



GOVERNMENT COLLEGE OF ENGINEERING, BARGUR – 635 104.
(AUTONOMOUS)
(Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.)
www.gcebargur.ac.in Office/Fax: 04343-266067

OFFICE OF THE CONTROLLER OF EXAMINATIONS

7th Academic Council Meeting

Date : 03.02.2023.

Time : 11.a.m

Venue : Seminar Hall, Department of Mechanical Engineering, GCEB.

AGENDA

- ❖ Confirmation and Action taken report of Minutes of 6th Academic Council meeting conducted on 26.05.2022.
- ❖ Abstract of students awarded with degree UG (FT/PT) 2018 batch; PG 2020 batch.
- ❖ To discuss and approve Regulation 2022.
- ❖ To discuss and approve Regulation 2022 Curriculum and Syllabi.
- ❖ To Discuss and approve amendments in Curriculum / Courses / Syllabus of UG/PG degree program of R-2018 and R-2020.
- ❖ To discuss and approve "Innovation Practicum program by Forge Academy".
- ❖ Any other matter with the permission of the chair.

Minutes of 7th Academic Council meeting

The 7th Academic Council meeting was conducted on 03.02.2023 at 11 a.m. in the Seminar Hall, Department of Mechanical Engineering, GCE, Bargur.

The following members were present for the above meeting.

s.no.	Name and Designation	Status
1.	Dr.Vijayan.R, Principal	Chairman
2.	Dr. Saraswathy.G, Associate Professor & Head, Department of Science and Humanities, GCEB	Controller of Examinations
3.	Dr.Udhayakumar.C, Professor, Institute of Remote Sensing, Department of Civil Engineering, CEG Campus, Anna Univ., Chennai.	University Nominee
4.	Dr.Kowsalya.G, Professor, Department of Computer Science and Engineering, Coimbatore Institute of Technology, Coimbatore.	University Nominee
5.	Dr.Thirunavukkarasu.V, Principal(i/c),GCE, Bodinayakkanur,Theni	Academic Expert
6.	Dr.Govardhan.K, Associate Professor, Department of Micro and Nano Electronics, School of Electronics Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu, India.	Academic Expert
7.	Dr.Senthil.R, Associate Professor, Department of Energy Studies, SRM University, Chennai.	Academic Expert
8.	Thiru.Sudhakar.S, Managing Director, Turbo Engineers, Coimbatore – 641 014.	Industry Expert
9.	Dr.NafeesaBegum.J, Professor & Head, Department of Computer Science and Engineering, GCEB.	Member
10.	Dr. Thirumal.P, Professor & Head, Department of Mechanical Engineering, GCEB.	Member
11.	Thiru. Arulkumar M, Assistant Professor (Sr.Scale)& Head (i/c), Department of ECE, GCEB	Member
12.	Thiru.Arivumani.V, Assistant Professor (Sr.Scale)& Head, Department of EEE, GCEB	Member
Invitee members		
1.	Dr.AshokKumar.I, Associate Professor, Department of Mechanical Engineering, GCEB	Assistant Controller of Examinations
2.	Thiru.KarthikeyanC.M.T, Assistant Professor (Sr.Scale), Department of CSE, GCEB.	Assistant Controller of Examinations

The following member expressed her inability to attend the meeting due to pre-occupation.

s.no.	Name and Designation	Status
1.	Dr. Sumathy.V, Principal, GCE, Dharmapuri.	University Nominee

The Principal & Chairman, Dr.Vijayan.R, welcomed and felicitated University nominee, Academic experts, Industry expert and other members for the 7th Academic Council meeting.

The Controller of Examinations, Dr.Saraswathy.G with the consent of Chairman conveyed the agenda and the proceeding of 7th academic council meeting started at 11.05a.m.

Agenda – 1: Confirmation and Action Taken Report of 6th Academic Council meeting held on 26.05.2023.

Agenda	Action taken
To discuss and approve amendments in Regulation 2020.	<p>1) The proposed guidelines for Industrial training / Internship and VAC were approved and the same is implemented from the AY 2022-2023 onwards.</p> <p>2) Students were enabled to register for arrear courses in the subsequent semester.</p> <p>3) Approved to conduct open day after publishing the result. Open day was conducted for Nov./Dec.2021 & April/May 2022 and resulted in decrease in number of revaluation.</p> <p>Nov./Dec.2021 examination: About 129 answer scripts were applied for revaluation (6.4%) out of 2257 answer scripts.</p> <p>April/May 2022 examination: About 22 answer scripts were applied for revaluation (2.99%) out of 851 answer scripts.</p>
To approve and ratify the changes / updation in Curriculum / Courses / Syllabus of UG (FT & PT) and PG degree programme of Regulation 2018 and Regulation 2020.	Approved curriculum and syllabi was implemented from the Academic year 2020-2021 onwards.

Resolved to ratify the action taken as per the suggestions made during 6th Academic Council meeting held on 26.05.2023.

Agenda – 2: Abstract of students awarded with degree (UG (FT/PT) 2018 batch; PG 2020 batch).

S. No	Branch	Registered	No. of passed candidates		
			Distinction	First	Second
UG Degree Programme					
1.	Computer Science and Engineering	61	23	38	-
2.	Electronics & Communication Engineering	55	13	42	-
3.	Electrical & Electronics Engineering (Full time)	61	8	53	-
4.	Mechanical Engineering	53	2	51	-
5.	Electrical & Electronics Engineering (Part Time)	6	-	6	-
PG Degree Programme					
1.	Computer Science and Engineering	2	-	2	-
2.	Applied Electronics	1	-	1	-

Agenda – 3: To discuss and approve Regulation 2022.

3.1. INTRODUCTION OF UNDERGRADUATE DEGREE WITH HONOURS AND MINOR DEGREE:

Existing Regulation 2020	Proposed Regulation 2022 (Academic year 2022-2023 onwards)
<p>4.1 Range credits A range of credits from 160 –165 for a student to be eligible to get Full time Four-year Undergraduate degree in Engineering (credits from 122-128 for Lateral Entry) and the total number of credits proposed for the part-time B.E. degree program is 96 - 100.</p>	<p>4.1 Range credits A range of credits from 160 –165 for a student to be eligible to get Full time Four-year Undergraduate degree in Engineering (credits from 122-128 for Lateral Entry) and the total number of credits proposed for the part-time B.E. degree program is 96 - 100.</p> <p>A student will be eligible to get Undergraduate degree with Honours or additional Minor Engineering, if he/she has earned additionally a minimum of 18 credits. Students can earn maximum of 6 credits in online mode (SWAYAM platform), out of these 18 credits (as per Anna University, Chennai Regulation 2021 (CBCS) for B.E. degree programme). w.e.f AY 2022-2023. (Refer Annexure – I)</p>

As per the Anna University direction, with reference to the revised Regulation 2021, Undergraduate degree with Honours and Minor degree was introduced from the academic year 2022-2023 onwards.

The Anna University, Chennai procedure and guidelines is referred for proceeding Undergraduate degree with Honours and Minor degree.

The above point was discussed and approved by the committee members.

3.2. TO DISCUSS AND APPROVE REGULATION 2022 CURRICULUM AND SYLLABI.

Existing Regulation 2020	Proposed Regulation 2022												
<p>4.10 MANDATORY COURSES (Only for Full Time B.E. Degree) Induction Program, Constitution of India and Environmental Science and Engineering (The list may change from time to time).</p> <table border="1"> <thead> <tr> <th>Mandatory course</th> <th>Award of Grade</th> </tr> </thead> <tbody> <tr> <td>Constitution of India.</td> <td>Internal mode – Grade is awarded based on Continuous assessment marks scored.</td> </tr> <tr> <td>Environmental Science and Engineering.</td> <td></td> </tr> </tbody> </table>	Mandatory course	Award of Grade	Constitution of India.	Internal mode – Grade is awarded based on Continuous assessment marks scored.	Environmental Science and Engineering.		<p>4.10 MANDATORY COURSES (Only for Full Time B.E. Degree) Induction Program, Constitution of India and Environmental Science and Engineering (The list may change from time to time).</p> <table border="1"> <thead> <tr> <th>Mandatory course</th> <th>Award of Grade</th> </tr> </thead> <tbody> <tr> <td>Constitution of India.</td> <td>Internal mode – Grade is awarded based on Continuous assessment marks scored.</td> </tr> <tr> <td>Environmental Science and Sustainability.</td> <td>External mode – Grade is awarded based on End semester examination marks scored.</td> </tr> </tbody> </table>	Mandatory course	Award of Grade	Constitution of India.	Internal mode – Grade is awarded based on Continuous assessment marks scored.	Environmental Science and Sustainability.	External mode – Grade is awarded based on End semester examination marks scored.
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Environmental Science and Sustainability.	External mode – Grade is awarded based on End semester examination marks scored.												

The amendment proposed in Clause 4.10 was discussed and approved.

Agenda – 4: TO DISCUSS AND APPROVE REGULATION 2022 CURRICULUM AND SYLLABI.

R 2022 Curriculum SEMESTER - I

R- 2022	CSE	ECE	EEE	MECHANICAL	L	T	P	Credits
Mandatory Course: Induction Programme (non-credit course) Common to all Branches								0
Course code	Theory Courses:							
22ZHS101	English for Engineers-I	English for Engineers-I	English for Engineers-I	English for Engineers-I	3	0	0	3
22ZBS102	Matrices and Calculus	Matrices and Calculus	Matrices and Calculus	Matrices and Calculus	3	1	0	4
22ZBS103	Engg. Physics	Engg. Physics	Engg. Physics	Engg. Physics	3	0	0	3
22ZBS104	Engineering Chemistry	Engineering Chemistry	Engineering Chemistry	22ZMBS104: Applied Chemistry	3	0	0	3
22ZES105	Problem Solving and Python Prog.	Problem Solving and Python Prog.	Problem Solving and Python Prog.	Problem Solving and Python Prog.	3	0	0	3
22ZMC106	தமிழர்மரபு/ Heritage of Tamils (non-credit course)				1	0	0	0
Laboratory Courses:								
22ZES107	Python lab	Python lab	Python Lab	Python Lab	0	0	3	1.5
22ZBS108	Chemistry Lab	Chemistry Lab	Chemistry Lab	Chemistry Lab	0	0	3	1.5
22ZBS109	Physics Lab	Physics Lab	-	-	0	0	3	1.5
22ZHS110	-	English Lab	English Lab	-	0	0	2	1
22MES111	-	-	-	Workshop	0	0	3	1.5
Credits	20.5	21.5	20.0	20.5				

SEMESTER - II

R- 2022	CSE	ECE	EEE	MECHANICAL	L	T	P	Credits
Course code	Theory Courses:							
22ZHS201	English for Engineers-II	English for Engineers-II	English for Engineers-II	English for Engineers-II	3	0	0	3
22ZBS202	TPDE	Ordinary Differential Equation and Analytical functions	ODEAF	Probability and Analytical functions	4	1	0	4
22ZBS203	Physics of SCD	Physics of SCD	Physics of SCD	22MBS203: Material Science	3	0	0	3
22ZES204	Engineering Graphics	22LPC204: Circuit Theory	Engineering Graphics	Engineering Graphics	3 2	1 0	0 3	4 3
22ZES205	Programming in C	Programming in C	22EES205: Basic Civil and Mechanical Engg.	22MES205: Basic Electrical and Electronics Engg.	3	0	0	3
	-	22LES206: Electrical & Instrumentation Engg.	22EES206: Electric Circuit Analysis	-	3 3	0 1	0	3/4
22ZMC207	Tamils and Technology / தமிழரும் தொழில்நுட்பமும்				1	0	0	0
Laboratory Courses:								
22ZES208	Prog. in C lab	Prog. in C lab	22EES208: ECA Lab	22MES208: BEEELab	0	0	3	1.5
22ZHS209	English Lab	22LPC209: C&D Lab	22EES209: BCM Lab	English Lab	0	0	2/3	1/1.5
22ZES210	Workshop Practices	Workshop Practices	22ZBS209: Physics Lab	22ZBS209: Physics Lab	0	0	3	1.5
Credits	20	24.5	24.5	20				

The Head of the department(s) presented their respective curriculum and detailed syllabi of Regulation 2022. The curriculum for all the eight semesters were discussed in length and the syllabus for First and Semester alone was presented for discussion and approval.

The mandatory courses offered in B.E. four-year degree programme was discussed. The total number of theory and Laboratory courses in each semester, course code, course title and total number of credits were discussed in length.

The valuable suggestions and recommendations given by the University nominee(s), Academic expert(s) and Industrial expert were listed below:

(1) It was suggested to follow the PO(s) as proposed in the NBA / AICTE by all the departments with a minimum of two PSOs. The CO, PO mapping should be uniform for all the branches.

(2) The Workshop Practices course content for ECE / CSE / EEE may be designed related to their respective department's need. For CSE department the Workshop Practices can include software-oriented practices. As per Anna University revised regulation R 2021, it was suggested by the University nominee to have "Workshop Practices" common to all branches.

(3) It was suggested to decrease the credit for the Course titled "Universal Human Values" from 3 credits to two. The Credits for Course titled "Artificial Intelligence" and "Machine Learning" may be increased from 3 credits to 4 credits. It was also **insisted** to have "**Artificial Intelligence**" and "**Machine Learning**" as **separate courses** and the "Artificial Intelligence" course to be listed under CSE department Open Electives.

(4) It was suggested to move "Mobile Computing" and Software Engineering" courses from Open electives to Core courses and "Network security" course to Open Electives.

(5) It was recommended to include a minimum of 12 courses in the Open Elective list.

(6) It was suggested to include comprehensive courses for better placement. Question paper pattern should include Gate questions also. Industry related courses may be listed separately.

(7) The nomenclatures like Fundamentals, Principles, Basics, Introduction should be avoided in Course title. Using the name Amazon, iOs etc., in the course title should be avoided strictly and general terms like "Mobile App development" may be used.

(8) The "Programming in C" course was suggested to offer with 4 credits i.e. Theory 2 hours and Laboratory 3 hours. This will enable the students to acquire practical knowledge and in turn will help the students in placement.

(9) It was suggested to have the **latest book edition** in the reference and text books.

(10) The structure of curriculum may be framed with either **5 Theory** courses and **2 Laboratory** courses or **6 Theory** courses and **2 Laboratory** courses.

(11) The credits for project should be uniform for all the branches. It was recommended to has **Project-I in 7th semester with 3 credits** and **Project-II in 8th semester with 8 credits** and **total 11 credits for Project work**. In 8thsemester, the students should carry out project -II in their domain only.

(12) It was insisted to have a round figure for total credits for all branches. It was Recommended to have **uniform total creditsfor all the branches** or with ± 2 variation and not more than that. When the Content of any course is changed then correspondingly the course code should also be changed.

(13) The **industrial expert** suggested having **Startups** focusing on idea generation and Development. Also insisted to have startup incubation centers to create future entrepreneurs.

(14) It was recommended to have atleast **four verticals with a minimum of seven Professional electives** across all branches.

(15) The course titled "Data Structures and Object Oriented Programming" credit may be increased to 4 credits. The Engineering Graphics course may be offered with 2 theory hours and 3 Laboratory hours (5 contact hours) and 3 credits.

(16) It was suggested that the common course titled "Research Methodology and IPR" with 3 credits should be offered by any one of the PG departments (CSE/ECE/EEE/MECH). The PG students and the Ph.D scholars (Engineering /Science and Humanities) may register and do the course under the department offering the course.

The detailed curriculum and syllabi is attached in *Annexure – II*.

Resolved and approved by the academic council members.

Agenda - 5: To consider and approve the changes/updation in Curriculum / Courses / Syllabus of UG(FT&PT) /PG degree program of R-2018; R-2020.

The Head of the department(s) presented minutes of Board of studies meeting conducted in their respective department.

5.1. The common course to be studied by the lateral entry / Transferred students admitted in GCE, Bargur during the Academic Year 2022-2023 was tabulated below:

S. No.	First year subjects to be studied	subjects to be studied by the student	Period of study recommended	Credit
1	20ZMC205 Constitution of India	All Lateral entry students and All transfer students	December 2022 to April 2023	0

5.2. The major changes in curriculum and syllabi were discussed in detail. The major changes / Updation were listed below:

S.no.	Existing curriculum R-2020	Curriculum revision in R-2022	Justification
1.	Engineering Chemistry course: B.E./I year/I sem. : ECE/CSE B.E./I year/ II sem.: EEE/MECH EVS –B.E/ECE/EEE/CSE/3 rd sem. B.E./4 th sem.	Engineering Chemistry - B.E. I sem. (ECE/EEE/CSE) Applied Chemistry/MECH EVS course: B.E. 4 th sem. (ECE/EEE/CSE/MECH)	As per Anna University, Chennai revised R-2021 curriculum
2.	Technical English course: B.E./I year/I sem. : ECE/CSE B.E./I year/ II sem.: EEE/MECH B.E./3 rd /MECH/4 th /EEE/5 th /CSE SOFT SKILLS AND PERSONALITY DEVELOPMENT LABORATORY	English for Engineers-I B.E.I sem. ECE/EEE/CSE/MECH English for Engineers-II B.E.I sem. ECE/EEE/CSE/MECH M.E. (PED) ENGLISH FOR RESEARCH PAPER WRITING	1) Studying Language in both Semester-I & II strengthens students ability to communicate. 2) Language courses rewards the students with the skills needed for self-critical reflection, adaptability and self-learning.
3.	Engineering Physics B.E./I sem. ECE/CSE/EEE/MECH Physics of Semiconductor Devices – B.E./II sem.: CSE/EEE/CSE Material Science: B.E./II sem. /Mech. Physics B.E./I sem. /BEE(PT)	Engineering Physics B.E./I sem. ECE/CSE/EEE/MECH Physics of Semiconductor Devices – B.E./II sem.: CSE/EEE/CSE Material Science: B.E./II sem. /Mech. Physics for Electrical Engg. B.E./I sem. /BEE(PT)	As per BoS members recommendation.
4.	Engineering Mathematics – I Engineering Mathematics-II Numerical Methods Probability and Queuing Theory Transforms and Partial Differential Equations Discrete mathematics	Matrices and Calculus Ordinary Differential Equations and Analytical Functions Applied Statistics and Numerical methods Probability and Analytical Functions. Probability and Queuing Theory Statistics and Random Processes Transforms and Partial Differential Equations Discrete mathematics	As per Anna University, Chennai revised R-2021 curriculum

5.3. The list of Open Electives offered by the Department of Physics:

Sl. No	Course code	Subject name	CAT	Contact period	L	T	P	C
1	22ZOE01	Crystal growth	BSC	3	3	0	0	3
2	22ZOE02	LASERS and applications	BSC	3	3	0	0	3
3	22ZOE03	Nanomaterials	BSC	3	3	0	0	3
4	22ZOE05	Thin Films	BSC	3	3	0	0	3
5	22ZOE06	Functional Materials	BSC	3	3	0	0	3
6	22ZOE07	Materials characterization techniques	BSC	3	3	0	0	3
7	22ZOE08	Spectroscopy	BSC	3	3	0	0	3

Resolved to approve and ratify the changes / updation in Curriculum / Courses / Syllabus of UG (FT & PT) and PG degree programme of Regulation 2018 and Regulation 2020.

Agenda – 6: Innovation Practicum program by Forge Academy.

The Directorate of Technical Education, Chennai and TamilNadu Skill Development Corporation has started 18 weeks internship programme for the third year (6th semester) students to develop the innovation culture and product development skills among the students. This programme is already implemented in GCE-Salem, GCE-Srirangam and GCE- Tirunelveli.

It is proposed to implement the same in GCE, Bargur in even semester 2022-23. In this regard Forge academy has conducted two-day workshop in GCE, Bargur on 19th & 20th January 2023. Totally 33 Students (ECE-5, EEE-10, CSE-12 and Mech-6) were selected for ProtoSem semester long student's internship. Students will undergo 18 weeks internship and study 7 courses during the Feb-May 2023.

The Courses offered at the internship is listed below.

1. Applied Design Thinking.
2. Startup Fundamentals.
3. Computational Hardware.
4. Coding for Innovators.
5. Industrial Design & Rapid Prototyping Techniques.
6. Industrial Automation/ Data Life Cycle Management.
7. Robotics/ ML/ML Ops.

All the above-listed courses are proposed to be inducted in to the curriculum of as professional electives. However, the selected students should complete the core courses offered in the 6th semester as per their respective curriculum.

A meeting was conducted with the 33 selected students, HODs, COE and Principal on 25th January 2023 to discuss the implementation of "ProtoSem semester-long student's internship".

(Minutes attached in Annexure – III)

It was decided that,



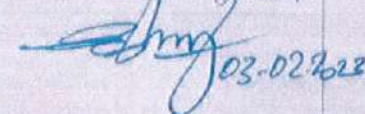
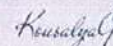
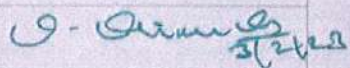
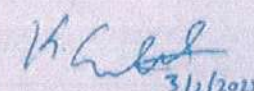
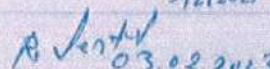
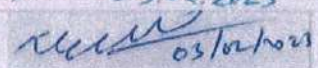
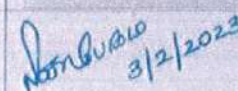
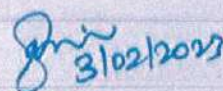
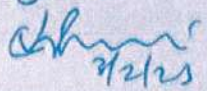
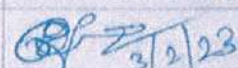
1. Seven courses offered in the internship will be considered equivalent to the 7 professional elective courses of the GCEB R2020 curriculum.
2. Core courses offered in the 6th semester can be registered in 6th or 7th semester as per student convenient under CBCS.
3. Laboratory courses offered in 6th semester can be registered in the 7th semester (R2020).
4. Project work carried out during the internship is allowed to present as project work done in the 6th semester (Wherever applicable in the respective Departments).

The academic council was elaborated about this internship scheme implementation. An official letter was also sent to DOTE in this regard (Annexure 3). Permission was requested to offer this Industry – Institute collaborated scheme in GCE, Bargur.

The above agenda was discussed in detail by the Committee and approved the same.

Conclusion:

Finally, the Controller of Examinations, Dr. Saraswathy G. thanked all the academic council members for their active participation and valuable suggestions for the benefit of the students and institution. The meeting came to close by 2.30p.m.

S.No	Name and Designation	Status	Signature with date
1.	Dr. Vijayan.R, Principal	Chairman	 3/2/23
2.	Dr. Saraswathy.G, Associate Professor & Head, Department of Science and Humanities, GCEB.	Controller of Examinations	 3/2/23
3.	Dr. Udhayakumar.C, Professor, Institute of Remote Sensing, Department of Civil Engineering, CEG Campus, Anna University, Chennai.	University Nominee	 03-02-2023
4.	Dr. Kowsalya.G, Professor, Department of Computer Science and Engineering, Coimbatore Institute of Technology, Coimbatore.	University Nominee	 03-02-2023
5.	Dr. Thirunavukkarasu.V, Principal (i/c), GCE, Bodinayakanur, Thent.	Academic Expert	 3/2/23
6.	Dr. Govardhan.K, Associate Professor, Department of Micro and Nanoelectronics, School of Electronics Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu, India.	Academic Expert	 3/2/2023
7.	Dr. Senthil.R, Associate Professor, Department of Energy Studies, SRM University, Chennai.	Academic Expert	 03.02.2023
8.	Thiru. Sudhakar.S, Managing Director, Turbo Engineers, Coimbatore - 641 014.	Industry Expert	 03/02/2023
9.	Dr. Nafeesa Begum.J, Professor & Head, Department of Computer Science and Engineering, GCEB.	Member	 3/2/2023
10.	Dr. Thirumal.P, Professor & Head, Department of Mechanical Engineering, GCEB.	Member	 3/02/2023
11.	Thiru. Arulkumar.M, Assistant Professor (Sr. Scale) & Head (i/c), Department of ECE, GCEB.	Member	 3/2/23
12.	Thiru. Arivumani.V, Assistant Professor (Sr. Scale) & Head, Department of EEE, GCEB.	Member	 3/2/23


PRINCIPAL & CHAIRMAN

Copy to:

1. All the Head of the Departments
2. Academic Council Members.



REGISTRAR

ANNA UNIVERSITY

SARDAR PATEL ROAD, CHENNAI - 600 025.

www.annauniv.edu

Phone : +91 44 2235 2161

+91 44 2235 7003

Office : +91 44 2235 7004

Fax : +91 44 2235 1956

E-Mail : registrar@annauniv.edu

Letter No.5749/AU/CAC/Honours/2022

16.11.2022

To
The Principals of Autonomous Colleges
Anna University.

Sir/Madam,

Sub: Anna University – Award of UG (Hons) with Specialisation, UG with Minor
and UG (Hons) - Reg.

It is informed that based on the guidelines provided by AICTE, the 28th Academic Council of Anna University has approved the implementation of the following.

1. B.E. / B.Tech. (Honours) in the same discipline
2. B.E. / B.Tech. Minor in other specialization and
3. B.E. / B. Tech. (Honours).


This shall be implemented for the UG students in the Autonomous Colleges affiliated to Anna University, who have joined from the academic year 2021 - 2022 onwards.

The norms for the regulations regarding the award of B.E. / B.Tech. (Honours) in the same discipline, B.E. / B.Tech. Minor in other specialisation and B.E. / B. Tech. (Honours) are provided in Annexure-I.

These norms for offering B.E. / B.Tech. (Honours) with Specialisation, B.E. / B.Tech. with Minor and B.E. / B.Tech. (Honours) shall be adopted in the respective regulation of your college under Autonomous status. This can be offered to those students who opt for it and also eligible for the same. Steps shall be taken by your college such that additional teaching faculties and staffs may be recruited and necessary infrastructure may be established to meet all the requirements of the additional courses that will be offered under the amended regulation.

This decision is taken with the approval of the competent authority.

This is for your information and necessary action at your end.


REGISTRAR i/c

Encl: Annexure-I

Copy to:

1. PS to Vice Chancellor
2. PA to Registrar
3. The Chairpersons, Faculty of Civil / Mechanical / Electrical / ICE / Technology / Management Sciences / S&H / Architecture & Planning, AU, Ch - 25.
4. Office of the Controller of Examinations.
5. The Stock File, CAC.

ANNEXURE I

(Amendment to the Regulation 2021 (CBCS) for B.E. / B. Tech. degree Programme offered in Non-Autonomous Affiliated Colleges)

4.10 B.E. / B. Tech. (Hons) Specialisation in the same discipline, B.E. / B. Tech. (Hons) and B.E. / B. Tech. minor in other specialisation.

(i) B.E./B.Tech. Honours (specialisation in the same discipline):

- a. The student should have earned additionally a minimum of 18 credits from a vertical of the same programme.
- b. Should have passed all the courses in the first attempt.
- c. Should have earned a minimum CGPA of 7.50.

(ii) B.E / B.Tech. Honours

- a. The students should have earned additional courses (minimum of 18 credits) from more than one vertical of the same programme.
- b. Should have passed all the courses in the first attempt.
- c. Should have earned a minimum CGPA of 7.50.

(iii) B.E./B.Tech. (minor in other specialisation)

The student should have earned additionally a minimum of 18 credits in any one of the verticals of other B.E/B.Tech programmes or from any one of the following verticals
VERTICAL I: FINTECH AND BLOCK CHAIN
VERTICAL II: ENTREPRENEURSHIP
VERTICAL III: PUBLIC ADMINISTRATION
VERTICAL IV: BUSINESS DATA ANALYTICS
VERTICAL V: ENVIRONMENT AND SUSTAINABILITY

2. Students can earn maximum of 6 credits in online mode (SWAYAM platform), out of these 18 credits as approved by Centre for Academic Courses
3. B.E./ B. Tech. (Hons) Specialisation in the same discipline, B.E / B.Tech. Honors and B.E./B.Tech. minor in other specialisation degree will be optional for students.
4. For the categories 1 (i) to 1(ii), the students will be permitted to register the courses from V Semester onwards provided the marks earned by the students until III semester should be of CGPA 7.50 and above and cleared all the courses in the first attempt.
5. For the category 1 (iii), the students will be permitted to register the courses from Semester V onwards provided the marks earned by the students until Semester III is CGPA 7.50 and above.
6. If a student decides not to opt for Honours, after completing certain number of additional courses, the additional courses studied shall be considered instead of the Professional Elective courses which are part of the curriculum. If the student has studied more number of such courses than the number of Professional Elective courses required as per the curriculum, the courses with higher grades shall be considered for the calculation of CGPA. Remaining courses shall be printed in the mark sheet, however, they will not be considered for calculation of CGPA.

7. If a student decides not to opt for Minor, after completing certain number of courses, the additional courses studied shall be considered instead of Open Elective courses which are part of the curriculum. If the student has studied more number of such courses than the number of open electives required as per the curriculum, the courses with higher grades shall be considered for calculation of CGPA. Remaining courses shall be printed in the mark sheet, however, they will not be considered for calculation of CGPA.

CLASSIFICATION OF DEGREE

16.2.1 First class with distinction

Degree (i)	Duration of programme (ii)	Duration permitted (iii)	Additional credits above the requirement of curriculum (iv)	CGPA (v)	Pass in (vi)	Break of study (vii)	Prevention due to lack of attendance	Withdrawal from writing end semester examination (viii)
B.E./B.Tech. (Regular)	4 years	5 years	-	8.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. (sandwich)	5 years	6 years	-	8.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. Lateral Entry	3 years	4 years	-	8.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt

B.E./B.Tech. (Honours) Specialisation in the same discipline	3/4/5 years (Lateral entry, Regular, Sandwich respectively)	4/5/6 years (Lateral entry, Regular, Sandwich respectively)	18 credits from any one vertical of the same programme	8.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. (Honours)	3/4/5 years (Lateral entry, Regular, Sandwich respectively)	4/5/6 years (Lateral entry, Regular, Sandwich respectively)	18 credits from more than one verticals of the same programme	8.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt
B.E./B.Tech. minor in other specialisation	3/4/5 years (Lateral entry, Regular, Sandwich respectively)	4/5/6 years (Lateral entry, Regular, Sandwich respectively)	18 credits from any one vertical of the other programme	8.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt

16.2.2 First class

Degree (i)	Duration of programme (ii)	Duration permitted (iii)	Additional credits (iv)	CGPA (v)	Pass in (vi)	Break of study (vii)	Prevention due to lack of attendance	Withdrawal from writing semester examination (viii)	from end (viii)
B.E./B.Tech. (Regular)	4 years	5 years	-	6.50	-	One year authorised break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-	
B.E./B.Tech. (sandwich)	5 years	6 years	-	6.50	-	One year authorised break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-	
B.E./B.Tech. Lateral Entry	3 years	4 years	-	6.50	-	One year authorised break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)	-	
B.E./B.Tech. (Honours) Specialisation in the same discipline	3/4/5 years (Lateral entry, Regular, Sandwich respectively)	4/5/6 years (Lateral entry, Regular, Sandwich respectively)	18 credits from any one vertical of the same programme	7.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt	be
B.E./B.Tech. (Honours)	3/4/5 years (Lateral entry, Regular, Sandwich respectively)	4/5/6 years (Lateral entry, Regular, Sandwich respectively)	18 credits from more than one verticals of	7.50	First attempt	One year authorised break of study included in the Duration permitted (iii)	Not permitted	Will not be considered as an attempt	be

B.E./B.Tech. minor in other specialisation	Sandwich respectively)	Sandwich respectively)	the same programme		the Duration permitted (iii)	
	3/4/5 years (Lateral entry, Regular, Sandwich respectively)	4/5/6 years (Lateral entry, Regular, Sandwich respectively)	18 credits from any one vertical of the other programme	6.50	One year authorised break of study included in the Duration permitted (iii)	Included in the Duration permitted (iii)
				-		-

Second Class

16.2.3 SECOND CLASS:

B.E./B.Tech. Regular, sandwich and lateral entry and B.E./B.Tech. minor in other specialisation degree students (not covered in clauses 16.2.1 and 16.2.2) who qualify for the award of the degree (vide Clause 16.1) shall be declared to have passed the examination in **Second Class**.

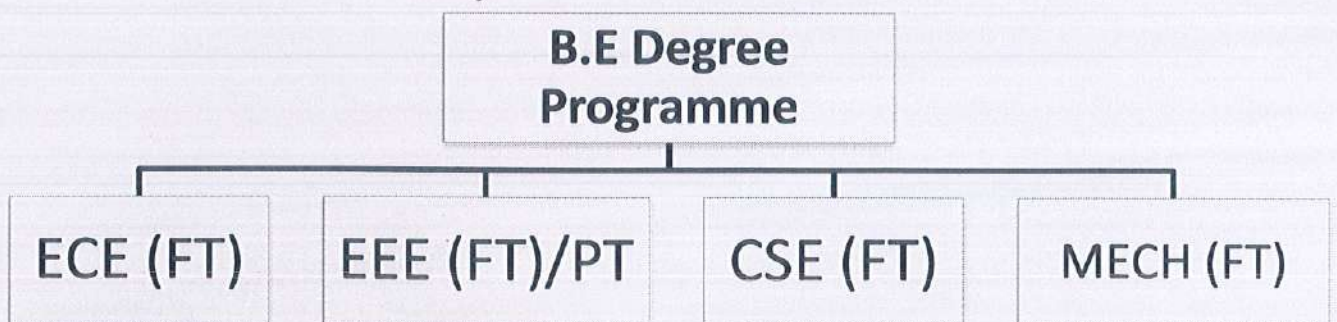
16.2.4. Student earned additional 18 credits as per Clause 4.10 (i) and (ii) but does not satisfy the conditions mentioned in 16.2.1 or 16.2.2 shall not be awarded B.E./B.Tech.Honours. In such cases the mark sheet will show the additional courses studied and those courses shall not be considered for CGPA computation. In such case if the student becomes eligible for First Class, while computing CGPA without taking into account the additional course studied, the student shall be awarded B.E. / B.Tech. in First Class only.

Regulation - 2022

CURRICULUM

FOR

B.E(FT) Degree Programme (First year)



Mandatory Course: Induction Program
(Common to all branches)

Induction	3 Weeks Duration
Induction program for students to be Offered right at the start of the first year.	<ul style="list-style-type: none">• Physical activity• Creative Arts• Universal Human Values• Literary• Proficiency Modules• Lectures by Eminent People• Visits to local Areas• Familiarization to Dept./Branch & Innovations

GOVERNMENT COLLEGE OF ENGINEERING,
(An Autonomous Institution, Affiliated to Anna University, Chennai)
BARGUR – 635 104



Regulation 2022

B.E. COMPUTER SCIENCE AND ENGINEERING
(Full Time)

CHOICE BASED CREDIT SYSTEM

Curriculum for
SEMESTER I & SEMESTER II
(For the students admitted in the AY 2022-23 onwards)

OFFICE OF CONTROLLER OF EXAMINATIONS
GOVERNMENT COLLEGE OF ENGINEERING, BARGUR – 635 104

Website: www.gcebargur.ac.in

PROGRAM SPECIFIC OUTCOMES (PSOs):	
1	PSO1: Professional Skills: The ability to understand, analyze and develop computer programs in the areas related to algorithms, data structures ,databases, software engineering and networking for efficient design of computer-based systems of varying complexity.
2	PSO2: Problem-Solving Skills: The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.
3	PSO3: Successful Career and Entrepreneurship: The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.
PROGRAM OUTCOMES (POs)	
1	Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2	Problem Analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3	Design/development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4	Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5	Modern Tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6	The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
8	Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
9	Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11	Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12	Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Mandatory Course: Induction Program
(Common to all branches)

Induction	3 Weeks Duration
Induction program for students to be Offered right at the start of the first year.	<ul style="list-style-type: none">• Physical activity• Creative Arts• Universal Human Values• Literary• Proficiency Modules• Lectures by Eminent People• Visits to local Areas• Familiarization to Dept./Branch & Innovations

**GOVERNMENT COLLEGE OF ENGINEERING (AUTONOMOUS), BARGUR
REGULATIONS 2022**

CHOISE BASED CREDIT SYSTEM

FULL TIME - B.E. COMPUTER SCIENCE AND ENGINEERING

I & II SEMESTERS CURRICULUM FOR SYLLABI

SEMESTER I

Sl. No	COURSE CODE	COURSE TITLE	CAT	CONTACT HOURS	L	T	P	C
THEORY COURSES								
1.	22ZHS101	English for Engineers-I	HSMC	3	3	0	0	3
2.	22ZBS102	Matrices and Calculus	BSC	4	3	1	0	4
3.	22ZBS103	Engineering Physics	BSC	3	3	0	0	3
4.	22ZBS104	Engineering Chemistry	BSC	3	3	0	0	3
5.	22ZES105	Problem Solving and Python Programming	ESC	3	3	0	0	3
6.	22ZMC106	தமிழர் மரபு /Heritage of Tamils	MC	1	1	0	0	0
LABORATORY COURSES								
7.	22ZES107	Problem Solving and Python Programming Laboratory	ESC	3	0	0	3	1.5
8.	22ZBS108	Chemistry Laboratory	BSC	3	0	0	3	1.5
9.	22ZBS109	Physics Laboratory	BSC	3	0	0	3	1.5
TOTAL				26	16	1	9	20.5

SEMESTER II

Sl. No	COURSE CODE	COURSE TITLE	CAT	CONTACT HOURS	L	T	P	C
THEORY COURSES								
1.	22ZHS201	English for Engineers-II	HSMC	3	3	0	0	3
2.	22SBS202	Transforms and Partial Differential Equations	BSC	4	3	1	0	4
3.	22ZBS203	Physics of Semiconductor Devices	BSC	3	3	0	0	3
4.	22ZES204	Engineering Graphics	ESC	5	1	0	4	3
5.	22ZES205	Programming in C	ESC	3	3	0	0	3
6.	22ZMC207	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	MC	1	1	0	0	0
LABORATORY COURSES								
7.	22ZES209	Programming in C Laboratory	ESC	3	0	0	3	1.5
8.	22ZHS210	Communication English Laboratory	HSMC	2	0	0	2	1
9.	22ZES211	Engineering Practices Laboratory	ESC	3	0	0	3	1.5
TOTAL				27	14	1	12	20.0

GOVERNMENT COLLEGE OF ENGINEERING,

(An Autonomous Institution, Affiliated to Anna University, Chennai)

BARGUR – 635 104



Regulation 2022

**B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
(Full Time)**

CHOICE BASED CREDIT SYSTEM

**△ Curriculum for
SEMESTER I & SEMESTER II
(For the students admitted in the AY 2022-23 onwards)**

OFFICE OF CONTROLLER OF EXAMINATIONS

GOVERNMENT COLLEGE OF ENGINEERING, BARGUR – 635 104

Website: www.gcebargur.ac.in

PROGRAM SPECIFIC OUTCOMES (PSOs):

1	Graduates will be able to understand and apply the concepts of Electronics and Communication Engineering in the field of Communication, Microelectronics, Signal Processing, Networking, Embedded and VLSI Systems.
2	Graduates will be able to design and utilize advanced Hardware and Software tools to analyze and implement subsystems for real time applications.
3	Graduates will be able to apply domain knowledge to enhance research in the field of Communication Engineering, Embedded Systems and VLSI Systems.

PROGRAM OUTCOMES (POs)

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

GOVERNMENT COLLEGE OF ENGINEERING (AUTONOMOUS), BARGUR
REGULATIONS 2022

CHOISE BASED CREDIT SYSTEM

FULL TIME B.E. ELECTRONICS AND COMMUNICATION ENGINEERING
CURRICULUM FOR SEMESTER I & SEMESTER II

SEMESTER I

Sl. No	COURSE CODE	COURSE TITLE	CAT	CONTACT HOURS	L	T	P	C
THEORY COURSES								
1.	22ZHS101	English for Engineers - I	HSMC	3	3	0	0	3
2.	22ZBS102	Matrices and Calculus	BSC	4	3	1	0	4
3.	22ZBS103	Engineering Physics	BSC	3	3	0	0	3
4.	22ZBS104	Engineering Chemistry	BSC	3	3	0	0	3
5.	22ZES105	Problem Solving and Python Programming	ESC	3	3	0	0	3
6.	22ZMC106	தமிழர் மரபு /Heritage of Tamils	MC	1	1	0	0	0
LABORATORY COURSES								
7.	22ZES107	Problem Solving and Python Programming Laboratory	ESC	3	0	0	3	1.5
8.	22ZBS108	Chemistry Laboratory	BSC	3	0	0	3	1.5
9.	22ZBS109	Physics Laboratory	BSC	3	0	0	3	1.5
10.	22ZHS110	Communication English Laboratory	HSMC	2	0	0	2	1
TOTAL				28	16	1	11	21.5

SEMESTER II

Sl. No	COURSE CODE	COURSE TITLE	CAT	CONTACT HOURS	L	T	P	C
THEORY COURSES								
1.	22ZHS201	English for Engineers - II	HSMC	3	3	0	0	3
2.	22ZBS202	Ordinary Differential Equation and Analytical Functions	BSC	4	3	1	0	4
3.	22ZBS203	Physics of Semiconductor Devices	BSC	3	3	0	0	3
4.	22LPC204	Circuit Theory	PCC	3	3	0	0	3
5.	22ZES205	Programming in C	ESC	3	3	0	0	3
6.	22LES206	Basic Electrical and Instrumentation Engineering	ESC	3	3	0	0	3
7.	22ZMC207	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	MC	1	1	0	0	0
LABORATORY COURSES								
8.	22ZES209	Programming in C Laboratory	ESC	3	0	0	3	1.5
9.	22LPC210	Circuits and Devices Laboratory	PCC	3	0	0	3	1.5
10.	22ZES211	Engineering Practices Laboratory	ESC	3	0	0	3	1.5
TOTAL				29	19	1	9	23.5

GOVERNMENT COLLEGE OF ENGINEERING,

(An Autonomous Institution, Affiliated to Anna University, Chennai)

BARGUR – 635 104



Regulation 2022

**B.E. ELECTRICAL AND ELECTRONICS ENGINEERING
(Full Time)**

CHOICE BASED CREDIT SYSTEM

**Curriculum for
SEMESTER I & SEMESTER II**
(For the students admitted in the AY 2022-23 onwards)

OFFICE OF CONTROLLER OF EXAMINATIONS

GOVERNMENT COLLEGE OF ENGINEERING, BARGUR – 635 104

Website: www.gcebargur.ac.in

PROGRAM SPECIFIC OUTCOMES (PSOs):

- | | |
|---|---|
| 1 | Apply the fundamentals of mathematics, science and engineering knowledge to identify, formulate, design and investigate complex engineering problems of electric circuits, analog and digital electronic circuits, electrical machines and power systems. |
| 2 | Apply appropriate techniques and modern Engineering hardware and software tools in power systems to engage in life- long learning and to successfully adapt in multi-disciplinary environments. |
| 3 | Ability to understand the recent technological developments in Electrical & Electronics Engineering and develop products to cater the societal & Industrial needs. |

PROGRAM OUTCOMES (POs)

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

**GOVERNMENT COLLEGE OF ENGINEERING (AUTONOMOUS), BARGUR
REGULATIONS 2022**

CHOISE BASED CREDIT SYSTEM

FULL TIME B.E. ELECTRICAL AND ELECTRONICS ENGINEERING

CURRICULUM FOR SEMESTER I & SEMESTER II

SEMESTER I

SI No	Course Code	Course Name	Course Category	Contact Hours	L	T	P	C
Induction Programme (Non Credit Mandatory Course)								0
THEORY COURSES								
1	22ZHS101	English for Engineers-1	HSMC	3	3	0	0	3
2	22ZBS102	Matrices and Calculus	BSC	4	3	1	0	4
3	22ZBS103	Engineering Physics	BSC	3	3	0	0	3
4	22ZBS104	Engineering Chemistry	BSC	3	3	0	0	3
5	22ZES105	Problem Solving and Python Programming	ESC	3	3	0	0	3
6	22ZMC106	தமிழர் மரபு /Heritage of Tamils	MC	1	1	0	0	0
LABORATORY COURSES								
7	22ZES107	Problem Solving and Python Programming Laboratory	ESC	3	0	0	3	1.5
8	22ZBS108	Chemistry Laboratory	BSC	3	0	0	3	1.5
9	22ZHS110	Communication English Laboratory	HSMC	2	0	0	2	1
TOTAL				25	16	1	8	20.0

SEMESTER II

SI No	Course Code	Course Name	Course Category	Contact Hours	L	T	P	C
THEORY COURSES								
1	22ZHS201	English for Engineers-II	HSMC	3	3	0	0	3
2	22ZBS202	Ordinary Differential Equation and Analytical Functions	BSC	4	3	1	0	4
3	22ZBS203	Physics of Semiconductor Devices	BSC	3	3	0	0	3
4	22ZES204	Engineering Graphics	ESC	5	1	0	4	3
5	22EES205	Basic Civil and Mechanical Engineering	ESC	3	3	0	0	3
6	22EES206	Electric Circuit Analysis	ESC	3	3	0	0	3
7	22ZMC207	தமிழரும் தொழில்நுட்பமும்/ Tamils and Technology	MC	1	1	0	0	0
LABORATORY COURSES								
8.	22ZBS209	Physics Laboratory	BSC	3	0	0	3	1.5
9.	22EES210	Electrical Circuits Laboratory	ESC	3	0	0	3	1.5
10.	22ZES211	Engineering Practices Laboratory	ESC	3	0	0	3	1.5
TOTAL				31	17	1	13	23.5

GOVERNMENT COLLEGE OF ENGINEERING,

(An Autonomous Institution, Affiliated to Anna University, Chennai)

BARGUR – 635 104



Regulation 2022

**B.E. MECHANICAL ENGINEERING
(Full Time)**

CHOICE BASED CREDIT SYSTEM

**Curriculum for
SEMESTER I & SEMESTER II**
(For the students admitted in the AY 2022-23 onwards)

OFFICE OF CONTROLLER OF EXAMINATIONS

GOVERNMENT COLLEGE OF ENGINEERING, BARGUR – 635 104

Website: www.gcebargur.ac.in

PROGRAM SPECIFIC OUTCOMES (PSOs):	
1	Acquire basic knowledge and expertise necessary for professional practice in Mechanical Engineering for higher studies and research.
2	Attain and practice technical skills to identify, analyze, innovate and interact with industry to solve complex problems related to Mechanical Engineering.
3	Possess a professional attitude as an individual or a team member with consideration for society, professional ethics, environmental factors and motivation for lifelong learning.
PROGRAM OUTCOMES (POs)	
1	Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2	Problem Analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3	Design/development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4	Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5	Modern Tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
6	The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
8	Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
9	Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11	Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12	Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

**GOVERNMENT COLLEGE OF ENGINEERING (AUTONOMOUS), BARGUR
REGULATIONS 2022**

CHOISE BASED CREDIT SYSTEM

FULL TIME B.E. MECHANICAL ENGINEERING

CURRICULUM FOR SEMESTER I & SEMESTER II

SEMESTER I

s.no.	Course Code	Course Title	CAT	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	22ZHS101	English for Engineers-1	HSMC	3	3	0	0	3
2	22ZBS102	Matrices and Calculus	BSC	4	3	1	0	4
3	22ZBS103	Engineering Physics	BSC	3	3	0	0	3
4	22MBS104	Applied Chemistry	BSC	3	3	0	0	3
5	22ZES105	Problem Solving and Python Programming	ESC	3	3	0	0	3
6	22ZMC106	தமிழர் மரபு /Heritage of Tamils	MC	1	1	0	0	0
LABORATORY COURSES								
7	22ZES107	Problem Solving and Python Programming Laboratory	ESC	3	0	0	3	1.5
8	22ZBS108	Chemistry Laboratory	BSC	3	0	0	3	1.5
9	22MES111	Engineering Practices Laboratory	ESC	3	0	0	3	1.5
TOTAL				26	16	1	9	20.5

SEMESTER II

Sl. No	Course Code	Course Title	CAT	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	22ZHS201	English for Engineering – II	HSMC	3	3	0	0	3
2	22MBS202	Probability and Analytic Functions	BSC	4	3	1	0	4
3	22MBS203	Material Science	BSC	3	3	0	0	3
4	22ZES204	Engineering Graphics	ESC	5	1	0	4	3
5	22MES205	Basic Electrical and Electronics Engineering	ESC	3	3	0	0	3
6	22ZMC207	தமிழரும் தொழில்நுட்பமும் /Tamils and Technology	MC	1	1	0	0	0
LABORATORY COURSES								
7	22ZBS209	Physics Laboratory	BSC	3	0	0	3	1.5
8	22ZHS210	Communication English Laboratory	HSMC	2	0	0	2	1
9	22MES211	Basic Electrical and Electronics Engineering Laboratory	ESC	3	0	0	3	1.5
TOTAL				27	14	1	12	20.0

Meera
25/1/23

Program Highlight Report

1. **Program Name:** Ideation Camp at GCE Bargur
2. **Program Period:** 19th and 20th of Jan 2023
3. **Forge Team:** Dr. Meera, Ram Kumar, Athéesh, Shireesha, Guna, Abhishek, Yogesh, Hiran and David
4. **Audience:** 26 Teams (150 Students of 6th Sem (ECE, EEE, CSE and Mech))
5. **Program Agenda:**

Program Agenda		
Ideation Camp@GCE,Bargur-19th-20th January 2023		
Day 1- 19th Jan	Activity	Facilitator(s)
09:45 - 10:15	Inaugural	Meera
10:15 - 11:00	Team Activity-Ice Breaking session	Ram-Forge Team
11:00 - 11:15	Break	
11:15 - 12:30	Ideas Worth Prototyping and FIH-Overview	Dr.Meera
12:30 - 01:00	Problem statements Identification	Shireesha
01:00 - 02:00	Lunch	
02:00 - 03:30	FIR- Introduction- PIH, PVCD	Workshop model-SPOCs
03:30 - 03:45	Break	
03:45 - 04:45	Value Proposition	Workshop model-SPOCs
04:45 - 05:30	Q&A Closure/Interviews	
	Outcome: Problem Statement collection	
Day 2 -20th Jan		
09:30 - 10:00	MUP Concept Generation, assessment	Shireesha
10:00 - 11:00	MUP Tech Canvas	Respective SPOC
11:00 - 11:15	Break	Respective SPOC
11:15 - 12:30	Introduction to Protosem and Forge.Lab @ Hosur	Shireesha
12:30 - 01:00	Pitch- Preparation	SPOC & Faculty Mentors
01:00 - 02:00	Lunch	
02:00 - 03:30	Presentation	SPOC & Faculty Mentors
03:30 - 03:45	Tea	
03:45 - 04:45	Presentation & Interviews	SPOC & Faculty Mentor
04:45 - 05:30	Valedictory and Closure	Chris and Team
	Outcome: Students selection for ProtoSem	
Common Sessions		

6. Program Outcomes:

- Able to introduce the students the Applied Design Thinking through Forge Innovation Handbook
- Interdisciplinary teams were formed from the streams of ECE, EEE, CSE and Mech. ans students were able to choose the Challenge Statements from the sandbox
- Forge SPOCS were assigned and one-on-one interaction is made to understand the student capabilities.
- Students were introduced to Life at ProtoSem and the outcomes of being an Innovation engineer.
- 49 Interviews were taken for the SPOC shortlisted set of people and the final selection process was done. (3 Rejected, 12 Waiting List, 33-Selected)
- Thus 33 Students (4-ECE, 11-EEE, 12-CSE and 6-Mech) were selected for ProtoSem Cohort which is going to be commenced from Feb 8th at FORT. Hosur

S.No	Student Name	Department
1	Akram Sherieff	ECE ✓
2	Abinaya	EEE ✓
3	Suresh R	EEE ✓
4	Anamiga Shri V	Mech ✓
5	Nithish Kumar S	CSE ✓
6	Tamil Selvan M D	Mech ✓
7	Sridharan T	ECE ✓
8	Naveen Shanjai B	CSE ✓
9	Nandhini S	EEE ✓
10	Esther Jemima P	Mech ✓
11	keerthana S S	CSE ✓
12	Lokesh Kumar R	EEE ✓
13	Kanagasabapathy M	ECE ✓
14	Suriya S V	Mech ✓
15	Kaviyarasan R	CSE ✓
16	Kameshraj D	EEE ✓
17	Madhiha Khanam K	CSE ✓
18	Mahakasilingam A	CSE ✓
19	Kailhash S	EEE ✓

ECE-4
EEE-11
MECH-6
CSE-12

20	Allan Ranjith Paul K	EEE ✓
21	Naveen V	MEC ✓
22	Vimaladevi R	EEE ✓
23	Swetha S	CSE ✓
24	Sivaram S J	CSE ✓
25	Kalanithi P	EEE ✓
26	Thejus B	ECE ✓
27	A R Pavish	CSE ✓
28	Ramraj G	EEE ✓
29	Pradeep S	CSE ✓
30	S Venkateshwaran	EEE ✓
31	D Prathick	CSE ✓
32	Praveen M	CSE ✓
33	Sriram V	MEC ✓


GOVERNMENT COLLEGE OF ENGINEERING-BARGUR

(An Autonomous Institution)

Bargur- 635 104, Tamilnadu

 Approved by AICTE, New Delhi and Affiliated by Anna University,
Chennai


Date: 20.01.2023

Government College of Engineering Bargur organized a **two day immersive ideation workshop "ProtoSem"** on 19-20 January, 2023 in association with Forge Academy for pre final year students to apply engineering principles, tools & techniques of design thinking to refine the value proposition of innovative ideas that are worth prototyping. 128 students, 9 innovation mentor training participated professors and 3 faculty members were part of the workshop.

Day one: Session one, orientation session was presented by the Mrs. B.L. Lakshmi Meera, Chief programming officer, forge academy on ideation and prototyping. Session two, student's teams are formed (6 students per team, minimum one student from each department CSE, EEE, ECE, MECH). Few team worked on their own idea, for others problem statement was provided by the Forge team. Teams are asked to submit **Innovation Title, Challenge, Significance, Target User, Use Cases, Existing Solutions, Adoption Barriers, Value Proposition, Solution Concept (MUP)**. Day two: Students worked in team on their idea and prepared the presentation. Session two, students presented their idea to the jury (Innovation mentors & experts from Forge Academy).

<u>Innovation mentors (GCE-B)</u>	<u>Forge Academy team</u>
<ul style="list-style-type: none"> • S. Sathishkumar AP/ME • (coordinator) • M. Anantha Babu, AP/ME • S. Tamil Prabakaran, AP/ME • R. Ranjith, AP/ECE • Dr.I.Thangaraju, AP/EEE • K.Thirumal, AP/EEE • Dr.S.Santhosh, AP/PHY • T.Mohandoss, AP/ECE • J.Manimaran, AP/CSE 	<ul style="list-style-type: none"> • Christopher Raj, SVP - C&O, Forge.FORT & GM, Forge.Academy • Dr. Meera VP & Chief Programming officer, Forge.Academy. • Shireesha K, Technical Manager. • Ramkumar S P, Program Lead. • Yogesh K, Technical Associate • Abhishek P K, Technical Associate • Hiran Gabriel D J, Technical Associate • Guna D, Technical Associate. • Alben David Priyaraj M, Technical Associate • Atheesvaran G, Program Associate • Vimal S, IT Trainee.5.AlbenDavid

20/1/23

20/1/23

 PRINCIPAL
 PRINCIPAL
 Government College of Engg.,
 BARGUR-635 104

GOVERNMENT COLLEGE OF ENGINEERING-BARGUR

A Two Day Immersive Ideation Workshop "Protosem", 19-20 January, 2023

Orientation Session by the Mrs. B.L. Lakshmi Meera, Chief program officer, forge academy on ideation and prototyping



GOVERNMENT COLLEGE OF ENGINEERING-BARGUR

A Two Day Immersive Ideation Workshop “Protosem”, 19-20 January, 2023

Students Team working on Ideation



GOVERNMENT COLLEGE OF ENGINEERING-BARGUR

A Two Day Immersive Ideation Workshop "Protosem", 19-20 January, 2023

Students Team idea presentation



DEPARTMENT OF TECHNICAL EDUCATION: CHENNAI 600 025

From
The Principal
Government College of Engineering
Bargur - 635104

To
The Commissioner
Directorate of Technical Education
Sardar Patel Road, Guindy
Chennai - 600 025

Lr.No: GCEB / Forge Academy / CTE / 01

Dated: 01.02.2023

Sir/Madam,

Sub: Forge Academy – Innovation, Semester-long internship, permission requested– Reg

Government College of Engineering Bargur organized a **two day immersive ideation workshop “ProtoSem”** on 19-20 January, 2023 in association with Forge Academy for pre final year students to apply engineering principles, tools & techniques of design thinking to refine the value proposition of innovative ideas that are worth prototyping. 128 students, 9 innovation mentor training participated professors and 3 faculty members were part of the workshop.

Interdisciplinary teams were formed from the streams of ECE, EEE, CSE and Mech. Students were able to choose the Challenge Statements from the sandbox. Forge SPOCS were assigned and one-on-one interaction is made to understand the student capabilities. 49 Interviews were taken for the SPOC shortlisted set of people and the final selection process was done. (3 Rejected, 12 Waiting List, 33-Selected). Thus 33 Students (5-ECE, 10-EEE, 12-CSE and 6-Mech) were selected for ProtoSem internship which may commence from Feb 8th at FORT. Hosur.

A meeting is organized for selected students. Principal, Heads of all the Departments, Faculty Advisors, innovation mentors and selected students were present in the meeting. Students will undergo 7 courses during the internship 1. Applied Design Thinking, 2. Startup Fundamentals, 3. Computational Hardware, 4. Coding for Innovators, 5. Industrial Design & Rapid Prototyping Techniques, 6. Industrial Automation / Data Life Cycle Management, 7. Robotics / ML/MLOps.

After the discussion it was decided that,

1. 7 courses offered in the internship will be considered equivalent to the 7 elective courses of the GCE B R2020 curriculum
2. Core courses offered in the 6th semester can be registered in 6th or 7th semester as per student convenient under CBCS.
3. Laboratory courses offered in 6th semester can be registered in the 7th semester (R2020).
4. Project work carried out during the internship is allowed to present in the 6th semester project work (wherever applicable in the Department).

All students agreed to undergo semester-long internship.

A proposal is being prepared to make MOU with Forge Academy.

Hence, permission is requested for the proposal to proceed further.


1/2/22
PRINCIPAL

Encl:

1. ProtoSem Ideation workshop minutes
2. Principal-Student meeting minutes
3. Forge Academy-selected students list mail copy



Minutes of the Meeting

Minutes of Principal meeting of "ProtoSem semester-long student's internship" held on 25th January 2023 at conference hall in Government College of Engineering, Bargur.

The following members were present in the meeting.

S.NO.	NAME AND DESIGNATION	Description
1.	Dr.R.Vijayan	Principal
2.	Dr.S.Letitia	Professor & Head / ECE
3.	Dr. J. Nafeesa Begum	Professor & Head / CSE
4.	Dr.P.Thirumal	Professor & Head / MECH
5.	Dr. S. Selvi	Assistant Profesor / CSE
6.	K.Thirumal	Assistant Profesor / EEE
7.	M. Ananthababu	Assistant Profesor / MECH
8.	R.Ranjith	Assistant Profesor / ECE
9.	V.Rajeshkannan	Assistant Profesor / ECE
10.	Dr.I.Ashokkumar	Assistant Profesor / MECH
11.	S. Sathishkumar	Assistant Profesor / MECH
12.	33 Students (5-ECE, 10-EEE, 12-CSE and 6-Mech)	

ProtoSem ideation workshop was conducted between 19-20 January 2023 for pre-final year students. Totally 33 Students (5-ECE, 10-EEE, 12-CSE and 6-Mech) were selected for ProtoSem semester long student's internship. Students will undergo 18 weeks internship and study 7 courses during the Feb-May 2023.

After the discussion it was decided that,

1. Students will undergo 7 courses during the internship 1. Applied Design Thinking, 2. Startup Fundamentals, 3. Computational Hardware, 4. Coding for Innovators, 5. Industrial Design & Rapid Prototyping Techniques, 6. Industrial Automation / Data Life Cycle Management, 7. Robotics / ML/MLOps.



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2. 7 courses offered in the internship will be considered equivalent to the 7 elective courses of the GCE B R2020 curriculum
3. Core courses offered in the 6th semester can be registered in 6th or 7th semester as per student convenient under CBCS.
4. Laboratory courses offered in 6th semester can be registered in the 7th semester (R2020).
5. Project work carried out during the internship is allowed to present in the 6th semester project work (wherever applicable in the Department).


25/2/23
PRINCIPAL

GOVERNMENT COLLEGE OF ENGINEERING




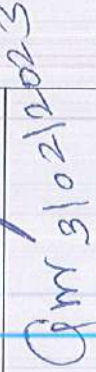



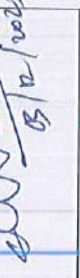

(An Autonomous Institution Affiliated to Anna University, Chennai)




BARGUR – 635104


7th ACADEMIC COUNCIL MEETING

(03.02.2023)

Attendance Sheet

S. No	Name	Designation	Status	Signature
1	Dr. R. Vijayan	Principal & Chairman	Chairman	
2	Dr. G. Saraswathy	Associate Professor, HoD / S&H	Controller of Examinations	
3	Dr. Udhayakumar. C	Professor, Institute of Remote Sensing, Department of Civil Engineering, College of Engineering, Guindy (CEG Campus), Anna University, Chennai – 600 025.	Anna University - Nominee	
4	Dr. Kousalya. G	Professor & Head of the Department, Department of Computer Science and Engineering, Coimbatore Institute of Technology (CIT), Coimbatore – 641 014.	Anna University – Nominee	
5	Dr. V. Thirunavukkarasu	Principal (In-charge) Government College of Engineering, Bodinayakanur, Theni	Academic Expert	
6	Dr. K. Govardhan,	Associate Professor, Centre for Nanotechnology Research, VIT University, Vellore	Academic Expert	
7	Dr. R. Senthil,	Associate Professor, Department of Energy Studies, SRM University, Chennai.	Academic Expert	
8	Thiru. Sudhakar S	Managing Director, Turbo Engineers, Coimbatore – 641 014.	Industrial Expert	
9	Dr. J. Nafesa Begum	Professor and HoD, Dept of CSE, GCE, Bargur	Member	

10	Dr. P. Thirumal	Professor and HoD, Dept of Mechanical Engineering, GCE, Bargur	Member	 31/02/22
11	Dr. I. Thangaraju	Assistant Professor (Sr. Gr), Dept of EEE, GCE, Bargur	Member	
12	Thiru M. Arulkumar	Assistant Professor (Sr. Gr), Dept of ECE, GCE, Bargur	Member	


31/02/22
(CoE/1A)