

SUMMARY OF THE COURSE ASSIGNMENTS, AUTUMN 2023

HOMEWORK ASSIGNMENTS 1-4 (2 and 4 MANDATORY)

HOMEWORK ASSIGNMENT 1 (individual)

Deadline: before the lecture 1 (6th September 2023 at 9:15)

1) READ THE BOOK CHAPTER:

Introductory chapter: Indoor Environmental Quality by Mujeebu M.A. 2019.

Chapter is available online at:

<https://www.intechopen.com/books/indoor-environmental-quality/introductory-chapter-indoor-environmental-quality>

2) READ THE JOURNAL PUBLICATION (Brink et al. 2021. Classrooms' indoor environmental conditions affecting the academic achievement of students and teachers in higher education: A systematic literature review) AND LIST THE MAIN FINDINGS/MOST INTERESTING FINDINGS FROM THE CHAPTERS 4.2 (The influence of the IEQ on the quality of learning) AND 4.3 (The influence of the IEQ on student's academic achievement).

Article is available online at:

<https://onlinelibrary.wiley.com/doi/full/10.1111/ina.12745>

[Classrooms' indoor environmental conditions affecting the academic achievement of students and teachers in higher education: A systematic literature review \(wiley.com\)](https://onlinelibrary.wiley.com/doi/full/10.1111/ina.12745)

HOMEWORK ASSIGNMENT 2 (individual/pair) “Indoor environment aspects”

MANDATORY TASK! (Grading: approved/rejected)

Deadline: 12th September 2023 at 23:59

You can do the work alone or with a pair.

Select one office space (The office space can be a single office room or open-plan office. The office can be located in Otaniemi, or it can be located anywhere) and consider about

- Implemented beneficial indoor environment aspects in that space
- Indoor environment aspects which could be implemented in that space
- Detrimental indoor environment aspects which should be removed/fixed in that space

Check the following aspects of the indoor environment (focus on the aspects with underline):

Acoustic Quality; Air Quality; Lighting; Office Layout; Office Furnishings; Cleanliness and Maintenance; Thermal Comfort

Prepare a power point presentation (5 min presentation, about 5-8 slides). You can include photos/figures/tables to your presentation.

Power point presentation (everyone should upload the presentation even if you do it together with a pair) should be uploaded to the course page by 12th September 2023 at 23:59.

You can use e.g. the following literature:

- Al horr Y., Arif M., Kaushik A., Mazroei A., Katafygiotou M., Elsarrag E. Occupant productivity and office indoor environment quality: A review of the literature. Building and Environment. 2016. Volume 105, pages 369-389.
- Kang S., Ou D., Ming Mak C. The impact of indoor environmental quality on work productivity in university open-plan research offices. Building and Environment. 2017. Volume 124, pages 78-89.
- Al horr Y, Arif M., Katafygiotou M., Mazroei A., Kaushik A., Elsarrag E. Impact of indoor environmental quality on occupant well-being and comfort: A review of the literature. International Journal of Sustainable Built Environment. 2016. Volume 5, pages 1-11.
- Šujanova P., Rychtáriková M., Mayor T.S., Hyder A. A Healthy, Energy-Efficient and Comfortable Indoor Environment, a Review. Energies 2019, Volume 12, Issue 8, pages 1414; <https://doi.org/10.3390/en12081414>
- Ganesh G.A., Sinha S.L., Verma T.N., Dewangan S.K. Investigation of indoor environment quality and factors affecting human comfort: A critical review. Building and Environment. 2021. Volume 204; <https://doi.org/10.1016/j.buildenv.2021.108146>
- Bergefurt L., Weijs-Perree M., Appel-Meulenbroek R., Arentze T. The physical office workplace as a resource for mental health – A systematic scoping review. Building and Environment. Volume 207, Part A, 108505

HOMEWORK ASSIGNMENT 3 (individual)

Read the following publication:

[Ensuring-Good-IAQ-in-Buildings-Trust-report_compressed-2.pdf \(bregroup.com\)](#)

Note: Lecture task (13th September 2023) will be based on this publication.

HOMEWORK ASSIGNMENT 4 (individual), a feedback report on someone else's learning diary (MIDTERM LEARNING DIARY EVALUATION)

MANDATORY TASK! (Grading: approved/rejected)

Deadline: 10th October 2023.

Upload your “midterm” learning diary to the MyCourse and send it also via email to your named pair **by 6th October 2023 at 23:59**. Your “midterm” learning diary should include text from the first four teaching events.

Evaluate your pair’s midterm learning diary. See the format of the evaluation document below.

Send your evaluation (word-document) to your pair via email and upload it to MyCourses (“Midterm learning diary evaluation”) **by 10th October 2023 at 23:59**.

See more detailed instructions on a separate document!

GROUP WORK (includes 5 different parts) - MANDATORY!

Deadlines:

19th September 2023 at 23:59

26th September 2023 at 23:59

3rd October 2023 at 23:59

10th October 2023 at 23:59

17th October 2023 at 23:59

- ❖ Indoor air quality in an office building (part 1)
- ❖ HVAC (Heating, ventilation, and air conditioning) -technologies in an office building (part 2)
- ❖ Lighting and “smart” building technologies in an office building (part 3)
- ❖ Acoustic design in an office building (part 4)
- ❖ Group evaluation (part5)

See instructions from a separate document!

LEARNING DIARY – MANDATORY!

Write 1-2 pages about each teaching event (**6.9.2023; 13.9.2023; 20.9.2023; 25.9.2023; 2.10.2023 (excursio); 4.10.2023; 9.10.2023; 11.10.2023**).

Total minimum length for the learning diary is 8 pages, maximum length 16 pages including figures/tables). Use font size 12, line spacing 1.5, normal margins 1 inch (= 2.54 cm) to 1.25 inches (= 3.17 cm)).

See guidelines for learning diaries from a separate document.

Deadlines:

“Midterm” learning diary: 6th October 2023 (See also Homework assignment 4!)

Final learning diary: 23rd October 2023