

## L4H 2020 SS2 Time line

**Friday, October 2**

8am New York, 1pm UK, 2pm CET, 3pm St Petersburg Time

**Zoom meeting**

Duration 2 hrs.

**Launch L4H SS2 Workshop**

All Students and Faculty should participate

- A. Launch Project
- B. Introduce Faculty
- C. Introduce Teams
  - a. Students should make arrangements for “meeting times” for teams to collaborate
- D. Review Weekly Deliverables
- E. HSW to Assign First Week’s Assignment for Module 1
  - a. Assign Module 1 lectures and Case studies for Review
  - b. Refer to assignment for Module 1
  - c. Deliverables:
    - Record onsite horizontal and vertical illuminance measurements using GL optic spectroradiometer onto the layout provided. Provide pdf document.
    - Record other lighting parameter as per the excel template.
    - Provide Dialux lighting calculation for the existing lighting condition, include calculation summary, isolines and pseudo renderings (in pdf format)
    - Compare recorded illuminance values with Dialux calculation. Report the % differences in the average light levels (vertical and horizontal)
    - Report comments on the existing lighting condition and suggestions for improvement
    - Present all the above outcomes in a Powerpoint presentation
  - d. Handout Meters and Task lamps for use for Module 1
  - e. Visit Site to review Project requirements

**Wednesday, October 7**

Each Team should check in with Module 1 coordinator (HSW) Time 5:30pm – 7:00pm CET

**Friday, October 9**

8am New York, 1pm UK, 2pm CET, 3pm St Petersburg Time

**Zoom meeting**

Duration 4 hrs.

Student Presentations of Deliverables from Module 1

- A. Review Weekly Deliverables
- B. TJU to Assign Second Week’s Assignment for Module 2
  - a. Assign Module 2 lectures and Case studies for Review
  - b. Refer to assignment for Module 2
  - f. Visit Site to review Project requirements
  - c. Handout Meters for use for Module 2
  - g. Deliverables:
    - Record of onsite vertical spectrum measurements using GL optic spectroradiometer onto the layout provided. Provide pdf document.

- Record of CIE Toolbox data Inputs and Outputs. Present findings and provide comments on the measured data and how the existing light sources, compare with daylight, as per:
  - Melanopic ELR - efficacy of luminous radiation
  - Daylight efficacy ratio
  - Melanopic EDI - equivalent Melanopic daylight D65 Illuminance for each photoreceptor
  - EDI = Equivalent Daylight D65 Illuminance for each photoreceptor
  - Wavelength Values at 1nm increments from 380nm to 780nm,
  - Effective Irradiance (unit of power) experienced by each of the photoreceptors in the retina, including the ipRGCs that in turn, drive circadian, neuroendocrine and neurobehavioral effects such as mood, alertness and sleep
- Present charts showing  $\alpha$ -opic weighted spectra for test Illumination compared to  $\alpha$ -opic weighted spectra for daylight D65 Illumination
- Assessment for how your Melanopic EDI compares to the Daylight Efficacy Ratio and what this means in terms of health
- Report comments on the existing lighting condition and suggestions for improvement. Explain proposed lighting adjustments to improve Spectral outputs.
- Present all the above outcomes in a Powerpoint presentation

### Wednesday, October 14

Each Team should check in with Module 2 coordinator (TJU) **Time 12:00-2:00pm New York (EST)**

### Friday, October 16

**8am New York, 1pm UK, 2pm CET, 3pm St Petersburg Time**

#### Zoom meeting

Duration 4 hrs.

Student Presentations of Deliverables from Module 2

- A. Review Weekly Deliverables
- B. KTH and AAU to Assign the Week's Assignment for Module 3
  - a. Assign Module 3 lectures and Case studies for Review
  - b. Refer to assignment for Module 3
  - c. Deliverables
    - ALFA report of the existing space, based on Assignment 1
    - A "subjective impressions" evaluation report of the existing space, based on Assignment 2
    - An overall evaluation and description of the existing space (using tools and findings from the previous modules) taking into consideration the visual and physiological impact of lighting as well as the objective and subjective experience of lighting, based on Assignment 3
    - List and describe the 3 most important factors that are not in line with a successful lighting design for your use case, based on Assignment 4
    - List and describe the most prominent lighting control possibility (daylight and electrical light) and scenario in your space, based on Assignment 5
  - d. Handout material, software and equipment for use for Module 3

### Wednesday, October 21

Each Team should check in with Module 3 coordinator (KTH and AAU), **Time 14:00-16:00 CET**

**Friday, October 23**

**8am New York, 1pm UK, 2pm CET, 3pm St Petersburg Time**

**Zoom meeting**

Duration 4 hrs.

Student Presentations of Deliverables for Module 3

- A. Review Weekly Deliverables
- B. AAU and KTH to Assign this Week's Assignment for Module 4
  - a. Assign Module 4 lectures and Case studies for Review
  - b. Refer to assignment for Module 4
  - c. Deliverables
    - Design concept – What do you want to achieve? Connect it with the 3 factors that you chose to improve in Module 3 (narrative, objectives, concept images)
    - Lighting criteria and description of solutions for various tasks and time of day – How do you want to achieve it? (fixture selection / schedule, control scenario, illustrative lighting drawings and model)
    - Proof of concept – Does your solution work to achieve your objectives? Present examples from your mock-up interventions and simulations (in comparison to existing conditions) (images, sketches)
    - First draft of design documents: lighting layout, section, renderings (to be discussed and further developed and presented in module 5)
    - Describe in 1-2 sentences how the measurement/simulation tools and guidelines helped or/and hindered your design process.
    - Please keep an archive of your progress materials
  - d. Handout material, software and equipment for use for Module 4

**Wednesday, October 28**

Each Team should check in with Module 4 coordinator (AAU and KTH), **Time 14:00-16:00 CET**

**Friday, October 30**

**8am New York, 1pm UK, 2pm CET, 3pm St Petersburg Time**

**Zoom meeting**

Duration 4 hrs.

Student Presentations of Deliverables for Module 4

- A. Review Weekly Deliverables
- B. Wolverhampton to Assign Final Deliverables
  - a. Refer to assignment for Final Deliverables
  - b. Final Deliverables

Demonstrate knowledge and understanding of SS2:  
The completion of Module No.5 involves making a group presentation. Your presentation should tell the story of lighting; its relevance; its dynamics in a building; and its impact on the health and wellbeing of occupants or users of a building. You are expected to draw from lessons learnt in Week/Module Nos 1-4 in the formulation of your presentation. The deliverables you are expected to achieve in your presentation are to demonstrate or show:

    - Record onsite horizontal and vertical illuminance measurements using GL optic spectroradiometer onto the layout provided. Provide pdf document.
    - Report comments on the existing lighting condition and suggestions for improvement
    - Present findings and provide comments on the measured data and how the existing light sources, compare with daylight, as per:
      - Melanopic ELR - efficacy of luminous radiation

- Daylight efficacy ratio
- Melanopic EDI - equivalent Melanopic daylight D65 Illuminance for each photoreceptor
- Assessment for how your Melanopic EDI compares to the Daylight Efficacy Ratio and what this means in terms of health
- ALFA report of an existing space.
- The visual and non-visual impact of lighting as well as the objective and subjective experience of lighting.
- Proof of concept – present examples from your mock-up interventions and simulations (in comparison to existing conditions)
- A draft of a lighting design solution/documents: lighting layout, section, renderings.
- Describe how measurement/simulation tools and guidelines can help or/and hinder a lighting design process.
- How lighting impacts on human wellbeing generally.
- Imagine different workers in one big open-plan office – different ages, different health conditions, different job tasks, etc. Explain how you will use lighting to benefit or satisfy all of them at the same time.
- Any final recommendations on the basis of the combined lessons you have learnt from SS2.

Feel free to use your discretion to package the contents of your presentation to fit-in with the time allowed: maximum of 30 minutes. Use your discretion to include any other aspect that will make your presentation tell a story about the overall aim of the summer school.

### **Wednesday, October 28**

Each Team should check in with Participating Faculty - Time TBD

### **Friday, November 6**

#### **Zoom meeting**

Student Final Presentations

8am New York, 1pm UK, 2pm CET, 3pm St Petersburg Time

Duration 4 hrs.