UNIVERSITI TEKNOLOGI MARA

BSS460: STRUCTURES II

Course Name (English)	STRUCTURES II APPROVED
Course Code	BSS460
MQF Credit	2
Course Description	This subject provides an understanding on structural design related to timber and steel structures.
Transferable Skills	Structure design & analysis
Teaching Methodologies	Lectures, Blended Learning
CLO	CLO1 acquire knowledge on the structural behaviour and application of timber in building components and application of steel structures in construction. CLO2 design a simple structure using two different components i.e. : timber and steel. CLO3 identify and analyze the failure of the timber and steel as building structural components
Pre-Requisite Courses	No course recommendations

Topics
1. Principles of timber, steel & Concrete 1.1) n/a
2. Beam design of two materials 2.1) Elastic theory method, Load factor method & limit state design method
3. Beam Deflection 3.1) Timber beam deflection & Steel beam deflection
4. Axially loaded column 4.1) Timber, Steel & Concrete column
5. Bolt & weld Connection 5.1) n/a
6. Squash Load 6.1) n/a
7. Additional of direct & bending stress 7.1) n/a
8. Gravity Retaining Wall 8.1) n/a

Assessment Breakdown	%
Continuous Assessment	40.00%
Final Assessment	60.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	1 group assignment 2 individual assignment	30%	CLO1 , CLO2 , CLO3
Test	n/a	10%	CLO1 , CLO2 , CLO3

Reading List

Reference Book Resources

- **Wyatt K.J. & Hough R 2003, *Principles of Structure*, UNSCO Press Australia**
- **Hanaor A 1998, *Principles of Structure*, Blackwell Science United Kingdom**
- **Morrow H.W. & Kokernak R.P 2001, *Statistic & Strength of Materials*, Prentice Hall New York**
- **BS 5268 : Part 2 1991, *Structural Use of Timber, Code of Practice for Permissible Stress Design, Materials and Workmanship.***
- **Mac Ginley, T.J & Ang. T.C 1990, *Structural Steelworks Design to Limit State Theory*, , Butterworth & Co. Ltd**
- **BS 5950 : Part 1 1985, *The Use of Structural Steel In Building, Code of Practice for Design in Simple and Continous Construction*, Hof Volled Sections.**
- **Graham W. Owens, Peter R. Knowles and Patrick J., Dowling 1994, *Steel Designer's Manual*, Steel Construction Institute.**
- **William T. Segui 2007, *Steel Design*, 4th Edition Ed., Thomson**
- **E.C. Ozelton & J.A. Baird 2006, *Timber Designers' Manual*, 3rd Edition Ed., Blackwell**

Article/Paper List: This Course does not have any article/paper resources

Other References: This Course does not have any other resources