion on the site in relation to the sun's path) of your building.

You can produce hand drawings if you can't access a computer.

TASK CHECKLIST:

- ☐ Produce a series of rendered final images of your Pavilion, or photograph your physical model
- ☐ Produce a scale floor plan and elevation views

Remember to include dimensions on your drawings - does your building fit on the 20m x 20m space?

Elevation

A view from the front, side or rear

Plan View

A view from above; a 'bird's eye view'

OVERVIEW:

Structuring written report

AGENDA & TASKS:

09.30: START

09.30-10.00:

Team meeting to review next steps

10.00-10.15:

LearnLive

GUIDANCE:

Bring it all together!

Use all the information you have collated during the week to construct a detailed report.

Ensure you include the main features of your Pavilion and how it meets the needs of the end users.

Think about the layout of your report and the order in which you present the information.

TASK CHECKLIST:

- ☐ Plan the structure and content of the written report

Use images and diagrams of your site and design to complement the writing



LUNCH - 12.30-13.30

OVERVIEW:

Complete and submit written report

AGENDA & TASKS:

13.30-15.30:

Individual work to complete report

15.30-16.00:

Submit report and complete feedback form on page 8

16.00:

Team Meeting - Reflection

16.30: FINISH

GUIDANCE:

Describe the key features of your project:

- What makes it different to others?
- The vision of the project
- What makes it ground-breaking?

Discuss your journey through the week: -

- What did you enjoy?
- What did you find challenging?

TASK CHECKLIST:

- ☐ Complete a written report summarising the project and your week
- ☐ Submit all your work to your school teacher or point of contact

What are the key points/features of the Pavilion you want to get across?

Check you've met the brief!

TIME TO RELAX

Well done! You've completed a fantastic work experience week and it's the weekend, what will you do to celebrate your achievement?

TIME TO REFLECT...

Name:

Name of your school or college:

Name of the company who provided your work experience:

Q1. Before I took part in this COYO Work Experience project, I really wanted a career in the Built Environment (often referred to as 'AEC' (Architecture, Engineering and Construction)

(1= totally disagree, 5 = totally agree)

1 ☐ 2 ☐ 3 ☐ 4 ☐ ☐

Q2. Now I have finished, has my view changed?

(1= far less likely, 5 = far more likely)

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Q3. What were the things I liked best about the project?

Feedback is important to us, to your work experience employer, future students and your school. Please complete this form and email a photo to support@classofyourown.com

OR scan the QR code to complete our on-line survey..



Q4. What were things I liked least about the project?

Q5. I will recommend this work experience to friends and teachers.

(1= totally disagree, 5 = totally agree)

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Q6. I developed the following skills during work experience:

- ☐ Creativity and innovation
- ☐ Teamwork
- ☐ Communication and collaboration
- ☐ Critical thinking and problem solving
- ☐ Digital skills
- ☐ Personal and interpersonal skills

Other