



भारतीय प्रौद्योगिकी संस्थान गुवाहाटी

INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

शासी मंडल की 109th वीं बैठक

**MINUTES OF THE ONE HUNDRED AND NINTH MEETING OF THE
BOARD OF GOVERNORS**

MINUTES

**DATE & TIME: 28TH DECEMBER 2021
AT 07.15 A.M.**

VENUE: IIT GUWAHATI

**MINUTES OF THE 109TH MEETING OF THE BOARD OF GOVERNORS HELD ON
28.12.2021**

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**Minutes of the 109th meeting of the Board of Governors of Indian Institute of Technology
Guwahati held on 28.12.2021**

SECTION - A: Confirmation of Minutes, Action Taken Report & Presentation

The One Hundred Ninth Meeting of the Board of Governors of the Institute was held on 28.12.2021 in the Board Room of the Institute with some members joining through video conferencing mode. Following members were present:

1. Dr. Rajiv I. Modi	Chairman (via Video-conference Mode)
2. Prof. T.G. Sitharam	Director
3. Prof. S.K. Srivastava	Member (via Video-conference Mode)
4. Padmashri Dr. Prahlada Rama Rao	Member (via Video-conference Mode)
5. Prof. Varadraj B. Bapat	Member (via Video conference Mode)
6. Prof. Diganta Goswami	Member
7. Prof. Pranab Goswami	Member (via Video conference Mode)
8. Prof. A.Srinivasan	Registrar and Secretary
9. Prof. Sashindra Kumar Kakoty	Member (Special Invitee) (via Video conference Mode)

Sh Rakesh Ranjan, Additional Secretary (HE) MoE, Commissioner & Secretary to the Government of Assam, Mr. Neel Prakash Chhetri could not attend the meeting due to their prior engagements and they were granted leave of absence.

Hon'ble Chairman, BOG welcomed all the members present in the meeting and advised to make the presentation under Item No.1 after completing all other agenda items.

The agenda for the day was taken up as listed below:

Item No. 2

Consider the confirmation of the minutes of the 108th meeting of the Board of Governors of the Institute held on 25.10.2021

The 108th meeting of the Board of Governors (BoG) of the Institute was held on 25.10.2021 in the Board Room of the Institute and also through video conferencing. The minutes of the meeting as given in **Annexure-1** (not enclosed as already uploaded) was circulated amongst the members of the Board for their comments / observations, if any.

No comments have been received on the BOG minutes of 108th meeting held on

25.10.2021 from any member of the Board.

The Board was requested to confirm the minutes of 108th meeting of BOG held on 25.10.2021 as circulated.

Resolution No: R_109BOG/02/2021

RESOLVED that the minutes of the 108th Meeting of the Board of Governors of the Institute held on 25.10.2021 be **CONFIRMED** as placed in **Annexure-1**(not enclosed as already uploaded).

Item No. 3

Action Taken Report (ATR) of the decisions of the 108th Meeting of the Board of Governors of the Institute held on 25.10.2021

Action Taken Report (ATR) on the decisions of the 108th meeting of the Board of Governors of the Institute held on 25.10.2021 was placed as **Annexure-2**(pg.36 to 42) before the Board for consideration. The Board was requested to **NOTE** the actions taken as per the decisions.

The Board noted the same and resolved as below:

Resolution No: R_109BOG/03/2021

RESOLVED that the action taken on the decision of the 108th Meeting of the Board of Governors of the Institute held on 25.10.2021 be **NOTED** as reported.

SECTION- B: Administrative items requiring approval of the Board

Item No 4

Approval for the recommendations of the 49th Meeting of the Finance Committee scheduled on 28.12.2021

The 49th Meeting of the Finance Committee (FC) of the Institute was scheduled at 07.00 A.M. just before the Board meeting on 28.12.2021. The copy of the agenda items for discussion in the said FC meeting was placed before the Board for reference on the day of the meeting. In terms of Section 5 (7) of the Statute, the recommendations of the Committee were conveyed during the BoG meeting. The agenda items that were placed in the 49th meeting of the FC was as follows:

Item No.	Agenda Items
ITEM NO.1	CONFIRMATION OF THE MINUTES OF THE 48 TH MEETING OF THE FINANCE COMMITTEE HELD ON 25 TH OCTOBER 2021
ITEM NO.2	ACTION TAKEN REPORT ON DECISION OF 48 TH FINANCE COMMITTEE MEETING HELD ON 25 TH OCTOBER 2021
ITEM NO.3	TO CONSIDER AND APPROVE FOR SUBMISSION OF THE SEPARATE AUDIT REPORT (SAR) ALONGWITH ANNUAL ACCOUNTS 2020-21 OF IIT GUWAHATI TO MINISTRY OF

	EDUCATION FOR PLACING IT IN THE PARLIAMENT
ITEM NO.4	TO CONSIDER REPLACEMENT OF AN INSTITUTE VEHICLE (MARUTI-CIAZ) THROUGH BUY-BACK SCHEME
Additional Items	
ADDL. ITEM NO.1	TO CONSIDER THE MATTER OF FIR FILED BY MR. VIKRANT SINGH, FORMER RESEARCH SCHOLAR ON THE DIRECTOR AND 21 MEMBERS (DEPUTY DIRECTOR, DEANS, ASSOCIATE DEANS AND SOME OFFICIALS OF IIT GUWAHATI AND THE ISSUE OF PAYMENT OF LEGAL FEES RELATED TO THIS CASE
ADDL. ITEM NO.2	TO CONSIDER THE PROPOSAL OF TUITION FEE FOR THE NEWLY INTRODUCED MBA PROGRAMME IN THE SCHOOL OF BUSINESS.

The Board was requested to consider the recommendations of the FC and approve the same.

The Board deliberated and resolved as below:

Resolution No: R_109BOG/04/2021

RESOLVED that the recommendations of the 49th meeting of the Finance Committee held on 28.12.2021 preceding the Board meeting placed separately as **Annexure** be **APPROVED**.

Item No 5

Consider the Annual Accounts of IIT Guwahati for the year 2020-21

The Board was apprised that an Audit team from the Director General of Audit (Central), Kolkata, Branch Office: Guwahati had conducted the Compliance Audit of the Accounts for the year 2020-2021 during the period 17.08.2021 to 05.10.2021. After completion of the Audit, the Separate Audit Report (SAR) was received from DGA(C), Kolkata, on 02.12.2021.

It was noted that Audited Annual Accounts for the year 2020-2021 along with SAR with bilingual printed version (Hindi and English) is to be submitted to Ministry of Education for placing in the Parliament with due approval of the Board.

This was also placed in the 49th meeting of Finance Committee scheduled before this BOG meeting on 28.12.2021 along with the Audit Report 2020-21 to the Board. A copy of SAR along with the Institute reply was placed as **Annexure-3** (pg.43 to 47).

The Finance Committee recommended the Audit Report 2020-21 to the Board for approval.

The Board was requested to approve the recommendations of the Finance committee for onward submission of Audited Report 2020-2021 and Separate Audit Report (SAR) to the Ministry for placing it before the Parliament.

The Board discussed and resolved as below:

Resolution No: R_109BOG/05/2021

RESOLVED that the Audited Report 2020-2021 and the Separate Audit Report (SAR) be **APPROVED** for onward submission to the Ministry for placing it before the Parliament.

Item No .6

Consider the Review Committee Report on selection modalities of Dr Shankar Dayal Sharma Gold Medal Award

In the 157th meeting of the Senate held on 20.10.2021, the committee constituted to look into the selection modalities of Dr. Shankar Dayal Sharma Gold Medal Award had submitted its report as placed in **Annexure-4** (Pg no 48 to 49). The Senate examined the following 02 documents which were prepared by the review committee to select the awardee as placed in **Annexure-5** (Pg No. 50 to 57).

- 1) Application for nomination of Dr. Shankar Dayal Sharma Gold Medal
- 2) Score Sheet

The Senate vide resolution R157/12/2021 approved the Review Committee report for selection modalities of Dr. Shankar Dayal Sharma Gold Medal Award. Further, keeping the recommendations of the committee intact, the Senate opined that the students availing a semester drop on medical/health ground with a valid medical certificate should also be considered along with subsequent batch of students. The Senate further recommended to apprise all students about the revised selection modalities.

The Board was requested to approve the resolution R157/12/2021 of the senate and the Review Committee report for selection modalities of Dr Shankar Dayal Sharma Gold Medal Award.

The Board discussed and resolved as below:

Resolution No: R_109BOG/06/2021

RESOLVED to **APPROVE** the resolution **R157/12/2021** of the senate and the Review Committee report on selection modalities of Dr Shankar Dayal Sharma Gold Medal Award along with the modifications suggested by the Senate in its 157th meeting.

Item No 7

Consider the recommendations of the Institute Post Graduate Programme Committee (IPPC) on the proposal from the Dept. of HSS to introduce MA (Liberal Arts) programme.

The Dept. of HSS submitted a proposal to introduce MA (Liberal Arts) programme in the Dept. of HSS to the Institute Post Graduate Programme Committee (IPPC). The Head of the Dept. of HSS briefed the proposal in the 113th IPPC Meeting held on 30.08.2021. The IPPC discussed the proposed programme at length and **RESOLVED** that the proposal be **REVISED** and **RESUBMITTED**. Accordingly, the Dept. incorporated all the

IPPC recommendations and submitted the revised proposal as given in **Annexure 6** (Pg. No.58 to 90) in the 157th Meeting of the Senate held on 20.10.2021.

The Senate examined the revised proposal and approved the same vide Resolution R.157/13/2021. However, the Senate also recommended the following:

- i. The eligibility criterion for general candidates should be at least 60% or 6.0 CPI in Bachelor's degree to maintain the quality and standard of the Institute.
- ii. Considering the option of GATE paper in HSS, the department should come up with a suitable selection procedure to enrol students in this programme.

The Board was requested to approve the recommendations of the 157th Senate regarding introduction of MA (Liberal Arts) programme in the Dept. of HSS.

The Board discussed and resolved as below:

Resolution No: R_109BOG/07/2021

RESOLVED to **APPROVE** the proposed MA (Liberal Arts) programme in the Dept. of HSS as per the recommendation of the 157th Meeting of the Senate.

The Board further **APPROVED** the following recommendations of the Senate:

- i. The eligibility criterion for general candidates should be at least 60% or 6.0 CPI in Bachelor's degree to maintain the quality and standard of the Institute.
- ii. Considering the option of GATE paper in HSS, the department should come up with a suitable selection procedure to enrol students in this programme.

Item No 8

Consider the recommendations of the Institute Post Graduate Programme Committee (IPPC) on a new M Tech specialization in Dept. of Chemical Engineering.

The Senate in its 157th meeting held on 20.10.2021 examined the proposal as placed in **Annexure-7** (Pg. No.91 to 98) on new M. Tech specialization in Department of Chemical Engineering. The senate in the meeting observed that, as per the recommendation of the IPPC, the department modified the name of the M Tech specialization as Computer Aided Process Engineering (CAPE). Further it also noted that the department would accommodate 15 seats for the new M Tech specialization by redistributing its total M Tech seats.

In the meantime, Academic Affairs Section proposed for 50 additional regular seats for various Master's programmes and sought budget sanction from the Ministry of Education through the office of Dean, RGF. Re-appropriation of the M Tech seats will be possible on its approval.

The senate vide resolution R157/14/2021 **RESOLVED** that the proposed M Tech specialization Computer Aided Process Engineering (CAPE), in Dept. of Chemical Engineering be **APPROVED** and **RECOMMENDED** it to be placed in the BOG.

In view of the above, the Board is requested to approve the proposed M Tech specialization Computer Aided Process Engineering (CAPE), in Dept. of Chemical Engineering as per recommendation of the 157th meeting of Senate.

The Board discussed and resolved as below:

Resolution No: R_109BOG/08/2021

RESOLVED to **APPROVE** the proposed M Tech specialization Computer Aided Process Engineering (CAPE), in Dept. of Chemical Engineering as per recommendation of the 157th meeting of Senate.

Item No 9

Consider the recommendations of the Institute Post Graduate Programme Committee (IPPC) on revised formats for transcript and degree certificate of PhD programmes

As per the Senate Resolution No. R.138/2/2019(ii), a committee was constituted for examining the content of the Degree certificate and it had submitted its recommendations to modify the content of PhD Degree certificate. Primarily, the committee recommended for dropping the name of the Department/Centre/School that was appearing as the discipline of the PhD. The Senate in its 143rd meeting approved the recommendations of the committee and resolved that the finer details would be finalized in consultation with the Dean of Academic Affairs. The Senate found that as a follow-up of the Senate Resolution No. R.143/6/2019, the Dean of Academic Affairs discussed the matter in the meeting of Heads of Departments and Academic Centres held on 11th May 2021 and decided to introduce a transcript with full details and drop the name of the Department/Centre/School in the Degree certificate as per the Senate resolution. Accordingly, the Academic Affairs Section prepared a format for transcript and circulated it to the Departments/Centres/Schools along with the format for Degree certificate for feedback. The 113th IPPC meeting, held on 30.08.2021, deliberated on the formats for the transcript and the Degree certificate for PhD programmes as well as the feedback received from the Departments/Centres/Schools and opined that the transcript should have only (i) the course work details as done by the student, (ii) the final dates of successful completion of comprehensive examination, state-of-the-art seminar and synopsis seminar, (iii) thesis details.

Accordingly, the formats for the transcript and the Degree certificate for PhD programmes are finalized and approved by the IPPC vide **R.113/9/2021**.

The Senate examined the formats for the transcript and the Degree certificate for PhD programmes. The Senate also considered the feedback and observations of the members and approved the formats as placed in **Annexure- 8** (pg.no 99 to 101) vide resolution **R.157/17/2021**.

The Board was requested to approve the formats for transcript and degree certificate of PhD programmes as per recommendation of IPPC and the Senate.

The Board discussed and resolved as below:

Resolution No: R_109BOG/09/2021

RESOLVED to **APPROVE** the revised formats for transcript and degree certificate of PhD programmes as per recommendation of IPPC and the Senate placed in **Annexure-8**(pg. no. 99 to 101).

Item No .10

Status report on filling of backlog vacancies of faculty Recruitment

The Ministry of Education vide its letter under reference D.O. No. 33-2/2021-TS-III (Pt.I) dated 24.08.2021, advised to clear the backlog by filling the vacancies in a Mission Mode within a period of one year starting from 05.09.2021 to 04.09.2022, which was placed in the 108th meeting of the BOG with status report. The Ministry also advised to include an agenda item in every Finance Committee/Board of Governors/Board of Management meeting, giving status of filling up of backlog vacancies. It was noted that IIT Guwahati also advertised for special recruitment drive for the vacancies in position against reserved categories and is also taking care of the reserved candidates in its ongoing regular recruitment process.

Accordingly, current status of vacancy positions in respect of IIT Guwahati were furnished as below:

1.	Students strength (as on 1 st April 2021)						6959	
2.	Sanctioned Faculty Strength (1 : 10 ratio of Faculty : Students)						696	
3.	Faculty in position (as on 17.12.2021) with break-up category-wise (as on 17.12.2021)							
	GEN	SC	ST	OBC	EWS	PWD	Total	
	384	17	04	15	-	03	423	
4.	Vacant position						273	
5.	Status of Vacant Positions against reserved category (2021-22)*							
			SC	ST	OBC	EWS	PW D	Total
	Vacant positions		43	22	78	29	-	172
	Filled up in ongoing regular recruitment		04	02	01	-	-	07
To be filled		39	20	77	29	-	165	
*It may be mentioned that, as the strength of students keep changing throughout								

the year, sanctioned faculty strength also changes while calculating in different time of a year. Because of variable nature of data, vacancy positions will also change, making it difficult to keep track of the category-wise vacancy positions. As such, earmarking/calculation of the vacancy positions will be done on the basis of the students' strength (as on 1st April) in the beginning of a particular financial year and use it till the end of that financial year.

This was placed before the Board for information.

The Board noted the same and resolved as below:

Resolution No: R_109BOG/10/2021

RESOLVED that the Status Report on filling of backlog vacancies of faculty recruitment in the Institute be **NOTED** as reported.

Item No.11

Consider and approve the list of subject experts as Board 's Nominee in Selection Committee for Faculty Recruitment in the School of Business

NOT FOR PUBLIC DOMAIN

Resolution No: R_109BOG/11/2021

NOT FOR PUBLIC DOMAIN

Item No.12

Consider and approve the recommendation of the Standing Committee meeting for selecting eligible faculty members for pay Level 15

It was apprised before the Board that applications were invited through e-mail from the faculty members, who have completed six years or more service as Professor for movement to the Pay Level 15 (HAG as per 6th CPC). The status of eligible Professors / application received etc. was placed as follows:

Number of existing Professors (as on last date of submission of application i.e. 11.01.2021)	185
Number of Professors eligible for Pay Level 15 (HAG) as per rule (40% of total Professors is eligible to upgrade to Pay Level 15)	74
Number of existing Professors in Pay level 15 (HAG)	44
Maximum number of Professors can be upgraded (as on 11.01.2021 (74 – 44)	30
Number of Professors eligible for applying to Pay Level 15 as on 11.01.2021 (As per rule, more than 6 years' experience in the post of Professor)	43
Number of Professors applied to Pay Level 15	36

On receipt of the applications from the eligible Professors, a Screening Committee

constituted by the Competent Authority of the Institute, had gone through the applications and examined each criterion as per the 'Methodology for movement of Professors (Pay Level 14A) to Pay Level 15 (HAG Pay)" approved by the BoG of the Institute in its 103rd meeting held on 15.07.2020. The marks-based evaluation of the applications was done by the Screening Committee. In the meantime, applications were forwarded to the Subject Experts approved by the BoG and specific comments and recommendation from Subject Experts against each faculty members obtained.

The Standing Committee constituted for selecting eligible faculty members for Pay Level 15 met on 01.11.2021 and 13.11.2021. After considering all aspects of the applicants including qualifications, date of eligibility, number of years as Professor, stipulated requirements, overall performance and review of the subject experts, the committee recommended the movement of eligible candidates to Pay Level 15 w.e.f. approval from Board of Governors (BoG), IIT Guwahati. Recommendation of the Standing Committee was sent to place before the BOG by circulation. While circulating the report to BOG, the matter of disciplinary proceedings against one of the candidates Prof. Lingaraj Sahoo, Dept. of BSBE, who was recommended for Pay Level 15, was noted. As such, the Standing Committee again met on 08.12.2021, deliberated the matter, and submitted revised recommendations. Both the Minutes of the Selection Committee are enclosed as **Annexure-10 (NOT FOR PUBLIC DOMAIN)** and **Annexure-11 (NOT FOR PUBLIC DOMAIN)**

The recommendations of the Standing Committee were placed before the Board for consideration and approval.

One of the members present enquired about the cut-off criterion and uniformity of criteria across the departments used in the selection of the eligible faculty members to Pay Level-15. The Director as the Chairman of the Selection Committee clarified the detailed procedure adopted by the Standing Committee for selection to the satisfaction of the member and the Board.

The Board discussed and resolved as below:

Resolution No: R_109BOG/12/2021

RESOLVED to APPROVE the selection of eligible faculty members for Pay Level 15 as recommended by the Standing Committee placed at **Annexure-11 (NOT FOR PUBLIC DOMAIN)**.

Item No.13

Consider and approve the recommendation of the committee constituted to frame a policy for Internal transfer of non-teaching employees and thereby implement the policy in the Institute

The Board was apprised that in order to frame a policy for Internal transfer of non-teaching employees considering the various factors such as age, years spent in place of posting, educational background, skills, personality, indispensability etc., a committee was constituted with the following members:

1. Prof. S. Nandi, Dept. of Computer Science and Engineering, IIT Guwahati
2. Prof. M.G.P.Prasad, Dept. of Mathematics ,IIT Guwahati
3. Mr. Prakash Hazarika, HoS (Administration), IIT Guwahati

The Committee met on 27.09.2021, 01.11.2021 and 22.11.2021 and submitted a comprehensive transfer policy for all non-teaching employees including Gp. A, B & C covering both Technical & Non-technical.

The committee after thorough deliberations and drawing reference to the Rotation Transfer Policy applicable to CSS officers issued by the DoPT vide no 21/02/2009-C.S. I(P) dated 16.07.2015, prepared a policy for the internal transfer of the Non –teaching employees of the Institute including the Technical cadre.

However, the committee observed from the advertisements and appointment letters issued to the technical officers and staff, that, the technical officers & technical staffs have been appointed against a specific Department/Centre and suggested to get the approval from BOG making employees of technical cadre transferable from one Dept./Centre/School to another in order to avoid any legal complications.

In view of the above, the Board was requested to approve the following –

- I. Transfer of technical cadre officers and staff from one Section/Dept./Centre/School to another as recommended by the committee.
- II. Policy for Internal transfer of non-teaching employees both technical and non-technical staff & officers as given in **Annexure-12**(pg.no.102 to 104) and implementation of the same in the Institute.

The Board deliberated on the matter and resolved as below:

Resolution No: R_109BOG/13/2021

RESOLVED to **APPROVE** the recommendations of the Committee regarding the transfer of technical cadre officers and staff from one Section/Dept./Centre/School to another.

The Board further **RESOLVED** to **APPROVE** the Policy for internal transfer of non-teaching employees both technical and non-technical staff and officers for implementation in the Institute.

Item No.14

Consider and approve financial up-gradation in respect of Dr. Sanjib Kr. Deka, Assistant Librarian of IIT Guwahati under Career Advancement Scheme (CAS)

The Board was apprised that a committee was constituted to examine the matter of financial up-gradation under Career Advancement Scheme (CAS) in respect of Dr. Sanjib Kr. Deka, Assistant Librarian of this Institute. The Committee met on 26.11.2021 at 4.30PM in the Conference Room of the Deputy Director and examined the matter

in the light of BOG resolution and MHRD letter MHRD letter No. 1-32/2006-U.II/U.I (I) dated 31.12.1008, under Sl: No. 5 (b)(ii).

The details regarding date of joining, existing Academic Grade Pay and Academic Qualification in respect of Dr. Sanjib Kr. Deka which satisfy the educational qualification & experience for financial up-gradation under CAS is as below:

Sl. No.	Name of the Assistant Librarian	Date of joining the Institute as Asst. Librarian at AGP 6000	Date of obtaining Ph.D. Degree
01.	Dr. Sanjib Kr. Deka	23.02.2015	20.07.2009

The Committee after detailed deliberation recommended the grant financial up-gradation to Dr. Sanjib Kr. Deka from Pay Level 10 to Pay Level 11 under Career Advancement Scheme (CAS) as detailed below.

Name	Present Designation and Pay Matrix Level	Next Eligible Financial up-gradation level (under Career Advancement Scheme)	Date of Eligibility
Dr. Sanjib Kr. Deka	Assistant Librarian Pay Level = 10 (PB3 = Rs15600-39100/-, AGP = Rs6000/- as per 6 th CPC)	Assistant Librarian Pay Level = 11 (PB3 = Rs.15600-39100/-, AGP = Rs.7000/- as per 6 th CPC)	23.02.2019

The minutes of the committee is given as Annexure-13(pg.105 to 106).

The Board was requested to approve the recommendation of the Committee granting financial up-gradation to Dr. Sanjib Kr. Deka from Pay Level 10 to Pay Level 11 under CAS.

The Board deliberated and resolved as below:

Resolution No: R_109BOG/14/2021

RESOLVED to APPROVE the financial up-gradation to Dr. Sanjib Kr. Deka from Pay Level 10 to Pay Level 11 under Career Advancement Scheme (CAS) w.e.f. 23.02.2019.

Item No.15

To consider and approve relaxation of age bar for internal candidates in case of direct recruitment.

It was apprised to the Board that the eligibility criteria pertaining to relaxation of age in case of internal candidates was not uniform. On further examination of the Recruitment Rules (RR's), it was found that the maximum age limit for Direct Recruitment was relaxed in the case of internal candidates for many posts like AR, STO, APEO, DR etc., whereas there is no such age relaxation in some posts (like Asst. Librarian, AEE, etc). This disparity has turned to be hindrance to some internal experienced candidates who are otherwise eligible to apply but are restrained from applying due the existing criteria of age bar.

Since this defies the main purpose and creates a divide among the employees, it was proposed to extend the criteria of relaxation of age bar for internal candidates in case of direct recruitment to all other such post where this criterion is not included except in the cases of Registrar, Librarian and other tenure post and accordingly modify the recruitment rule of the respective posts.

Placed for consideration and approval of the Board.

The Board discussed and resolved as below:

Resolution No: R 109BOG/15/2021

RESOLVED to APPROVE relaxation of age bar for the internal candidates in case of Direct Recruitment in the Institute for all posts except for the position of the Registrar, Librarian & other tenure posts.

Item No.16

To Consider replacement of an Institute Vehicle (MARUTI-CIAZ) through buy-back scheme

As per Resolution No.: R 47_FC/8/2021 of the 47th meeting, the Finance Committee of the Institute recommended to the Board of Governors for approval of replacement of the vehicle used by the Director of the institute with a multi-utility vehicle "Innova Crysta" (Made by Toyota) through buy-back scheme (Extract of the Minutes of the Item No. 8 is enclosed at **Annexure – 14** (pg.107). The Board of Governors of the Institute in its 107th meeting held on 14.07.2021 approved the proposal as recommended by Finance Committee.

Subsequently, a Committee was formed for this purpose. The committee in its 1st meeting held on 21.10.2021 decided the followings:

1. Buy-back value of the existing vehicle should be fixed through a Government Certified Valuer.
2. Quotation / Proforma Invoice should be collected from nearby Dealer of Toyota Innova Crysta vehicle.
3. Valuation certificate and opening of the quotation would be done together.

(Copy of the Minutes is enclosed at **Annexure – 15**(pg.108)

The committee again met on 16.11.2021. Valuation certificate for existing vehicle of the Director by Mr. Pradeep Adhikari, BE, FIE, (Licence No. SLA 20536) valued the vehicle at ₹3.00 Lakh. (Copy of the valuation Certificate is at **Annexure – 16**(pg.109).

The buy-back value of Maruti Ciaz as quoted by Government certified valuer is ₹3,00,000 (Rupees Three Lakhs only), whereas the buy-back value as submitted by the dealer (Toyota) is ₹3,20,000 (Rupees Three Lakhs Twenty Thousand only).

Initially the dealer (Toyota) had quoted the Vehicle valuation price at ₹3,00,000.00. However, after deliberation the dealer has agreed to consider the value of vehicle at ₹3,20,000.00.

As per the Proforma Invoice submitted by M/s Gargya Autocity Pvt. Ltd. the quoted price of the Toyota Innova Crysta Model ZX, MT Pearl white proposed to be purchased is ₹25,52,495.00 (Excluding the buy-back value of ₹3,20,000.00). Copy of the Proforma Invoice is enclosed at **Annexure – 17** (pg.110).

However, it was also communicated by the dealer that with passage of time, the valuation of the old vehicle may come down and price of the new vehicle may increase, therefore, the matter is to be processed quickly. An agenda item on the matter was also placed in the 49th meeting of the Finance Committee to be held preceding this BOG meeting.

The Finance Committee considered, approved and recommended to the BOG for purchase of the vehicle through buy-back mode as presented before the Committee

The Board deliberated on the matter and resolved as below:

Resolution No: R_109BOG/16/2021

RESOLVED to APPROVE the proposal of purchase of Toyota Innova Crysta Model ZX, MT Pearl White through buy back mode as per the recommendations of the Finance Committee of the Institute.

Item No.17

To consider and decide on the report of the Inquiry Committee constituted to fix responsibility and to initiate necessary disciplinary proceedings against the charged officials for loss of public money of Rs. 5.97 crore due to damage of Hostel No. - 8.

Resolution No: R_109BOG/17/2021

NOT FOR PUBLIC DOMAIN

Item No.18

To consider and decide on the Report of the Inquiry Committee w.er.t. Dr K.V Srikanth, Asst. professor (under Suspension), Dept of Mathematics

Resolution No: R_109BOG/18/2021

NOT FOR PUBLIC DOMAIN

Item No.19

Grievance letter submitted by the Technical staff with entry level qualification of BE/MSc for seeking higher pay scale as per recommendation of 5th, 6th and 7th CPC.

Resolution No: R_109BOG/19/2021

NOT FOR PUBLIC DOMAIN

Item No.20

Disciplinary Proceedings and resignation of Dr. Ranu Roychoudhuri, Assistant Professor, Dept. of Humanities and Social Sciences

Resolution No: R_109BOG/20/2021

NOT FOR PUBLIC DOMAIN

Item No.21

The matter of FIR filed by Mr. Vikrant Singh against the Director and Deans of IIT Guwahati

Resolution No: R_109BOG/21/2021

NOT FOR PUBLIC DOMAIN

Item No.22

To consider and approve the recommendation of the Departmental Promotion Committee Meeting for the post of Technical Officer Gr.II, held on 17.12.2021

The Departmental Promotion Committee consisting of the following members, met at 2.30 p.m. on 17.12.2021 in the Interview Room of IIT Guwahati for appointment (promotion) to the post of **Technical Officer Gr. II- 07 posts (6 UR; 1 SC)** from amongst the internal candidates.

1.	Prof. S.K. Kakoty Deputy Director, IIT Guwahati
2.	Prof. A. Srinivasan Registrar (Interim), IIT Guwahati
3.	Dr. D. Udaya Kumar Head, Dept. of Design, IIT Guwahati
4.	Prof. Ratnajit Bhattacharjee Head, Computer & Communication Centre
5.	Prof. K.S.R Krishna Murthy Head, Dept. of Mechanical Engineering, IIT Guwahati
6.	Prof. Harshal B. Nemade Head i/c, Dept. of EEE, IIT Guwahati, IIT Guwahati
7.	Prof. Tamal Banerjee, Head i/c , Department of Chemical Engineering, IIT Guwahati
8.	Prof. Sandip Paul Head i/c, Dept. of Chemistry, IIT Guwahati

9.	Prof. A. Perumal Head, Dept. of Physics, IIT Guwahati
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The Committee noted that 11 internal candidates had applied for the post of Technical Officer Gr. II against Circular under reference No. R&P/174/MODALITY/IR/2020/1571 dated 02.11.2021. After screening the applications, 08 candidates were called for the interview and all of them were present on that day.

The recommendation of the committee was opened before the BOG and the names were read aloud.

The Board was requested to consider and approve the Selection Committee Report that recommended the following 06(six) candidates for the post Technical Officer Gr-II vide DPC Meeting held on 17.12.2021:

Name of the Candidate	Dept./Section/Centre
Mr. Utpal Kumar Sarma	Dept. of EEE
Dr. Lukumoni Borah	Dept. of Chemical Engineering
Mr. Amal Kalita	Dept. of Mechanical Engineering
Ms. Lipika Nath	Dept. of Chemistry
Mr. Atul Chandra Deka	Dept. of Physics
Mr. Mrinal Kanti Chakraborty	Dept. of Design

The Committee also recommended the following panel (Valid for one year):

Name of the Candidate	Dept./Section/Centre
Mr. Naba Kumar Thakuria	Computer and Communication Centre
Mr. Amitabh Bordoloi	Dept. of Design

The Board resolved as follows:

Resolution No: R_109BOG/22/2021

Resolved to APPROVE the recommendation of the Departmental Promotion Committee Meeting for selection of the 06 (six) candidates and the Panel mentioned above for the post of Technical Officer Gr. II, held on 17.12.2021.

SECTION- C: Items for Ratification and Reporting

Item No.23

Items approved by the Chairman for ratification

Following items approved by the Chairman are placed before the Board for ratification.

- A.** Approval of recommendations of the Selection Committee of interviews for various Faculty positions in the School of Health Science and Technology and School of Energy Science and Engineering

The Board was requested to **RATIFY** the approval of the Chairman, BOG IIT Guwahati.

The Board **NOTED** the items reported and resolved as given below:

Resolution No: R_109BOG/23/2021

RESOLVED to **RATIFY** the items approved by the Chairman, BOG IIT Guwahati as below:

A. Approval of recommendations of the Selection Committee of interviews for various Faculty positions in the School of Health Science and Technology and School of Energy Science and Engineering

Interview for different faculty positions in the Department of School of Health Science and Technology and School of Energy Science and Engineering was held on 13.11.2021 and 18.11.2021 respectively.

The recommendations of the Selection Committee for the faculty positions in the School of Health Science and Technology & School of Energy Science and Engineering are as follows:

1. School of Health Science and Technology

Sl. No.	Name	Recommended for	Initial Pay (Rs.)
1	Dr. Khem Raj Ghusinga	Assistant Professor	Pay Level-12 Cell-1
2	Dr. Subrata Pramanik	Assistant Professor	Pay Level-12 Cell-2
3	Dr. Rajiv Kumar Kar	Assistant Professor	Pay Level-12 Cell-1

2. School of Energy Science and Engineering

Sl. No.	Name	Recommended for	Initial Pay (Rs.)
1.	Dr. Pankaj Kalita	Associate Professor	As per rules
2.	Dr. Ranjit Thangavel	Assistant Professor	Pay Level-11 Cell-3
3.	Dr Farukh Khalid	Assistant Professor	Pay Level-12 Cell-2
4.	Dr. E.S.N. Raju	Assistant Professor	Pay Level-11 Cell-2

Item No.24

Items approved by the Director for ratification:

Following items approved by the Director are being reported to the Board

- A. New Appointments and/or Extension of period of appointment of some officials in the existing positions
- B. Confirmation of Non- Faculty Members occupying regular posts
- C. Recommendation of the Selection Committee for the post of Senior Assistant

- under Internal Recruitment process
- D. Recommendation of the Selection Committee for the post of Attendant under Internal Recruitment process
 - E. Revision of the bus fares for commuters availing Institute Bus Facility
 - F. Naming of new Hostel meant for accommodation of project staff as “DIKHOW” Hostel
 - G. Counting of Past Service of Dr. Shyamanta Moni Hazarika, Dept. of Mechanical Engineering
 - H. Long leave without pay in respect of Dr. Rashmi Dutta Baruah
 - I. Order to be followed by IPM Section while obtaining Administrative approval of a work proposal

The Board was requested to ratify the approvals of the Director.

The Board **NOTED** the items approved by the Director and resolved as below:

Resolution No: R_109BOG/24/2021

RESOLVED to **RATIFY** the items approved by the Director, BOG IIT Guwahati as given below:

A. New Appointments and/or Extension of period of appointment of some officials in the existing positions:

Some new appointments have been made and appointments of some of the existing persons have been extended / adjusted as mentioned below:

Sl. No	Name	Position	Period of appointment/extension
1.	PROF. HEMANT B KAUSHIK, DEPARTMENT OF CIVIL ENGINEERING	Associate Dean of Academic Affairs, Online Programmes (ADOAA-OP)	For a period of one-year w.e.f 8.11.2021.
2.	PROF. VINAYAK KULKARNI, DEPARTMENT OF ELECTRICAL ENGINEERING	Professor In-charge of Legal Cell	For a period of two years w.e.f 01.11.2021
3.	PROF. C V SASTRI, DEPARTMENT OF CHEMISTRY	Chairman Technical Board	Term extended for a period of one-year w.e.f 14.10.2021

B. Confirmation of Non- Faculty Members occupying regular posts as under:

Sl. No	Name	Post against which service is confirmed	Dept./Centre/Section
1.	Mr. Kallol Kashyap Saikia	Junior Assistant	II&SI Section
2.	Mr. Manjit Das	Junior Assistant	Students' Affairs Section
3.	Ms. Khanthai Mala Basumatary	Junior Assistant	Dept. of HSS

4.	Mr. Pragma Sharma	Junior Assistant	Administration Section
5.	Mr. Hirak Jyoti Das	Junior Assistant	Academic Affairs Section

C. Recommendation of the Selection Committee for post of Senior Assistant under Internal Recruitment process as under:

Under UR Category

Sl. No.	Name of the candidates	Post	Category of the candidates
1.	Mr. Manash Protim Dutta	Senior Assistant	OBC
2.	Mr. Raju Talukdar		GEN
3.	Mr. Deep Jyoti Sinha		GEN
4.	Mr. Bhaskar Jyoti Sonowal		ST
5.	Mr. Avishek Dutta		GEN
6.	Mr. Paragjyoti Sharma		GEN
7.	Mr. Nabajit Rajbongshi		OBC
8.	Mr. Manash Pratim Barman		GEN
9.	Mr. Nilotpal Sarma		GEN
10.	Mr. Pulak Rajbongshi		OBC
11.	Ms. Munmi Roy Choudhury		SC
12.	Mr. Jnanendra Ballav Goswami		GEN
13.	Mr. Himangshu Bharadwaj		GEN
14.	Mr. Rijumoni Dutta		GEN
15.	Mr. Manas Protim Das		SC
16.	Ms. Nilakshi Goswami		GEN
17.	Mr. Binod Upadhyaya		GEN

Under SC Category

Sl. No.	Name of the candidates	Post	Category of the candidates
1.	Mr. Gourish Mazumder	Senior Assistant	SC
2.	Mr. Amarendra Das		SC
3.	Ms. Chinmayee Pathak		SC

Under ST Category

Sl. No.	Name of the candidates	Post	Category of the candidates
01	Mr. John Sangma Dangou	Senior Assistant	ST

Under PwD Category

Sl. No.	Name of the candidates	Post	Category of the candidates
01	Mr. Himanku Dutta	Senior Assistant	OBC (PwD)

The committee has also submitted a list of wait listed candidates which will be active for 1 year.

D. Recommendation of the Selection Committee for post of Attendant under Internal Recruitment process as under:

Under UR Category

Sl. No.	Name of the candidates	Name of the post	Category of the candidates
1.	Mr. Bhrigu Kalita	Attendant	GEN
2.	Mr. Pankaj Das	Attendant	OBC

E. Revision of the bus fares for commuters availing Institute bus facility

A committee was constituted to look on the Audit observation on admissibility of Transport Allowance to employees availing Institute bus and submit a report therein. The committee members met on 01.11.2021, to discuss about the observation raised by CAG on the subject: **Irregular payment towards transport allowance**. The committee discussed on the report prepared based on discussions of the earlier meetings and deliberated that State Govt. Road Transport rates vide Govt. of Assam, Transport notification NO TMV.195/2010/352 dated 20.11.2021, may be considered for fixing the rates to be charged from the users of the Institute Bus Facility. The following rates were proposed by the committee:

- a. Rs 1,125.00 as monthly deductions from the concerned employees who are availing the Institute Bus Facility.
- b. For any other commuter who will be availing the Institute Bus Facility, the following rates may be charged for one way to or from the Institute:
 - i. Rs.25.00 per ticket for any route beyond Jalukbari
 - ii. Rs.15.00 per ticket for Jalukbari
- c. The rates should be reviewed every couple of years.

The recommendation of the committee was approved by the Director on dated 29.11.2021. Subsequently a circular has been issued on the subject vide Ref. No AD/32/98/Vol.24/1744 dated 02.12.2021 intimating the same.

F. Naming of new Hostel meant for accommodation of project staff as “DIKHOW” Hostel

The committee constituted for naming the New Hostel for accommodating project staffs deliberated in detail and considered a few names for the same. The committee finally recommended the name of the Building as “Dikhow” Hostel considering the tradition of naming the hostels by different rivers of North-East India. The recommendation of the Committee was approved by the Director, IIT Guwahti dated 18.11. 2021. Subsequently, a circular was issued intimating the same vide Ref No Ad /32/98/Vol.24/1743 dated 02.12.2021.

G. Counting of past Service of Dr. Shyamanta Moni Hazarika, Professor, Department of Mechanical Engineering

Consequent upon receipt of the pensionary liabilities from Tezpur University, in respect of the past service rendered there during the period from 20.03.1997 to 15.15.2007 by Dr. Shyamanta Moni Hazarika, the present Professor, Department of Mechanical Engineering of this Institute, has been approved for counting as qualifying service for Pension-cum-Gratuity benefits at this Institute.

H. Long leave without pay in respect of Dr. Rashmi Dutta Baruah

Dr. Rashmi Dutta Baruah, Assistant Professor Gr. I in the Department of Computer Science and Engineering has applied for Long Leave to avail Marie Sklodowska-Curie (CONEX-Plus) Fellowship at University Carlos III of Madrid (UC3M), Spain.

The Institute has agreed to sanction Long Leave without Pay with effect from 18.11.2021 to 17.11.2023 to avail Marie Sklodowska-Curie (CONEX-Plus) Fellowship at University Carlos III of Madrid (UC3M), Spain.

I. Order to be followed by IPM section while obtaining the Administrative approval of a work proposal

As per order Dir./IITG/15/Notice /2021 dated 10.11.2021, IPM section is to follow the following order for obtaining administrative approval of a work proposal.

A. Work proposals for approval of the Director/B&WC

Initiating Engineer/Section Engineer	→	HoS (IPM)	→	Dean (IPM)/ Associate Dean (IPM)	→
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Registrar for Internal Audit, Legal vetting	→	Dean (IPM)/ Associate Dean (IPM)	→	Dean (RGF)	→
Director/B&WC					

B. Work proposals for approval of the Dean (IPM)/Associate Dean (IPM)

Initiating Engineer/Section Engineer	→	HoS (IPM)	→	Dean (IPM)/ Associate Dean (IPM)	→
Registrar for Internal Audit, Legal vetting as per need	→	Dean (IPM)/ Associate Dean (IPM)	→	Dean (RGF)	→
Dean (IPM)/ Associate Dean (IPM)					

The role and responsibilities of officials at different levels are as listed in **Annexure 24**(pg.no 111)

Item No. 25

Items for Reporting to the Board:

The following items are reported to the Board:

- A. Proposal to have only the scanned/digital signature of the Registrar on the degree certificates of graduating students w.e.f. the 23rd Convocation.
- B. Suspension of license fee free accommodation provided to certain employees of the Institute due to CAG observation
- C. Writ Petition filed by Dr. K.V. Srikanth in the Hon'ble Gauhati High Court for his reinstatement into Service
- D. Recent development of writ petitions No W.P (C) No 3485 of 2021 filed by Mr Vikrant Singh, a terminated student
- E. Complaints on constitution of Selection Committee for the post of Registrar IIT Guwahati.
- F. Complaints on constitution of Selection Committee for the post of Registrar IIT Guwahati

The Board discussed and resolved as given below:

Resolution No: R_109BOG/25/2021

The Board NOTED/RATIFIED the matters as below:

- A. Proposal to have only the scanned/digital signature of the Registrar on the degree certificates of graduating students w.e.f. the 23rd Convocation.**

Consequent upon implementation of digital signature on the pass certificates of the graduating students, the digital signature of only the Registrar was necessary, not only for uploading in the Govt. of India's National Academic Depository (NAD) but also for authentication /verification by various external agencies. In accordance with the above with effect from 19th convocation of the Institute onwards, pass certificates of the graduating students had been signed

manually by the Registrar only, where the images of the signature of the Director and the Chairman BOG have been already prefixed. In order to do away with the time consuming rigorous practice of manual signature of the Registrar particularly in this pandemic, it was proposed to have only the scanned/digital signature of the Registrar on the pass certificates of the graduating students with effect from 23rd convocation of the Institute held on 16.07.2021, sine the same is acceptable to both uploading in the Govt. of India National Academic Depository (NAD) and also for authentication verification by various external agencies. The same was also reported in the 157th meeting of the Senate and the Senate vide resolution R157/20 (j) /2021 **RESOLVED** that the proposal to have only the scanned/digital signature of the Registrar on the degree certificates of the graduating students' w.e.f. 23rd Convocation be **NOTED**.

B. Suspension of license fee free accommodation provided to certain employees of the Institute due to CAG observation

License fee free accommodation was provided to some of the officials of the Institute as per decision of the 29th meeting of BOG held on 04.05.2002. But as per the OM No 18018/01/2017 Pol III dated 17.08.2017, Director of Estates, Government of India recommendation of the Committee of Allowance formed under the aegis of the seventh Pay commission vide para 7 of the Resolution No 1-2/2016-IC dated 25.07.2016, GOI has inter alias decided that Rent Free Accommodation Allowance stands abolished with effect from 01/07/2017 vide Resolution No 11-1/2016-IC dated 06.07.2017. As such CAG Audit raised a query on the non-deduction of License fee from the said officials. In this context the facility of license fee free accommodation has been suspended in the Institute w.e.f 01.11.2021, until further order.

C. NOT FOR PUBLIC VIEWING

D. NOT FOR PUBLIC VIEWING

E. NOT FOR PUBLIC VIEWING

F. NOT FOR PUBLIC DOMAIN

SECTION- D: Minutes of meetings of Statutory bodies for reporting to the Board

Item No.26

Minutes of the 90th meeting of the Building & Works Committee (B&WC) of the Institute held on 08.12.2021

The 90th meeting of the Building and Works Committee (B&WC) of the Institute was held on 08.12.2021 The Minutes of the meeting was placed as **Annexure-30** (pg.no.112 to 142)

This was placed before the Board in terms of the Section 6(8) of the Statute.

Resolution No.: R_109BOG/26/2021

RESOLVED to **APPROVE** the minutes of the 90th meeting of the Building and Works Committee (B&WC) of the Institute held on 08.12.2021

Item No.27

Minutes of the 158^h meeting of the Senate of the Institute held on 20.12.2021

The minutes of the 158th meeting of the Senate of the Institute that was held on 20.12.2021 was tabled on the day of the meeting.

This was placed before the Board in terms of the Section 4(10) of the Statute.

Resolution No.: R_109BOG/27/2021

RESOLVED to **APPROVE** the minutes of the 158th meeting of the Senate of the Institute held on 20.12.2021 as placed.

SECTION E : ADDITIONAL ITEMS

Item No.28

Consider the selection of a new nominee of the Senate to the Board of Governors for the calendar year 2022-2023

The term of Prof. Diganta Goswami, Senate nominee to the BOG of the Institute, will expire on 31.12.2021. The matter was placed in the 158th Meeting of the Senate held on 20.12.2021. The 158th Senate vide resolution R158/4/2021 resolved to assign the responsibility of election process to elect a new nominee to the BOG for a period of two years to the Secretary, Senate i.e Registrar of the Institute.

The Board was requested to approve the recommendation the 158th meeting of the Senate on assignment of the responsibility of election process to elect a new nominee to the BOG for a period of two years to the Secretary, Senate i.e Registrar of the Institute.

The Board discussed the matter and resolved as follows:

Resolution No.: R_109BOG/28/2021

RESOLVED to **APPROVE** the recommendation the 158th meeting of the Senate on assignment of the responsibility of election process to elect a new nominee to the BOG for a period of two years.

Item No.29

Consider the proposal of new B Tech programme in Energy Engineering, submitted by the School of Energy Science and Engineering

The School of Energy Science and Engineering proposed a new B. Tech Program in Energy Engineering as and placed the proposal in the 158th Meeting of the Senate held on 20.12.2021 (copy enclosed as **Annexure 31** (pg no 143 to 145). The intake proposed

for the program is 20 seats, including female only seats. The program is intended to be offered from July 2022 session.

The Senate vide resolution R.158/5/2021, resolved that the proposal for starting new B Tech programme in Energy Engineering with 20 seats including female only seats, submitted by the School of Energy Science and Engineering be approved and recommended the same to be placed in the BOG.

The Board was requested to approve the recommendation the 158th meeting of the Senate on the proposal for starting of new B Tech programme in Energy Engineering with 20 seats including female only seats.

The Board discussed on the matter and resolved as follows:

Resolution No.: R_109BOG/29/2021

RESOLVED to APPROVE the recommendation the 158th meeting of the Senate on the proposal for starting of new B Tech programme in Energy Engineering with 20 seats including female only seats.

Item No. 30

Consider the list of Experts as Senate nominees for the School of Business

NOT FOR PUBLIC VIEWING

Resolution No.: R_109BOG/30/2021

NOT FOR PUBLIC VIEWING.

Item No. 31

Consider the proposal of Tuition fee for the newly introduced MBA programme in the School of Business

With approval of the proposal to offer Master of Business Administration (MBA) Programme at the School of Business in IIT Guwahati, the IPPC in its 115th meeting dated 09.12.2021 considered the proposal of the School pertaining to curriculum, the syllabi of first year courses, eligibility criteria and the selection mechanism of the proposed MBA programme and place the same in the 158th meeting of the Senate for approval.

The Senate vide resolution R.158/7/2021 resolved to approve the proposal of the curriculum and syllabi of MBA programme in the School of Business subject to the correction and modifications as suggested.

Further, the 158th Senate recommended that the proposal of Tuition Fee for the MBA programme as given in **Annexure-33**(pg.146) be placed in the BOG through the Finance Committee for approval. So, the matter will also place in the 49th meeting of the Finance Committee which is scheduled preceding this BOG meeting on 28.12.2021.

The Board was requested to approve the Tuition fee of the MBA programme as per recommendation of the 158th Meeting of the Senate and the 49th meeting of the Finance Committee.

The Board deliberated on the matter and resolved as follows:

Resolution No.: R_109BOG/31/2021

RESOLVED to APPROVE the Tuition fee (**placed at Annexure-33**) of the MBA programme as per recommendation of the 158th Meeting of the Senate and the 49th meeting of the Finance Committee.

Item No.32

Consider the recommendations of the IPPC on the proposal of new M Tech in Bioengineering programme from the BSBE Department

As per recommendation of the 113th meeting of IPPC, the Department of BSBE submitted the revised proposal of the new M Tech programme in Bioengineering in 115th meeting of IPPC dated 09.12.2021

The IPPC resolved that the revised proposal as per **Annexure 34** (pg no. 147 to 168) from the Dept. of BSBE to introduce M Tech in Bioengineering be approved and recommended to place it in the Senate.

The Senate in its 158th meeting held on 20.12.2021 vide resolution R, 158/8/2021 resolved that the proposal of new M Tech in bioengineering programme from the BSBE Department be approved and recommended the same to be placed in the BOG for approval.

The Board was requested to approve the recommendation of the proposal of new M Tech in Bioengineering programme from the BSBE Department as per approval and recommendation of the Senate.

The Board deliberated on the matter and resolved as follows:

Resolution No.: R_109BOG/32/2021

RESOLVED to APPROVE the recommendation of the proposal of new M Tech in Bioengineering programme from the BSBE Department as per approval and recommendation of the Senate.

Item No.33

Consider the proposal of repealing of Direct Admission Clauses in the PhD Ordinance

The Senate in its 157th meeting opined that the direct admission clauses A.1.8 and A.2.9 (given below) of PhD Ordinance be repealed.

A.1.8 An MTech graduate of IIT Guwahati, up to a period of 2(two) years from his/her completing the programme, with a minimum CPI of 8.0 in course work,

may be considered for direct admission into the PhD programme of the Institute, in the same Department.

A.2.9 An MDes graduate of IIT Guwahati, up to a period of 2(two) years from his/her completing the programme, with a minimum CPI of 8.0 in course work, may be considered for direct admission into the PhD programme of the Department of Design of the Institute.

The matter was sent for the feedback of all departments, schools and academic centres and subsequently placed to the IPPC. Accordingly, the matter was deliberated in the 115th IPPC meeting held on 09.12.2021 and resolved that the Direct Admission Clauses in the PhD Ordinance be repealed and recommended to place it in the Senate.

The Senate vide resolution R.158/9/2021 resolved to approve the proposal of repealing the Direct Admission Clauses in the PhD Ordinance and recommended it to be placed in the BOG.

The Board was requested to consider and approve the proposal of repealing the Direct Admission Clauses in the PhD Ordinance as per recommendation of IPPC and Senate.

The Board discussed on the matter and resolved as follows:

Resolution No.: R 109BOG/33/2021

RESOLVED to APPROVE the proposal of repealing the Direct Admission Clauses in the PhD Ordinance as per recommendation of IPPC and Senate.

Item No.34

Consider the recommendations of the IPPC on the proposal of NSS course for PG/PhD students

The NSS Coordinator has proposed for floating CoS(NSS) courses for all students as placed in **Annexure 35** (pg no 169).The matter was sent for the feedback of all departments, schools and academic centres to explore possibility of offering the course for PG students also as the course was already offered to UG students. Subsequently, the matter was placed in the 115th IPPC meeting held on 09.12.2021. After due deliberations, the IPPC opined that the course might be offered to PG students as optional Audit course. The IPPC further opined that getting a pass grade in the course would not be requirement for a PG/PhD degree, while the grade (PP/NP) obtained in the course would be reflected in the transcript. Accordingly, the IPPC resolved to recommend NSS course as an optional audit course for PG/PhD students and forwarded it to Senate for discussion and approval,

The Senate discussed the matter at length and after due deliberations and discussing the concerns raised, resolved that IPPC's recommendation to float NSS course as an optional audit course for PG/PhD students be approved. The course shall have the credit

structure of 0-0-2-0 aligning with that of the existing UG course. Further, the Senate recommended to place matter in the BoG, as this is the first time that this kind of course is proposed to be offered to PG/PhD students.

The Board was requested to approve the recommendation of the IPPC and the Senate to float NSS course as an optional audit course for PG/PhD students.

The Board discussed the matter and resolved as follows:

Resolution No.: R_109BOG/34/2021

RESOLVED to APPROVE the recommendation of the IPPC and the Senate to float NSS course as an optional audit course for PG/PhD students

Item No. 35

To consider the proposal for including Associate Dean of Academic Affairs (Online Programmes) in the Institute level Academic Committees

Aligning to the present compositions of the Institute level academic committees, it is proposed to include newly inducted Associate Dean of Academic Affairs (Online Programmes) in the respective committees as per the following:

1. Member of the Institute Academic Disciplinary Committee (IADC),
2. Vice-Chairman of the Institute Undergraduate Programme Committee (IUPC),
and
3. Vice-Chairman of the Institute Postgraduate Programme Committee (IPPC).

The matter was placed in the 158th meeting of the Senate and requested to consider the proposal for discussion and approval.

The Senate vide resolution R.158/14/2021 resolved to approve that the proposal for including Associate Dean of Academic Affairs (Online Programmes) in the Institute level Academic Committees and recommended the same to be placed in the BOG.

The Board was requested to approve the proposal for including Associate Dean of Academic Affairs (Online Programmes) in the Institute level Academic Committees as per recommendation of the Senate.

The Board discussed the matter and resolved as follows:

Resolution No.: R_109BOG/35/2021

RESOLVED to APPROVE the proposal for including Associate Dean of Academic Affairs (Online Programmes) in the Institute level Academic Committees as per recommendation of the Senate.

Item No.36

Appointment to the post of Registrar, IIT Guwahati

In any other item with the approval of Chairman, BOG; with regard to appointment of

Registrar was taken up and the sealed cover on the recommendation of the selection committee was opened in the Board meeting.

It was apprised to the Board that online applications were invited for appointment to the post of Registrar at IIT Guwahati from Indian nationals. Accordingly interview for the same was held on 20.12.2021. A total of 07(Seven) candidates were shortlisted for the interview and 06(Six) of them appeared for the interview. The Selection Committee duly constituted for selection of eligible candidate submitted their report to the BOG. The same was read out in the Meeting. The following candidate was selected to the post of Registrar of IIT Guwahati.

Name of the Selected Candidate	Post to which Selected
Mr. Pradeep Kumar Ray	Registrar

The Board was requested to approve the same.

The Board discussed and resolved as follows:

Resolution No.: R_109BOG/36/2021

RESOLVED to APPROVE selection of Mr. Pradeep Kumar Ray to the post Registrar at IIT Guwahati, as recommended by the Selection Committee for a tenure of five years from the date of joining or till attaining the age of 62 years, whichever is earlier.

Item No.1

Presentations by Dean R&D, and Head, School of Energy Sciences & Engineering

The Board of Governors of the Institute in its 108th Meeting held on 25.10.2021 suggested the Heads of two or three Departments/Sections alternatively to make brief audio/visual presentations to showcase the achievements of the Departments including their plans, innovations, and contribution to the Nation in general and the North East in particular.

Accordingly, a power-point presentation of about 15 minutes was delivered by Dean, Research & Development and Head, School of Energy Sciences and Engineering before the BOG showcasing the recent activities, achievements and plans of the respective Section/ School.

The Board appreciated the efforts of the R&D Section and the achievements of the Institute in the R&D front. The Board also appreciated the academic & R&D profile and plans of the newly formed School of Energy Sciences and Engineering. The Board members expressing their excitement also pointed out that the academic and R&D activities are moving in the right directions and are hopeful of seeing the good efforts bear fruits in due course of time.

The Director of the Institute also pointed out the various scientific infrastructure being developed in the recent time. The Board applauded the hard work and team effort that

has been carrying out the recent scientific developmental works in the Institute.

At the end the Director extended gratitude on behalf of the Board to the outgoing Senate Nominee, Prof. Diganta Goswami for his support and active participation in the Board meetings during his tenure.

The meeting ended with a vote of thanks to the Chair.

**Prof. A. Srinivasan
Registrar (Interim)
&Secretary
Board of Governors
IIT Guwahati**

ANNEXURE-1

NOT ENCLOSED AS ALREADY UPLOADED

ANNEXURE-2

**Action Taken Status on the decision of the 108th Meeting of the BOG held on
25.10.2021**

Sl No	Items	Resolutions No /Resolutions	Remarks
1	To consider confirmation of the minutes of the 107 th meeting of the Board of Governors of the Institute held on 14.07.2021 and special joint meeting of Finance Committee (FC) and BOG held on 07.08.2021	<u>R108BOG/01/2021:</u> RESOLVED that the minutes of the 107 th Meeting of the Board of Governors of the Institute held on 14.07.2021 and Special joint meeting of Finance Committee (FC) and BOG held on 07.08.2021 be CONFIRMED as placed in <u>Annexure-1</u> (pg.45-87) and <u>Annexure-2</u> (pg.88-91).	Resolution is noted for record
2	To consider the Action Taken Report of the decisions of the 107 th Meeting of the Board of Governors of the Institute held on 14.07.2021 and the special joint meeting of FC and BOG held on 07.08.2021.	<u>R108BOG/02/2021:</u> RESOLVED that the action taken on the decision of the 107 th Meeting of the Board of Governors of the Institute held on 14.07.2021 and the Special Joint Meeting of FC and BOG held on 07.08.2021 be NOTED as reported.	Action taken as reported
3	Approval to the Annual Report of IIT Guwahati for the year 2020-21	<u>R108BOG/04/2021:</u> RESOLVED that the Annual Report for the year 2020-21 be APPROVED for tabling before the Parliament. The Board further ADVISED the Institute to explore reducing the volume of the Annual report.	Will be sent to the Ministry along with the Annual Accounts
4	Approval to the recommendations of the Forty Eight (48 th) Meeting of the Finance Committee scheduled on 25.10.2021	<u>R108BOG/05/2021:</u> RESOLVED that the recommendation of the 48 th meeting of the Finance Committee held on 25.10.2021 preceding the Board meeting be APPROVED as per <u>Annexure-4</u> (enclosed separately).	Action taken as reported
5	Proposal for 4 years online BSc (Honours) Degree Program in Data Science	<u>R108BOG/06/2021:</u> RESOLVED to APPROVE the modification of the proposal for the 4 year online B Sc (Honours) Degree Programmes in Data Science as per recommendation of the 157 th meeting of the Senate held on 20.10.2021.	Tender was floated. Only one bid was received but the bid being a conditional one has been rejected. The Institute is now exploring other means

6	Approval to the proposal for setting up a School of Business at IIT Guwahati	<u>R108BOG/07/2021:</u> RESOLVED to APPROVE the proposal for starting the School of Business at IIT Guwahati with PhD and Master of Business Administration (MBA) Programmmes as per recommendation of the 157 th Senate Meeting held on 20.10.2021.	Office order issued
7	Status of Recruitment of Faculty Members at IIT Guwahati	<u>R108BOG/08/2021:</u> The Board NOTED the status of recruitment of faculty members at IIT Guwahati	Noted as reported
8	Special recruitment drive advertisement for SC/ST/OBC-NCL/EWS/ PwD for all Departments/Schools and status of backlog vacancies	<u>R108BOG/09/2021:</u> The Board NOTED the status of special recruitment drive for SC/ST/OBC-NCL/EWS/PwD for all Departments/Schools and status of backlog vacancies in IIT Guwahati	Advertisement issued .Last date is 15.01.2022
9	Status of Recruitment of Non-Faculty Members at IIT Guwahati	<u>R108BOG/10/2021:</u> RESOLVED that the proposal of initiating the recruitment process for filling the vacant non- teaching positions by direct recruitment in a phased manner be APPROVED . In the first phase, recruitment of the posts listed in the above table be ADVERTISED .	Advertisement issued except AEE
10	Approval to the "IIT Guwahati Ambulance Policy"	<u>R108BOG/11/2021:</u> RESOLVED that the "IIT Guwahati Ambulance Policy" pertaining to IIT Guwahati Ambulance Usage Rules and IIT Guwahati Ambulance Maintenance Policy as per the Annexure-6 be APPROVED .	Implemented. Office order issued
11	Approval to the "Data Retention Policy for IIT Guwahati Telemedicine Portal"	<u>R108BOG/12/2021:</u> RESOLVED that the Data Retention Policy for IIT Guwahati Telemedicine Portal as given in Annexure-7 (pg. 106-113) be APPROVED .	Implemented. Office order issued
12	Reconsideration of hike in the room rent of Married Scholars Hostel (MSH)	<u>R108BOG/13/2021:</u> RESOLVED to APPROVE the hike of room rent of the Married Scholar Hostel (MSH) at the following rates : 1. Rs 1500/- per month w.e.f November 2021 to December 2021. 2. Rs 2000/- per month w.e.f January 2022 to December 2022. 3. Rs 2500/- per month w.e.f January 2023 to December 2023.	Implemented. Office order issued
13	Designated Estate Officer of the Institute	<u>R108BOG/14/2021:</u> RESOLVED that the proposal to re-designate the Estate Officer of the Institute	Implemented.

		as HoS (Establishment) in place of AR (Establishment) be APPROVED	Office order issued
14	Financial up-gradation of Dr. Ranjit Kr Rajbangshi, Assistant Librarian, IIT Guwahati under Career Advancement Scheme (CAS)	R108BOG/15/2021: RESOLVED that the recommendation of the Selection Committee to grant financial up-gradation and re designation of Dr. Ranjit Kr. Rajbangshi from Pay Level 11 to Pay Level 12 as Deputy Librarian under Career Advancement Scheme (CAS) w.e.f 12.07.2019 as per the table given above be APPROVED .	Implemented.
15	To consider and approve segregation of Engineer posts into Assistant and Junior Engineers	R108BOG/16/2021: RESOLVED that the proposal to convert the 4(four) sanctioned and vacant posts of Junior Engineer to Assistant Engineer so that the eligible Jr. Engineers are given an opportunity for up-gradation through internal recruitment process be APPROVED .	Implemented
16	Accord administrative approval for the modified estimate for "Augmentation of the 11/0.433 KV sub-station in the IIT Guwahati Campus".	R108BOG/17/2021: RESOLVED to ACCORD administrative approval to the revised estimate of Rs.111.00 lacs for the work of augmentation of the 11/0.433 KV sub-station no.5 at IIT Guwahati Campus .	Intimated to IPM section for implementation
17	To consider and approve resolution of 89 th B&WC on Dibang Hostel considering safety of students and rehabilitation of the building	R108BOG/18/2021: RESOLVED to ACCORD APPROVAL to the resolutions of the 89 th B&WC as given below (i) Considering the safety & hygienic point of view, the students should be vacated from the hostel and shifted to another hostel. (ii) The entire area of the hostel is to be barricaded to stop entry of any individual till rehabilitation work is completed. (iii) Er. Ajoy Chandra Bordoloi, member B&WC who has vast experience in this field will review the remedial measures suggested earlier for rehabilitation of the hostel and advise the course of action. IPM Section and Civil Engineering Department will provide all the necessary support to Er. Bordoloi.	Under process
18	Approval to the proposal to establish a Super-Specialty Hospital (SSH)	R108BOG/19/2021: RESOLVED to APPROVE the following as solicited: 1. Collaboration with Government of Assam for the financial support to develop a Super-Specialty Hospital at IIT Guwahati.	Under process

		<p>2. Formation of a section 8 company jointly with Government of Assam for the implementation of the Super-Specialty Hospital.</p> <p>3. Usage of an identified Land for the Super-Specialty Hospital in the IITG Campus</p> <p>4. Permission to prepare a Detailed Project Report for the Super-Specialty Hospital once the Section 8 company is formed.</p> <p>Appoint a Consultant for the Hospital once the Section 8 company is formed</p>	
19	To report to the BoG regarding a writ petition filed before the Hon'ble Gauhati High Court by Mr. Utsav Uday Kadam challenging his termination from this Institute	<p>R108BOG/20/2021:</p> <p>i) The Board NOTED the Order of the Hon'ble Gauhati High Court</p> <p>ii) RESOLVED to APPROVE the recommendation of the 157th Senate –“that the SDC and the ICC would consider deliberations and recommendations on the matter by giving adequate opportunity to Mr. Utsav Uday Kadam to defend himself”.</p>	Action Taken
20	Report on the writ petition filed by Mr Vikrant Singh before the Hon'ble Gauhati High Court challenging the termination of his studentship from this Institute	NOT FOR PUBLIC DOMAIN	Informed the Legal Retainer as per decision of the Senate
21	To consider the Report of the High Power Committee constituted to summarize the procedures followed by Inquiry Committee constituted to inquire into altercation between Dr. B.K Rai and Dr. Gaurav Trivedi	<p>R108BOG/22/2021:</p> <p>NOT FOR PUBLIC DOMAIN</p>	<p>Letter sent to the Ministry as reported in the BOG</p> <p>Once response is received from MoE, we will do the next step</p> <p>Under process</p>
22	Non-payment of Licence fee by Dr B K Rai former Assistant Professor, IITG,	<p>R108BOG/23/2021:</p> <p>NOT FOR PUBLIC DOMAIN</p>	Under process

	Dept of EEE for the period from February,2020 till date and future action to be taken for continued occupation of Institute quarter		
23	Recovery of excess pay from Dr B K Rai, Former Assistant Professor IIT Guwahati	R108BOG/24/2021: NOT FOR PUBLIC DOMAIN	Recovered by book adjustment
24	Minutes of the 89 th meeting of the Building & Works Committee (B&WC) of the Institute held on 04.10.2021	R108BOG/28/2021: NOT FOR PUBLIC DOMAN	Noted as reported
25	Minutes of the 156 th Special meeting of the Senate of the Institute held on 06.09.2021	R108BOG/29/2021: RESOLVED that the Minutes of the 156 th meeting of the Senate held on 20.10.2021 through online & offline mode and placed before the Board in terms of the Section 4(10) of the Statute be NOTED	Noted as reported
26	Appointment of Faculty members in Department of Design	R108BOG/30/2021: RESOLVED to withdraw the relaxation criteria set by the BoG in its 76 th and 77 th meetings, so that the same eligibility criteria followed for other academic departments of the Institute are enforced, for appointment of faculty members in the Department of Design hence forth be APPROVED .	Action Taken
27	To consider the proposal for IIT Guwahati Alumni Awards	R108BOG/31/2021: RESOLVED to approve the recommendation of the Senate for granting Alumni awards to the following br APPROVED . <u>1. IIT Guwahati Young Alumni Achiever Award, 2021</u> Dr. Ankit Garg , Associate Professor, Department of Civil and Environmental Engineering, Shantou University, China. <u>2. IIT Guwahati Distinguished Alumni Award 2021</u> Mr. Archit Gupta , Founder and CEO, ClearTax. <u>3. IIT Guwahati Outstanding Service Award 2021</u> No suitable nomination was received in this category.	Alumni Award 2020-21 Ceremony conducted online and awards were given
28	Approval to the recommendation of the Selection Committee for appointment of faculty positions in the Department of Computer Sciences and	R108BOG/32/2021: RESOLVED to APPROVE the recommendation of the Selection Committee for appointment of faculty positions in the Department of Computer	Offer letter issued

	<p>Engineering and Mehta Family School of Data Sciences and Artificial Intelligence</p>	<p>Sciences and Engineering and Mehta Family School of Data Sciences and Artificial Intelligence as under:</p> <p>Department of Computer Science and Engineering</p> <table border="1" data-bbox="660 398 1195 1518"> <thead> <tr> <th>Sl No</th> <th>Name</th> <th>Recommended for</th> <th>Initial Pay (Rs.)</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td></td> <td>Dr. Amit C Awekar</td> <td>Associate Professor</td> <td>As per rules</td> <td>-</td> </tr> <tr> <td></td> <td>Dr. Chandan Karfa</td> <td>Associate Professor</td> <td>As per rules</td> <td>-</td> </tr> <tr> <td></td> <td>Dr. Deepanjan Kesh</td> <td>Associate Professor</td> <td>As per rules</td> <td>-</td> </tr> <tr> <td></td> <td>Dr. John Jose</td> <td>Associate Professor</td> <td>As per rules</td> <td>-</td> </tr> <tr> <td></td> <td>Dr. Diptapriyo Majumdar</td> <td>Assistant Professor</td> <td>Pay Level -11 Cell -3</td> <td>-</td> </tr> <tr> <td></td> <td>Dr. Sidharth Sharma</td> <td>Assistant Professor</td> <td>Pay Level -10 Cell -8</td> <td>-</td> </tr> </tbody> </table> <p>Mehta Family School of Data Science and Artificial Intelligence</p> <table border="1" data-bbox="660 1675 1195 1906"> <thead> <tr> <th>Sl. No.</th> <th>Name</th> <th>Recommended for</th> <th>Initial Pay (Rs.)</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Dr. Neeraj Kumar Sharma</td> <td>Assistant Professor</td> <td>Pay Level -11 Cell -3</td> <td>-</td> </tr> </tbody> </table>	Sl No	Name	Recommended for	Initial Pay (Rs.)	Remarks		Dr. Amit C Awekar	Associate Professor	As per rules	-		Dr. Chandan Karfa	Associate Professor	As per rules	-		Dr. Deepanjan Kesh	Associate Professor	As per rules	-		Dr. John Jose	Associate Professor	As per rules	-		Dr. Diptapriyo Majumdar	Assistant Professor	Pay Level -11 Cell -3	-		Dr. Sidharth Sharma	Assistant Professor	Pay Level -10 Cell -8	-	Sl. No.	Name	Recommended for	Initial Pay (Rs.)	Remarks	1	Dr. Neeraj Kumar Sharma	Assistant Professor	Pay Level -11 Cell -3	-	
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1	Dr. Neeraj Kumar Sharma	Assistant Professor	Pay Level -11 Cell -3	-																																												
29	Approval to the list of graduating students who have completed their Ph.D programmes after the 23rd	<p>R108BOG/33/2021:</p> <p>RESOLVED to APPROVE the list of graduating students as per the</p>	Awarded as reported																																													

	Convocation for the award of degrees.	aforementioned Annexure -10 (pg. 118-120) who have completed their Ph.D programmes after the 23 rd Convocation for the award of degrees as per recommendation of the 157 th Senate Meeting held on 20.10.2021.	
30	Approval to the proposal of setting up of a separate Administrative Unit for Online Degree Programmes of the Institute	<p><u>R108BOG/34/2021:</u></p> <p>RESOLVED to APPROVE the proposal to create a dedicated administrative unit for purpose of online degree programmes of the Institute under the above mentioned (1 to 7) set up and guidelines as per recommendation of the 48th meeting of Finance Committee to implement the same.</p> <p>RESOLVED to AUTHORIZE the Director of the Institute to appoint the new Associate Dean of Academic Affairs for Online Programmes, ADoAA (OP,) on a urgent basis for planning and initiating the programmes.</p>	Associate Dean has been appointed
31	Minutes of the 157 th meeting of the Senate of the Institute to be held on 20.10.2021	<p><u>R108BOG/35/2021</u></p> <p>RESOLVED that the Minutes of the 157th meeting of the Senate held on 20.10.2021 through online & offline mode and placed before the Board in terms of the Section 4(10) of the Statute be NOTED.</p>	Noted as reported
<ul style="list-style-type: none"> Rest of the Items are either reporting Item or items for noting by the Board. 			

ANNEXURE- 3

**Indian Institute of Technology Guwahati
Replies to the Separate Audit Report on Annual Account for the year 2020-21**

Sl.	Comments of C&AG	Reply from the Institute
A	Balance Sheet	
1.1	Liabilities	
1.1.1	Designated/ Earmarked/ Endowment Funds (Schedule-2): ₹174.47 crore: In deviation from the Format of Accounts prescribed by the MoE, advances amounting to ₹24.20 lakh were deducted from the concerned Earmarked Funds viz 'GATE- 2021' (₹13.20 lakh) and 'JEE' (₹11 lakh), resulting in understatement of both- the 'Designated/ Earmarked/ Endowment Funds' (Schedule-2) and the 'Loans, Advances and Deposits ' (Schedule-8)-by ₹24.20 lakh each.	Noted. The observation will be taken care of and the advance of Earmarked fund will be reflected in Schedule: 8 under Loans and Advances in the next financial year account for the year 2021-22 onwards.
1.2	Assets	
1.2.1	Capital Work in Progress (Schedule-4): ₹262.08 crore: The above head was overstated by ₹10.10 crore, due to inclusion of a work viz. 'Construction of Boundary Wall Phase-V at IITG Campus (Group-B)', which had been completed in December 2020, at a cost of ₹10.10 crore, resulting in understatement of the 'Fixed Assets' (Schedule-4) by ₹10.10 crore.	Noted The facts and figures will be verified and necessary rectification will be made in the next Annual Accounts of Institute for the year 2021-22.
1.2.2	Loans, Advances and Deposits (Schedule-8): ₹84.25 crore:	
(a)	In deviation from the declared Accounting Policy No. 9 and the Format of Accounts prescribed by the MoE, grants-in-aid of ₹20.71 crore, received in April 2021, for the financial year 2020-21, were included under the head 'Cash at Bank', instead of being exhibited under the head 'Grants Receivable', resulting in overstatement of the 'Current Assets' (Schedule-7) and understatement of the 'Loans, Advances and Deposits', by ₹20.71 crore each,	Noted This will be taken care of while preparing the next Accounts for the financial year 2021-22 onwards.
(b)	'Loans, Advances and Deposits' (Schedule-8) were understated by ₹1.26 crore, due to the Security Deposit for electricity connection being shown as ₹2 crore, instead of ₹3.26 crore. This also resulted in understatement of the 'Corpus/ Capital Fund' (Schedule-I) by ₹1.26 crore.	Noted. Correction has already been made as per audit comments.

B	Income and Expenditure Account	
2.1	Expenditure	
2.1.1	<p>Administrative and General Expenses (Schedule-17): ₹20.31 crore:</p> <p>Although Accounting Standard 16 provides for capitalization of the borrowing costs attributable to acquisition of assets, the Institute accounted for the 'Interest Cost' of ₹3.20 crore for servicing a loan, obtained from the 'Higher Education Financing Agency' (HEFA), for creation of assets, as revenue expenditure. This resulted in overstatement of 'Administrative and General Expenses' and 'Grants/ Subsidies' (Schedule- 10), by ₹3.20 crore each.</p>	<p>Institute received Grants-in-Aid from Ministry of Education Govt. of India mainly in three object head:</p> <ol style="list-style-type: none"> 1. OH 31 – Revenue -General Expenditure 2. OH 35 – Capital (Creation of Capital Assets) 3. OH 36 – Revenue - Salary <p>For payment of HEFA interest – Grant is released under OH 31 – towards recurring expenditure (Copy enclosed for reference) and so it is a part of Administrative and General Expenses and accordingly included in Schedule 17. As such, there is no overstatement of expenditure Schedule – 17.</p> <p>Further, Schedule 10 represents the grants for both Capital and Revenue and its utilization. So question of overstatement of Schedule 10 does not arise.</p>
2.1.2	<p>Repair and Maintenance (Schedule-19): ₹50.59 crore:</p> <p>The above head included expenditure on items of capital nature, totaling ₹1.22 crore, <i>viz.</i> 'Electro Chlorinator at Water Treatment Plant' (₹18.88 lakh), 'Construction of certain Brick drains at Hostel areas and RCC Drains' (₹83.23 lakh) and 'Construction of storage space near Civil Engineering Department' (₹19.43 lakh), resulting in overstatement of the Excess of Expenditure over Income, by ₹1.22 crore.</p>	<ol style="list-style-type: none"> 1. Installation & commissioning of Electro chlorinator at water treatment plant, - The electro chlorinator which was already under use. It was more than 15 years old and not functioning well. Moreover, there was no stand by Electro chlorinator available in plant. The work was important as it is essential to maintain the water quality supplied to the Institute community. <p>The work is a replacement of damaged equipment and to repair the system of water treatment plant for proper functioning. Thus it falls under revenue head.</p> <ol style="list-style-type: none"> 2. The other expenditure will be reconciled and correction will be made accordingly.
2.1.3	<p>Depreciation (Schedule-4): ₹69.90 crore:</p> <p>The above head was understated by ₹23.20 lakh, due to the following:</p>	
(a)	<p>It was understated by ₹20.20 lakh, due to non-transfer of the expenditure incurred on the completed Boundary Wall, amounting to ₹10.10 crore and attracting depreciation @ 2 per cent per annum, from 'Capital Work-in-Progress', to 'Fixed Assets'.</p>	<p>Noted</p> <p>Depreciation will be charged accordingly and exhibited in the Annual Accounts of Institute for the year 2021-22.</p>
(b)	<p>It was understated by ₹3 lakh, due to non-capitalization of the 'Electro Chlorinator' (₹18.88 lakh @ 5 percent) and 'Storage and Drains', under the head 'Buildings' (₹1.02 crore @ 2 percent).</p> <p>Thus, the Excess of Expenditure over Income was understated by ₹23.20 lakh.</p>	<p>Noted.</p> <p>Necessary rectification will be done after reconciliation of facts and figures.</p>

2.2	Income	
2.2.1	<p>Other Income (Schedule 13): ₹6.44 crore:</p> <p>The above head was understated by ₹60.18 lakh, due to non-transfer of an unclaimed Security Deposit of ₹60.18 lakh, which had lapsed prior to the financial year 2020-21, from the Earmarked Fund titled 'Institute Development Fund', to 'Miscellaneous Income '(Schedule- 13), resulting in overstatement of the Excess of Expenditure over Income, by ₹60.18 lakh.</p> <p>Despite mention of this in previous year's Audit Report, no rectification had been carried out.</p>	<p>The forfeited security money has been transferred to Institute Development fund with the Approval of 102nd Board of Governor Meeting held on 17th March 2020 so that it can be used for development works of the Institute.</p>
C	Receipts and Payments Account	
3.1	<p>Grants Received: ₹361 crore:</p> <p>The above head included accrual receipts of grants, amounting to ₹20.71 crore, which had been received on 3 April 2021, resulting in overstatement of the Receipts and Payments Account by ₹20.71 crore.</p>	<p>A total amount of ₹55.35 crore (₹34.64+₹20.71) was sanctioned vide F No. 27-2/2020 TS-1 dated 25.03.2021 and transferred to institute account thorough PFMS and the same is accounted into books of account for the financial year 2020-2021.</p> <p>Out of which ₹20.71 crore has been reflected into account on 03.04.2021 when bank account was reconciled.</p> <p>Thus, there is no overstatement of Receipts and payments account by ₹20.71 crore.</p>
D	General	
4.1	<p>Although Income of ₹33.20 lakh, from 'Application Fees for Ph.D. Admission', was in the nature of academic receipts, the Institute showed the amount under the head 'Other Income' (Schedule-13), instead of exhibiting it under the head 'Academic Receipts' (Schedule-9).</p>	<p>As advised, the PhD application fee will be shown in Schedule: 9 instead of Schedule 13 of income & Expenditure Account from next financial year onwards.</p>
4.2	<p>There was a shortfall in the actuarial provisioning of leave encashment (Schedule-3), due to the maximum leave encashment, at the time of retirement, being considered as 240 days, instead of 300 days.</p>	<p>Noted</p> <p>The Leave Encashment provision has been made – based on the Actuarial Valuation Report.</p> <p>However, this has already intimated to the Institute's Assigned Actuaries - taking into consideration of observation – made by CAG Audit for the year 2020-21 being actuarial valuation for Leave Encashment report should be 300 days' maximum leave encashment on retirement instead of 240 days</p>
4.3	<p>No disclosure was made in the 'Notes to Account' regarding reasons for no transactions having taken place, during the last two years, in 378 projects (out of 1334 projects), having balance of ₹8.58 crore (credit) and ₹2.38 crore (debit).</p>	<p>Noted.</p> <p>Necessary disclosure will be made in the Notes on Accounts from the year 2021-22 onwards.</p>

4.4	Although 72 projects had been completed during the financial year 2020-21, the Institute did not return the unspent balance of ₹1.38 crore to the sponsors and, thereby, overstated the liabilities and assets of institute, to the same extent.	The unspent balance of completed project as on 31 st March-2021 was ₹1.38 crore. After completion of projects UCs are sent to the funding agency for their checking and approval. As per their final approval, acceptance and advice, R&D section has returned ₹30.23 lakh till 30 th Sept. 2021. Remaining amount will be sent to the funding agency as per their final advice.
4.5	The Format of Accounts, prescribed by the MoE, mandates the introduction of a new Schedule, on the liabilities side of the Balance Sheet, for loans received by the Institute. The Institute, however, showed loan amounts of ₹29.74 crore and ₹58.66 crore, in the 'HEFA Fund' and the 'HEFA-Secured Loan', respectively, under the head 'Other Liabilities' (Schedule-3), instead of providing a separate Schedule/ Sub-Schedule/ Annexure in the annual accounts. This led to lack of clarity in regard to the loans received, their repayment, servicing of interest thereon, grant receipts and the institute's revenue utilized.	Noted As advised by audit team, a statement of HEFA Loan will be disclosed in Notes on Account or a separate sub-schedule will be annexed for better clarity of HEFA Loan in the accounts from the financial year 2021-22.
E	Grants-in-Aid: The Institute is mainly financed by grants from the Government of India. It had an opening balance of Grants, amounting to ₹6.28 crore (Schedule 10). For the financial year 2020-21, grants amounting to ₹360.97 crore (<u>Revenue</u> : ₹315.97 crore and <u>Capital</u> : ₹45 crore) were sanctioned for and received by Institute (₹340.26 crore till March 2021 and ₹20.71 crore in April 2021). Out of the total grants of ₹367.25 crore so available, it spent ₹352.96 crore (<u>Revenue</u> : ₹316.81 crore and <u>Capital</u> : ₹36.15 crore), leaving an overall unspent balance of ₹14.29 crore.	Agreed
F	Net Effect The net effect of the comments given in preceding paragraphs was that both - the Assets, as well as the Liabilities - were understated by ₹1.50 crore, as at 31 March 2021 and the Excess of Expenditure over Income was overstated by ₹1.59 crore, for the year ended 31 March 2021.	Agreed

Annexure

A	Adequacy of the Internal Audit System: The Internal Audit System is inadequate on account of the following:	
(i)	There is an Internal Audit Wing in the Institute. Internal Audit was, however, not conducted for the financial year 2020-21.	The institute Internal Audit wing is conducting the audit as per the guide lines of Institute. For Internal Audit – Institute is appointing Internal Auditors to conduct the internal audit. Due to COVID 19 Pandemic – Institute could not appoint the Internal Auditors for the Financial year 2020-21.

(ii)	The Internal Audit Wing reports to the Registrar, instead of reporting to the Head of the Institute (Director).	The Internal Audit Reports to the Registrar of the Institute being the custodian of records, the common seal and the funds of the Institute.
B	Adequacy of the Internal Control System: The Internal Control System is inadequate in the following areas:	
i.	There is no master list, containing more than one source of supply, for all important material.	Following the GFR norms, the Institute has been floating open tenders in 80% of the cases. The e-mode of procurement does not envisage the need for a short of Reserved Categories list of suppliers on e-publishing / e-procurement mode Hence, the master list in view of GOI guide line become redundant.
ii.	Vouchers are not being linked with the ledger account.	All the vouchers are linked with the Ledger / Bank Book / Cash Book / Journal register etc. with the system generated serial number.
iii.	No fidelity bonds have been obtained from officials holding valuable stock.	The Institute does not maintain stock except stationeries and hence no fidelity bond has not been obtained.
iv.	Not all the suppliers' invoices are being directly routed through the Accounts Department.	Procedure followed in invoicing of supplier's claim adopted by institute is as below: 1. Once a supply is completed with inspection report where applicable, the invoice of is forwarded by the indenters to Store and Purchase for further process. 2. Store and Purchase process the claim and forwards the same for invoicing and payment made by the Finance & Accounts (F&A) Section centrally. Hence, the invoicing is fully routed through F&A Section.
v.	Suppliers' Statements are not being compared with the ledgers.	Suppliers statement is taken into consideration after being properly examined and verification of the Installation certificate while processing the bills for Equipment / Furniture and Stock entry certificate on the bill by the appropriate authority in case of consumable /chemicals / stationeries and other items in revenue nature
vi.	Unpaid creditors are not being reconciled with the General ledger.	The Creditors has been created for the known liability with the verification of all relevant documents which are reflected in general ledger.
C	System of Physical Verification of Fixed Assets and Inventories The Institute did not conduct physical verification of its Fixed Assets and Inventories, for the financial year 2020-21.	The physical verification of the Fixed Assets has been conducted for the financial year 2020-21 and the report has already submitted to Audit
D	Statutory Liabilities: The Institute was regular in payment of statutory dues.	-

ANNEXURE-4

Dated 10/06/2021

To,
Dean, Academic Affairs
IIT Guwahati

Sub: Review committee meeting minutes pertaining to Dr. Shankar Dayal Sharma Gold Medal

Dear Prof. Mahanta,

This has reference to the constituted committee (Ref: IITG/Acad/Senate/149/2020/9534, dated 14/10/2020) to review guidelines for selecting Dr. Shankar Dayal Sharma Gold medal winner. The committee held multiple meetings between March and June 2021 inviting inputs from all stake holders representing each board. Student General secretary of each board were also consulted by their respective board Chairpersons including ex-chairman's to review the selection guidelines holistically.

Special emphasis was given by the committee to ensure equal participation, fare grading representing activities across all five board i.e. Sports, Technical, Cultural, Welfare, Hostel. Also, student leadership activities under Institute and Department heads along with academic performance and student academic/research accomplishments were counted. The following are the gist which finally emerged from the deliberations:

- 1) The committee recommended the following 09 (nine) subheadings with cumulative 100 points to be graded for selection of the awardee.
 - a) Academic performance (20 marks)
 - b) Sports Board (10)
 - c) Technical Board (10)
 - d) Cultural Board (10)
 - e) Welfare Board (10)
 - f) Hostel Board (10)
 - g) Institute activities (10)
 - h) Departmental activities (10)
 - i) Publications/Patents/Conference/Awards/Start-Up (10)

Activity wise the cumulative score distribution is:

Extracurricular activities: Sports/Technical/Cultural = 30 points

Administrative participation: Welfare/Institute/Hostel/Department = 40 points

Academic/Research participation: Academic score/Awards, publications etc = 30 points

- 2) To encourage participation and avoid confusion amongst students and scorers, all eligible entries are now listed in the application form under general guidelines (last 02 pages of application form). This would allow streamlined participation and fare scoring. Only listed items would be considered for scoring as per given list.
- 3) Scope of earlier "Publications" head has now been broadened to "Publications/Patents/Conference/Awards/Start-Up". This is to encourage student participation and rewarding students under each newly included activity.

- 4) Scores for activities under Hostel, Department, Publications and Awards is now increased from current 05 points to 10 each. This is to encourage respective activities and fairly count the efforts of students under the each mentioned heads.
- 5) Under boards "Technical/Sports/Cultural" grading is now solely based on performance i.e. winning prizes in any of the listed events. Various important fresh activities are also now introduced. Further, selected administrative efforts by students (e.g. leadership in club activities, Alcheringa Techniche etc., member participating in inter-IIT event) are now rewarded under "Institute" head under each well defined subheading.
- 6) Scores under each category/activity were weighed across other categories based on efforts contributed, time devoted by student, difficulty levels etc. for fair evaluation. Example, inter IIT/outside event prizes are given higher scores than intra level activities.
- 7) Some of the previously marked activities e.g. green & peer to peer are now merged into existing board/club activities (e.g. Technical board-Prakriti club & Welfare board respectively) for better clarity and avoiding redundant grading.
- 8) Under Hostel, joint sec HAB, member HMC are now introduced to recognize the students' efforts with fair grading.
- 9) Under welfare board, student participation under various social welfare activities are now encouraged with competitive scores.
- 10) As tie breaker for candidate with same marks, the current prevalent rules will be followed i.e. DOB/JEE rank etc.

The above deliberations emerged in the form of (1) revised score sheet (ANNEXURE- I) and (2) revised application form (ANNEXURE-II). Both the documents are now attached for your kind reference.

The same is placed for your kind consideration.

With kind regards,



Prof. Biman B Mandal
(ADOAA-UG and Chairman, Review Committee)

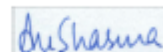
Endorsements for committee members:



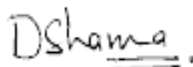
ADOAA-UG



Chairman, Technical



Chairman, Cultural



Chairman, Sports



Chairperson, Welfare



Chairman, HAB

ANNEXURE-5

APPLICATION FOR NOMINATION OF DR. SHANKAR DAYAL SHARMA GOLD MEDAL
(To be Filled by Final Year BTech/BDes Student and Recommended by the Department)

Instruction to Students:

1. Enclose/mail your resume to this application.
2. Email the scanned copy the certificate for each of the achievement mentioned in the application to HoD. The concerned HoD/Faculty coordinator will verify the respective columns of the applications. Please properly name the certificate attached as per the heading. For example, if you are attaching your achievement in sport you may name the file as "Roll Number_Sports". For multiple certificate related to sports you can make a single combined PDF and name it as "Roll Number_Sports" and zip it (for large files).
3. Restrict your inputs to listed items only (see page 4-5 for guidance). Others entries than listed will not be considered.

1. Name of the student (in capital letters)			
2. Roll No.		3. Department	
4. Discipline			
5. Cumulative Performance Index (CPI) [Maximum 20 Points] (Students with final CPI 7.5 or more are eligible)			
(a) Current CPI		(b) Final CPI	(To be filled by Academic Section)

To be filled by student			To be filled by Faculty		
Position held / Achievement		Period	Copy of Certificate Attached Yes/No	Certificate is attached[Yes/No]	
I. Achievements in Sports [Maximum 10 Points]					
1.					
2.					
3.					
4.					
5.					
II. Achievements in Cultural Activities [Maximum 10 Points]					
1.					
2.					
3.					
4.					
5.					

Signature of the student

Signature of the DUPC Secretary/Faculty nominated by HoD

Date:

Date:

To be filled by student				To be filled by Faculty
Position held / Achievement	Period	Copy of Certificate Attached Yes/No	Certificate is attached[Yes/No]	
III. Achievements in Technical Activities [Maximum 10 Points]				
1.				
2.				
3.				
4.				
5.				
IV. Welfare Activities [Maximum 10 Points]				
1.				
2.				
3.				
4.				
5.				
V. Leadership (Institute Level) [Maximum 10 Points]				
1.				
2.				
3.				
4.				
5.				
VI. Leadership (Hostel Level) [Maximum 10 Points]				
1.				
2.				
3.				
4.				
5.				

Signature of the student

Signature of the DUPC Secretary/Faculty nominated by HoD

Date:

Date:

To be filled by student				To be filled by Faculty	
Position held / Achievement		Period	Copy of Certificate Attached Yes/No	Certificate is attached[Yes/No]	
VII. Leadership (Departmental Level) [Maximum 10 Points]					
1.					
2.					
3.					
4.					
5.					
VIII. Publications/Patent/Conference/Award/Start-up activity (Academic & Research related) [Maximum 10 Points]					
To be filled by student				To be filled by Faculty	
Name of the Author(s)	Title of the Article/Book/Chapter/ Patent/ Conference/ Award/ Start-up etc (with patent award/filing number)	Details of Journal, Volume & Year/ Publishing House and Year for Book/Chapter/ Patent Granting Organization/Conference date and venue/Start-Up registration number etc	Proof/ attachment Enclosed Yes/No	Proof Enclosed/ Verified Yes/No	
1.					
2.					
3.					
4.					
5.					

Signature of the student

Signature of the DUPC Secretary/Faculty nominated by HoD

Date:

Date:

Signature of Head of the Department

Date:

---000---

GUIDE TO THE ELIGIBLE ACTIVITIES FOR AWARD

The following events/items are ONLY considered under each stated category (I-VIII) for grading.
 Please RESTRICT your inputs to the given list as below. Others entries than listed will not be considered.

SPORTS:

Positions/Achievements
Inter IIT Gold
Inter IIT Silver
Inter IIT Bronze
Captain in Inter IIT
SPIRIT Gold (Annual Sports Fest. of IITG)
SPIRIT Silver (Annual Sports Fest. of IITG)
SPIRIT Bronze (Annual Sports Fest. of IITG)
Captain in SPIRIT
Intra IIT Gold (only SPARDHA to be considered)
Intra IIT Silver (only SPARDHA to be considered)
Intra IIT Bronze (only SPARDHA to be considered)
Other Regional Meet (Gold) (outside IITG tournament)
Other Regional Meet (Silver) (outside IITG tournaments)
Other Regional Meet (Bronze) (outside IITG tournaments)
Captain in Other Regional Meet (outside IITG tournaments)

CULTURAL:

Positions/Achievements
Alcheringa (1st prize)
Alcheringa (2nd prize)
Alcheringa (3rd prize)
Manthan (1st prize)
Manthan (2nd prize)
Manthan (3rd prize)
Inter IIT Cultural meet (1st prize)
Inter IIT Cultural meet (2nd prize)
Inter IIT Cultural meet (3rd prize)
Club activities (1st prize)
Club activities (2nd prize)
Club activities (3rd prize)
Other Cultural Festivals (1st prize)
Other Cultural Festivals (2nd prize)
Other Cultural Festivals (3rd prize)

* **Club activities** includes prizes won in the activities organized by all clubs of cultural board and EBSB. Specify the name of the club and event, category and the prize position (1st/2nd/3rd).

* **Prizes in Other Cultural Festivals** excludes all the events listed above where a student/students represented IITG and participated individually/as a team. Specify the name of the event, category and the prize position (1st/2nd/3rd).

WELFARE:

Positions/Achievements
Dept. representative to placement
Peer Mentorship
Leader in organizing welfare activities by welfare board members (e.g. Blood donation camps and other social welfare activities)

TECHNICAL:

Positions/Achievements
Inter IIT Tech Meet (Gold Medal)
Inter IIT Tech Meet (Silver Medal)
Inter IIT Tech Meet (Bronze Medal)
Techniche (1st Prize)
Techniche (2nd Prize)
Techniche (3rd Prize)
Udgam (1st Prize)
Udgam (2nd Prize)
Udgam (3rd Prize)
Prizes in other Technical Activities (International/National Hackathons and workshops through Technical Board)
Kriti (1st Prize)
Kriti (2nd Prize)
Kriti (3rd Prize)
Techevince Prizes

INSTITUTE:

Positions/Achievements
VP
GS
Club Sec
Member in Gymkhana
Club Member
Leader in club activities (excluding Club Sec)
Other Activities like leading team in Alcheringa, Techniche, Inter IIT & Techevince.
Member participating in inter IIT Event (Medal Winners/Captains are excluded)

HOSTEL:

Positions/Achievements
Joint Sec HAB
General Sec Hostel
Other Hostel Sec
Member of HMC

DEPARTMENT:

Positions/Achievements
DUPC Member
Other contributions to Dept. (e.g. volunteer in Research Conclave & Coordinator/Co-Coordinator of Dept clubs etc)

PUBLICATION/ACCOLADES:

Positions/Achievements
International Journal/Book/Chapter/Conference Publications
National Journal/Book/Chapter/Conference Publications
International Conference Presentation
National Conference Presentation
Awards pertaining to Academic/Research activities (International level)
Awards pertaining to Academic/Research activities (National level)
Start-Up Activities (Lead member)
Start-Up Activities (Co-members)
Patents (applied/granted)

SCORE SHEET:

Name:

Roll Number:

Sports Activities (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
Inter IIT Gold	10				
Inter IIT Silver	8				
Inter IIT Bronze	6				
Captain in Inter IIT	4				
SPIRIT Gold (Annual Sports Fest. of IITG)	5				
SPIRIT Silver (Annual Sports Fest. of IITG)	4				
SPIRIT Bronze (Annual Sports Fest. of IITG)	3				
Captain in SPIRIT	1				
Intra IIT Gold (only SPARDHA to be considered)	4				
Intra IIT Silver (only SPARDHA to be considered)	3				
Intra IIT Bronze (only SPARDHA to be considered)	2				
Other Regional Meet (Gold) (outside IITG tournament)	6				
Other Regional Meet (Silver) (outside IITG tournaments)	5				
Other Regional Meet (Bronze) (outside IITG tournaments)	4				
Captain in Other Regional Meet (outside IITG tournaments)	1				

Cultural Activities (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
Alcheringa (1st prize)	10				
Alcheringa (2nd prize)	9				
Alcheringa (3rd prize)	8				
Manthan (1st prize)	7				
Manthan (2nd prize)	6				
Manthan (3rd prize)	5				
Inter IIT Cultural meet (1st prize)	7				
Inter IIT Cultural meet (2nd prize)	6				
Inter IIT Cultural meet (3rd prize)	5				
Club activities (1st prize)	4				
Club activities (2nd prize)	3				
Club activities (3rd prize)	2				
Other Cultural Festivals (1st prize)	7				
Other Cultural Festivals (2nd prize)	6				
Other Cultural Festivals (3rd prize)	5				

Welfare Activities (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
Dept representative to placement	5				
Peer Mentorship	5				
Leader in organising welfare activities by welfare board members (e.g. Blood donation camps and other social welfare activities)	3				

Technical Activities (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
Inter IIT Tech Meet (Gold Medal)	8				
Inter IIT Tech Meet (Silver Medal)	7				
Inter IIT Tech Meet (Bronze Medal)	6				
Techniche (1st Prize)	6				
Techniche (2nd Prize)	5				
Techniche (3rd Prize)	4				
Udgam (1st Prize)	6				
Udgam (2nd Prize)	5				
Udgam (3rd Prize)	4				
Prizes in other Technical Activities (International/National Hackathons and workshops through Technical Board)	5				
Kriti (1st Prize)	4				
Kriti (2nd Prize)	3				
Kriti (3rd Prize)	2				
Techevince Prizes	3				

Institute Level (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
VP	9				
GS	6				
Club Sec	4				
Member in Gymkhana	2				
Club Member	1				
Leader in club activities (excluding Club Sec)	2				
Other activities like leading team in Alcheringa, Techniche, Inter IIT & Techevince.	2				
Member participating in inter IIT event (Winners/Captains are excluded)	1				

Hostel Level (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
Joint Sec HAB	5				
General Sec Hostel	4				
Other Hostel Sec	3				
Member of HMC	2				

Department Level (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
DUPC Member	3				
Other contribution to Dept. (e.g. volunteer in Research Conclave & Coordinator/Co-Coordinator of Dept clubs)	2				

Publications/Patents/Conference/Awards/Start-Up (Academic/Research Related) (10 marks)

Positions/Achievements	Points	First Time	Second Time	Third time	Fourth time
International Journal/Book/Chapter/Conference Publications	5				
National Journal/Book/Chapter/Conference Publications	4				
International Conference Presentation	3				
National Conference Presentation	2				
Awards pertaining to Academic/Research activities (INTERNATIONAL level)	5				
Awards pertaining to Academic/Research activities (NATIONAL level)	4				
Start-Up Activities (Lead member)	5				
Start-Up Activities (Co-members)	4				
Patents (applied/granted)	5				

ANNEXURE-6

As per the Minutes of the 113th IPPC held on 30th August 2021, as per R.113/4/2021 the Dept. Of HSS is resubmitting the Revised proposal to introduce MA (Liberal Arts) programme in the Dept. of HSS.

In the same meeting under Item 4 the proposal was discussed and while approving the proposal in principle for placing it to the Senate, the Department was recommended to submit a revised proposal by incorporating the inputs of the IPPC.

Revisions suggested:

- 1) Benefit to the Department and Faculty members (Answer highlighted in yellow in the proposal copy in page 4)

Ans: The programme would not only benefit a wide variety of young minds in achieving their potential to become responsible, wise and humane future citizens, it will also enable the faculty of the humanities disciplines in the Department of Humanities and Social Sciences to broaden their teaching and research horizons and foster interdisciplinary output. Both student and teacher are liable to be enriched in various ways through the proposed programme. In designing and executing the programme, the departmental faculty will be able to express their academic creativity in a new kind of student engagement. They will be able to train students at the postgraduate level more intensively in their own discipline, leading to an enriched and augmented pool of future research scholars. Close mentoring and interaction through project supervision is likely to lead to more long-term engagements in innovative research in the future.

- 2) Eligibility Criteria to be included (Highlighted in yellow in the proposal copy in page 5)

Ans: **Eligibility Criteria**

To apply for admission the candidate must satisfy one of the following criteria:

1. A Bachelor's (10+2+3) degree (major/ honours) or equivalent from a recognized University, in any discipline, with a minimum of either 50% marks or 5.0 CPI in a 10-point scale (a minimum of either 45% marks or 4.5 CPI in a 10-point scale for SC/ ST/ PwD candidates) in major/honours only.
2. Candidates not having major/honours courses, must have the concerned degree with a minimum either 50% aggregate marks or 5.0 CPI in a 10-point scale (a minimum of either 45% aggregate marks or 4.5 CPI in a 10-point scale for SC/ ST/ PwD category candidates).

Aptitude for critical thinking, general inquisitiveness and pleasure in reading, curiosity about the human environment and a strong passion for history and aesthetics is desirable.

Proposed number of seats: 30

Admission process: Written test and personal interview.

3. Research Projects should be just called Projects (Highlighted in Yellow in page 7)

Ans: **Two Projects of 16 credits each.**

4. Credit structure of Projects to be revised(Highlighted in yellow in the proposal copy page no.9)

Ans: Corrected as per suggestion received

- **Project I(0-0-16-16)**

5. To remove MA and PhD courses from the title of List of Electives in page 13.

Ans: Correction done



DRAFT PROPOSAL

**MASTER OF LIBERAL ARTS
(MLA)**

**Department of Humanities and Social Sciences
Indian Institute of Technology Guwahati**

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PREAMBLE

The proposed Master of Arts in Liberal Arts offers a unique combination of training in theoretical-abstract thinking and its real-life implications. Critical thinking forms the cornerstone of this programme, and students will be trained to think independently and openly about issues that affect their lives. By engaging in meaningful cross-disciplinary and multidisciplinary conversations, students will learn to make informed judgments and choices, while also remaining aware of their ethical implications. The challenges faced by humanity and the planet today require a holistic approach, lateral thinking abilities and non-traditional problem-solving skills in the future citizens of the world. Our program will help students to be creative with the skill sets they acquire and to address real-life problems. The programme will also offer opportunities for interested learners to engage with digital technology and methodology, to think critically about technological paradigms and to apply digital tools in critical humanities research in praxis-based projects.

Liberal arts programmes have mostly been the prerogative of elite undergraduate education internationally. In those models, students go through general education in core courses in their first two years of college education followed by two more years of specialized education in their chosen major discipline. Select private Indian universities, including Ashoka University and Krea University have been offering undergraduate programs in liberal arts/liberal arts and sciences where they generally follow the US model. While we do take inspiration from the US model, we do not aim to replicate it since that would entail squeezing a four-year model into a two-year programme. Our programme has been designed keeping in mind the current models of undergraduate education in the humanities in India. Students who would choose our programmewould have already acquired three years of discipline-specific education in their respective undergraduate curricula. This master's programme will train them in general liberal arts education and expand their horizon

of disciplinary knowledge so that they can make informed and innovative choices in their future careers.

In this connection we wish to note that some American institutions, such as Stanford University and New York University, offer post-graduate degrees in the liberal arts. These programmes, however, are generally part-time and offered to working professionals in industry who wish to enhance their critical and theoretical competence in the arts and humanities. While we welcome students from industry and all other backgrounds, we emphasize that our programme would be full-time and as academically rigorous as any comparable regular master's program offered in the IIT system.

The programme would not only benefit a wide variety of young minds in achieving their potential to become responsible, wise and humane future citizens, it will also enable the faculty of the humanities disciplines in the Department of Humanities and Social Sciences to broaden their teaching and research horizons and foster interdisciplinary output. Both student and teacher are liable to be enriched in various ways through the proposed programme. In designing and executing the programme, the departmental faculty will be able to express their academic creativity in a new kind of student engagement. They will be able to train students at the postgraduate level more intensively in their own discipline, leading to an enriched and augmented pool of future research scholars. Close mentoring and interaction through project supervision is likely to lead to more long-term engagements in innovative research in the future. Finally, the proposed MA in Liberal Arts will be the first of its kind in North East India and will be crucial in securing a place for the region in the liberal arts higher education map.

Career Outcomes

This programme will equip students to explore a wide range of career opportunities in government and private sectors and international organizations. It may also enable them to forge innovative non-traditional career paths in intersectional fields. Following are some of the areas in which our students may find suitable positions:

- Higher education
- Teaching
- Indian civil service/UPSC recruitment
- Journalism
- The museum and art galleries sector
- Digital humanities and heritage preservation projects
- Arts administration
- Publishing
- Non-governmental organizations
- National and international think tanks
- Information technology
- Consulting, UN Programs

Eligibility Criteria

To apply for admission the candidate must satisfy one of the following criteria:

1. A Bachelor's (10+2+3) degree (major/ honours) or equivalent from a recognized University, in any discipline, with a minimum of either 50% marks or 5.0 CPI in a 10-point scale (a minimum of either 45% marks or 4.5 CPI in a 10-point scale for SC/ ST/ PwD candidates) in major/honours only.
2. Candidates not having major/honours courses, must have the concerned degree with a minimum either 50% aggregate marks or 5.0 CPI in a 10-point scale (a minimum of either 45% aggregate marks or 4.5 CPI in a 10-point scale for SC/ ST/ PwD category candidates).

Aptitude for critical thinking, general inquisitiveness and pleasure in reading, curiosity about the human environment and a strong passion for history and aesthetics is desirable.

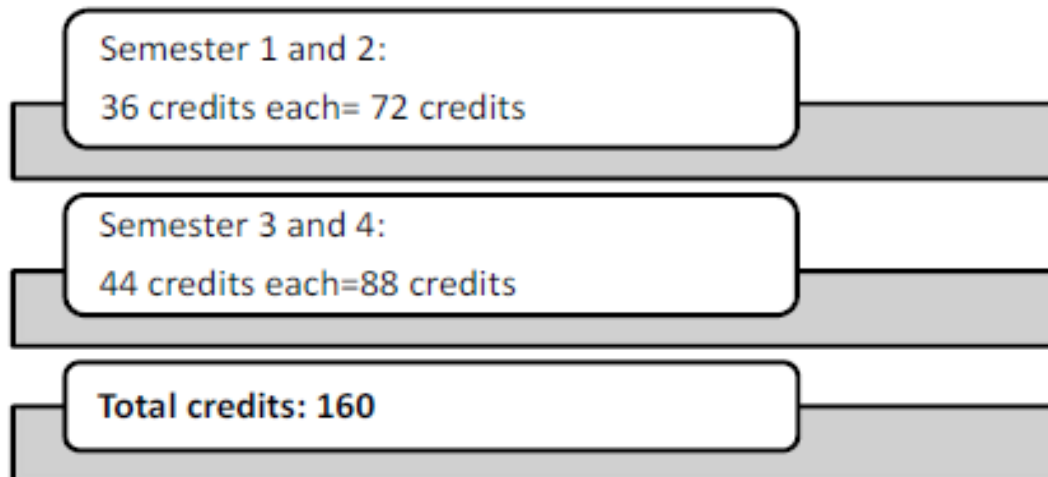
Proposed number of seats: 30

Admission process: Written test and personal interview.

LIBERAL ARTS FACULTY GROUP MEMBERS

1. Prof. Sukanya Sharma (Head and Professor, Archaeology)
2. Prof. RohiniMokashiPunekar (English)
3. Prof. PrabhuVenkataraman (Philosophy)
4. Prof. Liza Das (English)
5. Prof. Shakuntala Mahanta (Linguistics)
6. Dr. Pahi Saikia (Associate Professor, Political Science)
7. Dr Mithilesh Kumar Jha (Assistant Professor, Political Science)
8. Dr Debapriya Basu (Assistant Professor, English)
9. Dr Kiran Keshavamurthy (Assistant Professor, English)
10. Dr Vipul Datta (Assistant Professor, History)
11. Dr Abhishek Kashyap (Philosophy)
12. Dr. Prasad Khanolkar (Geography)
13. Prof. Priyankoo Sarma (Linguistics)
14. Dr. Bidisha Som (Linguistics)

COURSE STRUCTURE



Notes on Course Mapping and Distribution

- **10 Core Courses of 8 credits each.**
Apart from the courses offered specifically for MLA (outlined below), it is proposed that some existing MADS core courses may be mapped on to the first 2 semesters of MLA. Suggested courses are incorporated in the Detailed Course Structure table on p. 9 below.
- **8 Elective Courses of 6 credits each.**
It is proposed that MLA electives may be mapped from existing MADS, and BTech Final Year electives, and PhD electives offered by the Department. A list of probable electives is furnished below.
- **Two Projects of 16 credits each.**
It is proposed that instead of a year-long dissertation component, the program will encourage students to explore research

methodologies and applications in a monitored self-learning project in each semester of the final year. This will give students the opportunity to try working with at least two research methodologies or to work on a couple of small hands-on digital humanities or other kinds of humanities projects. Students may also choose to continue the project activity undertaken in Project I in Project II. It is suggested that this practical component may be in the form of fieldwork/ seminars/ projects using humanities computing tools/ any other practical format chosen by the student under faculty supervision. This will optimise students' opportunities to explore interests, apply learning outcomes, use methodological training in real-life situations and acquire specialised skills such as in the operation of digital tools for humanities data analysis. This kind of practical project activity will be relevant training not only for those wishing to go into academics but also for those planning to build non-academic or entrepreneurial careers.

Detailed Course Structure

<p style="text-align: center;"><u>Semester 1 (24+12=36)</u></p> <ul style="list-style-type: none"> • Core 1 (3-1-0-8): HSXXX Introduction to the Liberal Arts • Core 2 (3-1-0-8): HS501 Essentials of Political Theory • Core 3 (3-1-0-8): HS516 Study of Society • Elective 1 (3-0-0-6) • Elective 2 (3-0-0-6) 	<p style="text-align: center;"><u>Semester 2 (24+12=36)</u></p> <ul style="list-style-type: none"> • Core 4(3-1-0-8): HSXXX Introduction to Literary Studies • Core 5 (3-1-0-8): HSXXX Theories and Thinkers: The Concept of Culture • Core 6 (3-1-0-8): HS524 Qualitative Research Methods in Social Sciences • Elective 3 (3-0-0-6) • Elective 4 (3-0-0-6)
<p style="text-align: center;"><u>Semester 3 (16+12+16=44)</u></p> <ul style="list-style-type: none"> • Core 7 (3-1-0-8): HSXXX International Relations and Diplomacy • Core 8 (3-1-0-8): HSXXX Historical Studies • Elective 5 (3-0-0-6) • Elective 6 (3-0-0-6) • Project I(0-0-16-16) 	<p style="text-align: center;"><u>Semester 4 (16+12+16=44)</u></p> <ul style="list-style-type: none"> • Core9 (3-1-0-8): HSXXX Foundational Linguistics • Core 10 (3-1-0-8): HSXXX Cultural Studies II • Elective 7 (3-0-0-6) • Elective 8 (3-0-0-6) • Project II(0-0-16-16)
<p><u>Total Course Credits: 160</u></p>	

LIST OF PROPOSED CORE COURSES (3-0-1-8)
[DETAILED COURSE PROPOSALS ON P. 16 FF]

HSXXX: INTRODUCTION TO THE LIBERAL ARTS

[N.B. This course is proposed as a co-taught initiative. Interested humanities faculty from each stream meets students for 2 weeks minimum, i.e. a minimum of 6 lectures and 2 tutorials, for orientation and evaluation. Readings to be decided by faculty. Please find detailed course preamble and suggested readings below on p. 14]

Envisaged as an orientation to the programme, this course will enable students to engage with the idea of liberal arts studies. Liberal Arts as curriculum and academic programme has a rich and varied history firmly rooted in both Classical Western epistemology and modern Western higher education. From the disciplines delineated by the Greeks for gaining knowledge for its own sake by free citizens (i.e. “free” or “liberal” learning) that came to be called the seven liberal arts comprising the medieval *trivium* (rhetoric, grammar, dialectic) and *quadrivium* (arithmetic, geometry, music, astronomy), to the educational curriculum of Renaissance humanism in Europe, to the liberal education vision in modern day America, liberal studies has reflected the quest by the Western world for the ideal of a “well-rounded” education. This course would place the programme’s philosophy within the history of its genesis and establishment and engage in debates about what it means to acquire a liberal education in our specific place and time. Is there a consensus about what constitutes a well-rounded education across all countries and all peoples and for all time? Can liberal studies be the same in India, and its North Eastern regions, as it is in the United States? What kind of interpretation of the concept of liberal studies can we offer within our own situations and our own institutions? Why is there a contemporary re-turn towards liberal studies in Anglo-American pedagogy, reflected in the LEAP (Liberal Education and America’s Promise) Initiative? What does it mean for each humanities discipline to engage in liberal studies? This course will discuss such issues from within the purview of each stream, offering through such discussions an introduction to fundamental questions of education and interdisciplinarity.

HSXXX: FOUNDATIONAL LINGUISTICS

This course introduces graduate students in liberal arts to the core areas of linguistics: phonetics, phonology, morphology, syntax, semantics and pragmatics, sociolinguistics and historical linguistics and also the fundamental questions, research findings and debates which inform linguistic research in its state-of-the-art form. The course will be focused on data analysis, reasoning, linguistic experimentation and argumentation so as to provide to students with foundational knowledge of linguistics leading to an appreciation of the core ideas which continue to guide the discipline.

HSXXX: INTERNATIONAL RELATIONS AND DIPLOMACY

With growing interdependence, technological advances and the rise of social media, the study of international politics and diplomacy has become an indispensable subject of analysis. The objective of this course is therefore to introduce students to the major concepts, approaches and issues in world politics and contemporary diplomacy. The first part of the course allows students the opportunity to critically debate and discuss the major approaches and ideas that shape international relations. The second part of the course provides an in-depth understanding of the international issues, the processes and outcomes of interactions between states and trans-national actors. This part of the course will enable students to develop critical thinking and understanding of the applicability of major theoretical perspectives to policy responses.

HSXXX: HISTORICAL STUDIES

This course will familiarize students to the fascinating complexity embedded in the debates, trends and methodologies that are shaping cutting edge research and pedagogic outcomes in the historical discipline.

HSXXX: INTRODUCTION TO LITERARY STUDIES

This course will introduce students to the theory and practice of reading literary texts. It will comprise two components: understanding genres and reading literary criticism. The former will require students to read select literary texts in the broad genres of poetry, prose (fiction and non-fiction) and drama and learn to identify their generic characteristics. Important sub genres such as the epic and the novel will be discussed with illustrations. The students' attention will be drawn to the ways in which genres can and do crosspollinate each other to form new hybrids and they will be asked to problematize the notion of genre through the insights gained from the reading. The latter component will consist of modules of major critical thinking about the nature of literary art. The traditions and movements of literary criticism will be historicized, and students would be required to evaluate the texts they are reading in Component I through the lens of the critics they encounter in Component II.

HSXXX: THEORIES AND THINKERS: THE CONCEPT OF CULTURE

The course will allow students to understand the evolution of the concept of “Culture”. Various theoreticians over the years have provided ideas and interpreted culture using new paradigms. As the word is one of the most over used word in the English language the implications of using the word in a varied context needs to be investigated. Students will be introduced to various thinkers, the context in which these thinkers developed the theories and the relevance of allowing the word to evolve further.

HSXXX: CULTURAL STUDIES II

This course will introduce students to the history and evolution of Cultural Studies and some of the major thinkers (Raymond Williams, E.P. Thompson, Richard Hoggart) and debates that constituted Cultural Studies as a multi and interdisciplinary field. Cultural Studies, in its initial phase, drew from British Marxism and later on from various politically engaged practices like semiotics, feminist theory, ethnography, poststructuralism and so on to study the production and circulation of cultural hegemony and agency under certain political, social and economic conditions. The aim of this course will be to examine the ways in which Cultural Studies drew from Marxism while also critiquing orthodox Marxist determinism to draw attention to other aspects of language and ideology to understand the social and political production of cultural phenomena and their relationship to power.

LIST OF POSSIBLE ELECTIVES (3-0-0-6)

Archaeology	Cultural Anthropology (Seminar Course)
Archaeology	Heritage, Identity and Archaeology
Archaeology	Issues in Culture Studies
English	Critical Development Theory
English	Inventing the Truth: The Art and Craft of Autobiography
English	Communication: Technology, Culture and Drama
English	Subaltern Voices and Narratives
English	Masculinities in Literature and Popular Culture
English	Literature and Science Writing
English	The Art of Fiction
English	Criticism: Theory and Application
English	Indian Writing in English
English	Cultural Theory and Interpretation
English	Reading English Women's Literary History, 1500-1800
English	The Material Text and its Other
English	The Novel: Theory and Perspectives
English	The Frankfurt School of Literary Theory and Criticism
Geography	Power, Politics, and Urban Space
Geography	Cinema and the City
Geography	Issues in Geographical Thought and Research
Geography	Critical Geographies
Geography	Feminist Geographies
History	Region, Nation and the Making of Post-Colonial India

History	Gandhi: The Man and His Ideas
History	The Efficacy of Visual Images
History	History of Contemporary India
History	Methods in Historical Research
History	History in Indian Vernaculars
History	Issues in Historical Research
History	Understanding Nations and Nationalism
History	Writing History of Art: Theory and Methods
Linguistics	Writing Systems of the World
Linguistics	Perspectives in Linguistics
Linguistics	Cognitive Linguistics: Theories and Methods
Linguistics	Research Methods in Linguistics
Philosophy	Philosophy of Science
Philosophy	Philosophical Issues
Philosophy	Philosophies of India
Philosophy	Contemporary Studies in Philosophy (Seminar)
Philosophy	Introduction to Western Philosophy
Philosophy	Philosophy of Religion
Philosophy	Issues in Applied Ethics: A multicultural Approach
Political Science	Transnationalism and Migration: Issues of Development
Political Science	Peace and Conflict Resolution
Political Science	Political Participation in Developing Asia
Political Science	Modern Political and Social Imaginaries

Political Science	India-s Northeast: A Panoramic Perspective
Political Science	Topics in International Relations
Political Science	Research Methods in Political Science
Political Science	Key Texts in Modern Indian Political Thought

PROPOSED CORE COURSE CURRICULUM

HSXXX INTRODUCTION TO LIBERAL STUDIES (3-1-0-8)

**Indian Institute of Technology Guwahati
Proposal for a New Course**

Course Number & Title: Introduction to Liberal Studies
L-T-P-C: 3-1-0-8
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: MLA/MLS
Offered in (Odd/ Even / Any): Any
Offered by (Name of Department/ Center): HSS
Pre-Requisite: None
Preamble / Objectives (Optional): Envisaged as an orientation to the programme, this course will enable students to engage with the idea of liberal arts studies. Liberal Arts as curriculum and academic programme has a rich and varied history firmly rooted in both Classical Western epistemology and modern Western higher education. From the disciplines delineated by the Greeks for gaining knowledge for its own sake (i.e. "free" or "liberal" learning) that came to be called the seven liberal arts comprising the medieval <i>trivium</i> (rhetoric, grammar, dialectic) and <i>quadrivium</i> (arithmetic, geometry, music, astronomy), to the educational curriculum of Renaissance humanism in Europe, to the liberal education vision in modern day America, liberal studies has reflected the quest by the Western world for the ideal of a "well-rounded" education. This course would place the programme's philosophy within the history of its genesis and establishment and engage in debates about what it means to acquire a liberal education in our specific place and time. Is there a consensus about what constitutes a well-rounded education across all countries and all peoples and for all time? Can liberal studies be the same in India, and its North Eastern regions, as it is in the United States? What kind of interpretation of the concept of liberal studies can we offer within our own situations and our own institutions? Why is there a contemporary re-tum towards liberal studies in Anglo-American pedagogy, reflected in the LEAP (Liberal Education and America's Promise) Initiative? What does it mean for each humanities discipline to engage in liberal studies? This course will discuss such issues from within the purview of each stream, offering through such discussions an introduction to fundamental questions of education and interdisciplinarity.

Course Content/ Syllabus (as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(,). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity,)

Philosophy of liberal arts; history of liberal arts; literary studies as a liberal art; liberal arts and politics; language studies and the liberal arts

In case of texts, too, concerned faculty will bring their own readings to the table, but a few suggestions are given below:

Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".

Texts: (Format: Authors, *Book Title in Italics font*, Volume/Series, Edition Number, Publisher, Year.)

1.

References: (Format: Authors, *Book Title in Italics font*, Volume/Series, Edition Number, Publisher, Year.)

1. Anthony Grafton and Lisa Jardine, *From Humanism to the Humanities: The Institutionalizing of the Liberal Arts in Fifteenth- and Sixteenth-century Europe*, Harvard University Press, 1987.
2. Caroline Winterer, *The Culture of Classicism: Ancient Greece and Rome in American Intellectual Life, 1780–1910*, Johns Hopkins University Press, 2002.
3. Blaich, Charles, Anne Bost, Ed Chan, and Richard Lynch, "Defining Liberal Arts Education," Center of Inquiry in the Liberal Arts, 2004.
4. *College Learning for the New Global Century: A Report From the National Leadership Council for Liberal Education and America's Promise*, Washington: Association of American Colleges and Universities, 2007. The LEAP Initiative Reports, available at https://www.gsw.edu/Assets/LEAP/files/College_Learning_for_the_New_Global_Century.pdf
5. Hugh, of St Victor, Jerome Taylor trans., *The Didascalion of Hugh St Victor: A Medieval Guide to the Arts*, Columbia University Press, 1991.
6. James V. Schall, *Another Sort of Learning: Selected Contrary Essays on How to Acquire an Education While Still in College or Anywhere Else*, Ignatius Press, 2011.
7. George D. Kuh et al, *High Impact Educational Practices: What they are, who has access to them, and why they Matter*, Washington: Association of American Colleges and Universities, 2008. The LEAP Initiative Reports, available at https://www.gsw.edu/Assets/LEAP/files/High-Impact_Educational_Practices.pdf

Detailed Course Content (Optional)		
It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1		
2		
3		
4		
5		

Total Number of Lectures =	
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In case of revision of existing course, Please provide below the details of existing course. EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

HSXXX INTERNATIONAL RELATIONS AND DIPLOMACY (3-1-0-8)
Indian Institute of Technology Guwahati
Proposal for a New Course

Course Number & Title: International Relations and Diplomacy
L-T-P-C: 3-1-0-8
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: MA Liberal Arts
Offered in (Odd/ Even / Any): Any
Offered by (Name of Department/ Center): HSS
Pre-Requisite: None
Preamble / Objectives (Optional): <p>With growing interdependence, technological advances and the rise of social media, the study of international politics and diplomacy has become an indispensable subject of analysis. The objective of this course is therefore to introduce students to the major concepts, approaches and issues in world politics and contemporary diplomacy. The first part of the course allows students the opportunity to critically debate and discuss the major approaches and ideas that shape international relations. The second part of the course provides an in-depth understanding of the international issues, the processes and outcomes of interactions between states and trans-national actors. This part of the course will enable students to develop critical thinking and understanding of the applicability of major theoretical perspectives to policy responses.</p>
Course Content/ Syllabus (as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(,). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity,) <p>IR approaches: realism, neo-realism, liberalism, institutionalism and constructivism; Conflict and crisis: balance of power, nuclear weapons, proliferation and disarmament; border disputes; Security issues: national security, military security, insurgencies, human security; Diplomacy: political diplomacy, diplomatic culture, norms and public diplomacy; Prevention of conflict: democratic peace research, gender and peace making, negotiations, multilateral efforts, regional organizations.</p>
Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".
Texts: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)
1.
References: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)

1.	Kenneth N. Waltz, <i>Man, the State and War: A Theoretical Analysis</i> , Columbia University Press, 1959
2.	Trevor C. Salmon, ed., <i>Issues in International Relations</i> , London: Routledge, 1999.
3.	Peter J. Katzenstein, Robert O. Keohane and Stephen D. Krasner, eds., <i>Exploration and Contestation in the Study of World Politics</i> , Cambridge: MIT Press, 1999.
4.	Margaret E. Keck and Kathryn Sikkink, <i>Activists Beyond Borders</i> . Ithaca, NY: Cornell UP, 1998.
5.	Cynthia Enloe, <i>Bananas, Beaches and Bases: Making Feminist Sense of International Politics</i> , Second Edition, Berkeley: University of California Press, 2014.
6.	Nuno P. Monteiro, <i>Theory of Unipolar Politics</i> , Cambridge: Cambridge University Press, 2014.
7.	Baylis and Smith, <i>The Globalization of World Politics</i> .

Detailed Course Content (Optional) It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1		
2		
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Total Number of Lectures =		

In case of revision of existing course, Please provide below the details of existing course. EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

HSXXX HISTORICAL STUDIES (3-1-0-8)

**Indian Institute of Technology Guwahati
Proposal for a New Course / Revision of a Course**

Course Number & Title: Studies in History	
L-T-P-C: 3-1-0-8	
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades	
Kind of Proposal (New Course / Revision of Existing Course): New Course	
Offered as (Compulsory / Elective): Compulsory	
Offered to: MA	
Offered in (Odd/ Even / Any): Any	
Offered by (Name of Department/ Center): HSS	
Pre-Requisite:	
Preamble / Objectives (Optional): This course will familiarize students to the fascinating complexity embedded in the debates, trends and methodologies that are shaping cutting edge research and pedagogic outcomes in the historical discipline.	
Course Content/ Syllabus (as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(.). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity,) Why Historical Studies? An Introduction; Art and History: How to See the Past and the Present?; Archives of Artistic Practices; Art, History, and the Anthropocene; Approaches to International Diplomatic History writing; Events, Wars and Historical Documentation; Global History and Historiography; Access to Historical Resources internationally: Archiving, Sources and Resources	
Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".	
Texts: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	White, Hayden, <i>The Content of the Form: Narrative Discourse and Historical Representation</i> , Baltimore: Johns Hopkins University Press, c1987.
2.	Koselleck, Reinhart, <i>Futures Past: On the Semantics of Historical Time</i> ; translated by Keith Tribe, Cambridge, Mass.: MIT Press, c1985.
3.	Kubler, George, <i>The Shape of Time: Remarks on the History of Things</i> , New Haven: Yale University Press, 1962.
4.	Preziosi, Donald, <i>The Art of Art History: A Critical Anthology</i> , Oxford: Oxford University Press, 2009.

5	Nardi,Isabella, <i>The Theory of Citrasūtras in Indian Painting: A Critical Re-evaluation of their Uses and Interpretations</i> , London; New York: Routledge, 2006.
6	Chakrabarty, Dipesh. <i>The Climate of History in a Planetary Age</i> , Chicago: The University of Chicago Press, 2021.
7	Mirzoeff, Nicholas, "Visualizing the Anthropocene," <i>Public Culture</i> (2014) 26 (2 (73)): 213–232. doi.org/10.1215/08992363-2392039
8	Trachtenberg, Marc, <i>The Craft of International History: A Guide to Method</i> , ISBN 9781400827237, Princeton University Press, 2006.
9	Berger, S., H Feldner, K Passmore, <i>Writing History: Theory and Practice</i> , ISBN 9780340975152, Bloomsbury Academic, 2010
10	Gaddis, John L., <i>The Landscape of History: How Historians Map the Past</i> , ISBN 978019517157, Oxford University Press, 2002.
11	Taylor, A. J. P., <i>The Origins of the Second World War</i> , Penguin, 2001, 9780140136722
References: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	

Detailed Course Content (Optional) It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1		
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Total Number of Lectures =		

In case of revision of existing course, Please provide below the details of existing course.
EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

**HSXXX THEORIES AND THINKERS: THE CONCEPT OF CULTURE
(3-1-0-8)**

**Indian Institute of Technology Guwahati
Proposal for a New Course**

Course Number & Title: Theories and Thinkers: The Concept of Culture
L-T-P-C: 3-1-0-8
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: MA Liberal Arts
Offered in (Odd/ Even / Any): Any
Offered by (Name of Department/ Center): HSS
Pre-Requisite: None
Preamble / Objectives (Optional): The Course will allow students to understand the evolution of the concept of "Culture". Various theoreticians over the years have provided ideas and interpreted culture using new paradigms. As the word is one of the most over used word in English language the implications of using the word in varied context needs to be investigated. Students will be introduced to various thinkers, the context in which these thinkers developed the theories and the relevance of allowing the word to evolve further.
Course Content/ Syllabus (as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(.). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity,) Edward B Tylor: the complex whole; Raymond Williams: Culture and Society; Stuart Hall: reception theory; Foucault: Power and Social Change; HomiBhaba :Locations of Culture, Commitment to theory; James Clifford: Twentieth Century Ethnography; Clifford Geertz: Symbolic Anthropology; Textualising culture, Landscape as culturalproduct; Disappearing People; Sacred Ecology.
Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".
Texts: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)
1.
References: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)
1. H.K.Bhaba: <i>The Location of Culture</i> , Routledge, 2006.
2. D.Morley and C. Kuan-Hsing (ed.) <i>Stuart Hall Critical Dialogues in Cultural Studies</i> , Routledge, 2006.
3. Geertz, C. <i>The Interpretation of Cultures</i> . New York: Basic Books 1973.
4. Hall, Stuart. <i>Representation: cultural representations and signifying practices</i> . London Thousand Oaks, California: Sage in association with the Open University 1997.

5.	WilliamsRaymnd. <i>Culture and Society</i> (New ed.). New York: Columbia University Press. 1963.
6.	Brower Barbara (Editor), Barbara Rose Johnston (Editor). <i>Disappearing Peoples?: Indigenous Groups and Ethnic Minorities in South and Central Asia</i> . New York: Routledge 2016.
7.	BerkesFikret. <i>Sacred Ecology</i> . New York: Routledge 2012

Detailed Course Content (Optional)		
It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
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5		
Total Number of Lectures =		

In case of revision of existing course, Please provide below the details of existing course. EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

HSXXX: CULTURAL STUDIES II (3-1-0-8)

**Indian Institute of Technology Guwahati
Proposal for a New Course**

Course Number & Title: Cultural Studies II
L-T-P-C: 3-1-0-8
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: MLA/MLS
Offered in (Odd/ Even / Any): Any
Offered by (Name of Department/ Center): HSS
Pre-Requisite: None
Preamble / Objectives (Optional): This course will introduce students to the history and evolution of Cultural Studies and some of the major thinkers (Raymond Williams, E.P. Thompson, Richard Hoggart) and debates that constituted Cultural Studies as a multi and interdisciplinary field. Cultural Studies, in its initial phase, drew from British Marxism and later on from various politically engaged practices like semiotics, feminist theory, ethnography, poststructuralism and so on to study the production and circulation of cultural hegemony and agency under certain political, social and economic conditions. The aim of this course will be to examine the ways in which Cultural Studies drew from Marxism while also critiquing orthodox Marxist determinism to draw attention to other aspects of language and ideology to understand the social and political production of cultural phenomena and their relationship to power.
Course Content/ Syllabus (as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(,). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity,) The history and evolution of Cultural Studies; Richard Hoggart: responses to the loss of an authentic working class culture; denunciations of mass culture; Raymond Williams: Gramsci and the Marxist critique of art and culture, cultural materialism; E.P Thompson: working class consciousness and the humanistic principles of democratic socialism.
Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".

Texts: (Format: Authors, <i>Book Title in Italic font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	Richard Hoggart, <i>Uses of Literacy: aspects of working class life</i> , Penguin Classics, 2009.
2.	Raymond Williams, <i>Culture and Society, 1780-1950</i> , Vintage Classics, 2017.
3.	E. P Thompson, <i>The Making of the English Working Class</i> , 2013
References: (Format: Authors, <i>Book Title in Italic font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	Chris Barker (ed.), <i>Making Sense of Cultural Studies: Central Problems and Critical Debates</i> , Sage Publications. 2002.
2.	Simon During (ed.), <i>The Cultural Studies Reader</i> , 2nd edition, Routledge, 2003.
3.	John Storey (ed.), <i>What is Cultural Studies: a reader?</i> , Arnold, 1996.
4.	David Oswell, <i>Cultural and Society: an introduction to Cultural Studies</i> , Sage, 2007.
5.	Stuart Hill & David Morley, <i>Essential Essays, Volume 1: Foundations of Cultural Studies</i> , Duke University Press, 2019.
6.	Stuart Hall, <i>Cultural Studies 1983: A Theoretical History</i> , Duke University Press, 2016.

Detailed Course Content (Optional) It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1		
2		
3		
4		
5		
Total Number of Lectures =		

In case of revision of existing course, Please provide below the details of existing course. EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

.....

HSXXX: INTRODUCTION TO LITERARY STUDIES (3-1-0-8)

**Indian Institute of Technology Guwahati
Proposal for a New Course**

Course Number & Title: Introduction to Literary Studies
L-T-P-C: 3-1-0-8
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: MLA/MLS
Offered in (Odd/ Even / Any): Any
Offered by (Name of Department/ Center): HSS
Pre-Requisite: None
Preamble / Objectives (Optional): <p>This course will introduce students to the theory and practice of reading literary texts. It will comprise two components: understanding genres and reading literary criticism. The former will require students to read select literary texts in the broad genres of poetry, prose (fiction and non-fiction) and drama and learn to identify their generic characteristics. Important sub genres such as the epic and the novel will be discussed with illustrations. The students' attention will be drawn to the ways in which genres can and do crosspollinate each other to form new hybrids and they will be asked to problematize the notion of genre through the insights gained from the reading. The latter component will consist of modules of major critical thinking about the nature of literary art. The traditions and movements of literary criticism will be historicized, and students would be required to evaluate the texts they are reading in Component I through the lens of the critics they encounter in Component II. The course contents will focus upon English literature since readings of a selection of Anglophone world literature are offered as electives.</p>
Course Content/ Syllabus (as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(.). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity,) <p>Component I: idea of the canon and characteristics of genres: epic, lyric, ballad, sonnet, play, essay, novel, short story; readings of select literary texts by genre.</p> <p>Component II: Thinkers: Plato, Aristotle, Horace, Sir Philip Sidney, John Dryden, Samuel Johnson, Immanuel Kant, Friedrich von Schiller, William Wordsworth, Samuel Taylor Coleridge, Percy Bysshe Shelley, Georg Wilhelm Friedrich Hegel, Karl Marx, Sigmund Freud, Matthew Arnold, Friedrich Nietzsche, T. S. Eliot, Mikhail Bakhtin, Virginia Woolf, Edmund Wilson, F. R. Leavis, Northop Frye, Erich Auerbach,</p>

Hans-Georg Gadamar, Victor Shklovsky, Gerard Genette, Jacques Derrida, Michel Foucault, Roland Barthes, Wolfgang Iser, Jacques Lacan, Walter Benjamin, Georg Lukacs, Terry Eagleton, Raymond Williams, Fredric Jameson, Pierre Bourdieu, Edward W. Said, Stephen Greenblatt, Nancy Armstrong, Homi K. Bhabha. Ideas and movements: Mimesis, Structuralism, The Intentional Fallacy, New Criticism, Cultural Materialism, Deconstruction, Postmodernism, Post-structuralism.	
Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".)	
Texts: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	Daniel Defoe, <i>Robinson Crusoe</i> (1719).
2.	Charles Dickens, <i>Great Expectations</i> (1861).
3.	James Joyce, <i>Ulysses</i> (1922).
4.	Toni Morrison, <i>Beloved</i> (1987).
5.	Selections from Margaret Ferguson et al., <i>The Norton Anthology of Poetry</i> , W. W. Norton & Company, 5 th Edition, 2005.
6.	Selections from J. Ellen Gainor et al., <i>The Norton Anthology of Drama</i> , W. W. Norton & Company, 2010.
7.	Selections from Richard Bausch and R. V. Cassill eds., <i>The Norton Anthology of Short Fiction</i> , W. W. Norton & Company, 2005.
8.	Selections from Francis Bacon, <i>The Essays</i> , Penguin Classics, 1985.
9.	Selections from M. H. Abrams, <i>Doing Things with Texts: Essays in Criticism and Critical Theory</i> , W. W. Norton & Company, 1991.
10.	Selections from David H. Richter (ed.) <i>The Critical Tradition: Classic Texts and Contemporary Trends</i> , St. Martin's Press, 2016.
References: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	William Empson, <i>Seven Types of Ambiguity</i> , 1947.
2.	Leonardo Malcovati, <i>Prosody in England and Elsewhere: A Comparative Approach</i> , Gival Press, 2006.
3.	John Hollander, <i>Rhyme's Reason: A Guide to English Verse</i> , Yale University Press, 1981.
4.	John Lennard, <i>The Poetry Handbook</i> , OUP, 2006.
5.	Ian Watt, <i>The Rise of the Novel</i> , Bodley Head, 2015.
6.	Terry Eagleton, <i>Literary Theory: An Introduction</i> , Wiley-Blackwell, 2008.
7.	Vincent B. Leitch et al., <i>The Norton Anthology of Theory and Criticism</i> , W. W. Norton & Company, 2010.
8.	M. H. Abrams, <i>The Mirror and the Lamp: Romantic Theory and the Critical Tradition</i> (1953), OUP, 1953.
9.	Eric Auerbach, <i>Mimesis: The Representation of Reality in Western Literature - New and Expanded Edition</i> , Princeton University Press, 2013.

Detailed Course Content (Optional)		
It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1		
2		

3		
4		
5		
Total Number of Lectures =		

In case of revision of existing course, Please provide below the details of existing course. EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

HSXXX: FOUNDATIONAL LINGUISTICS (3-1-0-8)

**Indian Institute of Technology Guwahati
Proposal for a New Course / Revision of a Course**

Course Number & Title: Foundational Linguistics	
L-T-P-C: 3-1-0-8	
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades	
Kind of Proposal (New Course / Revision of Existing Course): New Course	
Offered as (Compulsory / Elective): Compulsory	
Offered to: MA	
Offered in (Odd/ Even / Any): Any	
Offered by (Name of Department/ Center): HSS	
Pre-Requisite: --	
Preamble / Objectives (Optional): This course introduces graduate students in liberal arts to the core areas of linguistics: phonetics, phonology, morphology, syntax, semantics and pragmatics, sociolinguistics and historical linguistics and also the fundamental questions, research findings and debates which inform linguistic research in its state-of-the-art form. The course will be focused on data analysis, reasoning, linguistic experimentation and argumentation so as to provide to students with foundational knowledge of linguistics leading to an appreciation of the core ideas which continue to guide the discipline.	
Course Content/ Syllabus (<i>as a single paragraph if it is not containing more than one subject. Sub-topics/ Sections may be separated by commas(.). Topics may be separated by Semi-Colons(;). Chapters may be separated by Full-Stop(.). While starting with broad heading, it may be indicated with Colon symbol before the topics. For example: Multi-variable Calculus: Limits of functions, Continuity,</i>) What is linguistics?; History of the field: Saussure, Sapir, Bloomfield, American structuralism versus the Prague School; Main subfields: phonetics, phonology, morphology, syntax, semantics and sociolinguistics; other cross-disciplinary areas: psycholinguistics, neurolinguistics, computational linguistics. Current theoretical models: Generative linguistics, Optimality Theory, cognitive linguistics, HPSG	
Books (In case UG compulsory courses, please give it as "Text books" and "Reference books". Otherwise give it as "References".	
Texts: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1.	O'Grady, William, John Archibald, et al., <i>Contemporary Linguistics: An Introduction</i> , 8th ed. Bedford/St. Martin's, 2015, ISBN: 9780312618513.

2.	
3.	
References: (Format: Authors, <i>Book Title in Italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	

Detailed Course Content (Optional) It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1		
2		
3		
4		
5		
Total Number of Lectures =		

In case of revision of existing course, Please provide below the details of existing course.	
EXISTING COURSE	
Course Number, Title, L-T-P-C:	
Pre-Requisite (if any)	
Contents:	
References:	

ANNEXURE-7



Indian Institute of Technology Guwahati
Department of Chemical Engineering

NOTE SHEET

Date: 06-09-2021

With reference to the suggestions made during the 113th IPPC meeting on new M.Tech. specialization (**Computational Chemical Engineering**), the department has made the following revisions. The DPPC members have deliberated and agreed upon on the revised proposal. It has already been discussed in the faculty meeting and approved.

Revisions are:

- (1) **Name of the program:** Computer Aided Process Engineering (CAPE)
- (2) **Number of seats: 15.** (This 15 seats are within the allotted seats for M.Tech. (CL), including the existing specializations of Material Science and Technology (MST) and Petroleum Science of Technology (PST).


The revised seat distribution would be: MST: 30, PST: 30, CAPE: 15.


The detailed revised proposal is given in the annexure.

This is placed for the approval.

ADoAA-PG

→


Prof. Anugrah Singh
(HoD)


Prof. Ashok Kumar Dasmahapatra
(DPPC Secretary)

Annexure

Draft Proposal for M Tech in Chemical Engineering

Specialization: Computer Aided Process Engineering, (CAPE)

Preamble: The fourth industrial revolution, Industry 4.0 emphasises upon accelerated decision making, optimising processes, maximising profits while minimising risks in a sustainable manner through digital transformation. This requires proficiency of human resources skilled in terms of development of new computer models and utilisation of existing computational tools. The models in the chemical industry vary over a range of time and length scales. While the design of a new process or optimisation of an existing process may require the use of atomistic modelling at the molecular scale, the design and analysis of the equipment require continuum modelling of mass, heat and momentum transport simultaneously. Further, the efficient process design, operation and control requires a system-level modelling approach. Needless to convey, tools such as artificial intelligence (AI) and machine learning (ML) along with statistical pedagogies provide newer horizons to tackle and solve complex problems. The proposed postgraduate programme aims to train students in the development of physics-based mathematical models, computational methods to solve the models, data analysis, and exposure to the industry-standard modelling tools through a blend of theoretical and practical relevant soft skills and project-based curriculum.

Eligibility Criteria: Same as for the existing specializations of Petroleum Science and Technology (PST)/ Material Science and Technology (MST)

No. of seats: 15 (This would be within the approved 75 seats for MTech, CL. The revised seats of MST and PST specialization is proposed to be 30 each.)

Semester wise course structure:

Semester I						Semester II					
Course	Course Name	L	T	P	C	Course	Course Name	L	T	P	C
CL501	Advanced Transport Phenomena	3	0	0	6	CL503	Advanced Thermodynamics	3	0	0	6
CL502	Computer Aided Numerical Methods	2	1	2	8	CL504	Advanced Reaction Engineering	3	0	0	6
CL645	Applied Statistics for Chemical Engineers [#]	3	0	0	6	CL6xx	Applications of Artificial Intelligence and Machine Learning in Chemical Engineering*	2	0	2	6
CL6xx	Process Modelling & Simulation Laboratory*	0	0	3	3	CL6xx	Multiscale Modelling and Simulation*	2	0	2	6
CL6xx	Elective – I	3	0	0	6	CL6xx	Elective – II	3	0	0	6
						CL599	Scientific Communications	0	0	2	2
Total Credits		11	1	5	29	Total Credits		13	0	6	32
Semester III						Semester IV					
CL698	Project – I	0	0	24	24	CL699	Project – II	0	0	24	24

Credit structure of different specializations:

	Total Credits in		
	Semester I	Semester II	Semester I & II
PST	32 (1 Elective)	29 (1 Lab + 1 Elective)	61
MST	26 (1 Lab + 1 Elective)	32 (1 Elective)	58
CAPE	29 (1 Lab + 1 Elective)	32 (2 Lab (part of theory) + 1 Elective)	61

Note:

- (i) CL501, CL502, CL503, CL504 and CL599 are common with MST and PST, and existing course.
- (ii) [#]CL645: existing elective course.
- (iii) *Newly Proposed Courses, Electives for B.Tech, M.Tech and Ph.D. Detailed syllabus are attached.
- (iv) Elective – I and II can be taken from the existing elective courses.

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Indian Institute of Technology Guwahati
Department of Chemical Engineering

M.Tech in Chemical Engineering (Specialization: Petroleum Science and Technology)

Semester - 1					Semester - 2												
Course	Course Name	L	T	P	C	Course	Course Name	L	T	P	C						
CL 501	Advanced Transport Phenomena	3	0	0	6	CL 503	Advanced Thermodynamics	3	0	0	6						
CL 502	Computer Aided Numerical Methods	2	1	2	8	CL 504	Advanced Reaction Engineering	3	0	0	6						
CL 511	Petroleum Reservoir Engineering	3	0	0	6	CL 598	Petroleum Laboratory	0	0	3	3						
CL 512	Petroleum Refinery Engineering	3	0	0	6	CL 505	Petroleum Production Engineering	3	0	0	6						
CL 6XX	Elective I	3	0	0	6	CL 599	Scientific Communications	0	0	2	2						
						CL 6XX	Elective II	3	0	0	6						
Total Credits					14	1	2	32	Total Credits					12	0	5	29
Semester - 3					Semester - 4												
Course	Course Name	L	T	P	C	Course	Course Name	L	T	P	C						
CL 698	Project I	0	0	24	24	CL 699	Project II	0	0	24	24						
Total Credits					0	0	24	24	Total Credits					0	0	24	24

M.Tech in Chemical Engineering (Specialization: Materials Science and Technology)

Semester - 1					Semester - 2												
Course	Course Name	L	T	P	C	Course	Course Name	L	T	P	C						
CL 501	Advanced Transport Phenomena	3	0	0	6	CL 503	Advanced Thermodynamics	3	0	0	6						
CL 502	Computer Aided Numerical Methods	2	1	2	8	CL 504	Advanced Reaction Engineering	3	0	0	6						
CL 513	Characterization of Materials	2	0	2	6	CL 514	Fundamentals of Material Science & Engineering	3	0	0	6						
CL 6XX	Elective I	3	0	0	6	CL 506	Smart Materials	3	0	0	6						
						CL 599	Scientific Communications	0	0	2	2						
						CL 6XX	Elective II	3	0	0	6						
Total Credits					10	1	4	26	Total Credits					15	0	2	32
Semester - 3					Semester - 4												
Course	Course Name	L	T	P	C	Course	Course Name	L	T	P	C						
CL 698	Project I	0	0	24	24	CL 699	Project II	0	0	24	24						
Total Credits					0	0	24	24	Total Credits					0	0	24	24

This is an already approved course. It has been included here for easy reference.

Course Number & Title: Applied Statistics for Chemical Engineers	
L-T-P-C: 3-0-0-6	
Type of Letter Grading (Regular Letter Grades/PP or NP Letter Grades): Regular Letter Grades	
Kind of Proposal (New Course/Revision of Existing Course): New Course	
Offered as (Compulsory/Elective): Elective	
Offered to: 4th year B. Tech, M. Tech, and Ph.D. students	
Offered in (Odd/Even/Any): Any	
Offered by (Name of Department/Center): Chemical Engineering	
Pre-Requisite: Nil	
Preamble/Objectives (Optional): A sound knowledge of statistics is essential for a chemical engineer. It is required in the applications such as curve fitting, stochastic modeling and optimization, and quality control. Conventional courses on mathematics and numerical methods do not cover this subject. In addition, a good exposure to the use of software (such as MATLAB®, MINITAB®, and Design-Expert®) for the statistical computations is essential. This course attempts to fulfill these requirements.	
Course Content/Syllabus:	
Probability theory. Random variables. Variation plots. Probability distributions. Sampling and estimation theories. Hypothesis testing. Curve fitting. Analysis of variance. Stochastic modeling and simulation: random walk, Bernoulli, Wiener, Poisson, Markov, Martingale, Lévy, and point processes, and Monte Carlo simulation. Statistical quality control: statistical process control and capability analysis, and design of experiments (e.g., factorial and response–surface methods). Artificial intelligence. Use of software (e.g., MATLAB®, MINITAB®, and Design-Expert®) for the solution of chemical engineering problems (e.g., chemical kinetics, process calculations, transport processes, process control, etc.).	
References:	
1.	M. R. Spiegel, J. J. Schiller, R. A. Srinivasan, and D. Goswami, <i>Probability and Statistics</i> , McGraw-Hill Education, 2017.
2.	W. Volk, <i>Applied Statistics for Engineers</i> , Literary Licensing, 2013.
3.	D. C. Montgomery, <i>Statistical Quality Control</i> , Wiley, 2015.
4.	P. Mathews, <i>Design of Experiments with MINITAB</i> , New Age International, 2010.
5.	N. G. Van Kampen, <i>Stochastic Processes in Physics and Chemistry</i> , North Holland, 2007.
6.	M. Pinsky and S. Karlin, <i>An Introduction to Stochastic Modeling</i> , Academic Press, 2011.

akmx
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Indian Institute of Technology Guwahati
Proposal for a New Course

Course Number & Title: CL6xx Applications of Artificial Intelligence and Machine Learning in Chemical Engineering	
L-T-P-C: 2-0-2-6	
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular	
Kind of Proposal (New Course / Revision of Existing Course): New Course	
Offered as (Compulsory / Elective): Compulsory for M.Tech (Specialization: Computer Aided Process Engineering), Elective for B.Tech, M.Tech., and Ph.D.	
Offered to: B.Tech., M.Tech., Ph.D.,	
Offered in (Odd/ Even / Any): Even	
Offered by (Name of Department/ Center): Chemical Engineering	
Pre-Requisite: Nil	
Course Content/Syllabus: Introduction to Artificial Intelligence (AI) and Machine Learning (ML); Types of learning problems: Supervised, Unsupervised, Semi-supervised; Overview of optimization techniques; Introduction to software tools used in AI & ML; Solving problems in Chemical Engineering (like decision support system, process control, modeling and simulation) applying rule-based AI & ML tools and lifecycle: (i) Data preprocessing: Data visualization, Outlier detection, & Smoothing techniques, Data scaling (Need for Scaling – Scale invariance, Standardization, Normalization), Dimensionality reduction, Feature extraction, selection (ii) Model Evaluation & identification: Performance metrics, analysis, Model selection, Hybrid cross-Validation methods (iii) Model development: (a) Classification – (Logistic regression, Naive Bayes classifier, K-nearest neighbors, Support vector machines, Decision trees, Random forests, Boosting), (b) Regression – (Linear regression – simple, multiple, Kernel, Regression analysis, Box-Jenkins models (ARMA, ARIMA), Neural Network).	
References: (Format: Authors, <i>Book Title in Italic font</i>, Volume/Series, Edition Number, Publisher, Year.)	
1	Hastie, T., Tibshirani, R., Friedman, J.H., <i>The Elements of Statistical Learning Data Mining, Inference, and Prediction</i> , Second Edition, Springer, 2009
2	Abu-Mostafa, Y.S., Magdon-Ismael, M., Hsuan-Tsin, L., <i>Learning from Data</i> . AMLBook, 2012
3	Bishop, C., <i>Pattern Recognition and Machine Learning</i> . Springer-Verlag, 2006
4	Gareth, J., Witten, D., Hastie. T., Tibshirani, R., <i>An Introduction to Statistical Learning with Applications in R</i> , Springer-Verlag, 2013
5	Müller, A. C., Gudio, S., <i>Introduction to Machine Learning with Python</i> , O'Reilly Media, Inc., 2016
6.	Shalev-Shwartz, S. and Ben-David, S., <i>Understanding Machine Learning: From Theory to Algorithms</i> , Cambridge University Press., 2014




**Indian Institute of Technology Guwahati
Proposal for a New Course**

Course Number & Title: CL 6XX: Process Modelling & Simulation Laboratory	
L-T-P-C: 0-0-3-3	
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular	
Kind of Proposal (New Course / Revision of Existing Course): New Course	
Offered as (Compulsory / Elective): Compulsory for M.Tech (Specialization: Computer Aided Process Engineering), Elective for B.Tech, M.Tech., and Ph.D.	
Offered to: B.Tech., M.Tech., Ph.D.	
Offered in (Odd/ Even / Any): Odd	
Offered by (Name of Department / Center): Chemical Engineering	
Pre-Requisite: Nil	
<p>Preamble: Chemical Processes often has complex model structure with various units working in tandem and hence synchronized. Therefore, a large equation set becomes invariable owing to both the nature and number of components. Further the operating conditions such as temperature and pressure becomes a challenging task due to the involvement of several complex processes in an industrial plant. To address these challenges, process flow sheet simulators are necessary in the gambit of chemical engineering. The current laboratory course shall demonstrate and offer a step by step tutorial with respect to simulation, optimisation and dynamics of such processes in commercial or generic simulators.</p>	
<p>Course Content/Syllabus: Fundamental concepts of mathematical models in chemical processes; Dynamic Simulation of chemical units including flash drum, binary distillation, continuous stirred tank reactor, plug flow reactor, petroleum refining column, heat exchanger, absorption tower and reactive distillation etc; Pipeline system design; Economic and sensitivity analysis; Design of various chemical processes.</p>	
References: (Format: Authors, <i>Book Title in Italic font</i> , Volume/Series, Edition Number, Publisher, Year)	
1	Kamal I. M., Al-Malah, <i>Aspen Plus: Chemical Engineering Applications</i> , Wiley, 2016
2	Amiya K. J., <i>Process Simulation and Control Using Aspen</i> , Second Edition, Prentice Hall India, 2012
3	Bequette, B., <i>Process Dynamics: Modeling, Analysis and Simulation</i> , Second Edition, Prentice Hall, 2003
4	Foo, D. C. Y., <i>Chemical Engineering Process Simulation</i> , First Edition, Elsevier, 2017
5	Luyben, W., <i>Process Modelling, Simulation and Control for Chemical Engineers</i> , Second Edition, McGraw-Hill, 1989

**Indian Institute of Technology Guwahati
Proposal for a New Course**

Course Number & Title: CL 6XX: Multiscale Modelling and Simulation	
L-T-P-C: 2-0-2-6	
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular	
Kind of Proposal (New Course / Revision of Existing Course): New Course	
Offered as (Compulsory / Elective): Compulsory to M.Tech (Specialization: Computer Aided Process Engineering), Elective for B.Tech., M.Tech and Ph.D.	
Offered to: B.Tech., M.Tech., Ph.D.	
Offered in (Odd/ Even / Any): Even	
Offered by (Name of Department / Center): Chemical Engineering	
Pre-Requisite: Nil	
Preamble: With a rapid rise in the computational power and therefore in computational techniques, it has now become possible to model the transport processes in process equipment for their design, analysis and troubleshooting. In this course, the students will learn the use of computational fluid dynamics to understand flow, heat and mass transport in process equipment. The students will also learn to apply molecular simulation techniques to study systems at an atomistic level and calculate thermodynamic and transport properties.	
Course Content/Syllabus: Governing equations and boundary conditions: Mass, momentum, and energy transport, Introduction to typical CFD workflow: geometry creation/cleaning, generating structured and unstructured mesh, grid independence, discretization techniques (finite volume method), solution techniques, post processing to calculate variables of engineering interest. CFD in Chemical engineering applications. Introduction to turbulence modelling, introduction to models for multiphase and reacting flows. Basic statistical mechanics, ensembles, interactions and force fields, periodic boundary condition and minimum image convention, molecular visualization, geometry optimization, Monte Carlo method, Monte Carlo simulation in various ensembles, molecular dynamics simulations, equations of motion and integration algorithms, calculation of thermodynamic, structural and transport properties. Applications in gas adsorption and separation, phase equilibria and other applications in energy and environmental sciences.	
References: (Format: Authors, <i>Book Title in italics font</i> , Volume/Series, Edition Number, Publisher, Year.)	
1	Patankar, S. V., <i>Numerical Fluid Flow and Heat Transfer</i> , CRC Press, 1980
2	Ranade, V., <i>Computational Flow Modeling for Chemical Reactor Engineering</i> , First Edition, Academic Press, 2001.
3	Frenkel, D., Smit, B., <i>Understanding Molecular Simulation: From Algorithms to Applications</i> , Second Edition, Academic Press, 2001.
4	Leach, A.R., <i>Molecular Modelling: Principles and Applications</i> , Second Edition, Pearson, 2001.
5	Versteeg, H. K., and Malalasekara, W., <i>An Introduction to Computational Fluid Dynamics: The Finite Volume Method</i> , Second Edition, Pearson, 2007
6	Allen, M. P., and Tildesley, D. J., <i>Computer Simulation of Liquids</i> , Second Edition, Oxford, 2017

ANNEXURE-8

ANNEXURE 157/17

INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

Transcript

Photo

NAME:
ROLL NUMBER:
PROGRAMME:
DISCIPLINE:
DEPARTMENT:
SUPERVISOR:

DATE OF ADMISSION:

COURSE WORK:

Semester I: Monsoon/Winter Semester of AY YYYY-YY

Course Code	Course Name	Cr.	Gr.
SPI = 8.23		CPI = 8.23	

Semester II: Monsoon/Winter Semester of AY YYYY-YY

Course Code	Course Name	Cr.	Gr.
SPI = 8.5		CPI = 8.41	

Date of Successful Completion of Comprehensive Examination:

Date of Successful Completion of State-of-the-Art Seminar:

Date of Successful Completion of Synopsis Seminar:

THESIS:

Title of the Thesis:

Date of Submission of Thesis:

Date of Viva Voce:

STATUS OF THE PROGRAMME:

Date:

Joint Registrar (Academic)

Guidelines for Preparation of Transcript

PROGRAMME: If a student is admitted in PhD programme, "Doctor of Philosophy" will be written. In case of Dual Degree, the programme name in Full will be written. For Joint Degree programme with other Institute or University, the details will be mentioned.

DEPARTMENT: If a student is admitted in a Centre or School it will be replaced with the appropriate entity. In this document, the term "dept" indicates, a department or a similar entity, such as a school or an academic centre.

DISCIPLINE: This is an optional field in the transcript. It is not the choice of a student but of it is of a dept. If a dept does not want it, it will not reflect in the transcript. Each dept may propose a list of broad disciplines (not the area of research), e.g., Statistics, Computer Science, Electrical Engineering, Organic Chemistry, Biology, etc., including the choice of "Interdisciplinary" in which the thesis is submitted. A department specific list needs an approval of the Senate and can be updated from time to time with an approval of the Senate.

SUPERVISOR: The name of each supervisor shall only be prefixed with "Dr." irrespective of the designation and followed by the affiliation of supervisor, i.e., the department and the organization. If there are more than one supervisor, the filed name will be written as "SUPERVISORS". The order of the list will be as per the order in the respective forms, recommended by DC and DPPC.

COURSE WORK: The courses credited and audited will be listed in the respective semesters during the course work. If the course work is exempted, it will be mentioned along with the reason.

COMPREHENSIVE EXAMINATION/STATE OF THE ART SEMINAR/SYNOPSIS SEMINAR: The dates of successful completion of the respective items will be mentioned. That is, for each item, the date of approval of the competent authority will be reflected on the transcript.

THESIS: Final title of the thesis will be reflected in the transcript. Only the date of first submission of the thesis will be mentioned, even if the thesis had to undergo certain revisions and resubmitted. The transcript will not reflect any information on resubmissions or the details of external examiners. The final date of successful completion of viva voce will be mentioned; in this case, it is the actual date on which the student faced the viva voce will be mentioned, upon the approval of competent authority.

STATUS OF THE PROGRAMME: If a student successfully completes the Viva Voce, the status will be "Complete". Otherwise, "Incomplete" – in this case, only those items that are completed up to the given point of time will be available in the transcript.



[Roll No.]

भारतीय प्रौद्योगिकी संस्थान गुवाहाटी

विद्या परिषद की अनुमति पर
विद्या वाचस्पति की उपाधि

[Student Name in Hindi]

को इस उपाधि के प्रदान हेतु विनियम विहित अपेक्षाएँ [Month of Completion in Hindi]
[Year of Completion] में सफलतापूर्वक पूर्ण करने पर प्रदान करता है।
भारतीय गणराज्य के अंतर्गत गुवाहाटी में आज xx [Month in Hindi] [Year in Hindi] को
संस्थान की यह उपाधि प्रदान की गई।

INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

upon the recommendation of the Senate hereby confers the degree of

Doctor of Philosophy

on

[Student Name in English]

who has successfully completed in अपेक्षाएँ [Month of Completion in English]
[Year of Completion], the requirements prescribed under the regulations for the
award of this degree.

Given this day, under the seal of the Institute at Guwahati in the Republic of India,
the xxth day of [Month], [Year].

Thesis Title : [XXXXX XXXX XXXX]

निदेशक एवं
अध्यक्ष, विद्या परिषद
Director and
Chairman, Senate

कुलसचिव
Registrar

अध्यक्ष,
शान्ति मंडल
Chairman,
Board of Governors

ANNEXURE-12

Internal Transfer Policy for the Non-Teaching Officers and Staffs (both Technical & Non-Technical) of IIT Guwahati

1. Name of the Policy:

The Policy shall be known as "Internal Transfer Policy of the Non-Teaching officers and Staffs (both Technical & Non-Technical) of IIT Guwahati".

Internal Transfer means transferring a non-teaching officer or staff from one section/ cell/ department/ centre/ school, etc. to another section/ cell/ department/ centre/ school, etc.

2. To whom Applicable:

This Policy is applicable to all regular Non-Teaching employees of the Institute excluding employees of the following cadre:

- i. Engineering Cadre
- ii. Library & Information Cadre
- iii. Security Cadre
- iv. Medical Cadre
- v. Official Language Cadre
- vi. Physical education, Training & Coach/ Trainers Cadre
- vii. Driver Cadre
- viii. Miscellaneous/ Isolated Posts Cadre

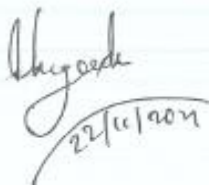
However, if possible, the employees of the above mentioned excluded cadre may be rotated within the Section in every 3 (three) years by changing their job responsibilities.

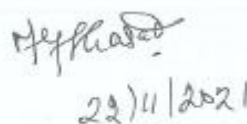
3. Authority Competent to make Transfer:

The transfer of non-teaching officers and staff shall be proposed by the Registrar and approved by the Director. The transfer order will be issued by the Registrar.

4. Transfer policy of the Registry Cadre and Non-Technical Group B & C employees:

Group-A Officers under Registry Cadre and Non-Technical Group B & C employees shall be transferred from one section/ department/centre/ school to the other


22/11/2021


22/11/2021


22/11/2021

section/ department/ centre/ school on a regular time interval. The maximum period of upto they can be posted in once place of posting is as under:

Category of employees	Maximum Tenure
Group A Officers	5 years
Group B & C employees	7 years

5. Transfer policy of Officers and staff members of Technical Cadre:

The Officers and Staff Members of the Technical Cadre shall be transferred from one department/ centre/ school to another department/ centre/ school depending upon

- i. Nature of work and work responsibility
- ii. Expertise

In such case, the maximum tenure in one place of posting shall be as under

Category of employees	Maximum Tenure
Group A Officers	5 years
Group B & C employees	7 years

6. Transfer policy of staff members of Accounts Cadre:

The staff members recruited for the Accounts service of the Institute may be rotated between F&A Section and other Sections where there is either the accounts related work is prevailing (like R&D, II&SI section) or there is a requirement of manpower of the accounts cadre (like HAB).

Since scope of rotation of places of the Accounts Cadre is limited, the staff members who are not transferred from F&A Section may be rotated within the Section in every 3 (three) years changing their job responsibilities.

7. Transfer policy of the staff members posted in the GATE/Jam, JEE & CCD Office:

The staff members posted in the GATE/JAM, JEE and CCD office shall be transferred in every two years. However, Competent Authority may exempt transfer of staff of



GATE/ JAM and JEE Office for the year in which IIT Guwahati will be the organising IIT.

8. Exemptions:

- I. Employee of all grades within three years of superannuation are exempted from transfer.
- II. Differently abled employees are exempted from this transfer policy. The Competent Authority will decide transfer/rotation of such employees on case to case basis taking into consideration of their disability, nature of duties, accessibility etc.
- III. Employees having medical issues which restrict an employee to perform certain specific nature of work are exempted from transfer. Such restrictions should be supported by the medical advice from the Institute Doctors.
- IV. Any other employees as decided by the Competent Authority on case to case basis.

9. Other Provisions:

- I. Husband and Wife shall not be posted in the same section/ department/ centre/ school.
- II. Parent and Children shall not be posted in the same section/ department/ centre/ school.
- III. Transfer/ rotation may be implemented in a staggered manner so that the functioning of the sections/ departments is not affected.

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22/12/2021

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ANNEXURE-13

**REPORT OF THE COMMITTEE FOR FINANCIAL UP-GRADATION IN RESPECT OF
DR. SANJIB KR. DEKA, ASSISTANT LIBRARIAN OF IIT GUWAHATI UNDER CAREER
ADVANCEMENT SCHEME (CAS)**

The Competent Authority of the Institute has constituted the following Committee to examine the matter of financial up-gradation under Career Advancement Scheme (CAS) in respect of Dr. Sanjib Kr. Deka, Assistant Librarian of this Institute :

1. Deputy Director, IIT Guwahati
2. Registrar, IIT Guwahati
3. Prof. Sudip Talukdar, Professor, Dept. of Civil Engineering, IIT Guwahati
4. Prof. S.K. Deb, Professor, Dept. of Civil Engineering, IIT Guwahati

The Committee met on 26.11.2021 at 4.30 PM in the Conference Room of the Deputy Director. All the members were present in the meeting.

The Committee examined the matter of financial upgradation in respect of Dr. Sanjib Kr. Deka as per Institute notification bearing reference No. AD/32/98/Vol.17/2821 dated 01.09.2014. The Committee noted that BOG in its 77th meeting held on 12.07.2014 has considered the CAS for the post of Librarian, Deputy Librarian and Assistant Librarian to be regulated as per MHRD order vide No. 1-32/2006-U.II/U.I(i) dated 31.12.2008 and in view of this the AGP of Librarian, Dy. Librarian and Asst. Librarian had been upgraded w.e.f. 12.07.2014.

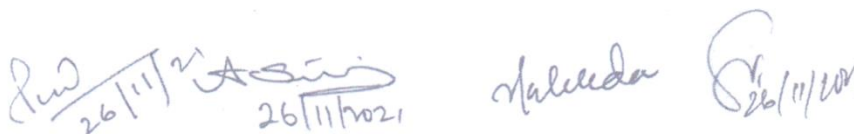
The Committee also noted that as per MHRD letter No. 1-32/2006-U.II/U.I (I) dated 31.12.1008, under Sl. No. 5 (b)(ii) Assistant Librarian/ College Librarian possessing Ph.D. in Library Science at the entry level, after completing service of 4 years in the AGP of Rs.6000, and if otherwise eligible as per guidelines laid down by the UGC shall be eligible for the higher AGP of Rs. 7000 with in the Pay Band of Rs. 15600-39100.

Further, the Committee noted the details regarding date of joining, existing Academic Grade Pay and Academic Qualification in respect of Dr. Sanjib Kr. Deka as below :

Sl. No.	Name of the Assistant Librarian	Date of joining the Institute as Asst. Librarian at AGP 6000	Date of obtaining Ph.D. Degree
01.	Dr. Sanjib Kr. Deka	23.02.2015	20.07.2009

The Committee further noted that Dr. Sanjib Kr. Deka satisfied the educational qualification & experience for financial upgradation under Career Advancement Scheme.

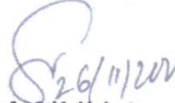
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The block contains four handwritten signatures and dates. From left to right: 1. A signature with the date '26/11/21'. 2. A signature with the date '26/11/2021'. 3. A signature with the name 'Nalanda' and the date '26/11/2021'. 4. A signature with the date '26/11/2021'.


-2-


Therefore, the Committee **RECOMMENDED** granting of financial up-gradation in respect of Dr. Sanjib Kr. Deka from Pay Level 10 to Pay Level 11 under Career Advancement Scheme (CAS) as detailed below.

Name	Present Designation and Pay Matrix Level	Next Eligible Financial up-gradation level (under Career Advancement Scheme)	Date of Eligibility
Dr. Sanjib Kr. Deka	Assistant Librarian Pay Level = 10 (PB3 = ₹15600-39100/-, AGP = ₹6000/- as per 6 th CPC)	Assistant Librarian Pay Level = 11 (PB3 = ₹15600-39100/-, AGP = ₹7000/- as per 6 th CPC)	23.02.2019


26/11/2021
Prof. S.K. Kakoty,
Dy. Director,
IIT Guwahati


26/11/2021
Prof. A. Srinivasan,
Registrar (Interim),
IIT Guwahati


26/11/2021
Prof. Sudip Talukdar,
Professor,
Dept. of CE,
IIT Guwahati


26/11/2021
Prof. S.K. Deb,
Professor,
Dept. of CE,
IIT Guwahati

ANNEXURE-14

**MINUTES
OF
THE 47TH MEETING OF THE FINANCE COMMITTEE OF
INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI HELD ON
14TH JULY 2021 (WEDNESDAY)**

Item No. 8

TO CONSIDER REPLACEMENT OF THE OFFICIAL VEHICLE USED BY THE DIRECTOR:

The official car for the Director of the Institute, Maruti Suzuki Ciaz, was purchased on 02.12.2014. It is more than six and half years old and has run around 71000 km. Many times it has stopped functioning in the middle of the road. Due to its continuous use, the condition of the car has deteriorated over the years and has become a source of constant worry. An agenda for procurement of a vehicle for the Director was placed in the 41st meeting of the finance committee meeting held on 19.08.2019. However, as the Director was holding charge of Chairman, BoG and Finance Committee during that period, he expressed that it should be taken up after the appointment of a new Chairman.

Director is using the vehicle, which is not in good condition, in discharging his official and ex-officio duties. Recently, Director, IIT Guwahati has been entrusted with the additional responsibility of Director, CIT Kokrajhar and he is also Governing Body / BoG members of different Institution in the North East India. Director has to travel extensively by road throughout North East to honour his various such official commitments and also consultancy assignments for North East Frontier railways (NFR), ONGC, Govt. of Assam and many other agencies for technical consultancy projects through IIT Guwahati. It is not safe to use the existing car for long journeys in different terrain due to possible unforeseen technical problems. It is essential that the official car of the Director should be in a good condition vehicle with high ground clearance suitable for all terrains. As such, it is proposed to replace the vehicle used by the Director with a Multi utility vehicle (MUV) through buyback mode. For this purpose, Innova Crysta (made by Toyota) a MUV car is considered to be suitable as it is widely used by different Govt. departments, Institutions, Universities, Public Sector organizations like Indian Oil Corporation for transportation of their higher Officials in the North East. As a preliminary step, price list of the car from a Guwahati based dealer was collected and it was found that cost of the said vehicle will be around ₹21.00 Lakh (Excluding buyback value of the existing vehicle).

The Finance Committee was requested to consider and approve the proposal of purchase of the vehicle through buyback mode as above and recommend to the Board for its Approval. Once approved, a committee will be constituted to do the due diligence and come with clear recommendation following due procedures which will be placed before the Finance Committee of the Institute for sanction of the replacement of the vehicle through buy back mode as above.

The Finance Committee resolved as follows:

Resolution No.: R 47_FC/8/2021:

RESOLVED to recommend to the Board of Governors for approval of replacement of the vehicle used by the Director of the institute through buy-back scheme as proposed.

ANNEXURE-15

Minutes of the Second Meeting for Replacement of the Director's Vehicle on Buy Back Basis

- Committee meeting (Date): 1st Meeting on 21.10.2021
2nd Meeting on 16.11.2021
- Venue: At the Conference Room of the Deputy Director's Office, Admin Building, IIT Guwahati

The second meeting of the committee for replacement of the Directors vehicle was held on 16-11-2021 for deliberating in the matter regarding replacement of the Directors vehicle and the following members were available:

1. Prof. Amaresh Dalal, ADOSA-1 & Professor, Department of Mechanical Engineering
2. Mr. Prakash Hazarika, JR (Administration)
3. Mr. T.T. Haokip, JR (Establishment) - Convenor
4. Jt. Registrar (F & A) or his representative.

As per the conclusions made in the First Meeting, Establishment Section collected quotation from nearby dealer of the Innova Crysta Vehicle and a valuation certificate from a Government Certified Valuer for the buyback value of the existing vehicle i.e. Maruti Ciaz was also collected. Both the valuation certificate and vehicle quotations were opened at the same time and the committee found both the documents to be in order.


The buyback value of Maruti Ciaz as quoted by Government certified valuer is ₹3,00,000 (Rupees Three Lakhs only), whereas the buyback value as submitted by the dealer (Toyota) is ₹3,20,000 (Rupees Three Lakhs Twenty Thousand only).

Initially the dealer (Toyota) had quoted the Vehicle valuation price at ₹3,50,000.00 and RC tax deduction at ₹50,000.00. Later, on telephonic conversation by the committee the dealer has agreed to reduce the value of RC tax deduction to ₹30,000.00. Hence the buyback value of the dealer stands at ₹3,20,000.00 (Rupees three lakh twenty thousand only). i.e. ₹3,50,000.00 (Vehicle valuation price) - ₹30,000.00 (RC Tax deduction).

However, it was also communicated by the dealer that with the passing time, the valuation of the old vehicle may come down and price of the new vehicle may increase, therefore, the matter is to be processed quickly.

Therefore, the Committee recommends to purchase Innova Crysta (Model: ZX, MT pearl white) for an amount of ₹25,52,495.00 (Proforma Invoice No. 688, dated 02.11.2021 is enclosed).

The report of the Committee as above is placed for kind and necessary approval of the Competent Authority.


Prof. Amaresh Dalal


Prakash Hazarika


T.T. Haokip


Dibya Jyoti Goswami

ANNEXURE-16



Quotation

Model City ZXI

Registration No. AS 25 E 6789

Mileage at the time of Evaluation.....

Dear Sir,
We thank you for your car at Toyota U-Trust
As per 203 point check sheet and price Grid of Toyota U-Trust valuation of your car is given below

Only selling price: if you exchange your car	Rs. 3,50,000/-
Add. Exchange Bonus: if you exchange your car	Rs.
Total Exchange Price* of your car	Rs.
* If New Car Model to be purchased.....	

The total price as quoted above is inclusive of all taxes at seller's end which may be applicable.
The Exchange Bonus is applicable only for NEW Car Model.
The Only Selling price valuation given above is valid for seven days or 300 Kms whichever occurs (in the same condition).
The price of your car is subject to condition and mileage at the time of actual sale, re-evaluation if necessary.
Once you accept this offer we will take care of your next new Toyota car buying related need, all under one roof.

Thank you,

Name Nekfhuor Rahman
(U-Trust)
Date 26/11/2021

Dealer Signature

(Customer Signature)

R.C Tax Deduction 30,000/-
Vehicle valuation price 3,20,000/-

Dealer Sales Executive

- Please bring following documents at the time of sales:
- # Original Registration Certificate
 - # Insurance Certificate/cover note
 - # NOC from Finance in case of pre closed loan
 - # Duplicate key/Remote control
 - # Copy of your address proof- Ration Card/Voter I.D. card

ANNEXURE-17

TOYOTA GARGYA AUTOCITY PVT. LTD.
Opp. D. T. O. Belkuchi, Kamrup, NH-37, Guwahati - 781 040
Phone : 1800 123 6670 Fax : 0361-2236623
E-mail : admin@gargyatoyota.com / marketing@gargyatoyota.com
Web : www.gargyatoyota.com

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PROFORMA INVOICE

TO: IIT, Guwahati PI NO. :
ADD: IIT, Guwahati DATE: 02-11-2021

SL.	Product Description	Qty.	Price	Amount
1	Toyota Innova Crysta, ZX, MT. Pearl White	1		23,88,500
2	TCS @ 1%.	1		16,139
3	LOGISTICS CHARGE	1		
4	TOYOTA INSURANCE Premium	1		1,07,005
5	EXTENDED WARRANTY	1		25,878
6	FASTAG	1		
7	REGISTRATION (5 YEARS / 15 YEARS)			
8	ACCESSORIES Floor Mats + Mud Guard, Diamond Bright	1		14,973
GROSS TOTAL				25,52,495

Rupees Twenty Five Lakhs Fifty Two Thousand
Four Hundred Ninety Five Only.

TERMS & CONDITIONS

- + Price and statutory levies prevailing at the time of delivery would be applicable.
- + Formal order with advance payment are as stated: Innova Crysta, Fortuner, Altis 1Lakh, Yaris 50,000, Urban Cruiser, Glanza 10,000 only.
- + Quotation valid for 15 days from the date of issue.
- + Delivery of Vehicles is subject to the right of TKM to change model, specifications and features without prior notice.
- + Force majeure Clause : If delivery is delayed due to unforeseen reason, which is beyond our control, we are not responsible for such delays.
- + Payment : DD/Cheque/Cash/BTGS/NEFT in favour of Gargya Autocity Pvt. Ltd. Payable at Guwahati.
Account Name : M/s Gargya Autocity Pvt. Ltd. name of Bank : State Bank of India
Account Number : 30438176745, IFS Code : SBIN0005240
- + Greencess / Entry Tax / Octroi/other levies will be extra if applicable & has to be born by customer.
- + The Registration of Vehicle and the issues of registration certificate are at the sole discretion of D.T.O. Kamrup (M)
- + All disputes shall be subject to the exclusive territorial jurisdiction of the courts at kamrup (M)

For **Gargya Autocity Pvt. Ltd.**
Authorised Signatory

**SOURCE
BY DEALER**

Customer copy (W) File Copy (M)

Annexure-24

Role and Responsibility of Officials at Different Levels while obtaining Administrative Approval of Work Proposal

Officials	Role and Responsibilities
Initiating Engineer / Section Engineer/etc.	The initiating Engineer should mention the necessity of the work, and a proposal will be prepared. A proposal should contain an estimate. The estimate of the proposed work should contain the rate and quantity along with the total cost of the work. Besides, it must state the basis of the estimate, e.g., based on DSR, market survey/rate analysis, previous approved rates, etc. The initiating engineer should mention the provision of GFR, Institute rules, etc., regarding its implementation steps, such as limited tender, open tender, without competitive bidding, etc., in the proposal.
HOS (IPM)	HoS (IPM) will review the proposal and put his observations. He will recommend and forward the proposal to Dean (IPM)/Associate Dean (IPM).
Dean (IPM)/ Associate Dean (IPM)	Based on the recommendation of HoS (IPM), Dean (IPM)/ Associate Dean (IPM) may take the observations of Internal Audit and Legal Cell as per the rules . For small works, if Dean (IPM)/Associate Dean (IPM) feels that the IA vetting is not necessary, the proposal may directly sent to Dean(RGF) for budget booking.
Internal Audit	Internal Audit to check the proposal and give their observations based on GFR, CVC Guidelines, and rules of the Institute. If the proposal is in order, IA will write: <ul style="list-style-type: none"> • Estimate is in order • Proposal is as per the provisions of GFR • No violation of CVC guidelines has been observed • The proposal is as per the rules of the Institute
Legal Cell	Input of legal cell, if required
Dean (IPM)/ Associate Dean (IPM)	To review the observations of IA, Legal Cell and to take necessary action, if any. If the proposal is in order, the proposal is to be recommended for <ol style="list-style-type: none"> a. budget booking and approval, for proposals require Director/B&WC approval b. budget booking for proposal to be approved by Dean(IPM)/Associate Dean (IPM)
Dean (RGF)	Budget booking and to forward the proposal for approval

ANNEXURE-30



MINUTES

of

**THE 90TH MEETING OF
THE BUILDING & WORKS COMMITTEE
OF
INDIAN INSTITUTE OF TECHNOLOGY
GUWAHATI**

HELD ON

8th December, 2021 (Wednesday) at 3.00 P.M.

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2	Action taken Report on the decision of the 89 th meeting of the Building and Works COMMITTEE of Indian Institute of Technology Guwahati held on 4 th October, 2021.	3
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3	I. Approval of allotment of work for “Outsourcing of Operation & Day-to-day maintenance of the Low Tension DG sets installed in IIT Guwahati Campus”.	3
	II. Approval of Time extension for the work “Construction of 1144 seater Hostel-11 at IITG campus”.	3
4	To consider and approve the estimate for the work “Construction of proposed external staircase (Fire Escape) in Chemistry Department at IITG Campus”.	4
5	To consider and approve the estimate for the work “Repair of depressed road portion between Kameng hostel and Technology Complex in IITG Campus”.	5
6	To consider and approve the estimate for the work “Providing and fixing of old aerator gear box with motors installed in sewerage treatment plant in IIT Guwahati campus”.	6
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8	To consider and approve the allotment of “Comprehensive Annual Operation & maintenance service of sewage treatment system of IIT Guwahati”.	9
9	To consider and approve the allotment of work to the contractors for the “Plantation work done in the IITG campus in the year 2020”.	10
10	To consider and approve the allotment of work to the contractors for the “Plantation of Season flowers at the IITG campus in the year 2020”.	10
11	To consider and approve the allotment of the work “Providing and laying water supply pipeline from view point tank to new ‘F’ type tower at IITG Campus”.	11
12	To consider and approve methodology for AMC of lift of various brands installed at IITG campus and renewal of existing AMC.	12
13	To consider and approve the Deviation and time extension for the work “Construction of 160 units of F-type Residential Quarters at IIT Guwahati Campus.	13
14	To consider and approve the deviation statement and timeline for “Construction of Research Park building in IITG Campus”.	14
15	To consider and approve the time extension for the work “Construction of Academic Complex (phase-VI) – (Block-A) at IIT Guwahati Campus”.	16

16	To consider and approve the time extension for completion of work of “Extension of Academic Complex Phase-V”.	16
17	To consider and approve the extension of time for the work “Water proofing treatment work at Academic Complex in IITG Campus (Group-A and B)”.	17
18	To consider and approve the deviation statement and extension of time for the work “Repairing and renovation of various buildings (Group-E) at IITG campus: Renovation of toilet in academic complex at Core-II, IITG Campus”.	18
19	To consider and approve the deviation statement and extension of time for the work “Repairing and renovation of various buildings (Group-F) at IITG campus: Renovation of toilet in academic complex at Core-III, IITG Campus”.	19
20	To consider and approve the comprehensive consultancy services fees for the work “Construction of Rural Technology Centre at IITG Campus”.	20
21	To consider and advice on posting of new Regional Construction Manager of UPRNNL at IITG Projects.	20
22	To consider and approve the estimate and allotment of the work for “Fault finding and re-laying of underground power 11KV HT & LT cable in the IITG campus”.	21
23	Approval for payment of pending bills of horticulture works done at the IITG campus in the year 2020-21.	22
24	To consider and approve the time extension for the work “Water proofing treatment work for Residential Quarters (A, B, C, D, E & F Type Qtr.) at IITG Campus- Group-B”.	22
25	To consider and Review of progress of major on-going and upcoming projects in the campus.	23
26	<u>Additional Agenda</u>	
i	To consider and advice regarding engagement of Architect consultant for the Mehta family School of Data Science and Artificial Intelligence.	24
ii	To consider and approve the conceptual drawings including plinth area estimate for the Construction of SAMEER (SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING AND RESEARCH) Building at IIT Guwahati Campus.	25
27	Other resolutions taken in the Meeting:	26
28	Annexure: Extract CPWD Manual 2019	28

INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

Minutes of the 90th meeting of the Building and Works Committee (B&WC) of Indian Institute of Technology Guwahati held on 8th December, 2021 (Wednesday) at 3.00 P.M. in the Board Room at Administrative Building, IIT Guwahati.

The Ninetieth Meeting of the Building and Works Committee (B&WC) of the Institute was held on 08.12.2021 (Wednesday) at 3.00 P.M. in the Board Room at Administrative Building, IIT Guwahati and the following members and special invitees were present:

1.	The Director, IIT Guwahati	Chairman
2.	The Deputy Director, IIT Guwahati	Member
3.	Shri Ajoy Chandra Bordoloi Retired Commissioner & Secretary PWD, Govt. of Assam	Member
4.	Shri Kamal Bhuyan Retired Chief General Manager Power Grid Corporation of India	Member
5.	Prof. Sukumar Nandi, Dean, Infrastructure, Planning and Management, IIT Guwahati	Member
7.	Prof. M.K. Bhuyan, Associate Dean, Infrastructure, Planning and Management	Special Invitee
8.	Prof. Rajib Kumar Bhattacharjya Dean, Resource Generation and Finance,	Special Invitee
9.	Prof. Sharad Gokhale Head, Department of Civil Engineering	Special Invitee
10.	Prof. A. Srinivasan The Registrar, IIT Guwahati	Member Secretary

The Chief Engineer, PWD (Building) Assam could not attend the meeting due to his prior engagements and he was granted leave of absence.

The agenda for the day was taken up as below:

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Item No. 1

CONFIRMATION of the minutes of the 89th meeting of the Building and Works Committee of Indian Institute of Technology Guwahati held on 4th October, 2021.

The 88th meeting of the Building and Works Committee of Indian Institute of Technology Guwahati held on 4th October, 2021 and the minutes of 89th meeting were circulated among the members for their comments / observations.

Comment was received from Honourable member Shri Kamal Bhuyan for following items:

- 1) Action taken report of 88th B&WC meeting; Item no-2: 4(II) & 4(III)
- 2) Allotment of the work of Data Centre and supply, installation of modular UPS: Item no 3 (I) & 3 (II).
- 3) Allotment of work of 11/0.433 kv substation work: Item no 3 (III)
- 4) Allotment of work of comprehensive AMC of 1800 TR & 1200 TR: Item no 3 (IV)
- 5) Allotment of work of AMC for Audio-Visual system: Item no 3 (VII)
- 6) Progress review of major on-going work : Item no 8

The advice from Honourable member were discussed and following were noted:

- 1) A certificate from supplier about the current condition to be obtained that major equipment's like generator/ motor are irreparable and needs to be replaced,
- 2) The advice for Data Centre was complied with
- 3) & 4) It was decided that in future efforts should be made for more participation and recorded in the evaluation report. One suggestion was to send the NITs to working organizations for display in their notice boards,
- 5) & 6) Noted for future compliances.

During discussion of the items in Action Taken Report the committee suggested in item no. 10 related to the format of the bill and certification of work and resolved as below:

Reference to item nos. of the Minutes of 89 th B&WC	Suggestion / Advice of the Committee
Item No: 10. Agenda Placed on the Table: i) Certification of Work:	A Committee with following members were constituted for review of bill format and certification of works: i) Shri Kamal Bhuyan, Hon'ble B&WC Member ii) Prof. Rajib Kr. Bhattacharjya, Dean, RGF iii) Shri Nirupam Roy, HoS, IPM Section The Committee report will be places in the next B&WC for discussion and decision.

Accordingly, the resolution, as drafted on the circulated minutes, stands rectified.

The B&WC was requested to consider and confirm the minutes with the above suggestions.

Resolution No : R/90-B&WC/1/2021

Resolved that the minutes of the 89th meeting held on 4th October, 2021 be confirmed and noted with the suggestions.

Item No. 2

Action taken Report on the decision of the 89th meeting of the Building and Works Committee of Indian Institute of Technology Guwahati held on 4th October, 2021.

The Action taken report on the decision of the 89th meeting of the Building and Works Committee of Indian Institute of Technology Guwahati held on 4th October, 2021, were placed before the B&WC.

The B&WC was requested to consider and note.

Resolution No : R/90-B&WC/2/2021

Resolved that the action taken on the decisions of the 89th meeting of the Building and Works Committee of Indian Institute of Technology Guwahati held on 4th October, 2021, be noted with the proposed suggestions.

Item no. 3: Items for ratification

- I. Approval of allotment of work for “Outsourcing of Operation & Day-to-day maintenance of the Low Tension DG sets installed in IIT Guwahati Campus”.**

Dean IPM informed that as approved by the B&WC in its 87th meeting held on 12th November, 2020, AMC for outsourcing of operation & day to day maintenance of the Low Tension DG sets installed in IITG campus was awarded to M/s Garuda Power for a period of one-year w.e.f. 01.11.2020. The AMC contract was expired on 30.10.2021. As per the provisions of the contract, a proposal for renewal of the same was put up for approval of the CA, accordingly Director as Chairman, B&WC approved the renewal of the existing AMC contract for a value of Rs. 55,79,269.00 for a period of one-year w.e.f. 01.11.2021.

Placed for ratification of the approval by the committee.

Resolution No : R/90-B&WC/3(I)/2021

Resolved to ratify the approval of the Director as Chairman B&WC.

- II. Approval of Time extension for the work “Construction of 1144 seater Hostel-11 at IITG campus”.**

It is informed by Dean IPM that the work of Construction of 1144 seater Hostel-11 was allotted to M/s. Badri Rai & Co. vide LOI no. IITG/ENGG/EE(C)-II/14/17/440 dtd.08.12.2014 for a contract value of Rs. Rs.96,65,03,154.00 with a time for completion of 30 months. The stipulated date of completion expired on 23.12.2017. First time extension for completion of the work was granted

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upto 31.12.2019 and afterwards due to covid pandemic situation 2nd extension was granted upto 31.03.2021. The work could not be completed within the extended time by the contractor and requested for further extension of time upto 30.11.2021 vide their letter no. BRC/IITG/BH-11/Com-174 dtd.14.10.2021 mentioning reasons for delay. Now the building work has been completed by the contractor on 31.10.2021 and the external development works has been completed on 30.11.2021. Accordingly, approval for time extension for completion upto 30.11.2021 was taken from the Director as Chairman B&WC.

Placed for ratification of the approval by the committee.

Resolution No : R/90-B&WC/3(II)/2021

- i) The Committee resolved to ratify the approval of the Director as Chairman B&WC,
- ii) The Committee noted that the hostel is 1144 seater. There will be no escalation on materials and labour wages.

Item No.4:

To consider and approve the estimate for the work "Construction of proposed external staircase (Fire Escape) in Chemistry Department at IITG Campus".

It is informed by Dean IPM that, multiple requests have been received from Chemistry Department regarding construction of emergency exit in the extension building of Chemistry Department. Dean IPM further informs that there is no provision of emergency escape route in the building which houses laboratories in all the four floors, where uses and storage of chemicals having fire hazards are involved. In view of the above, it is essential to construct an emergency fire exit staircase. Feasibility has been checked by the IPM Section and architect M/s. Architects Collaborative (who was involved in construction of the building) was requested to provide the drawings and estimate for the fire exit staircase. The detailed estimate ₹ 87,78,709.00 received from the Architect has been checked and found in order.

Method of execution of the work have also been proposed for the works as follows:

It is proposed to take up the work by e-tendering in two bid system through ITI portal www.tenderwizard.com/IITG as follows:

- | | | | |
|-----|--------------------|---|--|
| (a) | Tender amount | : | ₹ 87,78,709.00 |
| (b) | Annual Turn Over | : | Having turn-over from construction works only not less than 30% of the value of work during the immediate last three consecutive years. |
| (c) | Experience in work | : | Shall have experience in execution in similar works for seven years as follows:
One work of value not less than 80% of tendered amount OR two works of each value not less than 60% of the tendered amount OR three works of each |

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value not less than 40% of the tendered amount in Govt./ Semi Govt. department / Govt. Autonomous body during last seven years.

- (d) Time of Completion : 8 (Eight) months.

Placed for approval of the estimate of ₹ 87,78,709.00 along with Administrative approval and recommendation for Financial sanction of Finance Committee for ₹ 96,56,580.00 after considering 10% over the estimate for future deviation and method of tendering of the work.

Resolution No : R/90-B&WC/4/2021

The Committee resolved as follows:

- (i) The staircase should be designed with steel structure and a comparison of cost is to be placed in the next B&WC for decision.

Item No.5:

To consider and approve the estimate for the work "Repair of depressed road portion between Kameng hostel and Technology Complex in IITG Campus".

Dean IPM informs that the portion of the road in between Kameng hostel and Technology complex has been severely depressed due to settlement of the earth filled up at a very initial stage. It has led to the accumulation of surface water due to which movement of traffic/pedestrians' has been seriously hampered. So many complaints have already been received to repair and strengthen the road on an emergency basis. As such it is proposed to strengthen and repair road along with construction of R.C.C box culvert as per the given specification. An estimate amounting to ₹36,65,691.00 based on DSR, 2018 rates with 10% cost Index to bring it to the present level has been prepared.

Method of execution of the work have also been proposed for the works as follows:

It is proposed to take up the work by e-tendering in two bid system through ITI portal www.tenderwizard.com/IITG as follows:

- (a) Tender amount : ₹ 36.66 lakh
- (b) Annual Turn Over : Having turn-over from construction works only not less than 50% of the value of work during the immediate last three consecutive years.

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- (c) Experience in work : Shall have experience in execution Road works completed satisfactorily during the last seven years as follows:
- (i) One work of value not less than 80% of tendered amount, (ii) two works of each value not less than 60% of the tender amount or (iii) three works of each value not less than 40% of the tendered amount in Govt./ Semi Govt department / Autonomous body during last seven years.
- (d) Time of Completion : 3 (months) months.

Placed for approval of the estimate of ₹ 36.66 lakh along with recommendation for Administrative approval and Financial sanction of Finance Committee and method of tendering of the work.

Resolution No : R/90-B&WC/5/2021

The Committee resolved to approve the proposal with following suggestions:

- i) The culvert has to be constructed first and then DBM and BM should be planned at a later date.
- ii) The quality of DBM & BM should be maintained with tight quality supervision.
- iii) The drainage system in the area should be looked into.
- iv) Time of completion will be six months.

Item No.6:

To consider and approve the estimate for the work "Providing and fixing of old aerator gear box with motors installed in sewerage treatment plant in IIT Guwahati campus".

It is informed by Dean IPM that the sewerage treatment plant of capacity of 1.35 MLD in the institute was commissioned and functional in the year 2006. The plant has completed more than 15 years. Now, since commissioning due to wear and tear and time aging, the gear box of the aerator gets frequently damaged, causing the plant not functioning to its full capacity. Although the gear box had been tried to repair several times, it did not last longer. This is frequently causing the sewage treatment plant less functional and occasionally creating unhygienic condition and nuisance in the nearby areas with foul smell. In this regard, to resolve the issue, specialized agencies viz. M/s Greentech Enterprise and M/s Swem Water Tech (India) Pvt Ltd have been contacted. The technical experts from these agencies have already visited the site. Since the existing gear box and motor assembly is older than 15 years, and the same model is now discontinued by OEM and hence not available in the market. As such, it is necessary to replace the existing aerator assembly with new

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one. Accordingly, budgetary quotations from specialized parties have been collected for preparation of the estimate. The estimate amounting to ₹28,80,838.00 has been prepared based on the average rate of the two quotations. Rates of other ancillary items of the estimate have been considered based on DSR'2018 and previously approved rate.

Method of execution of the work have also been proposed for the works as follows:

It is proposed to take up the above work through invitation of e-tender through tenderwizard portal and central public procurement portal as well as in the Institute's website with the following minimum qualifying criteria:

- (a) Tender amount : ₹ 28.80 lacs
- (b) Annual Turn Over : Having turn-over from sewage treatment plant related works only not less than 50% of the value of work during the immediate last three consecutive years
- (c) Experience in work : Shall have experience in execution of works comprising of supply and installation of STP aerator gearbox and motors etc. completed satisfactorily during the last seven years as follows:

One work of value not less than 80% of tendered amount OR two works of each value not less than 60% of the tender amount OR three works of each value not less than 40% of the tendered amount in Govt./Semi Govt. department/ Govt. Autonomous body during last seven years.
- (d) Time of Completion : 06 (Six) months

Placed for approval of the estimate of ₹ ₹ 28.80 lakh along with recommendation for Administrative approval and method of tendering of the work.

Resolution No : R/90-B&WC/6/2021

The Committee NOTED that it is difficult to get vendors for aerator gear box and resolved to approve the estimate and method of execution of work.

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Item No.7:

Inclusion of penalty clause in tender for the upcoming works projects.

(Renamed “Inclusion of Penalty Clause/ Liquidated Damages/ Bonus clause as per CPWD”).

It is informed by Dean IPM that the B&WC in its 87th meeting held on 12.11.2020 has approved the work of (1) Execution of balance work of Research building, Classroom complex and SAC building at IIT Guwahati and (2) Vertical Extension of Annex building of Mechanical Engineering Department at IITG Campus along with the methodology of tendering. Further B&WC in its 88th meeting held on 06.07.2021 advised for modification of the following points in the tenders for the above works:

- a) Minimum turnover should be 50% of the tendered amount: Same has been modified in the NIT as well as in the relevant clause in the Special Conditions of Contract.
- b) Penalty clause should be included for delay in work.

Dean IPM further inform that an indirect penalty clause is already available in existing the tenders and the same is being followed since 2013 as per approval of the 72nd B&WC held on 14.03.2013. As per this clause, if a contractor fails to complete a work as per set out milestones and within the stipulated time, no escalation is payable for materials and POL at all. Any increase in the material & POL component has to be borne by the contractor for the entire contract including extension period for the work. Indirect penalty is thus applicable to the contractor irrespective of reasons for delay. Moreover, escalation is not allowed to contractor after expiry of original stipulated time schedule. However, for the justified extension period escalation is payable only on the labour component with cost index (C.I.) limited to the date of completion as per original stipulated time schedule. Any variation in the C.I. and resultant escalation has to be borne by the contractor.

Earlier to this, a clause of compensation for delay in works & escalation clause was available in tenders upto 2012. Applicability of the clause was never found practicable as there were always several reasons for delay in execution viz. delay in issuance of drawings, delay in release of payment, change in scope of work during execution, non-availability of specialized items locally, proximity of construction to existing building (restriction in working hours), shortage of workmen during festivals/harvest seasons, high rainfall region. Above reasons are not attributable to contractor and time extension becomes inevitable for the works. Also, it was felt difficult to make the clause practically applicable by quantifying any amount of loss as penalty against time overrun and also having possibilities of disputes between Owner & Contractor on imposition leading to Arbitration. In addition to the existing clause, inclusion of another penalty clause will involve two- way penalty. In CPWD tender also only one penalty clause is available in tenders.

In view of the above and as suggested by 88th B&WC it is proposed to include the penalty clause and escalation clause in line of CPWD tender for the upcoming projects by replacing the existing indirect penalty clause cum escalation clause of tender.

The B&WC is requested to consider and approve the proposal for inclusion of penalty clause for liquidated damages in tender for all upcoming works projects.

Resolution No : R/90-B&WC/7/2021

The Committee resolved to approve the item with the following modification:

- i) The title of the work should be modified to "Inclusion of Penalty Clause/ Liquidated Damages/ Bonus clause as per CPWD".
- ii) The clauses will be as followed in CPWD.

Item No. 8:

To consider and approve the allotment of "Comprehensive Annual Operation & maintenance service of sewage treatment system of IIT Guwahati".

Dean IPM informed that as per approval of the 88th B&WC, e-tenders for the work "Comprehensive Annual Operation & maintenance service of sewage treatment system of IIT Guwahati" were invited vide NIT no.: IITG/IPM/NIT/R/2021/20 Dated 03.09.2021 through e-tender. The tender evaluation Committee found that the single bidder has quoted 7.12% above the estimated value, hence, the bidder has been asked for negotiation of their bid vide letter no. IITG/IPM/21-22/L-327(A) Dated: 21.10.2021 and the bidder has agreed to provide discount on Part-B items vide letter no NIL dated 23.10.2021. The tender committee recommended for allotment of the work to the bidder at the negotiated amount of ₹97,29,187.00 Accordingly, after verification from internal audit, it is proposed to allot the work to the lowest bidder at the negotiated amount as below:

Name of Firm	Estimated Amount (₹)	Quoted Amount (₹)	Negotiated Amount (₹)	% above (+)/ below (-) estimate
M/s D. P. Traders	92,82,081.00	99,43,060.00	97,29,187.00	(+) 4.82 %

Placed for approval of the allotment of Comprehensive Annual Operation & maintenance service of sewage treatment system of IIT Guwahati to M/s. D. P. Traders at ₹ 97,29,187.00.

Resolution No : R/90-B&WC/8/2021

The Committee advised to re-negotiate with the contractor for rebate on entire value of the contract, instead of only in part B (variable part). The Committee authorised the Director as Chairman B&WC to allot the work after the negotiation.

Item No. 9:

To consider and approve the allotment of work to the contractors for the “Plantation work done in the IITG campus in the year 2020”.

Prof. Sharad Gokhale, the then Dean IPM briefed the Committee the need of the plantation by engaging local contractors due to the Covid situation prevailing from March 2020 when every thing was closed and movement of public was restricted.

Placed for approval of the ex-facto allotment of work to the two contractors viz, Sri Milan Kakaty and Sri Balen Das as per the revised executed amount of ₹ 3,94,050.00 and ₹ 3,18,440.00 with the stipulated rate considering the disaster issue prevailing at that time.

Resolution No : R/90-B&WC/9/2021

The Committee resolved to approve the plantation done through the following contractors considering the prevailing Covid situation at that time:

- i) Sri Milan Kakaty - ₹ 3,94,050.00
- ii) Sri Balen Das - ₹ 3,18,440.00

Approved as a special case. However, the committee advised that no work shall be undertaken before the issue of Administrative Approval and Expenditure sanction by the competent authority on the basis of estimates framed. Post facto approval can be taken on the grounds of urgency by following the appropriate provision of GFR.

Item No. 10:

To consider and approve the allotment of work to the contractors for the “Plantation of Season flowers at the IITG campus in the year 2020”.

The Committee was briefed by Prof. Sharad Gokhale, the then Dean IPM the need of the season flower plantation by engaging local contractors by the concerned section of IPM/ Engineers due to the Covid situation prevailing from March 2020 when everything was closed and movement of public was restricted. Moreover, there was no outsourced contracts existed at that time due to the expiry of the earlier contracts in the month of March, 2020. It was also not possible to take the tendering works as the administrative offices was closed at that time although the 86th B&WC held on 23rd December, 2019 approved an estimate to follow up the tender. Meanwhile, the campus was in need of certain horticultural activities like cleaning of huge jungles that were first developing during March-November, plantation activities, etc to ensure the engagement of temporary workers as well as maintain physical activities of all. As such under the specific guidance of Government of India/Assam for the disaster issues, the institute decided to do minimum activities through its earlier contractors/supervisors during the COVID-19 pandemic. The campus cleaning works were allotted to them at the approved rate of such work of 86th B&WC held on 23rd December, 2019. Similarly, it was decided to engage them to develop and maintain winter season flower in minimum areas of the campus at the similar approved rate of 86th B&WC held on 23rd December, 2019. Out of all the contractors and supervisors, only M/s. Shree Bhumi Nursery, Dispur, Sri Milan Kakati of Ghoramara,

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North Guwahati and Sri Balen Das of Ghoramara, North Guwahati agreed to do the work and others were reluctant to do due to the financial incapability. Accordingly, M/s. Shree Bhumi Nursery, Sri Milan Kakati and Sri Balen Das were allotted the limited winter season flower plantation works as per the areas stated. After completion of the work, the Institute felt to review the approved rate based the execution and accordingly an analysis has been framed to justify the exact cost according to which the value of work for the individual contractors stands as below-

- i) M/s. Shree Bhumi Nursery-- Area=1200.00 sqm @₹326.00 /sqm=₹3,91,200.00
- ii) Sri Milan Kakati-- Area=792.67 sqm @₹326.00 /sqm=₹2,58,410.00
- iii) Sri Balen Das-- Area=1408.02 sqm @₹326.00 /sqm=₹4,51,015.00.

Placed for approval of the ex-facto allotment of work to the three contractors viz, M/s. Shree Bhumi Nursery, Sri Milan Kakaty and Sri Balen Das as per the executed amount of ₹3,91,200.00, ₹2,58,410.00 and ₹4,51,015.00 for the specific locations of the works considering the situation at that time.

Resolution No : R/90-B&WC/10/2021

The Committee resolved to approve the season flower plantation done through the following contractors considering the prevailing Covid situation at that time:

- i) M/s. Shree Bhumi Nursery - ₹3,91,200.00
- ii) Sri Milan Kakaty - ₹2,58,410.00
- iii) Sri Balen Das - ₹4,51,015.00

Approved as a special case. However, the committee advised that no work shall be undertaken before the issue of administrative approval and expenditure sanction by the competent authority on the basis of estimates framed. Post facto approval can be taken on the grounds of urgency by following the appropriate provision of GFR.

Item No. 11:

To consider and approve the allotment of the work "Providing and laying water supply pipeline from view point tank to new "F" type tower at IITG Campus".

It is informed by Dean IPM that an estimate of ₹ 20,04,550.00 was approved by the competent authority for the work "Providing and laying water supply pipeline from view point tank to new "F" type tower at IITG Campus". Accordingly, tenders were invited in two bid system vide NIT NO: IITG/IPM/ NIT/R/2021/17 Dated 13.07.2021, through e-tendering portal www.tenderwizard.com/IITG. As per NIT the Opening of Techno-Commercial bids was scheduled on 27.08.2021 but due to low response from the bidder the tender Committee proposed to extend the tender till 10.09.2021, which was approved by the Competent Authority. The Techno-Commercial bids were opened on 10.09.2021 where only one bidder has submitted his bid and was found qualified for opening of Price bid. As approved by Competent Authority the price bid of the successful bidder i.e. Sri Narayan Deka was opened on 12.11.2021 and the comparative statement was prepared as stated below:

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Sl. No.	Name of Contractor	Estimated Amount (₹)	Quoted Amount (₹)	% high / low
1	Sri Narayan Deka, Lothia Bagicha, Amingaon	20,04,550.00	21,02,925.00	+4.91%

The Tender Committee recommends to award the work to the Sri Narayan Deka at his quoted amount of ₹ 21,02,925.00.

Placed for approval of the allotment of Providing and laying water supply pipeline from view point tank to new 'F' type tower at IITG Campus to Sri Narayan Deka at ₹ 21,02,925.00.

Resolution No : R/90-B&WC/11/2021

The Committee NOTED that in spite of extension of tender date due to low response, only one bidder participated in the bid and resolved to approve the recommendation of the Tender evaluation committee to allot the work to Sri Narayan Deka at ₹ 21,02,925.00.

Item No. 12:

To consider and approve methodology for AMC of lift of various brands installed at IITG campus and renewal of existing AMC.

Dean IPM informed that there are 27 no's of passenger lifts installed at IITG campus consisting of various brands like M/s Kone Elevator (5 nos), M/s Otis Elevator (6 nos), M/s Schindler (5 nos) and M/s Johnsons (11 nos) and comprehensive AMC contract were made with these OEMs, based on the handing over of the lifts to IITG and after completion of their defect liability period as per works contract. Accordingly, more than one comprehensive AMC contracts were made with each OEM for smooth running of the lifts. As per the view of the competent authority, it is better to have either one contract with a third party considering all brands of lifts taken together or individual contract for each brand of lifts. Dean IPM further informed that data regarding AMC of lifts have been collected from few IITs for the passengers lifts installed at their campus (via email/ telephonic conversation). From the survey it is found that running of individual AMC of a similar brand is preferred by other IITs than running of single contract for all brands of lifts taken together. It is mainly because of financial involvement, which is higher for third party AMC as compared to individual AMC for each brand of lifts. It may also be stated that the OEM of the lifts are reluctant to run AMC under third party. Moreover, OEM of a particular brand of lifts do not extend their services to another brands of lifts due to not matching of drive, other mechanical & electrical components in their lifts. In this way it is possible to minimize the no of AMC, by keeping one AMC for each brand. Instead of having several AMCs possibilities of a comprehensive AMC by clubbing all brands of lifts together shall also be explored.

From the above consideration, we will have four different AMC contracts for four OEM of the lifts installed at our campus instead of existing thirteen contracts. In such case, instead of tendering quotations can be collected from respective OEMs which may be further negotiated by comparing with other brands of similar specification. In view of the above, the COMMITTEE is requested to SUGGEST any of the methodology for AMC of lifts as mentioned below:

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- i) Comprehensive third-party AMC by clubbing all brands of lifts,
- ii) OEM specific AMCs (for four brands)

It is also proposed that till new AMCs are in place/six months, the Director as Chairman B&WC may be authorized to approve the renewal of existing AMCs so that services can be continued in buildings.

Placed for consideration and advice.

Resolution No : R/90-B&WC/12/2021

The Committee considered the options of the AMC lifts and resolved to approve the following:

- i) AMC offer shall be invited from OEM of lifts of the concern brand viz Kone Elevator, Otis Elevator, Schindler and Johnsons separately. Negotiation with OEM has to be initiated to get best price
- ii) The AMC period can be for 3 or 5 years based on economical alternative.
- iii) Rates for AMC of lifts added at a later date after starting of AMC will be at a pro-rata basis and to be included in the tender.

ITEM NO. 13

To consider and approve the Deviation and time extension for the work "Construction of 160 units of F-type Residential Quarters at IIT Guwahati Campus.

It is informed by Dean IPM that the work of Construction of 160 units of F-type Residential Quarters was allotted to M/s Badri Rai & Co. for a contract value 136,86,01,432.60 (excluding GST) vide LOA No.349/GM/Jhr.Zone/Tender-IIT Guwahati(IITG-03-02)/RNN/18 dated. 29.06.2018 and Agreement No. IITG-03 dated. 17.07.2018 by UPRNN. As per agreement the schedule time of completion was thirty (30) months from the date of notice to proceed (17.07.2018) with work and the work was to be completed by 16.03.2020. However, the work could not be completed by the contractor within the schedule time and extension of time was granted by the competent authority of the Institute upto 22-04-2022. During construction of the buildings, it is observed that quantities of some of the items have exceeded the provision of the BOQ. Moreover, certain extra items are also required for completion of the building in all respect.

Dean IPM also inform that nearly 50% of the work has been completed and assessment has been made for the quantities for completing the remaining works of the project in all respect and the detailed deviation statement for the work has been prepared. Revised contract value now stands at ₹158,23,52,648.00 which is 3.2% more than the tendered amount and approval of the deviation statement is necessary for continuation of the work. It is further inform by Dean IPM that the funding for the project is from HEFA and the approved sanctioned amount from HEFA is ₹159.63 crore. As per the revised contract value there is no extra financial involvement over the HEFA sanctioned amount.

Placed for approval of the deviation statement with revised contract value of ₹158,23,52,648.00 and time extension upto 31.12.2022 for completion of the work.

Resolution No : R/90-B&WC/13/2021

The Committee ADVISED as follows:

- i) A three member sub-committee with following members is constituted to go through the rate analysis of extra & substitute items:
 - a) Shri Ajoy Chandra Bordoloi, Hon'ble B&WC Member
 - b) Prof. Rajib Kr. Bhattacharjya, Dean, RGF
 - c) Shri Dibyajyoti Dutta , EI Engineering, IPM Section
- ii) Considering the urgency of finishing of one block by March 2022, the Committee resolved to authorized the Director as Chairman B&WC to approve the Deviation Statement based on the sub-committee report
- iii) The Committee resolved to approve extension of time for atleast one tower by April 2022 & remaining 3 towers by 31.12.2022.

ITEM NO. 14

To consider and approve the deviation statement and time line for "Construction of Research Park building in IITG Campus".

Dean IPM informed that the work "Construction of Research Park building in IITG Campus" was allotted to M/s. Ganpati Construction Company, Guwahati-781001 Vide LOI No. IITG/ENGG/DD/AEE(C)/18/09/44 Dated. 08.02.2019 at a contract value of ₹ 52,99,26,501.00. As per original scope of work, provision for internal finishing work of only two floors was available. The total sanctioned amount for the Research park work was ₹ 75.00 crore. Out of which tendered value for the original building contract was ₹ 59.35 crore. As there was cushion of ₹ 15.65 crore (₹ 75.00 - ₹ 59.35 crore) for increasing the scope of work, Dean (IISI) has requested to complete some more floors with the additional fund available. Accordingly, approval of a tentative deviation amounting to ₹ 12,74,20,193.00 (revised contract value ₹ 72,09,37,874.50) for increasing the scope of existing contract was obtained from 87th B&WC held on 12th November 2020 with additional time of completion of 6 months. This increase of scope is permissible as per CPWD norms (CPWD Manual 2019, SOP, Clause (XVI) (a) (i), extract placed as Annexure-1). During construction of the buildings certain additional requirements are found to be necessary for completing the building in all respect and the BOQ has been revised for these requirements. The abstract of the revised estimate is as follows:

Sl. No	Particulars	Amount as per BoQ	Amount based on Deviation	Net Amount Excess(+)/ Savings(-)
1	Part - A : Building works	41,40,47,854.46	47,83,19,806.04	6,42,71,951.59
2	Part - B : Internal Sanitary & Water Supply Installation	1,09,88,380.00	1,28,80,270.00	18,91,890.00
3	Part - C : Site Development Works	2,91,70,600.00	2,69,05,950.70	-22,64,649.30
4	Part - D(i): Fire Fighting works	72,00,140.00	90,25,864.86	18,25,724.86

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	Part - D(ii) : Fire Detection & Alarm System	75,54,557.00	53,63,650.00	-21,90,907.00
5	Part - E : Electrical Works including Lift	5,34,32,726.03	7,96,32,043.13	2,61,99,317.09
6	Part - F: HVAC works	1,83,47,070.00	2,56,65,862.00	73,18,792.00
	Total =	54,07,41,327.49	63,77,93,446.73	9,70,52,119.24
	Rebate if any @ 2.00% =	-1,08,14,826.55	-	1,20,35,845.24
	Total =	52,99,26,500.94	62,57,57,601.48	
	Add GST @12%=	6,35,91,180.11	7,44,35,815.31	
	Grand Total =	59,35,17,681.05	70,01,93,416.79	
	Probable Escalation amount as per relevant clause of the Contract Agreement =		1,99,25,766.96	
	Total amount including escalation =		72,01,19,183.76	

Dean IPM also inform that there is no extra financial implication over the sanctioned amount of ₹ 72.09 crore which was already approved by the 87th B&WC. As per the above deviation it would possible to complete internal finishing up to G+5 floor of half part of Research block and ground floor of office block including external finishing of G+8 floor and G+7 floor will be completed for Research and Office block respectively. Considering the above, time line for completion of the work is proposed as below:

- i) Completion of two floors (GF &FF) of block B1 (8 laboratories) by 31.01.2022
- ii) Completion of remaining 4 floors of block B1 (16 labs) by 31.07.2022
- iii) Completion of GF of office block by 31.10.2022
- iv) Completion of all external development work in all respect by 31.12.2022.

Placed for approval of the deviation statement with revised contract value of ₹72,01,19,184.00 and timeline for completion of the work as proposed.

Resolution No : R/90-B&WC/14/2021

The Committee considered the matter and resolved to approve the following:

- i) Deviation statement with revised contract value of ₹72,01,19,184.00
- ii) Time extension for completion of the work as follows:
 - a) Completion of two floors (GF &FF) of block B1 (8 laboratories) by 31.01.2022
 - b) Completion of remaining 4 floors of block B1 (16 labs) by 31.07.2022
 - c) Completion of GF of office block by 31.10.2022
 - d) Completion of all external development work in all respect by 31.12.2022

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ITEM NO. 15

To consider and approve the time extension for the work “Construction of Academic Complex (phase-VI) – (Block-A) at IIT Guwahati Campus”.

Dean IPM informed that the work of “Construction of Academic Complex (phase-VI) – (Block-A) at IIT Guwahati Campus” was allotted to M/s PSK Engineering & Construction Co. vide LOA No.348/GM/Jhr.Zone/Tender-IIT Guwahati(IITG-04)/RNN/18 dated. 29.06.2018 and Agreement No. IITG-04 dated. 20.08.2018. by UPRNN. As per agreement the schedule time of completion was twenty (20) months from the date (17.08.2018) of notice to proceed with work and the work was to be completed by 20.04.2020. However, the work could not be completed by the contractor within the schedule time. So, notes showing detailed reasons for losing time were put up to the Competent Authority for 1st extension of completion time upto 22.09.2021. The Competent Authority had approved the same.

Dean IPM further inform that the work is in progress and structural works upto 3rd floor level is going on and about 27% of work has been completed. Further, the work could not be completed in time due to the mentioned reasons. The contractor has requested for time extension of another 16 months from 23.09.2021 to 18.01.2023 to complete the work

Placed for approval of the time extension upto 18.01.2023 for completion of the work.

Resolution No : R/90-B&WC/15/2021

The Committee considered the matter and resolved to approve the extension of time upto 18.01.2023. The Committee further ADVISED to expedite the work with deployment of men and machineries to complete the work within the extended time.

ITEM NO. 16

To consider and approve the time extension for completion of work of “Extension of Academic Complex Phase-V”.

It is informed by Dean IPM that the above work was awarded to M/s EPIL for an accepted value of Rs. 69,44,71,574.00 vide LOI No. IITG/ENGG/SE(C)/26(B)/144 dtd. 25.03.2015 and Agreement No IITG/ENGG/15/AGMT/11 dtd. 07.05.2015. The schedule date of completion of the project expired on 10.04.2017 and the First time extension for completion of the work was granted upto 31.07.2018. The work could not be completed within the extended time by the contractor and applied for further extension of time upto 31.12.2021. Dean IPM further inform that as per directive of the MHRD, for funding certain ongoing capital projects including the work of construction of Academic Phase-V, the Institute had to apply for loan from HEFA. The approval from the MHRD was received on 24.07.2019. After final approval from HEFA, the pending RA bill to the contractor could be paid in

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26.11.2019. During this process the contractor could not be paid any bill since March 19' till November 19'. Thus due to lack of fund the work progress has suffered. After release of first installment of fund by HEFA, the work remobilization by the contractor also took some time. Also, due to the Covid-19 pandemic and lockdown in March 2020, the construction works of all the projects came to complete halt. There has been considerable decline in the required manpower because of Assembly Election (March-April) 2021 in Assam and West Bengal and the progress has been hampered. Afterwards due to the 2nd wave of Covid pandemic and imposition of curfew and other restrictions by the State Govt the work was held up from May 2021 to July 2021. Moreover, there has been a considerable increase in the scope work. Accordingly, a deviation of more than 22% with revised contract value of ₹87,45,67,246.00 was approved by the 88th B&WC held on 06.07.2021. Now, the contractor has mobilized manpower & resources for completing the work and it is expected that remaining works can be completed by end of December 2021. Considering the above it is proposed to extend the time for completion of the work upto 31.12.2021.

Placed for approval of the time extension upto 31.12.2021 for completion of the work.

Resolution No : R/90-B&WC/16/2021

The Committee considered the matter and resolved to approve the time extension upto 31.12.2021. The Committee further reiterated that this will be the last extension for the work. In case the work is not completed within this extended time, the work will be completed by the Institute at the risk & cost of the contractor.

ITEM NO. 17

To consider and approve the extension of time for the work "Water proofing treatment work at Academic Complex in IITG Campus (Group-A and B)".

It is informed by Dean IPM that the work of "Water proofing treatment work at Academic Complex in IITG Campus (Group-A)" & "Water proofing treatment work at institutional buildings (administrative building, library and computer Centre building, lecture hall complex and auditorium building) (Group-B)" was allotted to M/s. Tricon vide LOI no. IITG/IPM/MAIN/FY20-21/LOI/22 Dtd. 26.03.2021 & M/S Mahalaxmi Associates, vide LOI no. IITG/IPM/MAIN/FY20-21/LOI/23 dated: 26-03-2021 respectively. The date of commencement of the work was 10.04.2021 and the scheduled time for completion was 4 months. The stipulated time for completion of the work as per work order is already over. As such the contractors have applied for extension of time up to 31.03.2022 mentioning reasons for delay in completion of the work within the stipulated time. It is expected that with the present mobilization of man and materials the work can be completed by the contractor within 31.03.2022.

Placed for approval of the time extension upto 31.03.2021 for completion of the work.

Resolution No : R/90-B&WC/17/2021

The Committee resolved to approve the extension of time for water proofing treatment in Academic Complex upto 31.03.2022. The Committee further reiterated that this will be the last extension for the work. The Committee ADVISED to get the work completed within the extended time by planning to work during night and on holidays in Academic Complex so that Academic activities are not disturbed.

ITEM NO. 18

To consider and approve the deviation statement and extension of time for the work “Repairing and renovation of various buildings (Group-E) at IITG campus: Renovation of toilet in academic complex at Core-II, IITG Campus”.

It is informed by Dean IPM that an estimate of ₹ 45,93,516.00 was approved by the B&WC in its 81st meeting held on 10th February, 2017 for the work of “Repairing and renovation of various buildings (Group-E) at IITG campus: Renovation of toilet in academic complex at Core-II, IITG Campus”. But due to fund constraint tendering could be done only in May, 2020. As per approved estimate the BOQ for the tender was prepared and the toilet cubicle item was kept in the tender. After tendering the work was then awarded to Sri Anil Thakuria vide W.O. No: IITG/IPM/MAIN/FY20-21/LOI/08, dated: 07.10.2020 for an accepted value of ₹ 43,15,353.00. In the BOQ, there were provisions for toilet cubicles made of compact laminated boards. Similar toilet cubicles were done in L.N.B. Central Library of the Institute. Due to non-suitability of user the items has been discontinued in other toilet renovation works in the later phases done in Academic Complex Core-I & Core IV. Moreover, as per norms, PWD friendly toilets are to be available and accessible from every department of the Academic Complex. Considering the requirement of PWD facilities in toilets such cubicles are also not suitable. The item is also very expensive. As per instruction of competent authority the toilet cubicle item was not executed and WPC doors have been introduced as extra items with brick wall partitions. For the above changes there is savings of ₹ 3,86,028.00 (6,66,000.00- 2,79,972.00) in the work for the individual item and accordingly, the work has been executed. There is an overall savings of ₹7,98,582.52 (₹43,15,352.80 - ₹ 35,16,770.28) on the approved contract value and the revised contract value stands at ₹ 35,16,770.00. The original stipulated date of completion was 07.02.2021. However, due to mentioned reasons the work could not be completed as per schedule. More than 95% of the work has been completed and handed over to the concerned Department for use. However, some electrical finishing work which is not in the scope of the contractor is in progress by other agencies. The remaining minor finishing work will be completed after completion of the electrical work within 7 days. As such, the time for completion of the work has been proposed to extend upto 15.12.2021.

Placed for approval of the deviation statement with revised contract value of ₹35,16,770.00 and time extension upto 15.12.2021 for completion of the work.

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Resolution No : R/90-B&WC/18/2021

The Committee resolved to approve as follows:

- i) Deviation statement with revised contract value of ₹35,16,770.00
- ii) Extension of time for completion of the work upto 15.12.2021.

ITEM NO. 19

To consider and approve the deviation statement and extension of time for the work "Repairing and renovation of various buildings (Group-F) at IITG campus: Renovation of toilet in academic complex at Core-III, IITG Campus".

Dean IPM informed that an estimate of ₹ 45,93,516.00 was approved by the B&WC in its 81st meeting held on 10th February, 2017 for the work of "Repairing and renovation of various buildings (Group-F) at IITG campus: Renovation of toilet in academic complex at Core-III, IITG Campus". But due to fund constraint tendering could be done only in May, 2020. As per approved estimate the BOQ for the tender was prepared and the toilet cubicle item was kept in the tender. After tendering the work was then awarded to Sri Ganesh Seal vide W.O. No: IITG/IPM/MAIN/FY20-21/LOI/09, dated: 07.10.2020 for an accepted value of ₹ 34,63,730.00. In the BOQ, there were provisions for toilet cubicles made of compact laminated boards. Similar toilet cubicles were done in L.N.B. Central Library of the Institute. Due to non-suitability of user the items has been discontinued in other toilet renovation works in the later phases done in Academic Complex Core-I & Core IV. Moreover, as per norms, PWD friendly toilets are to be available and accessible from every department of the Academic Complex. Considering the requirement of PWD facilities in toilets such cubicles are also not suitable. The item is also very expensive. Accordingly, as per instruction of competent authority the toilet cubicle item was not executed and WPC door frames and flush door shutters with laminates have been introduced as extra items with brick wall partitions and the work has been executed. There is an overall savings of ₹4,77,748.05 (₹34,63,730.32 - ₹ 29,85,982.27) on the approved contract value and the revised contract value stands at ₹ 29,85,982.00 The original stipulated date of completion was 07.02.2021. However, due to mentioned reasons the work could not be completed as per schedule. More than 95% of the work has been completed and handed over to the concerned Department for use. However, some electrical finishing work which is not in the scope of the contractor is in progress by other agencies. The remaining minor finishing work will be completed after completion of the electrical work within 7 days. As such, the time for completion of the work has been proposed to extend upto 15.12.2021.

Placed for approval of the deviation statement with revised contract value of ₹29,85,982.00 and time extension upto 15.12.2021 for completion of the work.

Resolution No : R/90-B&WC/19/2021

The Committee resolved to approve as follows:

- i) Deviation statement with revised contract value of ₹29,85,982.00
- ii) Extension of time for completion of the work upto 15.12.2021.

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ITEM NO. 20

To consider and approve the comprehensive consultancy services fees for the work "Construction of Rural Technology Centre at IITG Campus".

Dean IPM informed that the B&WC in its 79th meeting held on 21st & 25th April 2016 had approved the proposal for Construction of Rural Technology Centre at IITG Campus. The committee was also suggested to place the detail estimate and method of construction of the work to the B&WC. Accordingly, the comprehensive architectural consultancy service was allotted to M/s. Barthakur & Associates, Guwahati. The detail estimate and drawings submitted by the architect M/s. Barthakur & Associates was approved by the B&WC in its 83rd meeting held on 19.02.2018. The total estimated cost of the project was Rs.18,81,99000.00. But, the project had been abandoned due to non-availability of funds of the Institute. Meanwhile, the Architect had done all the design and drawing of the projects and as per contract agreement he had submitted the details drawing for tendering and construction. The Architect had raised a bill for consultancy service of ₹21,24,353.00 as per clause no.5 of payment schedule of the agreement. On scrutiny it was observed that as per payment schedule of the agreement payment from 5.1 to 5.3 will be based on estimated value and payment from 5.4 onward shall be on actual value of execution. As the work could not be initiated due to fund constraint, the payment to the Architect may be released from sl no. 5.1 to 5.3 based on approved estimated cost amounting to ₹11,08,358.00.

Placed for consideration and approval of the consultancy service fees of ₹11,08,358.00 to make the payment to the Architect M/s Borthakur and Associated.

Resolution No : R/90-B&WC/20/2021

Honourable B&WC member Shri Ajoy Chandra Bordoloi desired to look in the Architect Selection documents and it was decided to forward the tendering & empanelment of Architect documents to him for his perusal and advice. The Committee authorised the Director as Chairman B&WC to approve the proposal after getting feedback from the member.

ITEM NO. 21

To consider and advice on posting of new Regional Construction Manager of UPRNNL at IITG Projects.

Dean IPM informed that the work "Taking up Construction works at IITG Campus" was allotted to the Government construction agency M/s. UPRNNL vide MoU No. IITG/ENGG/18/MOU/01, Dated: 11.01.2018. Some of the major construction projects viz 160 units F-type quarters and Extension of Academic complex (Ph-VI) are in middle phases of construction. A group of engineers headed by Regional construction manager (RCM) are engaged for the various projects under the agency at IITG campus. Initially, the agency appointed Mr Senthil Kumar J as the RCM for the construction project at IITG. But due to some personal reasons Mr. Senthil Kumar J has resigned from M/s. UPRNNL on 1st Nov. 2021. As per clause no.4.2.3 of the MoU with M/s. UPRNNL the agency shall not change the Project head and other assisting officials during implementation of the project except with concurrence of IITG. Now, the Agency has submitted application requesting approval of IITG for posting Mr. Kishor

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Boruah as a new RCM-UPRNNL on the place of Mr. Senthil Kumar J.

Placed for consideration and advice on the posting of Mr. Kishor Boruah as the new RCM-UPRNNL for the IITG project.

Resolution No : R/90-B&WC/21/2021

The Committee NOTED the posting of Mr. Kishor Boruah as new Regional Construction Manager of UPRNNL for IIT projects.

ITEM NO. 22

To consider and approve the estimate and allotment of the work for "Fault finding and re-laying of underground power 11KV HT & LT cable in the IITG campus".

Dean IPM informed that the 11KV underground cable laid in between 33kV substation and ESS#05 (near Estate building) has developed a fault on 24.07.2021 and power supply was interrupted to Central Library, Computer and Communication center, Data Centre, BH auditorium, Estate building, Old HVAC Plant, Water Treatment Plant, KV School, Burge pumping station along with few hostels viz. Siang, Kapili, Dibang, Lohit & Disang. However, the power supply to the above mentioned areas were restored temporarily by charging through alternative route from ESS#04A. The restoration of the power supply through the original route become very essential for smooth maintaining of power supply in the campus. In this regard, one specialized agency M/s MEP Engineering, a sister concern of M/s Sterling and Wilson Limited has been contacted to find out the fault in the power cable by using cable fault locator. It may kindly note that the agency has got sufficient expertise along with required machinery and tools & tackles for the work. Earlier similar works have been executed in the campus and the agency has agreed to execute the work at the same rate as previously approved. It may be note that the detailed estimate could not be prepared as the number of fault in the underground cable could not be finalized without engaging the cable fault locator. The agency has succeeded to detect fault in the underground cable in various places and they have completed the necessary jointing process after digging out in the faulty areas. The agency has completed the work in all respect including re-laying and test charging of the cable and power supply is restored through the original route. An estimate amounting to ₹4,69,935.00 has been prepared after completion of the work based on the previously approved rates.

Placed for approval of the estimate of ₹4,69,935.00 and allotment of the work, "Fault finding and re-laying of underground power 11KV HT & LT cable in the IITG campus" to M/s MEP Engineering.

Resolution No : R/90-B&WC/22/2021

The Committee resolved to approve the estimate and allotment of the work "Fault finding and re-laying of underground power 11KV HT & LT cable in the IITG campus" at ₹4,69,935.00 to M/s MEP Engineering.

ITEM NO. 23

Approval for payment of pending bills of horticulture works done at the IITG campus in the year 2020-21.

Prof. Sharad Gokhale, the then Dean IPM briefed the Committee about need of the jungle cutting by engaging local contractors. He informs that normally the horticulture works of the campus was carried out through annual maintenance contracts since 2003. But due to expiry of existing AMC contract in March 2020 and subsequent Covid pandemic situation from March, 2020, the horticulture works were executed in different modes. Few final bills for such horticulture works were prepared and placed in the accounts section of the institute the payment of which is still pending for B&WC approval.

Placed for approval for release of payment of pending bills for ex-facto allotment of all such horticulture works during the Covid pandemic period of 2020-21.

Resolution No : R/90-B&WC/23/2021

The Committee resolved to approve for release of payment of pending bills for ex-facto allotment of all horticulture works during the Covid pandemic period of 2020-21.

Approved as a special case. However, the committee advised that no work shall be undertaken before the issue of administrative approval and expenditure sanction by the competent authority on the basis of estimates framed. Post facto approval can be taken on the grounds of urgency by following the appropriate provision of GFR.

ITEM NO. 24

To consider and approve the time extension for the work "Water proofing treatment work for Residential Quarters (A, B, C, D, E & F Type Qtr.) at IITG Campus- Group-B".

It is informed by Dean IPM that the work "Waterproofing treatment work for Residential Quarters (A, B, C, D, E & F-Type Qtr.) at IITG campus - Group-B" was allotted to M/s Buildrite Construction at a contract value of Rs.94,92,555.00 vide work order no. IITG/IPM/MAIN/FY20-21/WO/107 dated 23.12.2021. As per work order, the time of completion of the work is 4 (four) months from the date of handing over of site. The work consists of Expansion Joint and roof treatment works, Damp proofing in walls, Rain water pipes, crack repairing works, repairing of the sunken floor in the toilet areas etc. in Residential quarters (A, B, C, D, E&F-type), Subansiri Hostel, Married Hostel, Guest House and Hospital Building. The work has been going on at different quarters as soon as permission obtains from the occupant of the related quarters to execute the work at different time. Therefore, the date of handing over of site at different area is different and accordingly the completion time of different works varied. The work could not be completed in 4(four) month from the date of issue of work order as the handing over of different site is still going on as mentioned above as well as the 2nd wave of Covid-19 delayed the work and the contractor has requested for extension of time of completion of work. It is proposed to execute the recently handed over work (site) to the contractor and other remaining works if occupant permit upto

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February'22 and after that no more works will be executed and closed the work by 28.02.2022.

Placed for approval of time extension upto 28.02.2022 for completion of the "Water proofing treatment work for Residential Quarters (A, B, C, D, E & F Type Qtr.) at IITG Campus- Group-B.

Resolution No : R/90-B&WC/24/2021

The Committee resolved to approve the extension of time upto 28.02.2022. The Committee further ADVISED to make alternative accommodation arrangement for quarter occupants where work is being done in case the occupant desires.

ITEM NO. 25

To consider and Review of progress of major on-going and upcoming works in the campus.

Dean, IPM informed that at present the following major construction works are in progress in the IITG campus:

- i) 160 units of F-Type Residential building in 4 blocks.
- ii) Academic Extension Phase VI (CET)
- iii) Research Park
- iv) Extension of Academic Complex (Phase – V) -DoD, CSE, Physics, Chemical Engg., HSS, Mathematics and Centre for Nano Technology.
- v) Augmentation of HVAC plant.
- vi) EWS hostel for girls' students.

All the above works except Research Park are under execution with loan from HEFA. Recently the work of hostel no.11 has been completed and the work of Academic extension and Nanotechnology building is also completed barring some minor works and expected to be completed by December 2021. The works F-Type Residential building, Research Park & Academic Extension Phase VI (CET) are in the middle phases of construction. The work of EWS hostel for girls' students has been allotted to contractor M/s. Tribeni Construction. However due to non-availability of fund the work was kept on hold. Now, information regarding release of fund for the work has been received from the Ministry on 11.11.2021. The contractor has been informed to start the work. They have mobilized for the work and constructed labour camps, started surveying and arranging to start the site development work by last week of December.

Estimate for the following works were approved by the 87th B&WC and the approval for HEFA loan sectioned for these projects has been received recently:

Sl.no.	Name of work	Estimated value
1	Construction of Biosciences & Bioengineering (BSBE) Building	₹45.00 cr.
2	Construction of Hostel for International faculty and Students	₹15.00 cr.

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3	Construction of building for CORE laboratory for first year students	₹15.00cr.
4	Vertical Extension of ME Department building at IIT Guwahati.	₹11.00cr.
5	Internal finishing works of Upper floors of Research Building, Classroom Complex & New SAC building.	₹10.51 cr.

Placed for review the progress report.

Resolution No : R/90-B&WC/25/2021

The Committee reviewed the physical progress of the major on-going works with photographic display of the works on the screen.

ITEM NO. 26: Additional Agenda

- i) To consider and advice regarding engagement of Architect consultant for the Mehta family School of Data Science and Artificial Intelligence.

It is informed by Dean IPM that there is an empaneled Architect for various building projects which was approved by the 81st B&WC held on 10.02.2017. The architect empanelment was done value wise in three categories as follows:

GROUP	NAME OF ARCHITECTS	RATE IN PERCENT
C	(1) Wadia Techno-Engineering Services Limited, Kolkata	i. For RCC building having less than G+5 floors of value above 50.00 crore @ 1.0351%
	(2) ENARCH Consultants (Pvt.) Limited, Noida	
	(3) DDF Consultants Pvt. Ltd., New Delhi	
	(4) Suresh Goel & Associates, New Delhi	
B	(1) RAJKHOWAS AARCHI, Guwahati	For RCC building having G+2 floor or more of value above 20.00 crore and up to 50.00 crore @ 2.1%
	(2) Architects Atelier, Chandigarh.	
A	(1) Borthakur and Associates, Guwahati	For multi-storeyed RCC building of value up to 20.00 crore @ 2.0%
	(1) Architects Collaborative, Guwahati	

Architects have been engaged for various works in the campus as per the empaneled list. As per

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the fund earmarked for the work by Mehta Family, the work falls under Group-A category of the approved empanelment. The following Architect are in Group-A of the empaneled list:

Sl. No	Name of Architectural Firm	Approved Consultancy fee	
1	M/s Architect Collaborative, Guwahati, Assam	For multi-storeyed RCC building of value ₹20.00cr or above	2.00%
2	M/s Borthakur & Associates, Guwahati, Assam		2.00%

Out of the two Architects, performance of M/s Barthakur & Associates, Guwahati, Assam, has been found satisfactory and in view of this, the work may be either allotted to M/s Borthakur & Associates from the empanelment OR by inviting fresh tender specifically for the project; however the process of tendering may take 2-3 months' time for finalization. It is to be mentioned that the funding for the project is from Mehta Family.

Placed for consideration and advice regarding engagement of consultant for the Mehta Family School of Data Science and Artificial Intelligence.

Resolution No : R/90-B&WC/26(i)/2021

The Committee ADVISED to invite open tender from Architects for design & drawings of Mehta Family School of Data Science and Artificial Intelligence by conceptual design competition with 75% weightage for the experience & conceptual plan and 25% in price component. At least one-month time to be given for the preparation of conceptual plans & submission of tender.

- ii) **To consider and approve the conceptual drawings including plinth area estimate for the Construction of SAMEER (SOCIETY FOR APPLIED MICROWAVE ELECTRONICS ENGINEERING AND RESEARCH) Building at IIT Guwahati Campus.**

It is informed by Dean IPM that there is a MOU in between IIT Guwahati and Society for Applied Microwave Electronics Engineering and Research (SAMEER) to carry out various activities by SAMEER at IIT Guwahati and as per the MOU, the competent authority of IIT Guwahati approved and handed over a land of measuring 2(two) acres area at south side of Technology complex in front of substation ESS-1 for construction of SAMEER building which will have laboratory, class room, conference room and their office etc. For the construction of SAMEER building, the competent authority of IITG has approved an Architect M/S Architect Collaborative for the comprehensive consultancy of design and drawing of SAMEER building as well as by the SAMEER. After lot of discussion, the Architect has submitted the conceptual drawing and plinth area estimate for the same. The building is proposed to construct G+1 floor having foundation capacity for G+ 3 floor. The total plinth area of the proposed building is 4756.00 sqm. The conceptual drawing of the SAMEER building has been finalized and approved by SAMEER. The plinth area estimate of the building is comes around ₹20.97 crores. The plinth area rate is ₹44092/sqm including architect fees and excluding site development work. The MOU regarding construction of SAMEER building by IITG and the details estimate will be

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placed in the next B&WC meeting after approval of the conceptual design and drawing.

Method of execution of the work have also been proposed for the works as follows:

It is proposed to take up the work by e-tendering in two bid system through ITI portal www.tenderwizard.com/IITG as follows:

- (a) Tender amount : Estimated Amount
- (b) Annual Turn Over : Having turn-over from construction works only not less than 30% of the tendered amount in each group during the immediate last three consecutive years.
- (c) Experience in work : Shall have experience in execution of RCC building of minimum G+2 level including cast-in situ piles of value not less than Rs.345.00 lacs completed satisfactorily during the last seven years as follows:

One work of value not less than 80% or two works of each value not less than 60% or three works of each value not less than 40% in Govt./ Semi Govt department / Autonomous body during last seven years.
- (d) Time of Completion : 20 months

Placed for approval of the estimate of ₹ 20.97 Crore along with recommendation for Administrative approval and method of tendering of the work.

Resolution No : R/90-B&WC/26(ii)/2021

The Committee resolved to considered the item and decided the following:

- a) The building foundation will be designed for G+3 storied,
- b) The G+1 building plan with 4756.00 sqm to be taken up in first phase is approved,
- c) The MOU should be time bound,
- d) SAMEER may provide a draft MOU for acceptance by the Institute,
- e) The Annual turnover for construction works only not to be less than 50% of the tendered value in immediate three consecutive works.

Item No: 27. Other resolutions taken in the Meeting:

- i) The Committee opined that there should be 24 feet barricade around the construction sites for all new projects. This should be included in the tender.
- ii) New projects should designed with green concepts using sensor based lights & water fittings for conservation of electricity & water,

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- iii) After completion of major works, a completion report to be prepared and placed in B&WC as an Agenda Item. On approval of the completion report, the final bills will be processed for payment.
- iv) Chairman B&WC directed HoD, Civil Engineering Department who was present as a Special Invitee to entrust the structural vetting work of BSBE building, International Students Hostel & Core Laboratory building to three structural Engineering faculty as Institute work

The MEETING ended with a vote of thanks to the chair.

Prof. A. Srinivasan
Member Secretary, B&WC

Approved

Prof. T.G.Sitharam
Chairman, B&WC

Annexure-1


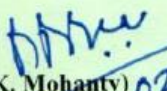
Extract CPWD Manual 2019

CHAPTER 4

MODES OF BIDDING SYSTEM

- .. (viii) All the pages/forms, whether printed or otherwise, are ensured to be clear, legible and unambiguous.
- (ix) The NIT on CPWD Form 7 provides that the Contractor should quote the percentage above or below upto two places of decimal only.
- (x) The time period for completion of work is kept reasonable and decided by the NIT approving authority keeping in view the quantum of work, requirement of user department, geographical conditions of the site and other constraints with due consideration to the availability of site and structural design in phases if any, as well as the technical requirements and particular site conditions and other factors possibly affecting the work viz rainy season, depth of sub soil water, special features of the buildings, spread of construction area, access to the site, law and order issue, type of foundation, importance/urgency of the work, mechanization involved in the work, availability of construction materials/machines etc.
- (xi) The notice inviting tender stipulates minimum requirement of technical staff depending upon the nature and requirement of the work. Guidance is taken from **Annexure -20**.
- (xii) Specific reference to the number of correction slips as well as the year of the Schedule of Rates and CPWD Specifications, is made in NIT.
- (xiii) Physical milestones are described in the table of milestones in Schedule F of CPWD Form 7/8. The Milestones are fixed, as far as possible, considering the critical activities for optimal use of the resources and completion of work in minimum time, unless sectional or part completion is necessary. In case of high uncertainties in physical milestones, financial milestones are provided.
- (xiv) Mode of deposit of Earnest Money is mentioned in NIT
- (xv) Necessary information is given in the NIT regarding the competent authority to sign the Agmt, execute the work, make correspondence with contractor, EOT etc and all other information required in the Schedule A to F of CPWD Form 7/8.
- (xvi) For maintaining uniformity in works, following deviation limits is stipulated by the authorities approving the NIT's for operation of Clause 12 of the GCC unless there are specific reasons to adopt different deviation limits for a particular work:
- | | |
|---|------|
| (a) For construction works | |
| (i) Superstructure & foundation work (except items mentioned in earthwork sub head in DSR and related items) | 30% |
| (ii) Items mentioned in earth work sub head in DSR and related items | 100% |
| (b) For construction works of time bound, urgent and emergency nature | |
| (i) Superstructure & foundation work (except items mentioned in earth work sub head in DSR and related items) | 50% |
| (ii) Items mentioned in earth work sub head in DSR and related items | 100% |
| (c) All Maintenance Works | 50% |

ANNEXURE – 31

<p>भारतीय प्रौद्योगिकी संस्थान गुवाहाटी ऊर्जा विज्ञान एवं अभियांत्रिकी स्कूल गुवाहाटी 781039, भारत</p>	<p>Annexure 158/5 </p>	<p>Indian Institute of Technology Guwahati School of Energy Science and Engineering Guwahati 781039, India</p>	
<p>Phone: +91-0361-258 3150 Email: energyoff@iitg.ac.in</p>	<p>NOTE SHEET</p>	<p>को प्राप्त हुआ / Received on 2/11/21 शिक्षण मामलें अनुभाग / Academic Affairs Section आई आई टी गुवाहाटी / IIT Guwahati गुवाहाटी / Guwahati-39</p>	<p>First Page</p>
<p>Date: 02/11/2021</p>			
<p>Sub: Proposal for new B.Tech. program in “Energy Engineering” with a request to place it in the upcoming IUPC meeting followed by Senate meeting</p>			
<p>School of Energy Science and Engineering is hereby proposing a new B.Tech. program in “Energy Engineering”. Please find attach the proposal for the same along with the course structure. The proposal was discussed in Faculty meeting.</p>			
<p>Intake: 20 seats Credits proposed: 314</p>			
<p>The program is intended to begin from July 2022 session, therefore we need to submit this to the JAB by this yearend so that it can be printed in the JEE Advanced brochure and the seat matrix may be finalized accordingly.</p>			
<p>I therefore request you to kindly give it priority and add it to the upcoming IUPC meeting followed by Senate.</p>			
<p>Thanking you.</p>			
<p>Yours sincerely,</p>			
<p> (K. Mohanty) 02/11/2021 Head, School of Energy Science & Engineering केन्द्र प्रमुख ऊर्जा विज्ञान एवं अभियांत्रिकी स्कूल School of Energy Science and Engineering</p>			
<p>→ Dean (Academic Affairs)</p>			

Proposal for a new B.Tech. program in “Energy Engineering”

The global energy consumption in the last century almost increased eleven-fold. The largest increase in rate of consumption has been in the coal, oil and gas divisions. The fossil fuels together constitute almost 87% of total energy demand of the world. The oil crisis in the 1970's and the global climate change concerns are really alarming and calls for the need of alternative clean energy sources. In 2004, the average atmospheric carbon dioxide concentration reached 377.4 ppm by volume. The safe level of carbon dioxide in the atmosphere is 350 ppm. In the recent time global levels of CO₂ concentration in atmosphere have crossed 400 ppm. Carbon dioxide emission from burning fossil fuels is believed to be the main factor influencing an alarming rise in global temperatures. Conference of the Parties, twenty-first sessions held at Paris in the year 2015 strictly warned and asked the nations to reduce their greenhouse gas emission level. Hence, a secure and sufficient supply of energy is of paramount important for the sustainability of modern societies. In order to address these issues, government of India has set an ambitious goal to achieve 450 GW of clean energy generation target by 2030. This goal needs to be supported through the initiatives of academia and research institutions. To achieve this goal creation of a pool of qualified manpower is of utmost importance. Across the globe various academic institutions have initiated specialized undergraduate programs under the broad umbrella of Energy Technology to complement the fight against climate change by their respective government. In this line School of Energy Science and Engineering, IIT Guwahati is proposing a four-year bachelor of technology (B.Tech.) course in Energy Engineering. First two years of the curriculum will focus on basic aspects of engineering which will build the foundation for understanding the underlying concepts of energy systems. The following two years specialized courses on Energy Engineering will be taught (such as Solar, wind, biomass, clean coal technology, renewable energy systems, energy economics and planning, energy management, nuclear energy, energy auditing, energy storage, hydrogen and fuel cells technologies, Electric Vehicles etc). The nature of the entire curriculum will be multidisciplinary with involvement of Faculties from various disciplines such as Mechanical, Electrical and Electronics, Chemical, Biosciences & Bioengineering and Civil Engineering. The focus of this program is to generate future industry leaders in various energy sectors from policy formulation to in-field implementation. The generated pool of manpower through this program will be best suited for the growing EV sector, core energy producing companies (OIL, ONGC, NTPC, GAIL, CIL, BHEL, NRL, NHPC, NEEPCO etc.), renewable energy companies and government bodies (BEE, MNRE, EESL, ISA etc.). The qualified engineers will carry strong base to pursue higher studies for doing challenging research in energy sector.

The course structure is appended below.



Course Structure of B.Tech. in Energy Engineering
School of Energy Science and Engineering, IIT Guwahati

Course No	Semester-I Course Name	L	T	P	C	Course No	Semester-II Course Name	L	T	P	C
CH101	Chemistry	3	1	0	8	BT101	Introductory Biology	3	0	0	6
CH110	Chemistry Laboratory	0	0	3	3	CS101	Introduction to Computing	3	0	0	6
EE101	Basic Electronics	3	1	0	8	CS110	Computing Laboratory	0	0	3	3
MA101	Mathematics - I	3	1	0	8	EE102	Basic Electronics Laboratory	0	0	3	3
CE101	Engineering Drawing	2	0	3	7	MA102	Mathematics - II	3	1	0	8
PH101	Physics - I	2	1	0	6	ME101	Engineering Mechanics	3	1	0	8
PH110/ME110	Workshop	0	0	3	3	PH102	Physics - II	2	1	0	6
						ME110/PH110	Physics Laboratory	0	0	3	3
		13	4	9	43			14	3	9	43
HS101	English Communication*	2	0	2	0	SA1xx	Students Activity Course - I	0	0	2	0
Course No	Semester-III Course Name	L	T	P	C	Course No	Semester-IV Course Name	L	T	P	C
ENxxx	Heat Transfer	3	1	0	8	ENxxx	Electrical Energy Systems	3	1	0	8
ENxxx	Engineering Thermodynamics	3	1	0	8	ENxxx	Biomass, Biofuels and Biorefinery	3	0	0	6
ENxxx	Solid and Fluid Mechanics	2	1	0	6	ENxxx	Wind, Hydro and OTEC	3	0	0	6
ENxxx	Fuels, Combustion and Reaction Engineering	2	1	0	6	ENxxx	Environmental Studies and Policy	3	0	0	6
ENxxx	Solar Energy Technology	3	0	0	6	HS1xx	HSS Elective - I Level-I	3	0	0	6
ENxxx	Laboratory 1: Fuel and Combustion Lab	0	0	3	3	ENxxx	Laboratory 3: Wind and Hydro Energy Lab	0	0	3	3
ENxxx	Laboratory 2: Solar Energy Technology Lab	0	0	3	3	ENxxx	Laboratory 4: Thermo-Fluid & Heat Transfer Lab	0	0	3	3
		12	6	6	40			15	1	6	38
SA1xx	Students Activity Course - II	0	0	2	0	SA1xx	Students Activity Course - III	0	0	2	0
Course No	Semester-V Course Name	L	T	P	C	Course No	Semester-VI Course Name	L	T	P	C
ENxxx	Power Generation and Transmission Systems	3	0	0	6	ENxxx	Energy Economics, Planning, Management and Auditing	3	0	2	8
ENxxx	Energy Materials and Devices	3	0	0	6	ENxxx	Control and Instrumentation for Energy Systems	2	1	0	6
ENxxx	Hydrogen and Fuel Cell Technology	3	0	0	6	ENxxx	Energy Conservation and Waste Heat Recovery	3	0	0	6
ENxxx	Energy Storage Systems	3	0	0	6	ENxxx	School Level Elective II	3	0	0	6
ENxxx	School Level Elective I	3	0	0	6	ENxxx	Community Engagement and Entrepreneurship Program	1	0	3	5
HS1xx	HSS Elective - II Level-I	3	0	0	6	ENxxx	Energy Innovation and Design Thinking	1	0	3	5
	Laboratory 5: Energy Materials & Device Fabrication Lab	0	0	3	3	ENxxx	Laboratory 6: Energy Systems and Simulation Lab	0	0	3	3
		18	0	3	39			13	1	11	39
SA1xx	Students Activity Course - IV	0	0	2	0						
Course No	Semester-VII Course Name	L	T	P	C	Course No	Semester-VIII Course Name	L	T	P	C
ENxxx	School Level Elective III	3	0	0	6	ENxxx	School Level Elective V	3	0	0	6
ENxxx	School Level Elective IV OR Energy Entrepreneurship Program I	3	0	0	6	ENxxx	School Level Elective VI OR Energy Entrepreneurship Program II	3	0	0	6
xxxxx	Open Elective I	3	0	0	6	xxxxx	Open Elective II	3	0	0	6
HS2xx	HSS Elective - I Level-II	3	0	0	6	HS2xx	HSS Elective - II Level-II	3	0	0	6
ENxxx	B Tech Project - I	0	0	12	12	ENxxx	B Tech Project - II	0	0	12	12
		12	0	12	36			12	0	12	36

Total Credits: 314

Handwritten signature/initials

ANNEXURE-33

School of Business

New Students of MBA Programme Joining in July 2022 – Fee Structure

Sl. No	Items	Amount (in Rupees)
A. One-Time Fees (At the time of admission) & Non-Refundable		
A.1	Admission Fee	Rs. 1,500
A.2	Certificates Fee (Grade Card + Provisional Degree)	Rs. 750
A.3	Medical Examination Fee	Rs. 100
A.4	Student Welfare Fee	Rs. 200
A.5	Identity Card Fee	Rs. 100
A.6	Modernization and Upgradation Fee	Rs. 1,000
A.7	Hostel Admission Fee*	Rs. 400
A.8	Mess Establishment Charge*	Rs. 2,500
Total		Rs. 6,550
B. One-Time Deposits (At the time of admission) & Refundable		
B.1	Institute Caution Money	Rs. 1,000
B.2	Library Caution Money	Rs. 1,000
B.3	Hostel Caution Money*	Rs. 4,000
B.4	Mess Deposit*	Rs. 3,600
Total		Rs. 9,600
C. Payable at Every Semester		
C.1	Tuition Fees [#]	Rs. 2,25,000
C.2	Registration/Enrollment Fee	Rs. 1,000
C.3	Examination Fee	Rs. 500
C.4	Academic Facilities Fee	Rs. 2,500
C.5	Students' Brotherhood Fund	Rs. 50
C.6	Students' Travel Assistance Fund	Rs. 50
C.7	Gymkhana Fee	Rs. 1,000
C.8	Hostel Fund*	Rs. 600
C.9	Hostel Rent*	Rs. 1,000
C.10	Hostel Maintenance Charge*	Rs. 3,000
C.11	Electricity and Water Charges*	Rs. 2,500
C.12	Adjustable Mess Advance*	Rs. 18,000
Total		Rs. 2,55,200
D. Payable at the time of admission & every July-November Semester Registration		
D.1	Medical Fee	Rs. 1,900
Grand Total (GEN/EWS-GENERAL/OBC-NCL Category) for Hosteller		Rs. 2,73,250
Grand Total (SC/ST/PwD Category) for Hosteller		Rs. 48,250
# For SC/ST/PwD Students, there is NO Tuition Fees		
* These fees are applicable only to the Hostellers		

Department of Biosciences and Bioengineering
Indian Institute of Technology Guwahati

Proposal for a new Academic Programme M.Tech in Bioengineering

About the program

Bioengineering is an interdisciplinary area applying the principles of life sciences and tools of engineering to create bio-based products, processes and services for healthy and sustainable livings. Considering the diversity and strength of the department, the M.Tech in Bioengineering is oriented toward executing engineering solutions for “Bioresources” and “Healthcare”.

The proposed curriculum consists of seven core courses, four elective courses, two laboratory courses and two semester projects. Two lab courses namely “Experimental techniques in Bioengineering” and “Applied Bioengineering lab” have been designed to provide hands-on experiences in Bioengineering. Out of four electives, two electives I and III are to be taken from the pool of department electives while the other two electives II and IV are to be taken from the pool of advanced level interdisciplinary elective courses offered by other departments/centres/schools. The students shall have the flexibility and creativity to pursue interdisciplinary research in the broad area of Biosciences and Bioengineering (38+ research groups/labs) during the two semesters of projects. Total credits of the project work are kept 46 based to fulfil the requirements of the institute. One year M.Tech project work shall be undertaken in different research groups of (i) Biosciences, (ii) Bioengineering, (iii) Physical Biology, (iv) Chemical Biology and (v) Computational Biology. In addition, there is a compulsory audit course of industrial training to be undertaken (minimum of 4 weeks and maximum up to 8 weeks) during the summer semester at the end of the second semester to improve the placement prospects.

This program provides a broad bioengineering curriculum while offering a focus on a specific engineering track that best fits students' interests and career choices. The program aims to impart fundamental knowledge, key concepts along with a specialized project work, which will help the students to nurture as technocrats as well as to find jobs and contribute to the success

of various companies working in the field of industrial or medical biotechnology and bioprocessing etc. Various initiatives by the Government of India like Biotechnology Industry Research Assistance Council (BIRAC), Biotech Consortium India Limited (BCIL), Biotech Parks and Incubation Centers have been aggressively pushing for innovation in many of these areas and pursuing to develop entrepreneurs.

The M.Tech in Bioengineering gives professional flexibility and a distinct competitive advantage recognized worldwide in the ever-changing field of bioengineering. The proposed program has the potential to make a significant impact.

Eligibility criteria

- (i) Qualifying Degree: Four years Bachelor's degree in Engineering or Technology, with biology or related subjects as one of the papers at the 10+2 level or later.
- (ii) Minimum CPI of 6.0 in a 10-point scale or a minimum of 60% of total/aggregate marks in Qualifying Degree.
- (iii) The applicants must qualify GATE in any of the related disciplines.

Student intake: 20# per year

In addition, a maximum of five international students shall be admitted per year in the self-sponsored category. The admission shall be conducted through an interview by a departmental committee. These students shall not be supported by the institute but may avail funding from other sources.

Subject to approval. It is proposed to earmark 10 seats from the sanctioned seat of the existing MTech in Biotechnology programme till the approval to initiate the programme in July 2022.

Admission Process

- (A) The admission process comprises two stages.
 - a) The applications fulfilling the above criteria shall be considered for preparing the merit list based on the GATE score.
 - b) Further, the admission process of the institute for M.Tech like the Common Offer Acceptance Portal (COAP) shall be followed.

Ordinances

The program shall comply with the existing M.Tech ordinances, rules and regulations of the institute.

There shall be no provision to interchange/ switch over between the two M.Tech programs of the department, Biotechnology and Bioengineering after the admission.

Future plan

Presently, the department proposes to start new M.Tech programme in Bioengineering with institute support. The students shall be admitted based on the GATE score and avail MHRD fellowship. In future, the department may apply for the support from the DBT or other funding agencies. The eligibility and admission process may be upgraded depending on the terms and conditions of the funding agencies e.g. in the case of DBT, the candidates also need to qualify Graduate Aptitude Test-Biotechnology (GAT-B) and the admission process comprises two stages as follows:

- a) The candidates should appear for the GAT-B, an Eligibility test for admission to DBT-supported PG Programmes.
- b) The institute shall separately advertise for admission in M.Tech (Bioengineering).

Further, in the event, if the support from the DBT is discontinued at the end of the support period, there will a provision for enrolling these students through the regular institute support mode based on the valid GATE score and the admission process (A) shall be followed.

Proposed course curriculum

Semester	Course Name	L-T-P-C
I	BT 501 Biotechniques	3-0-0-6
	BT 521 Advanced Bioreactor Engineering	3-0-0-6
	BT 645 Introduction to IPR and Ethics	3-0-0-0
	BT xxx Elective I	3-0-0-6
	xx xxx Elective II	3-0-0-6
	BT 530 Experimental techniques in Bioengineering	0-0-6-6
	Total: 30	
II	BT 522 Advanced Bioengineering	3-0-0-6
	BT 523 Metabolic Engineering	3-0-0-6
	BT 524 Bioinstrumentation & Control	3-0-0-6
	BT xxx Elective III	3-0-0-6
	xx xxx Elective IV	3-0-0-6
	BT 540 Applied Bioengineering Lab	0-0-6-6
	Total: 36	
Summer	BT 525 Industrial Training	0-0-6-0
III	BT 623 Research Methodology	2-1-0-6
	BT 700 M. Tech Project I (MTP I)	0-0-22-22
	Total: 28	
IV	BT 701 M. Tech Project II (MTP II)	0-0-24-24
	Total: 24	
Total Credit: 118		

Course proposals for consideration:

1. Proposal for a New Course / ~~Revision of a Course~~

Course Number & Title: BT 521 - Advanced Bioreactor Engineering
L-T-P-C: 3-0-0-6
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: M.Tech (Bioengineering)
Offered in (Odd/ Even / Any): Odd
Offered by (Name of Department/ Center): Biosciences and Bioengineering
Pre-Requisite: Basic knowledge and understanding of biochemical/bioprocess engineering
<p>Preamble / Objectives:</p> <p>To provide the students an expertise on the design and scale-up of bioreactors.</p> <p>To develop bioengineering skills for the production of biochemical product using integrated biochemical processes.</p>
<p>Course Content/ Syllabus</p> <p>Bioreactor Concepts: Bioreactor Operation – Batch operation, fed-batch operation, continuous operation, productivity optimisation and cost minimization; Types of Bioreactor – Airlift reactor, Packed-bed reactor, Fluidized-bed reactor, Perfusion reactor, Membrane bioreactor, Rotating biological contactor; Case Studies in Bioreactor Operations;</p> <p>Aeration and Agitation in Bioreactor: Mass transfer in agitated tanks; Power requirement for mixing; Agitation rate studies – Mixing time and residence time distribution; Bioreactor Geometry – Reactor, impeller, sparger and baffle design; shear damage, bubble damage, methods of minimizing cell damage. Case Studies for Aeration and Agitation;</p> <p>Materials and Components for Bioreactor Design: Materials of construction for bioreactor components - vessel, nozzles, ports, baffles, jackets, spargers, cooling coils, piping and valves; Design considerations for bioreactor components; Design for containment and aseptic operation; Case Studies for Aeration and Agitation;</p> <p>Bioreactor Scale-Up and Scale-Down: Effect of Scale-Up: aeration, agitation, mixing, sterilization, inoculum development, nutrient availability and supply, pH, shear, temperature maintenance, partial pressure; Scale-up Techniques: – constant power consumption per volume, constant mixing time, constant impeller tip speed, constant volumetric mass transfer co-efficient; Scale-down Related Aspects; Case Studies in Bioreactor Scale-up and Scale-down Aspects;</p> <p>Bioreactor Instrumentation and Control: Sensor Design and Operating Principle: Temperature, flow measurement and control, Pressure measurement and control, shaft power, rate of stirring, detection and prevention of foam, measurement of cells, measurement and control of dissolved oxygen, inlet and outlet gas analysis, pH measurement and control, SCADA systems for Bioreactors: SCADA architecture, SCADA communication, SCADA functions; Case Studies in Bioreactor Instrumentation and Control.</p>

Books	
Text/References:	
1.	Douglas S. Clark and Harvey W. <i>Blanch</i> . <i>Biochemical Engineering</i> , Second Edition, CRC Press 1997
2.	<i>Bjorn K. Lydersen</i> , Nancy A. D'Elia, and Kim L. Nelson, <i>Bioprocess Engineering: Systems, Equipment and Facilities</i> . 1 st Edition, Wiley-Interscience, 1994
3.	S. Liu, <i>Bioprocess Engineering: Kinetics, Biosystems, Sustainability, and Reactor Design</i> , Elsevier, 2016
4.	Pauline Doran, <i>Bioprocess Engineering Principles</i> , 2nd Edition, Academic Press 2012
5.	James M. Lee, <i>Biochemical Engineering</i> , Prentice Hall, 1992
6.	James E. Bailey and David F. Ollis, <i>Biochemical Engineering Fundamentals</i> , McGraw Hill 1986
7.	Octave Levenspiel, <i>Chemical Reaction Engineering</i> , Wiley 2016.

Detailed Course Content (Optional)		
It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1	Bioreactor Concepts	6
2	Aeration and Agitation in Bioreactor	9
3	Materials and Components for Bioreactor Design	9
4	Bioreactor Scale-Up and Scale-Down	6
5	Bioreactor Instrumentation and Control	12
Total Number of Lectures =		42

In case of revision of existing course, Please provide below the details of existing course. NA
EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

2. Proposal for a ~~New Course~~ / Revision of a Course

Course Number & Title: BT 645 - Introduction to IPR and Ethics

L-T-P-C: 3-0-0-6
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades / PP or NP Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): Revision of Existing Course
Offered as (Compulsory / Elective): Elective for PhD/B.Tech and Compulsory audit for M.Tech
Offered to: PhD/MTech/BTech
Offered in (Odd/ Even / Any): Any
Offered by (Name of Department/ Center): Biosciences and Bioengineering
Pre-Requisite: NIL
<p>Preamble / Objectives:</p> <p>The course will raise awareness of the principal concepts of intellectual property and its importance as a spur to human creativity in the advancement of economic and social development, and in the facilitation of international trade through the treaties offering multi-lateral protection; Explain what constitutes protection of IP; Introduce the treaties that govern IP; Strategic elements of IPR: Validity, protection, infringement, licensing; Explain some of the services of WIPO that assist in the worldwide acquisition, management and protection of IP rights. The course is designed in such a manner that the average length of time it will take to study the course will be around 40 hours.</p>
<p>Existing (old) Course Content (BT 306; 3-0-0-6):</p> <p>General overview of Intellectual Properties; Patent and utility models; Design and trademark; Trade secret and unfair competition; New plant varieties and geographical indication; Copyright and related rights; International intellectual property treaties; Patents structure and classification; Patenting procedures; Economic impact of the patent system and legal issues; Licensing and enforcing intellectual property; Commercializing an invention; Case studies; Scope of intellectual properties in India – Biodiversity and Traditional knowledge; Biosafety- classification and description of biosafety levels; Design of clean rooms and biosafety labs; Biosafety regulations to protect nature; Growers and consumers interest and nation interest; Potential risk from genetically modified organisms; Ethical issues in research and case studies.</p>

New Course Content Proposed:

Introduction to Intellectual Properties; Importance of IPR; Domains of IPR: Patent; Design and trademark; Trade secret and unfair competition; New plant varieties and Farmers right; Geographical indication; Semiconductor Integrated Circuits; Biological Diversity; Copyright and Related rights; Strategic elements of IPR: Validity, protection, infringement, licensing; Overview of Laws related to IPR in India; World Intellectual Property Organization (WIPO) and administered treaties; The Agreement of Trade Related Aspects of Intellectual Property Rights (TRIPS); Ethics of Science and Ethical issues in research taking the case of GM crops and stem cells.

Books

Texts:

- | | |
|----|---|
| 1. | B. Ramakrishna and Anil Kumar, Fundamentals of Intellectual Property Rights: For Students, Industrialist and Patent Lawyers, Notion Press; 1 edition 2017 |
| 2. | C. B. Raju, Intellectual Property Rights, Serial Publication, New Delhi, 2006 |

Detailed Course Content (Optional)

It will not be included in the Courses of Study Booklet

Sl. No.	Broad Title / Topics	Number of Lectures
1	Introduction to IPR	5
2	Industrial Property Rights covering Patents, Design and Trademarks and associated Treaties	20
3	Industrial Property Rights covering GI, Plant Breeders Right, Law of Unfair Competition associated Treaties	5
4	Copyright and Related rights and Copyright in digital Era	5
5	Ethical Issues in Research with case study	5
Total Number of Lectures =		40

3. Proposal for a New Course / ~~Revision of a Course~~

Course Number & Title: **BT 530 - Experimental techniques in Bioengineering**

L-T-P-C: 0-0-6-6

Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades

Kind of Proposal (New Course / Revision of Existing Course): New Course	
Offered as (Compulsory / Elective): Compulsory	
Offered to: M.Tech in Bioengineering	
Offered in (Odd/ Even / Any): Odd	
Offered by (Name of Department/ Center): Biosciences and Bioengineering	
Pre-Requisite: NIL	
<p>Preamble / Objectives:</p> <p>This laboratory course aims to provide hands-on experience as well as the demonstration of the state of the art facilities/instruments being used for the identification, characterization and purifications in Biosciences and Bioengineering. This course will train the students to various analytical techniques, which is expected to be helpful during the dissertation and other practical applications to utilize these techniques.</p>	
<p>Course Content/ Syllabus</p> <p>Spectroscopy: UV-Visible spectroscopy based quantification of DNA and Protein; Protein structural analysis using infrared and circular dichroism spectroscopy; Determination of conformational stability of a protein by monitoring protein fluorescence; Enzyme-linked immunosorbent assay (ELISA) for enzyme activity;</p> <p>Chromatography: High Performance Liquid Chromatography-Mass Spectrometry and Gas Chromatography; Size exclusion chromatography; Gel electrophoresis;</p> <p>Microscopy: Fluorescence microscope; Fluorescence imaging of stained cells; Demonstrations of laser scanning confocal microscopy, scanning electron microscopy, atomic force microscopy, microcomputed tomography;</p> <p>Ultracentrifugation: separation of cell organelles from plant or animal tissues; Flow cytometry.</p>	
Books	
Texts / References:	
1.	A. J. Ninfa and D. P. Ballou, Fundamental Laboratory Approaches for Biochemistry and Biotechnology, Wiley; 2nd Edition,1998.
2.	J. Sambrook and D. W. Russell, Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory Press, 3rd Edition, 2001.
3.	R. J. Simpson, Proteins and Proteomics: A Laboratory Manual, CSHL press, 2003

Detailed Course Content (Optional)		
Sl. No.	Broad Title / Topics	Number of Lectures
1.	Bioanalytical Techniques Lab for 14 weeks	NA
Total Number of Lectures =		NA

In case of revision of existing course, please provide below the details of existing course.

NA

EXISTING COURSE

Course Number, Title, L-T-P-C:

Pre-Requisite (if any)

Contents:

References:

4. Proposal for a New Course / Revision of a Course

Course Number & Title: BT 522 - Advanced Bioengineering
L-T-P-C: 3-0-0-6
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: M.Tech in Bioengineering
Offered in (Odd/ Even / Any): Even
Offered by (Name of Department/ Center): Biosciences and Bioengineering
Pre-Requisite: NIL
Preamble / Objectives (Optional): Bioengineering is the application of engineering tools and biological, physical, and chemical principles to address real-world challenges related to the life sciences. This course aims to broadly cover biological/medical and engineering aspects. The course contents include fundamental biological and physiological principles along with emerging concepts of biomechanics, drug delivery, biomaterials and tissue engineering. This course shall enable the students to realize and explore the broader scopes of bioengineering and direct them to apply engineering approaches for biological systems.

Course Content/ Syllabus		
<p>Bioengineering: Living Systems; Introduction to Advanced Biomaterial and Tissue Engineering Concepts; Bio-interfacial interactions; Bioengineered Organs and Tissues; Cellular and Regenerative Concepts; Micro and Macro Fabrication Techniques in Bioengineering; Concepts on Microfluidics in Bioengineering, Nano-Bioengineering in Medicine, Controlled and Sustained Drug Delivery Systems, Bioengineered 3D Disease Models, 3D Bioreactors; Recent Applications in Regenerative Medicine.</p> <p>Biomechanics: Introduction to Biomechanics; Musculoskeletal Anatomy and Anthropometric Terminologies; Joint Movement, Function and Disorders; Introduction to Muscle Dynamics; Mechanical Properties of Bone, Joints and Implant Materials; Introduction to Mechanobiology and Mechanoregulatory Algorithms.</p>		
Books		
Texts / References:		
1.	R. Lanza, R. Langer and J. P. Vacanti, The Principles of Tissue Engineering, 4 th Edition, Academic Press, 2013	
2.	B. D. Ratner, A. S. Hoffman, F. J. Schoen and J. E. Lemons, Biomaterials Science: An Introduction to Materials and Medicine, 3 rd Edition, Academic Press, 2012.	
3.	R. I. Freshney, Culture of Animal Cells: A Manual of Basic Technique and Specialized Applications, 6 th Edition, Wiley-Blackwell, 2010	
4.	R. Lanza and A. Atala, Essentials of Stem Cell Biology, 3 rd Edition, Academic Press, 2013	
5.	Mirjana Pavlovic, Bioengineering: A conceptual approach. Springer, 2014.	
6.	Ronald Huston, Principles of biomechanics. CRC press, 2008.	
7..	Y. C. Fung, Biomechanics: Mechanical properties of living tissues. (2nd Ed), Springer, 1993.	
8.	G. T. Yamaguchi, Dynamic modeling of musculoskeletal motion: a vectorized approach for biomechanical analysis in three dimensions, Springer, 2001.	
Detailed Course Content (Optional)		
It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1	Bioengineering	21

2	Biomechanics	21
Total Number of Lectures =		42

<p>In case of revision of existing course, Please provide below the details of existing course.</p> <p>NA</p> <p style="text-align: center;">EXISTING COURSE</p>
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

5. Proposal for a ~~New Course~~ / Revision of a Course

Course Number & Title: BT 523 - Metabolic Engineering
L-T-P-C: 3-0-0-6
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): Revision of Existing Course
Offered as (Compulsory / Elective): Compulsory for M.Tech (Bioengineering) and Elective for PhD/B.Tech
Offered to: PhD/MTech/BTech
Offered in (Odd/ Even / Any): Odd
Offered by (Name of Department/ Center): Biosciences and Bioengineering
Pre-Requisite: NIL
<p>Preamble / Objectives (Optional): The course will raise awareness of the principal concepts of intellectual property and its importance as a spur to human creativity in the advancement of economic and social development, and in the facilitation of international trade through the treaties offering multi-lateral protection; Explain what constitutes protection of IP; Introduce the treaties that govern IP; Strategic elements of IPR: Validity, protection, infringement, licensing; Explain some of the services of WIPO that assist in the worldwide acquisition, management and protection of IP rights. The course is designed in such a manner that the average length of time it will take to study the course will be around 40 hours.</p>
Existing (old) Course Content (BT 628; 3-0-0-6):

Overview to the field with illustrating examples; Methods for metabolic characterization: genome, transcriptome, proteome, metabolome, fluxome; Comprehensive models for cellular reactions; Regulation of metabolic pathways; Metabolic flux analysis; Applications of metabolic flux analysis; Methods for the experimental determination of metabolic fluxes by isotope labelling; Metabolic control analysis; Metabolic design: gene amplification, gene-disruption, randomized and targeted strain development; Metabolic Engineering in Practice: actual examples from research and industrial biotechnology.

New Course Content Proposed:

Overview to the field with illustrating examples; Methods for metabolic characterization: genome, transcriptome, proteome, metabolome, fluxome; Comprehensive models for cellular reactions; Regulation of metabolic pathways; Metabolic flux analysis; Applications of metabolic flux analysis; Methods for the experimental determination of metabolic fluxes by isotope labelling; Metabolic control analysis; Metabolic design: gene amplification, gene-disruption, randomized and targeted strain development; Metabolic Engineering in Practice: actual examples from research and industrial biotechnology.

Books

Texts / References:

1.	Gregory N. Stephanopoulos, Aristos A. Aristidou and Jens Nielsen, Metabolic Engineering Principles and Methodologies, Academic Press, 1998.
2.	S. Y. Lee and E. T. Papoutsakis, Metabolic Engineering, Marcel Dekker, New York, 1999.
3.	David Fell, Understanding the Control of Metabolism, Portland Press, London, 1997.
4.	R. Heinrich and S. Schuster, The Regulation of Cellular Systems, Chapman & Hall, 1996.
5.	E. O. Voit, Computational Analysis of Biochemical Systems, Cambridge University Press, 2000

Detailed Course Content (Optional)

It will not be included in the Courses of Study Booklet

Sl. No.	Broad Title / Topics	Number of Lectures
1	Overview to the field with illustrating examples	3

2	Methods for metabolic characterization	3
3	Comprehensive models for cellular reactions	3
4	Regulation of metabolic pathways	6
5	Metabolic flux analysis	6
6	Applications of metabolic flux analysis	3
7	Methods for the experimental determination of metabolic fluxes by isotope labelling	3
8	Metabolic control analysis	6
9	Metabolic design	3
10	Metabolic Engineering in Practice	6
Total Number of Lectures =		42

6. Proposal for a New Course / ~~Revision of a Course~~

Course Number & Title: BT 524 - Bioinstrumentation and Control
L-T-P-C: 3-0-0-6
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory
Offered to: M.Tech (Bioengineering)
Offered in (Odd/ Even / Any): Even
Offered by (Name of Department/ Center): Biosciences and Bioengineering
Pre-Requisite: Basic knowledge and understanding of biochemical/bioprocess engineering
<p>Preamble / Objectives:</p> <p>The basic objective of this course is to provide the fundamental knowledge of Bioinstrumentation and control. The course basically has two parts. The first part deals with Bioinstrumentation, the science associated with the measurement of biological variables such as blood pressure related to biomedical instrumentation. The purpose of the next part of this course is to apply the key concepts of automatic control and instrumentation to bioprocess systems. Material and energy balances are used to model unsteady state (dynamic) process systems where control algorithms are required to bring the process back to equilibrium. Laplace Transforms are used as a means to conveniently solve ordinary differential equations, which are used when describing process control systems. Control</p>

loops are developed to represent industrial processes enabling appropriate control approaches to be elucidated. Commonly used sensing, transmission and final control elements are described and depicted in Piping and Instrumentation Diagrams (P&IDs). The course is delivered through a combination of lectures and tutorials where the students have an appreciation of the fundamental importance of control systems for the safe and sustainable operation of bioprocess systems.

Course Content/ Syllabus

Bioinstrumentation: Basic concepts of medical instrumentation; Sensors and principles; Amplifiers and Signal Processing; Origin of bio potentials; Bio potential electrodes and amplifiers; Blood pressure and sound; Biomedical telemetry and telemedicine; Patient safety; Therapeutic and prosthetic devices; Introduction to Matlab software/Simulink graphical programming and its application in bioinstrumentation.

Introduction to Laplace Transforms: 1st order system and examples of 1st order system; Response of 1st order system for step, sinusoidal, ramp, impulse inputs; Interacting and non-interacting system; Linearization; 2nd order system; examples of 2nd order system; Derivation of transfer function for various inputs to a 2nd order system; Dead time response to 1st and 2nd order systems for underdamped and overdamped conditions.

Introduction to control system: components of a control system; block diagram and development of block diagram for a bioprocess control system; Open-loop control system; Closed loop control system; On-off controller; P, PI, PID controller and derivation of transfer functions of controllers; Overview of advanced control strategies in bioprocess

Books

Texts/References:

1.	John G. Webster, Medical Instrumentation: Application and Design, Wiley, 5th Edition, 2020.
2.	G. D.Baura, Medical Device Technologies: A Systems Based Overview Using Engineering Standards Academic Press, Oxford, UK, Elsevier, 2011
3.	Joseph J. Carr and John M. Brown, Introduction to biomedical equipment technology, 4 th Edition, Pearson New York, 2000
4.	D. J. Dewhurst, An Introduction to Biomedical Instrumentation, Elsevier Science, 2014

5.	Dale E. Seborg, Thomas F. Edgar, Duncan A. Mellichamp and Francis J. Doyle III, Process Dynamics and Control, 4 th Edition. John Wiley, 2016
6.	Donald R. Coughanowr, Steven E. LeBlanc. Process Systems Analysis and Control, 3 rd Edition, McGraw Hill Education, 2013
7.	George Stephanopolous, Chemical Process Control – An introduction to theory and practice, 7 th Edition, Peritance Hall of India, 2008

Detailed Course Content (Optional)		
It will not be included in the Courses of Study Booklet		
Sl. No.	Broad Title / Topics	Number of Lectures
1	Basic concepts of Instrumentation, sensors & signal processing	6
2	Biopotential origin, electrodes and amplifiers	5
3	Blood pressure, sound, telemedicine & devices	7
4	Introduction to Matlab programming	2
5	Introduction to Laplace Transforms	8
6	Introduction to control system	8
7	Advanced control strategies in bioprocess	6
Total Number of Lectures =		42

In case of revision of existing course, please provide below the details of existing course. NA
EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

7. Proposal for a New Course / ~~Revision of a Course~~

Course Number & Title: BT 540 - Applied Bioengineering lab
L-T-P-C: 0-0-6-6
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades

Kind of Proposal (New Course / Revision of Existing Course): New Course	
Offered as (Compulsory / Elective): Compulsory	
Offered to: M.Tech in Bioengineering	
Offered in (Odd/ Even / Any): Odd	
Offered by (Name of Department/ Center): Biosciences and Bioengineering	
Pre-Requisite: NIL	
<p>Preamble / Objectives (Optional):</p> <p>This laboratory course aims to provide hands-on experience to complement the theoretical concepts covered in Advanced Bioengineering and Biomolecular and Cellular Process Engineering. This course is expected to be helpful in (a) designing the project activities during the dissertation and (b) understanding the basics of real industrial practices.</p>	
<p>Course Content/ Syllabus</p> <p>Transformation of microorganism and expression of recombinant protein in shake flask culture;</p> <p>Expression of recombinant proteins in bioreactor and analysis of growth kinetics;</p> <p>Introduction to mammalian cell culture techniques;</p> <p>Preparation/3D printing and characterization of biomaterial scaffolds;</p> <p>Cell proliferation/viability assay on scaffolds;</p> <p>Rheological characterization of biomaterials;</p> <p>Mechanical properties of metallic implant biomaterials;</p> <p>Nanoparticle fabrication, model drug loading and release kinetic assay;</p> <p>Demonstration of 3D bioreactors.</p>	
Books	
Texts / References:	
1.	J. Sambrook and D. W. Russell, Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory Press, 3rd Edition, 2001.
2.	Heidi Smith and Alfred Brown, Benson's Microbiological Applications Laboratory Manual, 15th Edition, McGraw Hill, 2022
3.	Debabrata Das and Debayan Das, Biochemical Engineering: A Laboratory Manual, 1st Edition, 2021

4.	Melissa Kurtis Micou and Dawn Kilkenny, A Laboratory Course in Tissue Engineering, CRC Press, 1st Edition, 2012	
5.	Gilson Khang, Moon Suk Kim and Hai Bang Lee, A Manual for Biomaterials/Scaffold Fabrication Technology,	
6.	Wujing Xian, A Laboratory Course in Biomaterials, CRC Press, 1st Edition, 2009	
Detailed Course Content (Optional)		
Sl. No.	Broad Title / Topics	Number of Lectures
1	Applied Bioengineering lab for 14 weeks	NA
Total Number of Lectures =		NA

In case of revision of existing course, Please provide below the details of existing course. NA EXISTING COURSE
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

8. Proposal for a New Course / ~~Revision of a Course~~

Course Number & Title: BT 525 - Industrial Training
L-T-P-C: 0-0-6-0
Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): PP or NP Letter Grades
Kind of Proposal (New Course / Revision of Existing Course): New Course
Offered as (Compulsory / Elective): Compulsory Audit
Offered to: M.Tech in Bioengineering
Offered in (Odd/ Even / Any): Summer
Offered by (Name of Department/ Center): Biosciences and Bioengineering
Pre-Requisite: NIL
Preamble / Objectives (Optional):
Course Content/ Syllabus This is a compulsory audit course of industrial training for 4(minimum) to 8 weeks (maximum) during the summer semester at the end of the second semester. This training

needs to be undertaken in any companies working in the field of industrial or medical biotechnology and bioprocessing etc. or in any research laboratory on a topic of industrial relevance in the board area of bioengineering. After successful completion of the training, the students shall submit the training certificate and training/project report to the course instructor, who shall evaluate and submit the grade. The faculty advisor for the respective batches shall be course instructor for the industrial training. PP (Pass) or NP (fail) grade will be awarded for this course from the Department side. However, a student with NP grade is not required to register again for passing this audit course.

Books

Texts / References: NA

Detailed Course Content (Optional)

Sl. No.	Broad Title / Topics	Number of Lectures
1	Industrial training up to 8 weeks	NA
Total Number of Lectures =		NA

In case of revision of existing course, Please provide below the details of existing course.

NA

EXISTING COURSE

Course Number, Title, L-T-P-C:

Pre-Requisite (if any)

Contents:

References:

9. Proposal for a New Course / Revision of a Course

Course Number & Title: **BT 700 - M. Tech Project I**

L-T-P-C: 0-0-22-22

Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades

Kind of Proposal (New Course / Revision of Existing Course): New Course

Offered as (Compulsory / Elective): Compulsory

Offered to: M.Tech in Bioengineering

Offered in (Odd/ Even / Any): Odd		
Offered by (Name of Department/ Center): Biosciences and Bioengineering		
Pre-Requisite: NIL		
Preamble / Objectives (Optional):		
Course Content/ Syllabus		
<p>This is a compulsory dissertation work in the different areas of Biosciences and Bioengineering. The student will undertake the mutually agreed project in the laboratory of the allotted supervisor(s) by the department. This course falls in the 3rd semester and continues for the whole semester. At the end of the semester as per the academic calender, the students shall submit the project report and present before the Examination Committee for the evaluation as per the existing M.Tech ordinance. The performance of students in this course shall be evaluated by the committee based on the submitted report and oral examination.</p>		
Books		
Texts / References: NA		
Detailed Course Content (Optional)		
Sl. No.	Broad Title / Topics	Number of Lectures
1	Dissertation work for one semester	NA
Total Number of Lectures =		NA

<p>In case of revision of existing course, Please provide below the details of existing course.</p> <p style="text-align: center;">NA</p> <p style="text-align: center;">EXISTING COURSE</p>
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

10. Proposal for a New Course / ~~Revision of a Course~~

Course Number & Title: BT 701 - M. Tech Project II
L-T-P-C: 0-0-24-24

Type of Letter Grading (Regular Letter Grades / PP or NP Letter Grades): Regular Letter Grades		
Kind of Proposal (New Course / Revision of Existing Course): New Course		
Offered as (Compulsory / Elective): Compulsory		
Offered to: M.Tech in Bioengineering		
Offered in (Odd/ Even / Any): Even		
Offered by (Name of Department/ Center): Biosciences and Bioengineering		
Pre-Requisite: NIL		
Preamble / Objectives (Optional):		
<p>Course Content/ Syllabus</p> <p>This is a compulsory dissertation work in the different areas of Biosciences and Bioengineering. The student continues the M. Tech Project I in the laboratory of the allotted supervisor(s) by the department. This course falls in the 4th semester and continues for the whole semester. At the end of the semester as per the academic calendar, the students shall submit the project report and present before the Examination Committee for the evaluation as per the existing M.Tech ordinance. The performance of students in this course shall be evaluated by the committee based on the submitted report and oral examination.</p>		
Books		
Texts / References: NA		
Detailed Course Content (Optional)		
Sl. No.	Broad Title / Topics	Number of Lectures
1	Dissertation work for one semester	NA
Total Number of Lectures =		NA

<p>In case of revision of existing course, Please provide below the details of existing course.</p> <p>NA</p> <p style="text-align: center;">EXISTING COURSE</p>
Course Number, Title, L-T-P-C:
Pre-Requisite (if any)
Contents:
References:

Pool of Electives for Electives I and III		
Course No.	Course Name	L - T - P - C
BT 606	Food Biotechnology	3 - 0 - 0 - 6
BT 609	Bioprocess Engineering	3 - 0 - 0 - 6
BT 612	Systems Biology	3 - 0 - 0 - 6
BT 618	Biomaterials	3 - 0 - 0 - 6
BT 620	Biosensors	3 - 0 - 0 - 6
BT 636	Tissue Engineering and Stem Cells	3 - 0 - 0 - 6
BT 640	Neural Imaging and Signal Systems	3 - 0 - 0 - 6
BT 643	Biointerface Engineering	3 - 0 - 0 - 6
BT 644	Biorefineries	3 - 0 - 0 - 6

Pool of Electives for Electives II and IV		
Course No.	Course Name	L - T - P - C
CL 611	Advanced Process Control	3 - 0 - 0 - 6
CL 612	Colloid and Interface Science	3 - 0 - 0 - 6
CL 630	Composite Materials	3 - 0 - 0 - 6
CL 631	Smart Materials	3 - 0 - 0 - 6
CL 634	Applied Rheology	3 - 0 - 0 - 6
CL 639	Biofluid Mechanics	3 - 0 - 0 - 6
CH625	Advances in Biological Macromolecules	3 - 0 - 0 - 6
CH628	Chemistry of Biological Macromolecules	3 - 0 - 0 - 6
ME 618	Micromechanics of Materials	3 - 0 - 0 - 6
ME 671	Biomaterials: Design and Applications	3 - 0 - 0 - 6
ME 696	Biomedical Devices and Systems	3 - 0 - 0 - 6
ME668	Sports Biomechanics	2 - 0 - 2 - 6
NT 730	Instrumentation for Nanotechnology	3 - 0 - 0 - 6
NT601	Nano Device: Fabrication, Production & Patent Writing	3 - 0 - 0 - 6

ANNEXURE-35



Receipt No. 968082 Annexure 109/10
Date: 8/10/21 Time: 10:30
भारतीय प्रौद्योगिकी संस्थान गुवाहाटी
INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

NOTE SHEET
CONTINUATION PAGE

STUDENTS' AFFAIRS SECTION

File Ref.: IITG/SA/NSS/207/2021

Date: 08.10.2021

Subject: Proposal for floating CoS (NSS) courses for all students – reg.

Presently students of IIT Guwahati are involved in NSS activities as:

- a) an optional course for the Undergraduate students as a part of SA course for 2 semesters and
- b) a volunteer for NSS activities irrespective of their courses. This kind of involvement is purely voluntary.

In a meeting, the Regional Director, NSS (GoI) has also expressed his concern about the less number of NSS volunteers (both in CoS course and NSS activities) compared to the total number of students and urged IIT Guwahati to accelerate the NSS activities and popularize NSS amongst the students.

To popularize and accelerate the NSS activities in IIT Guwahati campus, following points are proposed -

1. NSS activities for the PG students (MA, M.Sc., M.Tech., M.Des., MSR, Ph.D students) can be floated as optional courses. They will get PP/NP grade just as UG students under SA Courses.
2. The proposal can be placed in the next IPPC meeting. Once IPPC recommended, then it may be placed in the Senate for further approval.

Therefore, this note is put up for your kind perusal and consideration, please.

Manabendra Sarma
Dr. Manabendra Sarma
(NSS Coordinator)