UNIVERSITI TEKNOLOGI MARA

BCT513: INTEGRATED SERVICES DESIGN

Course Name (English)	INTEGRATED SERVICES DESIGN APPROVED
Course Code	BCT513
MQF Credit	3
Course Description	The main aim of the course is to form an understanding of the design, installation and testing of building services applications commonly provided in habitable buildings.
Transferable Skills	1. Able to analyse the applications of integrated services design; 2. Able to calibrate the related services applications; 3. Able to collaborate with team members in performing the related building services applications.
Teaching Methodologies	Lectures, Blended Learning, Tutorial, Discussion, Presentation, Workshop
CLO	CLO1 Analyse the applications of integrated services design for building construction. CLO2 calibrate the related services applications for building construction CLO3 Collaborate with team members in performing the related building services applications in building construction
Pre-Requisite Courses	No course recommendations

Topics
1. 1.0 Water Supply 1.1) • Basic design consideration 1.2) • Interpretation of relevant M&E drawing 1.3) • Relevant building legislative 1.4) • Testing & commissioning of water supply system
2. 2.0 Sanitation, Drainage and Sewerage System 2.1) • Basic design consideration 2.2) • Interpretation of relevant M&E drawing 2.3) • Relevant building legislative 2.4) • Testing & commissioning of water supply system
3. 3.0 Electrical Supply 3.1) • Basic design consideration 3.2) • Interpretation of relevant M&E drawing 3.3) • Relevant building legislative 3.4) • Testing & commissioning of electrical supply system
4. 4.0 Communication System 4.1) • Basic design consideration 4.2) • Interpretation of relevant M&E drawing 4.3) • Relevant building legislative 4.4) • Testing & commissioning of communication system
5. 5.0 Mechanical Ventilation Air conditioning (MVAC) 5.1) • Basic design consideration 5.2) • Interpretation of relevant M&E drawing. 5.3) • Relevant building legislative 5.4) • Testing & commissioning of air conditioning system
6. 6.0 Fire Safety Technology 6.1) • Basic design consideration 6.2) • Interpretation of fire services drawing 6.3) • Relevant building legislative 6.4) • Testing & commissioning of fire safety system

7. 7.0 Mechanical transportation 7.1) • Basic design consideration 7.2) • Relevant building legislative 7.3) • Interpretation of mechanical transportation drawing. 7.4) • Testing & commissioning of mechanical transportation system
8. 8.0 Intelligent Building 8.1) • Basic design consideration 8.2) • Integration of building services 8.3) • Relevant building legislative 8.4) • Testing & commissioning of mechanical transportation system

Assessment Breakdown	%
Continuous Assessment	100.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	online slide presentation	20%	CLO3
Group Project	Video presentation	20%	CLO3
Practical	video recording	30%	CLO2
Writing Test	ongoing online test	30%	CLO1

Reading List

Recommended Text

- **Sinopoli, J. 2006, *Smart Building: A Handbook for Design and Operation of Building Technology Systems*, Spicewood Publishing.**

Reference Book Resources

- **Stephens, A., & Fuller, M. 2009, *Sewage Treatment: Uses, Processes and Impact.*, Nova Science Pub Inc.**
- **Chadderton. D., V. 2007, *Building Services engineering*, 5th Edition Ed., EF Spon. London**
- **Ehrlich, C. 2007, *Intelligent Building Dictionary: Terminology for Smart, Integrated, Green Building, Construction and management*, Spoon Press. London**
- **Walter, T., G., Allison, G., K., Benjamin, S., & John, S., R. 2010, *Mechanical & Electrical Equipment for Building*, 11th Edition Ed., John Wiley. USA.**
- **Hall, F., & Greeno, R. 2009, *Building Services Handbook*, 5th Edition Ed., Butterworth- Heinemann England.**
- **Robertson, J., C. 2009, *Introduction to Fire Prevention*, 7th Edition Ed., Prentice Hall Englewood Cliffs, NJ., USA.**

Article/Paper List

This Course does not have any article/paper resources

Other References

- **https://www.aicompanies.com. Advanced Instruments. 2017, *What is calibration***
- **https://www.apesoftware.com. Apesoftware.com. 2017, *Calibration procedure***