



**DADI INSTITUTE OF ENGINEERING & TECHNOLOGY  
(AUTONOMOUS)**

(Approved by A.I.C.T.E., New Delhi & Permanently Affiliated to JNTUGV, Vizianagaram)

**NAAC Accredited with 'A' Grade and Inclusion u/s 2(f) & 12(B) of UGC Act**

An ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018 Certified Institute.

**NH-16, Anakapalle-531002, Visakhapatnam, A.P.**

**Mobile: +919963694444, Website: [www.diet.edu.in](http://www.diet.edu.in), E-mail: [info@diet.edu.in](mailto:info@diet.edu.in)**

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**BOARD OF STUDIES**

**DEPARTMENT OF CSE (AI&ML)**

**COURSE: COMPUTER SCIENCE & ENGINEERING (AI&ML)**

## FORMATION AND FUNCTIONS OF BOARD OF STUDIES

The Board of Studies is a statutory body that reports to the Academic Council through the Concerned Dean. Each Academic Department shall have a Board of Studies. All academic matters like Introduction of a new Academic Programme, Revision of a programme / course, review of academic rules shall be handled by the board of studies.

### **Composition of Board of Studies:**

1. Head of the Department concerned (Chairman).
2. The entire faculty of each specialization.
3. Two subject experts from outside the Parent University to be nominated by the Academic Council.
4. One expert to be nominated by the Vice-Chancellor from a panel of six recommended by the college Principal.
5. One representative from industry/corporate sector/allied area relating to placement.
6. One postgraduate meritorious alumnus to be nominated by the principal.

The Chairman, Board of Studies, may with the approval of the principal of the college,:

- Co-opt (a) Experts from outside the college whenever special courses of studies are to be formulated.  
(b) Other members of staff of the same faculty.

**Term:** The term of the nominated members shall be three years.

### **Meetings:**

- a) The Board of Studies shall meet at least twice a year.
- b) A notice of at least 5 days shall be given for a meeting of the Board of studies along with the agenda prepared with the approval of the Chairman, Board of Studies.
- c) Every meeting shall be presided over by the Chairman of the Board of Studies.
- d) Secretary shall finalize the Minutes of the proceedings as soon as possible after the meeting.
- e) Decisions at the meeting shall be taken by a simple majority and shall come into force only after the approval of the Academic Council. However the proposals shall be recommended by the concerned Dean to the Academic Council.

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**Board of Studies: CSE (AI&ML)**

S.No.	Name of the person	Designation	Category	Status of the person	Affiliation
1	Mr. A.Venkateswara Rao	Associate Professor	Education	Chairman(HOD)	DIET, Anakapalle
2	Mr. P.SVSV Rama Raju	Associate Professor	Education	Member-Faculty	DIET, Anakapalle
3	Mr. Ratnakar Kotnana	Associate Professor	Education	Member-Faculty	DIET, Anakapalle
4	Mr. Kolli Nuka Raju	Associate Professor	Education	Member-Faculty	DIET, Anakapalle
5	Dr. Prasanna Kumar Lakkineni	Associate Professor	Education	Member-Faculty	DIET, Anakapalle
6	Dr.P.Srinivas	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
7	Mrs.Suneetha Sampathi Rao	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
8	Mr.K.Kranthi Kiran	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
9	Mrs.Razia Sulthana	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
10	Mrs.G.Pushpa	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
11	Mrs.D.Harshitha	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
12	Mrs.K.Ramya Krishna	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
13	Ms.S.Sireesha	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
14	Mrs.K.Divya Kalyani	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
15	Mrs.G.Sunanda	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
16	Mrs.Ch.Usha	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle

17	Mrs.D.Padma	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
18	Mrs. K. Lavanya	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
19	Mrs.G.Chandrika	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
20	Mrs.P.Mounika	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
21	Mrs.R. Swapna	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
22	Mr. S. Syam Kumar	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
23	Mrs M Kalyani	Assistant Professor	Education	Member-Faculty	DIET, Anakapalle
21	Dr.P.Aruna Kumari	Assistant Professor & HoD	Education	Member-Faculty	JNTU GV
22	Dr. K.Venkata Ramana	Associate Professor, Dept., of CS&SE	Education		Andhra University college of Engineering
23	Dr. Uma Devi Tatavarthi	Professor Dept., of CSE GITAM	Education		GITAM
24	Mr. Abhijeet	General Manager (Projects) and TA to Director(Operations)	Industry	Representative from industry/corporate sector/allied area relating to placements	RINL- Visakhapatn am.
25	Ms. K.Pelessea	CSE	Alumni	Meritorious student	Content Lead, Arika Flash Creations, Visakhapatn am

*A. Venk*  
BOS -Chairman



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9963993229 principal@diet.edu.in www.diet.edu.in

NH-16, Anakapalle – 531002, Visakhapatnam, A.P.

**Dr.R.Vaikunta Rao, M.Tech., Ph.D.**  
Principal

Lr.No.DIET(A)/ BOS-CSE(AI&ML,DS)/2023-24/02

Dt:23-12-2023

To,  
Sri. Abhijeet,  
Senior Manager and TA to Director(operations),  
Steel Plant,  
Visakhapatnam.

Sir,

Sub: DIET (A) - Constitution of Board of Studies (BOS) - Submission of proceedings for nomination of a member - Welcome to first BOS meeting request – Reg.

With reference to the captioned subject, the academic council/principal is pleased to nominate you as a member in newly constituted Board of Studies in the Department of Computer Science and Engineering(AI&ML, Data Science), Dadi Institute of Engineering & Technology (Autonomous), Anakapalle w.e.f the A.Y 2023-24 for tenure of three years. In this regard, we heartily welcome you to Department BOS meetings which shall be scheduled at least once every six months.

It is to inform you that the first BOS meeting for UG & PG – CSE (AI&ML, Data Science) is scheduled to be conducted on 30-12-2023 in hybrid mode at DIET campus, Anakapalle.

Agenda is to approve the first year Syllabus and to discuss other matters with the permission of chair.

In this regard, we trust that you are the right person to contribute your valuable suggestion in revising the Curriculum & Syllabus based on the industrial requirement and latest technology prevailing in Computer Science and Engineering(AI&ML,Data Science) which can help the student's community to shape themselves for their bright future.

The Board of Studies shall recommend the following to the Academic Council:

- Courses of studies;
- Measures for the improvement of the standards of teaching and research;
- Any other academic matter.



*Dr. R. Vaikunta Rao*  
23/12/23  
PRINCIPAL  
(Dr. R. Vaikunta Rao)  
PRINCIPAL  
Dadi Institute of  
Engineering & Technology  
ANAKAPALLE - 531 002.



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**Dr.R.Vaikunta Rao, M.Tech., Ph.D.**  
**Principal**

Lr.No.DIET (A)/BOS-CSE (AI&ML ,Data Science)/2023-24/01

Dt.23-12-2023

To,  
Dr. Uma Devi Tatavarthi,  
Prof, Dept.of CSE,  
GITAM,  
Visakhapatnam.

Sir,

Sub: DIET (A) - Constitution of Board of Studies (BOS) - Submission of proceedings for nomination of a member - Welcome to first BOS meeting request – Reg.

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- Measures for the improvement of the standards of teaching and research;
- Any other academic matter.



*Dr. R. Vaikunta Rao*  
23/12/23

**PRINCIPAL**

**(Dr. R. Vaikunta Rao)**

**PRINCIPAL**

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**Dr.R.Vaikunta Rao, M.Tech., Ph.D.**  
Principal

Lr.No. DIET(A) / BOS-CSE(AI&ML,DS)/2023-24/04

Dt.23-12-2023

To  
Dr. K.Venkata Ramana,  
Associate Professor,  
Dept. of CSE, AU,  
Vizainagaram.

Sir,

Sub: DIET (A) - Constitution of Board of Studies (BOS) - Submission of proceedings for nomination of a member - Welcome to first BOS meeting request – Reg.

With reference to the captioned subject, the academic council/principal is pleased to nominate you as a member in newly constituted Board of Studies in the Department of Computer Science and Engineering(AI&ML ,Data Science), Dadi Institute of Engineering & Technology (Autonomous), Anakapalle w.e.f the A.Y 2023-24 for tenure of three years. In this regard, we heartily welcome you to Department BOS meetings which shall be scheduled at least once every six months.

It is to inform you that the first BOS meeting for UG & PG – CSM&CSD is scheduled to be conducted on 30-12-2023 in hybrid mode at DIET campus, Anakapalle.

Agenda is to approve the first year Syllabus and to discuss other matters with the permission of chair.

In this regard, we trust that you are the right person to contribute your valuable suggestion in revising the Curriculum & Syllabus based on the industrial requirement and latest technology prevailing in Computer Science and Engineering(AI&ML ,Data Science), which can help the student's community to shape themselves for their bright future.

The Board of Studies shall recommend the following to the Academic Council:

- Courses of studies;
- Measures for the improvement of the standards of teaching and research;
- Any other academic matter.



*Dr. R. Vaikunta Rao*  
23/12/23

PRINCIPAL  
(Dr. R. Vaikunta Rao)  
PRINCIPAL  
Dadi Institute of  
Engineering & Technology  
ANAKAPALLE - 531 002.



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**Dr.R.Vaikunta Rao, M.Tech., Ph.D.**  
Principal

Lr.No.DIET (A)/BOS-CSE (AI&ML)/2023-24/01

Dt.23-12-2023

To,  
Dr. P. Aruna Kumari,  
Asst Prof & HoD,  
JNTU-GV CEV(A),  
Vizainagaram.

Sir,

Sub: DIET (A) - Constitution of Board of Studies (BOS) - Submission of proceedings for nomination of a member - Welcome to first BOS meeting request – Reg.

Ref: Proc.No. JNTU-GV/BOS Members Nomination/DIET (A)/2023-24 dated 14-12-2023

With reference to the captioned subject, the academic council/principal is pleased to nominate you as a member in newly constituted Board of Studies in the Department of Computer Science and Engineering(AI&ML), Dadi Institute of Engineering & Technology (Autonomous), Anakapalle w.e.f the A.Y 2023-24 for tenure of three years. In this regard, we heartily welcome you to Department BOS meetings which shall be scheduled at least once every six months.

It is to inform you that the first BOS meeting for UG & PG – CSM is scheduled to be conducted on 30-12-2023 in hybrid mode at DIET campus, Anakapalle.

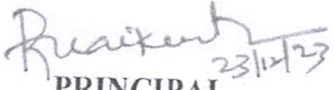
Agenda is to approve the first year Syllabus and to discuss other matters with the permission of chair.

In this regard, we trust that you are the right person to contribute your valuable suggestion in revising the Curriculum & Syllabus based on the industrial requirement and latest technology prevailing in Computer Science and Engineering (CSM) which can help the student's community to shape themselves for their bright future.

The Board of Studies shall recommend the following to the Academic Council:

- Courses of studies;
- Measures for the improvement of the standards of teaching and research;
- Any other academic matter.



  
PRINCIPAL  
(Dr. R. Vaikunta Rao)  
PRINCIPAL  
Dadi Institute of  
Engineering & Technology  
ANAKAPALLE - 531 002





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**Dr.R.Vaikunta Rao, M.Tech., Ph.D.**  
Principal

Lr.No.DIET(A)/ BOS-CSE(AI&ML,DS)/2023-24/03

Dt.23-12-2023

To  
Ms.K.Pelsea,  
Content Lead,  
Arika Flash Creations,  
Visakhapatnam.

Sir,

Sub: DIET (A) - Constitution of Board of Studies (BOS) - Submission of proceedings for nomination of a member - Welcome to first BOS meeting request – Reg.

With reference to the captioned subject, the academic council/principal is pleased to nominate you as a member in newly constituted Board of Studies in the Department of Computer Science and Engineering(AI&ML, Data Science), Dadi Institute of Engineering & Technology (Autonomous), Anakapalle w.e.f the A.Y 2023-24 for tenure of three years. In this regard, we heartily welcome you to Department BOS meetings which shall be scheduled at least once every six months.

It is to inform you that the first BOS meeting for UG & PG – CSE (AI&ML, Data Science) is scheduled to be conducted on 30-12-2023 in hybrid mode at DIET campus, Anakapalle.

Agenda is to approve the first year Syllabus and to discuss other matters with the permission of chair.

In this regard, we trust that you are the right person to contribute your valuable suggestion in revising the Curriculum & Syllabus based on the industrial requirement and latest technology prevailing in Computer Science and Engineering which can help the student's community to shape themselves for their bright future.

The Board of Studies shall recommend the following to the Academic Council:

- Courses of studies;
- Measures for the improvement of the standards of teaching and research;
- Any other academic matter.



*Dr. R. Vaikunta Rao*  
23/12/23

**PRINCIPAL**  
**(Dr. R. Vaikunta Rao)**  
PRINCIPAL  
Dadi Institute of  
Engineering & Technology  
ANAKAPALLE - 531 002



HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

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**Invitation for Board of Studies Meeting at Department of CSE(AI & ML) on 30th December-2023 @10.00AM onwards through Online Mode-Reg**

2 messages

HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

Wed, Dec 27, 2023 at 9:27 PM

To: "arunakumarip.cse@jntugvcev.edu.in" &lt;arunakumarip.cse@jntugvcev.edu.in&gt;

Cc: Deputy HOD CSD &amp; CSM &lt;dyhodcsdm@diet.edu.in&gt;

Respected Madam,

I am pleased to inform you that you are a special invitee member of the Board of Studies for the Department of CSE(AI & ML), Dadi Institute of Engineering & Technology as per JNTU-GV Order No. Proc.No. JNTU-GV/BOS Members Nomination/DIET (A)/2023-24, dated 14-12-2023.

As per telephonic conversation, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM,DIET.

The Agenda of the Meeting:

1. Discussion and finalization of the Draft syllabus of UG courses (B.Tech).

Hope you will accept our invitation and a line of confirmation from your side is highly appreciated. Please find enclosed invitation letter for the BoS meeting.

The draft syllabus and google meet link will be sent very soon

With Regards

**A.Venkateswara Rao**  
Associate Professor & HOD  
Department of CSD & CSM,  
**Dadi Institute of Engineering and Technology,**  
**Accredited by NAAC with A Grade**  
**Visakhapatnam,Andhra Pradesh.**  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

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 Invitation Letter Dr P.Aruna Kumari.pdf  
243K

HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

Sat, Dec 30, 2023 at 5:48 AM

To: arunakumarip.cse@jntugvcev.edu.in

Respected Madam,

**Greetings from Dadi Institute of Engineering & Technology !!!!**

As per our earlier mail conversations, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM, DIET.

The Agenda of the Meeting:

1. Discussion and finalization of the Draft syllabus of UG as per NEP 2020.

Please find the draft syllabus and Google meet link

Meeting Link: <https://meet.google.com/myp-evrb-wan>

Date of Meeting: 30/12/2023 Time: 10.00AM Onwards

Thanking you

**A.Venkateswara Rao**  
 Associate Professor & HOD  
 Department of CSD & CSM,  
**Dadi Institute of Engineering and Technology,**  
**Accredited by NAAC with A Grade**  
**Visakhapatnam,Andhra Pradesh.**  
[www.diet.edu.in](http://www.diet.edu.in)  
 Mobile:9948766181

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**2 attachments**

 **Invitation Letter Dr P.Aruna Kumari.pdf**  
 243K

 **DIET B.Tech DR23 CSD &CSM.pdf**  
 791K



HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

**Invitation for Board of Studies Meeting at Department of CSE(AI -ML & DS) on 30th December-2023 @10.00AM onwards through Online Mode-Reg**

2 messages

HOD CSD & CSM <hodcsdm@diet.edu.in>  
To: dr.kondapallivr@andhrauniversity.edu.in  
Cc: Deputy HOD CSD & CSM <dyhodcsdm@diet.edu.in>

Wed, Dec 27, 2023 at 9:43 PM

Respected Sir,

I am pleased to inform you that you are a special invitee member of the Board of Studies for the Department of CSE(AI - ML & DS), Dadi Institute of Engineering & Technology as per JNTU-GV proceeding orders

As per telephonic conversation, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM,DIET.

The Agenda of the Meeting:


1. Discussion and finalization of the Draft syllabus of UG courses (B.Tech).

Hope you will accept our invitation and a line of confirmation from your side is highly appreciated. Please find enclosed invitation letter for the BoS meeting.

The draft syllabus and google meet link will be sent very soon

With Regards

**A.Venkateswara Rao**  
Associate Professor & HOD  
Department of CSD & CSM,  
**Dadi Institute of Engineering and Technology,**  
**Accredited by NAAC with A Grade**  
**Visakhapatnam,Andhra Pradesh.**  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

 Invitation Letter Dr. K.Venkata Ramana.pdf  
240K

HOD CSD & CSM <hodcsdm@diet.edu.in>  
To: dr.kondapallivr@andhrauniversity.edu.in

Sat, Dec 30, 2023 at 5:41 AM

Respected Sir,

**Greetings from Dadi Institute of Engineering & Technology !!!!**

As per our earlier mail conversations, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM, DIET.

The Agenda of the Meeting:

1. Discussion and finalization of the Draft syllabus of UG as per NEP 2020.

1/5/24, 5:53 AM

Dadi Institute of Engineering & Technology (DIET) Mail - Invitation for Board of Studies Meeting at Department of CSE(AI -ML ...

Please find the draft syllabus and Google meet link

Meeting Link: <https://meet.google.com/myp-evrb-wan>

Date of Meeting: 30/12/2023 Time: 10.00AM Onwards

Thanking you

With Regards

**A.Venkateswara Rao**

Associate Professor & HOD

Department of CSD & CSM,

**Dadi Institute of Engineering and Technology,**

**Accredited by NAAC with A Grade**

**Visakhapatnam, Andhra Pradesh.**

**[www.diet.edu.in](http://www.diet.edu.in)**

**Mobile: 9948766181**

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**2 attachments**



**Invitation Letter Dr. K.Venkata Ramana.pdf**

240K



**DIET B.Tech DR23 CSD & CSM.pdf**

791K



HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

**Invitation for Board of Studies Meeting at Department of CSE(AI -ML & DS) on 30th December-2023 @10.00AM onwards through Online Mode-Reg**

2 messages

HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

Wed, Dec 27, 2023 at 9:35 PM

To: utatavar@gitam.edu

Cc: Deputy HOD CSD &amp; CSM &lt;d yhodcsdm@diet.edu.in&gt;

Respected Madam,

I am pleased to inform you that you are a special invitee member of the Board of Studies for the Department of CSE(AI - ML & DS), Dadi Institute of Engineering & Technology as per JNTU-GV proceeding orders

As per telephonic conversation, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM,DIET.

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With Regards

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Department of CSD & CSM,  
**Dadi Institute of Engineering and Technology,**  
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**Visakhapatnam,Andhra Pradesh.**  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

 Invitation Letter Dr. T Uma Devi.pdf  
241K

HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

Sat, Dec 30, 2023 at 5:45 AM

To: utatavar@gitam.edu

Respected Madam ,

**Greetings from Dadi Institute of Engineering & Technology !!!!**

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Date of Meeting: 30/12/2023 Time: 10.00AM Onwards

Thanking you

**A.Venkateswara Rao**  
Associate Professor & HOD  
Department of CSD & CSM,  
Dadi Institute of Engineering and Technology,  
Accredited by NAAC with A Grade  
Visakhapatnam, Andhra Pradesh.  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

[Quoted text hidden]

2 attachments

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791K



HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

**Invitation for Board of Studies Meeting at Department of CSE(AI -ML & DS) on 30th December-2023 @10.00AM onwards through Online Mode-Reg**

2 messages

**HOD CSD & CSM** <hodcsdm@diet.edu.in>  
To: Abhijeet <abhijeet@vizagsteel.com>  
Cc: Deputy HOD CSD & CSM <dyhodcsdm@diet.edu.in>

Wed, Dec 27, 2023 at 9:45 PM

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The Agenda of the Meeting:


1. Discussion and finalization of the Draft syllabus of UG courses (B.Tech).

Hope you will accept our invitation and a line of confirmation from your side is highly appreciated. Please find enclosed invitation letter for the BoS meeting.

The draft syllabus and google meet link will be sent very soon

With Regards

**A.Venkateswara Rao**  
Associate Professor & HOD  
Department of CSD & CSM,  
**Dadi Institute of Engineering and Technology,**  
**Accredited by NAAC with A Grade**  
**Visakhapatnam,Andhra Pradesh.**  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

 **Mr. Abhjeet.pdf**  
243K

**HOD CSD & CSM** <hodcsdm@diet.edu.in>  
To: Abhijeet <abhijeet@vizagsteel.com>

Sat, Dec 30, 2023 at 5:39 AM

Respected Sir,

Respected Sir,

**Greetings from Dadi Institute of Engineering & Technology !!!!**

As per our earlier mail conversations, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM, DIET.



The Agenda of the Meeting:

1. Discussion and finalization of the Draft syllabus of UG as per NEP 2020.

Please find the draft syllabus and Google meet link

Meeting Link: <https://meet.google.com/myp-evrb-wan>

Date of Meeting: 30/12/2023 Time: 10.00AM Onwards

Thanking you

With Regards

**A.Venkateswara Rao**  
Associate Professor & HOD  
Department of CSD & CSM,  
**Dadi Institute of Engineering and Technology,**  
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**Visakhapatnam, Andhra Pradesh.**  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

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**2 attachments**



**Mr. Abhjeet.pdf**  
243K



**DIET B.Tech DR23 CSD & CSM.pdf**  
791K



HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

**Invitation for Board of Studies Meeting at Department of CSE(AI -ML & DS) on 30th December-2023 @10.00AM onwards through Online Mode-Reg**

3 messages

HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

Wed, Dec 27, 2023 at 9:39 PM

To: pelsea.karri23@gmail.com

Cc: Deputy HOD CSD &amp; CSM &lt;dyhodcsdm@diet.edu.in&gt;

Dear Alumni,

I am pleased to inform you that you are a special invitee member of the Board of Studies for the Department of CSE(AI - ML & DS), Dadi Institute of Engineering & Technology as per JNTU-GV proceeding orders

As per telephonic conversation, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM,DIET.

The Agenda of the Meeting:

1. Discussion and finalization of the Draft syllabus of UG courses (B.Tech).

Hope you will accept our invitation and a line of confirmation from your side is highly appreciated. Please find enclosed invitation letter for the BoS meeting.

The draft syllabus and google meet link will be sent very soon

With Regards

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Visakhapatnam,Andhra Pradesh.  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

 Mrs K.Pelsea.pdf  
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pelsea.karri &lt;pelsea.karri23@gmail.com&gt;

Wed, Dec 27, 2023 at 8:09 AM

To: HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

Cc: Deputy HOD CSD &amp; CSM &lt;dyhodcsdm@diet.edu.in&gt;

I will attend the meeting sir.

[Quoted text hidden]

HOD CSD &amp; CSM &lt;hodcsdm@diet.edu.in&gt;

Sat, Dec 30, 2023 at 5:43 AM

To: pelsea.karri23@gmail.com

Dear Alumni,

**Greetings from Dadi Institute of Engineering & Technology !!!!**

As per our earlier mail conversations, I invite you to join the BoS meeting through online mode on 30<sup>th</sup> December -2023 (Saturday) at 10.00 AM at the Dept. of CSD & CSM, DIET.

The Agenda of the Meeting:

1. Discussion and finalization of the Draft syllabus of UG as per NEP 2020.

Please find the draft syllabus and Google meet link

Meeting Link: <https://meet.google.com/myp-evrb-wan>

Date of Meeting: 30/12/2023 Time: 10.00AM Onwards

Thanking you

**A.Venkateswara Rao**  
Associate Professor & HOD  
Department of CSD & CSM,  
**Dadi Institute of Engineering and Technology,**  
**Accredited by NAAC with A Grade**  
**Visakhapatnam, Andhra Pradesh.**  
[www.diet.edu.in](http://www.diet.edu.in)  
Mobile:9948766181

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**DIET B.Tech DR23 CSD &CSM.pdf**  
791K


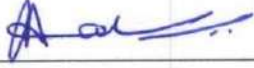




# DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

## Minutes of Meeting

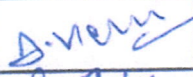

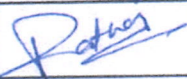
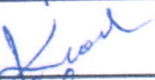
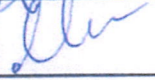
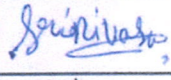

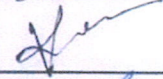
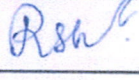
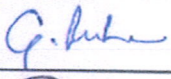

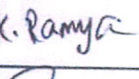
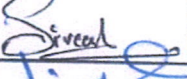
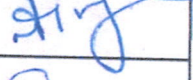
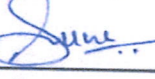

Minutes of Boards of studies in the faculty of Computer Science & Engineering (AI & ML) , as per the orders of the Principal Lr.No. DIET(A)/BOS-CSE(AI & ML) 2023-24/01-05 Dated: 23.12.2023

The first Board of Studies meeting of the Department of CSE(AI&ML) was held an online meeting on 30/12/2023 at 10:00 A.M through Google meet: ( Meeting Link: <https://meet.google.com/myp-evrb-wan>) to finalize the Scheme/Syllabus of I B.Tech in Computer Science & Engineering (AI & ML) department for the session 2023-24. Following BOS members were present in the meeting.

S.No	Name of the Member	Signature
1	<b>Mr. A.Venkateswara Rao,</b> Asso.Prof,HOD-CSE(AI&ML), Chairman(BOS),DIET	
2	<b>Dr. Dr.P.Aruna Kumari</b> Assistant Professor & HoD,JNTUGV,VZM	
3	<b>Dr. K.Venkata Ramana</b> Associate Professor, Dept., of CS&SE, Andhra University college of Engineering	
4	<b>Dr. Uma Devi Tatavarthi</b> Professor Dept., of CSE ,GITAM University ,Visakhapatnam	
5	<b>Mr. Abhijeet</b> General Manager (Projects) and TA to Director(Operations) RINL-Visakhapatnam.	
6	<b>Ms. K.Peleasea</b> Content Lead,Arika Flash Creations,Visakhapatnam, Alumni-DIET	

**DADI INSTITUTE OF ENGINEERING & TECHNOLOGY  
(AUTONOMOUS)**

**Board of Studies: CSE (AI&ML, Data Science)**

S.No.	Name of the person	Designation	Category	Status of the person	Signature
1	Mr. A.Venkateswara Rao	Associate Professor	Education	Chairman(HOD)	
2	Mr. P.SVSV Rama Raju	Associate Professor	Education	Member-Faculty	
3	Mr. Ratnakar Kotnana	Associate Professor	Education	Member-Faculty	
4	Mr. Kolli Nuka Raju	Associate Professor	Education	Member-Faculty	
5	Dr. Prasanna Kumar Lakkineni	Associate Professor	Education	Member-Faculty	
6	Dr.P.Srinivas	Assistant Professor	Education	Member-Faculty	
7	Mrs.Suneetha Sampathi Rao	Assistant Professor	Education	Member-Faculty	
8	Mr.K.Kranthi Kiran	Assistant Professor	Education	Member-Faculty	
9	Mrs.Razia Sulthana	Assistant Professor	Education	Member-Faculty	
10	Mrs.G.Pushpa	Assistant Professor	Education	Member-Faculty	
11	Mrs.D.Harshitha	Assistant Professor	Education	Member-Faculty	
12	Mrs.K.Ramya Krishna	Assistant Professor	Education	Member-Faculty	
13	Ms.S.Sireesha	Assistant Professor	Education	Member-Faculty	
14	Mrs.K.Divya Kalyani	Assistant Professor	Education	Member-Faculty	
15	Mrs.G.Sunanda	Assistant Professor	Education	Member-Faculty	
16	Mrs.Ch.Usha	Assistant Professor	Education	Member-Faculty	

17	Mrs.D.Padma	Assistant Professor	Education	Member-Faculty	<i>Padma</i>
18	Mrs. K. Lavanya	Assistant Professor	Education	Member-Faculty	<i>Lavanya</i>
19	Mrs.G.Chandrika	Assistant Professor	Education	Member-Faculty	<i>Chandrika</i>
20	Mrs.P.Mounika	Assistant Professor	Education	Member-Faculty	<i>P.Mounika</i>
21	Mrs.R. Swapna	Assistant Professor	Education	Member-Faculty	<i>Swapna</i>
22	Mr. S. Syam Kumar	Assistant Professor	Education	Member-Faculty	<i>Syam Kumar</i>
23	Mrs M Kalyani	Assistant Professor	Education	Member-Faculty	<i>Kalyani</i>

*A. Mani*  
BOS Chairman

At the onset of the meeting, the Chairman of BOS, Mr. A.Venkateswara Rao welcomed all the members and introduced internal BOS members to external BOS members. The meeting began with presentation of curriculum by chair for I.B.Tech Computer Science & Engineering (AI & ML), I and II semesters. He then presented the syllabus of all core subjects of I and II semesters prepared by internal BOS members.

Further an elaborative discussion on the scheme and syllabus of I B.Tech in Computer Science & Engineering (AI & ML) department for the session 2023-24 took place with all experts and their valuable suggestions are invited.

Meeting was ended with vote of thanks by HOD (CSE (AI &ML)) to all experts and invited members for their valuable inputs and kind presence in BOS meeting





### **Agenda:**

To discuss and finalize the course structures of I B.Tech, I & II Semesters Computer Science & Engineering (AI & ML) , DR-23 (Autonomous) Regulations.

### **Points Discussed:**

1. External BoS member Dr. P. Aruna Kumari enquired about any changes made in the syllabus suggested by parent University (JNTUGV)
2. External BOS Member Dr. Uma Devi Tatavarthi enquired about some of topics in Introduction of Programming (DR23CS11T1) and no. of hours allotted per week.
3. DIET- Alumni suggested some of Industry Oriented subjects in upcoming semester course structure.
4. All External BoS members agreed with the course structures of I B.Tech, I & II Semesters Computer Science & Engineering (AI & ML) , DR-23 (Autonomous) Regulations.



## Resolutions:

1. Discussed the proposed course structure and finalized the course structure and syllabus for B.Tech I year w.e.f. 2023-24 onwards.
2. Discussed some of topics in Introduction of Programming and no. of hours allotted per week.
3. Discussed some of Industry Oriented subjects in upcoming semester course structure.
4. The Board authorized BOS Chairman for any minor corrections / additions required in the framed course structure and syllabi.

Encl: - Annexure-1 (Course Structure of I.B.Tech programme of DR-23)

## Signatures of Members



**1. Dr. P. Aruna Kumari**  
Assistant Professor & HoD, JNTUGV, VZM



**2. Dr. K. Venkata Ramana**  
Associate Professor, Dept., of CS&SE,  
Andhra University college of Engineering, VSP



**3. Dr. Uma Devi Tatavarthi**  
Professor Dept., of CSE,  
GITAM University, Visakhapatnam



**4. Mr. Abhijeet**  
General Manager (Projects) and TA to.  
Director(Operations), RINL-Visakhapatnam



**5. Ms. K. Pelesea**  
Content Lead, Arika Flash Creations, Visakhapatnam,  
Alumni-DIET



**BOS Chairman**

# Annexure-1: Course Structure of I.B.Tech programme of DR-23

## B. Tech (Regular-Full time)

**B. TECH-CSE, IT, CSE(DS), CSE(AI), CSE(CS), CSE(AI&ML), AI&DS, AI&ML**

Sl. No.	Course Name	Category	Cr. No.
1	Physical Sciences – Physics, Yoga and Foundation	MC	3-0-4-0
2	Career Counselling	MC	3-0-3-0
3	Orientation to all branches – course objectives, tools etc.	MC	3-0-0-0
4	Orientation on selected branch – course-orientation, lab, work and projects	EC	3-0-3-0
5	Advanced Mathematics	MC	3-0-3-0
6	Practical Training in Foundation Course	MC	3-1-2-0
7	Human Values & Professional Ethics	MC	3-0-0-0
8	Communication Skills – focus on Listening, Speaking, Reading, Writing skills	BS	3-1-2-0
9	Concepts of Programming	ES	3-0-3-0

(Effective for the students admitted into I year from the Academic Year **2023-24** onwards)

**DADI INSTITUTE OF ENGINEERING & TECHNOLOGY**  
**ANAKAPALLE-531002, VISAKHAPATNAM, Andhra Pradesh, India**  
**DEPARTMENT of COMPUTER SCIENCE & ENGINEERING**

**B.TECH. - COURSE STRUCTURE – DR23**  
**(Applicable from the academic year 2023-24 onwards)**

**INDUCTION PROGRAMME**

S.No.	Course Name	Category	L-T-P-C
1	Physical Activities -- Sports, Yoga and Meditation, Plantation	MC	0-0-6-0
2	Career Counseling	MC	2-0-2-0
3	Orientation to all branches -- career options, tools, etc.	MC	3-0-0-0
4	Orientation on admitted Branch -- corresponding labs, tools and platforms	EC	2-0-3-0
5	Proficiency Modules & Productivity Tools	ES	2-1-2-0
6	Assessment on basic aptitude and mathematical skills	MC	2-0-3-0
7	Remedial Training in Foundation Courses	MC	2-1-2-0
8	Human Values & Professional Ethics	MC	3-0-0-0
9	Communication Skills -- focus on Listening, Speaking, Reading, Writing skills	BS	2-1-2-0
10	Concepts of Programming	ES	2-0-2-0

**DADI INSTITUTE OF ENGINEERING & TECHNOLOGY**  
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**DEPARTMENT of COMPUTER SCIENCE & ENGINEERING**

I Year I Semester						
S.No	Course Code	Course Name	L	T	P	Credits
1.	DR23MA11T1	Linear Algebra & Calculus	3	0	0	3
2.	DR23PH11T1	Engineering Physics	3	0	0	3
3.	DR23EN11T1	Communicative English	2	0	0	2
4.	DR23CE11T2	Basic Civil & Mechanical Engineering	3	0	0	3
5.	DR23CS11T1	Introduction to Programming	3	0	0	3
6.	DR23HS01	Communicative English Lab	0	0	2	1
7.	DR23BS03	Engineering Physics Lab	0	0	2	1
8.	DR23ES02	Engineering Workshop	0	0	3	1.5
9.	DR23ES06	IT Workshop	0	0	2	1
10.	DR23ES07	Computer Programming Lab	0	0	3	1.5
11.	DR23MC01	Health and Wellness, Yoga and Sports	0	0	1	0.5
<b>Total</b>						<b>20.5</b>

Controller of Examinations  
Dadi Institute of Engineering & Technology

I Year-I Semester

L	T	P	C
3	0	0	3

## INTRODUCTION TO PROGRAMMING

(Common to All branches of Engineering)

### Course Objectives:

**The objectives of this course is to acquire knowledge on the**

- i. To impart adequate knowledge on the need of programming languages and problem-solving techniques and develop programming skills.
- ii. To enable effective usage of Control Structures and Implement different operations on arrays.
- iii. To demonstrate the use of Strings and Functions.
- iv. To impart the knowledge of pointers and understand the principles of dynamic memory allocation.
- v. To understand structures and unions and illustrate the file concepts and its operations.
- vi. To impart the Knowledge Searching and Sorting Techniques

### UNIT-I Introduction to Computer Problem Solving:

Programs and Algorithms, Computer Problem Solving Requirements, Phases of Problem Solving, Problem Solving Strategies, Top-Down Approach, Algorithm Designing, Program Verification, Improving Efficiency, Algorithm Analysis and Notations.

### UNIT-II Introduction to C Programming:

Introduction, Structure of a C Program. Comments, Keywords, Identifiers, Data Types, Variables, Constants, Input/output Statements. Operators, Type Conversion. Control Flow, Relational Expressions: Conditional Branching Statements: if, if-else, if-else—if, switch. Basic Loop Structures: while, do-while loops, for loop, nested loops, The Break and Continue Statements, goto statement.

### UNIT-III Arrays:

Introduction, Operations on Arrays, Arrays as Function Arguments, Two Dimensional Arrays, Multidimensional Arrays. Pointers: Concept of a Pointer, Declaring and Initializing Pointer Variables, Pointer Expressions and Address Arithmetic, Null Pointers, Generic Pointers, Pointers as Function Arguments, Pointers and Arrays, Pointer to Pointer, Dynamic Memory Allocation, Dangling Pointer, Command Line Arguments.

### UNIT-IV Functions:

Introduction Function : Declaration, Function Definition, Function Call, Categories of Functions, Passing Parameters to Functions, Scope of Variables, Variable Storage Classes. Recursion. Strings: String Fundamentals, String Processing with and without Library Functions, Pointers and Strings.

### UNIT-V

Structures, Unions, Bit Fields: Introduction, Nested Structures, Arrays of Structures, Structures and

Functions, Self-Referential Structures, Unions, Enumerated Data Type —Enum variables, Using Typedef keyword, Bit Fields. Data Files: Introduction to Files, Using Files in C, Reading from Text Files, Writing to Text Files, Random File Access.

**Note:** The syllabus is designed with C Language as the fundamental language of implementation.

**Course Outcomes:**

At the end of the Course, Student should be able to:

- i. Illustrate the Fundamental concepts of Computers and basics of computer programming and problem-solving approach
- ii. Understand the Control Structures, branching and looping statements
- iii. Use of Arrays and Pointers in solving complex problems.
- iv. Develop Modular program aspects and Strings fundamentals.
- v. Demonstrate the ideas of User Defined Data types, files. Solve real world problems using the concept of Structures, Unions and File operations.

**Text Books:**

1. A Structured Programming Approach Using C, Forouzan, Gilberg, Cengage.
2. How to solve it by Computer, R. G. Dromey, and Pearson Education.
3. Programming In C A-Practical Approach. Ajay Mittal, Pearson

**References:**

1. Byron Gottfried, Schaum's Outline of Programming with C, McGraw-Hill.
2. Computer Programming. Reema Thareja, Oxford University Press
3. The C Programming Language, Dennis Richie And Brian Kernighan, Pearson Education.
4. Programming In C, Ashok Kamthane, Second Edition, Pearson Publication.
5. Let us C ,YaswanthKanetkar, 16th Edition,BPB Publication.
6. Computing fundamentals and C Programming, Balagurusamy, E., McGraw-Hill Education, 2008

**Web References:**

1. <http://www.c4learn.com/>
2. <http://www.geeksforgeeks.org/c/>
3. <http://nptel.ac.in/courses/122104019/>
4. <http://www.learn-c.org/>
5. <https://www.tutorialspoint.com/cprogramming/>

L	T	P	C
0	0	2	1

**IT WORKSHOP**  
(Common to all branches of Engineering)

**Course Objectives:**

- To introduce the internal parts of a computer, peripherals, I/O ports, connecting cables
- To demonstrate configuring the system as Dual boot both Windows and other Operating Systems Viz. Linux, BOSS
- To teach basic command line interface commands on Linux.
- To teach the usage of Internet for productivity and self-paced life-long learning
- To introduce Compression, Multimedia and Antivirus tools and Office Tools such as Word processors, Spread sheets and Presentation tools.

**Course Outcomes:**

- CO1: Perform Hardware troubleshooting.
- CO2: Understand Hardware components and inter dependencies.
- CO3: Safeguard computer systems from viruses/worms.
- CO4: Document/ Presentation preparation.
- CO5: Perform calculations using spreadsheets.

**PC Hardware & Software Installation**

**Task 1:** Identify the peripherals of a computer, components in a CPU and its functions. Draw the block diagram of the CPU along with the configuration of each peripheral and submit to your instructor.

**Task 2:** Every student should disassemble and assemble the PC back to working condition. Lab instructors should verify the work and follow it up with a Viva. Also students need to go through the video which shows the process of assembling a PC. A video would be given as part of the course content.

**Task 3:** Every student should individually install MS windows on the personal computer. Lab instructor should verify the installation and follow it up with a Viva.

**Task 4:** Every student should install Linux on the computer. This computer should have windows installed. The system should be configured as dual boot (VMWare) with both Windows and Linux. Lab instructors should verify the installation and follow it up with a Viva

**Task 5:** Every student should install BOSS on the computer. The system should be configured as dual boot (VMWare) with both Windows and BOSS. Lab instructors should verify the installation and follow it up with a Viva

**Internet & World Wide Web**

**Task1:** Orientation & Connectivity Boot Camp: Students should get connected to their Local Area Network and access the Internet. In the process they configure the TCP/IP setting. Finally students should demonstrate, to the instructor, how to access the websites and email. If there is

no internet connectivity preparations need to be made by the instructors to simulate the WWW on the LAN.

**Task 2:** Web Browsers, Surfing the Web: Students customize their web browsers with the LAN proxy settings, bookmarks, search toolbars and pop up blockers. Also, plug-ins like Macromedia Flash and JRE for applets should be configured.

**Task 3:** Search Engines & Netiquette: Students should know what search engines are and how to use the search engines. A few topics would be given to the students for which they need to search on Google. This should be demonstrated to the instructors by the student.

**Task 4:** Cyber Hygiene: Students would be exposed to the various threats on the internet and would be asked to configure their computer to be safe on the internet. They need to customize their browsers to block pop ups, block active x downloads to avoid viruses and/or worms.

### **LaTeX and WORD**

**Task 1 – Word Orientation:** The mentor needs to give an overview of La TeX and Microsoft (MS) office or equivalent (FOSS) tool word: Importance of La TeX and MS office or equivalent (FOSS) tool Word as word Processors, Details of the four tasks and features that would be covered in each, Using La TeXand word – Accessing, overview of toolbars, saving files, Using help and resources, rulers, format painter in word.

**Task 2:** Using La TeX and Word to create a 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 both La TeX and Word.

**Task 3:** 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 4:** 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, Paragraphs and Mail Merge in word.

### **EXCEL**

**Excel Orientation:** The mentor needs to tell the importance of MS office or equivalent (FOSS) tool Excel as a Spreadsheet tool, give the details of the four tasks and features that would be covered in each. Using Excel – Accessing, overview of toolbars, saving excel files, Using help and resources.

**Task 1:** Creating a Scheduler - Features to be covered: Gridlines, Format Cells, Summation, auto fill, Formatting Text

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



### WEEK 3

**Objective:** Learn how to define variables with the desired data-type, initialize them with appropriate values and how arithmetic operators can be used with variables and constants.

#### **Suggested Experiments/Activities:**

**Tutorial 3:** Variable types and type conversions:

**Lab 3:** Simple computational problems using arithmetic expressions.

- i) Finding the square root of a given number
- ii) Finding compound interest
- iii) Area of a triangle using heron's formulae
- iv) Distance travelled by an object

## UNIT II

### WEEK 4

**Objective:** Explore the full scope of expressions, type-compatibility of variables & constants and operators used in the expression and how operator precedence works.

#### **Suggested Experiments/Activities:**

**Tutorial4:** Operators and the precedence and as associativity:

**Lab4:** Simple computational problems using the operator' precedence and associativity

- i) Evaluate the following expressions.
  - a.  $A+B*C+(D*E) + F*G$
  - b.  $A/B*C-B+A*D/3$
  - c.  $A+++B---A$
  - d.  $J= (i++) + (++i)$
- ii) Find the maximum of three numbers using conditional operator
- iii) Take marks of 5 subjects in integers, and find the total, average in float

### WEEK 5

**Objective:** Explore the full scope of different variants of -if construct namely if-else, null-else, if-else if\*-else, switch and nested-if including in what scenario each one of them can be used and how to use them. Explore all relational and logical operators while writing conditionals for -if construct.

#### **Suggested Experiments/Activities:**

**Tutorial 5:** Branching and logical expressions:

**Lab 5:** Problems involving if-then-else structures.

- i) Write a C program to find the max and min of four numbers using if-else.
- ii) Write a C program to generate electricity bill.
- iii) Find the roots of the quadratic equation.
- iv) Write a C program to simulate a calculator using switch case.
- v) Write a C program to find the given year is a leap year or not.

## WEEK 6

**Objective:** Explore the full scope of iterative constructs namely while loop, do-while loop and for loop in addition to structured jump constructs like break and continue including when each of these statements is more appropriate to use.

### Suggested Experiments/Activities:

**Tutorial 6:** Loops, while and for loops

**Lab 6:** Iterative problems e.g., the sum of series

- i) Find the factorial of given number using any loop.
- ii) Find the given number is a prime or not.
- iii) Compute sine and cos series
- iv) Checking a number palindrome
- v) Construct a pyramid of numbers.

## UNIT III

### WEEK 7:

**Objective:** Explore the full scope of Arrays construct namely defining and initializing 1-D and 2-D and more generically n-D arrays and referencing individual array elements from the defined array. Using integer 1-D arrays, explore search solution linear search.

### Suggested Experiments/Activities:

**Tutorial 7:** 1 D Arrays: searching.

**Lab 7:** 1D Array manipulation, linear search

- i) Find the min and max of a 1-D integer array.
- ii) Perform linear search on 1D array.
- iii) The reverse of a 1D integer array
- iv) Find 2's complement of the given binary number.
- v) Eliminate duplicate elements in an array.

### WEEK 8:

**Objective:** Explore the difference between other arrays and character arrays that can be used as Strings by using null character and get comfortable with string by doing experiments that will reverse a string and concatenate two strings. Explore sorting solution bubble sort using integer arrays.

### Suggested Experiments/Activities:

**Tutorial 8:** 2 D arrays, sorting and Strings.

**Lab 8:** Matrix problems, String operations, Bubble sort

- i) Addition of two matrices
- ii) Multiplication two matrices
- iii) Sort array elements using bubble sort
- iv) Concatenate two strings without built-in functions
- v) Reverse a string using built-in and without built-in string functions

**Reference Books:**

1. Algorithms and Data Structures: The Basic Toolbox by Kurt Mehlhorn and Peter Sanders
2. C Data Structures and Algorithms by Alfred V. Aho, Jeffrey D. Ullman, and John E. Hopcroft
3. "Problem Solving with Algorithms and Data Structures" by Brad Miller and David Ranum
4. Introduction to Algorithms by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, and Clifford Stein
5. Algorithms in C, Parts 1-5 (Bundle): Fundamentals, Data Structures, Sorting, Searching, and Graph Algorithms by Robert Sedgewick.

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