



**Minutes of 42nd meeting of the Institute Academic Advisory Committee
(IAAC) held on December 16, 2019**

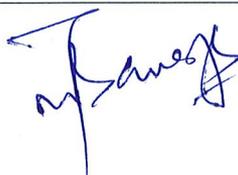
Following members were present at the meeting on December 16, 2019:

Sr. No.	Name	Designation
1	Dr. S. R. Gandhi	Director
2	Dr. P. L. Patel	Deputy Director
3	Dr. Jyotirmay Banerjee	Dean (Academic)
4	Dr. K. D. Yadav	I/c. Registrar
5	Dr. V. H. Pradhan	Dean (Student Welfare)
6	Dr. P. V. Timbadiya	Dean (A & RG)
7	Dr. A. A. Shaikh	Dean (R & C)
8	Dr. H. R. Jariwala	Asso. Dean (Academic)
9	Dr. H. G. Patel	Asso. Dean (Student Welfare)
10	Dr. J. K. Parikh	Asso. Dean (R & C)
11	Dr. G. R. Vesmawala	Asso. Dean (P & D)
12	Dr. Shailendra Kumar	Head, MED
13	Dr. R. Chudamani	Head, EED
14	Dr. A. D. Darji	Head, ECED
15	Dr. M. Mukhopadhyay	Head, CHED
16	Dr. M. A. Zaveri	Head, COED
17	Dr. Y. D. Patil	Head, AMD
18	Dr. M. Mansoor Ahammed	Head, CED
19	Dr. B. Z. Dholakiya	Head, ACD
20	Dr. A. K. Rai	Head, APD
21	Dr. Sushil Kumar	Head, AMHD
22	Shri Amit C. Patel	I/c. Dy. Registrar (Academic)

Item: 1	To confirm minutes of the 41 st meeting of IAAC held on September 26, 2019.
Res. 1	The minutes of 41 st meeting of IAAC is confirmed. The house was informed about the non-payment of fees and subsequent withdrawal of several students from M. Tech. program in consequence to Resolution 3 of 41 st IAAC.
Item: 2	To discuss and ratify the Course Outcomes (CO) of first year courses approved by DAAC of respective departments
Res. 2	The course outcomes submitted by departments for first year courses were analyzed and some departments were requested to revisit the course outcomes in terms of usage of appropriate keywords and resubmit the revised version on or before 31 st January 2020.
Item: 3	To discuss and finalize the revised syllabus for second year to final Year of B. Tech. programmes forwarded by the DAAC of respective departments as per the scheme approved by the 43 rd Senate.
Res. 3	In view of the request from Head of Departments of several Engineering disciplines, the last date of submission of revised syllabus for second year to final Year of B. Tech. programmes is extended to 31 st January 2020. In this regard, departments are encouraged to conduct one day workshop for curriculum revision seeking financial assistance from TEQIP-III and submit the revised syllabus for each course along with course outcomes and recommended books (only 5 most significant reference books in the order of their priority) and practical (if applicable) as per the format attached in Annexure A.
Item: 4	To discuss and finalize the revised syllabus for second to final Year of M. Sc. Integrated programmes forwarded by the DAAC of respective departments as per the scheme approved by the 43 rd Senate.
Res. 4	In view of the request from all Head of Departments of Sciences disciplines, the last date of submission of revised syllabus for second year to final Year of B. Tech. programmes is extended to 31 st January 2020. In this regard, departments are encouraged to conduct one day workshop for curriculum revision seeking financial assistance from TEQIP-III and submit the revised syllabus for each course along with course outcomes and recommended books (only 5 most significant reference books in the order of their priority) and practical (if applicable) as per the format attached in Annexure A.
Item: 5	To discuss the process of registration of students for comprehensive



	Examination.
Res. 5	Ph D students, who have completed their 16 credits, can register for their comprehensive examination in MIS on or before 7 th January 2020.
Item: 6	To discuss and finalize the procedure to be followed to transfer credits of NPTEL/SWAM courses completed by Ph D Students.
Res. 6	It is resolved that the supervisors of Ph D students will submit the certificates of NPTEL/SWAM courses to Deputy Registrar (Academic) as per the format attached in Annexure B . The detailed grade criteria and course codes for registration of NPTEL/SWAM courses is attached in Annexure C .
Item: 7	To discuss the proposal for “Early Induction Program” for final year B. Tech. students of all departments to M. Tech. program at IITs, as already exists in the department of Civil Engineering.
Res. 7	There was a suggestion for strengthening our existing M. Tech. programs in place of such a proposal. However, in view of the fact that only few students are selected in “early induction program” who will have better laboratory facilities at IIT, Head of Departments were requested to prepare proposal for “Early Induction Program” for final year B. Tech. students to M. Tech. program at IIT Bombay and initiate the interaction with respective Head of departments of IIT Bombay
Item: 8	To consider the recommendation of 31 st meeting of DAAC, Applied Mathematics & Humanities Department held on September 25, 2019 regarding offering a course on “English for Research and Academics” to research scholars of the institute from next semester.
Res. 8	It is resolved that the course on “English for Research and Academics” recommended by may be offered as credit course only to research scholars of English section. Research scholars from other departments/sections may opt for this course as audit course.
Item: 9	To consider the recommendation of 31 st meeting of DAAC, Applied Mathematics & Humanities Department held on September 25, 2019 regarding PhD admission in English. Proposed criteria from the department for admission in English for FIR students: “Full time Institute Research scholar (FIR) taking admission in PhD Programs should have either qualified TOEFL/IELTS at least once (with 70/120) or NET”
Res. 9	The house unanimously rejected the proposal and advised the department to



	continue with the existing practice as per Ph D regulations.
Item: 10	To consider the recommendation of meeting of DAAC, Electronics Engineering Department held on October 24, 2019 regarding nomination of Dr. A. S. Mandloi, Asst. Professor, ECED, as administrative supervisor for all Ph. D scholars working under Dr. K. P. Upla, Asst. Professor, ECED, who will be going for post doctoral studies for a period of one Year.
Res. 10	Approved
Item: 11	To consider the recommendation of meeting of DAAC, Electronics Engineering Department held on October 24, 2019 regarding change of PhD Supervisor for Mr. Mitul Nagar (reg. No.: D19EC005) from Dr. Z. M. Patel, Asso. Professor, ECED to Dr. P. J. Engineer, Asst. Professor, ECED owing to the change in research domain of the students.
Res. 11	Approved
Item: 12	To consider the recommendation of 59 th meeting of DAAC, Chemical Engineering Department held on November 20, 2019 for relative grading in subjects and removing the existing minimum cut of condition as per academic regulation 11.4 for B. Tech. programme which states that “the minimum % of marks for award of the ‘DD’ grade is 36%. However the student must secure at least 30% marks in the END Semester examination; otherwise he be awarded the FF grade.”
Res. 12	The house advised the department to continue with the existing practice, approved by the Institute Senate.
Item: 13	To consider the recommendation of 59 th meeting of DAAC, Chemical Engineering Department held on November 20, 2019 which proposes that research training for PhD students’ be completed by regular course work only and there is no need for separate comprehensive examination, as there is already six monthly research progress seminar given by the students.
Res. 13	The house advised the department to follow the recent guidelines of Institute Senate.
Item: 14	To consider the recommendation of 59 th meeting of DAAC, Chemical Engineering Department held on November 20, 2019 to allow admission of non-GATE candidates to the M. Tech. Chemical Engineering Programme as the department is facing difficulties to fill the sanctioned numbers of Seats in the M. tech. programme ever since the admission is centralized and is on basis of GATE qualification.



Res. 14	The house rejected the proposal
Item: 15	To consider the recommendation of 31 st meeting of DAAC, Civil Engineering Department held on October 16, 2019 to change the category of PhD student Mr. Vineela Nandam (Reg. No.: D18CE004) who is pursuing PhD under Dr. P. L. Patel, Professor, Civil Engineering Department from Full-time Institute Research Scholars (FIR) to Full-time Research Scholar (FRS) .
Res. 15	Approved
Item: 16	To consider the recommendation of 31 st meeting of DAAC, Civil Engineering Department held on October 16, 2019 to institute "Best Project" award for B. Tech final year students.
Res. 16	Approved with no financial commitment from the institute
Item: 17	To consider the recommendation of 23 rd meeting of DAAC, Applied Physics Department held on September 26, 2019 regarding change of the department name from 'Department of Applied Physics' to 'Department of Physics'.
Res. 17	The house recommended the department to prepare strong justification for such change and submit in future through their DAAC.
Item: 18	To consider the recommendation of 23 rd meeting of DAAC, Applied Physics Department held on September 26, 2019 regarding nomination of Head of the Department as administrative supervisor for the following Ph.D students of Dr. D. R. Roy who is visiting HWK, Germany during November 01, 2019 to April 30, 2020 . <ol style="list-style-type: none"> 1. Ms. Bhumika k. Sharma (Adm. No.: D15PH004) 2. Mr. Kaptansinh Rajput (Adm. No.: D17PH002) 3. Vilas P. Chaudhari (Adm. No.: D17PH003) 4. Pankaj Kumar (Adm. No.: D18PH001) 5. Bijal R. Mehta (Adm. No.: D19PH002)
Res. 18	Approved
Item: 19	To consider the recommendation of 75 th meeting of DAAC, Applied Chemistry Department held on October 14, 2019 to approve Dr. Suban Sahoo, Asso. Professor, Applied Chemistry Department, as Co-Supervisor of Mr. Anuj K. Saini (Reg. No.: D18CY006) and Mr. Seshu Vardhan Pothabathula (Reg. No.: D19CY007), who are pursuing PhD under Dr. Rajender Kumar, Asst. Professor, Applied Chemistry Department.



Res. 19	Dr. Suban Sahoo is recommended as the supervisor of the student while Dr. Rajender Kumar will be co-supervisor.
Item: 20	To consider the recommendation of 75 th meeting of DAAC, Applied Chemistry Department held on October 14, 2019 to approve Dr. Suban Sahoo, Asso. Professor, Applied Chemistry Department, as act Co-Supervisor of his M.Sc. dissertation students Mr. Vishal vaishnav (Reg. No.: I15CY001), Mr. Monak Patel (Reg. No.: I15CY006) and Mr. Aditi Rathore (Reg. No.: I15CY006), who are pursuing dissertation under Dr. Rajender Kumar, Asst. Professor, Applied Chemistry Department.
Res. 20	Dr. Suban Sahoo is recommended as the supervisor of the student while Dr. Rajender Kumar will be co-supervisor.
Item: 21	To consider the recommendation of 76 th meeting of DAAC, Applied Chemistry Department held on November 08, 2019 to approve Dr. Raghavendra Sai V V, Asso. Professor, Applied Mechanics Department, Indian Institute of Technology Madras as Co-Supervisor of Ms. Meenakshi Brijlal Prasad Paswan (Reg. No.: D18CY005), who is pursuing PhD under Dr. B. Z. Dholakiya, Asso. Professor, Applied Chemistry Department.
Res. 21	Approved
Item: 22	To consider the recommendation of 31 st meeting of DAAC, Applied Mathematics & Humanities Department held on September 25, 2019 to approve Dr. Manoranjan Maiti, Ex-Professor, Applied Mathematics with Oceanology and Computer Programming Department, Vidyasagar University, Midnapopre, West Bengal, as Co-Supervisor of Mr. Ekadashi Das (Reg. No.: D19MA004) who are pursuing PhD under Dr. Ranjan Kumar Jana, Asst. Professor, Applied Mathematics & Humanities Department.
Res. 22	After deliberation, the house recommended that Dr. Ranjan Jana be the sole supervisor of the student.
Item: 23	To consider the recommendation of 31 st meeting of DAAC, Applied Mathematics & Humanities Department held on September 25, 2019 to approve Dr. Manoranjan Maiti, Ex-Professor, Applied Mathematics with Oceanology and Computer Programming Department, Vidyasagar University, Midnapopre, West Bengal and Dr. Manas Kumar Maiti, Asso. Professor, Mathematics, Mahishadal raj College, Mahishadal, purab-Medinipur, West Bengal as Co-Supervisors of Ms. Rituparna Mondal (Reg. No.: D19MA003), who are pursuing PhD under Dr. Ranjan Kumar Jana, Asst. Professor, Applied Mathematics & Humanities Department.
Res. 23	After deliberation, the house recommended that Dr. Ranjan Jana be the sole



	supervisor of the student.
Item: 24	To consider the recommendation of 31 st meeting of DAAC, Applied Mathematics & Humanities Department held on September 25, 2019 regarding change of category of PhD student Mr. Radharaman Roy (Reg. No. DS16MA001) who is pursuing PhD under Dr. R. K. Jana, Asst. Professor, Applied Mathematics & Humanities Department from Full-time Research Scholars (FRS) to Full-time Institute Research Scholars (FIR).
Res. 24	Approved provided the concerned faculty member has vacancy of admitting an additional FIR student.
Item: 25	To consider the recommendation of 26 th meeting of DAAC, Applied Mechanics Department held on November 08, 2019 to approve Dr. V. A. Sawant, Asso. Professor, Civil Engineering Department, Indian Institute of Technology Roorkee as Co-Supervisor of Mr. Vikashkumar A. Jha (Reg. No. D19AM004), who is pursuing PhD under Dr. J. B. Patel, Asst. Professor, Applied Mechanics Department.
Res. 25	Approved.
Item: 26	To consider the recommendation of 45 th meeting of DAAC, Mechanical Engineering Department held on October 03, 2019 regarding Finalizing PEOs and POs for M. Tech. Manufacturing Engineering.
Res. 26	Members of the house suggested some corrections in the PEOs and POs for M. Tech. Manufacturing Engineering. The corrected PEOs and POs be approved and submitted through DAAC.
Item: 27	To consider the recommendation of 45 th meeting of DAAC, Mechanical Engineering Department held on October 03, 2019 regarding the Scheme of revised Curriculum for M. Tech. programme.
Res. 27	The scheme of revised curriculum for M. Tech. programmes will be finalized after completion of revision of syllabus for UG programs.
Item: 28	To consider the recommendation of 32 nd meeting of DAAC, Applied Mathematics & Humanities Department held on December 13, 2019 to change the category of PhD student Mr. Nikkam Vishal Eknath (Reg. No.: D18MA002) who is pursuing PhD under Dr. Dhananjay Gopal, Asst. Professor, Applied Mathematics Department from Full-time Institute Research Scholars (FIR) to Full-time Research Scholar (PEC) .
Res. 28	Approved



Items from Chair	
Item: 29	To consider the recommendation of 47 th meeting of DAAC, Electrical Engineering Department held on December 12, 2019 to approve Dr. S. N. Sharma, Professor, Electrical Engineering Department, as Co-Supervisor of Mr. Amruta Lambe (Reg. No.: D19EL003), who is pursuing PhD under Dr. H. G. Patel, Asso. Professor, Electrical Engineering Department
Res. 29	Approved
Item: 30	To consider the recommendation of 47 th and 48 th meeting of DAAC held on 6 th December and 13 th December 2019 respectively regarding restructuring of existing PG programs as per the recommendation of Academic Audit held during 18-19 October 2019.
Res. 30	It is recommended that the department takes up syllabus revision of existing PG programs with overlaps in syllabus between different programs being eliminated. Restructuring of existing PG programs may be proposed based on significant inputs from existing students, alumni and industry. In this regard, department is encouraged to conduct workshops for PG curriculum restructuring/revision seeking financial assistance from TEQIP-III.



Dr. Jyotinmay Banerjee
Dean(Academics)
Member Secretary, IAAC



Dr. S. R. Gandhi
Director
Chairman, IAAC

Copy to:

- Director, SVNIT Surat: for kind information please.
- I/c Registrar, SVNIT Surat for kind information and necessary action please.
- I/c Dy. Registrar (Academic) for kind information and necessary action please.
- All the members of Institute Academic Advisory Committee (IAAC) through e-mail

Format for Submission of Syllabus

Fundamentals of Materials and Manufacturing

L	T	P	Credit
3	0	2	04

MEME113 S2

Scheme

1. Course Outcomes (COs):

At the end of the course the students will be able to:

CO1	
CO2	
CO3	
CO4	
CO5	
CO6	

2. Syllabus

- **ENGINEERING MATERIALS** (14 Hours)
Classification of engineering materials, Metals (ferrous and non-ferrous) and alloys, Ceramics, Polymers (thermosets and thermoplastics), Composites (metal-matrix, ceramic-matrix, polymer-matrix), Semi-conductors, Bio-materials, Nano-materials, and Advance materials, Engineering properties of materials, Stress- Strain relationship, Effect of temperature on properties of materials. Crystalline structure, Nano-crystalline structure, Types of crystal systems, Crystal lattice, Lattice parameters, Metallic structures, Miller indices, Atomic radius & atomic packing factors for various crystal systems, Crystalline materials, Amorphous materials, Structure determination by X-ray diffraction, Bragg's law.
- **METAL CASTING PROCESSES** (10 Hours)
Overview of casting processes, Applications – materials and products, Sand casting process – types of patterns, pattern allowances, core and mould making, molding materials, types of cores, elements of riser and gating system, melting and pouring, cleaning of castings, casting defects, Special casting techniques such as – permanent mould casting, shell mould casting, die casting, investment casting, continuous casting and centrifugal casting.
- **METAL FORMING PROCESSES** (8 Hours)
Overview of metal forming processes, Applications - materials and products, Nature of plastic deformation, Temperature in metal forming, Forming processes - Rolling, Forging, Extrusion, Drawing (wire, bar and tube), and Sheet metal forming.
- **WELDING AND ALLIED PROCESSES** (10 Hours)
Overview of welding processes, Weld joints, Gas welding (Principles of gas welding, types of gases used, types of flames, welding techniques, equipment used, filler rods), Gas cutting, Electric arc welding processes - manual metal arc welding, flux cored arc welding, gas tungsten arc welding (GTAW), gas metal arc welding (GMAW), submerged arc welding, Electric resistance welding processes – spot welding, seam welding, projection welding, upset welding, flash welding, Solid state welding processes – friction welding, friction stir welding, ultrasonic welding, Weld defects, Allied processes like brazing, soldering and adhesive bonding.

(Total Lecture Hours: 42)

3. Practicals:

1. Testing of clay content of moulding sand.
2. Determination of grain fineness number of moulding sand.
3. Determination of moisture content of moulding sand.
4. Demonstration of permanent mould casting process
5. Demonstration and practice on manual metal arc welding
6. Demonstration of the effects of the welding parameters on GTAW process
7. Demonstration and practice on oxy-acetylene gas welding
8. Demonstration of the effects of the welding parameters on oxy-acetylene gas welding
9. Demonstration and practice on gas cutting
10. Practice on soldering of galvanized steel
11. Demonstration of selected forming operations

4. Books Recommended:

1. M. P. Groover, Fundamentals of Modern Manufacturing, Materials, Processes, and Systems, 4th Edition, John Wiley, 2010.
2. S. Kalpakjian and S. R. Schmid, Manufacturing Processes for Engineering Materials, 6th Edition, Pearson Education, 2018.
3. P. N. Rao, Manufacturing Technology – Vol. 1, 5th Edition, McGraw Hill, 2018.
4. V. Raghavan, Materials Science and Engineering: A First Course, 6th Edition, Prentice Hall India, 2015.
5. J. T. Black and R. A. Kohser, DeGarmo's Materials and Processes in Manufacturing, Wiley India, 2017.



Format for Submission of NPTEL/SWAYAM Course Credit by Supervisor

To,
Dy. Registrar (Academic)
SVNIT, Surat

Subject: Submission of NPTEL/SWAYAM Course Credit

Dear Sir,

This is to certify that my student _____ (Name) _____, (Reg. No.: _____) has successfully completed his NPTEL/SWAYAM Course of _____ (Title of Course) _____. This was a 12 Week/ 8 Week/ 4 Week Course and he is eligible for 4 / 3 / 2 Credits for this Course. He has obtained _____ % marks in the course and equivalently is eligible for _____ (Grade) _____. Please enter this information to MIS.

Thanking You

Sincerely

Supervisor

Head of Department

Note: Mark sheet/Certificate printed from NPTEL/SWAYAM portal duly attested by the supervisor is required to be submitted along with this letter.



Grade Sheet format and Course Code for NPTEL/SWAYAM Courses**Grade Sheet**

CC	BC	BB	AB	AA
60-67	68-74	75-82	83-89	90-100

Score Type of Certificate

- ≥ 90 Elite + Gold
- 75-89 Elite + Silver
- ≥ 60-74 Elite
- 40-59 Successfully Completed
- <40 Fail

Course Codes

1	SWM401	NPTEL - 1	12 Week
2	SWM402	NPTEL - 2	12 Week
3	SWM403	NPTEL - 3	12 Week
4	SWM404	NPTEL - 4	12 Week
5	SWM301	NPTEL - 5	8 Week
6	SWM302	NPTEL - 6	8 Week
7	SWM303	NPTEL - 7	8 Week
8	SWM304	NPTEL - 8	8 Week
9	SWM201	NPTEL - 9	4 Week
10	SWM202	NPTEL - 10	4 Week
11	SWM203	NPTEL - 11	4 Week
12	SWM204	NPTEL - 12	4 Week
13	SWM205	NPTEL - 13	4 Week
14	SWM206	NPTEL - 14	4 Week



GN 901

	English for Research and Academics	LTPC
GN901	Course Code	4004
1	Revising Grammar- Parts of Speech, Parts of A Sentence, Tenses, Active and Passive Voice, Auxiliaries, Noun Phrase, Phrasal Verb, Clauses, Subject-Verb Agreement, Collocation	12 Hrs
2	Importance of Punctuation in Writing- Use of Comma, Semi Colon, Colon, Full Stop, Hyphen and Dash, Brackets, Braces, and Parentheses, Apostrophe, Quotation Marks and Ellipsis	4hrs
3	The Writing Process- Note Making, Planning and Preparation of Writing, Word order, Breaking up Long Sentences, Structuring Paragraphs and Sentences, Art of Condensation, Paragraph Writing, Summarising and Paraphrasing, Using Linking Words, Cohesion, Coherence	18hrs
4	Editing your work- Common Errors, Right Vocabulary, Avoiding Ambiguity, Removing Redundancy, and Avoiding Plagiarism	8hrs
5	Writing for Research-, Compare and Contrast, Argumentative, Descriptive, Exploratory Essays	8 hrs
6	Presenting your research- Types of Presentation, Steps of Making a Good Presentation, Use of Visual Aids in Presentation, Beginning with Short Presentation, Making Persuasive Presentation	10 hrs

Reference Books

- 1 Leech, Geoffrey & Svartvil. *A Communicative Grammar of English*. Longman Group UK Ltd. 2006.
- 2 Quirk, Randolph and Greenbaum, Sidney. *A University Grammar of English*. Pearson, 2009.
- 3 Cook, Claire Kehrwald. *Line by Line. How to Edit Your Own Writing*. The Modern Language Association of America, 1985.
- 4 Wallwork, Adrian. *English for Writing Research Papers*. Springer, 2011.
- 5 Murray, Rowena & Moore, Sarah. *The Handbook of Academic Writing: A Fresh Approach*. Open University Press, 2006.
- 6 Bailey, Stephen. *Academic Writing: A Practical Guide for International Students*. 4th Edition. Routledge, 2014.