



Navodaya Education Trust
NAVODAYA INSTITUTE OF TECHNOLOGY
Navodaya Nagar, Byangere Road, Raichur-584103
Affiliated to VTU, Belagavi Karnataka, Approved by AICTE, New Delhi

Name of the Workshop: Outcome Based Education with Assessment and Evaluation

Date : 08-07-2017

Resource Person: Dr.Rathnakumar P

Number of Faculty Participants: 64

Number of Admin staff Participants: NIL

Description:

In the era of globalization, traditional education system is losing its relevance. In today's world, everything changes very rapidly and continuously. More skills are required to work with very fast developing specialized fields. The educational institutions should produce graduates to have the skills and behavioral attributes in addition to knowledge. Thus to overcome the requirement, it is mandatory to shift from traditional education system to Outcome Based Education (OBE), which includes Program Outcomes (PO), Program Specific Outcomes (PSO), and Course Outcomes (CO). This Faculty Development Programme (FDP) addresses the need to enhance the knowledge about the latest Outcome Based Education (OBE) and with its assessment and evaluation. The major contents delivered are

- Taxonomies and Instructional Objectives
- Key parameters of OBE: Vision and Mission, PEOs, POs, PSOs, and Cos
- Outcome-based Curriculum Design
- Direct and Indirect Assessment of PO/PSO
- Outcome Based Evaluation
- Assessment and Evaluation

M
6.7.2017
Signature of Coordinators
Internal Quality Assurance Cell
(IQAC)

Navodaya Institute of Technology (NIT)
RAICHUR-584 103

Principals
Signature of Principal 8.7.17
PRINCIPAL

Navodaya Institute of Technology (NIT),
RAICHUR-584 103



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PHOTOS



**One Day Workshop on “Outcome Based Education with Assessment and Evaluation”
on 08-07-2017**



Gallikayya

PRINCIPAL
Navodaya Institute of Technology (IIT),
RAICHUR-584 103

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Navodaya Nagar, Bijangere Road, Raichur-584103
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Circular No: NITR/IQAC/2017-18/01

Date: 05-07-2017

Circular

It is hereby informed to all the staff and students to attend for one day Workshop on
“**Outcome Based Education with Assessment and Evaluation**” on 08.07.2017 at NIT auditorium
at 9.30am.

Resource Person: Dr P Rathnakumar

HOD & Professor
Department of Mechanical Engineering
Navodaya Institute of Technology, Raichur

Topics: Outcome Based Education with Assessment and Evaluation

M
05.07.17
Event Coordinator
Internal Quality Assurance Cell
(IQAC)
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RAICHUR-584 103
Copy to:

- ❖ Vice Principal
- ❖ HOD CSE
- ❖ HOD EEE
- ❖ HOD ECE
- ❖ HOD ME
- ❖ HOD CV
- ❖ HOD H & S



Principal
Principal
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One Day Workshop on "Outcome Based Education with Assessment and Evaluation" on 08-07-2017

Organized by
 INTERNAL QUALITY ASSURANCE CELL
 NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
SCHEDULE

Date	Time	Session	Topics	Resource Person
08/07/2017 (Saturday)	10.00 to 11.00		Inaugural Function	Dr P Rathnakumar HOD & Professor Department of Mechanical Engineering Navodaya Institute of Technology, Raichur
	11.00 to 11.15		Tea Break	
	11.15o 1.15	I	1. Taxonomies and Instructional Objectives 2. Key parameters of OBE: Vision and Mission, PEOs, POs, PSOs, and Cos 3. Outcome-based Curriculum Design	
	1.15 to 2.15		Lunch Break	
	2.15 to 3.15	II	1. Direct and Indirect Assessment of PO/PSO 2. Outcome Based Evaluation Assessment and Evaluation	
	3.15 to 4.00		Valedictory	

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List of Faculties attended one day Workshop on “Outcome Based Education with Assessment and Evaluation” on 08,07,2017

SL NO	NAME OF THE FACULTY	DESIGNATION	BRANCH
1	Mr. Md Adil	Asst. Prof	CE
2	Mr. Ashish P Desai	Asst. Prof	CE
3	Mr. Rajmohan B	Asst. Prof	CE
4	Ms. Shwetha Patil	Asst. Prof	CE
5	Mr. Vijaykumar G	Asst. Prof	CE
6	Mr.Nagesh Sugandhi	Asst. Prof	CE
7	Ms. Shruthi Shivaraj	Asst. Prof	CE
8	Ms. Priyanaka Patil	Asst. Prof	CE
9	Mr. Bharath Koner	Asst. Prof	CE
10	Mr. Santoshkumar	Asst. Prof	CE
11	Mr. Ramesh Bargani	Asst. Prof	CE
12	Mr. Basavaraj Akki	Asst. Prof	CE
13	Mr. Vinayak S	Asst. Prof	CE
14	Mr. Praveen Gouda Patil	Asst. Prof	CE
15	Mr. Shivlingayya	Asst. Prof	CE
16	Mr. Maheshwar M	Asst. Prof	CE
17	Mr. Panduranga B	Asst. Prof	CE
18	Mr. Chetan Gudi	Asst. Prof	CSE
19	Mr. Siva Kumar Reddy	Asst. Prof	CSE
20	Mrs. Shanthi E	Asst. Prof	CSE
21	Mr. Hanumesh D	Asst. Prof	CSE
22	Mr. Vijay Kumar Yadav	Asst. Prof	CSE
23	Ms. Jayashree	Asst. Prof	CSE
24	Ms. Bhagavathi A	Asst. Prof	CSE
25	Ms. Madhuri Devi C H	Asst. Prof	ECE
26	Ms. Channaveeramma R	Asst. Prof	ECE
27	Mr. Rammurthy Dasari	Asst. Prof	ECE
28	Ms. Priyadarshini N	Asst. Prof	ECE
29	Mr. Sachin kumar	Asst. Prof	ECE
30	Mr. Md. Shoibuddin Madni	Asst. Prof	ECE
31	Ms. Gauravi Shetty	Asst. Prof	ECE
32	Ms. Preeti Pattankude	Asst. Prof	ECE



G. M. G. G.

33	Ms. Muneeb Afzal	Asst. Prof	ECE
34	Ms. Atiya Sultana	Asst. Prof	ECE
35	Mr. Vasanth Reddy	Asst. Prof	ECE
36	Mr. Pradeep KGM	Asst. Prof	ECE
37	Mr. B K Mazumdar	Asst. Prof	EEE
38	Mr. Daniel	Asst. Prof	EEE
39	Ms. Geeta K M	Asst. Prof	EEE
40	Mr. Velu	Asst. Prof	EEE
41	Mr. Satish Kumar	Asst. Prof	EEE
42	Mr. Sudhakar Kothuru	Asst. Prof	EEE
43	Mr. Madhubabu B	Asst. Prof	EEE
44	Ms. Sana Anjum	Asst. Prof	EEE
45	Mr. Kiran Kumar T.H	Asst. Prof	H&S
46	Mr. Srikanth Kulkarni	Asst. Prof	H&S
47	Ms. Shalini K	Asst. Prof	H&S
48	Mr. Gururaj K	Asst. Prof	H&S
49	Mr. Shekar Arkasali	Asst. Prof	H&S
50	Ms. Rashmi das Bhat	Asst. Prof	H&S
51	Mr. Nagesh Babu Reddy K	Asst. Prof	ME
52	Dr. Anantachar	Asst. Prof	ME
53	Mr. Pradeep Ilay	Asst. Prof	ME
54	Mrs. Geeta V	Asst. Prof	ME
55	Mr. Priyankar D	Asst. Prof	ME
56	Mr. Zeeshan Ali	Asst. Prof	ME
57	Mr. Md. Umar	Asst. Prof	ME
58	Mr. Vinayak Mannur	Asst. Prof	ME
59	Mr. Mallikarjun	Asst. Prof	ME
60	Mr. Faheem Akthar	Asst. Prof	ME
61	Mr. Imran Basha	Asst. Prof	ME
62	Mr. Rajashakarappa	Asst. Prof	ME
63	Mr. Srikar G Kulkarni	Asst. Prof	ME
64	Mr. Ravi Kulkarni	Asst. Prof	ME

Internal Quality Assurance Cell
(IQAC)

Navodaya Institute of Technology (NIT)
RAICHUR-584 103



Principal
RAICHUR-584 103



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NET's

**NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

Date: 12.08.2019

From

Dr. M. N. Faruk
Professor & Head, CSE,
Navodaya Institute of Technology,
Raichur-584103.

To

The Principal,
Navodaya Institute of Technology,
Raichur-584103.

Respected Sir,

Sub: Permission for conducting a Lecture on "Awareness Program for Faculties & Students on Outcome Based Education"- Regarding.

With reference to the above cited subject, we have proposed to conduct a Lecture on **"Awareness Program for Faculties & Students on Outcome Based Education"** for all students and Faculties of Computer Science & Engineering Department on 21-08-2019. The selected topic may be useful to students and faculties to get align themselves and work towards fulfilling OBE concepts.

Kindly provide permission to do the same.

Thanking You.

Yours faithfully

Handwritten signature in green ink: Gani K... 12/08/19

Handwritten signature in blue ink: Dr. M.N. Faruk 12/08/19
Dr. M.N. Faruk
Professor & Head, CSE

Head of Department,
Computer Science & Engineering,
Navodaya Institute of Technology,
RAICHUR-584 103



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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
NAVODAYA DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Cir. No:

Date: 19-08-2019

CIRCULAR

All the faculties of department of Computer Science & Engineering, NIT, Raichur are here by informed to attend a Lecture on "Awareness Program for Faculties & Students on Outcome Based Education" on 21.08.2019 at 10.30 AM in CSE Department System Software Laboratory.

Lectures Details:

- Course Duration: 02 Hours.
- Beneficiary: Staff
- Location: CSE Department System Software Laboratory
- Schedule: 21.08.2019
- Timings: 10.30 A.M. to 12:30 P.M.

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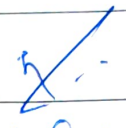
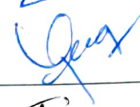








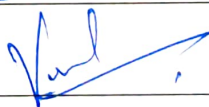
- All the faculties of CSE.
- Department Notice Board.
- Principal for kind information.

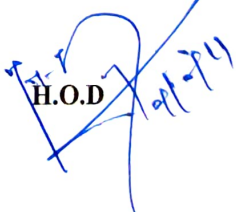
HOD
Head of Department
Computer Science & Engineering
Navodaya Institute of Technology
RAICHUR-584 104

Ganesh Gow
19/8/19

Attended Faculty List

Awareness Program for Faculties & Students on Outcome Based Education

SL.NO	NAME OF THE FACULTY	SIGNATURE
1.	Dr. M N Faruk (H.O.D)	
2.	Mr. Vijay Kumar Yadav	
3.	Mr. Chetan Gudi	
4.	Mr. Siva Kumar Reddy	
5.	Mrs. Shanthi E	
6.	Mr. Hanumesh D	
7.	Ms. Jayashree	
8.	Ms. Usha K	
9.	Mrs. Supriya G Purohit	
10.	Mrs. Saziya Anjum	
11.	Mrs. Vishakha P	


H.O.D

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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Students Attendance List

“Awareness Program for Faculties & Students on Outcome Based Education”

Date: 21-08-2019

2nd Year


SL.NO	USN	NAME OF STUDENT	ATTENDANCE (P/A)
1.	3NA18CS001	A KANAKALAXMI	P
2.	3NA18CS002	AFROZ AHMED	P
3.	3NA18CS003	ANN MARY GEORGE	A
4.	3NA18CS006	CHETANA J KULKARNI	P
5.	3NA18CS007	DEEPTHI H JOSHI	P
6.	3NA18CS008	DIVYA	P
7.	3NA18CS009	DURGA VENI	P
8.	3NA18CS010	DYAM HANUMESH	A
9.	3NA18CS012	HUGAR PHULARI VISHAL AMRUT	P
10.	3NA18CS013	K RAGHAVENDRA RAO	P
11.	3NA18CS014	K V V LAKSHMAN	P
12.	3NA18CS015	M.PRABHUVEER	A
13.	3NA18CS016	NIKHILA M	P
14.	3NA18CS017	MAHADHAV	P
15.	3NA18CS020	MOHAMMED	P
16.	3NA18CS022	MOHAMMED SAIF UDDIN	P
17.	3NA18CS023	MOHAMMED TAJAMMUL	P
18.	3NA18CS024	PADALA SUDHA SREEDEVI	P
19.	3NA18CS025	PALLAVI	P
20.	3NA18CS026	PAVANKUMAR SINGH	A
21.	3NA18CS027	POOJA RANI	P
22.	3NA18CS028	PRAVEEN KUMAR	P
23.	3NA18CS029	R NIDA AFREEN	P
24.	3NA18CS030	RATHI YASH	A
25.	3NA18CS031	RITHIKA SHARMA	P
26.	3NA18CS032	SANKEERTHANA	P
27.	3NA18CS033	SHREEDHARA	P

P.T. - P
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28.	3NA18CS034	SINDHUPRIYA KS	P
29.	3NA18CS035	SUNITHA	P
30.	3NA18CS036	SYED SAMEER	P
31.	3NA18CS037	SYEDA SABA	A
32.	3NA18CS038	SYEDA SHAGUFTA ANJUM	P
33.	3NA18CS039	UDAYASRI A	P
34.	3NA18CS040	UZMA SHABREEN	P
35.	3NA18CS041	V.VARSHINI	P
36.	3NA18CS042	VISHNU NAVALI	A
37.	3NA18CS043	VISHNUKANTH	P
38.	3NA18CS044	WILAYATH ALI	P
39.	3NA19CS400	SADIQ	P
40.	3NA19CS401	SANA	P

3rd Year


SL.NO	USN	NAME OF STUDENT	ATTENDANCE (P/A)
41.	3NA17CS001	AKSHAY B MUTALIC	P
42.	3NA17CS002	B SREEJA	P
43.	3NA17CS003	B V REKHA DEVI	P
44.	3NA17CS004	BHAVYA	P
45.	3NA17CS005	C POOJITHA	A
46.	3NA17CS006	G TEJASWINI	P
47.	3NA17CS008	VIJAY TARUN	P
48.	3NA17CS009	HAFSA BATUL	P
49.	3NA17CS010	HAJRA	P
50.	3NA17CS012	KOMAL	P
51.	3NA17CS013	KRISHNAVENI PUJARI	P
52.	3NA17CS014	MANJARI INAMDAR V	A
53.	3NA17CS015	PAVANKUMAR T	P
54.	3NA17CS016	PAVITRA	P
55.	3NA17CS018	RACHANA	P
56.	3NA17CS019	S KAMAKSHI	A
57.	3NA17CS021	SAFOORA FATIMA	P
58.	3NA17CS022	SHIVAPPA	P
59.	3NA17CS023	SHREESHA	P
60.	3NA17CS024	SHREESHA DANDE	P
61.	3NA17CS025	SRIKAR K	A


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62.	3NA17CS027	V KAVANABHANDARI	P
63.	3NA15CS007	EJAS AHEMAD	P
64.	3NA15CS021	SOUMYA C	A
65.	3NA16CS020	SUSHMITHA	P

4th Year

SLNO	USN	NAME OF STUDENT	ATTENDANCE (P/A)
66.	3NA14CS011	SHWETHA	P
67.	3NA15CS003	VISHNU	P
68.	3NA15CS012	POORNIMA	P
69.	3NA15CS013	PRIYANKA	P
70.	3NA15CS017	SHILPA	P
71.	3NA15CS019	SHRADHA	P
72.	3NA16CS001	ABHISHEK KULKARNI	P
73.	3NA16CS002	AMEENA BEGUM	P
74.	3NA16CS004	ANUSHA M	A
75.	3NA16CS005	APOORVA M R	P
76.	3NA16CS008	E SWETHA	P
77.	3NA16CS009	K JAHNAVI	P
78.	3NA16CS010	J M MADHU	P
79.	3NA16CS011	MANASA KOTWAL	P
80.	3NA16CS012	RIDA TAMKIN	P
81.	3NA16CS013	SAMREEN SULTANA	A
82.	3NA16CS014	SHRUSTI MALI PATIL	P
83.	3NA16CS015	SHWETA	P
84.	3NA16CS016	SINDHU PATIL	P
85.	3NA16CS017	SHIRISHA DESHPANDE	P
86.	3NA16CS018	SRI LAKSHMI K	P
87.	3NA16CS019	SURESH K	P
88.	3NA16CS021	SYEDA SANNAYYA	P
89.	3NA16CS023	VAISHNAVI	P
90.	3NA17CS400	IMTIYAAZ	P
91.	3NA14IS001	HARSHA	A
92.	3NA15IS003	KISHAN K P	P


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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
DEPARTMENT OF MECHANICAL ENGINEERING

Date: 21.08.2019

Report on OBE Lecture

Department of Computer Science & Engineering, Navodaya Institute of Technology, Raichur organized a lecture on "Awareness Program for Faculties & Students on Outcome Based Education" for faculties & students of Computer Science & Engineering on 21.08.2019 at System Software Laboratory from 10.30 AM to 12.30 PM.

The lecture was delivered by

1. Dr. M.N. Faruk, Professor & Head,
Dept. of Computer Science & Engineering,
NIT, Raichur

In the era of globalization, traditional education system is losing its relevance. In today's world, everything changes very rapidly and continuously. More skills are required to work with very fast developing technology. The educational institutions should produce graduates to cope with technological development. Thus to overcome the requirement, it is mandatory to shift from traditional education system to Outcome Based Education (OBE), which includes Program Outcomes (PO), Program Specific Outcomes (PSO), and Course Outcomes (CO). With contrary to the fact that most teachers put the center of their attention too much on what they teach rather than on what their students learn, OBE emphasizes on what is expected from the student to finally achieve when they complete their course rather than how they achieved it. Outcome based education is defined as an approach to education in which decisions about the curriculum are driven by the outcomes the students should display by the end of the course- professional knowledge, skills, abilities, values and attitudes- rather than on the educational process. It highlights the fact that you have to know the final destination of your journey before you start voyaging. Exploring new ways for designing tertiary education is a worldwide pursuit. There is a need for tertiary education to provide both professional knowledge/skills and all-round attributes to the graduates so as to enable them to face the diversified yet global demands of the 21st century society

Galli Gow 21/8/19

HOD
Head of Department
Computer Science & Engineering
Navodaya Institute of Technology
RAICHUR-574 102

Program Educational Objective-PEO

- The educational objectives of an engineering degree program are the statements that describe the expected achievements of graduates in their career, and also in particular, what the graduates are expected to perform and achieve during the first few years after graduation.
- The PEOs may be guided by global and local needs, vision of the Institution, long term goals etc.
- For defining the PEOs the faculty members of the program must continuously work with all Stakeholders: Local Employers, Industry, Students and the Alumni

PEOs (Examples)

- PEO1**
Graduate will compete on a global platform to pursue their professional career in Electrical Engineering and allied disciplines
- PEO2**
Graduates will ~~have~~ higher ~~English~~ and/or ~~engage~~ in continuous up gradation of their professional skills
- PEO3**
Graduate will communicate effectively and will demonstrate professional behaviour while working in diverse team
- PEO4**
Graduates will demonstrate concern for society and environment

(Example 2 - Civil Engineering)

- PEO1**
Practice civil engineering in construction industry, public sector undertaking and as an entrepreneur for successful professional career
- PEO2**
Pursue higher education for professional development
- PEO3**
Exhibit leadership qualities with demonstrable attributes in lifelong learning to contribute to the societal needs

Processes for PEOs

- Feedback format for collecting data from stakeholders
- A process by which PEOs are created and reviewed periodically
- A process to evaluate to what extent PEOs are attained
- Review, Mid correction, and Continuous Quality Improvement

Program Outcomes

- POs are statements about the knowledge, skills and attitudes (attributes) the graduate of a formal engineering program should have.
- Profile of the Graduates reached through POs - Target
- POs are defined by Accreditation Agencies of the country (NBA in India)
- Defining these is the Starting Point

Program Outcomes (POs)

- Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
- Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- Design/Development of Solutions:** Design solutions for complex engineering problems, and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental constraints.
- Conduct Investigations of Complex Problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

- Conti...
- Modern Tool Usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations
 - The Engineer and Society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
 - Environmental and Sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
 - Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

- Conti...
- Individual and Team Work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
 - Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions
 - Project Management and Finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments
 - Lifelong Learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change

PROGRAM SPECIFIC OUTCOMES (PSO)

- These outcomes are specific to a program in addition to NBA defined POs, namely, **Civil, Mechanical, Chemical, Computer science etc.,(2-4)**
- Example: Civil Engineering can have PSOs as:
 - PSO 1: Able to analyse and design building structural systems.
 - PSO 2: Able to provide design solutions to water supply and sewage systems.
 - PSO 3: Able to identify and analyse transportation engineering problems and provide solutions for the benefit of society.

Dr. P. S. R.
Head of Department,
Computer Science & Engineering
Maulana Institute of Technology
P.O. No. 205, 505 406

Presented By

Dr. M.N. Faruk
Professor & Head, CSE
Navodaya Institute of Technology, Raichur
hodcse.nv@navodaya.edu.in

Outcomes Based Education

Outcomes based education (OBE) is a process that involves the restructuring of curriculum, assessment and reporting practices in education to reflect the achievement of high order learning and mastery rather than the accumulation of course credits" (Tucker, 2004)

(http://www.slideshare.net/jelal109/obe-approaches?from_action=save)

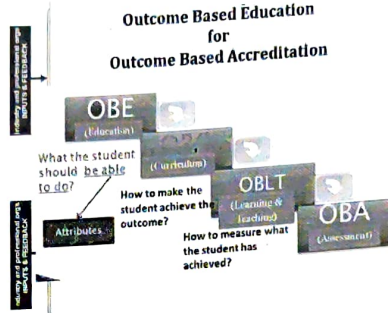
Why Outcome Based Accreditation

- Globalization has brought in a clear shift from education as transmission of expert knowledge to education as building learner competencies including learning to learn and life long learning.
- That means focus will have to be on:
 - Understanding fundamentals very well, and learning new skills/competencies that would enable individuals to cope with the demands of the rapidly changing workplace
 - Prepare global engineers who will have to solve problems and shoulder challenges which are not even known today!!

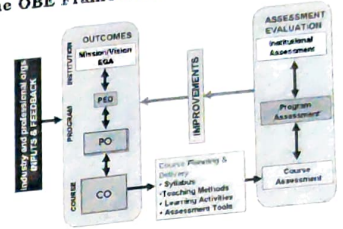
Accreditation Criteria (OBE)



Outcome Based Education for Outcome Based Accreditation



The OBE Framework



Administrative System for Implementation of OBE



Vision and Mission Statements

- Statements help in defining aspirations and to remain focused
- Should be written in a simple language, easy to communicate and should define objectives which present near future of the Institute
- Vision statement is dream of where one wants the Institute to be and inspires all the stake holders
- Mission statements are actionable statements that guide the stake holders to act

How to formulate Vision and Mission Statements

- Bottoms up approach
- Involve all stakeholders
- Discussion, Brain storming
- Gap analysis or SWOT analysis
- Challenges before the institute
- What are the immediate and long term goals
- Evolve Vision and Mission statements based on these discussions
- Strategic plan

Vision and Mission Statements

Vision is a futuristic statement that the institution would like to achieve over a long period of time, and Mission is the means by which it proposes to move toward the stated Vision

Example..

Vision:
To emerge as one of the nation's finest Institutions in the field of Technical Education and Research through focused, effective and sustained monitoring of its programmes and resources.

Mission:
To develop high quality professionals ingrained in ethics, wisdom and creativity for the betterment of the society.

Corrected Vision and Mission Statements

Vision:
To emerge as one of the nation's finest Institutions of higher learning in the field of Technical Education to develop professionals who are technically competent, ethical, environment friendly for betterment of society.

Mission:
Accomplish stimulating learning environment for students through quality teaching, research and outreach activity by providing state of the art facilities, industry exposure and guidance of dedicated faculty

Department Vision and Mission Statements (Sample)

Vision:
To be an excellent centre for imparting quality higher education in Civil Engineering for a constantly changing societal needs with credibility, integrity and ethical standards.

Mission:
Accomplish excellence in curricular, co-curricular activities with a committed faculty through teaching and research which creates technically competent and dedicated civil engineers to serve their surroundings with pride.

Dr. M.N. Faruk
Head of Department
Computer Science & Engineering
Navodaya Institute of Technology
Raichur

FEEDBACK

DATE: 21-08-2019

DEPARTMENT: COMPUTER SCIENCE & ENGINEERING

NAME OF THE RESOURCE PERSON	Dr. M.N. FARUK
DESIGNATION	Professor & Head, CSE
INSTITUTE/ORGANIZATION	Navodaya Institute of Technology, Raichur
TITLE OF PROGRAM	"Awareness Program for Faculties & Students on Outcome Based Education"
VENUE	System Software Lab, Department of CSE
COMMENTS	Chetan Audi Awareness program on OBE is must in current generation. The presentation of content was very helpful.

NET's
NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
(Approved by AICTE, New Delhi & Affiliated to VU, Belgaum)

FEEDBACK

DEPARTMENT: COMPUTER SCIENCE & ENGINEERING

DATE: 21-03-2019

NAME OF THE RESOURCE PERSON	Dr. M.N. FARUK
DESIGNATION	Professor & Head, CSE
INSTITUTE/ORGANIZATION	Navodaya Institute of Technology, Raichur
TITLE OF PROGRAM	"Awareness Program for Faculties & Students on Outcome Based Education"
VENUE	System Software Lab, Department of CSE
COMMENTS	<i>Abhishek Kulkarni.</i> <i>Program conducted was very informative. Awareness on OBE gave more knowledge & was helpful.</i>



NAVODAYA

NET's
NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
DEPARTMENT OF MECHANICAL ENGINEERING

Cir. No: NITR/2019-20/02E/01

Date: 17-08-2019

CIRCULAR

All the faculties of department of Mechanical Engineering, NIT, Raichur are here by informed to attend a Lecture on "Responsibilities of faculties in Outcome Based Education" on 19.08.2019 at 10.00 AM in Department Seminar Hall.

Lectures Details:

- Course Duration: 90 Minutes approx.
- Beneficiary: Staff
- Location: Department Seminar Hall
- Schedule: 19.08.2019
- Timings: 10.00 A.M. to 11.30 A.M.

To

All the faculties of MED
Department Notice Board
Copy to Principal for kind information

[Handwritten Signature]
17/08/19

HOD
Head of Department
Department of Mechanical Engineering
Navodaya Institute of Technology (NIT)
RAICHUR.

[Handwritten Signature]
17/08/19

PRINCIPAL
Navodaya Institute of Technology (NIT)
RAICHUR-584 103



Measuring Attainment of Course Outcomes and Program Outcomes – A Simplified Approach as per Self-Assessment Report - June 2015

Bhimasen Soragaon¹, K S Mahesh²

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²(Asst. Professor, Department of Industrial Engineering and Management, JSS Academy of Technical Education, Bangalore, India)

Abstract: The National Board of Accreditation (NBA) has released a modified version of the self-assessment report (SAR) for Tier - II engineering institutions in the country. Ten different criteria covering different aspects of providing engineering education have been included in the report. These criteria rigorously assess the quality of engineering education offered by different programs of a non-autonomous engineering institution affiliated to a university.

Criterion 3 assesses the attainment of program outcomes (POs) through attainment of course outcomes (COs). Different approaches have been adopted by engineering institutions for the measurement of attainment of COs and POs prior to June 2015 SAR format. Also, criterion 7 depends to a large extent and criterion 2 to some extent on criterion 3. Hence, it is required to measure the attainment of COs and POs as per the guidelines of SAR June 2015 format.

This paper presents a simplified but robust approach for the measurement of attainment of COs and POs. The approach can be extended to measure the attainment of Program Specific Outcomes (PSOs) also. Sample course is considered for showing the measurement of attainment of COs and POs.

Keywords: Self-assessment report, Attainment of Course outcomes, Program outcomes, Tier-II engineering institutions

I. Introduction

Demand for quality of education and employable work-force is ever increasing globally. The continuous innovations in industries, global competition and new business requirements have led to raising the bar for the fresh engineering graduates' employability and success in professional career. National Board of Accreditation (NBA) is one of the platforms that provides a framework to bridge the 'academic- industry gap' and enables better employment prospects for engineering graduates. The process guidelines help in building curriculum to improve not only the technical skills but also the soft-skills of the engineering graduates, which in-turn increases the employability of graduates. By imbibing these process guidelines and principles in Engineering Programs, the institutions can meet the global standards and get recognition across the globe. The NBA, which insists on 'Outcome Based Education', has published guidelines and templates^{[1][2]} for UG Engineering Programs (Tier-II) to conduct 'Self-Assessment' of their quality of education. The guidelines help the institutions, who conduct UG Engineering Programs, improve their teaching-learning processes to meet the global standards of technical education. The guidelines are presented in the SAR in the form of ten criteria meeting which will enable an engineering institution to get accredited. One of the important criteria is about measuring the attainment of course outcomes (COs), program outcomes (POs) and program specific outcomes (PSOs). Whereas POs are defined by the NBA, COs and PSOs need to be defined or formulated by the respective programs. However, in the earlier versions of SAR, POs should have been defined by the programs based on the graduate attributes.

II. Attainment Of COs, POs And PSOs

The process of attainment of COs, POs and PSOs starts from writing appropriate COs for each course of the program from first year to fourth year in a four-year engineering degree program. The course outcomes are written by the respective faculty member using action verbs of learning levels suggested by Bloom^[3] and Anderson^[4]. Then, a correlation is established between COs and POs in the scale of 1 to 3, 1 being the slight (low), 2 being moderate (medium) and 3 being substantial (high). A mapping matrix is prepared in this regard for every course in the program including the elective subjects. The course outcomes written and their mapping with POs are reviewed frequently by a committee of senior faculty members before they are finalized. The following tables show the COs and the CO-PO mapping matrix for a sample course:



Table II.1: Course Outcomes

Course Name: Mechanics of Materials

Course Code: 10ME34

At the end of this course, the student will be able to:

Course Outcome #	Course Outcome
C204.1	Explain the concepts of 'stress' and 'strain' in a structural member subjected loading.
C204.2	Calculate stresses and strains in structural members such as bars, plates, cylinders subjected to fluid pressure, etc. using suitable methods.
C204.3	Analyze bars and beams for energy stored and stresses in them when subjected to different loadings.
C204.4	Analyze beams, columns and shafts for stresses and deflections that occur in them under a variety of applied loads.

C204 – the style of writing course code number as suggested in SAR report.

Table II.2: Mapping of Course Outcomes with Program Outcomes

CO #	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C204.1	2	2	2	2	-	-	-	-	-	-	-	-
C204.2	3	3	3	2	-	-	-	-	-	-	-	-
C204.3	3	3	3	2	-	-	-	-	-	-	-	-
C204.4	3	3	3	2	-	-	-	-	-	-	-	-
C204	2.75	2.75	2.75	2.00	-	-	-	-	-	-	-	-

From the mapping matrix of COs and POs for all the courses as above, a 'Program level Course-PO matrix' of all the courses including first year courses is prepared. Table II.3 below shows 'Course-PO' mapping matrix. For convenience and simplicity, only few courses are shown with hypothesized mapping values except for C204 course.

Table II.3 Program level Course-PO matrix for all the courses including first year courses

COURSE	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	3.00	3.00	2.00	---	2.50	1.75	---	---	---	---	---	---
C102	2.75	2.00	3.00	2.00	---	2.00	---	---	2.00	---	---	---
C103	---	---	---	---	---	---	3.00	2.60	2.5	3.00	---	2.00
C204	2.75	2.75	2.75	2.00	-	-	-	-	-	-	-	-
C205	2.00	3.00	2.5	1.50	2.00	---	---	2.00	---	---	2.00	---
C301	3.00	2.00	2.60	2.00	2.00	---	---	---	---	---	---	---
C302	---	3.00	3.00	2.50	---	---	2.00	1.75	2.00	---	---	2.00
C401	2.50	2.60	2.00	---	3.00	2.00	---	2.00	---	2.50	---	2.50
C404	3.00	3.00	3.00	3.00	2.00	2.00	2.50	3.00	---	2.50	3.00	---

II.1 Attainment of COs

Course Outcomes are narrower statements that describe what students are expected to know, and be able to do at the end of each course. These relate to the skills, knowledge, and behavior that students acquire in their matriculation through the course^[5].

In a university affiliated college, the CO attainment levels can be measured based on the results of the internal assessment and external examination conducted by the university. This is a form of direct measurement of attainment. In the university to which the author's institute is affiliated to, three internal assessment tests are conducted for each course in a semester. In each test, the percentage of students who achieve a set target (usually, 60% of the maximum marks, i.e., 15 of 25) for the COs that are covered is computed. After the three tests, the average of these percentages is computed to decide the attainment level. NBA has given, in its SAR format, the following example guidelines for arriving at an attainment level:

Attainment Level 1: 60% of students score more than 60% marks out of the maximum relevant marks.

Attainment Level 2: 70% of students score more than 60% marks out of the maximum relevant marks.

Attainment Level 3: 80% of students score more than 60% marks out of the maximum relevant marks.

Thus, the average of percentage of students attaining all the COs decides the CO attainment level. For the case example considered, in the internal assessment (IA) tests, the target attainment level for each CO and for each student is set at 60% of the maximum marks for a question or a group of questions. The percentage of students attaining this target level of each CO is computed and the average of these percentages is considered for deciding the attainment level of course outcome as shown above in the example guidelines. The process of computing CO attainment in internal assessment is shown in Table II.4 (next page).

From the table, it is found that the percentages of students attaining CO1, CO2, CO3, and CO4 are 100 (1.00), 63 (0.63), 98 (0.98), and 70.5 $\{(0.87+0.54)/2\}$ respectively. Hence, the average percentage of students who attained all the COs is 82.875 (0.82875). This corresponds to Course Attainment level of 3.

Similarly, after the declaration of the university results, the percentage of students who attained the COs is computed. Here, it is assumed that the questions answered by a student cover all the course outcomes defined for that course. From Table II.4 (please refer last two columns), it is found that only 8 percent of students have scored more than 60% of the maximum marks in the course. Hence, the attainment level in this case is 0 as per the example guidelines suggested in the SAR of NBA.

Attainment Level 1: 60% of students scoring more than university average marks or set attainment level.

Attainment Level 2: 70% of students scoring more than university average marks or set attainment level.

Attainment Level 3: 80% of students scoring more than university average marks or set attainment level.

In a meeting of senior faculty members in the author's institute, many discussions were held on setting the target attainment level (percent of marks scored by a student in a course) for deciding the course attainment level. The author argued that this target should be set based not only on the university previous results for 3-4 years but also on the type of course (subject) and the quality of students admitted. In engineering programs, there are few courses which students feel rather difficult compared to other courses. Few example courses to cite in Mechanical Engineering program are 'Thermodynamics', 'Mechanics of Materials', 'Dynamics of Machinery', 'Heat Transfer', etc. where university results vary drastically every year.

In the case example considered in this paper, the target percent of marks scored by the students is set by the course faculty member based on the university results of the course in the institute in the past three years. The average pass percentage in that course was around 40% of which only about 18% percent of students scored 60 marks or more out of maximum 100 marks. Hence, the target was reduced to 42% (that is, a student should score 42 marks or more for attaining a CO). The guidelines for deciding the attainment levels are then modified as

Attainment Level 1: 60% of students scoring more than 42% of maximum marks.

Attainment Level 2: 70% of students scoring more than 42% of maximum marks.

Attainment Level 3: 80% of students scoring more than 42% of maximum marks.

From the table, it is found that only 40% of students have scored more than 42% of marks. Hence, the CO attainment level in SEE is ZERO.

II.2 Overall Course Outcome Attainment

The overall CO attainment level in the course considered is then computed as

Overall CO attainment level = 50% of CO attainment level in IA tests + 50% of CO attainment level in SEE

$$\text{Overall CO attainment level} = 0.5 \times 3 + 0.5 \times 0 = 1.5$$

It is assumed here that all the COs defined for the course are covered in SEE. However, it is difficult to know the coverage of COs question-wise since the question paper is set by different faculty members.

The example guidelines in the SAR suggest to use a proportion of 80% of weightage to SEE and 20% weightage to internal assessment for computing overall CO attainment for a course. However, a decision was taken from the discussions in several meetings in the institute to use 50% weightage each for SEE and internal assessment. Hence it is decided to use the above weight proportion for computing overall CO attainment for each course. The above procedure of computing overall CO attainment is to be repeated for each course from first year to final year in an academic year (including opted electives, project work and technical seminars in final year) in order to enable computation of PO and PSO attainment levels.

II.3 Attainment of POs

Program Outcomes (POs) are one step broader statements than COs that describe what students are expected to know and be able to do upon the graduation. These relate to the skills, knowledge, and behavior that students acquire in their matriculation through the program (NBA Tier-II Manual, January 2013)^[5]. Earlier to June 2015 format of SAR, the programs used to define the POs based on the graduate attributes. The June 2015



Measuring Attainment of Course Outcomes and Program Outcomes – A Simplified Approach as per..

format of SAR includes POs defined common to all programs. However, NBA suggests programs to define 2 – 4 POs specific to an engineering program and are called 'Program Specific Outcomes (PSOs)' [1]. It is required to compute the attainment levels for PSOs in addition to computing attainment of POs.

Program outcomes and 'program specific outcomes' are attained through the attainment of COs. This is called direct attainment of POs and PSOs. The overall CO attainment value as computed in section II.2 and the CO-PO mapping values as computed in Table II.2 are used to compute the attainment of POs. Similarly, the overall CO attainment value as computed in section II.2 and CO-PSO mapping (not shown in this paper) values are used to compute the attainment of PSOs.

Table II.4: Percentage of students attaining course outcomes and attainment level

Sl No	USN	Name of the Student	PO1		PO2		PO3		PO4		University Result	Target Level		
			CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8				
			Q1.2.3 (5M)	Q1.2.3 (5M)	Q1.2.3 (10M)	Q1.2.3 (10M)	Q1.05 (15M)	Q1.05 (15M)	Q1.2.3.4(25M)	Q1.2.3.4(25M)				
1	1XX12M027	STUDENT 1	4	Y	10	N	8	Y	7	N	AB	NA		
2	1XX12M028	STUDENT 2	5	Y	3	N	8	Y	13	Y	10	N		
3	1XX12M029	STUDENT 3	5	Y	20	Y	10	Y	15	Y	AB	NA		
4	1XX12M030	STUDENT 4	5	Y	19	Y	10	Y	15	Y	AB	NA		
5	1XX12M031	STUDENT 5	4	Y	20	Y	10	Y	15	Y	AB	NA		
6	1XX12M032	STUDENT 6	3	Y	13	Y	9	Y	15	Y	AB	NA		
7	1XX12M033	STUDENT 7	4	Y	17	Y	8	Y	14	Y	AB	NA		
8	1XX12M034	STUDENT 8	4	Y	12	Y	10	Y	15	Y	AB	NA		
9	1XX12M035	STUDENT 9	5	Y	20	Y	10	Y	15	Y	AB	NA		
10	1XX12M036	STUDENT 10	5	Y	20	Y	10	Y	15	Y	AB	NA		
11	1XX12M037	STUDENT 11	5	Y	10	N	10	Y	10	Y	AB	NA		
12	1XX12M038	STUDENT 12	4	Y	10	N	10	Y	15	Y	AB	NA		
13	1XX12M039	STUDENT 13	4	Y	20	Y	10	Y	15	Y	AB	NA		
14	1XX12M040	STUDENT 14	3	Y	17	Y	10	Y	14	Y	AB	NA		
15	1XX12M041	STUDENT 15	4	Y	16	Y	10	Y	15	Y	AB	NA		
16	1XX12M042	STUDENT 16	4	Y	7	N	10	Y	8	N	9	N		
17	1XX12M043	STUDENT 17	5	Y	11	N	10	Y	15	Y	17	Y		
18	1XX12M044	STUDENT 18	5	Y	18	Y	10	Y	15	Y	AB	NA		
19	1XX12M045	STUDENT 19	4	Y	20	Y	10	Y	15	Y	AB	NA		
20	1XX12M046	STUDENT 20	5	Y	20	Y	10	Y	15	Y	AB	NA		
21	1XX12M047	STUDENT 21	4	Y	11	N	9	Y	8	N	20	Y		
22	1XX12M048	STUDENT 22	4	Y	20	Y	10	Y	15	Y	AB	NA		
23	1XX12M049	STUDENT 23	4	Y	8	N	10	Y	15	Y	AB	NA		
24	1XX12M050	STUDENT 24	4	Y	14	Y	AB	NA	AB	NA	18	Y		
25	1XX12M051	STUDENT 25	5	Y	17	Y	AB	NA	AB	NA	18	Y		
26	1XX12M052	STUDENT 26	4	Y	10	N	10	Y	15	Y	AB	NA		
27	1XX12M053	STUDENT 27	5	Y	18	Y	10	Y	15	Y	AB	NA		
28	1XX12M054	STUDENT 28	4	Y	20	Y	10	Y	15	Y	AB	NA		
29	1XX12M055	STUDENT 29	5	Y	12	Y	8	Y	8	N	22	Y		
30	1XX12M056	STUDENT 30	4	Y	18	Y	10	Y	15	Y	AB	NA		
31	1XX12M057	STUDENT 31	5	Y	17	Y	10	Y	12	Y	AB	NA		
32	1XX12M058	STUDENT 32	5	Y	16	Y	10	Y	15	Y	AB	NA		
33	1XX12M059	STUDENT 33	3	Y	6	N	9	Y	12	Y	20	Y		
34	1XX12M060	STUDENT 34	4	Y	16	Y	10	Y	15	Y	AB	NA		
35	1XX12M061	STUDENT 35	5	Y	20	Y	10	Y	15	Y	AB	NA		
36	1XX12M062	STUDENT 36	5	Y	10	N	10	Y	10	Y	AB	NA		
37	1XX12M063	STUDENT 37	5	Y	20	Y	10	Y	15	Y	AB	NA		
38	1XX12M064	STUDENT 38	5	Y	18	Y	10	Y	15	Y	AB	NA		
39	1XX12M065	STUDENT 39	4	Y	12	Y	8	Y	14	Y	AB	NA		
40	1XX12M066	STUDENT 40	5	Y	10	Y	10	Y	14	Y	AB	NA		
41	1XX12M067	STUDENT 41	4	Y	19	Y	7	Y	15	Y	AB	NA		
42	1XX12M068	STUDENT 42	5	Y	10	N	4	N	14	Y	AB	NA		
43	1XX12M069	STUDENT 43	AB	NA	AB	NA	10	Y	12	Y	15	Y		
44	1XX12M070	STUDENT 44	5	Y	3	N	10	Y	5	N	14	N		
45	1XX12M071	STUDENT 45	3	Y	3	N	9	Y	15	Y	0	N		
46	1XX12M072	STUDENT 46	3	Y	3	N	9	Y	12	Y	11	N		
47	1XX12M073	STUDENT 47	4	Y	0	N	AB	NA	AB	NA	13	N		
48	1XX12M074	STUDENT 48	4	Y	2	N	8	Y	1	N	20	Y		
49	1XX12M075	STUDENT 49	4	Y	12	Y	10	Y	15	Y	AB	NA		
50	1XX12M076	STUDENT 50	3	Y	5	N	10	Y	14	Y	AB	NA		
			Y	49			31			46			7	20
			N	0			19			1			6	30
			NA	1			1			3			37	0
			CO attainment	1.00			0.63			0.98			0.87	0.54
			Ave att	0.8287									0.705	
			Att. Level	3									Att. Level	0

Using Table II.4 and the overall course attainment levels of all the courses, the PO attainment values are computed as shown in Table II.5 (next page).

Sample computation of PO values:

- Cell number C101-PO1: PO attainment vale = (Corresponding cell value from Table II.3 x Overall CO attainment value for course C101)/3 = (3x2.3)/3 = 2.3
- Cell number C103-PO9: PO attainment vale = (Corresponding cell value from Table 2.3 x Overall CO attainment value for course C103)/3 = (2.5 x 2.5)/3 = 2.08

- Cell number C204-PO4: PO attainment value = (Corresponding cell value from Table 2.3 x Overall CO attainment value for course C204)/3
= (2.0 x 1.5)/3 = 1.00

As per the guidelines of the SAR, the overall attainment of outcomes of a program (POs) is computed by adding direct attainment and indirect attainment values in the proportion of 80:20¹¹. That is, 80% of direct attainment and 20% of indirect attainment is taken into consideration.

The direct attainment of POs is the average of individual PO attainment values. From table II.5, the direct attainment of PO1 is $(2.30+2.57+1.34+2.60+1.375+2.17+3.00)/6 = 2.19$. The direct attainment of other POs is computed in this manner and is shown in the table.

For determining indirect attainment of POs and PSOs, SAR suggests student exit surveys, employer surveys, co-curricular activities, extracurricular activities, etc. In this paper, student exit survey alone is considered for this purpose. A questionnaire was designed (as shown in the last page) for this purpose and the average responses of the outgoing students for each PO is computed and entered in the corresponding row of Table II.5. Finally, overall PO attainment values are computed by adding direct and indirect PO attainment values in the proportion of 80:20 respectively. The computed values are compared with the set target values of POs. The target values are set in consultation with the members of 'departmental advisory board (DAB)' along with the faculty members of the program. It is argued that the target PO attainment value for each PO must be different since the contribution of courses for PO attainment is different. Accordingly, each PO was set with different target value as shown in the last row of Table II.5. It is found from the table that all the POs are attained. An action plan for POs that do not reach the target attainment value must be designed and implemented in the subsequent academic year. Criterion 7 of the SAR deals with target values of POs, and action plans needed for attaining POs whose attainment values are less than the set target values.

A table similar to Table II.5 is to be prepared for computing the attainment of PSOs based on CO-PSO mapping relationship values and overall course attainment levels.

Table II.5: PO attainment values

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	Overall CO Attain.
C101	2.30	2.30	1.53	---	1.92	1.34	---	---	---	---	---	---	2.30*
C102	2.57	1.87	2.80	1.87	---	1.87	---	---	1.87	---	---	---	2.80*
C103	---	---	---	---	---	---	2.50	2.17	2.08	2.50	---	1.67	2.50*
C201	1.34	2.00	1.67	1.50	1.34	---	---	1.34	---	---	1.34	---	2.00*
C202	2.60	1.73	2.25	1.73	1.73	---	---	---	---	---	---	---	2.60*
C203	---	2.80	2.80	2.33	---	---	1.87	1.63	1.87	---	---	1.87	2.80*
C204	1.375	1.375	1.375	1.00	-	-	-	-	-	-	-	-	1.5
C301	2.17	2.25	1.73	---	2.60	1.73	---	1.73	---	2.17	---	2.17	2.60*
C404	3.00	3.00	3.00	3.00	2.00	2.00	2.50	3.00	---	2.50	3.00	---	3.00*
Direct PO attain.	2.19	2.28	2.25	2.09	1.92	1.74	2.29	1.97	1.94	2.39	2.17	1.90	
Indirect PO attain.	2.25	2.10	2.05	1.95	1.90	1.95	2.50	2.88	2.72	2.82	2.98	2.36	
Overall PO attain.	2.20	2.39	2.29	2.13	1.95	1.78	2.33	2.15	2.09	2.47	2.33	1.99	
#Target set	2.00	2.00	2.00	2.00	1.50	1.50	2.00	2.00	2.00	2.00	2.00	1.50	


*Assumed overall CO attainment values

#Hypothecated values

III. Conclusion

Criterion 3 of 'self-assessment report' of NBA is an important criterion and is an input for criterion 7. The criterion gives an indication of how a program is performing in terms of attainment values of course outcomes and program outcomes. The paper has proposed a simplified methodology for measuring or computing the attainment of course outcomes and hence program outcomes and program specific outcomes (PSOs). The attainment values of POs and PSOs thus computed can be compared with the target attainment



 **Navodaya Institute of Technology**
Department Of Mechanical Engineering

Outcome-Based Education (OBE)

Responsibilities of Faculties in OBE ON 19.08.2019

Dr. P. Rathna Kumar
Prof & HOD.ME

Prof. Raja Shakarappa
Assistant Professor.ME

OUTCOMES OF THIS PRESENTATION

After this presentation, the participants shall:

- be more aware of what EAC is looking for during an accreditation exercise/visit
- be more aware of his/her roles and contributions in OBE

Contents

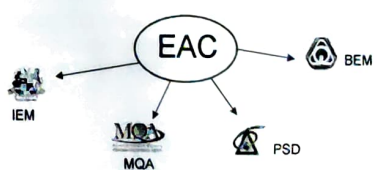
- What is EAC?
- Why Need Accreditation?
- Deficiencies of Traditional Education
- Outcome Based Education (OBE)
- Roles of Lecturers
- Roles of Students
- Q & A

What Is EAC?

Engineering Accreditation Council

- Formed in 2000

Previous accreditation for engineering programs :
PSD (1957) → IEM (1959) → BEM (1967) → LAN(1996) / MQA(2007)



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graph TD
    EAC((EAC)) --> IEM[IEM]
    EAC --> MQA[MQA]
    EAC --> PSD[PSD]
    EAC --> BEM[BEM]
  
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What Is EAC?

Engineering Accreditation Council

- Formulates and updates accreditation policies and criteria
- Approves guidelines and operating procedures
- Oversees operational arrangements and appoints evaluation panel
- Receives evaluation reports and decides on accreditation
- Responds to complaints, appeals or any proposals for change
- Oversees development and operation of accreditation and mutual recognition agreement with other countries
- Fosters the dissemination of developments and best practices in engineering education

Why Need Accreditation?

Governed by the **REGISTRATION OF ENGINEERS ACT 1967 (Revised 2002)**

- No person is allowed to practice unless he is a professional engineer
 - Professional engineer may use "Ir" before his name OR "PEng" after his name
- Graduate engineers to register before taking up employment as an engineer

Why Need Accreditation?

graduate engineers to register before taking up employment as an engineer

Those who has successfully completed an accredited engineering programme

Professional Engineer - a graduate engineer who has obtained the prescribed practical experience, passed the Professional Assessment Examination, and satisfied all other requirements of the Board of Engineers (BEM)

Why Need Accreditation?

International Mobility (Washington Accord)

- The Washington Accord (WA): Agreement that establishes equivalence of other countries' accredited professional engineering programs.
- Accredited Engineering Graduates are recognized by other signatory countries - Possible employment as engineers in those countries without further examinations.





NAVODAYA

NET's

NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
DEPARTMENT OF MECHANICAL ENGINEERING

Date: 21.08.2019

Report of OBE Lecture

Department of Mechanical Engineering, Navodaya Institute of Technology organized a lecture on **“Roles and Responsibilities of Faculties in Outcome Based Education”** for faculties of Mechanical Engineering on 19.08.2019 at Department seminar hall from 10.00 AM to 11.30 AM.

The lecture was delivered by

1. Dr.P. Rathnakumar, Professor & Head,
Dept. of Mechanical engineering,
NIT, Raichur
2. Mr. Rajashakarappa Asst. Professor
Dept. of Mechanical engineering,
NIT, Raichur.

The main focus on outcome based education (OBE) in comparison with output based education was discussed. The various aspects of accreditation parameters like Vision, Mission, Programme Educational Objectives, Programme Outcomes, Course outcomes were discussed with sample statements for MECH UG Programme at NIT. The roles and responsibilities of faculties in effective implementation of OBE were discussed. The assessment tools for validation of PEO's and PO's attainment namely direct and indirect assessment were discussed and analyzed for sample courses of an academic year. The students and faculties shared their experience with respect to implementation of OBE. In the end, an interaction was conducted by the speaker to analyze the student's and Faculties knowledge and interest in OBE implementation. Overall, the lecture was more informative and useful to faculties.



P.A.
21/08/19

HOD

Head of Department

**Department of Mechanical Engineering
Navodaya Institute of Technology (NIT)
RAICHUR.**

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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
 (Approved by AICTE, New Delhi & Affiliated to VU, Belgaum)

DEPARTMENT: MECHANICAL ENGINEERING **FEEDBACK** **DATE: 19-08-2019**

NAME OF THE RESOURCE PERSON	Dr. P Rathna Kumar & Mr. Rajashakarappa	
DESIGNATION	Professor – Head & Assistant Professor	
INSTITUTE/ORGANIZATION	Navodaya Institute of Technology, Raichur	
TITLE OF PROGRAM	"Responsibilities of faculties in Outcome Based Education"	
VENUE	NIT Auditorium	
COMMENTS	<p style="font-size: 1.2em; font-family: cursive;">Session was very good, learn lot more about facilities of outcome based education.</p>	



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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
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DEPARTMENT: MECHANICAL ENGINEERING
FEEDBACK

DATE: 19-08-2019

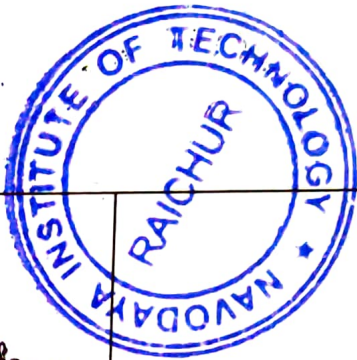
NAME OF THE RESOURCE PERSON	Dr. P Rathna Kumar & Mr. Rajashakarappa
DESIGNATION	Professor – Head & Assistant Professor
INSTITUTE/ORGANIZATION	Navodaya Institute of Technology, Raichur
TITLE OF PROGRAM	“Responsibilities of faculties in Outcome Based Education”
VENUE	NIT Auditorium
COMMENTS	Session was Good, well developed presentations with good content.



FEEDBACK

DATE: 19-08-2019

NAME OF THE RESOURCE PERSON	Dr. P Rathna Kumar & Mr. Rajashakarappa
DESIGNATION	Professor – Head & Assistant Professor
INSTITUTE/ORGANIZATION	Navodaya Institute of Technology, Raichur
TITLE OF PROGRAM	“Responsibilities of faculties in Outcome Based Education”
VENUE	NIT Auditorium
COMMENTS	The program was well organized. It was helpful in understanding the responsibilities of faculties in OBE.



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FEEDBACK

DEPARTMENT: MECHANICAL ENGINEERING

DATE: 19-08-2019

NAME OF THE RESOURCE PERSON	Dr. P Rathna Kumar & Mr. Rajashakarappa
DESIGNATION	Professor – Head & Assistant Professor
INSTITUTE/ORGANIZATION	Navodaya Institute of Technology, Raichur
TITLE OF PROGRAM	“Responsibilities of faculties in Outcome Based Education”
VENUE	NIT Auditorium
COMMENTS	<i>The session was good, & informative. Useful for us.</i>





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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CIRCULAR

19.08.2019

All the faculty members and students of EEE NIT, Raichur are hereby informed to attend the Awareness Programme on "Outcome Based Education (OBE), 23/08/2019.

Venue: Auditorium, Library Block

Date & Time : 23.08.2019, 10 am to 12.30 pm

Circular to

1. All EEE Students
2. All faculty members




[Handwritten signature] 19/8/19
HOD/EEE
Department of
Electrical and Electronics Engineering
Navodaya Institute of Technology,
RAICHUR-584 103. Karnataka

[Handwritten signature] 19/8/19
PRINCIPAL
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

NETs
Navodaya Institute of Technology, Raichur
Department of Electrical and Electronics Engineering
Awareness programme on Outcome Based Education
Students Attendance Details 23.08.2019

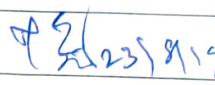

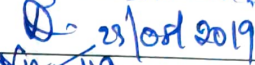
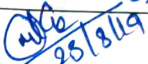
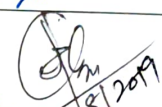
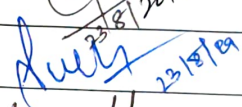
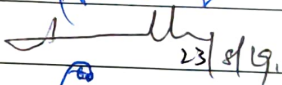


Sl. No.	USN	Name of The Student	Attended
1.	3NA14EE008	NAZIA BEGUM	- AB -
2.	3NA15EE007	SAFFULAH ISLAM KHAN	- AB -
3.	3NA15EE012	NEHA FATIMA	P
4.	3NA15EE014	AYYAPPA P	P
5.	3NA15EE019	SHOAIB AKTHAR	P
6.	3NA16EE001	AISHWARYA GUJJAR	P
7.	3NA16EE003	FARHEEN TARANNUM	P
8.	3NA16EE004	FAYEZA AFROZE	P
9.	3NA16EE005	HEENA KOUSER	P
10.	3NA16EE006	KAMMARI BINDU MADHAV	P
11.	3NA16EE007	KHAJA MOINUDDIN	P
12.	3NA16EE008	M SUMAIYA KHATOON	P
13.	3NA16EE010	MOHAMMADI SABAHATH KHANAM	P
14.	3NA16EE011	MEGHA	P
15.	3NA16EE012	MEGA PATIL	- AB -
16.	3NA16EE013	MISBA KHANUM	P
17.	3NA16EE015	MUNAZZA NOOR ZIYA	P
18.	3NA16EE016	NAZMA UNNISA	P
19.	3NA16EE017	OMKARI VIJAYALAXMI	P
20.	3NA16EE018	PADMAJA G	P
21.	3NA16EE019	PALLAVI NAYAK	P
22.	3NA16EE020	PAVANKUMAR	P
23.	3NA16EE022	ROHINI J P	P
24.	3NA16EE023	SOHAIL KHAN SURI	P
25.	3NA16EE024	SUJATHA	P
26.	3NA16EE025	N V SWETHA	- AB -
27.	3NA16EE027	TULJA BHAVANI	P
28.	3NA16EE028	VISHWANATH	P
29.	3NA16EE030	AYESHA FATHIMA	P
30.	3NA16EE031	CHANDRAKALA .CG	P
31.	3NA16EE408	MD. IRFAN KHAN	P
32.	3NA16EE412	NAVEENA K	- AB -
33.	3NA16EE419	SHRI KRISHNA	P
34.	3NA16EE425	VEERAJU M M	P
35.	3NA17EE400	ABDUL GAFFAR	P
36.	3NA17EE401	AKASH KUMAR M	P
37.	3NA17EE403	ASHWIN KUMAR	P
38.	3NA17EE404	AVINASH K	P
39.	3NA17EE406	BASAVARAJA	P
40.	3NA17EE408	KRISHNA	P
41.	3NA17EE410	MOHAMMED ASIM	P
42.	3NA17EE411	MOHAMMED RAFIYUDDIN	P
43.	3NA17EE413	RAHIM KHAN M A	P




 Department of
 Electrical and Electronics Engineering
 Navodaya Institute of Technology,
 RAICHUR-584 103, Karnataka

NETs
Navodaya Institute of Technology, Raichur
Department of Electrical and Electronics Engineering
Awareness programme on Outcome Based Education
Faculty Attendance Details

23.08.2019

S.No.	Name of the Faculty	Designation	Signature
1	Dr.M.Srinivasan	Prof.& Head	 23/8/19
2	Mr.Mazumdar.B.K	Asso. Prof.	 23/8/2019
3	Mr.Daniel.N.	Asst.Prof.	 23/8/19
4	Ms.Geeta.K.M.	Asst.Prof.	 23/8/19
5	Mr.Sathish Kumar.K.	Asst.Prof.	 23/8/2019
6	Mr.Velu.A.	Asst.Prof.	 23/8/19
7	Mr.Madhu Babu.B.	Asst.Prof.	 23/8/19
8	Ms.Sana Anjum	Asst.Prof.	 23/8/19
9	Mr.Kiran Kumar	Asst.Prof.	




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Awareness Programme on

Outcome Based Education(OBE)

Dr.M.Srinivasan
Professor / Department of EEE

Mr.K.S.Sathish Kumar
Assistant Professor / Department of EEE
Navodaya Institute of Technology

Date : 23.08.2019

23.08.2019

What Is NBA & Its Constitution

- NBA Stands for NATIONAL BOARD OF ACCREDITATION
- NBA is Totally Independent Body which Accreditates programme from Diploma level to Post Graduate level in Engineering and Technology, Management, Architecture, Pharmacy, Hospitality and Mass Communication
- Established in the year 1994 under Section 10 (u) of AICTE Act.
- NBA became Autonomous in January 2010 and in April 2013 the Memorandum of Association and Rules of NBA were amended to make it completely independent of AICTE, administratively as well as financially.
- NBA now independent in its functioning; decision making as well as financially.
- Does not receive any grant either from the government or from any regulatory body of technical and higher education

23.08.2019

Goals Of NBA

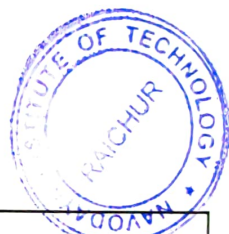
- To develop a Quality Conscious system of Technical Education where Excellence relevance to market needs and participation by all stake holders are prime and major determinants.
- NBA is dedicated to building a technical education system that will match the national goals of growth by competence contributions to economy through competitiveness and compatibility to societal development.
- NBA will provide Quality bench marks targeted at Global and National Stockpile of human capital in all fields of technical education

23.08.2019

Significance of Accreditation

- For the Parents and Students**
 - It signifies that their child goes through a teaching-learning environment as per accepted good practices, and that the student has entered an institution, which has the essential features of Quality Professional Education.
- For the alumni**
 - It signifies attachment through the pride of passing out of an institution with high credentials.
- For the employers.**
 - It signifies that the institutional performance is based assessment through a competent body of Quality assessors, with strengths/weaknesses emanating as a feedback for policy-making.
- For the Institution**
 - It signifies its strengths, weaknesses and opportunity for future growth.
- For the industry infrastructure Sectors**
 - It signifies, identification of quality of institutional capabilities and skills and knowledge.
- For the Country**
 - It signifies confidence in the suitability for sustaining stockpiles of market sensitive human capital and a pragmatic national development perspective.

23.08.2019



Handwritten signature and date: 23/8/19

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Navodaya Institute of Technology,
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Benefits of Accreditation

- ◆ Demonstrates accountability to the public.
- ◆ Demonstrates the commitment to excellence.
- ◆ Strengthens consumer confidence.
- ◆ Facilitates continuous Quality Improvement.
- ◆ Improves staff morale.
- ◆ Recognizes the achievements/innovations.
- ◆ Facilitates information sharing.
- ◆ Priority in getting financial assistance
- ◆ Helps the institution to know its strengths, weaknesses and opportunities.
- ◆ Initiates institutions into innovative and modern methods of pedagogy
- ◆ Gives institutions a new sense of direction and identity
- ◆ Provides society with reliable information on quality of education offered.
- ◆ Promotes intra and inter-institutional interactions.

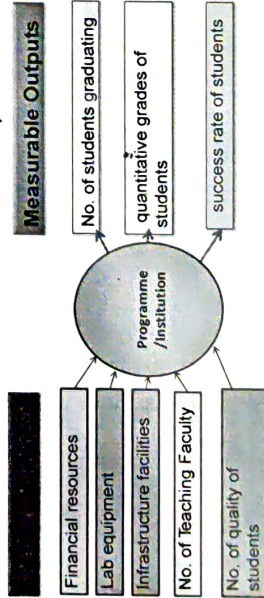
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Outcome Based Accreditation

- Till recently NBA was for input – output based accreditation, now it has switched over to outcome based accreditation.
- Outcome based education is student centered learning method that focus on measuring student performance i.e. outcomes. Outcomes may include a range of skills and knowledge.
- Outcome based accreditation – focus remains on evaluation of outcomes of the Program, though Input and Output parameters are also looked into.

23.08.2019

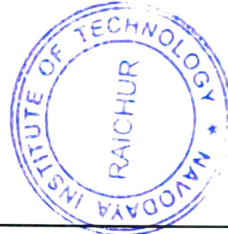
Input-Output Based Education



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Traditional Education VS OBE



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Traditional Education

It is content oriented. Different degrees have their associated syllabi. Relevant contents are taught and examined in the traditional approach to teaching, the professor lectures and assigns well-defined convergent single – discipline problems, and the students listen, take notes, and solve problems individually.

Teachers focus on 'covering the content' giving much less thought to the 'learning by the student' & 'teaching methodology'.

The content-driven approach to teaching has been referred to as a teacher-centered approach.

- > Instructional objectives and learning outcomes are not comprehensively planned & informed to students.
- > Student involvement is very low level.
- > Too much technical content at the expense of a broader, liberal education.
- > Stress on Lower Order Thinking Skills.
- > Student assessment is not aligned to program outcomes.

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What Is Outcome Based Education

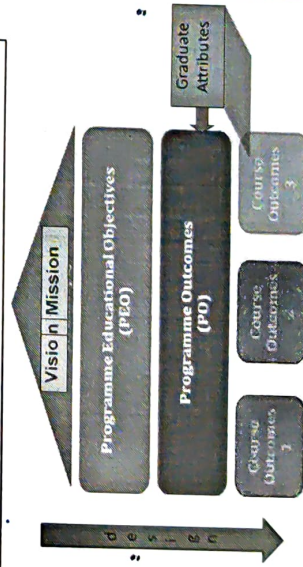
1. What the students need to learn?
2. What the students should demonstrate to the professional world?
3. Accordingly designing both curricula and delivery mechanisms/teaching strategies) to build the required skills and competence.

Basic Knowledge

1. Discipline Knowledge
2. Experiments and practice
3. Engineering Tools
4. The Engineer and Society
5. Environment and Sustainability
6. Ethics
7. Individual and Team Work
8. Communication
9. Life-Long learning
- 10.

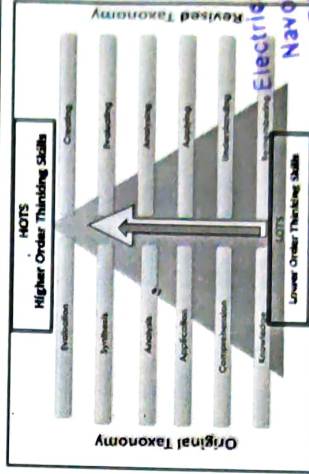
WASHINGTON ACCORD
AND GRADUATE
ATTRIBUTES (WA ONLY
FOR UG ENGINEERING
PROGRAMS)

Key Constituents of OBE

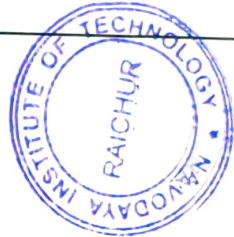


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Bloom's Higher Order Thinking Skills (HOTS) vs. Lower Order Thinking Skills (LOTS)



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THINKING SKILLS

- **LEVEL 1: KNOWLEDGE (REMEMBERING)** what do the students know; what content do they know?
Knowledge may be defined as the ability to recall or remember facts without necessarily understanding them.
- **LEVEL 2: COMPREHENSION (UNDERSTANDING)**
Comprehension may be defined as the ability to understand and interpret learned information.
- **LEVEL 3: APPLICATION (APPLYING)**
Application may be defined as the ability to use learned material in new and concrete situations, e.g. put ideas and concepts to work in solving problems.
- **LEVEL 4: ANALYSIS (ANALYSING)**
Analysis may be defined as the ability to break down information into its components, e.g. look for interrelationships.
- **LEVEL 5: SYNTHESIS (EVALUATING)**
Synthesis may be defined as the ability to put parts together to form a new whole.
- **LEVEL 6: EVALUATION (CREATING)**
Evaluation may be defined as the ability to judge the value of material for a given purpose, e.g. present and defend opinions; identify strengths / weaknesses; make convincing arguments.

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Expectations on Students under OBE – the Outcomes

- Be more creative, able to analyze and synthesize information.
- Able to plan and organize tasks, able to work in a team as a community to propose solutions to problems and market their solutions.

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Why OBE?

- With the national accreditation bodies, National Board of Accreditation (NBA) & National Assessment & Accreditation Council (NAAC) heavily focusing on the adoption of OBE approach for all programmes in INDIA.
- OBE is a process that involves assessment and evaluation practices in education to reflect the attainment of expected learning and showing mastery in the program area

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Why need Accreditation

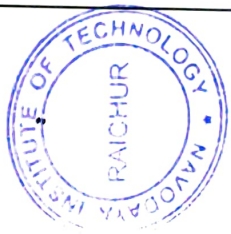
A person with accredited degree may be able to work for the government, as well as private sector.

He/she may subsequently become a Professional Engineer/ Practitioner. International Mobility (Washington Accord)

The Washington Accord (WA): Agreement that establishes equivalence of other countries' accredited professional & engineering programs.

Accredited Engineering Graduates are recognized by other signatory countries - Possible employment as engineers in those countries without further examinations.

23.08.2019



Signature: *[Handwritten Signature]*
 Department of Engineering and Electronics Technology,
 Navodaya Institute of Technology,
 RAICHUR-584 103, Karnataka

Why need OBE

Programmes to be accredited from 2013 will have to be based on OBE approach!

NO OBE = NO ACCREDITATION

NO ACCREDITATION = NO ADMISSION

NO ADMISSION = NO INSTITUTIONAL GROWTH

23.08.2019

Why need Accreditation

A person with accredited degree may be able to work for the government, as well as private sector.

He/she may subsequently become a Professional Engineer/ Practitioner.
International Mobility (Washington Accord)

The Washington Accord (WA): Agreement that establishes equivalence of other countries' accredited professional & engineering programs.

Accredited Engineering Graduates are recognized by other signatory countries - Possible employment as engineers in those countries without further examinations.

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Thank you



23.08.2019



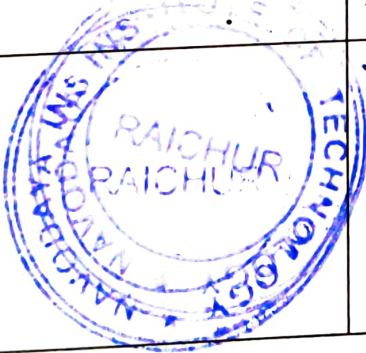
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Navodaya Institute of Technology,
RAICHUR-584 103, Karnataka

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FEEEDBACK

DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 23.08.2019

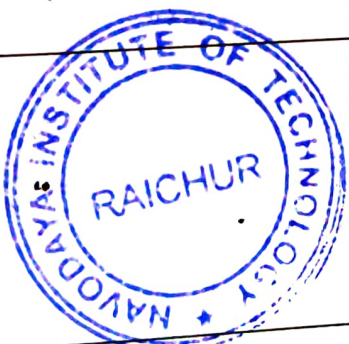
NAME OF THE RESOURCE PERSON(S)	Dr.M.Srinivasan & Mr.K.S.Sathish Kumar
DESIGNATION	Professor – Head & Assistant Professor
INSTITUTE / ORGANIZATION	Navodaya Institute of Technology
TITLE OF THE PROGRAMME	Awareness Programme on Outcome Based Education”
VENUE	Auditorium
COMMENTS	 <p>The program was good It was usefull session to understand about OBE</p>

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FEEEDBACK

DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 23.08.2019


NAME OF THE RESOURCE PERSON(S)	Dr.M.Srinivasan & Mr.K.S.Sathish Kumar
DESIGNATION	Professor – Head & Assistant Professor
INSTITUTE / ORGANIZATION	Navodaya Institute of Technology
TITLE OF THE PROGRAMME	Awareness Programme on Outcome Based Education”
VENUE	Auditorium
COMMENTS	 <p>the program was good. it was very useful to understand about OBE</p>

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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
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INSTITUTE / ORGANIZATION	Navodaya Institute of Technology
TITLE OF THE PROGRAMME	Awareness Programme on Outcome Based Education”
VENUE	Auditorium
COMMENTS	 <p>This Event was well organised & it was useful. in understanding the responsibilities of faculty in OBE.</p>

NETS
NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
(Approved by AICTE, New Delhi & Affiliated to VTU, Belgaum)

FEEEDBACK

DEPARTMENT: ELECTRICAL AND ELECTRONICS ENGINEERING

Date: 23.08.2019

NAME OF THE RESOURCE PERSON(S)	Dr.M.Srinivasan & Mr.K.S.Sathish Kumar
DESIGNATION	Professor – Head & Assistant Professor
INSTITUTE / ORGANIZATION	Navodaya Institute of Technology
TITLE OF THE PROGRAMME	Awareness Programme on Outcome Based Education”
VENUE	Auditorium
COMMENTS	session was highly informative. Thank you sir.

NET's


NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
DEPARTMENT OF ELECTRICAL AND ELECTRONICS
ENGINEERING

SUMMARY OF ONE DAY AWARENESS ON "OUTCOME BASED
EDUCATION"

On 23th August 2019, Department of EEE conducted a Awareness Programme on "Outcome Based Education". The awareness programme presented by Dr.M.Srinivasan, Professor and Head and Mr.Sathish Kumar Assistant Professor, Department of Electrical and Electronics Engineering.

The objective of the programme is create awareness of outcome based education. Speakers briefed about the need for Outcome Based Education to the faculty and students of EEE. Outcome-Based Education (OBE) is a student-centric learning model that helps teachers to plan the course delivery and assessment with the end point in mind. The teacher keeps in mind the end point (outcomes) when he/she designs the curriculum (while planning lessons, designing assignment & assessments, lecturing and other activities). Everything a teacher does in the classroom should ultimately lead the student toward the outcomes of the course. A few parameters that everyone must be aware in order to measure Outcome-Based Education are Graduate Attributes (GA), Program Educational Objectives (PEO), Program Outcomes (PO) / Program Specific Outcomes (PSO) , Course Outcome (CO). The assessment tools for attainment of PEO,PO through direct and indirect assessment methods were discussed.The session shed light on its objectives and the several steps through which it can be implemented in current teaching practices. The session also included a briefing of how Outcome Based Education is different from traditional teaching practices and its effectiveness in current education scenarios. At the end interactive session were conducted. Over all the lecture was more informative and useful to the students and faculty members.




23/8/19
Department of
Electrical and Electronics Engineering
Navodaya Institute of Technology,
RAICHUR-584 103, Karnataka



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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

NAVODAYA

From

Date: 07.11.2019

Dr. K. Venkatachalam,
Professor & Head,
Department of ECE,
Navodaya Institute of Technology,
Raichur-584103.

To

The Principal,
Navodaya Institute of Technology,
Raichur-584103.

Respected Sir,

Sub: Permission for conducting a Lecture on **“Responsibilities of Students and faculties in Outcome Based Education”**- Regarding.

With reference to the above cited subject, we have proposed to conduct a Lecture on **“Responsibilities of Students and faculties in Outcome Based Education”** for all students and Faculties of Electronics and Communication Engineering Department on 15-11-2019. The selected topic may be useful to students and faculties to get align themselves and work towards fulfilling OBE concepts.

Kindly provide permission to do the same.

Thanking You.



gallibawa 7/11/19
PRINCIPAL
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

Yours faithfully

[Signature]
7/11/19

Head of Department
Electronics & Communication Engineering
Navodaya Institute of Technology (NIT)
RAICHUR-584 103



NET's
NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Cir. No:

Date: 7-11-2019

CIRCULAR

All the faculties of department of Electronics Communication Engineering, NIT, Raichur are here by informed to attend a Lecture on “Responsibilities of faculties in Outcome Based Education” on 15.11.2019 at 11.00 AM in Department Seminar Hall.

Lectures Details:

- Course Duration: 90 Minutes approx.
- Beneficiary: Staff
- Location: Department Seminar Hall
- Schedule: 15.11.2019
- Timings: 11.00 A.M. to 12.30 P.M.

To

All the faculties of ECE
Department Notice Board
Copy to Principal for kind information

HOD

Head of Department
Electronics & Communication Engineering
Navodaya Institute of Technology (NIT)
RAICHUR-584 103



PRINCIPAL
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

NET's



NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

NAVODAYA

Date: 16.11.2019

Report of OBE Lecture

Department of Electronics and Communication Engineering, Navodaya Institute of Technology organized a lecture on “Roles and Responsibilities of Faculties in Outcome Based Education” for faculties of Electronics and Communication Engineering on 15.11.2019 at Department seminar hall from 11.00 AM to 12.30 PM.

The lecture was delivered by

1. Dr. K. Venkatachalam, Professor & Head,
Department of Electronics and Communication Engineering,
NIT, Raichur
2. Mr. Gauravi Shetty Asst. Professor
Dept. of Electronics and Communication Engineering,
NIT, Raichur.

The main focus on outcome based education (OBE) in comparison with output based education was discussed. The various aspects of accreditation parameters like Vision, Mission, Programme Educational Objectives, Programme Outcomes, Course outcomes were discussed with sample statements for MECH UG Programme at NIT. The roles and responsibilities of faculties in effective implementation of OBE were discussed. The assessment tools for validation of PEO's and PO's attainment namely direct and indirect assessment were discussed and analyzed for sample courses of an academic year. The students and faculties shared their experience with respect to implementation of OBE. In the end, an interaction was conducted by the speaker to analyze the student's and Faculties knowledge and interest in OBE implementation. Overall, the lecture was more informative and useful to faculties.



G. K. Venkatachalam
PRINCIPAL

Navodaya Institute of Technology (NIT)
RAICHUR-584 103

[Signature]
HOD 16/11/19

Head of Department

Electronics & Communication Engineering
Navodaya Institute of Technology (NIT)
RAICHUR-584 103



NAVODAYA
INSTITUTE OF
TECHNOLOGY

Department of Electronics and Communication Engineering

Date: 15-11-2019

Awareness programme on Outcome Based Education

Faculty Attendance Details

Sl.No	Name of the Faculty	Designation	Signature
1	Dr.Venkatachalam .K	Professor & M. ead	
2	Mrs.Channaveeramma		
3	Mr. Rammurthy D		
4	Mrs. Madhuri Devi C H	Assistant professor	
5	Mr. Sachin Kumar	Asst. Prof.	
6	Mrs. Priyadharshini N		
7	Mr. Shoibuddin Madni	Asst. Prof	
8	Mrs. Gauravi Shetty	Asst. Professor.	
9	Mr. Pradeep K G M	Asst. Professor	
10	Mr. Vasanth Reddy		
11	Mrs. Preeti Sagar Pattankude		
12	Ms.Atiya Sultana	Asst. Prof	
13	Ms. Muneeb Afzal	Asst. Prof	



Head of Department
Electronics & Communication Engineering
Navodaya Institute of Technology (NIT),
RAICHUR-584 103

NET's
Navodaya Institute of Technology, Raichur
Department of Electronics and Communication Engineering
Awareness programme on Outcome Based Education
Students Attendance Details 15.11.2019

Sl.No	USN	NAME OF THE STUDENT	SIGNATURE
1	3NA14EC006	DEVIKA P	P
2	3NA14EC014	SUSHMA K	P
3	3NA15EC001	AKSHAY D	P
4	3NA15EC013	HARSHITA	P
5	3NA16EC001	A DEEPTHI	P
6	3NA16EC006	SHASHANK KUMAR R	P
7	3NA16EC007	FATHIMA AFAF	P
8	3NA16EC008	J SHRAVANI	P
9	3NA16EC009	JAVERIA IRAM	P
10	3NA16EC010	MAHALAXMI M	P
11	3NA16EC013	SANIYA NAYYER	P
12	3NA16EC014	SHIVAMURTHY K	P
13	3NA16EC015	SUJATA S N	P
14	3NA16EC018	SWATHI	P
15	3NA16EC020	VAISHALI P	P
16	3NA16EC021	ZOHARA SADAF	P
17	3NA16EC022	SYED SALMA BANU	P
18	3NA16EC023	RAKESH	P
19	3NA16EC403	SHRUTI	P
20	3NA12EC012	MAITRI (10TH SCHEME)	P
21	3NA14EC402	BASAVARAJESHWARI (10TH SCHEME)	P




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Principal

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