



ASSESSMENT IN ENGINEERING EDUCATION: A PEDAGOGICAL APPROACH

Assessment is considered as the most important role in steering the learning process; however we cannot be confined to one particular methodology as the best assessment method for a course. An assessment plan helps in selecting the right testing method and decides on the relative weight of each assessment for the final result of a course. This also helps to ensure that the assessment addresses the intended learning outcomes. In addition, it provides a good overview of the test arrangement for a course that will be published in the course manual. This makes an assessment plan a helpful tool for examiners and an important instrument for quality assurance which makes the first module of the course. An assessment matrix is designed to ensure that all the selected learning objectives are covered in the assessment which helps to make certain that the assessment will be both valid and reliable which provides the insights for the second module. This is done by using different methods to set the cut-off score by using rubrics. In the third module, the participants will be put forward to apply quality criteria for the construction of assessments and assessment items to improve the quality of assessments and education which have huge impact on the future education and careers of students. In the fourth and final module of the course the participants will find answers for the following questions 1) on which aspects did students perform well, and where did they fail? 2) If good students fail on certain questions, what does this say about the question or about teaching? 3) We may need to decide on how to fix certain errors or unexpected situations and think about how this affects students' grades 4) what are the things to consider when performing an exam or item analysis? 5) What do you look for? 6) How do you draw conclusions and make plans for future improvements? During the course, the participants will be guided through the different phases of preparing, creating and evaluating the assessments through instructional videos, interviews, animations and checklists. In addition to these, there will be course activities, such as assessments, and discussion prompts.

After participating, you will be able to:

1. Design an assessment that is constructively aligned (content, level, methods) with the course objectives and activities
2. Apply the quality criteria with respect to validity, reliability and transparency for construction of assessments and assessment items
3. Analyze the assessment output and results, assess the quality of the assessment and make decisions about students' grades accordingly
4. Formulate future improvements for an assessment.

By participating in this STTP, you will find answers to the following questions:

- What is the role of assessment?
- How can you select the right methods of assessment for your course?
- What is constructive alignment? • How can an assessment plan and matrix help you in the construction of assessments?
- Is it possible to make an absolute reliable and valid assessment?
- How can the formulation of good assessment questions have an impact on that?
- What is the role of feedback?
- How can rubrics help with providing feedback?
- What are the things to consider when performing an exam or item analysis? What aspects should you look out for?
- How do you draw conclusions from an exam analysis and make plans for future improvements?
- If good students fail on certain questions, what does this say about the question... or about your teaching?

DEPARTMENT OF MECHANICAL ENGINEERING
ASSESSMENT IN ENGINEERING EDUCATION: A PEDAGOGICAL APPROACH
AICTE APPROVED SHORT TERM TRAINING PROGRAM (STTP)
DETAILED SCHEDULE

PHASE 1-16.11.2020-21.11.2020

DATE	DAY	10.30AM-12.30PM	12.30-01.30PM	01.30-03.30PM
16.11.2020	MONDAY	Dr BS Pabla-NITTR Chandigarh Development and evaluation of Assessment Plan Assessment and Evaluation in Outcome Based Education (OBE) environment	LUNCH BREAK	Dr NC Shivaprakash-IISC Bangaluru -Challenges in good learning and assessment
17.11.2020	TUESDAY	Dr G Janardhanan- NITTR Chennai Fundamentals of Assessment and Characteristic of good assessment, item analysis with case study linking with academic and role of feedback using rubrics		Dr Pradeep Kumar Choudrey-Jawaharlal Nehru University, NewDelhi Assessment in Engineering Education: Where do we fail and Why?
18.11.2020	WEDNESDAY	Mr Alfredo Soeiro- Universidade do Porto, Portugal Role of assessment, Selecting the right methods of assessment for your course, constructive alignment and role of feedback		Dr S Rajarajan- Sairam Institute of Technology Impact analysis of assessing Industrial Visit, industrial sponsored laboratories and internship
19.11.2020	THURSDAY	Dr Kapil Kadam-IIT Bombay Assessment: What, Why, How and Online”		Dr T Lakshmanan- SRM Institute of Science & Technology Significance of Question Papers in Assessment
20.11.2020	FRIDAY	Dr Thayyaba Khatoon-Malla Reddy College of Engineering & Technology, Hyderabad Formulation of good assessment questions, developing rubrics helps with providing feedback		Dr G Moorthy-Velammal Institute of Technology Best Practice in Product Development & it’s assessment
21.11.2020	SATURDAY	Dr G Kalivarathan,.Addu school of Engineering division. Addu city Hithadhoo Ministry of education Maldives Effective implementation of PLC, Professional learning communities, collaboration and Faculty empowerment over OBE towards sustainable developments in quality of education for better assessment strategies amongst Engineering domain		Dr Atasi Mohanty-IIT Kharagpur role of assessment in enhancing students’ performance and motivation, Selection of right methods for our own course and feedback

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PHASE 2-14.12.2020-19.12.2020

DATE	DAY	10.30AM-12.30PM	12.30-01.30PM	01.30-03.30PM
14.12.2020	MONDAY	Dr Kapil Kadam-IIT Bombay Assessment: What, Why, How and Online”	LUNCH BREAK	Dr NC Shivaprakash-IISC Bangaluru -Challenges in good learning and assessment
15.12.2020	TUESDAY	Dr Pradeep Kumar Choudrey-Jawaharlal Nehru University, NewDelhi Assessment in Engineering Education: Where do we fail and Why?		Dr G Janardhanan- NITTR Chennai Fundamentals of Assessment and Characteristic of good assessment, item analysis with case study linking with academic and role of feedback using rubrics
16.12.2020	WEDNESDAY	Mr Alfredo Soeiro- Universidade do Porto, Portugal Role of assessment, Selecting the right methods of assessment for your course, constructive alignment and role of feedback		Dr BS Pabla-NITTR Chandigarh Development and evaluation of Assessment Plan Assessment and Evaluation in Outcome Based Education (OBE) environment
17.12.2020	THURSDAY	Dr R Kaja Bantha Navas- Sathyabama University, Chennai CDIO & Assessment tools and rubrics for evaluating the capstone projects in OBE		Dr G Kalivarathan, Addu school of Engineering division. Addu city Hithadhoo Ministry of education Maldives Effective implementation of PLC, Professional learning communities, collaboration and Faculty empowerment over OBE towards sustainable developments in quality of education for better assessment strategies amongst Engineering domain
18.12.2020	FRIDAY	Dr Thayyaba Khatoon-Malla Reddy College of Engineering & Technology, Hyderabad Formulation of good assessment questions, developing rubrics helps with providing feedback		Dr KN Subramanya- RV College of Engineering Direct and Indirect Assessment of Student Learning
19.12.2020	SATURDAY	Dr S Rajarajan- Sairam Institute of Technology Impact analysis of assessing Industrial Visit, industrial sponsored laboratories and internship		Dr Atasi Mohanty-IIT Kharagpur role of assessment in enhancing students’ performance and motivation, Selection of right methods for our own course and feedback

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PHASE 3-04.01.2021-09.01.2021

DATE	DAY	10.30AM-12.30PM	12.30-01.30PM	01.30-03.30PM
04.01.2021	MONDAY	Dr Kapil Kadam-IIT Bombay Assessment: What, Why, How and Online”	LUNCH BREAK	Dr NC Shivaprakash-IISC Bangaluru -Challenges in good learning and assessment
05.01.2021	TUESDAY	Dr Pradeep Kumar Choudrey-Jawaharlal Nehru University, NewDelhi Assessment in Engineering Education: Where do we fail and Why?		Dr G Janardhanan- NITTR Chennai Fundamentals of Assessment and Characteristic of good assessment, item analysis with case study linking with academic and role of feedback using rubrics
06.01.2021	WEDNESDAY	Dr S Rajarajan- Sairam Institute of Technology Impact analysis of assessing Industrial Visit, industrial sponsored laboratories and internship		Dr G Moorthy-Velammal Institute of Technology Best Practice in Product Development & it's assessment
07.01.2021	THURSDAY	Mr Alfredo Soeiro- Universidade do Porto, Portugal Role of assessment, Selecting the right methods of assessment for your course, constructive alignment and role of feedback		Dr BS Pabla-NITTR Chandigarh Development and evaluation of Assessment Plan Assessment and Evaluation in Outcome Based Education (OBE) environment
08.01.2021	FRIDAY	Dr Thayyaba Khatoon-Malla Reddy College of Engineering & Technology, Hyderabad Formulation of good assessment questions, developing rubrics helps with providing feedback		Dr G Kalivarathan,,Addu school of Engineering division. Addu city Hithadhoo Ministry of education Maldives Effective implementation of PLC, Professional learning communities, collaboration and Faculty empowerment over OBE towards sustainable developments in quality of education for better assessment strategies amongst Engineering domain
09.01.2021	SATURDAY	Dr T Lakshmanan- SRM Institute of Science & Technology Significance of Question Papers in Assessment		Dr Atasi Mohanty-IIT Kharagpur role of assessment in enhancing students' performance and motivation, Selection of right methods for our own course and feedback