



# UNIVERSITY OF DELHI BULLETIN OF INFORMATION

For Admission To  
**BACHELOR OF TECHNOLOGY**

**2023-24**



## Message from Vice Chancellor

Dear B. Tech. aspirants,

*It is indeed a matter of great pride, pleasure and privilege for the University of Delhi to reintroduce three Bachelor of Technology (B.Tech.) Programs in the emerging areas of technology, namely Computer Science and Engineering, Electronics and Communication Engineering and Electrical Engineering under its historic Faculty of Technology which was established in the year 1952.*



*On behalf of the University of Delhi and also on my personal behalf, I extend a warm welcome to every aspiring student who wishes to enrol in one of these prestigious B.Tech. Programs reintroduced by the University with effect from the Academic Session 2023-24.*

*Historically, Delhi College of Engineering, one of the most prestigious Engineering Colleges of our country, was conferred the status of a University in the year 2009 and another renowned Engineering College, Netaji Subhas Institute of Technology, was conferred the status of a University in the year 2018 by the Government of NCT of Delhi thereby limiting the scope of teaching-learning and research in the emerging areas of the Technology by the Faculty of Technology, University of Delhi.*

*These underlying circumstances, especially with the Clarion Call of our Hon'ble Prime Minister, for an Atmanirbhar Bharat through the introduction of a path breaking National Education Policy 2020 (NEP-2020), Skill India movement and similar nationwide initiatives, it became imperative that the University of Delhi once again delve in the domain of technology in the glorious Centenary Year of its existence while at the pinnacle of academic progress. The University came up with the germane idea to reinvigorate the Faculty of Technology with the introduction of B.Tech. Programs in those areas of technology which are in demand globally. This will not only help in the generation of skilled youth equipped with the latest trends of technological education but also help our Nation to contribute to the global skilled work force, thereby substantially leveraging the advantages of the global skilled manpower requirement.*

*I am sure that the students who will be enrolled on the basis of their Joint Entrance Examination (Main) 2023 will be able to avail the best of facilities in this University in terms of physical infrastructure with state-of-the-art building, classrooms and laboratories, human infrastructure with faculty members having vast knowledge and experience in the respective areas of study along with a vibrant eco-friendly North Campus spread over 407 acres in the historic landscape of the Capital city of our country.*

*The uniqueness of the B.Tech. Programs being introduced by the University is highlighted on several counts as these B.Tech. Programs has taken its heart from the historic NEP-2020, which envisages a multi-disciplinary approach, practical orientation and innovative approach in syllabi formulation and teaching-learning, multiple entry- exit options and student-friendly program structure, among similar significant features.*

*It is a matter of time that our students of the Faculty of Technology will shine brighter than ever in their academic excellence, professional achievement and bring enormous glory to this University and the Nation at large in the times to come.*

*I wish every success to the students who enrol for the B.Tech. Programs in their every academic, professional and personal endeavour of life.*

Best Wishes!

Yogesh Singh  
Vice-Chancellor  
University of Delhi

## ADMISSION SCHEDULE

Registration Begins	05 July, 2023 (Wednesday)
Registration Closes	11:59 PM, 25 July, 2023 (Tuesday)
Allocation cum Admission Schedule	To be announced later on the website

### ADVICE

*Candidates are advised to keep checking the admission website of UoD for updates, guidelines, schedules and admission-related policies.*

## DISCLAIMER

The University of Delhi (UoD) reserves the right to revise, amend and/or delete any part of the Bulletin of Information Bachelor of Technology - 2023 (BOI (B.Tech.)-2023) without prior notice. Any change so made shall be updated on the admission website of the UoD. Any change in allocation rules after the release of the BOI (B.Tech.)-2023 document shall become effective from the date it is posted on the admission website, [www.admission.uod.ac.in](http://www.admission.uod.ac.in).

Due care has been taken to reproduce the authentic, official version of the rules and regulations and additional relevant information in this document as far as possible. However, it should, in no case, be construed as a warranty, express or implied, regarding the completeness and accuracy of the information provided as a reference.

The UoD disclaims any liability towards any individual for any loss or damage caused to him/her arising out of any action taken on the basis of the provided information. Any error on the admission website and this document may be due to inadvertent omissions and/or any other reason. This disclaimer shall apply to each and every part of admission policies related to admission in B.Tech. 2023-24, including all notifications, corrigendum, amendments, addendums, and regulations notified on the website and attached or contained herein.

The candidate is responsible for regularly checking the admission website of UoD for updates, guidelines, schedules, and admission-related policies.

Any issue/dispute regarding admissions under B.Tech. 2023-24 shall be amenable to Delhi Courts' territorial and subject matter jurisdiction only.

**For notifications and updates regarding B.Tech. Admissions-2023, please visit: [www.admission.uod.ac.in](http://www.admission.uod.ac.in)**

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## LIST OF ABBREVIATIONS

AICTE	All India Council for Technical Education
AIU	Association of Indian Universities
BOI (B.Tech.)-2023	Bulletin of Information (B.Tech.) 2023
CBSE	Central Board of Secondary Education
COBSE	Council of Boards of School Education
CRL	Common Rank List
CW	Children/Widows of Personnel of the Armed Forces
ECC	Educational Concession Certificate
EWS	Economically Weaker Section
FoT	Faculty of Technology
KM	Kashmiri Migrant
JEE	Joint Entrance Examination
MoE	Ministry of Education
NTA	National Testing Agency
OBC-NCL	Other Backward Classes – Non-Creamy Layer
PwBD	Person with Benchmark Disability
SC	Scheduled Caste
ST	Scheduled Tribe
UGC	University Grants Commission
UoD	University of Delhi
UR	Unreserved

## CHAPTER 1

# MINIMUM ELIGIBILITY

1. Candidate must have passed Class XII or its equivalent from a single recognized board.
2. A candidate must have secured 60%\* or more marks in an aggregate of Physics, Chemistry and Mathematics and must have passed English as a subject of study at the Senior School Certificate Examination level.

\*For:

Economically Weaker Section (EWS)	: 60%
Scheduled Caste (SC), Scheduled Tribe (ST)	: 50%
Persons with Benchmark Disabilities (PwBD)	: 50%
Other Backward Class (OBC-NCL)	: 55%

3. For applying to B.Tech. Programs of UoD, candidates must have appeared in JEE (Main) Paper-I, 2023.

Candidates who have appeared at the Class XII examination in the year 2023 and have been placed in compartment (supplementary) will not be eligible for admission for the year 2023-24.



## CHAPTER 2

# GENERAL INFORMATION & IMPORTANT POINTS

### 2.1. GENERAL INFORMATION

The University of Delhi, through its Faculty of Technology (FoT), offers the following B.Tech. Programs:

- B.Tech. (Computer Science and Engineering)
- B.Tech. (Electronics and Communication Engineering)
- B.Tech. (Electrical Engineering)

**For the academic year 2023-24, admission to the B.Tech. programs of UoD will be done on the basis of the All India Common Rank List (CRL) of the Joint Entrance Examination (Main) Paper-I, 2023, the eligibility requirements, criteria and procedures specified by the UoD on its website and Bulletin of Information (B.Tech.) - 2023.**

Candidates must check the eligibility criteria carefully for all three B.Tech. Programs. There are no additional eligibility criteria besides the ones stipulated by the UoD through its website & BOI (B.Tech.)- 2023, published on the admission website of the UoD.

1. JEE (Main)-2023 is conducted by the National Testing Agency (NTA). The candidate may note that the role of NTA is limited to the conduct of JEE (Main) - 2023, declaration of results, and handling of queries related to the entrance examination.
2. Simply appearing in JEE (Main) - 2023 will not be a sufficient condition to secure a seat in UoD. In addition to appearing in JEE (Main), a candidate must apply on the official portal of UoD, i.e <http://engineering.uod.ac.in> to take admission in the B.Tech. Programs offered by UoD. Application submitted through any other mode or portal/website will not be accepted under any circumstances.
3. Before initiating the application process, the candidates are advised to read the contents of BOI (B.Tech.)- 2023 carefully and the Delhi University Act, 1922, its amendments and the Statutes. The Ordinances, Rules, Regulations, and Notifications of the UoD available on the University website, [www.du.ac.in](http://www.du.ac.in) shall be final and binding.
4. Determination of eligibility and verification of documents for admission to UoD Programs will be the sole purview of UoD.
5. Seat allocation to B.Tech. (Computer Science and Engineering), B.Tech. (Electronics and Communication Engineering), and B.Tech. (Electrical Engineering) will be based solely on the Common Rank List (CRL) in JEE (Main) Paper-I, 2023, subject to fulfillment of eligibility criteria.
6. In case the seats of Supernumerary quota(s) remain vacant, the same will not be converted to any other Category.
7. UoD will not be responsible for a candidate's lack of awareness of the admission guidelines, schedule, Eligibility Criteria and BOI (B.Tech.)-2023 rules. Candidates must check their dashboard, email, and admission website ([admission.uod.ac.in](http://admission.uod.ac.in)) for all communications and updates related to admissions from time to time. It is the sole responsibility of the candidate to regularly check his/her dashboard, email, and admission website

#### ADVICE

*For any admission-related queries, candidates can access Chatbots, call on Helplines, and/or write emails at UG helpdesk. Details are available on the admission website.*



([admission.uod.ac.in](http://admission.uod.ac.in)) for all communications and updates related to admissions.

8. In case of non-compliance with the requirements for admission, including non-submission of relevant documents and/or non-payment of fee(s) within the stipulated date and time, the candidate will lose his/her right to admission.
9. The candidate will be required to appear in person for verification of the original documents as and when notified by the University.
10. It is the sole responsibility of the candidate to prove his/her eligibility for claiming reservation under any of the reserved categories (including supernumerary categories, such as PwBD, CW, KM, Single Girl Child and Orphans). Candidates applying under SC/ST/OBC- NCL/EWS/Supernumerary quotas will be required to upload the certificates/ documents of the respective reserved category/sub-category/quota issued by the Competent Issuing Authority.
11. If, at any stage, documents submitted by the candidate relating to the admission are found to be fake/ non-genuine and/or fabricated or, in any other manner, defective, the said candidate will not be given admission. If already admitted, admission will be canceled without any prior notice in this regard. If the same is found after completing the Program, his/her degree will be revoked and appropriate legal action will be taken against such candidates.
12. A candidate's participation in the admission process will be provisional. If, at any stage, it is found that eligibility requirements are not fulfilled, the admission if granted, shall be canceled *ipso facto* and appropriate legal action will be taken against such candidate. The University will not refund the Admission Fee (if paid) in case a candidate is found ineligible at any stage.
13. The University reserves the right to cancel the admission of any candidate who violates the rules and regulations laid down by the UoD.

## 2.2. IMPORTANT POINTS

1. For applying to B.Tech. Programs of UoD, the candidates will have to pay a one-time Registration-cum-Allocation Fee (non-refundable):

Category of the Candidate	Registration-cum-Allocation Fee (non-refundable)
UR/OBC-NCL/EWS	Rs. 1500.00 (Rupees One Thousand Five Hundred Only)
SC/ST/PwBD	Rs. 1200.00 (Rupees One Thousand Two Hundred Only)

2. The BOI (B.Tech.)-2023 rules stated herein will be applicable for provisional admission to the three B.Tech. Programs of FoT of UoD for the Academic Session 2023-24.
3. The online application process will be considered completed only after the realization of the Registration fee. The candidate must ensure that the Registration fee is submitted only through the UoD admission portal. Registration fee deposited via any other link or mode other than the payment link provided by UoD will not be considered under any circumstances.
4. If a candidate has applied for any of the B.Tech. Programs but doesn't fulfill the eligibility criteria his/her candidature will not be considered.
5. If all the documents are found to be in order and the eligibility criteria are met by the candidate, the allocated

### ADVICE

*Candidates should not wait for the last day to fill the form.*

### ADVICE

*It is advisable to fill the form through a desktop/laptop. Avoid filling the form using a mobile phone.*

seat will be provisionally approved by FoT. In that case, the candidate will have to take the admission on the approved allocated seat by paying the admission fee within the stipulated time.

6. Candidates are advised to keep the login credentials, i.e., login Id and password strictly confidential to avoid misuse. The login credentials, once generated, cannot be changed/ edited under any circumstances.
7. The candidate must adhere to the stipulated timelines of all allocation and admission rounds.
8. A candidate whose documents are found to be invalid owing to willful forgery/ act of cheating will be debarred from admission.

## CHAPTER 3

# ADMISSION PROCESS

### 3.1. REGISTRATION

To apply for B.Tech. Programs in UoD, the following are mandatorily required:

- JEE (Main)-2023 Application Number
- Applicant's Name (as it appears in JEE (Main)-2023)
- Date of Birth

#### ADVICE

*Candidate must fill the B.Tech. form (engineering.uod.ac.in) with the utmost care, as editing, will not be allowed once the application form is successfully submitted.*

Before starting the registration process, candidates are advised to scan and keep a copy of all the required documents/ certificates on his/her Computer/ Laptop to avoid mistakes while filling in the form. Kindly refer to Annexure IV for the List of Required Documents.

The application form has the following sections:



#### 3.1.1: Personal Section

In the Personal Section, the details entered by the candidate must match with the particulars mentioned in the certificates/ documents of the candidate. Mismatches/ discrepancies may lead to the rejection of the application form at any stage.

**Candidate must fill the Personal Section carefully.**

The candidate who had opted for PwBD category in JEE (Main)-2023 will not be allowed to change his/her category as s(he) would have availed PwBD benefits (such as compensatory time and/or provision of scribe) during JEE (Main)-2023.

Candidate opting for CW category must choose the CW Priority carefully.

Candidate must ensure that the Bank Account details filled in by him/her are valid and belong either to the candidate or his/her immediate family members only. It may be noted that refunds (if any) by UoD, will be made only to this account. Change of Bank Account details is not allowed under any circumstances during the entire admission process.

#### ADVICE

*Candidates must remember their login details, such as JEE (Main)-2023 registration number, email id and password. They must keep their login information strictly confidential to avoid misuse.*

**Once the form is submitted, the following Personal Details will not be changed:**

- (i) Parent's Name
- (ii) Category / Sub-Category/ Caste/ Supernumerary Quotas
- (iii) Gender
- (iv) Email id
- (v) Mobile number
- (vi) Bank Account details

### 3.1.2. Academic Section

Candidates must enter the marks of all the subjects in which s(he) has passed Class XII.

If the marksheet contains both Class XI and Class XII marks, only the Class XII marks must be entered. The candidate must have passed Theory and Practical separately.

Fill the marks obtained and maximum marks for Theory and Practical separately as per the Class XII mark sheet. If the Theory/ Practical breakup is not specified for a paper, enter the marks only in the 'Theory' section for that paper and enter "0" in the maximum marks and marks obtained in the Practical section.

Sessional/ Internal Assessment may be added under the Practical section. Any discrepancy in the entry of marks pertaining to the Theory, Practical or Total, will be the sole responsibility of the candidate.

### 3.1.3: Uploads

The candidate must upload the required relevant documents.

The name of the candidate claiming reservation under SC/ST/OBC-NCL/EWS/CW/KM/PwBD/Single Girl Child/Orphan must match with the name that appears on the corresponding School Board qualifying certificates and in JEE (Main)-2023. Similarly, the parents' names must match the certificates.

The candidate shall be responsible for the legibility and authenticity of the certificate s(he) uploads. S(he) must take utmost care to ensure that uploaded documents/certificates are authentic and accurate.

If any false attestation/falsified records are detected, the Candidate will be debarred from the University and penal action will be taken against the Candidate. No fees will be refunded in such cases.

**No undertaking in lieu of incomplete/ non-availability of certificates/ documents will be accepted.**

### 3.1.4: Preview

The candidate will be able to preview the application form only after the successful uploading of the mandatory documents.

The candidate will have the option of editing/ making changes, if required, at this stage.

The candidate must carefully read every detail submitted by him/her before proceeding to the next section of the Final Submission.

**No change/edit/modification will be allowed once the application form is successfully submitted.**

### 3.1.5: Submission

Once the application form has been filled and the documents are uploaded, the candidate must submit the form by paying the Registration-cum-allocation fee. A candidate will become eligible to participate further only after the successful realization of the registration fees within the stipulated time.

The fee must be paid only through the Payment Gateway link provided on the candidate's dashboard. If the registration fee is not successfully remitted, the application will not be considered for allocation under any circumstances.

Candidates are advised to use any one of these payment modes: Net Banking/Debit Card/Credit Card/UPI.

#### ADVICE

*Candidates must ensure that the uploaded certificates are visible and readable.*

#### ADVICE

*Candidates must pay the registration fee well before the deadline to avoid any last-minute haste.*

#### ADVICE

*Upon successful payment of the Registration fee, candidates are advised to keep records of the transaction details as proof for future reference.*

### 3.1.6: Providing the Preferences

The candidate must confirm the Common Rank of JEE (Main) Paper-I, 2023.

Candidate must give his/her preference for B.Tech. Program/s in which s(he) is willing to take admission, if offered.

The candidate must take utmost care while ordering the preferences.

Only the preferences submitted by the candidate will be considered for allocations and upgrades (if any).

The submitted preference order will determine the allocation of seat (Refer to 3.2 for Allocation Rules).

#### ADVICE

*Addition/ deletion of preferences will not be allowed after the closure of the Preference filling.*

**It is in the best interest of the candidate to fill the maximum number of preferences.**

Before submitting, the candidate must ensure that the order of preferences is as per his/her choice. **Editing the preferences after the stipulated deadline will NOT be allowed**, i.e., the candidate CANNOT change the order of his/her preferences OR add/delete any more Program/s after the stipulated deadline.

If a candidate does not "Submit" his/her preferences, the last saved preference order will be locked automatically upon reaching the deadline for the Preference-Filling. These locked preferences will become the basis for allocating seats for all rounds.

#### ADVICE

*Candidates must not wait for the last date of preference filling.*

## 3.2. ALLOCATION RULES

1. The University will consider All India Combined Rank List (CRL) obtained in JEE (Main) Paper-I, 2023 for the purpose of allocations.
2. The Highest Possible Preference will be provisionally allocated to a candidate considering the following criteria:
  - (i) Program Merit
  - (ii) Category (UR/OBC-NCL/SC/ST/EWS)
  - (iii) Availability of seats
  - (iv) Any other allocation rules, policies, or criteria as mentioned in this document or published on the admission website of UoD.
3. The merit list for the UR category seats will comprise all candidates in order of merit. No one will be excluded from the same. In other words, the merit list for the Unreserved (UR) category will also include SC/ST/OBC-NCL/EWS candidates, irrespective of category, if they meet the criterion of merit for the UR category. No candidate can be excluded from the UR category merit list just because the Candidate belongs to or has applied under SC/ST/OBC-NCL/EWS category. Discrimination on the basis of category/caste is completely unlawful. The UoD does not tolerate discrimination against any Candidate/student on this basis. Strict action will be taken against any violations.
4. If candidates belonging to SC/ST/OBC-NCL/EWS/PwBD/CW/KM/Single Girl Child/Orphan category do not have a valid certificate/ document issued by the respective issuing authority at the time of admission, they will not be considered for allocation in the relevant category as claimed. (Refer to Annexure IV and V).
5. If the total number of eligible ST category candidates who have applied for a particular Program exhausts, then the remaining seats under this category for that particular Program will be allocated to eligible SC category candidates and vice-versa.
6. In case, a candidate who was allocated a seat under any reserved category/ sub-category and was rejected on the basis of deficiency/ies in the category/sub-category/ caste documents, s(he) may be considered for seat

allocation in subsequent round/s (if any) in UR category as per his/her eligibility, merit and availability of seats in UR.

### 3.3. SEAT ALLOCATION AND ADMISSION

On declaration of the Seat Allocation result/s by the University, the candidate must login to his/her dashboard for acceptance of the allocated seat, if offered.

**It is the responsibility of the candidate to login to the dashboard and check if a seat is allocated in a given round of seat allocation, and if allocated s(he) must complete all admission formalities.**

#### ADVICE

*Candidates must check the schedule of activities for admission, which are available on the admission website of UoD (admission.uod.ac.in).*

#### 3.3.1: Acceptance, Physical Verification of Documents and Approval

On declaration of each allocation round, if a seat is provisionally allocated, the candidate must "**Accept**" the allocated seat before the last date/time specified for the given allocation round.

Candidates who accept the provisionally allotted seat should then, visit the website of FoT for the schedule of physical verification of documents.

**Inactivity/no-action will be taken as non-acceptance to the allocated seat. It will be treated as a decline to the provisionally allocated seat and the candidate will no longer be able to participate in subsequent rounds.**

**In case a candidate is offered multiple seats in a particular round, s(he) must take admission on ONLY ONE allocated seat.**

FoT will verify the following:

1. Minimum Eligibility of the Candidate
2. Common Rank in JEE (Main) Paper-I, 2023
3. Validity and authenticity of Documents/Certificates submitted by the candidate

After verification, the FoT will either 'Approve' or 'Reject' the application.

During physical verification, if any document/ certificate is found inadequate/insufficient/inappropriate, it will lead to cancellation of the admission, *ipso facto*. Further, such a candidate will forfeit the opportunity for admission for the Academic Session 2023-24.

**In case of Approval:** Once the approval is accorded, the candidate will have to pay the requisite 'Admission Confirmation Fee' (refer to Section 3.3.2).

**In case of Rejection:** At the time of physical verification, if an application gets rejected, any/all of the following reason/s may be stated:

1. Non-fulfillment of the Minimum Eligibility by the Candidate
2. Invalid documents/certificates submitted by the Candidate
3. Failure to respond to the query(ies) raised by FoT within the stipulated time

#### 3.3.2: Admission to the Provisionally Allocated Seat

After the approval is accorded, the candidate **will have to pay Rs. 1,00,000.00 (Rupees One Lakh only)\*** as

confirmation of the allocated seat. The admission will be confirmed only after successfully paying the admission confirmation fee.

If a candidate fails to pay the admission confirmation fee within the stipulated time, it will be considered as a cancellation of the provisionally allocated seat. The allocated seat shall be forfeited, and the candidate will not be considered for any subsequent allocation rounds.

**ADVICE**

*Candidates must make the fee payment well in time and not wait for the last date.*

The remaining admission fees (Annexure – II) will have to be submitted after the closure of all rounds of admission, as and when notified by the UoD.

\*For candidates belonging to PwBD category, the admission confirmation fees will be Rs. 25,000.00 (Rupees Twenty Five Thousand only).

**ADVICE**

*Candidate must keep checking admission website for payment of remaining admission fees.*

### **3.3.3: Relaxation of Payment of Fees**

Keeping in mind the Institutional Social Responsibility (ISR), in terms of the availability of opportunity to otherwise eligible candidates from economically challenged sections of society, the UoD will waive off fees to be paid by a candidate at the time of admission in the following manner:

- (i) Candidates whose parental income (Father and Mother taken together) is Rs. 4 lakhs or less will receive 90 percent waiver of fees at the time of admission. Such candidates will be required to pay the examination fee and hostel fee (if applicable) from time to time.
- (ii) Candidates whose parental income (Father and Mother taken together) is more than Rs. 4 lakhs and less than 08 lakhs will receive a 50 percent waiver of fees at the time of admission. Such candidates will be required to pay the examination fee and hostel fee (if applicable) from time to time.

Eligibility Condition: Such candidates shall be required to submit the Income Tax Return of their parents (father and mother both) for the financial years 2020-21 and 2021-22. In case any of the parents is non-working, a separate certificate is to be submitted along with the application form at the time of seeking admission to the UoD. Such candidates shall also submit an EWS certificate issued by the prescribed authority. However, for the determination of Income, only ITR shall be used.

For claiming admission in this category, both the parents (Father / Mother) / Guardian(s) (in case parents are deceased) shall have to upload copy of an affidavit to this effect, duly attested by the area District Magistrate / Additional Magistrate / Deputy Commissioner / Collector / Additional Deputy Commissioner / Deputy Collector / 1st Class Stipendiary Magistrate / City Magistrate (not below the rank of 1st Class Stipendiary Magistrate), Sub-Divisional Magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner, at the time of online registration and should produce original affidavit at the time of physical reporting at FoT.

### **3.3.4: Laptop Reimbursement Scheme**

All admitted students will be reimbursed the cost of a laptop or Rs. 50,000.00 (Fifty thousand only), whichever is lower on the production of the proper invoice/ bill/receipt to this effect. Further details in this regard will be provided at the time of admission.

## **3.4 SUBSEQUENT ALLOCATION ROUNDS**

The University may announce multiple allocation rounds based on the availability of the seats that arise due to rejections, cancellations, and withdrawals. UoD will display the vacant seats on its admission website



([admission.uod.ac.in](http://admission.uod.ac.in)) before every allocation round.

All admitted candidates who opt for the "Upgrade" option (refer to 3.5.1) in a particular round will be considered for the respective allocation round, subject to the availability of seats.

Candidates who were allocated their first preference in any round will not be considered in subsequent round/s of allocation.

### 3.5. UPGRADE & FREEZE

Before beginning an Allocation Round, the University will open an "Upgrade" Window for all admitted candidates.

#### 3.5.1: Upgrade

An admitted candidate can select the 'Upgrade' option, which will allow upgradation to a higher preference submitted by the candidate. Admitted candidates who opt for upgradation will automatically be upgraded based on the allocation and upgradation policy.

Choosing the option 'Upgrade' will mean that the candidate consents to consideration of an offer of admission to a Program of his/her higher preference in the subsequent round (if any). His/her current admitted seat will be auto-canceled if the new preference is allocated.

A candidate who opts for 'Upgrade' can also reorder the Programs that were higher in preference than the allocated one.

The Program in which the candidate had taken an admission earlier will never be offered to the candidate in any subsequent round. Similarly, the Program/s which were below in the preference order at which the candidate had taken an admission earlier will never be offered again to the candidate in any subsequent round.

The upgrade option will not be available for the candidate who was allocated his/her first preference.

It will be the candidate's responsibility to keep checking for 'Upgrade' options in all rounds of seat allocations. Failure/inability to participate in the upgradation process will not be considered a grievance in any circumstance.

**A candidate who gets upgraded will have to 'Accept' the upgraded seat and complete the admission procedures on the upgraded allocated seat/s.** If a candidate does not do any activity on the upgraded seat/s, it will, by default, be considered canceled and the candidate will be out of the allocation process.

If a candidate is not upgraded, his/her admission to the earlier seat will be retained.

Selecting an upgrade does not mean an assurance of a seat in the next/ any subsequent allocation rounds.

Upgradation is subject to:

- a. Program Merit
- b. Order of Preference
- c. Availability of seats

#### 3.5.2: Freeze

A candidate who has been admitted to an allocated seat and desires to continue with it should submit a 'Freeze' request through his/her dashboard. **On selecting 'Freeze', such a candidate will never be allowed to opt for "Upgradation."**

ADVICE
<i>Candidates must "Freeze" their admission only if they are satisfied with the allocated seat and do not want to be considered for subsequent allocations.</i>

If an admitted candidate neither opts for Upgrade nor Freeze and remains inactive in that round, the admission taken by him/her will be retained and s(he) will not be considered for upgradation in any subsequent round/s.

#### ADVICE

*Once the freeze option has been exercised, a candidate will not be allowed to upgrade.*

### 3.6 CANCELLATION OF PROVISIONALLY ALLOCATED SEAT/ ADMISSION

1. Failure to 'Accept' the provisionally allocated seat within the stipulated timeline will lead to cancellation of the allocated seat.
2. The provisionally allocated seat will be canceled if a candidate fails to pay the admission confirmation fees within the stipulated time.
3. The provisionally allocated seat/admission will be canceled if, at any time, any of the document(s)/ certificate(s) is/are found to be invalid/fraudulent.
4. The provisionally allocated seat/admission will be canceled if, at any time, it is found that a candidate does not meet the Minimum Eligibility Criteria as declared by UoD.

**A candidate whose provisionally allocated seat/admission is canceled due to any of the above-mentioned reason will forfeit the right to seek admission to UoD and no fee shall be refunded.**

### 3.7. WITHDRAWAL OF ADMISSION BY THE CANDIDATE

A candidate who has been admitted to a Program but wishes to withdraw can do so through his/her dashboard by selecting the 'Withdraw' option and paying a withdrawal fee of Rs. 1000.00 (non-refundable).

A candidate who withdraws his/her admission will forfeit his/her eligibility for admission to the B.Tech. programs for the academic year 2023-24. No further participation in any of the subsequent regular allocation rounds, if any, will be allowed.

**The Withdrawal option will be suspended on the announcement of the Spot Admission round/s.**

### 3.8. MID ENTRY

Candidates who failed to register within the stipulated time and are desirous of participating later can participate through the Mid-Entry window (as and when announced by the University). Such a candidate can do so by paying a Mid-Entry fee of **Rs. 2500.00 (non-refundable)**.

A candidate who applies mid-way will not hold any right to claim the seats allocated to candidates who had applied within the stipulated earlier, i.e., during the initial stage. Allocation of seats to such candidates may be considered for subsequent rounds (if any), subject to fulfillment of merit, eligibility criteria, availability of seats, and other rules.

Once the seat has been allocated to the candidate who has applied midway, it will be mandatory for him/her to be admitted to the allocated seat. Failure to accept the allocated seat will forfeit the candidate's right to seek admission to UoD. The seats allocated to such candidates will not be upgraded in any subsequent allocation rounds.

Merely registering through Mid-Entry does not guarantee an allocation of seats. Mid-Entry will only be considered after successful remittance of the Mid-Entry fee.

### 3.9. SPOT ADMISSION

After completing regular allocation rounds, if seats remain vacant, UoD may announce Spot round/s of admission.

Candidates who had applied earlier but are not admitted on the date of declaration of the Spot Admission round can participate in Spot Admission.

On the announcement of Spot Admission, the dashboard of all the admitted candidates will be kept in freeze mode and they will neither be considered for upgrades nor allowed to withdraw their admissions.

To be considered in a Spot Admission round, the candidate will have to opt for 'Spot Admission' through his/her dashboard.

**For every Spot Admission round, the University will display the vacant seats of each Program. A desirous candidate will be able to select ONLY ONE Program.**

In Spot Admissions, allocations will be done on the basis of the following criteria:

1. Availability of seats
2. Program Merit
3. Order of Preference
4. Category
5. Any other allocation rules, policies, or criteria as mentioned in this document (BOI (B.Tech.)-2023), or published on the admission website of UoD

It will be mandatory for the candidate to take admission to the seat allocated in a Spot round. Failure to accept the allocated seat in the Spot Admission round will forfeit the candidate's eligibility for admission to UoD.

There will be no option of 'Upgrade' and 'Withdraw' during the Spot Admission rounds. **The seat allocated in a particular Spot Admission round will be final and will not be upgraded in any subsequent round/s of Spot Admission.**

### 3.10. REMITTANCE OF FEE

Admission of a candidate will be deemed confirmed only after the successful realization of the admission confirmation fee. The admission confirmation fee must be paid only through the candidate's dashboard. If the fee is not successfully remitted within the stipulated time, the admission will not be considered complete under any circumstances.

For all payments, candidates are advised to use any of these payment modes: Net Banking/Debit Card/Credit Card/UPI.

#### 3.10.1: Virtual Wallet

Upon the successful remittance of the admission confirmation fee, a virtual wallet will be created for a candidate.

In case a candidate gets upgraded and the Fee of the upgraded seat is more than the amount in the virtual wallet of the candidate, s(he) will have to pay the differential amount within the stipulated time.

In case the fee of the upgraded seat is less than the amount in the virtual wallet of the candidate, it will be auto-debited upon receiving approval from the University.

#### ADVICE

*Upon successful payment of the Admission Fee, the candidate must keep a record of transaction details for future reference.*

#### ADVICE

*Candidates must complete the fee payment process well before the deadline to avoid any last-minute haste.*

### 3.10.2: Payment Failures

In the likely case of payment failure-related issues:

1. If the amount is not deducted from the account, the candidate must try paying again before the payment deadline.
2. Candidate must ensure a stable internet connection is used for making the online payment.
3. Candidate must use the correct credentials to make a successful payment.
4. If the amount is deducted, but the notification is not received, the candidate may seek confirmation from his/her source bank.
5. If a successful transaction is confirmed from the source Bank and the payment failure continues to be reflected on the dashboard, in that case, the candidate may contact the ICICI Eazypay Payment Gateway Helpline between 9.30 a.m. to 5:30 p.m., Monday to Saturday (except second and fourth Saturdays) at the following numbers.

Phone: +91-9871985944, +91-9667640628

Email Address: [dupaymentquery@icicibank.com](mailto:dupaymentquery@icicibank.com)

For queries related to payment, kindly use the standard format given below:

Candidate Name	Date of Transaction	Transaction no./id	Course applied to	Email ID	Mobile no. Entered in UoD application	Nature of Query
#####	DD.MM.YYYY	2#####	e.g., B.Tech.	Registered Email ID of the Candidate	Registered Mobile no. of the Candidate	#####

### 3.11. REFUND POLICY

On account of the withdrawal of the admission by the candidate, the full fee after deduction of Rs. 5000.00 (five thousand only) will be refunded only if the withdrawal has been made before the last date of admission, as announced by UoD. Fees for withdrawals done after the last date of admission will not be refunded under any circumstances.

**Following fees will not be refunded:**

- a) Registration Fee
- b) Mid-Entry Fee
- c) Withdrawal Fee

On the closure of admissions, a refund process will be initiated. The UoD will try to settle the refunds within three months of the closure of admissions.

### 3.12. GRIEVANCE REDRESSAL

The Faculty of Technology will establish a Grievance Redressal Committee to redress grievances that may arise during admission. In addition, a Sub-Committee of Grievance Redressal for redressing the grievances of candidates belonging to SC/ST/OBC/EWS and PwBD categories will also be established. The details of the Grievance Redressal Committee and the Sub-Committee will be displayed on the website of the FoT and on the admission website of UoD to facilitate and address the needs/queries of candidates within the stipulated time.

### 3.13. ADMISSION ON OTHER SUPERNUMERARY QUOTAS

Separate Allocation result/s will be declared for candidates seeking admission under Supernumerary quotas. Candidates must keep visiting the admission website for guidelines and schedules related to admissions under Supernumerary quotas. They must also regularly check their dashboard.

#### 3.13.1: Persons with Benchmark Disability (PwBD)

Five percent (5%) of the total sanctioned strength in each Program is reserved for PwBD candidates.

Separate Allocation result/s will be declared for candidates seeking admission under PwBD quota.

For the format of PwBD certificate, refer to Annexure V. Disability Certificates issued after 01.06.2021 must be as per the Gazette Notification no. 1736 (E) dated 05.05.2021 issued by the Department of Empowerment of Persons with Disabilities and applied through UDID portal. However, Disability Certificates issued before 01.06.2021, will be considered as per other existing applicable rules and notifications of the Department of Empowerment of Persons with Disabilities and the University of Delhi.

As per the Rights of Persons with Disabilities Act, 2016, a 'person with benchmark disability means a person with not less than forty percent (40%) of a specified disability where specified disability has not been defined in measurable terms and includes a person with disability where specified disability has been defined in measurable terms, as certified by the certifying authority'. It may be noted that the erstwhile Persons with Disabilities (Equal Opportunities, ProTech.of Rights and Full Participation) Act, 1995 (No. 1 of 1996), under which reservation for Persons with Disabilities in admissions was provided earlier, has now been repealed.

Persons with benchmark disabilities falling within any of the following specified categories of disabilities as mentioned in the Schedule to the Rights of Persons with Disabilities Act, 2016 [See Clause (zc) of Section 2 of the said Act] are eligible to get the benefit of the said reservation.

#### A. Locomotor Disability

Locomotor disability (a person's inability to execute distinctive activities associated with movement of self and objects resulting from affliction of musculoskeletal or nervous system or both), including—

1. "**Leprosy cured person**" means a person who has been cured of leprosy but is suffering from—
  - (i) loss of sensation in hands or feet as well as loss of sensation and paresis in the eye and eye-lid but with no manifestation of deformity;
  - (ii) manifest deformity and paresis but having sufficient mobility in their hands and feet to enable them to engage in normal economic activity
  - (iii) extreme physical deformity as well as advanced age which prevents him/her from undertaking any gainful occupation, and the expression "leprosy cured" shall construed accordingly;
2. "**Cerebral palsy**" means a Group of non-progressive neurological condition affecting body movements and muscle coordination, caused by damage to one or more specific areas of the brain, usually occurring before, during or shortly after birth;
3. "**Dwarfism**" means a medical or genetic condition resulting in an adult height of 4 feet 10 inches (147 centimeters) or less;
4. "**Muscular Dystrophy**" means a group of hereditary genetic muscle disease that weakens the muscles that move the human body and persons with multiple dystrophy have incorrect and missing information in their genes, which prevents them from making the proteins they need for healthy muscles. It is characterized by progressive skeletal muscle weakness, defects in muscle proteins, and the death of muscle cells and tissue;
5. "**Acid Attack Victims**" means a person disfigured due to violent assaults by throwing of acid or similar corrosive substance.

## B. Visual impairment

6. "**Blindness**" means a condition where a person has any of the following conditions, after best correction
- (i) total absence of sight; or
  - (ii) visual acuity less than 3/60 or less than 10/200 (Snellen) in the better eye with best possible correction; or
  - (iii) limitation of the field of vision subtending an angle of less than 10 degree.
7. "**Low-vision**" means a condition where a person has any of the following conditions, namely:
- (i) visual acuity not exceeding 6/18 or less than 20/60 upto 3/60 or upto 10/200 (Snellen) in the better eye with best possible corrections; or
  - (ii) limitation of the field of vision subtending an angle of less than 40 degree upto 10 degree.

## C. Hearing Impairment

8. "**Deaf**" means persons having 70 DB hearing loss in speech frequencies in both ears;
9. "**Hard of Hearing**" means person having 60 DB to 70 DB hearing loss in speech frequencies in both ears;
10. "**Speech and Language Disability**" means a permanent disability arising out of conditions such as laryngectomy or aphasia affecting one or more components of speech and language due to organic or neurological causes.

## D. Intellectual Disability

A condition characterised by significant limitation both in intellectual functioning (reasoning, learning, problem solving) and in adaptive behaviour which covers a range of every day, social and practical skills, including—

11. "**Specific Learning Disabilities**" means a heterogeneous group of conditions wherein there is a deficit in processing language, spoken or written, that may manifest itself as a difficulty to comprehend, speak, read, write, spell, or to do mathematical calculations and includes such conditions as perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia;
12. "**Autism Spectrum Disorder**" means a neuro-developmental condition typically appearing in the first three years of life that significantly affects a person's ability to communicate, understand relationships and relate to others, and is frequently associated with unusual or stereotypical rituals or behaviours.

## E. Mental Illness

"**Mental illness**" means a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life, but does not include retardation which is a condition of arrested or incomplete development of mind of a person, specially characterised by subnormality of intelligence.

## F. Disability caused due to Chronic neurological conditions, such as—

13. "**Multiple Sclerosis**" means an inflammatory, nervous system disease in which the myelin sheaths around the axons of nerve cells of the brain and spinal cord are damaged, leading to demyelination and affecting the ability of nerve cells in the brain and spinal cord to communicate with each other;
14. "**Parkinson's Disease**" means a progressive disease of the nervous system marked by tremor, muscular rigidity, and slow, imprecise movement, chiefly affecting middle-aged and elderly people associated with degeneration of the basal ganglia of the brain and a deficiency of the neurotransmitter dopamine.

## G. Blood Disorder

15. "**Haemophilia**" means an inheritable disease, usually affecting only male but transmitted by women to their male children, characterised by loss or impairment of the normal clotting ability of blood so that a minor wound may result in fatal bleeding.

16. "**Thalassemia**" means a group of inherited disorders characterised by reduced or absent amounts of haemoglobin.

17. "**Sickle Cell Disease**" means a haemolytic disorder characterised by chronic anaemia, painful events, and various complications due to associated tissue and organ damage; "haemolytic" refers to the destruction of the cell membrane of red blood cells resulting in the release of haemoglobin.

#### **H. Multiple Disabilities (more than one of the above-specified disabilities)**

Multiple disabilities, including deaf-blindness which means a condition in which a person may have a combination of hearing and visual impairments causing severe communication, developmental, and educational problems.

**I. Any other category as may be notified** by the Central Government.

#### **Concessional/Waiver of fees in respect of Persons with Benchmark Disabilities (PwBD)**

Candidates belonging to PwBD category shall be given a fee concession of 75% of the total fees as compared to the other students taking admission in a particular program of the University.

Candidates must ensure that the PwBD certificate is in the candidate's name and issued by a recognized Government Hospital, bearing a duly attested photograph of the candidate.

#### **3.13.2: Children/Widows of Personnel of the Armed Forces (CW)**

Five percent (5%) of seats are reserved for candidates for Children/Widows of Personnel of the Armed Forces(CW), Program-wise, in all colleges.

All such Candidates have to upload the Educational Concession Certificate (ECC) issued by **any of the following authorities** on the proper letterhead:

- Secretary, Kendriya Sainik Board, Delhi
- Secretary, Rajya Zila Sainik Board
- Officer-in-Charge, Record Office
- 1st Class Stipendiary Magistrate
- Ministry of Home Affairs (For Police Personnel in receipt of Gallantry Awards)

No other format shall be permissible. Proofs of the CW category in the form of an ID card of parent or dependent, Medicalcard, Ration card, CSD card, etc., are not admissible in lieu of certificate in a correct format. The priority must be clearly mentioned in the certificate. Certificates that do not mention the relevant priority will not be considered\*.

Admission may be offered to the Children/Widows of Personnel of the Armed Forces (**Priority I to IX**), including Para-Military Personnel (**only Priority I to V**), in the following order of preference:

<b>Priority I</b>	<b>Widows / Wards of Defence personnel killed in action;</b>
<b>Priority II</b>	Wards of Defence Personnel disabled in action and boarded out from service with disability attributable to military service;



<b>Priority III</b>	Widows/Wards of Defence Personnel who died while in service with death attributable to military service;
<b>Priority IV</b>	Wards of Defence Personnel disabled in service and boarded out with disability attributable to military service;
<b>Priority V</b>	Wards of Ex-servicemen and Serving personnel, including personnel of police forces who are in receipt of Gallantry Awards; Param Vir Chakra Ashok Chakra Maha Vir Chakra Kirti Chakra Vir Chakra Shaurya Chakra President's Police Medal for Gallantry/President Gallantry Medal for the fire services personnel Sena Medal (Gallantry), Nau Sena Medal (Gallantry), Vayu Sena Medal (Gallantry) Mention-in-Despatches Police Medal for Gallantry/Gallantry Medal for fire services
<b>Priority VI</b>	Wards of Ex-Servicemen.
<b>Priority VII</b>	Wives of: Defence personnel disabled in action and boarded out from service. Defence personnel disabled in service and boarded out with disability attributable to military service. Ex-servicemen and serving personnel who are in receipt of Gallantry Awards.
<b>Priority VIII</b>	Wards of Serving Personnel
<b>Priority IX</b>	Wives of Serving Personnel

\*The University may ask for supporting documents along with ECC.

A separate Merit List will be declared for candidates seeking admission under the CW quota.

For the format of the Educational Concession Certificate (ECC) certificate, refer to Annexure V.

### 3.13.3: Kashmiri Migrants (KM)

01 (One) seat is reserved Program-wise for the Wards of Kashmiri Migrants.

Separate Allocation result/s will be declared for candidates seeking admission under the Kashmiri Migrants quota.

All wards of Kashmiri Migrants will have to upload a Certificate of Registration as Kashmiri Migrants issued by Divisional Commissioner / Relief Commissioner.

### 3.13.4: Single Girl Child

01 (One) seat in each B.Tech. Program is reserved under the Supernumerary Quota for a single girl child.

For claiming admission in this category, the Father / Mother / Guardian (in case parents are deceased) shall have to upload copy of an affidavit to this effect, duly attested by the area District Magistrate / Additional Magistrate / Deputy Commissioner / Collector / Additional Deputy Commissioner / Deputy Collector / 1st Class Stipendiary Magistrate / City Magistrate (not below the rank of 1st Class Stipendiary Magistrate), Sub-Divisional Magistrate / Taluka

Magistrate / Executive Magistrate / Extra Assistant Commissioner, at the time of online registration and should produce original affidavit at the time of physical reporting at FoT.

### **3.13.5: UoD Ward Quota**

Admission to the wards of the University and its College employees, both teaching and non-teaching, will be done as per Academic Council resolution 9 a & b dated 27.11.2020 and subsequent amendments/notifications thereof.

Candidate must upload a valid Employment Certificate issued by the due officials. The certificate must clearly mention the status of employment of the parent/s. Only the certificate uploaded during the BOI (B.Tech.)-2023 Application form will be considered. I-Card, Aadhar Card, or any other document will not be accepted.

### **3.13.6: Orphans Quota**

The University of Delhi will be admitting two candidates (one male and one female) in each program of study, both at the Undergraduate and Postgraduate level. These two seats will be supernumerary.

The Council of the University further resolved that the expenditure incurred for admission and continuance of study of such students in the University or its Colleges shall be met from the University Welfare Fund or College Students' Welfare Fund, as the case may be, for admissions in the University or in the College.

A candidate who wishes to seek admission under the orphans quota will have to upload a certificate from a Govt. recognized Orphanage/Charitable Home or Death certificate of both parents.

## EQUIVALENCE OF BOARDS

The applications for admission to all the UG programs in the Colleges/Departments in respect of candidates belonging to the Examining bodies of Boards / Universities recognized/accredited by the Association of Indian University (AIU) / University Grants Commission (UGC) / Ministry of Education (MoE) shall be considered in terms of the following recommendations as mentioned in the University circular letter of 13.01.2005.

Senior School Certificate of various Boards recognized by AIU /Central Board of Secondary Education (CBSE) is considered as equivalent to the Senior School Certificate of Central Board for the purposes of eligibility to various Undergraduate programs.

Candidates who pass various Degree / School Examination of Foreign Universities / Boards as having already been approved by the Equivalence Committee, from time to time, will be considered eligible as a matter of routine. The cases of only those Candidates who do not fall in the list of AIU /UGC /Council of Boards of School Education in India (COBSE) / MoE recognized accredited Boards/ Universities shall be referred to the University on an individual basis.

## SEAT MATRIX AND FEE STRUCTURE

B.TECH. (COMPUTER SCIENCE AND ENGINEERING)							
SANCTIONED STRENGTH					SUPERNUMERARY		
UR	OBC-NCL	SC	ST	EWS	PwBD	CW	KM
48	33	18	9	12	6	6	1

B.TECH. (ELECTRONICS AND COMMUNICATION ENGINEERING)							
SANCTIONED STRENGTH					SUPERNUMERARY		
UR	OBC-NCL	SC	ST	EWS	PwBD	CW	KM
48	33	18	9	12	6	6	1

B.TECH. (ELECTRICAL ENGINEERING)							
SANCTIONED STRENGTH					SUPERNUMERARY		
UR	OBC-NCL	SC	ST	EWS	PwBD	CW	KM
48	33	18	9	12	6	6	1

### Fee structure of the First year admission of the B.Tech. Programs

Sl.no.	Particulars	Fee for B.Tech. Program (Rs.)
1.	Tuition Fee	1,08,000/-
2.	University Student Welfare Fund	16,980/-
3.	Faculty/Department/ Student Welfare Fund	10,000/-
4.	University Development Fund	900/-
5.	University Facilities and Services Charges	20,000/-
6.	Faculty/Department Facilities and Services Charges	60,000/-
7.	Economically Weaker Section Support University Fund	100/-
8.	Delhi University Students Union (DUSU) Fund	20/-
	<b>TOTAL FEES</b>	<b>2,16,000/-</b>

## SYLLABI

## FACULTY OF TECHNOLOGY

## B.TECH. PROGRAM OUTCOMES

Engineering Graduates will be able to:

- 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- 5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9. Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- 11. Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**Assessment & Scheme of examination:**

As per examination rules of UoD.

## PROGRAM STRUCTURE

### Bachelor of Technology (B.Tech.)

1. Computer Science and Engineering
2. Electronics and Communication Engineering
3. Electrical Engineering

#### Semester-I

Sr. No.	Course Domain	Course Title	Hours per week			Total Course Hrs. per week	Credits
			L	T	P		
1.	DSC-1	Mathematics-I	3	1	0	4	4
2.	DSC-2/ DSC-5*	Physics OR Introduction to Electrical and Electronics Engineering	3	0	2	5	4
3.	DSC-3	Fundamentals of Computer Programming	3	0	2	5	4
4.	GE	Select a course from the specified list of GEs					4
5.	AEC	Select a course from the specified list of AECs					2
6.	SEC	Select a course from the specified list of SECs					2
7.	VAC	Select a course from the specified list of VACs					2
<b>Total Credits</b>							<b>22</b>

**NOTE:**

**\*1. Half of the students enrolled will take up Physics and half of the students will take up Introduction to Electrical & Electronics Engineering in the Semester I and vice versa in the Semester II.**

## Semester-II

Sr. No.	Course Domain	Course Title	Hours per week			Total Contact Hrs. per week	Credits
			L	T	P		
1.	DSC-4	Mathematics-II	3	1	0	4	4
2.	DSC-5/ DSC-2*	Introduction to Electrical and Electronics Engineering OR Physics	3	0	2	5	4
3.	DSC-6	Data Structures	3	0	2	5	4
4.	GE	Select a course from the specified list of GEs					4
5.	AEC	Select a course from the specified list of AECs					2
6.	SEC	Select a course from the specified list of SECs					2
7.	VAC	Select a course from the specified list of VACs					2
<b>Total Credits</b>							<b>22</b>

### NOTE:

**\*1. Half of the students enrolled will take up Physics and half of the students will take up Introduction to Electronics & Electrical Engineering in the Semester I and vice versa in the Semester II.**

### LIST OF SKILL ENHANCEMENT COURSES (SECs)

1. Computer Workshop (Course Credit: 0L-0T-2P, Course Hours: 0L+0T+4P)
2. Electronics Workshop (Course Credit: 0L-0T-2P, Course Hours: 0L+0T+4P)
3. Electrical Workshop (Course Credit: 0L-0T-2P, Course Hours: 0L+0T+4P)

### LIST OF GENERIC ELECTIVES (GEs)

The students will be offered a list of Generic Electives as decided by the university from time to time.

### LIST OF ABILITY ENHANCEMENT COURSES (AECs)

The students will be required to choose these courses from a pool of courses offered by the University as per UGCF-2022

### LIST OF VALUE ADDITION COURSES (VACs)

The students will be required to choose these courses from a pool of courses offered by the University as per UGCF-2022



## SYLLABI

### MATHEMATICS-I (DSC-1) CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Mathematics-I	4	3	1	0	Class XII with Physics, Chemistry and Mathematics	NIL

Course Hours: L: 03 T: 01 P: 00

#### Course Objectives:

To teach students concepts of Linear Algebra, Vectors and Calculus and apply them for problem solving.

#### Course Outcomes:

After completing the course, the students should be able to:

1. Develop a basic understanding of the linear algebra, vectors and calculus use in engineering
2. Solve mathematical problems of vector spaces and matrices
3. Derive calculus theorems and use these to solve some integral problems.
4. Apply calculus to solve suitable engineering applications

#### Unit-I

Matrices: Matrices, Vectors: addition and scalar multiplication, Matrix multiplication, Linear systems of equations, Linear Independence, Rank of a matrix, Determinants, Cramer's Rule, Inverse of a matrix, Gauss elimination and Gauss-Jordan elimination.

#### Unit-II

Vector spaces I: Vector Space, Linear dependence of vectors, Basis, Dimension, Range and kernel, Rank and nullity, Inverse of a linear transformation, Rank nullity theorem,

#### Unit-III

Vector spaces II: Eigenvalues, Eigenvectors, Symmetric, Skew-symmetric and Orthogonal Matrices, Eigenbases, Diagonalization, Inner product spaces, Gram-Schmidt orthogonalization.

#### Unit-IV

Calculus: Indeterminate forms and L'Hospital's rule, Rolle's Theorem, Mean value theorems, Taylor's and Maclaurin theorems, Evaluation of definite and improper integrals, Applications of definite integrals to evaluate surface areas and volumes of revolutions, Beta and Gamma functions and their properties.

#### Suggested Readings\*:

1. G.B. Thomas and R.L. Finney, Calculus and Analytic geometry, Pearson Education.
2. Erwin Kreyszig, Advanced Engineering Mathematics, John Wiley & Sons.
3. D. Poole, Linear Algebra: A Modern Introduction, Brooks Cole.
4. Ramana B.V., Higher Engineering Mathematics, Tata McGraw-Hill Publishing Company Limited.

5. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications.
6. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers.
7. V. Krishnamurthy, V.P. Mainra and J. L. Arora, An introduction to Linear Algebra, Affiliated East– West Press Private limited.

\*Latest Edition of the books to be followed.

**PHYSICS (DSC-2)**  
**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Physics	4	3	0	1	Class XII with Physics, Chemistry and Mathematics	NIL

**Course Hours: L: 03 T: 00 P: 02**

**Course Objectives:**

To teach students basic concepts of atomic structures, mechanics, electron theory, semiconductors and investigate their characteristics and applicability.

**Course Outcomes:**

After completing the course, the students should be able to:

1. Develop a basic understanding of concepts of atomic structures, electron theory and semiconductors.
2. Correlate mechanics and electron theory with engineering applications.
3. Apply concepts of semiconductor junctions and operations for device operations.
4. Plot characteristics of the studied devices, measure their characteristics and use these for some practical applications.

**UNIT – I**

Review of Atomic Structure and Statistical Mechanics: - Ideas on Atomic Structure, Quantum Mechanics, The Schrodinger Wave Equation, Statistical Mechanics, Bonding of atoms, Crystalline state  
Free electron theory, Density of states and energy band diagrams, Kronig-Penny model (to introduce origin of band gap), Energy bands in solids, E-k diagram, Direct and indirect band gaps, Types of electronic materials: metals, semiconductors, and insulators, Density of states, Occupation probability, Fermi level, Effective mass, Phonons.

**UNIT - II**

Elemental and compound semiconductors, Intrinsic and extrinsic semiconductors, Dependence of Fermi level on carrier-concentration and temperature (equilibrium carrier statistics), Carrier generation and recombination, Carrier transport: diffusion and drift, The Hall Effect, Einstein Relations, Excess carriers in semiconductors p-n junction, Excess carriers and Quasi-Fermi Levels, Basic equations for semiconductor device operation, Solution of carrier transport equation.

**UNIT - III**

P-N Junctions: - The abrupt junction (Electric field, potential, capacitance), V-I characteristic of an ideal diode, a

real diode. Metal-semiconductor junction (Ohmic and Schottky), Semiconductor materials of interest for optoelectronic devices

Optical transitions in bulk semiconductors: absorption, spontaneous emission, and stimulated emission; Joint density of states, Density of states for photons, Transition rates (Fermi's golden rule), Optical loss and gain; Photovoltaic effect, Exciton, Drude model.

#### UNIT - IV

Four-point probe and measurements for carrier density, resistivity, and hall mobility; Hot-point probe measurement, capacitance-voltage measurements, parameter extraction from diode I-V characteristics, DLTS, band gap by UV-VIS spectroscopy, absorption/transmission.

Density of states in 2D, 1D and 0D (qualitatively). Practical examples of low-dimensional systems such as quantum wells, wires, and dots: design, fabrication, and characterization techniques. Heterojunctions and associated band- diagram.

**Note:** Course coordinator will prepare a list of experiments and lab manual for the Practicals covering the whole syllabus.

#### Suggested Readings\*:

1. Pierret, Semiconductor Device Fundamental,
2. P. Bhattacharya, Semiconductor Optoelectronic Devices, Pearson Education
3. J. Singh, Semiconductor Optoelectronics: Physics and Technology, McGraw-Hill Inc.
4. B.E.A. Saleh and M.C. Teich, Fundamentals of Photonics, John Wiley & Sons, Inc.
5. S. M. Sze, Semiconductor Devices: Physics and Technology, Wiley
6. A. Yariv and P. Yeh, Photonics: Optical Electronics in Modern Communications, Oxford University Press, New York.
7. Online course: "Semiconductor Optoelectronics" by M R Shenoy on NPTEL
8. Online course: "Optoelectronic Materials and Devices" by Monica Katiyar, Deepak Gupta on NPTEL.

\*Latest Edition of the books to be followed.

### INTRODUCTION TO ELECTRICAL AND ELECTRONICS ENGINEERING (DSC-5) CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Introduction to Electrical and Electronics Engineering.	4	3	0	1	Class XII with Physics, Chemistry and Mathematics	NIL

**Course Hours: L: 03 T: 00 P: 02**

#### Course Objectives:

To solve electric circuits, to characterize motors, bipolar devices, and multi stage amplifiers

#### Course Outcomes:

After completing the course, the students should be able to:

1. Solve various DC & AC circuits using applicable theorems.
2. Demonstrate the working of electric motors using different laws and principles
3. Characterize and measure properties of bipolar devices
4. Conceptualize multi stage amplifiers and apply these for engineering applications.

#### **Unit I: D.C. and A.C. Circuits:**

Introduction to circuit elements, uncontrolled energy sources, Kirchhoff's laws, Superposition, Thevenin's, Norton's and maximum power transfer Theorems, AC Fundamentals: Sinusoidal a.c. quantities, instantaneous, maximum, average and effective values, Phasor representation, Steady state response of series and parallel R-L, R-C and R-L-C circuits, Concept of impedance and admittance, J-method, Active, Reactive and Apparent Power.

#### **Unit II: Transformers and Electric Motors:**

Electromagnetism: Simple magnetic circuits, Electric Circuit analogy. Electromagnetically induced EMF and Induced Force on a conductor. Faraday's Law, Lenz's Law Concept of Self and Mutual Inductance, Transformers: Construction and operation of single phase transformer, EMF equation, Losses, Efficiency and applications of transformers, Electrical Motors: Constructional details of D.C. Motor, Equations, operating characteristics and applications of shunt, series and Compound Motors, Construction, operation and application of different types of single phase induction motors, Measuring Instruments: Moving coil and moving iron Voltmeters and ammeters and extension of range, Dynamometer type wattmeter.

#### **Unit III: Devices and Circuits:**

PN Junction diode and its use in Rectifier circuits, Capacitive and Inductive filters, Operation and application of special diodes: Zener diode, photodiode, and light emitting diode (LED), Construction and operation of Bi-polar junction transistors, Characteristics under CB, CE, CC configurations, Voltage and current gains, input and output resistances, Biasing of transistors, load line and operating point, Transistor as a switch, Introduction to FET, UJT SCR, Triac and Diac, their characteristics and applications.

#### **Unit IV: Multi Stage Amplifiers:**

R-C coupled amplifier and its frequency response, concept of Bandwidth, Push pull amplifiers, Feedback amplifiers: Classification of feedback amplifiers, Gain, input & output resistance of feedback amplifiers, Advantage of negative feedback, Measuring Instruments: Digital voltmeters, Digital multimeters, CRO and its applications. DSO and oscilloscope probes.

**Note:** Course coordinator will prepare a list of experiments and lab manual for the Practicals covering the whole syllabus.

#### **Suggested Readings\*:**

1. Electrical and Electronics Technology by Hughes Revised by John H. Ley, Et al, Pearson
2. Principles of Electrical Engineering by Del-Toro. Pearson.
3. S.N. Singh, Basic Electrical Engineering, S.N. Singh, PHI Learning Private Limited.
4. Boylestad, R.L. and Nashelsky, L. Electronic Devices and Circuit Theory. Pearson Education.
5. Millman, J. and Grabel, A. Microelectronics. McGraw-Hill, Incl.
6. Malvino, A. and Bates, D. Electronic Principles, with Simulation CD, McGraw-Hill, Inc.

\*Latest Edition of the books to be followed.

## FUNDAMENTALS OF COMPUTER PROGRAMMING (DSC-3)

### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Fundamentals of Computer Programming	4	3	0	1	Class XII with Physics, Chemistry and Mathematics	NIL

Course Hours: L: 03 T: 00 P: 02

#### Course Objectives:

To teach students computer fundamentals and do programming using C for problem solving.

#### Course Outcomes:

After completing the course, the students should be able to:

1. Explain the use of software and programming for problem solving.
2. Develop programming using simple concepts of input, output and control statements.
3. Apply arrays, functions, strings, structures, and pointers for problem solving.
4. Design and implement solutions for data handling with permanent storage using modular programming and files

#### Unit I

**Programming Fundamentals & Control Statements:** Block Diagram of Computer, Hardware vs software, concept of operating system and compiler, Introduction to C programming, basic programming using input and output operators and expressions, programming using if and if-else, Programming using looping-for, while, do-while; use of switch and break.

#### Unit II

**Arrays based Programming:** Defining and processing 1-D and 2-D Arrays for Problem solving, string as array of char and its processing

#### Unit III

**Modular programming using Functions:** Structured Programming, storage classes defining and calling a function, modular programming using functions, passing arguments and arrays to functions, functions of void and returning values. Recursion, file handling

#### Unit IV

**Programming using pointers, structures and unions:** Pointers in C: Pointer declaration, Passing Pointer to functions, pointers vs arrays, dynamic memory allocation. Structures and Unions, Programming Using Array of Structures and Unions, Memory Requirements for Unions.

**Note:** The programming language to be used for teaching and implementation will be C. The Course coordinator will prepare a list of experiments and lab manual for the Practicals covering the whole syllabus.

#### Suggested Readings\*:

1. Byron S. Gottfried, Programming with C Language, Schaum Series, Tata McGraw Hill.

2. E Balaguruswamy, Programming with C, Tata McGraw Hill.
3. Kernighan & Richie, C Programming, Prentice Hall of India.

\*Latest Edition of the books to be followed.

**MATHEMATICS-II (DSC-4)**  
**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Mathematics-II	4	3	1	0	Class XII with Physics, Chemistry and Mathematics	NIL

**Course Hours: L: 03 T: 01 P: 00**

**Course Objectives:**

To teach students process of doing Laplace and Fourier transformation, apply probability distributions over random variables, and statistical techniques for data processing.

**Course Outcomes:**

After completing the course, the students should be able to:

1. Develop a basic understanding of the Laplace and Fourier transformations
2. Apply random variable and probability distributions for different stochastic processes.
3. Evaluate data characteristics using statistical measures and techniques.
4. Compare and contrast different statistical tests for data evaluation.

**Unit-I**

**Laplace and Fourier Transform:** Laplace transformation and its properties, Unit – step, Impulse and Periodic functions; Fourier Transform, Fourier Sine and Cosine Transform, Finite Sine and Cosine transform, Convolution theorem. Application of Fourier transform.

**Unit-II**

**Random variables and probability distributions:** Conditional probability, Probability spaces, Discrete random variables, Independent random variables, Expectation of discrete random variables, Sums of independent random variables, Moments, Variance of a sum, Correlation coefficient, Chebyshev's Inequality, The multinomial distribution, Poisson approximation to the binomial distribution, Infinite sequences of Bernoulli trials, Continuous random variables and their properties, Distribution functions and densities, Normal, Exponential and Gamma densities, Conditional densities, Bayes' rule.

**Unit-III**

**Basic Statistics: Measures of Central tendency:** Moments, Skewness and Kurtosis - Probability distributions: Binomial, Poisson and Normal - evaluation of statistical parameters for these three distributions; Correlation and regression – Rank correlation; Curve fitting by the method of least squares- fitting of straight lines, second degree parabolas and more general curves.

**Unit-IV**

**Applied Statistics:** Test of significance: Large sample test for single proportion, difference of proportions, single

mean, difference of means, and difference of standard deviations; Small samples: Test for single mean, difference of means and correlation coefficients; Test for ratio of variances - Chisquare test for goodness of fit and independence of attributes; T-test, Anova Test, F-Test.

**Suggested Readings\*:**

1. Erwin Kreyszig, Advanced Engineering Mathematics, John Wiley & Sons.
2. P. G. Hoel, S. C. Port and C. J. Stone, Introduction to Probability Theory, Universal Book Stall.
3. S. Ross, A First Course in Probability, Pearson Education.
4. W. Feller, An Introduction to Probability Theory and its Applications, Wiley.
5. N.P. Bali and Manish Goyal, A text book of Engineering Mathematics, Laxmi Publications.
6. B.S. Grewal, Higher Engineering Mathematics, Khanna Publishers.
7. Veerarajan T., Engineering Mathematics (for semester III), Tata McGraw-Hill Publishing Company Limited.

\*Latest Edition of the books to be followed.

**DATA STRUCTURES (DSC-6)  
FUNDAMENTALS OF COMPUTER PROGRAMMING  
CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Data Structures	4	3	0	1	Class XII with Physics, Chemistry and Mathematics	NIL

**Course Hours: L: 03 T: 00 P: 02**

**Course Objectives:**

To understand and efficiently apply various data structures such as stacks, queues, linked lists, trees and graphs for solving various computing problems using C programming language.

**Course Outcomes:** After completing the course, the students should be able to:

1. Develop skills to identify and determine the usage of various data structures, operations, associated algorithms and implement their applications.
2. Implement trees and graphs, and explain its applications.
3. Design and implement algorithms for searching and sorting.
4. Analyze efficiency of different algorithms using time and space complexity.

**Unit-I**

**Simple Data Structures:** Arrays based Linear Data Structures: Array storage, sparse arrays; Transpose and addition of sparse matrices, Stacks and Queues and their applications, multiple stacks, and queues in an array.

**Unit-II**

**Searching and Sorting:** Searching techniques: Linear and Binary, Sorting techniques: Selection, Bubble, Insertion, Merge sort, Quicksort; Complexity analysis; revision of Pointers and Dynamic Memory,

**Unit-III**

**Linked Data Structures:** Singly, Doubly & Circular Linked Lists; representation, operations and applications, linked stacks and queues, linked lists based polynomial addition.

#### **Unit-IV**

**Advanced Data Structures:** Trees, Basic concepts and definitions of a tree and binary tree and associated terminology, Binary tree traversal techniques, some more operations on binary trees, Heaps, and heapsort; Graphs: Terminology and Representations, Directed Graphs, Representation of graphs and their Transversal.

**Note:** The programming language to be used for teaching and implementation will be C. Course coordinator will prepare a list of experiments and lab manual for the Practicals covering the whole syllabus. Course coordinator will also prepare some mini projects to be done by the students utilizing various aspects of the subject & syllabus.

#### **Suggested Readings\*:**

1. E Horowitz and S. Sahni: Fundamentals of Data Structures in C, Second Edition, Universities Press.
2. R.L. Kruse: Data Structures & Program Design in C, PHI.
3. D.F. Knuth: The Art of Computer Programming Vol-1, Narosa Publications.
4. Byron S. Gottfried: Theory and Problems of Programming with C Language, Schaum's Outlines Series, TMH.

\*Latest Edition of the books to be followed.

### **COMPUTER WORKSHOP (SEC-1) Semester-I & II [Common to all branches]**

**Course Name – Computer Workshop**

**Course Credits: 0L-0T-2P**

**Course Hours: 0L+0T+4P**

**Pre-requisite: Nil**

**Course objectives:** Students of Computer Engineering are to work with various hardware and software not only in academia but also in the company. Thus, students should get familiar with various hardware, software, operating systems, and networking. This course will provide students a much-needed knowledge of computer hardware and networking, enabling them to identify and rectify onboard computer hardware, software, and network-related problems. With the help of this course, the student will be able to understand the hardware specifications that are required to run an operating system and various application programs.

**Course outcomes:** After completing their training in Computer Workshop, students will be able to  
CO1. Describe the procedure for installation of software on different systems and identify the various components of hardware systems.  
CO2. Identify and demonstrate components of computer and operating system and their troubleshooting.  
CO3. Describe the basics of Internet and web design  
CO4. Perform the process of software installation

#### **Job 1. Assembly/Disassembly of Computers**

Hardware peripherals like RAM, ROM, input devices, output devices, processors, etc. Processors and processor core counts and frequency etc. motherboards, internal and external connectors. Types of data cables. LAN, Audio, and Video. The physical set-up of Printers- Scanner set-up, Webcam, Bluetooth device, Memory card reader, etc. Working of SMPS. Connection of different types of devices to the ports (CPU), Single board computer: Raspberry Pi.



**Job 2. Assembly/Dis-assembly of Laptop**

Mounting of processor. Fixing of the motherboard in the tower case. Connection to the power supply. Installation of drivers. Connection of cables. Mount the memory modules. Install the internal cards. Connection of the external devices and power.

**Job 3. Computer Network Setup**

Networking components, devices, and tools; Preparing the network cables, network setup, configuration and management commands, Installation and configuration of network interface card and identification of MAC address. Sharing of resources

**Job 4. Software Installations**

Installation of Windows Operating System, Types of software and their installations, some useful software (MS office, Adobe Acrobat, Google Chrome, VLC Media Player, LibreOffice, Win Rar)

**Job 5. PC Maintenance**

POST (Power on Self-Test), identifying problems by Beep codes errors, checking power supply using Multi-meter, Replacement of components etc.

**Job 6. Introduction to MS office**

Introduction to MS office - MS Word, MS PPT, MS Excel, Working with MS Word. MS Excel - Introduction to MS Excel, Basic computations, and calculations. Creation of slides including hyperlink, video, audio, and textual content.

**Job 7. Tools for Online Teaching and Meetings**

Setting & troubleshooting of online meetings and video conferencing like google meet, zoom, Microsoft teams, Webex etc; use of google classroom and google forms for teaching, feedback, and evaluation.

**Job 8. Internet and Basic Webpage Design**

Searching the Internet, checking the speed of Internet connection, usage of E-Commerce, Creating webpage using HTML, CSS with static text, images, tables, audio, video etc and dynamic contents, animation usage and tools for webpages

**Job 9. AI & ML Applications:**

Case studies using module (Blackbox based) integration for AI & ML and its applications

Note: Workshop incharge may make additions or deletions in respect of above mentioned jobs as per the situation at any point of time.

**Electronics Workshop (SEC-2)**  
**Semester-I & II [Common to all branches]**

**Course Name-Electronics Workshop**

**Course Credits: 0L-0T-2P**

**Course Hours: 0L+0T+4P**

**Pre-requisite: Nil**

**Pre-requisite: Nil**

**Course objectives:** To impart practical knowledge to the students about electronic components, circuits, and

electronic instruments. This course on Electronic Workshop will enable students to get a good opportunity for beginning their professional career even at the end of first year.

**Course outcomes:** After completing the course, the students should be able to:

CO1: Identify and troubleshoot various electronic components and instruments.

CO2: Differentiate between various ICs and PCBs

CO3: Disassemble a computer and identify various peripherals and internal circuit component.

CO4. Design and fabricate a product by building an actual power supply.

#### **Job 1. Basic components used in the Electronics circuits**

- Identification of various components being used in any electronic circuit such as resistor, capacitor, various diodes (p-n junction, Zenner, LED), transistors (BJT, MOSFET, FET), breadboard, potentiometer.
- Learn graphical symbols used to represent the various components.
- Find the value of resistance, capacitance by its color code and value mentioned on the component.

#### **Job 2. Instruments for measurement and analysis of Electronics circuits**

- Study the various controls on the panel of a typical CRO, Multimeter.
- Testing of components such as resistor, capacitor and transistor as PNP or NPN, Gain value of transistor, ensure the connectivity of their leads using multimeter.
- Perform small jobs as given by your instructor by using some of the above components and instruments.

#### **Job 3. Instruments for generating the signals for the electronic circuits**

- Study the various controls on the panel of a function generator and DC power supply.
- Using CRO and function generator perform jobs such as waveform analysis, Voltage measurement, frequency measurement, phase difference measurement etc.

#### **Job 4. Integrated circuits and (IC) tester**

- Study the pin configuration of a given IC number.
- Study the function of IC tester.
- Testing of IC on the IC tester.
- Verify the truth table of various logic gates by assembling them on the breadboard.
- Draw the Pin configuration of various logic gates in your file and record the observations of the truth table of these logic gates.

#### **Job 5. Transformer and soldering iron**

- Study the transformers used in the electronic circuits.
- Learn the precautions while using a soldering iron.
- Perform small jobs using soldering iron.

#### **Job 6. Printed circuit board**

- Learn to make a layout of electronic circuit using any PCB design software (OrCAD/TINA/ KiCAD/ DesignSpark PCB/ any other available software).
- Use of electronic components in the layout.
- Perform small jobs such as making a circuit on the PCB and learn soldering of components on PCB.
- Analysis of the designed circuit using CRO, Multimeter and signal generator.

#### **Job 7. Identification of various peripheral devices of computer**

- Learn to find complete specification of the given computer.
- Identify various peripheral devices including a keyboard, mouse, printer, and flash drive of a computer.

**Job 8. Assembling and disassembling of computer**

- Learn the precautions while disassembling of computer.
- Study of motherboard.
- Identification of various hardware peripherals like RAM, ROM and Processor.
- Study of various ports in a computer for interfacing with external hardware components.

**Job 9. Product Development (Part 1)**

- Study the basic circuit of variable DC power supply.
- Procure all the components required to build a DC supply like transformer, diodes, capacitor, resistance, potentiometer, on/off switch etc. for given specifications of DC power supply.
- Test each component.
- Assemble it on breadboard and test its functionality.

**Job 10. Product Development (Part 2)**

- Design a PCB for variable DC power supply designed in Job 9.
- Fabricate the variable DC power supply by assembling all the components on PCB and perform soldering.
- Test the fabricated variable DC Power supply.

Note: Workshop Incharge may make additions or deletions in respect of above-mentioned jobs as per the situation at any point of time.

**ELECTRICAL WORKSHOP (SEC-3)**  
**Semester-I & II [Common to all branches]**

**Course Name: Electrical Workshop**

**Course Credits: 0L-0T-2P**

**Course Hours: 0L+0T+4P**

**Pre-requisite: Nil**

**Course objectives:** In view of the multi exit facility to be provided to the students leaving after first year, this course on Electrical Workshop will enable such to get a good opportunity for beginning their professional career even at the end of first year.

**Course Outcomes:** After completing their training in Electrical Workshop, students will be able to  
CO1. Differentiate the tools, recall their names and develop skill of using each one of these tools. They will also be able to describe the material and components used in House Wiring, get apprised of their names and use in the process of wiring.

CO2. Design various types of wirings and do actual wiring with his/her own hands. Students will also be able to explain the Energy Meter functions and make connections of energy meter and MCBs.

CO 3. Discuss the constructional details of DC and one type of single phase AC motor and maintain such items. Students will also be able to repair few house hold gadgets.

CO4. Design and fabricate the product by building an actual battery charger.

**Job 1. Tools in the field of Electrical Engineering:**

- Gain awareness about various tools used in the field of Electrical Engineering and to learn the operation of each tool. Like: Vice, drill machine, hand grinder, combination pliers, screw driver set, wire stripper, tester, test lamp, multimeter, hammer, lug crimper, Soldering iron, hacksaw, different types of files.

- Perform small jobs as given by your instructor by using some of the above tools.

**Job 2. House Wiring Materials:**

- Make a study of various components and material used in house wiring. Like: Aluminum and Copper wires of different specifications used in house wiring. Wooden boards and Bakelite sheets, wall mounted switch boxes and wiring plates, 2 pin, 3 pin, 5 pin wall sockets, power sockets, 2 pin, 3 pin & power plugs, iron and PVC conduits, bends, casing capping, junction boxes, Gang boxes, baton holder, pendant holder, bracket holder, angle holder, incandescent bulbs, LEDs, tube light strips, CFL, Indicator lamps. One way, 2 way and power switches. Isolators, MCBs, ELCBs and other materials.
- Practice fixing of switches and sockets in gang box.

**Job 3. Performing, House wiring:**

- Study various types of house wiring techniques: Baton wiring, casing capping wiring, surface conduit wiring and concealed conduit wiring
- Perform surface conduit wiring to accomplish stair case lighting.
- Prepare an extension board with following: Two 6A sockets with individual switches and individual indicators on an appropriate gang box.

**Job 4. Electronic Energy Meter**

- Study the connections of Electronic Energy Meter. Assemble an MCB main board with a double pole MCB/isolator and 2 single pole MCBs and make connection with energy meter on one side and two load circuits on the other. Show operations of MCBs one by one.

**Job 5. House hold Gadgets**

- Study the construction and operation of a heater, heat convector, Electric iron, kitchen Mixer, soldering iron (depending upon time and availability this list can be modified).
- Assemble a heater from the available components. Operate it and measure its current, Voltage and Power.

**Job 6. DC and Single phase AC Motors**

- Observe the given D.C. and single phase A.C. motors. Run them by connecting appropriate supply.
- Open the given D.C. Motor, observe its construction, do its servicing, clean its bearings and commutator. Reassemble and run it.
- Open the given A.C. motor, study its construction. Clean its bearing. Assemble it back and operate it. Measure it's no load current.

**Job 7. Ceiling Fans**

- Study the construction and operation of a ceiling fan, Dis-mental the given ceiling fan. Observe all its parts. Clean its bearings and other parts. Check the continuity of running and starting windings. Test the capacitor for its functionality. Assemble the fan back. Operate it by connecting to supply.
- Reverse the direction of rotation by changing connection at the capacitor.
- Connect an electronic regulator and control its speed.

**Job 8. Product Development (Part-1)**

- Study the circuit of a battery charger.
- Procure all the components required to build a charges like: Transformer, diodes, capacitor, voltmeter, ammeter, indicator, rotary switch, on/off switch, box connecting load. Test each component separately. (specification of charger will be given)
- Assemble bridge rectifier using 4 diodes.

**Job 9. Product Development (Part-2)**

- Complete the testing of components procured in job 8.
- Fabricate the battery charger by assembling all the components procured and tested in job no. 8 (product development part-I) and wire it.
- Test the fabricated charger.

**Job 10. Experience of Electronic Devices**

- Identify resistors, capacitors of various types and specifications
- Identify the given solid state devices like: diodes and transistors, SCR, Triac, Diac, few ICS of various specifications.
- Study the circuit of a solid state low rating voltage regulator.
- Assemble a voltage regulator and test it on fan and incandescent bulb. Or assemble a timer circuit using 555 IC.

Note: Workshop in-charge may make additions or deletions in respect of above mentioned jobs as per the situation at any point of time.

## LIST OF DOCUMENTS REQUIRED AT THE TIME OF APPLYING

Candidates shall be required to upload copies of relevant certificates/documents at the time of applying (as applicable) and produce the same certificates/documents in original at the time of physical verification at the College.

1. Class X Certificate in the name of the candidate, indicating date of birth and Parents' names.
2. Class XII Marksheet in the name of the candidate. The name of the candidate must match with the JEE (Main)-2023 form.
3. SC/ST/OBC-NCL/EWS/CW/KM/PwBD Certificate (in the name of the Candidate) issued by the competent issuing authority. The name of candidate claiming reservation under SC/ST/OBC-NCL/EWS//CW/KM/PwBD must match the name that appear on his/her corresponding School Board qualifying certificate and in JEE (Main)-2023. Similarly, his/her parents' names must match in both sets of certificates.
4. OBC - Non-Creamy Layer Certificate (in the name of the Candidate) issued by the competent issuing authority, and wherein the caste is in the OBC Central List issued by The name of the candidate claiming reservation under OBC - Non-Creamy Layer must match with the name as it appears on his/her corresponding School Board qualifying certificate and in JEE (Main)-2023; similarly, the parents' names must match in both sets of certificates. Income certificate must be issued after March 31, 2023. The format of the OBC - NCL certificate is given in Annexure V.
5. EWS Certificate (in the name of the candidate) from the competent issuing authority certifying the candidate can claim reservation under this category. The name of the candidate claiming reservation under this category must match with the name that appears on his/her corresponding School Board qualifying certificate; similarly, his/her parents' names must match in both sets of certificates. Income certificate must be issued after March 31, 2023. Refer to Annexure V for the format of the certificate.
6. PwBD disability certificate should be in the name of the candidate issued by a recognized Government Hospital, bearing a photograph of the candidate (Refer to Annexure V for the format of the certificate). Disability Certificates issued after 01.06.2021 must be as per the Gazette Notification no. 1736 (E) dated 05.05.2021 issued by the Department of Empowerment of Persons with Disabilities and applied through UDID portal. However, Disability Certificates issued before 01.06.2021, will be considered as per other existing applicable rules and notifications of the Department of Empowerment of Persons with Disabilities and the University of Delhi.
7. Candidates applying under the CW category must upload the Educational Concession Certificate (ECC), (in the name of the candidate) in the format wherein the Priority is clearly mentioned. Refer to Annexure V for the format of the certificate.
8. Candidate applying under the Kashmiri Migrant category must upload the relevant certification in the correct format issued by Divisional Commissioner/Relief Commissioner.
9. Candidate who wishes to seek admission under the orphans quota will have to upload certificate from a Govt. recognized Orphanage/Charitable Home or Death certificate of both the parents.
10. For claiming admission in the category of Single Girl Child, the Father / Mother / Guardian (in case parents are deceased) shall have to upload copy of an affidavit to this effect, duly attested by the area District Magistrate / Additional Magistrate / Deputy Commissioner / Collector / Additional Deputy Commissioner / Deputy Collector / 1st Class Stipendiary Magistrate / City Magistrate (not below the rank of 1st Class Stipendiary Magistrate), Sub-Divisional Magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner, at the time of online registration and should produce original affidavit at the time of physical reporting at FoT.
11. Candidate who wish to seek admission under UoD Ward supernumerary quota must upload a valid employment

certificate of his/her parent/s issued by the due officials. Only the employment certificate uploaded in BOI (B.Tech.)-2023 application form will be considered. I-cards, Aadhar Card and/or any other document will not be accepted.

Candidates shall be responsible for the quality and authenticity of the certificate they upload. Candidates must take utmost care to ensure the uploaded documents/ certificates are authentic and accurate. Candidates will be responsible to produce documents/ certificates as sought. All certificates/ documents will be returned to the candidate by the University upon completion of any physical verification that may be required at a later stage.

If the original certificates are not in English/ Hindi, the English/ Hindi version/ translation of such certificates, duly certified by the Principal/ Director or other competent authority of the last Institute attended, will be required during the verification of documents.

## CERTIFICATE FORMATS

### FORMAT OF SCHEDULED CASTES (SC) AND SCHEDULED TRIBES (ST) CERTIFICATE

1. This is to certify that Shri/ Shrimati/ Kumari\* \_\_\_\_\_ son/daughter' of \_\_\_\_\_ of Village/Town\* \_\_\_\_\_ District/Division\* of State/Union Territory\* \_\_\_\_\_ belongs to the \_\_\_\_\_ Scheduled Caste / Scheduled Tribe\* under :-

- \* The Constitution (Scheduled Castes) Order, 1950
  - \* The Constitution (Scheduled Tribes) Order, 1950
  - \* The Constitution (Scheduled Castes) (Union Territories) Order, 1951
  - \* The Constitution (Scheduled Tribes) (Union Territories) Order, 1951
- [As amended by the Scheduled Castes and Scheduled Tribes Lists (Modification Order) 1956, the Bombay Reorganisation Act, 1960, the Punjab Reorganisation Act, 1966, the State of Himachal Pradesh Act, 1970, the North Eastern Areas (Reorganisation) Act, 1971, the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 1976 and the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 2002]
- \* The Constitution (Jammu and Kashmir) Scheduled Castes Order, 1956;
  - \* The Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959, as amended by the Scheduled Castes and Scheduled Tribes Order (Amendment) Act, 1976;
  - \* The Constitution (Dadara and Nagar Haveli) Scheduled Castes Order, 1962; \* The Constitution (Dadara and Nagar Haveli) Scheduled Tribes Order, 1962;
  - \* The Constitution (Pondicherry) Scheduled Castes Order, 1964; \* The Constitution (Uttar Pradesh) Scheduled Tribes Order, 1967;
  - \* The Constitution (Goa, Daman and Diu) Scheduled Castes Order, 1968; \* The Constitution (Goa, Daman and Diu) Scheduled Tribes Order, 1968; \* The Constitution (Nagaland) Scheduled Tribes Order, 1970;
  - \* The Constitution (Sikkim) Scheduled Castes Order, 1978;
  - \* The Constitution (Sikkim) Scheduled Tribes Order, 1978;
  - \* The Constitution (Jammu and Kashmir) Scheduled Tribes Order, 1989;
  - \* The Constitution (Scheduled Castes) Order (Amendment) Act, 1990;
  - \* The Constitution (Scheduled Tribes) Order (Amendment) Act, 1991;
  - \* The Constitution (Scheduled Tribes) Order (Second Amendment) Act, 1991.

2. # This certificate is issued on the basis of the Scheduled Castes / Scheduled Tribes\* Certificate issued to Shri / Shrimati\* \_\_\_\_\_ father/mother\* of Shri /Shrimati /Kumari\* \_\_\_\_\_ of \_\_\_\_\_ Village/Town\* in \_\_\_\_\_ District/Division\* \_\_\_\_\_ of the State/Union Territory\* \_\_\_\_\_ who belongs to the \_\_\_\_\_ Caste / Tribe\* which is recognised as a Scheduled Caste/Scheduled Tribe\* in the State / Union Territory\* issued by the \_\_\_\_\_ dated \_\_\_\_\_

3. Shri/ Shrimati/ Kumari \* \_\_\_\_\_ and / or\* his / her\* family ordinarily reside(s)\*\* in Village/Town\* \_\_\_\_\_ of \_\_\_\_\_ District/Division\* of the State Union Territory\* of \_\_\_\_\_  
 Place: \_\_\_\_\_ Date: \_\_ \_\_\_\_\_ Signature: \_\_\_\_\_  
 Designation: \_\_\_\_\_  
 (With seal of the Office) State/Union Territory\* \_\_\_\_\_

\* Please delete the word(s) which are not applicable.

# Applicable in the case of SC/ST Persons who have migrated from another State/UT.

#### IMPORTANT NOTES

The term "ordinarily reside(s)\*\*\*" used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

Officers competent to issue Caste/Tribe certificates:

1. District Magistrate / Additional District Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / Ist Class Stipendiary Magistrate / City Magistrate / Sub-Divisional Magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner.
2. Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
3. Revenue Officers not below the rank of Tehsildar.
4. Sub-divisional Officer of the area where the candidate and/ or his family normally reside(s).
5. Administrator / Secretary to Administrator / Development Officer (Lakshadweep Island).
6. Certificate issued by any other authority will be rejected.



**PERSONS WITH BENCHMARK DISABILITIES CERTIFICATE**

**FORM-II**

**Disability Certificate**

**(In cases of amputation or complete permanent paralysis of limbs and in cases of blindness)**

**(NAME AND ADDRESS OF THE MEDICAL AUTHORITY ISSUING THE CERTIFICATE)**

Recent PP size  
attested  
photograph  
(showing face only) of  
the person with  
disability

**Certificate No.** \_\_\_\_\_

**Date:** \_\_\_\_\_

This is to certify that I have carefully examined Shri/Smt./Kum. \_\_\_\_\_  
\_\_\_\_\_ son/wife/daughter of Shri \_\_\_\_\_ Date of Birth (DD/MM/YY) \_\_\_\_\_  
\_\_\_\_\_ Age \_\_\_\_\_ years, male/female  
\_\_\_\_\_ Registration No. \_\_\_\_\_ permanent resident of House No. \_\_\_\_\_  
\_\_\_\_\_ Ward/Village/ Street \_\_\_\_\_ Post Office \_\_\_\_\_  
\_\_\_\_\_ District \_\_\_\_\_ State \_\_\_\_\_  
\_\_\_\_\_, whose photograph is affixed above, and am satisfied that:

1. he/she is a case of:

- a. locomotor disability
- b. blindness

(Please tick as applicable)

2. The diagnosis in his/her case is \_\_\_\_\_

3. He/ She has \_\_\_\_\_ % (in figure) \_\_\_\_\_ per cent (in words) permanent physical impairment/blindness in relation to his/her \_\_\_\_\_ (part of body) as per guidelines (to be specified).

4. The applicant has submitted the following document as proof of residence:-

Nature of Document	Date of Issue	Details of authority issuing certificate

(Signature and Seat of Authorised Signatory of notified Medical Authority)

(Signature/Thumb impression of the person in whose favour the disability certificate is issued.)

## FORMAT OF OBC-NCL CERTIFICATE

This is to certify that Shri / Smt. / Kum\* \_\_\_\_\_ Son / Daughter\* of Shri / Smt.\* \_\_\_\_\_ of Village/Town\* \_\_\_\_\_ District/Division\* \_\_\_\_\_ In the \_\_\_\_\_ State belongs to the \_\_\_\_\_ community which is recognized as a backward class under:

- (i) Resolution No. 12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No. 186 dated 13/09/93.
- (ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- (iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- (iv) Resolution No. 12011/196/94-BCC dated 9/03/96.
- (v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section 1 No. 210 dated 11/12/96.
- (vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- (vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- (viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- (ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section 1 No. 270 dated 06/12/99.
- (x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- (xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
- (xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- (xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- (xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- (xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 16/01/2006.
- (xvi) Resolution No. 12011/14/2004-BCC dated 12/03/2007 published in the Gazette of India Extraordinary Part I Section I No. 67' dated 12/03/2007.
- (xvii) Resolution No. 12015/2/2007-BCC dated 18/08/2010.
- (xviii) Resolution No. 12015/13/2010-BCC dated 08/12/2011.

Shri / Smt. / Kum. \_\_\_\_\_ and / or his family ordinarily reside(s) in the District/Division of State. This is also to certify that he/she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training G.M. No. 36012122/93-Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/3/2004 Estt.(Res.) dated 09/03/2004, further modified vide OM No. 36033/3/2004-Estt. (Res.) dated 14/10/2008 or the latest notification of the Government of India.

Dated:

District Magistrate I Deputy Commissioner /Any otherCompetent Authority

Seal

\* Visit <http://www.ncbc.nic.in> for latest guidelines and updates on the Central List of State-wise OBCs.

\*\*Please delete the word(s) which are not applicable.

\*\*\* As listed in the Annexure (for FORM-OBC-NCL)

\*\*\*\* The authority issuing the certificate needs to mention the details of Resolution of Government of India, in which the caste of the candidate is mentioned as OBC.

NOTE:

a. The term 'Ordinarily resides' used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

b. The authorities competent to issue Caste Certificates are indicated below:

- (i) District Magistrate/ Additional Magistrate/ Collector/ Deputy Commissioner/ Additional Deputy Commissioner/ Deputy Collector/ 1st Class Stipendiary Magistrate/ Sub-Divisional magistrate/ Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner (not below the rank of 1st Class Stipendiary Magistrate).
- (ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.
- (iii) Revenue Officer not below the rank of Tehsildar' and
- (iv) Sub-Divisional Officer of the area where the candidate and/or his family resides

**ECONOMICALLY WEAKER SECTIONS CERTIFICATE**

Government of .....  
(Name & Address of the authority issuing the certificate)

**INCOME & ASSET CERTIFICATE TO BE PRODUCED BY ECONOMICALLYWEAKER SECTIONS**

Certificate No. -----  
Valid for the year -----

Dated -----

1. This is to certify that Shri/Smt./Kumari \_\_\_\_\_ son/daughter/wife of permanent resident of \_\_\_\_\_  
Village/Street \_\_\_\_\_ Post Office District in the State/Union Territory Pin Code whose photograph is attested below belongs to Economically Weaker Sections, since the gross annual income\* of his/her "family"\* is below Rs. 8 lakh (Rupees Eight Lakh only) for the financial year 2022-2023. His/her family does not own or possess any of the following assets\*\*\*:

- I. 5 acres of agricultural land and above;
- II. Residential flat of 1000 sq. ft. and above;
- III. Residential plot of 100 sq. yards and above in notified municipalities;
- IV. Residential plot of 200 sq. yards and above in areas other than the notified municipalities.

2. Shri/Smt./Kumari \_\_\_\_\_ belongs to the \_\_\_\_\_ caste which is not recognized as a Schedule Caste, Schedule Tribe and Other Backward Classes (Central List).

Recent Passport size attested photograph of the applicant	Signature with seal of Officer _____ Name _____ Designation _____
	<b>The income and assets of the families as mentioned would be required to be certified by an officer not below the rank of Tehsildar in the States/UTs.</b>

\* **Note 1:** Income covered all sources i.e. salary, agricultural, business, profession, etc.  
\*\* **Note 2:** The term "**Family**" for this purpose includes the person, who seeks benefit of reservation, his/her parents and siblings below the age of 18 years as also his/her spouse and children below the age of 18 years.  
\*\*\* **Note 3:** The property(ies) held by a "**Family**" in different locations or different places/cities have been clubbed while applying the land or property holding test to determine EWS status.

## EDUCATIONAL CONCESSION CERTIFICATE (ECC)

(On the proper Letter Head with complete address, telephone number(s) and e-mail ID) OFFICE OF THE \_\_\_\_\_

This is to certify that Mr. / Miss. \_\_\_\_\_ is son / daughter of \_\_\_\_\_ (No. \_\_\_\_\_) resident of \_\_\_\_\_.

The above named officer / JCO / OR \_\_\_\_\_: Priority – I

Widows / Wards of Defence personnel killed in action on \_\_\_\_\_ during \_\_\_\_\_;

Priority – II

Wards of disabled in action on \_\_\_\_\_ during \_\_\_\_\_ and boarded out from service with disability attributable to military service.

Priority – III

Widows / Wards of Defence Personnel who died while in service with death attributable to military service.

Priority – IV

Wards of Defence Personnel disabled in service and boarded out with disability attributable to the military service.

Priority – V

Wards of Serving / Ex-servicemen personnel including personnel of police forces who are in receipt of Gallantry Awards;

- i. ParamVir Chakra
- ii. Ashok Chakra
- iii. MahaVir Chakra
- iv. Kirti Chakra
- v. Vir Chakra
- vi. Shaurya Chakra
- vii. President's Police Medal for Gallantry/President's Fire Service Medal for Gallantry
- viii. Sena, NauSena, VayuSena Medal
- ix. Mention-in-Despatches
- x. Police Medal for Gallantry/Gallantry Medal for Fire Services/Fire Service Medal for Gallantry.

Priority – VI

Wards of Ex- Servicemen

Priority – VII

Wives of:

- ii. Defence Personnel disabled in action and boarded out from service.
- iii. Defence Personnel disabled in service and boarded out with disability attributable to military service.
- iv. Ex-Servicemen and Serving Personnel who are in receipt of Gallantry Awards.

Priority – VIII

Wards of Serving Personnel Priority – IX

Wives of Serving Personnel

Mr. / Miss. / Mrs. \_\_\_\_\_ son / daughter / wife of \_\_\_\_\_ Officer / JCO / OR is eligible for educational concession for admission in University of Delhi against the Armed Forces Category under Priority No. \_\_\_\_\_.

No.: \_\_\_\_\_ Date: \_\_\_\_\_

Seal <Rubber Stamp> with Name & Designation (Signature)

**AFFIDAVIT FOR SINGLE GIRL CHILD**

For claiming admission in this category, the Father/Mother/Guardian (in case parents are deceased) shall have to submit affidavit / self-attested to this effect duly attested by area District Magistrate /Additional Magistrate / Deputy Commissioner / Collector / Additional Deputy Commissioner / Deputy Collector / 1st Class Stipendiary Magistrate / City Magistrate (not below the rank of 1st Class Stipendiary Magistrate), Sub-Divisional Magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner.

**FORMAT OF AFFIDAVIT / SELF-ATTESTED FOR ONLY (SINGLE) GIRL CHILD CATEGORY  
(on nonjudicial paper of Rs.20/- duly attested by 1st class Magistrate)**

I \_\_\_\_\_ (name) father/mother of Miss \_\_\_\_\_, resident of \_\_\_\_\_  
\_\_\_\_\_ (full address to be given) do hereby, solemnly declare and affirm as under:

1. That I am a citizen of India.
2. That Miss \_\_\_\_\_ born on \_\_\_\_\_ is the only (Single) Girl Child of the deponent.
3. That the deponent has no living male /female Child other than the above one.

Place:  
Dated:

DEPONENT

**VERIFICATION**

Verified that the contents of the above affidavit / self-attested are true and correct to the best of my knowledge and belief and nothing has been concealed therein.

Place:  
Dated:

DEPONENT



**UNIVERSITY OF DELHI**

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*Address for Correspondence*

**Admission Branch**

Gate No. 04  
University of Delhi  
Delhi 110007

**Faculty of Technology**  
Maharishi Kanad Bhawan  
North Campus University of  
Delhi  
Delhi 110007

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**Website**

[www.admission.uod.ac.in](http://www.admission.uod.ac.in)

**Office number:**

011-27006900

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