

**I.K. GUJRAL PUNJAB TECHNICAL UNIVERSITY JALANDHAR
(REGISTRAR OFFICE)**

IKGPTU/REG/NF/AC/151

Dated: 23.04.2024

NOTIFICATION

Sub.: Branch Change norms of the University from admission session 2024-25 onwards.

The following procedure shall be followed for change of branch from admission session 2024-25 onwards:

1. The branch upgradation shall be called as Change of Branch.
2. The change of branch shall be carried out prior to commencement of the 3rd Semester and shall be on the basis of result of 1st semester within same Campus/Institute of IKGPTU.
3. Only those students who have passed all the subjects of 1st semester can participate in the change of branch process.
4. In case of Tie in grades/marks, the following mechanism will be considered:
 - (i) Firstly, the marks of 10+2 will be considered.
 - (ii) Secondly, the marks of 10th will be considered.
 - (iii) Finally, date of birth will be considered to break the tie (if any).
5. Students opting upgradation/change of branch have to qualify the bridge courses as per notification No. IKGPTU/REG/NF/2101 dated 24.05.2019 within one year from the date of upgradation/change of branch.
6. The option for change of branch will not be applicable on the students admitted under Tuition Fee Waiver Scheme (refer to clause xii of notification No. 13/60/08-11E2/1797 dated 23.05.2011 issued by Department of Technical Education & Industrial Training (Technical Education Branch-II), Government of Punjab).
7. The above norms shall also be applicable on the students admitted in session 2023-24.

This is issued with the approval of the competent authority on dated 16.04.2024 (on hard copy) vide eOffice File No. I-25/37/2022-ACAD (computer No. 66094).

This supersedes all the previous notifications/office orders issued in this regard.


(Dr. S.K. Misra)
Registrar

Endst. No. IKGPTU/REG/NF/AC/152-157

Dated: 23.04.2024

A copy of the above is forwarded to the following for information and necessary action please.

1. Dean (Academics).
2. All HoD (Teaching)
3. Director/Principal, Constituent Campuses/Affiliated Colleges/Autonomous Colleges.
4. Controller of Examination.
5. ITS Branch: for upload on University website.
6. Secretary to Vice Chancellor: for kind information to Hon'ble Vice Chancellor.


(Dr. S.K. Misra)
Registrar

I. GUJRAL PUNJAB TECHNICAL UNIVERSITY

Estd. Under Punjab Technical University Act, 1996
(Punjab Act No. 1 of 1997)

Ref. No. : IKGPTU/Reg/NF/ 2101

Dated : 24.05.2019

NOTIFICATION

Sub: **Change / upgradation of branch in 3rd semester of B. Tech program.**

The student who opt for change/ upgradation of branch in 3rd Semester of B. Tech w.e.f. admission session 2018-2019 onwards within College/Institute affiliated to IKGPTU, shall have to study the bridge course / additional subjects as per following guidelines:

A- For Mathematics

1. Two Bridge courses (Bridge course-I, II) have been formulated in Mathematics for change of branch. Bridge Course-I should be opted by the students shifting the branch within the departments of Mechanical Engineering, Civil Engineering, Electrical Engineering and Electronics & Communication Engineering and related branches. The list of related branches is enclosed at **Annexure-I**.
2. For shifting the branch from any of the above said departments to Computer Science and Engineering, the students should opt for Bridge Course-II.
3. The student shifting the branch from Computer Science Engineering to any of the above said branches of Mechanical Engineering, Civil Engineering, Electrical Engineering, Electronics and Communication Engineering students should opt Bridge Course-I.
4. Both the Bridge Courses should be audit/qualifying courses and no extra credit be awarded to students qualifying these courses.
5. These courses should be evaluated by the concerned teacher allocated to teach this course through internal evaluation. The evaluation of these courses should be done at college/departmental level as no extra credits are to be awarded to the students.



- Concerned teacher should be given 2 hours load per week for teaching the bridge course.
7. No extra credit should be awarded to the student for qualifying the course.
 8. The audit/qualifying course should have to be qualified by the students within one year of change of branch.
 9. The institute shall issue a certificate that the student has passed additional / Bridge Course successfully.
 10. Upon certification by teacher for qualifying the audit course/s (theory and practical), earlier issued result notification/s and DMCs of the concerned student shall be cancelled and the Examination Department of IKGPTU shall issue new result notification and DMCs as per upgraded curriculum with same number of credits.

B. For Physics:

1. In Physics no Bridge Course or Qualifying course is required if the students opt for shifting of branch within the following groups:

Group	Branch	Shifted to Branch & Vica-Versa
I	Computer Science	Electronics and Communication
II	Electrical Engineering	Chemical Sciences
III	Chemical Sciences	Biotechnology

2. If the student opts for shifting of branch outside the above mentioned groups, then he/she is required to qualify the complete course of physics (theory and practical) of previous semester of the opted branch.
3. No extra credit should be awarded to the student for qualifying the course.
4. These courses should be evaluated by the concerned teacher allocated to teach this course through internal evaluation. The evaluation of these courses should be done at college/departmental level as no extra credits are to be awarded to the students.



5. Concerned teacher should be given 2 hours load per week for teaching the bridge course.
6. The audit/qualifying course should have to be qualified by the students within one year of change of branch.
7. The institute shall issue a certificate that the student has passed additional / Bridge Course successfully.
8. Upon certification by teacher for qualifying the audit course/s (theory and practical), earlier issued result notification/s and DMCs of concerned student shall be cancelled and the Examination Department of IKGPTU shall issue new result notification and DMCs as per upgraded curriculum with same number of credits.

Encl: Total 04 pages


(Dr. S.S. Walia)
Registrar

Endst. No. IKGPTU/REG/NF/2102-2105

Dated: 24.05.2019

A copy is forwarded to the following officers for information please.

1. I/c Secretariat, O/o Vice Chancellor: For information of Vice Chancellor
2. All HoDs (Non-Teaching)
3. Director (Main Campus): To inform the all HoDs (Teaching) and Incharge, all Constituent Campuses
4. Director, IKGPTU Hoshiarpur Campus


(Dr. S. S. Walia)
Registrar

Jr. No.	Branch	Related Branches
1	Civil Engineering-	1. Civil Engineering
		2. Construction Engineering & Management
2	Electrical Engineering-	1. Electrical Engineering
		2. Automation & Robotics
		3. Electrical & Electronics Engineering
		4. Electronics & Electrical Engineering
		5. Electrical Engineering & Industrial Control
		6. Instrumentation & Control Engineering
3	Mechanical Engineering	1. Mechanical Engineering
		2. Marine Engineering
		3. Production Engineering
		4. Industrial Engineering
		5. Tool Engineering
		6. Automobile Engineering
		7. Aerospace Engineering
		8. Aeronautical Engineering
4	Computer Science Engineering	1. Computer Engineering
		2. Computer Science Engineering
		3. Information Technology
		4. 3D Animation Engineering
5	Electronics and communication Engineering	1. Electronics & Communication Engineering
		2. Electronics & Computer Engineering
		3. Electronics & Instrumentation Engineering
		4. Electronics & Telecomm Engineering
		5. Electronics Engineering
6	Chemical Sciences	1. Chemical Engineering
		2. Petrochem & Petroleum Refinery Engineering
		3. Textile Engineering
		4. Food Technology
7	Bio-Technology-	Bio-Technology

Bridge Course-I

Subject Code: BTAMBC1-18

Section-A

Unit-I: Partial Differential Equations

Introduction to PDEs, Lagrange's Equation, Classification of PDEs, D' Alembert's solution of wave equations, heat equations and their solutions by variable separable method and Fourier series, Solution of boundary-value problems for various linear PDEs.

Unit-II: Numerical Methods

Solution of polynomial and transcendental equations – Bisection method, Regula-Falsi method, Newton-Raphson method, System of linear equations: Gauss elimination method, Gauss Seidel method, Numerical integration: Trapezoidal rule and Simpson's 1/3rd and 3/8 rules, Ordinary Differential equations: Euler and modified Euler's methods, Runge-Kutta method of fourth order for solving first order equations.

Section-B

Unit-III: Complex Variable – Differentiation

Elementary functions of complex variables, limit, continuity and differentiability, Cauchy-Riemann equations, analytic functions, harmonic functions, finding harmonic conjugate.

Unit-IV: Complex Variable – Integration

Contour integrals, Cauchy-Goursat theorem (without proof), Cauchy Integral formula (without proof), Liouville's theorem and Maximum-Modulus theorem (without proof), Taylor's series, zeros of analytic functions, singularities, Laurent's series, Residues, Cauchy Residue theorem (without proof), Evaluation of definite integral involving sine and cosine.

Text / References:

1. Sneddon, I.N., *Elements of Partial Differential Equation, 3rd Edition*. McGraw Hill Book Company, 1998.
2. Copson, E.T., *Partial Differential Equations, 2nd Edition*. Cambridge University Press, 1995.
3. Strauss, W.A., *Partial Differential Equations: An Introduction, 2nd Edition*. 2007.
4. Sharma, J.N., *Numerical Methods for Engineers and Scientists, 2nd Edition*. Narosa Publ. House New Delhi/Alpha Science International Ltd., Oxford UK, 2007, Reprint 2010.
5. Jain, M.K., Iyengar, S.R.K. and Jain, R.K., *Numerical Methods for Scientific and Engineering Computation, 5th Edition*. New Age International Publ. New Delhi, 2010
6. Ahlfors, L.V., *Complex Analysis, 2nd Edition*. McGraw-Hill International Student Edition, 1990.
7. Kumar, R.R., *Complex Analysis*, Pearson Education, 2015.
8. Churchill, R. and Brown, J.W., *Complex Variables and Applications, 6th Edition*. New-York: McGraw-Hill, 1996.

Bridge Course-II

Subject Code: BTAMBC2-18

Unit-I: Measures of Central tendency: Moments, skewness and kurtosis, Variance, Correlation coefficient, Probability, conditional probability, independence; Discrete random variables.

Unit-II: Continuous random variables, Probability distributions: Binomial, Poisson and Normal, Poisson approximation to the binomial distribution, evaluation of statistical parameters for these three distributions.

Unit-III: Correlation and regression for bivariate data, Rank correlation, Curve fitting by the method of least squares- fitting of straight lines, second degree parabolas and more general curves. Test of significance for small and large samples (z-test, t-test, F-test and Chi-square test).

Text / References:

1. Hoel, P. G., Port, S. C. and Stone, C. J., *Introduction to Probability Theory*, Universal Book Stall, 2003 (Reprint).
2. Ross, S., *A First Course in Probability*, 6th Ed., Pearson Education India, 2002.
3. Feller, W., *An Introduction to Probability Theory and its Applications*, Vol. 1, 3rd Ed., Wiley, 1968.
4. Bali, N.P. and Goyal, M., *A text book of Engineering Mathematics*, Laxmi Publications, Reprint, 2010.

Notification

ਸਾਖਾ : ਕੰਡਕਟ ਅਤੇ
ਡਾਇਰੀ ਨੰ.: 701
ਮਿਤੀ : 3-6-11

No. 13/60/08-1TE2/ 1797

Dated Chandigarh, the 3 May 2011.

In supersession of earlier notification No. 13/60/08-1TE2/2650 of 24.6.2010, the Governor of Punjab is pleased to re-notify the Fee Waiver Scheme as below in keeping with the guidelines of All India Council for Technical Education (AICTE) as contained in its Approval Process Hand Book (2011 - 2012):-

- i) The Scheme shall be applicable to all approved Technical Institutions offering Bachelors Programmes, Diploma and Post Diploma Programme of Three/Four years duration.
- ii) These seats shall be 5% over and above the sanctioned intake.
- iii) The Competent Authority for admissions shall be the same as for regular admission and the eligibility criteria with regard to qualifications shall be the same as notified for other categories.
- iv) The scheme shall be mandatory for all institutions approved by the AICTE.
- v) Sons and daughters of parents whose annual income is less than Rs.2.50 lakhs from all sources shall only be eligible for seats under this scheme.
- vi) The Waiver shall be limited to the tuition fee as prescribed by the State Government. All other fee except tuition fees will have to be paid by the beneficiary.
- vii) The admission shall be made by Punjab Technical University for degree level programmes in colleges affiliated to it and by Punjab State Board of Technical Education & Industrial Training for diploma level courses in institutions affiliated to it.
- viii) In the event of non availability of students in this category, the same shall not be given to any other category of applicants.
- ix) The Punjab Technical University and the Punjab State Board of Technical Education & Industrial Training shall invite applications under this category, make a separate merit list and effect admissions on the basis of the merit list so generated, through a separate counselling which shall be held prior to regular counselling for admissions to various other categories.
- x) The Institutions shall publish in their brochure and website the details of this scheme.
- xi) The Punjab Technical University and the Punjab State Board of Technical Education & Industrial Training shall submit a separate list of the students admitted under this category to the institute to which they are admitted for compliance.
- xii) The Punjab Technical University and the Punjab State Board of Technical Education & Industrial Training shall issue a letter to each of the beneficiary student admitted under this scheme and such a beneficiary shall not be allowed to change Institution or Course under any circumstances. In case, a selected beneficiary intends to forego the benefit of fee waiver to take admission in any

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other category, he shall be allowed to do so provided the post vacated by him shall go to the next eligible candidate under this scheme.

- xiii) All Institutions shall display information regarding candidates admitted under this scheme on their websites for information of general public and send a copy thereof to the Punjab Technical University and the Punjab State Board of Technical Education & Industrial Training, as the case may be.
- xiv) The amount of fee thus waived off will not be claimed by any institution from the Government or any other authority in any context.
- xv) The fee waiver to a student shall be for the complete duration of the course.
- xvi) The student availing fee waiver post will not be entitled to avail financial assistance under any other Government Scheme what so ever. However, he/ she shall be eligible for any scholarship available on competition/ merit basis.
- xvii) The implementation of this scheme shall be subject to any amendments/ charges or orders of the State Government as may be issued from time to time.

2.0 This notification shall come into force with immediate effect.

Dated Chandigarh
the 23/5/2011

Suresh Kumar, IAS
Principal Secretary to Government of Punjab
Department of Technical Education &
Industrial Training

Endst. No. 13/GO/08-1TF/2/

Dated Chandigarh, the 23 May 2011

A copy is forwarded to Controller, Printing and Stationery, Punjab, Chandigarh with a request to publish the Notification in Punjab Government Gazette (Extra Ordinary) and supply 50 copies for office use.

Additional Secretary to Govt of Punjab
Dept of Technical Education & Industrial Training

Endst. No. 13/GO/08-1TF/2/ 1799

Dated Chandigarh, the 23 May 2011

A copy is forwarded to the following for information and necessary action:

1. The Director, Technical Education & Industrial Training, Punjab, Chandigarh.
2. The Vice-Chancellor, Punjab Technical University, Jalandhar
3. The Chairman, Punjab State Board of Technical Education & Industrial Training, Chandigarh

Superintendent