15.04.2019

From
Dr.M.Srinivasan,
Professor and Head,
Navodaya Institute of Technology,
Raichur-584103.

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

Sir

Subject: Req. to conductTraining Programs for Non-Teaching Faculty- Reg

We have proposed to conduct the Training programson the topic **"Two-day workshop on "AutoCAD- Electrical"**on 22.04.2019 to 23.04.2019 at Navodaya Institute of Technology, Department of EEE, Raichur from 10.00 AM to 04.00PM.

Thanking You

Yours faithfully

[Dr.M.Srinivasan]

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

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

NET's
NAVODAYA INSTITUTE OF TECHNOLOGY: RAICHUR

Tel : +91 8532-200115, 240334, Fax : +91-8532-240054
E-Mail :hodeee.nit@navodaya.edu.in

CIRCULAR

Greetings from Navodaya Institute of Technology, Raichur…

The department of Electrical & Electronics Engineering is organizing a **"Hands on Workshop in AutoCAD"** for Non-Teaching Faculties to upgrade the support staff skills.

The main objective of this workshop is to enhance their skills in AUTOCAD software.
AutoCAD Electrical design software is AutoCAD for electrical controls designers, purpose-built to create and modify electrical control systems. The comprehensive symbols libraries and tools help boost productivity by automating control engineering tasks.
We are pleased to inform that the department of Electrical and Electronics Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **22.04.2019 to 23.04.2019.**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating the attached invitation.

Venue: Department of Electrical and Electronics Engineering
Navodaya Institute of Technology,Raichur.
Timing: 10.00AM to 4.00 PM

Thanking you,
Yours sincerely,

20/4/19
Dr.M.Srinivasan
HOD/EEE

Head of the Department
Department of Electrical and
Electronics Engineering
Navodaya Institute of Technology
RAICHUR-584 103. Karnataka

NAVODAYA INSTITUTE OF TECHNOLOGY: RAICHUR

DEPARTMENT: EEE

ACADEMIC YEAR: 2018-19

DATE: 23/04/2019

S.No	Name of the Staff	Date	
01	SANDEEP KUMAR	22-04-19 to 23-04-19	Sandeep
02	Raghavan	22-04-19 to 23-04-19	Raghavan
03	Mahesh	22-04-19 to 23-04-19	
04	Bharani	22-04-19 to 23-04-19	
05	Channabasava	22-04-19 to 23-04-19	Channa
06	Suresh	22-04-19 to 23-4-19	
07	Shivakumar	22-04-19 to 23-4-19	
08	Vidyavathi	22-04-19 to 23-4-19	Vidya

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

23/4/19

HEAD OF THE DEPARTMENT

Navodaya Education Trust ®

Navodaya Institute of Technology

Raichur

A Report

On

Two-day workshop on "AutoCAD- Electrical"

Coordinators:

Prof.Geeta K.M, *Assistant Professor*

Prof. A Velu,*Assistant Professor*

Department of Electrical and Electronics Engineering

Organized by:

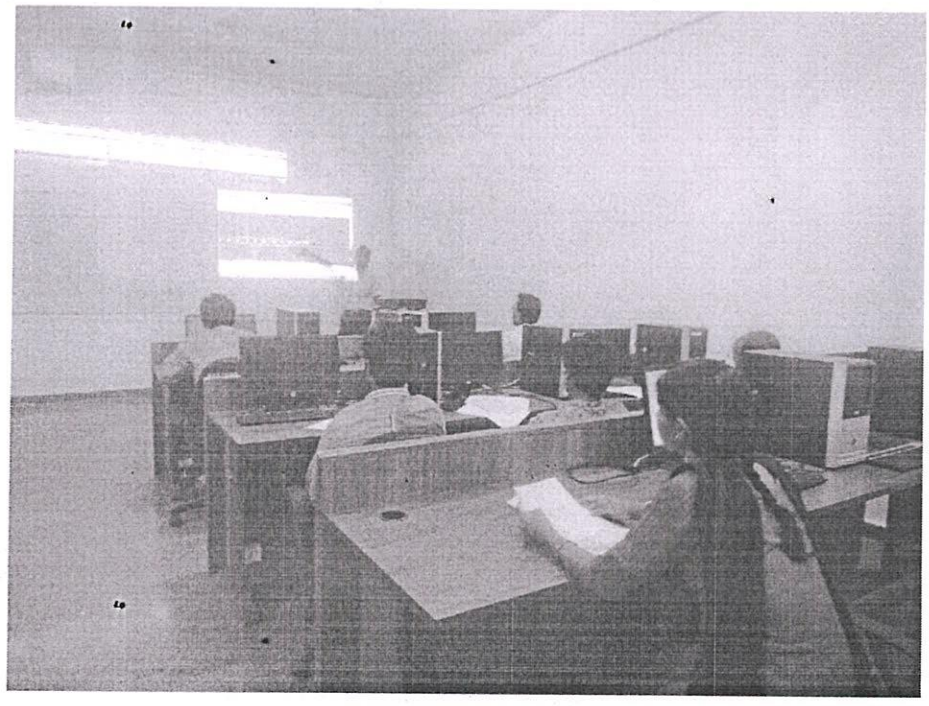
Department of Electrical and Electronics Engineering

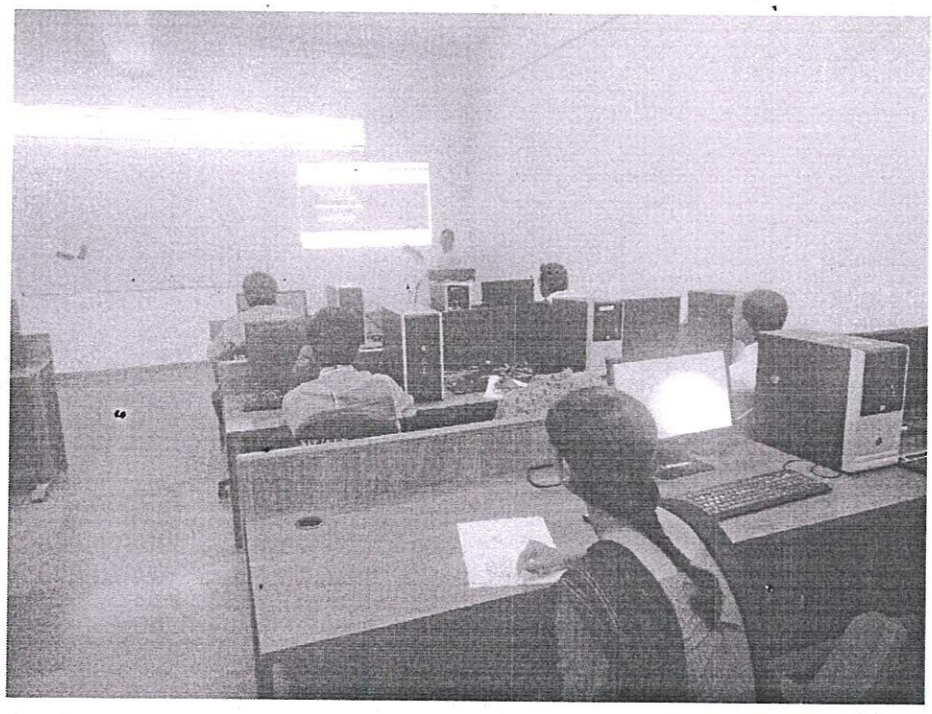
Navodaya Institute of Technology-Raichur

Date: 22 & 23 April, 2019 Time: 10:00am to 04:00pm

INTRODUCTION:

Department of Electrical and Electronics Engineering from arranged Two Days Workshop on AutoCAD –Electrical dated 22 & 23 April 2019. Coordinators-Prof. Geeta K.M, Assistant Professor and Prof. A Velu, Assistant Professorprovidetheir expertise to all Modules of AutoCAD on effective use of subjective knowledge to supporting staffs.





NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

2294

Head of the Department
Department of Electrical and
Electronics Engineering
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RAIC... ...584 103. Karnataka

AUTOCAD COMMAND	DISCRIPTION	FURTHER INFORMATION
LINE	Create a line	Basic AutoCAD commands: Mastering the LINE command in AutoCAD
TRIM	Trim object to meet the edges of other objects	Basic AutoCAD commands: Trim and Extend in AutoCAD
CIRCLE	Create a circle	Basic AutoCAD commands: Circles in AutoCAD
EXTEND	Extend object to meet the edges of other objects	Basic AutoCAD commands: Trim and Extend in AutoCAD
ARRAYRECT	Create a rectangular pattern of object	Basic AutoCAD commands: Arrays in AutoCAD
ARRAYPOLAR	Create a circular pattern of object	Basic AutoCAD commands: Arrays in AutoCAD
COPY	Create a copy of an object	Basic AutoCAD commands: Move and Copy objects in AutoCAD MOVE
MOVE	Move an object	Basic AutoCAD commands: Move and Copy objects in AutoCAD ROTATE
ROTATE	Rotate an object	Basic AutoCAD commands: Mirror and Rotate in AutoCAD
MIRROR	Create a mirrored copy of an object	Basic AutoCAD commands: Mirror and Rotate in AutoCAD
ERASE	Delete an object	Basic AutoCAD commands: Explode and Erase in AutoCAD
CHAMFER	Bevels the edges of an object	Basic AutoCAD commands: Chamfer and Fillet
FILLET	Rounds the edges of objects	Basic AutoCAD commands: Chamfer and Fillet

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

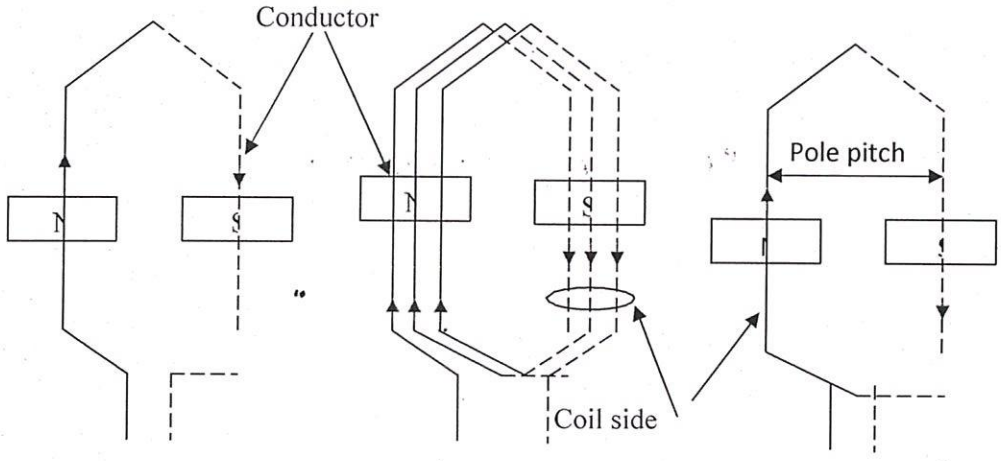
INTRODUCTION TO AUTOCAD:

Winding Diagrams: (i) DC Winding diagrams (ii) AC Winding Diagrams Terminologies used in winding diagrams:

Conductor: An individual piece of wire placed in the slots in the machine in the magnetic field.

Turn: Two conductors connected in series and separated from each other by a pole pitch so that the emf induced will be additive.

Coil: When one or more turns are connected in series and placed in almost similar magnetic positions. Coils may be single turn or multi turn coils.



(a) SingleturnCoil (b) 3 –turncoil (c) Multi turncoil

Fig. 1 Different types of winding coils representations

Coil group: One or more coil single coils formed in a group forms the coil group.

Winding: Number of coils arranged in coil group is said to be a winding.

Pole Pitch: Distance between the poles in terms of slots is called pole pitch.

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RAICHUR-584 103. Karnataka

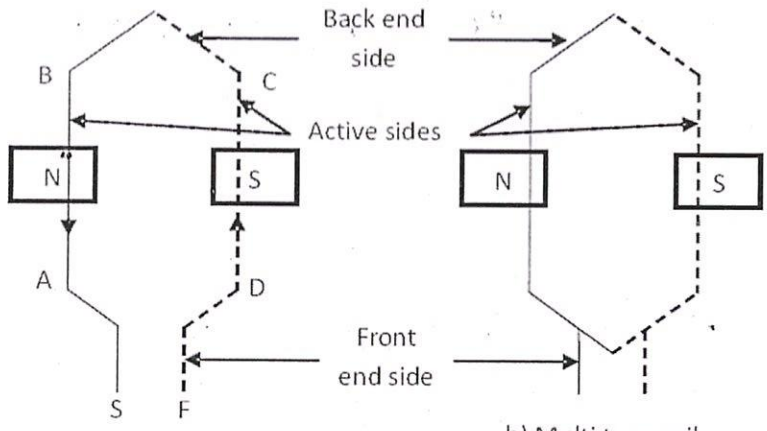

Fig. 2 Single and Multi turn coils

Full Pitch winding: If the coil pitch for a winding is equal to pole pitch the winding is called full pitch winding Fig .

Chorded winding: When the pitch of the winding is less than the full pitch or pole pitch then the winding is called short pitch winding or chorded winding.

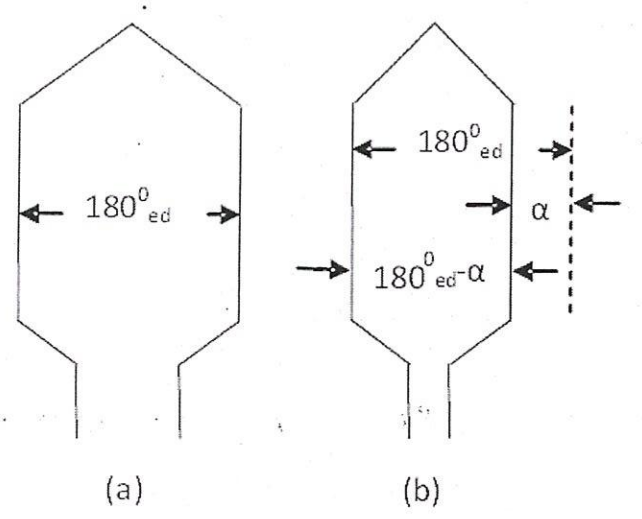

Fig. 3 Full pitched and short pitched coils

Single layer winding: Only one coil side placed in one slot.

Double layer winding: Two coil sides are placed in a single slot. Single and double layer windings are shown in Fig4

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Electronics Engineering
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Raichur-58 103. Karnataka

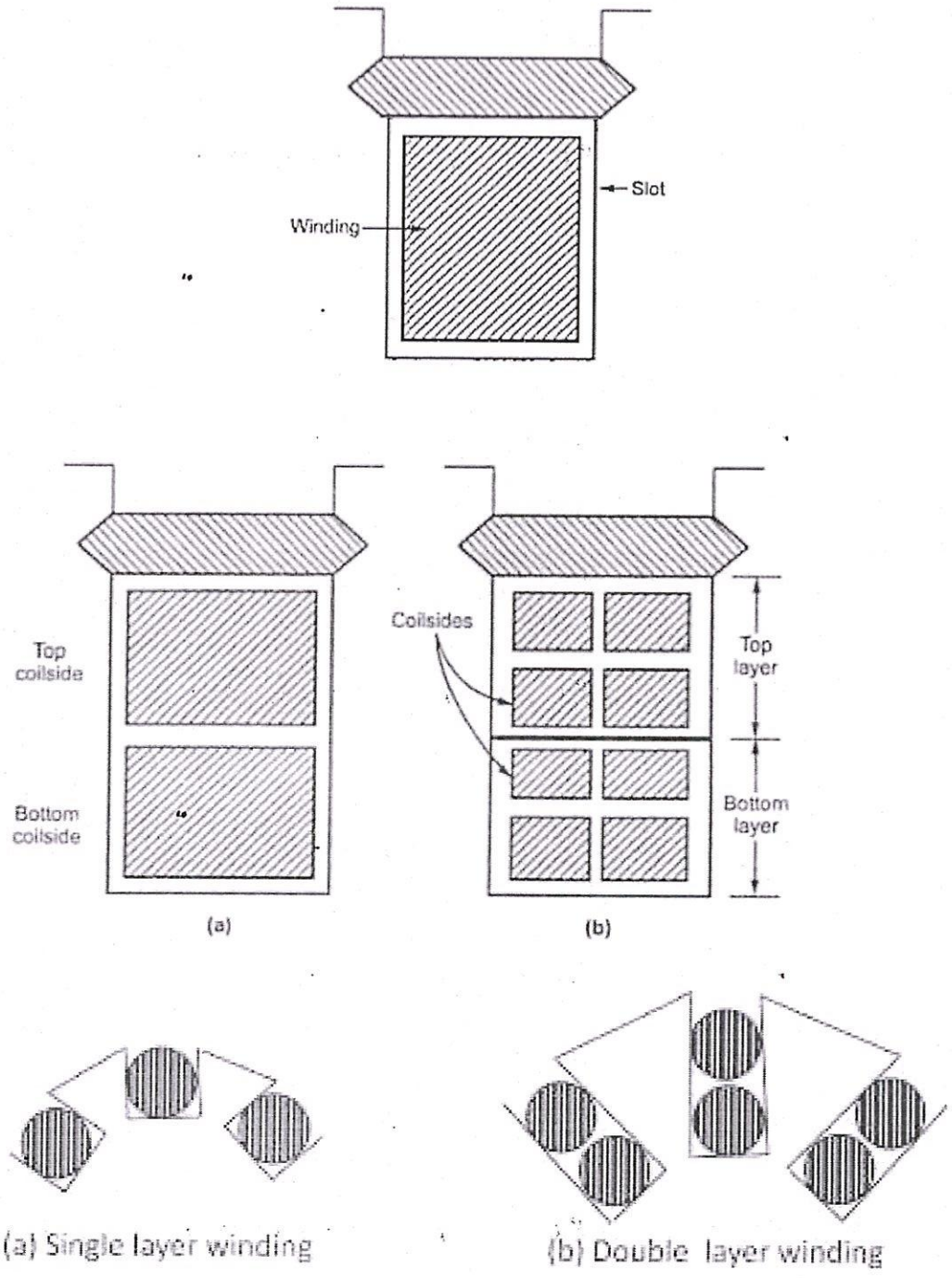

Fig.4 Single and double layer windings

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Navodaya Institute of Technology,
RAICHUR-584 103. Karnataka

Classification of windings: Closed type and open type winding

Closed type windings: In this type of winding there is a closed path around the armature or stator. Starting from any point, the winding path can be followed through all the turns and starting point can be reached. Such windings are used in DCmachines.

Open windings: There is no closed path in the windings. Such windings are used in AC machines.

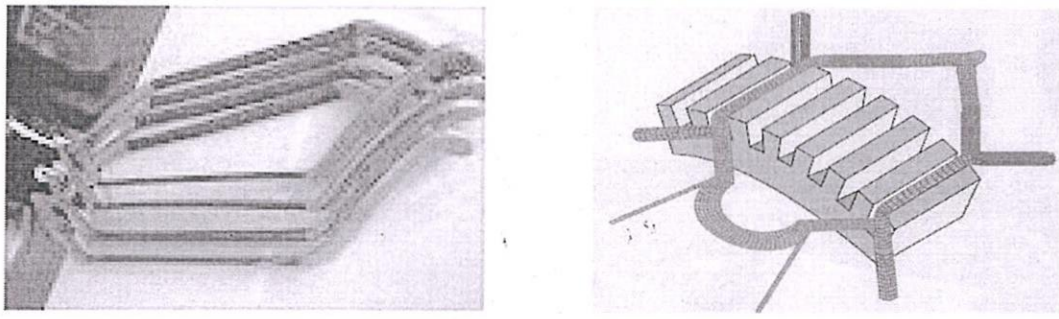

Fig. 5 Photographs of the windings and coils

DC Windings: Two types of windings (a) Lap winding (b) Wave winding
These two types of windings differ in two ways (i) number of circuits between positive and negative brushes, (ii) the manner in which the coil ends are connected. However the coils of both lap and wave windings are identicallyformed.

TYPES AND SHAPES OF WINDING WIRES: The winding wires used in electrical motors are classified as follows. 1) Round wires 2) Rectangular straps 3) Strandedwires

1. Round Wires: It has thin and thick conductors and are used in semi-closed slot type motors and mush winding rotors. It is wounded in reels and available inKilograms.
2. Rectangular straps: It is used in open type slot motors. These conductors are available as long straps in meters. They are used in the following places. 1) Low voltage motor windings. 2) Used as conductor in high current motor. 3) Series field motor windingcoils.

Winding Pitches:

Back Pitch: The distance between top and bottom coil sides of a coil measured around the back of the armature is called back pitch and is designated as y_b. Back pitch is approximately equal to number of coil sides per layer. Generally back pitch is an oddinteger.
Front Pitch: The distance between two coil sides connected to the same commutator segment is called the front pitch and is designated as y_f.
Winding Pitch: The distance between the starts of two consecutive coils measured in terms of coil sides is called winding pitch and is designated as Y.
$Y = y_b - y_f$ for lap winding $Y = y_b + y_f$ for wave winding

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

Commutator pitch: The distance between the two commutator segments to which the two ends of a coil are connected is called commutator pitch and is designated as y_c and is measured in terms of commutator segments.

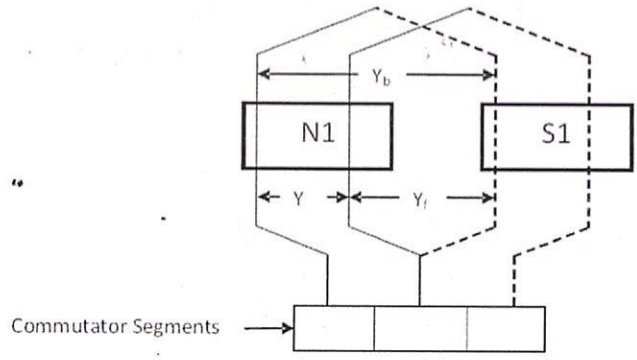

Fig. 6 Lap winding

Lap Winding: The winding in which successive coils overlap each other hence it is called lap winding. In this winding end of one coil is connected to the commutator segment and start of the adjacent coil situated underthesamepoleasshowninfig.6.Lapwindingisfurtherdividedassimplexand Duplexlapwinding.

Simplex lap winding: In this type of winding finish F1 of the coil 1 is connected to the start S2 of coil 2 starting under the same pole as start s1 of coil 1.
We have back pitch $y_b = 2c/p \pm k$ where c = number of coils in the armature, p = number of poles, k = an integer to make y_b an odd integer.

Important rules for Lap winding:
Let Z = Number of conductors
P = number ofpoles
Y_b = Back pitch
Y_f = Front pitch
Y_c = Commutator pitch
Y_a = Average pole pitch
Y_p = Pole pitch
Y_R = Resultant pitch

1. Y_b (Back pitch) and Y_f (Front pitch) must be approximately equal to Y_p (Polepitch)
2. Y_b (Back pitch) must be less or greater than Y_f (Front pitch) by 2m where m is the multiplicity of the winding. When Y_b is greater than Y_f the winding progresses from left to right and is known as progressive winding. . When Y_b is lesser than Y_f the winding progresses from right to left and is known as retrogressive winding. Hence $Y_b = Y_f \pm 2m$.
3. Y_b and Y_f must beodd.
4. Y_b and Y_f may be equal or differ by ±2. + for progressive winding, - for retrogressivewinding
5. $Y_a = (Y_b + Y_f) / 2 = Y_p$
6. Y_R(Resultant pitch) is alwayseven.
7. $Y_c = m$, m = 1 for simplex winding; m = 2 for duplexwinding

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

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

8. Number of parallel paths = mp = number ofbrushes.

Simplex wave winding: In this type of winding finish F1 of the coil 1 is connected to the start Sx of coil x starting under the same pole as start s1 of coil 1.

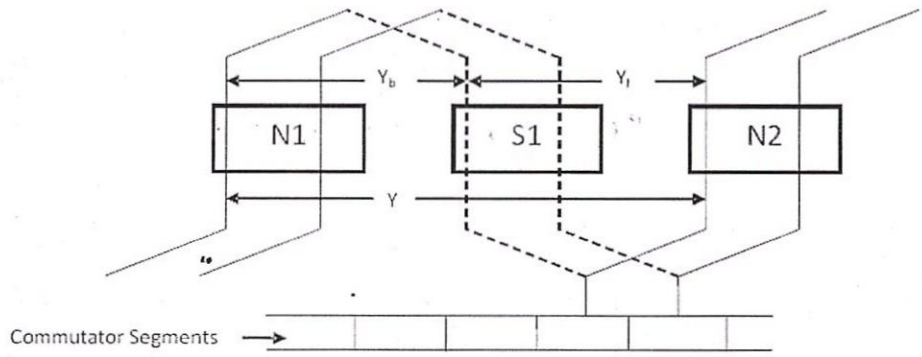


Fig. 7 wave windings

Wave winding: In wave winding the end of one coil is not connected to the beginning of the same coil but is connected to the beginning of another coil of the same polarityas that of the first coil as shown in fig. 7.
Important rules for Wave winding:

1. Y_b (Back pitch) and Y_f (Front pitch) must be approximately equal to Y_p (Polepitch)
2. Y_b and Y_f must beodd.
3. Y_b and Y_f may be equal or differ by ±2. + for progressive winding, - for retrogressivewinding
4. $Y_c = (Y_b + Y_f) / 2$ and should be a wholenumber.

Dummy coils: The wave winding is possible only with particular number of conductors and poles and slots combinations. Some times the standard stampings do not consist of the number of slots according to the design requirements and hence the slots and conductor combination will not produce a mechanically balanced winding. Under such conditions some coils are placed in the slots, not connected to the remaining part of the winding but only for mechanical balance. Such windings are called dummycoils.

Equalizer rings or Equalizer connections in Lap winding: This is the thick copper conductor connecting the equipotential points of lap winding for equalizing the potential of different parallel paths.

Sequence diagram or ring Diagram: The diagram obtained by connecting the conductors together with their respective numbers. This diagram is used for finding the direction of induced emf and the position of brushes.

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

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

03.01.2020

From
Dr.M.Srinivasan,
Professor and Head,
Navodaya Institute of Technology,
Raichur-584103.

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

Sir

Subject: Requisition to conduct Training Programs for Non-Teaching Faculty- Reg

We have proposed to conduct the Training programs on the topic **"Hands-on Workshop in MATLAB"** on 06.01.2020 and 08.01.2020 at Navodaya Institute of Technology, Department of EEE, Raichur from 10.00 AM to 05.00 PM.

Thanking You

Yours faithfully

31.12.2019

[Dr. M.Srinivasan]

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

Permitted

31/12/2019

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

NAVODAYA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CIRCULAR

04.01.2020

Greetings from Navodaya Institute of Technology, Raichur.

The department of Electrical & Electronics Engineering is organizing a **"Hands-on Workshop in MATLAB"** for Non-Teaching Faculties to upgrade the support staff's skills.

The main objective of this workshop is to enhance the skills in MATLAB software.

A simple computational tool such as MATLAB can be quite handy to solve such mathematical problems, provided we can formulate the problems appropriately.

Also, couple of sessions will be conducted for the use of MATLAB to demonstrate its applications to specific topics such as Power Electronics and Drives, Signal & Image Processing, control systems.

We are pleased to inform that the department of Electrical and Electronics Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **06.01.2020 to 08.01.2020.**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating.

Venue: Department of Electrical and Electronics Engineering
Navodaya Institute of Technology, Raichur.
Timing: 10.00AM to 5.00PM

Thanking you,

Yours sincerely,

Dr.M.Srinivasan
HOD/EEE

NAVODAYA INSTITUTE OF TECHNOLOGY ★ RAICHUR

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

NAVODAYA INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

"Hands-on Workshop in MATLAB"

LIST OF PARTICIPANTS

Date: 06.01.2020 to 08.01.2020.

S.No	Name of the Staff	Department	Designation	Signature
1	Ms. BHAVANI	EEE	Instructor	8/01/20
2	Mr. CHANNABASAVA	EEE	Instructor	08/1/20
3	Ms. VIDHYA	ECE	Instructor	
4	Mr. SHIVA KUMAR	ECE	Instructor	

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

8/1/2020

HEAD OF THE DEPARTMENT

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

Navodaya Education Trust ®
Navodaya Institute of Technology
Raichur

A Report

On

"Hands-on Workshop in MATLAB"

Coordinators:

Dr. M.Srinivasan, Head and Professor

Prof. B.K Mazumdar, Assistant Professor

Prof. Sathish Kumar K.S, Assistant Professor

Department of Electrical and Electronics Engineering

Organized by:

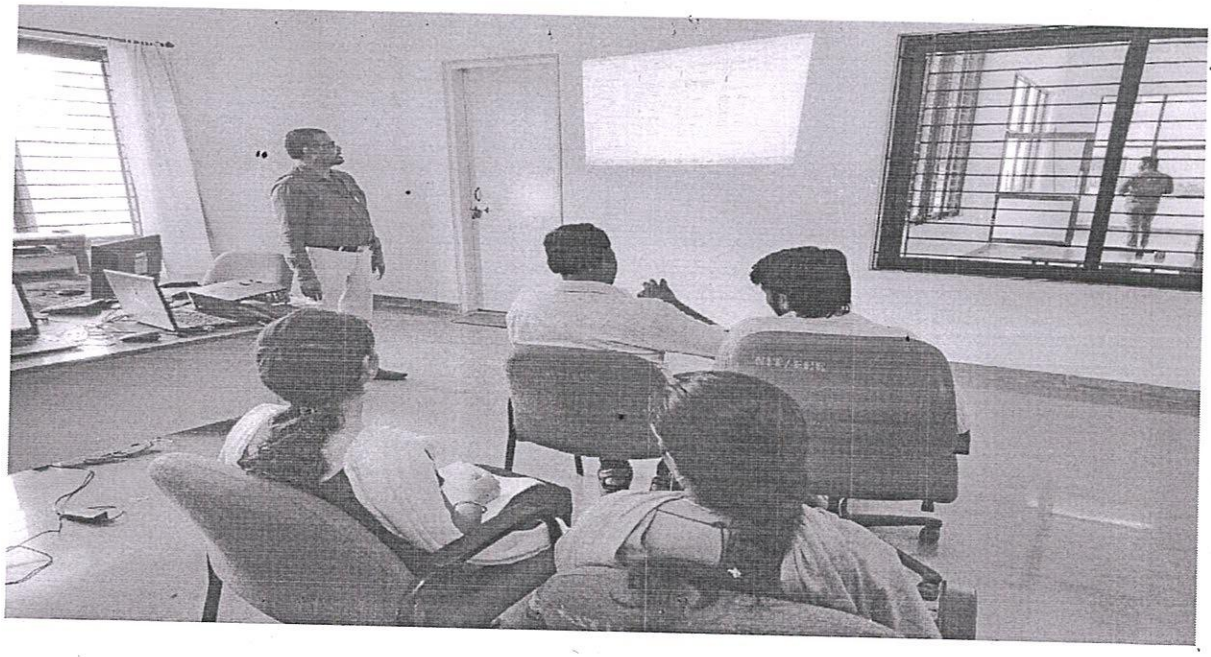
Department of Electrical and Electronics Engineering

Navodaya Institute of technology-Raichur

Date: 06th January to 8 January, 2020

OBJECTIVE: - The workshop was based on the Basic of MATLAB.

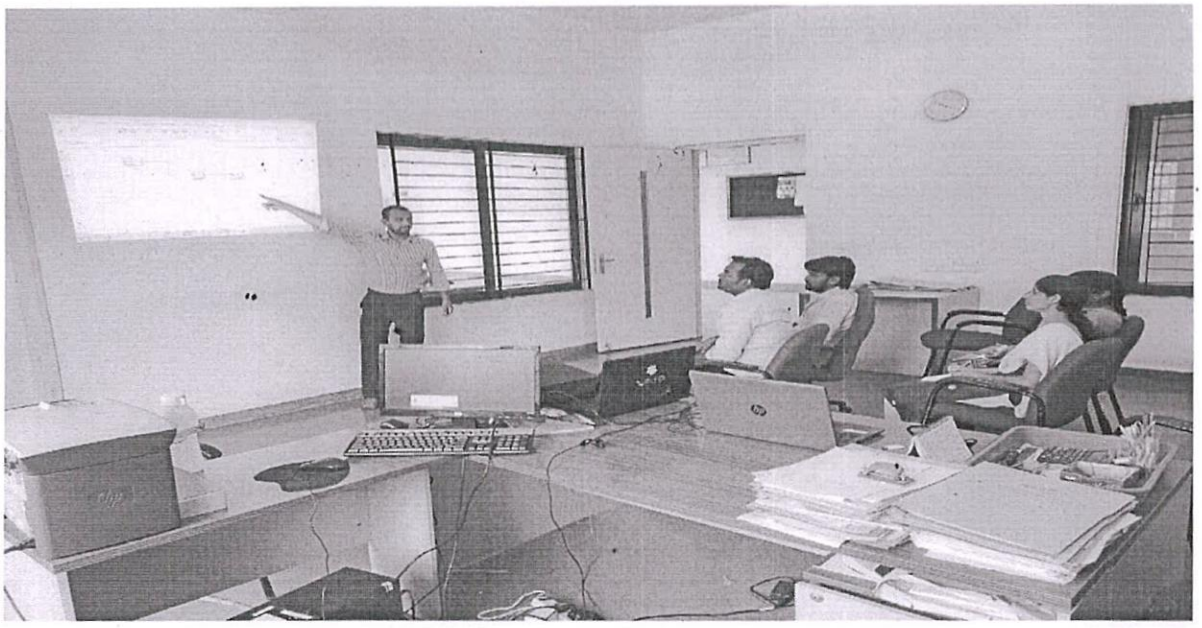
Navodaya Institute of Technology, Raichur Electrical and Electronics Engineering department conducted a workshop on MATLAB. The workshop was based on the Basics of MATLAB to upgrade the knowledge of supporting staffs in the department. Coordinators- Dr. M.Srinivasan, Head and Professor, Mr. B.K Mazumdar, Assistant Professor, Mr. Sathish kumar K.S, Assistant Professor demonstrated with various programs related to Circuit Analysis, Control System , Digital Signal processing and Power system.



NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

8/1/2020

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



Module 1: Introduction to MATLAB --MATLAB SimPowerSystems --Simulation of Rectifier --Usage of MATLAB Demos	Dr. M.Srinivasan, *Professor and Head*
Module 2: Functions --Starting Simulink --Model Files -- Basic Elements --Running Simulations --Building Systems	Mr. B.K Mazumdar, *Assistant Professor*
Module 3: Signal Processing in MATLAB --Basic Commands and syntax --Identifiers --Arrays and Matrices --Referencing Elements --Matrix Operations --Array Operations	Mr. Sathish kumar K.S, *Assistant Professor*

31/8/2020

NAVODAYA INSTITUTE OF TECHNOLOGY ★ RAICHUR

Head of the Department
Department of Electrical and Electronics Engineering
Navodaya Institute of Technology,
RAICHUR-584 103. Karnata.

20.07.2017

From,
Dr. K M Palaniswamy,
Professor and Head,
Department of Electronics and Communication Engineering,
Navodaya Institute of Technology,
Raichur-584103

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

Sir

Subject: Requisition to conduct Training Programs for Non-Teaching Faculty- Reg

We are planning to organize the two day training program for Non-Teaching staff on "**A course on Repair and Maintenance of Equipments"** on 27/07/2017 & 28/07/2017 in the department of ECE. I assigned **Mr. Md Shoaibuddin Madni,** Assistant Professor/ECE to conduct this program to the non teaching faculties.

So, I request you to give permission to conduct training program.

Approved 20/7/17

Thanking You,

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

Yours faithfully,

20/7/17

[Dr. K. M Palaniswamy]
Head of Department
Electronics & Communication Engineering
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

PRINCIPAL 13/7/2017
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

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NAVODAYA INSTITUTE OF TECHNOLOGY: RAICHUR

Tel : +91 8532-240115, 240334, Fax : +91-8532-240054
E-Mail :hodece.nit@navodaya.edu.in

CIRCULAR

Cir.No:2017-18/FDP/NTF/01

Respected Sir / Madam,

Greetings from Navodaya Institute of Technology, Raichur…

The Department of Electronics & Communication Engineering is organizing a **"A Development course on repair and maintenance of equipments"** for Non-Teaching Faculties to upgrade the support staff's skills.

The main objective of this workshop is to enhance knowledge and skill in maintenance/troubleshooting/servicing/repair of electronic measuring instruments.

A couple of sessions will be conducted to demonstrate working, programming and simulation of all the softwares in electronics and communication laboratories.

We are pleased to inform that the Department of Electronics & Communication Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **27/07/2017 & 28/07/2017.**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating the attached invitation.

Venue: Department of Electronics & Communication Engineering

Navodaya Institute of Technology, Raichur.

Timing: 9.00AM to 5.30PM

Thanking you,

Yours sincerely,

Dr.K. M. Palaniswamy

HOD/ECE

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

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

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

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Schedule for Faculty Development Program (FDP) on **"A Course on Repair and Maintenance of Equipments"**

Organised By

Navodaya Institute of Technology: Raichur (27/07/2017 & 28/07/2017)

Timing of Each Day Session

Day	Session I (10:30 am-1:00pm)		Session II (2:00pm-5:00pm)
27-07-2017	Basic working principles of the equipments used in electronics laboratories to enhance knowledge	LUNCH BREAK	Maintenance/troubleshooting/servicing/repair of electronic measuring instruments.
26-07-2017	Working and programming of all the software in electronics and communication laboratories.		Simulation of all the software in electronics and communication laboratories.

20/7/17

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

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

13/6/2017

Navodaya Institute of Technology
RAICHUR-584 103

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NAVODAYA
Institute of Technology
RAICHUR

Attendance Report

Two day faculty development program on "A development course on repair and maintenance of equipments"

Sl.No	Name of the participant	27/07/2017	28/07/2017
1.	Bhavani		
2.	Chanabasave		
3.	Vidya		
4.	Anusha		

INSTITUTE OF TECHNOLOGY RAICHUR

28/7/17
Head of Department
Electronics & Communication Engineering
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

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

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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

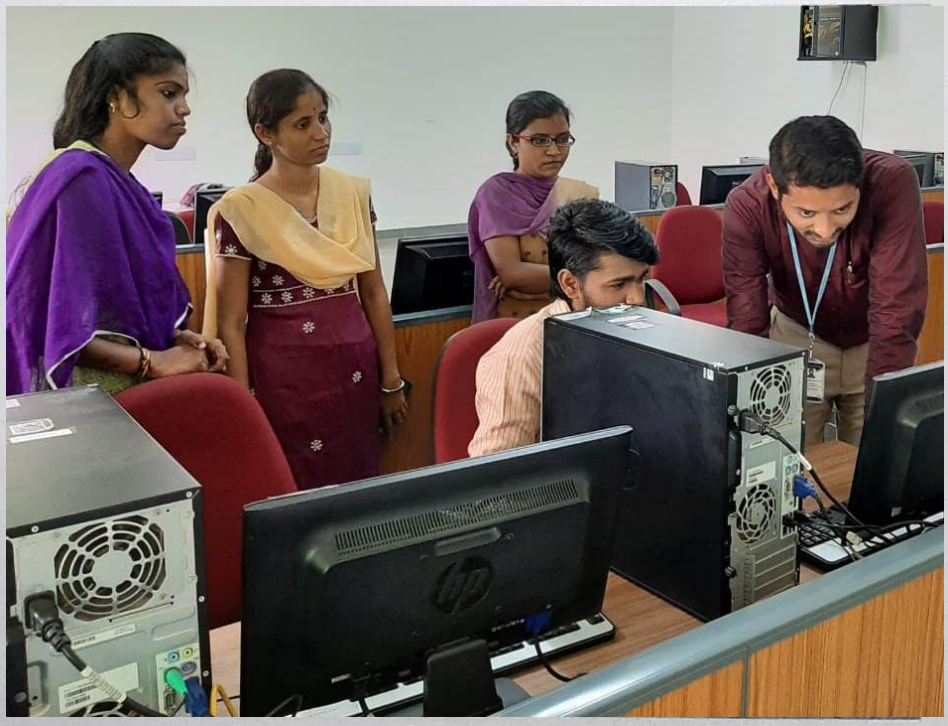
Date: 30/07/2017

Report on Two Days Training Program for Non-Teaching Staff

Two days training program "A development course on repair and maintenance of equipments" was conducted on 27/07/2017 & 28/07/2017 at Navodaya Institue of Technology, organized by Department of ECE.

On first day, the speaker for the session Mr Md Shoaibuddin Madni, Assistant Professor, Dept. of ECE showed the basic working principles of the equipments used in electronics laboratories to enhance knowledge and skill in maintenance/troubleshooting/servicing/repair of electronic measuring instruments.

On second day, the trainer showed the working, programming and simulation of all the software in electronics and communication laboratories.



28/7/17

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

PRINCIPAL 31/8/2017
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

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Training Equipment Users

The primary responsibility for the care and maintenance of equipment rests with the user. Users should understand how their equipment works, what its limitations are, and what it can and cannot do. All of these are usually well described in the user manual that is supplied by the equipment manufacturer or supplier. It is important that users read and understand the user manual and keep it in a safe place.

In situations where surgeons or clinicians work under extreme time pressure, they may not be able to pay sufficient attention to the care and maintenance of the equipment they use. In this case, nursing staff and patient attendants can be trained in basic preventative maintenance and care. However, surgeons and clinicians must still be trained to use equipment properly and safely; they are also responsible for reporting faults and should be included in discussions about maintenance and repair.

Users should be trained to do the following **preventative maintenance** tasks on a regular basis (check the manufacturer's guide or user manual for details):

- Clean outer as well as inner surfaces and lubricated parts.
- Check for damage, loose or missing screws, and corrosion.
- Change filters and renewable parts.
- Lubricate movable parts.

All users, including clinicians, are responsible for the **safety** of their equipment. Users should be trained and encouraged to do the following:

- Carefully wipe the surfaces of the instrument regularly. Check for sharp metal or broken lenses in the instrument that could injure the patient or user.

Top tips for training equipment users

- Demonstrate what to do.
- Allow the student to actually do the work and practice under supervision.

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- Maintain a friendly environment, rather than a highly competitive environment, in which to learn.
- Be patient with your students, but expect effort and excellence.
- Always have a back-up plan in case equipment breaks or a part is not available.

Training the Equipment maintenance and repair team

- Basic do's and don'ts when handling equipment
- How to operate equipment
- Basic anatomy cleaning of equipment
- Safety procedures.

Training is not an activity that only happens once. Training is required at various times throughout an employee's career:

- Induction training: when staff are newly placed in post, move to a new department or facility, or to a new location with different responsibilities
- Training when new equipment first arrives
- Refresher training: regular training to update and renew skills throughout the working life of staff.

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27.07.2018

From
Dr. K. Venkatachalam,
Professor and Head,
Department of Electronics and Communication Engineering,
Navodaya Institute of Technology,
Raichur-584103

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

Sir

Subject: Requisition to conduct Training Programs for Non-Teaching Faculty- Reg

We are planning to organize the two day training program for Non-Teaching staff on **"Hands-on Experience on Mvision KEIL IDE & ARM Microcontrollers"** on 30/07/2018 & 31/07/2018 in the department of ECE. I assigned **Mr. Sachin kumar**, Assistant Professor/ECE to conduct this program to the non teaching faculties.

So, I request you to give permission to conduct training program.

Thanking You,

Approved
27/7/18

Yours faithfully,

27/7/18

[Dr. K. Venkatachalam]

Head of Department
Electronics & Communication Engineering
Navodaya Institute of Technology (NIT)
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E-Mail :hodece.nit@navodaya.edu.in

CIRCULAR

Cir.No:2018-19/FDP/NTF/01

Respected Sir / Madam,

Greetings from Navodaya Institute of Technology, Raichur…

The Department of Electronics & Communication Engineering is organizing a **"Hands-on Experience on Mvision KEIL IDE & ARM Microcontrollers"** for Non-Teaching Faculties to upgrade the support staff's skills.

The main objective of this workshop is to enhance the skills in KEIL software.

A simple tool such as KEIL can be quite handy for Embedded-C programming. Also, couple of sessions will be conducted to demonstrate Software Development tools, Current Trends, Future Developments, Microcontroller architecture, Compilers, Debugger etc.

We are pleased to inform that the Department of Electronics & Communication Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **30/07/2018 & 31/07/2018.**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating the attached invitation.

Venue: Department of Electronics & Communication Engineering

Navodaya Institute of Technology, Raichur.

Timing: 9.00AM to 5.30PM

Thanking you,

Yours sincerely,

Dr.K. Venkatachalam
HOD/ECE

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Head of Department
Electronics & Communication Engineering
Navodaya Institute of Technology (NIT)

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Schedule for Faculty Development Program (FDP) on **"Hands-On Experience On Mvision KEIL IDE & ARM Micro-Controllers"**

Organized By

Navodaya Institute of Technology: Raichur (30/07/2018 & 31/07/2018)

Timing of Each Day Session

Day	Session I (10:30 am-1:00pm)		Session II (2:00pm-5:00pm)
30-07-2018	Introductory lecture over the theme mvision KEIL IDE & ARM micro-controllers, general characteristics of Embedded Systems, Software Development, Tools, Current Trends and Future Developments	LUNCH BREAK	Embedded-C programming on KEIL IDE software. A simple application program for blinking an LED , write and compile their own program code on KEIL IDE
31-07-2018	Basics of Microcontroller architecture, Compilers, Debugger.		Participants to do the procedures explained by the trainer on an 8051 Microcontroller trainer kit and watching the output real-time on the hardware board.

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NAVODAYA INSTITUTE OF TECHNOLOGY

Attendance Report

Two day faculty development program on "mvision KEIL IDE & ARM micro-controllers"

Sl.No	Name of the participant	30/7/2018	31/7/2018
1.	Vidya		
2.	Anusha		
3.	Bhavani.		
4.	Channabasava		

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NAVODAYA INSTITUTE OF TECHNOLOGY, RAICHUR

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Date: 01/08/2018

Report on Two Days Training Program for Non-Teaching Staff

Two days training program "Hands-on experience on mvision KEIL IDE & ARM micro-controllers" was conducted on 30/07/2018 & 31/07/2018 at Navodaya Institue of Technology, organized by Department of ECE.

On first day, the speaker for the session Mr Sachin Kumar, Assistant Professor, Dept. of ECE delivered an introductory lecture over the theme mvision KEIL IDE & ARM micro-controllers; it covered topics like general characteristics of Embedded Systems, Software Development, Tools, Current Trends, and Future Developments and in the second session explained the basics of Microcontroller architecture, Compilers, Debugger etc.

On second day, the speaker started Embedded-C programming on KEIL IDE software. A simple application program for blinking an LED was explained to the participants and they were allowed to write and compile their own program code on KEIL IDE. Then, in second session all the participants were allowed to do the procedures explained by the trainer on an 8051 Microcontroller trainer kit, for watching the output real-time on the hardware board.

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Create Applications

This chapter guides you through the steps required to create and modify projects using CMSIS described in the previous chapter.

NOTE
The example code in this section works for the MCB1800 evaluation board (populated with LPC1857). Adapt the code for other starter kits or boards.

The tutorial creates the project *Blinky* in these two basic design concepts:

- RTOS design using Keil RTX5.
- Infinite loop design for bare-metal systems without RTOS Kernel.

Blinky with Keil RTX5

The section explains the creation of the project using the following steps:

- **Setup the Project:** create a project file and select the microcontroller device along with the relevant CMSIS components.
- Configure the Device Clock Frequency: configure the system clock.
- Create the Source Code Files: add and create the application files.
- **Build the Application Image:** compile and link the application for downloading it to an on-chip Flash memory of a microcontroller device.
- **Using the Debugger** on page 63 guides you through the steps to connect your evaluation board to the PC and to download the application to the target.

For the project *Blinky*, you will create the following application files:

main.c This file contains the *main()* function that initializes the RTOS kernel, the peripherals, and starts thread execution.

LED.c The file contains functions to initialize and control the GPIO port and the thread function *blink_LED()*. The *LED_Initialize()* function initializes the GPIO port pin. The functions *LED_On()* and *LED_Off()* control the port pin that interfaces to the LED.

LED.h The header file contains the function prototypes for the functions in *LED.c* and is included into the file *main.c*.

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Setup the Project

From the µVision menu bar, choose **Project – New µVision Project**.

☞ Select an empty folder and enter the project name, for example, *Blinky*. Click **Save**, which creates an empty project file with the specified name (*Blinky.uvprojx*).

Next, the dialog **Select Device for Target** opens.

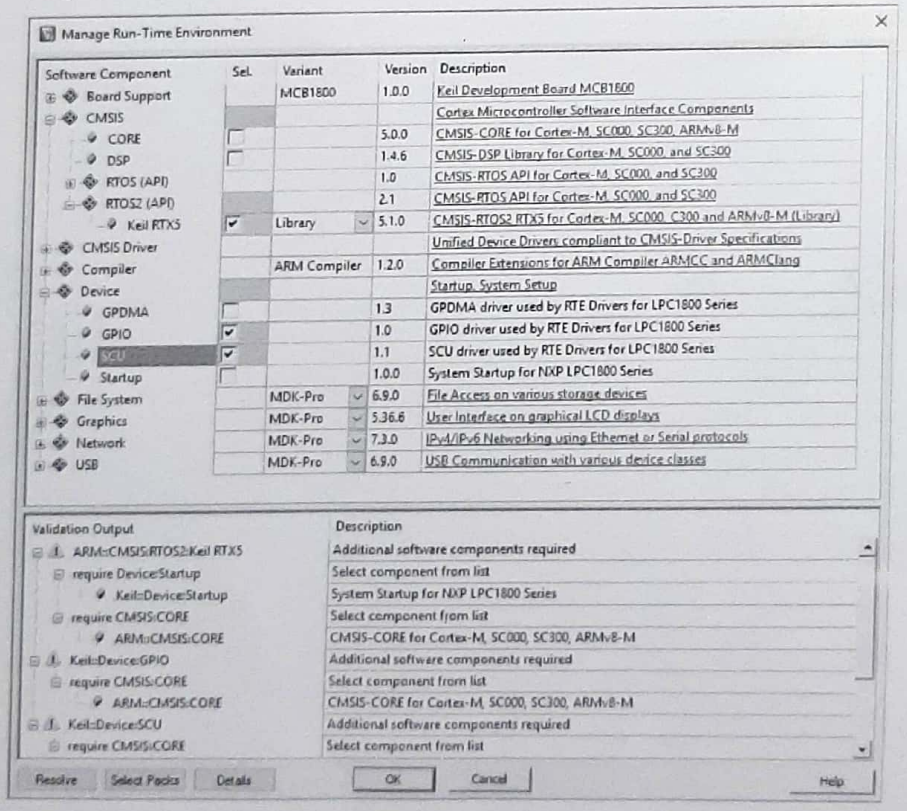
☞ Select the LPC1857 and click **OK**.

The device selection defines essential tool settings such as compiler controls, the memory layout for the linker, and the Flash programming algorithms.

The **Manage Run-Time Environment** dialog opens and shows the software components that are installed and available for the selected device.

☞ Expand **::CMSIS:RTOS2(API)** and enable **:Keil RTX5 (Library)**.

Expand **::Device** and enable **:GPIO** and **:SCU**.



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The **Validation Output** field shows dependencies to other software components. In this case, the components **ARM::CMSIS:CORE** and **::Device:Startup** are required.

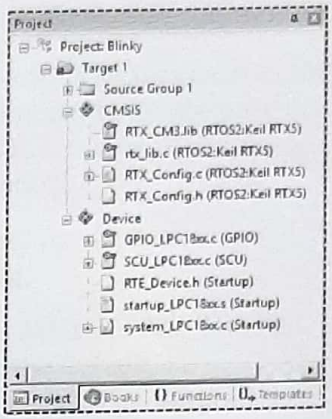
TIP: A click on a message highlights the related software component.

Click **Resolve**.

This resolves all dependencies and enables other required software components (here **ARM::CMSIS:Core** and **::Device:Startup**).

Click **OK**.

The selected software components are included into the project together with the startup file, the RTX sources and configuration files, as well as the CMSIS system files. The **Project** window displays the selected software components along with the related files. Double-click on a file to open it in the editor.



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Configure the Device Clock Frequency

The system or core clock is defined in the *system_<device>.c* file. The core clock is also the input clock for the RTOS Kernel Timer and, therefore, the RTX configuration file needs to match this setting.

NOTE

Some devices perform the system setup as part of the main function and/or use a software framework that is configured with external utilities.

*Refer to **Device Startup Variations** on page 56 for more information.*

The clock configuration for an application depends on various factors such as the clock source (XTAL or on-chip oscillator), and the requirements for memory and peripherals. Silicon vendors provide the device-specific file *system_<device>.c* and therefore it is required to read the related documentation.

TIP: Open the reference manual from the **Books** window for detailed information about the microcontroller clock system.

The MCB1800 development kit runs with an external 12 MHz XTAL. The PLL generates a core clock frequency of 180 MHz. As this is the default, no modifications are necessary. However, you can change the settings for your custom development board in the file *system_LPC18xx.c*.

☞ To edit the file *system_LPC18xx.c*, expand the group **Device** in the **Project** window, double-click on the file name, and modify the code as shown below.

Set PLL Parameters in *system_LPC18xx.c*

```
:
/* PLL1 output clock: 180MHz, Fcco: 180MHz, N = 1, M = 15, P = x          */
#define PLL1_NSEL    0              /* Range [0 -   3]: Pre-divider  ratio N */
#define PLL1_MSEL   14              /* Range [0 - 255]: Feedback-div ratio M */
#define PLL1_PSEL    0              /* Range [0 -   3]: Post-divider ratio P */

#define PLL1_BYPASS 0               /* 0: Use PLL, 1: PLL is bypassed        */
#define PLL1_DIRECT 1               /* 0: Use PSEL, 1: Don't use PSEL        */
#define PLL1_FBSEL  0               /* 0: FCCO is used as PLL feedback       */
                                    /* 1: FCLKOUT is used as PLL feedback    */

:
```

Keil RTX5 automatically detects the clock setting so that a manual adaption is not required.

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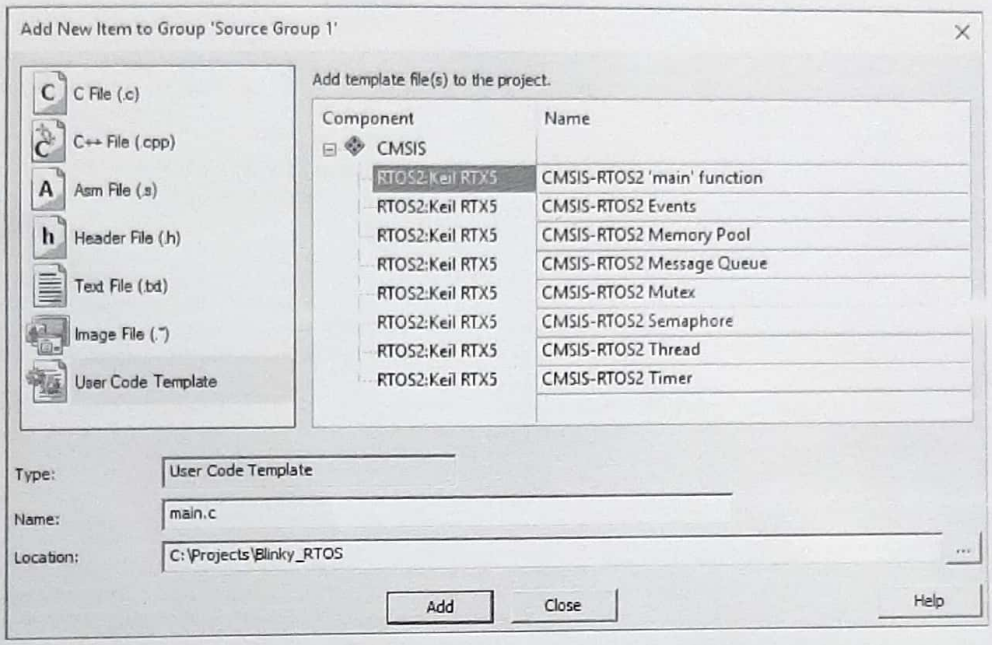
Create the Source Code Files

Add your application code using pre-configured **User Code Templates** containing routines that resemble the functionality of the software component.

☞ In the **Project** window, right-click **Source Group 1** and open the dialog **Add New Item to Group**.



☞ Click on **User Code Template** to list available code templates for the software components included in the project. Select **CMSIS-RTOS2 'main' function** and click **Add**.

This adds the file *main.c* to the project group **Source Group 1**. Now you can add application specific code to this file.

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☞ Add the code below to create a function *blink_LED()* that blinks LEDs on the evaluation kit.

Code for *main.c*

```
/*----------------------------------------------------------------------------
 * CMSIS-RTOS 'main' function template
 *---------------------------------------------------------------------------*/

#include "RTE_Components.h"
#include  CMSIS_device_header
#include "cmsis_os2.h"
#include "LED.h"

#ifdef RTE_Compiler_EventRecorder
#include "EventRecorder.h"
#endif

/*----------------------------------------------------------------------------
* Application main thread
*---------------------------------------------------------------------------*/
void app_main (void *argument) {

  Init_BlinkyThread ();                    // Start Blinky thread
  for (;;) {}
}

int main (void) {

  // System Initialization
  SystemCoreClockUpdate();
#ifdef RTE_Compiler_EventRecorder
  // Initialize and start Event Recorder
  //EventRecorderInitialize(EventRecordError, 1U);
#endif
  // ...
  LED_Initialize ();                       // Initialize LEDs

  osKernelInitialize();                    // Initialize CMSIS-RTOS
  osThreadNew(app_main, NULL, NULL);       // Create application main thread
  osKernelStart();                         // Start thread execution
  for (;;) {}
}
```

NOTE
The file RTE_Components.h includes a define/macro specifying the name of the device header file such that you can specify the device include in a device agnostic way using #include CMSIS_device_header.

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Create an empty C-file named *LED.c* using the dialog **Add New Item to Group** and add the code to initialize and access the GPIO port pins that control the LEDs.

Code for *LED.c*

```
/*----------------------------------------------------------------------------
 * File LED.c
 *----------------------------------------------------------------------------*/
#include "SCU_LPC18xx.h"
#include "GPIO_LPC18xx.h"
#include "cmsis_os2.h"                  // ARM::CMSIS:RTOS:Keil RTX5

osThreadId_t tid_blink_LED;             // Thread id of thread blink_LED

void blink_LED (void *argument);  // Prototype function

void LED_Initialize (void) {
  GPIO_PortClock      (1);              // Enable GPIO clock

  /* Configure pin: Output Mode with Pull-down resistors */
  SCU_PinConfigure (13, 10, (SCU_CFG_MODE_FUNC4|SCU_PIN_CFG_PULLDOWN_EN));
  GPIO_SetDir       (6, 24, GPIO_DIR_OUTPUT);
  GPIO_PinWrite     (6, 24, 0);
}

void LED_On (void) {
  GPIO_PinWrite     (6, 24, 1);           // LED on: set port
}

void LED_Off (void) {
  GPIO_PinWrite     (6, 24, 0);           // LED off: clear port
}

// Blink LED function
void blink_LED(void *argument) {
  for (;;) {
    LED_On ();                          // Switch LED on
    osDelay (500);                      // Delay 500 ms
    LED_Off ();                         // Switch off
    osDelay (500);                      // Delay 500 ms
  }
}

void Init_BlinkyThread (void) {
  tid_blink_LED = osThreadNew (blink_LED, NULL, NULL);  // Create thread
}
```

NOTE
You can also use the functions as provided by the ***Board Support*** *component described on page 45****Error! Bookmark not defined.****.*

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Create an empty header file named *LED.h* using the dialog **Add New Item to Group** and define the function prototypes of *LED.c*.

Code for *LED.h*

```
/*----------------------------------------------------------------------------
 * File LED.h
 *----------------------------------------------------------------------------*/
void LED_Initialize ( void );                    // Initialize GPIO
void LED_On ( void );                            // Switch Pin on
void LED_Off ( void );                           // Switch Pin off

void blink_LED ( void const *argument );         // Blink LEDs in a thread
void Init_BlinkyThread ( void );                 // Initialize thread
```

Build the Application Image

Build the application, which compiles and links all related source files.

Build Output shows information about the build process. An error-free build displays program size information, zero errors, and zero warnings.

```
Build Output
*** Using Compiler 'V5.06 update 4 (build 422)', folder: 'C:\Keil_v5\ARM\ARMCC\Bin'
Rebuild target 'Target 1'
compiling LED.c...
compiling rtx_lib.c...
compiling main.c...
compiling RTX_Config.c...
assembling startup_LPC18xx.s...
compiling GPIO_LPC18xx.c...
compiling SCU_LPC18xx.c...
compiling system_LPC18xx.c...
linking...
Program Size: Code=8664 RO-data=1036 RW-data=5504 ZI-data=1632
After Build - User command #1: C:\Keil_v5\/ARM/BIN/ElfDwT.exe .\Objects\Blinky.axf BASEADDRESS(0x1A000000)
ELFDWT - Signature Creator V1.2.0.0
COPYRIGHT Copyright (C) 2014-2016, ARM Ldt. and  ARM Germany GmbH
*** Updated Signature over Range[32] (0x1A000000 - 0x1A000018): @0x1A00001C = 0x53FFCD46
*** Processing completed, no Errors.
".\Objects\Blinky.axf" - 0 Error(s), 0 Warning(s).
Build Time Elapsed:  00:00:02
```

The section **Using the Debugger** on page 63 guides you through the steps to connect your evaluation board to the workstation and to download the application to the target hardware.

TIP: You can verify the correct clock and RTOS configuration settings of the target hardware by checking the one-second interval of the LED.

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16.04.2020

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

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

Sir

Subject: Requisition to conduct Training Programs for Non-Teaching Faculty- Reg

We have proposed to conduct the Training programs on the topic **"Hands-on Workshop on Hardware and Networking Basics"** on 21.04.2020 to 23.04.2020 at Navodaya Institute of Technology, Department of CSE, Raichur from 09.00 AM to 05.30 PM.

Thanking You

Yours faithfully

[Dr. M. N. Faruk]
Head of Department
Computer Science & Engineering
Navodaya Institute of Technology
RAICHUR-584 103

PRINCIPAL 16-4-20
Navodaya Institute of Technology (NIT)
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RAICHUR

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E-Mail :hodcse.nit@navodaya.edu.in

CIRCULAR

Cir: 2019-20/FDP/01 16-04-2020

Respected Sir / Madam,

Greetings from Navodaya Institute of Technology, Raichur…

The department of Computer Science & Engineering is organizing a **"Hands on Workshop on Hardware and Networking Basics"** for Non-Teaching Faculties to upgrade the support staff's skills. The main objective of this workshop is to enhance the skills in Hardware and networking within the college premises. The Hardware and Networking Course covers all the fundamental topics of Hardware and Networking, as well as special attention. is given to the practical implications. The syllabus includes the study of computer components, types of RAM. Internet connectivity procedures and other such hardware related concepts. The networking part of the syllabus includes dealing with important topics such as various internet protocols and network troubleshooting. The workshop makes the candidate capable enough to take up any challenges offered by the company.

We are pleased to inform that the department of Computer Science & Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **21.04.2020 to 23.04.2020.**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating the attached invitation.

Venue: Department of Computer Science & Engineering
Navodaya Institute of Technology, Raichur.
Timing: 9.00AM to 5.30PM

Thanking you,
Yours sincerely,

PRINCIPAL 16.4.2020
Navodaya Institute of Technology (NIT)
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RAICHUR

Dr. M. N. Faruk
HOD, CSE
Head of Department
Computer Science & Engineering
Navodaya Institute of Technology
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NON TEACHING STAFF SKILLS UP GRADUATION

DEPARTMENT: **CSE**

ACADEMIC YEAR: **2019-20** DATE: **21-04-2020**

SL.No	Name of the Staff	Date	Details
1.	Mr. Vijay Vardhan (CSE)	21-04-2020 to 23-04-2020	Programmer, Dept. of CSE
2.	Ms. Vaishnavi (CSE)	21-04-2020 to 23-04-2020	Programmer, Dept. of CSE
3.	Ms. Vidya (ECE)	21-04-2020 to 23-04-2020	Lab Technician, Dept. of ECE

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Navodaya Education Trust ®
Navodaya Institute of Technology
Raichur

A Report

On

"Hands on Workshop on Hardware and Networking Basics"

Coordinators:

Dr. M. N. Faruk, ***Head and Professor***

Prof. Vijaykumar Yadav, ***Assistant Professor***

Prof. Sivakumar Reddy, ***Assistant Professor***

Department of Computer Science & Engineering

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

Organized by:

Department of Computer Science & Engineering

Navodaya Institute of Technology, Raichur

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

Date: 21st April to 23rd April, 2020

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

Objective:

The main objective of this workshop is to enhance the skills in Hardware and networking within the college premises. The Hardware and Networking Course covers some of the fundamental topics of Hardware and Networking, as well as special attention, is given to the practical implications. The syllabus includes the study of computer components, types of RAM, Internet connectivity procedures and other such hardware related concepts. The networking part of the syllabus includes dealing with important topics such as various internet protocols and network troubleshooting. The workshop makes the candidate capable enough to take up any challenges offered by the company.

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Basic Networking Hardware

Agenda

- Basic LAN Definition
- Network Hardware
- Network Media
- Sample LAN Implementation

LANs

- Definition – LAN
  - "local area network"
  - Is a group of computers and associated devices that share a common communications line or wireless link and typically share the resources of a single processor or server within a small geographic area (for example, within an office building).
  - Usually, the server has applications and data storage that are shared in common by multiple computer users.
  - A local area network may serve as few as two or three users (for example, in a home network) or many as thousands of users.

LANs

- Definition – Wireless LAN
  - A local area network that transmits over the air typically in an unlicensed frequency such as the 2.4GHz band.
  - A wireless LAN does not require lining up devices for line of sight transmission.
  - Wireless access points (base stations) are connected to an Ethernet hub or server and transmit a radio frequency over an area of several hundred to a thousand feet which can penetrate walls and other non-metal barriers.
  - Roaming users can be handed off from one access point to another like a cellular phone system.
  - Laptops use wireless network cards that plug into an existing PCMCIA slot or that are self contained on PC cards, while stand-alone desktops and servers use plug-in cards (ISA, PCI, etc.).

LANs

- Characteristics – LAN
  - Topology
    - The geometric arrangement of devices on the network or the shape of a local-area network (LAN) or other communications system.
  - Protocols
    - The rules and encoding specifications for sending data. The protocol defines the format and meaning of the data that is exchanged. The protocols also determine whether the network uses a peer-to-peer or client/server architecture.
  - Media
    - Devices can be connected by twisted-pair wire, coaxial cables, or fiber optic cables. Some networks do without connecting media altogether, communicating instead via radio waves.

LANs

- Topology types

  - bus topology: All devices are connected to a central cable, called the bus or backbone. Bus networks are relatively inexpensive and easy to install for small networks. Ethernet systems use a bus topology.
  - star topology: All devices are connected to a central hub. Star networks are relatively easy to install and manage, but bottlenecks can occur because all data must pass through the hub. This is not much of a problem anymore with the widespread deployment of switches.
  - ring topology: All devices are connected to one another in the shape of a closed loop, so that each device is connected directly to two other devices, one on either side of it. Ring topologies are relatively expensive and difficult to install, but they offer high bandwidth and can span large distances.

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Network Hardware

- Hub
  - An unintelligent network device that sends one signal to all of the stations connected to it.
  - All computers/devices are competing for attention because it takes the data that comes into a port and sends it out all the other ports in the hub.
  - Traditionally, hubs are used for star topology networks, but they are often used with other configurations to make it easy to add and remove computers without bringing down the network.
  - Resides on Layer 1 of the OSI model

OSI Model Layers
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical

Network Hardware

- Switch
  - Split large networks into small segments, decreasing the number of users sharing the same network resources and bandwidth.
  - Understands when two devices want to talk to each other, and gives them a switched connection
  - Helps prevent data collisions and reduces network congestion, increasing network performance.
  - Most home users get very little, if any, advantage from switches, even when sharing a broadband connection.
  - Resides on Layer 2 of the OSI model.

OSI Model Layers
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical

Network Hardware

- Bridge
  - Connects two LANs and forwards or filters data packets between them.
  - Creates an extended network in which any two workstations on the linked LANs can share data.
  - Transparent to protocols and to higher level devices like routers.
  - Forward data depending on the Hardware (MAC) address, not the Network address (IP).
  - Resides on Layer 2 of the OSI model.

OSI Model Layers
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical

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RAICHUR-584 103.

23/4/12

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23/4/12

Network Hardware

- Repeater
  - Used to boost the signal between two cable segments or wireless access points.
  - Can not connect different network architecture.
  - Does not simply amplify the signal, it regenerates the packets and retimes them.
  - Resides on Layer 1 of the OSI model.

OSI Model Layers
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical

Network Hardware

- Router
  - A device that connects any number of LANs.
  - Uses standardized protocols to move packets efficiently to their destination.
  - More sophisticated than bridges, connecting networks of different types (for example, star and token ring)
  - Forwards data depending on the Network address (IP), not the Hardware (MAC) address.
  - Routers are the only one of these four devices that will allow you to share a single IP address among multiple network clients.
  - Resides on Layer 3 of the OSI model.

OSI Model Layers
7 Application
6 Presentation
5 Session
4 Transport
3 Network
2 Data Link
1 Physical

Network Hardware

- Additional Network Hardware Devices
  - Network Interface Cards (NICs)
    - Puts the data into packets and transmits packet onto the network.
    - May be wired or wireless.
  - Gateway
    - Connects networks with different protocols like TCP/IP network and IPX/SPX networks
    - Routers and Gateways often refer to the same device
  - Proxy server
    - Isolates internal network computers from the internet.
    - The user first access the proxy server and the proxy server accesses the internet and retrieves the requested web page or document. The user then gets a copy of that page from the proxy server

Source: [illegible]

Common Network Media

- Electrical (copper)
  - Coaxial Cable
    - Single copper conductor in the center surrounded by a plastic layer for insulation and a braided metal outer shield.
  - Twisted pair
    - Four pairs of wires twisted to certain specifications.
    - Available in shielded and unshielded versions.
- Fiber-optic – A cable, consisting of a center glass core surrounded by layers of plastic, that transmits data using light rather than electricity.
- Atmosphere/Wireless – Uses Electromagnetic waves, whose frequency range is above that of microwaves, but below that of the visible spectrum.
- Choose Media based on :
  - Wiring configurations
  - Distance and location limitations
  - Speed
  - Reliability
  - Security
  - Budget

Copper - Twisted Pair

- Dialup over telephone line.
  - DSL (Digital Subscriber Line)
    - High-speed (256 Kbps – 55 Mbps), Full-duplex
    - Asymmetric Digital Subscriber Line (ADSL) and High-bit-rate Digital Subscriber Line (HDSL)
- CAT5
  - Ethernet cable standard defined by the Electronic Industries Association and Telecommunications Industry Association (EIA/TIA)
  - Speeds up to 100 Mbps
- Connector
  - RJ-45 - Standard connectors used for unshielded twisted-pair cable.

Ethernet Specifications

- 10BaseT
  - Ethernet specification for unshielded twisted pair cable (category 3, 4, or 5), transmits signals at 10 Mbps (megabits per second) with a distance limit of 100 meters per segment.
- 10BaseF
  - Ethernet specification for fiber optic cable, transmits signals at 10 Mbps (megabits per second) with a distance limit of 2000 meters per segment.
- 100BaseT
  - Ethernet specification for unshielded twisted pair cabling that is used to transmit data at 100 Mbps (megabits per second) with a distance limit of 100 meters per segment.
- 1000BaseTX
  - Ethernet specification for unshielded twisted pair cabling that is used to transmit data at 1 Gbps (gigabits per second) with a distance limitation of 220 meters per segment.

Optical Fiber

- Infrared light is transmitted through fiber and confined due to total internal reflection.
- Fibers can be made out of either plastic or glass.
- Used for high speed backbones and pipes over long distances.
- Comparatively expensive.

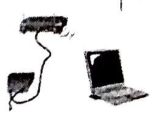
Cable Types Characteristics

[illegible]

	[illegible]	[illegible]	[illegible]	[illegible]
Data Rate	[illegible]	[illegible]	[illegible]	[illegible]
Signaling Method	Base Band	Base Band	Base Band	Base Band
Media Type	CAT5 [illegible]	[illegible]	CAT5 [illegible]	[illegible]
Max Length	[illegible]	[illegible]	[illegible]	[illegible]

Wireless Media

- Wireless LAN or WLAN
  - Wireless local area network that uses radio waves as its carrier
- Wi-Fi ("Wireless Fidelity")
  - A set of standards for WLANs based on IEEE 802.11
- Wi-Max
  - Emerging technology that can cover ranges up to 10 miles or more
- Satellite/Microwave
  - High speed media used for longer distances and remote locations



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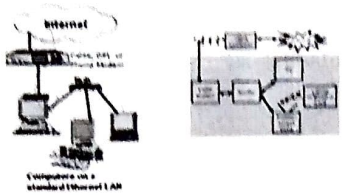
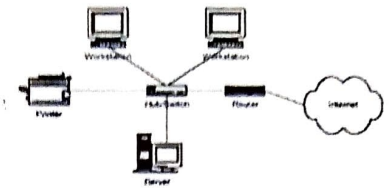
Sample LAN Implementation

Home Configuration



Sample LAN Implementation

Business Configuration



Sample LAN Implementation

Business Configuration

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E-Mail :hodcse.nit@navodaya.edu.in

CIRCULAR

CI: 2016-17/FDP/01

Date: 20-07-2017

Respected Sir / Madam,

Greetings from Navodaya Institute of Technology, Raichur…

The department of Computer Science & Engineering is organizing a **"Training Session on Microsoft Office Tools"** for Non-Teaching Faculties to upgrade the support staff's skills. The main objective of this workshop is to enhance the skills in microsoft tools like Microsoft office word, Powerpoint and Microsoft Excel. As we all are aware that the documentation works at the level of non teaching staff needs Word processing and data repository tools.

We are pleased to inform that the department of Computer Science & Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **23.07.2017 to 25.07.2017.**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating the attached invitation.

Venue: Department of Computer Science & Engineering
Navodaya Institute of Technology, Raichur.
Timing: 9.00AM to 5.30PM

Thanking you,
Yours sincerely,

20/07/17.

Mr. Vijaykumar Yadav
(I/C) HOD, CSE

PRINCIPAL 20.7.17
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

NAVODAYA INSTITUTE OF TECHNOLOGY
RAICHUR

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

20.07.2017

From
Mr. Vijaykumar Yadav,
(I/C) Head, CSE
Navodaya Institute of Technology,
Raichur-584103.

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

Sir

Subject: Requisition to conduct Training Programs for Non-Teaching Faculty- Reg

We have proposed to conduct the Training programs on the topic **"Training Session on Microsoft Office Tools"** on 23.07.2017 to 25.07.2017 at Navodaya Institute of Technology, Department of CSE, Raichur from 09.00 AM to 05.30 PM.

Thanking You

Yours faithfully

[Mr. Vijaykumar Yadav]

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

20.7.17
PRINCIPAL
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NON TEACHING STAFF SKILLS UP GRADUATION

DEPARTMENT: **CSE**

ACADEMIC YEAR: **2017-18**

DATE: **23-07-2017**

SL.No	Name of the Staff	Date	Details
1.	Mr. Anil Kandagal (CSE)	23-07-2017 to 25-07-2017	Programmer, Dept. of CSE
2.	Mr. Hariprasad (Civil)	23-07-2017 to 25-07-2017	Programmer, Dept. of CSE
3.	Ms. Vidya (ECE)	23-07-2017 ,to 25-07-2017	Lab Technician, Dept. of ECE
4.	Mr. Veeresh (Mech)	23-07-2017 to 25-07-2017	Lab Technician, Dept. of ME

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23.7.17

Head of Department
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NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

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Institute of Technology
RAICHUR

A Report On

"Training Session on Microsoft Office Tools"

Coordinators:

Prof. Vijaykumar Yadav, ***Assistant Professor (I/C HOD)***

Prof. Chetan Gudi, ***Assistant Professor***

Department of Computer Science & Engineering

Organized by:

Department of Computer Science & Engineering

Navodaya Institute of Technology, Raichur

Date: 23rd July to 25th July, 2017

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Head of Department
Computer Science & Engineering
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RAICHUR-584 103

Course Description and Objective:

0ffice tools course would enable the faculty in crafting professional word documents, excel spread sheets, power point presentations using the Microsoft suite of office tools. To familiarize the faculties in preparation of documents and presentations with office automation tools.

Course Outcomes:

By learning the course, the students will be able

• to perform documentation

• to perform accounting operations

• to perform presentation skills

Word

Word Orientation :

The instructor needs to give an overview of Microsoft word & Importance of MS Word as word Processor, Details of the four tasks and features that would be covered Using word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter.

Task 1 : Using word to create project certificate. Features to be covered:-Formatting Fonts in word, Drop Cap in word, Applying Text effects, Using Character Spacing, Borders and Colors, Inserting Header and Footer, Using Date and Time option in Word.

Task 2 : Creating project abstract Features to be covered:-Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, Hyperlink, Symbols, Spell Check , Track Changes.

Task 3 : Creating a Newsletter : Features to be covered:- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes and Paragraphs

Task 4 : Creating a Feedback form - Features to be covered- Forms, Text Fields, Inserting objects, Mail Merge in Word.

Excel

Excel Orientation : The instructor needs to tell the importance of MS Excel as a Spreadsheet tool, give the details of the four tasks and features that would be covered Excel – Accessing, overview of toolbars, saving excel files, Using help and resources {Comdex Information Technology course tool kit Vikas }

Task1: Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, Formatting Text

Task 2 : Calculations - Features to be covered:- Cell Referencing, Formulae in excel – average, std.deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, LOOKUP/VLOOKUP

Task 3 : Performance Analysis - Features to be covered:- Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting

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Task 4 : Cricket Score Card - Features to be covered:-Pivot Tables, Interactive Buttons, Importing Data, Data Protection, Data Validation

MS Power Point

Task1 : Students will be working on basic power point utilities and tools which help them create basic power point presentation. Topic covered includes :- PPT Orientation, Slide Layouts, Inserting Text, Word Art, Formatting Text, Bullets and Numbering, Auto Shapes, Lines and Arrows

Task 2 : This session helps students in making their presentations interactive. Topics covered includes : Hyperlinks, Inserting –Images, Clip Art, Audio, Video, Objects, Tables and Charts

Task 3 : Concentrating on the in and out of Microsoft power point. Helps them learn best practices in designing and preparing power point presentation. Topics covered includes :- Master Layouts (slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), Inserting – Background, textures, Design Templates, Hidden slides. Auto content wizard, Slide Transition, Custom Animation, Auto Rehearsing

Task 4 : Power point test would be conducted. Students will be given model power point presentation which needs to be replicated (exactly how it's asked).

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25/07/12
Head of Department
Computer Science & Engineering
Navodaya Institute of Technology
RAICHUR-584 103

2019-20/W-S/01

01.02.2020

From
Dr.P. Rathnakumar,
Professor and Head,
Department of Mechanical Engineering
Navodaya Institute of Technology,
Raichur-584103.

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

Sir

Subject: Requisition to conduct Training Programs for Non-Teaching Faculty- Reg

We have proposed to conduct the Training programs on the topic **"Hands on Workshop in Solid Edge" from 05.02.2020 to 07.02.2020 for** non-teaching staff at Navodaya Institute of Technology, Department of Mechanical Engineering, and Raichur from 10.00 AM to 05.00 PM.

Thanking You

Yours faithfully

01/2/2020

[Dr. Rathnakumar]

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

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

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RAICHUR

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E-Mail :hodme.nit@navodaya.edu.in

CIRCULAR

2019-20/WS/02 03-02-20

TO
Non-teaching staff
NIT Raichur,

Greetings from Navodaya Institute of Technology, Raichur…

The department of Mechanical Engineering is organizing a **"Hands on Workshop in Solid Edge"** for Non-Teaching Faculties to upgrade the support staff's skills.

The main objective of this workshop is to enhance the skills in **Solid Edge** software. Simple Drawing software such as **Solid Edge** can be quite handy to draw highly complicated machine components; also couple of sessions will be conducted for the use of **Solid Edge** software to demonstrate its applications to specific topics such as Designing and modeling.

We are pleased to inform that the department of Mechanical Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **05.02.2020 to 07.02.2020.**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating the attached invitation.

Venue: Department Mechanical Engineering
Navodaya Institute of Technology, Raichur.
Timing: 9.00AM to 5.00 PM

03/02/2020

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Thanking you,
Yours sincerely,
03/2

Dr.P.Rathnakumar
HOD/MECH

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

NAVODAYA INSTITUTE OF TECHNOLOGY

NAVODAYA INSTITUTE OF TECHNOLOGY: RAICHUR

NON TEACHING STAFF SKILLS UP GRADUATION

DEPARTMENT: Mechanical Engineering

ACADEMIC YEAR: 2019-2020 DATE:: 07/02/2020

Sl.No	Name of the Staff	Date	Details	Signature
(1)	Veeresh	7/2/2020	Instructor (M/c shop)	
(2)	Raghavan	7/2/2020	Instructor (CAED Lab)	
(3)	Sandeep Kumar	7/2/2020	Instructor (CIM Lab)	Sandeep.
(4)	Y.B. Sandeep Raj	7/2/2020	Instructor (EC Lab)	
(5)	Chandra Shekar	7/2/2020	Foreman (m/c shop)	

07/02

HEAD OF THE DEPARTMENT

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

07/02/2020

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Navodaya Education Trust ®
Navodaya Institute of Technology
Raichur

A Report

On

"Hands on Workshop in Solid Edge"

For Non-Teaching Staff

Coordinators:

Prof Shrikar G Kulkarni, *Assistant Professor*

Prof. Ravi Kulkarni, *Assistant Professor*

Prof. Priyankar D, *Assistant Professor*

Department of Mechanical Engineering

Organized by:

Department of Mechanical Engineering

Navodaya Institute of technology-Raichur

Date: 05th February to 7 February 2020

"Hands on Workshop in Solid Edge"

Navodaya Institute of Technology, Raichur Mechanical Engineering department conducted a worksh op on **"Solid Edge"** The workshop was based on the Basics of drawing to upgrade the knowledge of supporting staffs in the department. Coordinators- Prof Shrikar G Kulkarni, Assistant Professor Prof. Ravi Kulkarni, Assistant Professor Prof. Priyankar D, Assistant delivered the content with practical and hands on training to part icipants.

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Module 1: PRIME **Learning Tools** Help Tooltips Command Finder Tutorials Take a tour of the User Interface **Design** Design Workflow Application Button Quick Access Toolbar The Ribbon with Tabbed Groups Command Bar with Docking Window and Tab Sets Prompt and Status Bar Mouse Button Options Traditional Part Design Workflow Creating Models Edit and Change Adding to the Model Manage the Completed Model **Draft** Interface Sheets Views Dimensions and Annotation Tools 2D to 3D to 2D Workflow Custom Sheets and Title Blocks **Assembly** Interface Building the Foundation: Relationships Changing that Foundation, No Cracks! Component Design Changes Tools for Managing the Growing Assembly **Assembly Draft** Views Bill of Materials / Parts List Explode/Render/Animate – Exploded Views --Basic Commands and syntax --Identifiers --Arrays and Matrices --Referencing Elements --Referencing Elements --Matrix Operations --Array Operations	**Prof Shrikar G Kulkarni, Assistant Professor** **Department of Mechanical Engineering** **NIT Raichur** INSTITUTE OF TECHNOLOGY NAVODAYA RAICHUR
MODULE 2: SYNCHRONOUS TRANSITION **Itinerary** Interface - The New Look Learning Tools Help Tooltips	**Prof. Ravi Kulkarni, Assistant Professor** **Department of Mechanical Engineering** **NIT Raichur**

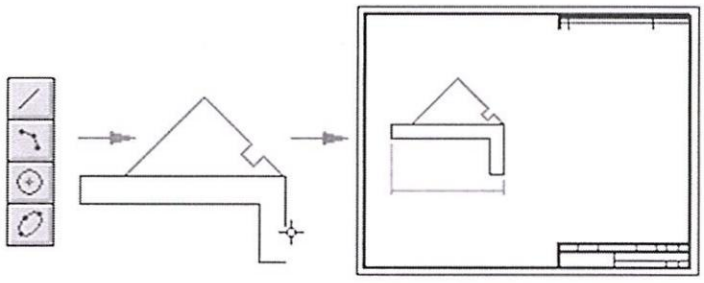
Command Finder - Take a Tour of the User Interface **Design Workflow** Application Button Quick Access Toolbar The Ribbon with Tabbed Groups Command Bar with Docking Window and Tab Sets Prompt and Status Bars Mouse Button Options **Design** Optimized Part Design Workflow PRE-ST Design Tools Creating HYBRID Models: History-based and PRE-ST Working with HYBRID Models Synchronous Design Workflow Real-time Changes Live Rules **Assembly** Interface Building the Foundation: Relationships Changing that Foundation…No Cracks! Component Design Changes Tools for Managing the Growing Assembly Synchronous Assemblies Synchronous Assembly Design	**Prof. Ravi Kulkarni, Assistant Professor** **Department of Mechanical Engineering** **NIT Raichur**
Module 3: Advanced Part & Assembly Design **Part Breakdown** Where to start, Sketches or Regions? Traditional or Synchronous design? Which features to model first **Profile/Sketch Tools** 2D designs that will improve your use of Intellisketch Tips for faster more reliable sketching Predictable/reliable profiles that won't blow up **Optimize Design** Which features to draw? Which featured to model? Learn to model the part - not draw it, what are LIVE RULES? Combining features to reduce file overhead and control changes Model intermediate to difficult parts /SMART PARTS	**Prof. Priyankar D, Assistant Professor** **Department of Mechanical Engineering** **NIT Raichur**

2D drawing views

A 2D drawing view consists of two-dimensional elements. It is not associative to a 3D model. A 2D drawing view allows you to quickly create or modify a drawing view without making changes to a part or assembly document.

To create a 2D drawing view of a part or assembly, you can convert a 3D part view or you can draw the 2D graphics yourself. You also can import a 2D design file and then create 2D views from it. You can layer 2D graphics on top of a 2D view.

Whenever you add or edit 2D graphical elements, a full range of drawing tools is provided. These include drawing and relationship commands that make it easy for you to draw an accurate 2D representation of a part or assembly.



Note:

For more information about 2D drawing in Solid Edge, see the Drawing 2D elements Help topic.

2D model views

2D model views are scaled 2D drawing views placed on working sheets of geometry that reside at full scale on the 2D Model sheet. You can create multiple 2D model views that reference the 2D model geometry, and you can customize the cropping boundary for each view created from the geometry on the 2D Model sheet.

Creating a 2D drawing view

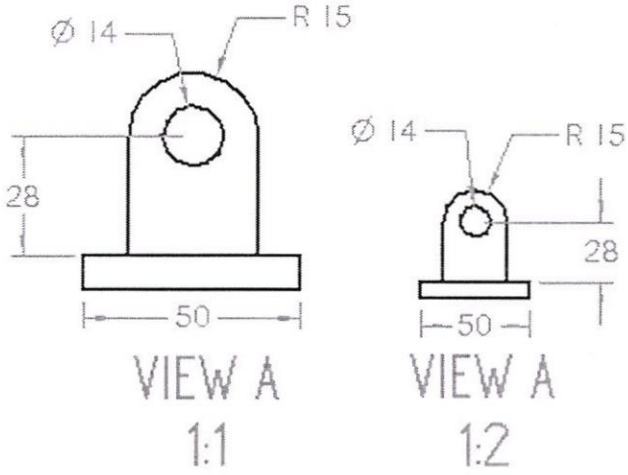
There are several commands related to creating a 2D view from existing graphics:

- 2D Model View command—Creates a 2D view that references geometry on the 2D Model sheet. Use the Drawing Area Setup command, which is available only for the 2D Model sheet, to set up a scaled work area in 2D model space.
- Convert to 2D View command—Converts a 3D part view to 2D geometry. Once you convert a part view to a 2D view, associativity to the part or assembly document cannot be retrieved.
- Draw In View command—Available for a 3D part, assembly, or sheet metal view placed on a working drawing sheet, this command opens a 2D View Edit window for you to draw in the view and to add annotations at a 1:1 scale.
- 2D View command—Superseded by the 2D Model View command, but still available through customization.

2D drawing scales

When drawing inside a 2D view placed on a working sheet, you typically work at 1:1 scale. You also can draw directly on the working sheet. If you decide later that you want to scale graphics you have drawn directly on the sheet, just move or copy them into a drawing view with the Cut, Copy, and Paste commands.

The dimension and annotation sizes on the working sheet are independent of the drawing view scale. For example, if you define the height and size of dimension text as 0.125 inches or 3.5 millimeters, these are the actual values of the dimension text on the printed drawing.



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RAICHUR

Using the 2D Model sheet

You also can work on the 2D Model sheet in 2D Model space. The Drawing Area Setup command defines a scaled work area where you can create, edit, and annotate a 2D design at a scale appropriate to the size of the part or assembly, yet print at a scale appropriate to the dimensions of your drawing sheet.
The Auto-Hide layer is available at all times when working on the 2D Model sheet.

2D Model view workflow

This workflow is used to create a 2D model view in a draft document.

First, use the 2D Model Sheet command to display the full-scale 2D Model sheet. There is one 2D Model sheet per document.

Next, use the Drawing Area Setup command to define a work space on the 2D Model sheet.

Next, place or create the design geometry on the 2D Model sheet, using any combination of design file import, dragging an existing .dft file onto the sheet, and 2D line drawing tools.

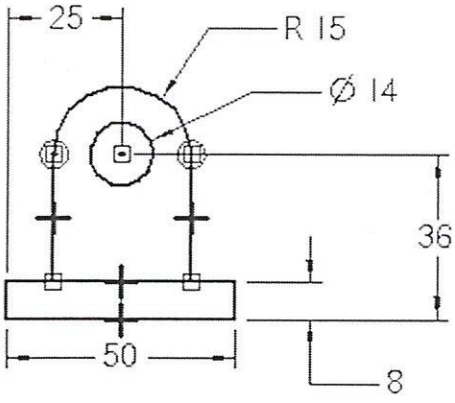
On the working drawing sheet, use the 2D Model View command to create one or more 2D model views that reference the 2D model geometry. You can customize the clipping boundary for each view created from the geometry on the 2D Model sheet, and assign a unique caption to each view.

Creating detail views from a 2D model view

You can use the Detail View command to create a dependent detail view from a 2D model view or a drawing view that has been converted to 2D geometry. You can create a detail view that displays a circular envelope or a detail view with a custom boundary.
Click here to learn more about Solid Edge detail views and the procedures for creating them.

2D views and associativity

If you set the Maintain Relationships option in the Relate group on the ribbon, the graphics you draw in a 2D view can be updated associatively, similar to the profiles you draw in the Part environment. You can place driving dimensions and apply relationships to control the size and location of the elements.



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RAICHUR

Hiding construction graphics, dimensions, and annotations

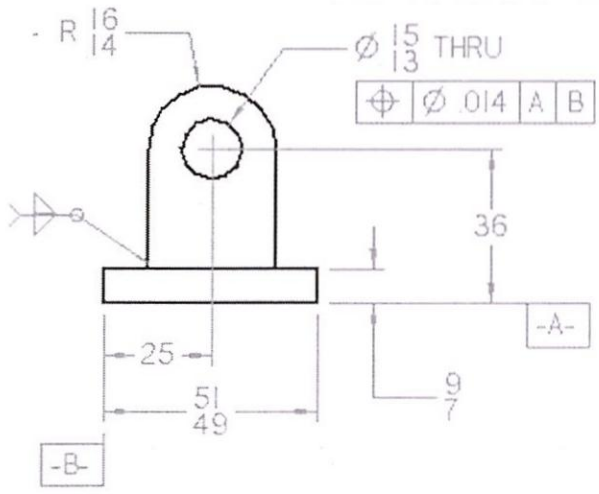
When you want to hide elements in a drawing view but you do not want to assign the hidden elements to individual layers, you can use the Auto-Hide layer. You can hide construction geometry, dimensions, and certain annotations. For example, you can place dimensions on the 2D Model sheet Auto-Hide layer to drive the size of the geometry but not display when a drawing view is placed on the working sheet.

- The Auto-Hide layer is available while you are drawing and dimensioning on the 2D Model sheet. You can use the 2D Model View command to create a drawing view of the 2D Model sheet geometry, and all elements on the Auto-Hide layer are hidden automatically.
- The Auto-Hide layer also is created automatically when you right-click a drawing view and choose the Draw In View command. When you close a Draw In View window, elements on the Auto-Hide layer are hidden automatically.

Completing the 2D view

When you finish drawing in a 2D view on the working sheet, click the Return button on the command bar to close the 2D View Edit window. After you close the 2D view window, you can add driven dimensions and annotations, such as weld symbols, feature control frames, and so forth to the drawing sheet.

If you are working in 2D model space on the 2D Model sheet, you can add and edit annotations and dimensions directly on the sheet. The graphics you add on the 2D Model sheet are visible in the 2D view on the working sheet when you click the sheet tab.

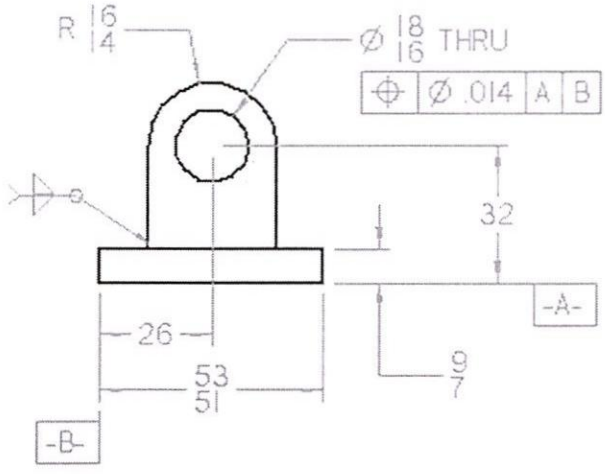


Editing 2D views

When you need to edit 3D model graphics in a 2D view, double-click the view. You can also use the Draw in View command on the shortcut menu.

If the 2D view graphics were created from the 2D Model sheet as a block, or dragged onto the sheet as a file, then you can use the Open command on the shortcut menu to open the graphics for editing. Or you can use the Unblock command to drop the block to its base elements for individual manipulation.

If you created the 2D view associatively, you can edit the driving dimensions to modify the graphics. When you close the 2D view, the driven dimensions you placed on the sheet will update.



What are you looking for?

How do I

- Convert a Part View to a 2D View
- Create a 2D model view
- Create automatic drawing views
- Define a 2D Model drawing area

Learn more about

- Drawing 2D elements
- Drawing area setup in 2D model space
- Drawing Production Overview

Look up more details

- Drawing Area Setup command
- View Wizard command
- 2D Model View command
- 2D Model Sheet command

08/02/2020

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Navodaya Institute of Technology (NIT)
RAICHUR-584103

08/02/20

Head of Department
Department of Mechanical Engineering
Navodaya Institute of Technology
RAICHUR.

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

20.07.2018

2018-19/MS/01

From
Dr.P. Rathnakumar,
Professor and Head,
Department of Mechanical Engineering
Navodaya Institute of Technology,
Raichur-584103.

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

Sir

Subject: Requisition to conduct Training Programs for Non-Teaching Faculty- Reg

We have proposed to conduct the Training programs on the topic **"Hands on Training Workshop in Microsoft Excel 2016" from 25.07.2018 to 27.07.2018 for** non-teaching staff at Navodaya Institute of Technology, Department of Mechanical Engineering, and Raichur from 10.00 AM to 05.00 PM.

Thanking You

20.07.2018
PRINCIPAL
Navodaya Institute of Technology (NIT)
RAICHUR-584 103

Yours faithfully

[Dr. Rathnakumar]

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

NAVODAYA INSTITUTE OF TECHNOLOGY
RAICHUR

NET's
NAVODAYA INSTITUTE OF TECHNOLOGY: RAICHUR

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E-Mail :hodme.nit@navodaya.edu.in

CIRCULAR

2018-19 | W.S | 02 23.07.2018

TO
Non-teaching staff
NIT Raichur.

Greetings from Navodaya Institute of Technology, Raichur…

The department of Mechanical Engineering is organizing a **"Hands on Training Workshop in Microsoft Excel 2016" from 25.07.2018 to 27.07.2018** for Non-Teaching Faculties to upgrade the support staff's skills.

The main objective of this workshop is to enhance the skills in **Microsoft Excel 2016** software. **Microsoft Excel 2016** is used very widely nowadays by everyone because it is very helpful and it helps in saving a lot of time. It is being used for so many years and it gets upgraded every year with new features. The most impressive thing about MS Excel is that it can be used anywhere for any kind of work. For example, it is used for billing, data management, analysis, inventory, finance, business tasks, complex calculations, etc. One can even do mathematical calculations using this and can also store important data in it in the form of charts or spreadsheets. We are pleased to inform that the department of Mechanical Engineering, Navodaya Institute of Technology is organizing a workshop for Non-Teaching Faculty during **25.07.2018 to 27.07.2018**

In this context, we look forward your support and request you to encourage participation of support staff's by circulating the attached invitation.

Venue: Department Mechanical Engineering
Navodaya Institute of Technology, Raichur.
Timing: 9.00AM to 5.00 PM

24/07/2018

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

Thanking you,
Yours sincerely,

Dr.P.Rathnakumar
HOD/MECH

Head of Department
Department of Mechanical Engineering
Navodaya Institute of Technology
RAICHUR

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NAVODAYA INSTITUTE OF TECHNOLOGY: RAICHUR

NON TEACHING STAFF SKILLS UP GRADUATION

DEPARTMENT: Mechanical Engineering

ACADEMIC YEAR: 2018 – 2019 DATE: 27.07.2018

Sl.No	Name of the Staff	Date	Details	Signature
(1)	Veeresh	27.07.18	Instructor (Workshop)	
(2)	Raghavendra	27.07.18	Instructor (Lab/Lab)	
(3)	Sandeep Kumar	—11—	Inst/Instructor (CIM Lab)	Sandeep
(4)	Y. B. Sandeep Raj	—11—	Instructor (EC Lab)	
(5)	Chandra Shekhar	—11—	Foreman (Mech Workshop)	

27/07/18

HEAD OF THE DEPARTMENT

Head of Department
Department of Mechanical Engineering
Navodaya Institute of Technology
RAICHUR.

27/07/18

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Navodaya Education Trust ®
Navodaya Institute of Technology
Raichur

A Report

On

"Hands on Training Workshop in Microsoft Excel 2016"

From 25.07.2018 to 27.07.2018

For Non-Teaching Staff

Coordinators:

Prof Pradeep Ilay	*Assistant Professor*
Prof. Imran Basha,	*Assistant Professor*
Prof. Raja Shakarappa	*Assistant Professor*

Department of Mechanical Engineering

Organized by:

Department of Mechanical Engineering

Navodaya Institute of technology-Raichur

Date: 25.07.2018 to 27.07.2018

NAVODAYA INSTITUTE OF TECHNOLOGY RAICHUR

"Hands on Training Workshop in Microsoft Excel 2016"

Navodaya Institute of Technology, Raichur Mechanical Engineering department conducted a workshop on "Microsoft Excel 2016". The workshop was based on the Basics of MS Excel to upgrade the knowledge of supporting staffs in the department. Coordinators- Prof Pradeep Ilay, Assistant Professor, Prof. Imran Basha, Assistant Professor Prof. Raja Shakarappa, Assistant professor delivered the content with practical and hands on training to participants.

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Part 1: Create and format workbooks Chapter 1: Set up a workbook Chapter 2: Work with data and Excel tables Chapter 3: Perform calculations on data Chapter 4: Change workbook appearance	Prof Pradeep Ilay Assistant Professor Department of Mechanical Engineering
Part 2: Analyze and present data Chapter 5: Manage worksheet data Chapter 6: Reorder and summarize data Chapter 7: Combine data from multiple sources Chapter 8: Analyze alternative data sets Chapter 9: Create charts and graphics Chapter 10: Create dynamic worksheets by using Pivot Tab	Prof Imran Basha Assistant Professor Department of Mechanical Engineering
Part 3: Collaborate and share in Excel Chapter 11: Print worksheets and charts Chapter 12: Automate repetitive tasks by using macros Chapter 13: Work with other Microsoft Office apps Chapter 14: Collaborate with colleagues **Part 4: Perform advanced analysis** Chapter 15: Perform business intelligence analysis Chapter 16: Create forecasts and visualizations	Prof Imran Basha Assistant Professor Department of Mechanical Engineering & Prof Raja Shakarappa Assistant Professor Department of Mechanical Engineering

Shortcuts

1. Alt + down arrow

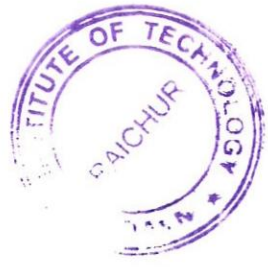
Currently, my favorite keyboard shortcut is **Alt+Down Arrow**. This allows you to create an instant drop-down list in a given cell. The list is based on data that is in the same column as the cell on which we used the keyboard shortcut. We just need to remember that the cell in which we want to use the instant drop-down list adjoins the data already entered (there was no empty data row between the data).

The Alt + down arrow combination also expands existing drop-down lists. This allows us to speed up our work if we focus on using the keyboard. It can also expand the filter menu in both standard data and pivot tables.

You can also move between elements of the chart with Alt + down arrow combination.

2. Alt-T-I and Alt-T-M-S

My Favorite shortcut for Win Excel. By pressing **Alt+T**, you can refer to the old menu structure that we used before Excel 2007. For example, to open the add-ins dialog to close or open add-ins you can use the shortcut **Alt+T+I** (the old Tools>Add-ins). If you want to open the Security dialog, you can use **Alt+T+M+S** (the old Tools>Macro>Security). You see that this is much easier than using File>Options>Trust Center>Trust Center Settings>Macro Settings.



3. Alt+F11 and Alt+F10

I specialize in automating Microsoft Office applications by developing VBA macros and add-ins. I write VBA code to interface Excel with PowerPoint and vice versa. For example, it's possible to programmatically create slides in PowerPoint from ranges and charts within Excel or, in the reverse direction, send content from a table in a PowerPoint slide to an Excel worksheet. You can learn more about VBA here.

My favorite shortcut is **Alt+F11** to open the VBE (Visual Basic Editor). From a non-programming perspective, Alt+F10 would be my favorite shortcut. This opens the Selection Pane which you use to reorder and rename the layers of shapes in your worksheet.

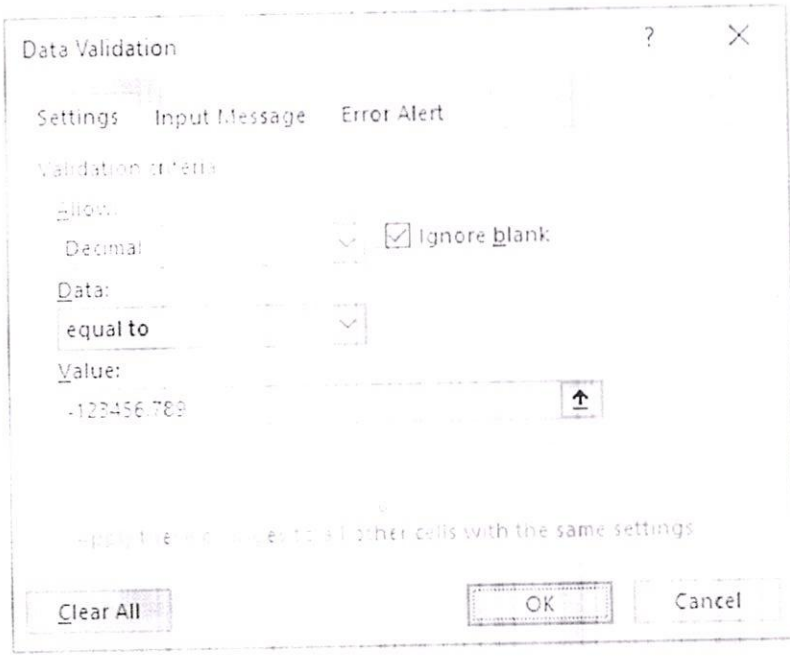
4. Ctrl+T My favorite Excel Shortcut is Ctrl+T. It is the shortcut to Convert the data into an Excel Table.

Converting data into an Excel Table is the best way to keep your data organized. As soon as a data range is converted into an Excel Table, it will acquire a set of awesome properties which makes the data easy to handle.

Some solid reasons to use Excel Tables include:

- Excel Tables are easy to Create, are Dynamic and come with Slicers
- Excel Tables can create human-readable, meaningful formulas which will be easy to understand
- Excel Tables are powered with Calculated Columns

Bonus Tip: CTRL+L is a lesser known shortcut to convert a data range into an Excel Table.



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