

A Systematic Approach for Developing Course Learning Outcomes to Fulfil Accreditation Requirements in Malaysia

By: **Elsheikh, EMA** (Elsheikh, Elsheikh Mohamed Ahmed)^[1]; **Sarudin, I** (Sarudin, Isarji)^[1]; **Gunawan, TS** (Gunawan, Teddy Surya)^[1]

2017 7TH WORLD ENGINEERING EDUCATION FORUM (WEEF)

Book Group Author(s): [IEEE](#)

Pages: 428-433

Published: 2017

Document Type: Proceedings Paper

Conference

Conference: 7th World Engineering Education Forum (WEEF)

Location: Univ Teknologi Petronas, Kuala Lumpur, MALAYSIA

Date: NOV 13-16, 2017

Sponsor(s): Kementerian Pendidikan Tinggi; Int Federat Engn Educ Soc; Soc Engn Educ Malaysia; Univ Teknologi Malaysia; Student Platform Engn Educ Dev; Dassault Systemes; Educ Malaysia; MathWorks; MMC; Quanser; IEEE

Abstract

Writing appropriate learning outcomes is crucial to course design. Properly written outcomes aids the design of other course elements such as delivery methods and assessment. This paper proposes a systematic approach for writing learning outcomes. The proposed procedure takes advantage of the hierarchical structure of the programme building components. When applied, the procedure helps meet some of the accreditation requirements imposed by the Malaysian Engineering Accreditation Council such as explicit assessment of programme outcomes. Key to success is the careful mapping between course components. Besides, the procedure simplifies course design consequently leading to continual improvement. The procedure can be applied to wide range engineering courses. It also gives more control on planning a balanced assessment.

Keywords

Author Keywords: [Course Learning Outcomes](#); [Programme Outcomes](#); [Accreditation](#); [Continual Quality Improvement](#)

Author Information

Reprint Address: [Elsheikh, EMA](#) (reprint author)

+ Int Islamic Univ Malaysia, Kuala Lumpur, Malaysia.

Addresses:

+ [1] Int Islamic Univ Malaysia, Kuala Lumpur, Malaysia

E-mail Addresses: elsheikh@iium.edu.my; isarji@iium.edu.my; tsgunawan@iium.edu.my

Funding

Funding Agency	Grant Number
Research Initiative Grant Scheme (RIGS)	
Research Initiative Grant Scheme (RIGS) by the International Islamic University Malaysia (IIUM)	RIGS15-154-0154

[View funding text](#)

Publisher

IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA

Categories / Classification

Research Areas: Education & Educational Research; Engineering

Web of Science Categories: Education, Scientific Disciplines; Engineering, Multidisciplinary

Citation Network

In Web of Science Core Collection

0

Times Cited

[Create Citation Alert](#)

15

Cited References

[View Related Records](#)

Use in Web of Science

Web of Science Usage Count

0

Last 180 Days

0

Since 2013

[Learn more](#)

This record is from:

Web of Science Core Collection

- Conference Proceedings Citation Index-Science

Suggest a correction

If you would like to improve the quality of the data in this record, please suggest a correction.

Cited References: 15Showing 15 of 15 [View All in Cited References page](#)*(from Web of Science Core Collection)*

1. **A comparison between CDIO and EAC engineering education learning outcomes** Times Cited: 5
By: Abdul Halim, M.H.; Buniyamin, N.
2016 IEEE 8th International Conference on Engineering Education (ICEED) Pages: 22-7 Published: 2016
2. **Actively linking learning outcomes and competencies to course design and delivery: experiences from an undergraduate Information Systems program in Singapore** Times Cited: 6
By: Baumgartner, Ilse; Shankaraman, Venky
2013 IEEE GLOBAL ENGINEERING EDUCATION CONFERENCE (EDUCON) Book Series: IEEE Global Engineering Education Conference Pages: 238-246 Published: 2013
3. **Learning outcomes and their assessment in higher education** Times Cited: 10
By: Dodridge, M.
Engineering Science and Education Journal Volume: 8 Issue: 4 Pages: 161-8 Published: Aug. 1999
4. Title: [not available] Times Cited: 9
Group Author(s): Engineering Accreditation Council
Engineering Programme Accreditation Manual 2012 Published: 2012
Publisher: Board Eng. Malays
5. **Designing and teaching courses to satisfy the ABET engineering criteria** Times Cited: 119
By: Felder, R. M.; Brent, R.
Journal of Engineering Education Volume: 92 Issue: 1 Pages: 7-25 Published: 2003
6. Title: [not available] Times Cited: 1
Group Author(s): International Engineering Alliance
Graduate Attributes and Professional Competencies Published: Jun. 2013
7. **CONSTRUCTIVE ALIGNMENT WORKSHOP** Times Cited: 1
By: ISARJI, HJ; SARUDIN; HJ, ZAINAB; et al.
Internation Islamic University Malaysia Published: Aug 2015
[\[Show additional data\]](#)
8. **An ontology model for building, classifying and using learning outcomes** Times Cited: 7
By: Kalou, A.; Solomou, G.; Pierrakeas, C.; et al.
2012 IEEE 12th International Conference on Advanced Learning Technologies (ICALT) Pages: 61-5 Published: 2012
9. **Learning Outcomes and Assessments Mapping Quality: Make it a Function** Times Cited: 16
By: Khawaja, Khalid W.
PROCEEDINGS OF 2016 IEEE GLOBAL ENGINEERING EDUCATION CONFERENCE (EDUCON2016) Book Series: IEEE Global Engineering Education Conference Pages: 1-5 Published: 2016
10. **The learning outcomes of exam questions in the Input/Output topic in Computer Architecture** Times Cited: 1
By: Larraza-Mendiluze, Edurne; Garay-Vitoria, Nestor
2013 LEARNING AND TEACHING IN COMPUTING AND ENGINEERING (LATICE 2013) Pages: 212-215 Published: 2013
11. **CQI processes, results, and program improvements for engineering design** Times Cited: 1
By: Lyons, JS; Bayoumi, AM
IEEE TRANSACTIONS ON EDUCATION Volume: 43 Issue: 2 Pages: 174-181 Published: MAY 2000
12. **Protein structure determination on demand** Times Cited: 3
By: Ming Li

13. **Functioning Modules for Learning Outcomes Attainment Measurement System in Universiti Kuala Lumpur** Times Cited: 1
By: Mokhtar, Shamsul Anuar; Zulfadli; Anuar, Siti Mashitah Shamsul
2016 PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON INFORMATION AND COMMUNICATION TECHNOLOGY (ICICTM) Pages: 77-83
Published: 2016
14. Title: [not available] Times Cited: 1
By: Noor, Megat Johari Megat Mohd.
WORKSHOP ACCREDITATI Published: 2015
15. **The Context and Outcomes of Learning in Educational Evaluation An Engineering Course** Times Cited: 1
By: Vasconcelos, F. H. L.; Silva, T. E. V.; Mota, J. C. M.
IEEE LATIN AMERICA TRANSACTIONS Volume: 13 Issue: 7 Pages: 2447-2453 Published: JUL 2015

Showing 15 of 15 [View All in Cited References page](#)

Clarivate

Accelerating innovation

© 2019 Clarivate [Copyright notice](#) [Terms of use](#) [Privacy statement](#) [Cookie policy](#)

[Sign up for the Web of Science newsletter](#) [Follow us](#)

