

Sri Sairam Engineering College
Sai Leo Nagar, West Tambaram, Chennai – 600044
Department of Humanities and Sciences

Minutes of the first Board of Studies meeting

The first Board of Studies (BoS) meeting of the Department of Humanities & Sciences was conducted on 13.06.2020 through online mode (ZOOM) at 10.00 A.M. (IST). The following members were present.

1. Dr. S. P. Dhanavel
Professor of English
Department of Humanities and Social Sciences
IIT Madras, Chennai 600036
External stakeholder
(Subject Expert)
2. Dr. C. Vijayan
Professor
Department of Physics
IIT Madras, Chennai-600036
External stakeholder
(Subject Expert)
3. Dr. B. Rajakumar
Professor
Department of Chemistry
IIT Madras, Chennai-600036
External stakeholder
(Subject Expert)
4. Dr. S. Ponnusamy
Professor
Department of Mathematics
IIT Madras, Chennai-600036
External stakeholder
(Subject Expert)
5. Dr. V. Santhi
Associate Professor
Department of Mathematics
Coimbatore Institute of Technology
Coimbatore – 641014
External stakeholder
(University Representative)
6. Shri. B. Balaji, M.E.
Chief Executive Officer
ABC Consults
Chennai – 600 044
External stakeholder
(Industry expert)
7. Dr. S. Jayavel
Associate Professor
IIITDM, Kancheepuram
External stakeholder
(Alumni Member)

English

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| 8. Dr. M. Shanmugathai, Professor | Internal stakeholder |
| 9. Ms. Mini Stanley, Associate Professor | Internal stakeholder |
| 10. Dr. A. Geetha, Assistant Professor | Internal stakeholder |

Physics

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| 11. Dr. R. Premanand, Professor | Internal stakeholder |
| 12. Dr. T.K. Subramaniam, Professor | Internal stakeholder |
| 13. Mr. Srinivasan@ Arunsankar, Asst. Professor | Internal stakeholder |
| 14. Dr. K. Selvarani, Assistant Professor | Internal stakeholder |
| 15. Ms. M. Dhivya, Assistant Professor | Internal stakeholder |

Chemistry

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| 16. Dr. G. K. Ayyadurai, Associate Professor | Internal stakeholder |
| 17. Dr. G. Puthilibai, Professor | Internal stakeholder |
| 18. Dr. S. Usha, Associate Professor | Internal stakeholder |
| 19. Dr. M. K. Raman, Assistant Professor | Internal stakeholder |
| 20. Mr. A. Kishore babu, Assistant Professor | Internal stakeholder |

Mathematics

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| 21. Dr. S.K. Umamaheswaran, Professor | Internal stakeholder |
| 22. Dr. K. Subathra, Professor | Internal stakeholder |
| 23. Dr. K. Parvatham, Professor | Internal stakeholder |
| 24. Ms. K. Anitha, Assistant Professor | Internal stakeholder |
| 25. Mr. M. Meiyathan, Assistant Professor | Internal stakeholder |
| 26. Dr. S. Ramakrishnan
Professor and Head, H&S
Sri Sairam Engineering College | Chairman, BoS (H&S) |

Dr. S. Ramakrishnan, Chairman of BOS opened the meeting by welcoming and presenting brief highlights about the H&S Department and introduced the external members to the internal members. The Chairman placed the following agenda for the deliberations and discussions of the members. The deliberations made during the meeting (as per the items of the circulated agenda) are given below.

Chemistry:

BOS.H&S.20.01.01: To review and approve the syllabus of **20BSCY101 Engineering Chemistry, 20BSPL101 Physics and Chemistry Laboratory** Courses offered to UG programmes (AI&DS, CIVIL, CSE, ECE, EEE, EIE, ICE, IT, MECH, PROD) in the First Semester.

- In the **Engineering Chemistry** syllabus minimum surface chemistry fundamentals portions can be included.

- b. In the **Chemistry Lab experiments** BOD & COD estimation can be included as demo experiment.

As per the suggestions of the expert member, fundamentals of surface chemistry is included in Engineering Chemistry and BOD and COD estimations are included as demo experiments in the Chemistry laboratory.

BoS members reviewed and resolved to approve the syllabus of **20BSCY101 Engineering Chemistry, 20BSPL101 Physics and Chemistry Laboratory.**

BOS.H&S.20.01.02

To review and approve the syllabus of **20BSCY201 Environmental Science and Engineering** Course offered to UG programmes (AI&DS, CSE, EIE, ICE, IT, MECH, PROD) in the Second and (CIVIL, ECE & EEE) in the Fourth Semester.

- c. In the **Environmental Science and Engineering** syllabus basic pollutants like CFC, CO₂, SO_x, NO_x can be taught as atmospheric chemistry and can be included in Unit-IV social issues by adding influence of atmospheric chemistry as prefix to the climate change.

- d. **Environmental Science and Engineering** for **CSE** and **ECE** branches shall be completed during second semester instead of fourth semester; the general subjects can be completed in the first year.

The portion "Influence of atmospheric chemistry with regard to the climate change" has been included in Environmental Science and Engineering as suggested by the expert member.

EVS course is included in the II Semester for all the branches except ECE, EEE and CIVIL as they have additional core paper in the II Semester.

BoS members reviewed and resolved to approve the syllabus of **20BSCY201 Environmental Science and Engineering.**

BOS.H&S.20.01.03:

To review and approve the syllabus of Open Elective Courses offered by the Chemistry Department to UG programmes.

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|-------|-----------|---------------------------------------|
| i. | 20CYOE901 | Advanced Engineering Chemistry |
| ii. | 20CYOE902 | Industrial Nanochemistry |
| iii. | 20CYOE903 | Principles of food Preservation |
| iv. | 20CYOE904 | Fundamentals of Nutrition |
| v. | 20CYOE905 | Air Pollution and Control Engineering |
| vi. | 20CYOE906 | Biochemistry |
| vii. | 20CYOE907 | Green Technology |
| viii. | 20CYOE908 | Water and Waste Water Treatment |

ix.	20CYOE909	Analytical Methods and Instrumentation Engineering
x.	20CYOE910	Fuel Cell Technology
xi.	20CYOE911	Introduction to Bio energy and Bio fuels
xii.	20CYOE912	Corrosion Science and Engineering
xiii.	20CYOE913	Waste Management & Recycling Technology
xiv.	20CYOE914	Environmental Toxicology

- e. In the **open electives Corrosion Science and Engineering and Analytical Techniques & Instrumentation Engineering** practical hours can be included.
- f. Desalination principle and methods can be included by adding water treatment to the open elective waste water treatment and frame it as water and waste water treatment.
- g. In the **open elective CYOE901**, Advanced Engineering chemistry thermodynamics unit Joule Thomson effect to be included. In phase rule CO₂ & H₂O phase diagrams are to be included.
- h. In the **open elective CYOE903**, Principles of food preservation, Food poisoning and Remedies are to be included.
- i. In the **open elective CYOE909**, Analytical & Instrumentation, Chromatography - Gas chromatography and Liquid chromatography are to be included.
- j. Automobile industry is moving towards E-Vehicles. This is the recent trend, therefore courses on Electro-chemistry in Battery technology, Battery Storage, etc. may be included as open electives.

As per the suggestions of the expert member the following changes/inclusions are made in the open elective courses:

In the Chemistry Laboratory, experiments/demo on Corrosion Science and Analytical techniques and Instrumentation are included.

Desalination Principle and methods are included in the open elective course 20CYOE908 and the course is renamed as Water and Waste Water Treatment.

In Advanced Engineering chemistry, Joule Thomson effect and phase diagrams are included.

In Principles of food preservation, a topic on food poisoning and remedies is included.

In Analytical Methods and Instrumentation Engineering, topics on Gas chromatography and Liquid chromatography are included.

In Engineering Chemistry, topics on Battery technology and Battery storage are dealt with.

BoS members reviewed and resolved to approve the syllabus of open elective courses offered by the Chemistry department to various UG Programmes.

English:

BOS.H&S.20.01.04:

To review and approve the syllabus of **20HSEN101 Technical English I** course offered to UG programmes (AI&DS, CIVIL, CSE, ECE, EEE, EIE, ICE, IT, MECH, PROD) and **20HSEN102** Business Communication and Value Science I course offered to CSBS Programme in the First Semester.

Dr. S. P. Dhanavel, Professor in English, IIT Madras, suggested that the grammar part of **Technical English I** may be slightly reduced and communicative exercises can be added and that the syllabus of Business Communication and Value Science I was appropriate. Grammar part in Technical English I is reduced and additional communicative exercises are included as per the suggestion of the expert member.

BoS members reviewed and resolved to approve the syllabus of Technical English I and Business Communication and Value Science I offered in the I Semester of the UG Programmes.

BOS.H&S.20.01.05:

To review and approve the syllabus of **20HSEN201 Technical English II** Course offered to UG programmes (AI&DS, CIVIL, CSE, ECE, EEE, EIE, ICE, IT, MECH, PROD) and **20HSEN202** Business Communication and Value Science II course offered to CSBS Programme in the Second Semester.

Dr. S. P. Dhanavel, Professor in English, IIT Madras, suggested that the grammar part of Technical English II may be slightly reduced and writing exercises can be added and that the syllabus of Business Communication and Value Science II was appropriate. Grammar part in Technical English II is reduced and additional writing exercises are included as per the suggestion of the expert member.

BoS members reviewed and resolved to approve the syllabus of Technical English II and Business Communication and Value Science II offered in the II Semester of the UG Programmes.

BOS.H&S.20.01.06:

To review and approve the syllabus of **20HSPL501 Communication & Soft skills**, a laboratory course offered to UG Programmes (CIVIL, EEE, EIE, ICE, Mechanical) in the Fifth Semester and (AI&DS, CSE, ECE, IT, PROD) in the Sixth Semester.

Dr. S. P. Dhanavel, Professor in English, IIT Madras, suggested that the reference books cited shall be thoroughly checked.

Dr. V. Santhi, Anna University representative, Coimbatore institute of Technology gave the opinion that vernacular medium learners shall be directed to imbibe reading habits.

As per the suggestion of the expert member it is ensured that the reference books cited covers the syllabus of the Communication and Soft skills course. Necessary reading exercises are also included in the syllabus.

BoS members reviewed and resolved to approve the syllabus of **20HSPL501 Communication & Soft skills** offered to UG programmes in the V and VI Semesters.

BOS.H&S.20.01.07:

To review and approve the syllabus of Open Elective Courses offered by the English Department to UG programmes.

- i. 20ENOE901 Basic Japanese
- ii. 20ENOE902 Fundamental German
- iii. 20ENOE903 Fundamental Chinese
- iv. 20ENOE904 Mass Communication
- v. 20ENOE905 Advanced Writing Skills
- vi. 20ENOE906 Interpersonal skills and Leadership qualities
- vii. 20ENOE907 Stress management
- viii. 20ENOE908 English for Competitive Exams

Dr. S. P. Dhanavel, Professor in English, IIT Madras, suggested that the title of Open Elective Literature, Culture and Media shall be named as Mass Communication with a few changes in the content.

Dr. S. P. Dhanavel, Professor in English, IIT Madras, recommended that all the foreign language electives shall be ensured appropriateness with the experts in the language.

The BoS members were appreciative of the list of English Open Electives, particularly with the elective, "Stress Management".

Dr. S. P. Dhanavel, Professor in English, IIT Madras and

Dr. V. Santhi, Anna University representative, Coimbatore institute of Technology suggested that an additional Open Elective, English for Competitive Exams shall be included. Dr. S. Jayavel, BoS, Alumni member stated that English courses shall have the spread over of 3 semesters and also the practical paper, "Communication and Soft Skills" may be made slightly heavier.

As per the suggestions of the expert members following changes / additions have been made:

The Course 20ENOE904 has been renamed as Mass Communication and few changes were made in the syllabus. Syllabus of Foreign language courses were checked under the guidance of language experts for appropriateness in the content. 20ENOE908 English for Competitive Exams is included as an open elective course.

BoS members reviewed and resolved to approve the syllabus of open elective courses offered by the English department to various UG Programmes.

Mathematics

BOS.H&S.20.01.08:

To review and approve the syllabus of **20BSMA101 Engineering Mathematics I** course offered to UG programmes (AI&DS, CIVIL, CSE, ECE, EEE, EIE, ICE, IT, MECH, PROD), **20BSMA102 Discrete Mathematics (CSBS)**, **20BSMA103 Introductory topics in Probability, Statistics and calculus (CSBS)** in the First Semester.

Dr. S. Ponnusamy suggested that the text books written by foreign authors may be included for the student's better understanding of the concepts.

He further gave the suggestion to reduce the number of text books covering the syllabus from five to two for the course BSMA102 Discrete Mathematics offered to CSBS program.

As suggested by the expert member the text books written by Foreign authors are included in all the courses.

As the syllabus for 20BSMA102 Discrete Mathematics is framed by TCS, we have sought their opinion regarding the reduction of text books.

The members reviewed the syllabus of courses offered in the First Semester and resolved to approve the same.

BOS.H&S.20.01.09: To review and approve the syllabus of **20BSMA201 Engineering Mathematics-II** course offered to UG programmes (CIVIL, ECE, EEE, EIE, ICE, MECH, PROD), **20BSMA202 Linear Algebra (CSBS)**, **20BSMA203 Statistical modelling with lab (CSBS)**, **20BSMA204 Discrete Structures (AI&DS, CSE, IT)** in the Second Semester.

The members reviewed the syllabus of courses offered in the Second Semester and resolved to approve the same.

BOS.H&S.20.01.10: To review and approve the syllabus of **20BSMA301 Linear Algebra, PDE and Transforms** course offered to UG programmes (CIVIL, ECE, EEE, EIE, ICE), **20BSMA302 Linear Algebra and its applications (AI&DS)**, **20BSMA303 Partial Differential Equations and Probability Theory (Mech, Prod)**, **20CBMA301 Computational Statistics with Laboratory (CSBS)**, **20BSMA304 Statistics and Linear Algebra (CSE, IT)** in the Third Semester UG Programmes.

The members reviewed the syllabus of courses offered in the Third Semester and resolved to approve the same.

BOS.H&S.20.01.11: To review and approve the syllabus of **20BSMA401 Probability theory and Stochastic Processes (ECE)**, **20BSMA402 Probability theory and Queueing theory (CSE, IT)**, **20BSMA403 Statistics and Numerical Methods (CIVIL, EEE, EIE, ICE, MECH, PROD)**, **20CBMA401 Operations Research with lab (CSBS)**, **20BSMA404 Probability and Statistical Modelling (AI&DS)**, **20AIPL401 R Programming laboratory (AI&DS)** in the Fourth Semester UG Programmes.

Dr. S. Jayavel suggested that the topic, "Numerical Solution of Partial Differential Equations" may be included in 20BSMA403 Statistics and Numerical Methods course in the Fourth Semester.

The topic "Numerical Solution of Partial Differential Equations" is included in Statistics and Numerical Methods as per the suggestion of the alumni member.

The members reviewed the syllabus of courses offered in the Fourth Semester and resolved to approve the same.

BOS.H&S.20.01.12: To review and approve the syllabus of the following Open Elective Courses offered by Mathematics Department to UG Programmes.

i. 20MAOE901	Advanced Linear Algebra
ii. 20MAOE902	Operations Research
iii. 20MAOE903	Optimization Techniques
iv. 20MAOE904	Graph Theory and its Applications
v. 20MAOE905	Probability and Statistics
vi. 20MAOE906	Algebra and Number Theory
vii. 20MAOE907	Statistics and R Programming
viii. 20MAOE908	Mathematical Finance
ix. 20MAOE909	Discrete Mathematics
x. 20MAOE910	Numerical Methods
xi. 20MAOE911	Cryptography and Number Theory
xii. 20MAOE912	Cellular Automata

Dr. S. Ponnusamy gave the suggestion to review the contents of the open elective course, **20MAOE901 Advanced Linear Algebra.**

As per the suggestion of the expert member changes have been made in the syllabus of Advanced Linear Algebra.

BoS members reviewed and resolved to approve the syllabus of open elective courses offered by the Mathematics department to various UG Programmes.

BOS.H&S.20.01.13:

To review and approve the syllabus of 20PCDMA101 Optimization Techniques in Design (M.E. (CAD)), 20PESMA102 Applied Mathematics for Electrical Engineers (M.E. (ES), M.E. (PED)), 20PCOMA103 Applied Mathematics for Communication Engineers (M.E. (CS)), 20PCSMA104 Applied Probability and Statistics (M.E. (CSE), M.E. (CSE with specialization in networks)), offered to PG Programmes in the First Semester.

Dr. S. Ponnusamy gave the suggestion to review the contents of the course, 20PESMA102 Applied Mathematics for Electrical Engineers.

As per the suggestion of the expert member changes have been made in the syllabus of Applied Mathematics for Electrical Engineers.

The members reviewed the syllabus of courses offered to various PG programs in the First Semester and resolved to approve the same.

Physics:

- BOS.H&S.20.01.14:** To review and approve the syllabus of 20BSPH101 Engineering Physics Course offered to UG programmes (AI&DS, CIVIL, CSE, ECE, EEE, EIE, ICE, IT, MECH, PROD) and 20BSPH102 Fundamentals of Physics (CSBS), 20BSPL101 Physics and Chemistry Laboratory (AI&DS, CIVIL CSE, ECE, EEE, EIE, ICE, IT, MECH, PROD) in the First Semester.
- a. Dr. C. Vijayan felt that the allotment of 45 periods for the completion of syllabus may not be sufficient for the course BS PH 102 – Fundamentals of Physics.

As the syllabus for 20BSPH102 Fundamentals of Physics is framed by TCS, we have sought their opinion regarding the reduction in contents.

The members reviewed the syllabus of courses offered in the First Semester and resolved to approve the same.

- BOS.H&S.20.01.15:** To review and approve the syllabus of 20BSPH201 Physics of Electron Devices (ECE, EEE), 20BSPH202 Physics of Materials (Mech, Prod), 20BSPH203 Physics for Information Science (AI&DS, CSE, IT), 20BSPH204 Physics for Civil Engg. (Civil), 20BSPH205 Principles of Electronics Engg. (CSBS), 20BSPH206 Physics for Instrumentation Engg. (EIE, ICE), 20BSPL201 Electronics Laboratory courses offered to UG programmes in the Second Semester.

The members reviewed the syllabus of courses offered in the Second Semester and resolved to approve the same.

- BOS.H&S.20.01.16:** To review and approve the curriculum and syllabus of the following Open Elective Courses offered by Physics Department to various UG programmes.

- i. 20PHOE901 Fundamentals of Nano Electronics
- ii. 20PHOE902 Fiber Optics and Laser Engineering
- iii. 20PHOE903 Fundamentals of MEMS and Nano Science
- iv. 20PHOE904 Introduction to Nanoscience and Nanotechnology
- v. 20PHOE905 Quantum Information and Computing
- vi. 20PHOE906 Nano and Quantum Electronics
- vii. 20PHOE907 Medical and Plasma Physics

- viii. 20PHOE908 Modelling and Designing of Materials and Material Characterization Techniques
 - ix. 20PHOE909 Particle Physics and Elementary Particles
 - x. 20PHOE910 Bio Physics (Structural biophysics, protein Dynamics, brain imaging and bioelectronics)
 - xi. 20PHOE911 Acoustics for Engineering
- b. Dr. C. Vijayan advised to rewrite the learning objectives for some of the papers which didn't meet the Bloom's taxonomy and he recommended to refer TLC website which is available in IITM for learning objectives.
 - c. He suggested to maintain the uniformity in all the papers regarding the number of Text books (as 5) and Reference books (as 5) with the revised editions.
 - d. He recommended to include some additional text books related to Quantum electrodynamics in the open elective paper 20PHOE906 Nano and Quantum electronics.
 - e. He commended the inclusion of older versions of text books and reference books for open elective papers.
 - f. He advised to check the spelling in the content of the syllabus as well as titles.

As per the suggestions of the expert member the following changes were made in the syllabus of the open elective courses:

Learning objectives of all the courses were reviewed and it is rewritten wherever necessary to meet the Bloom's taxonomy.

For all the courses except few minimum of 5 text and 5 reference books are suggested.

Additional text books related to Quantum electrodynamics were added for the open elective course 20PHOE906 Nano and Quantum Electronics.

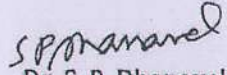
Spell checks were made in the content of the syllabus and course titles.

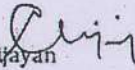
The members reviewed and resolved to approve the syllabus of Open Elective courses offered by the Physics department to various UG Programmes.

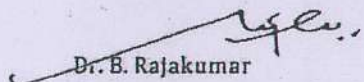
BoS resolved to recommend the following to the Academic Council for further approval.

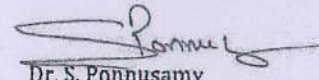
- a) Syllabus of Basic Sciences and English courses offered to UG programmes in Engineering and Technology (AI&DS, CIVIL, CSBS, CSE, ECE, EEE, EIE, ICE, IT, MECH, PROD).
- b) Syllabus of Open Elective Courses offered by Humanities and Sciences Department to various UG programmes.

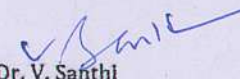
Meeting then ended with vote of thanks by Dr. A. Rajendra Prasad, Principal, SEC.

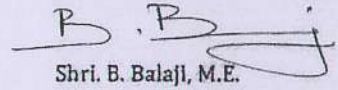

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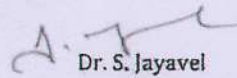

 Dr. C. Vignyan
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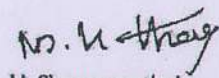

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

 Dr. S. Ponnusamy
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 Department of Mathematics
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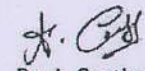

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Mr. Srinivasan @ Arunsankar
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Dr. M. K. Raman
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Mr. A. Kishore babu
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Dr. K. Subathra
Professor, Dept. of Mathematics

Dr. K. Parvatham
Professor, Dept. of Mathematics

Ms. K. Anitha
Assistant Professor, Dept. of Mathematics

Mr. M. Meiyannathan
Assistant Professor, Dept. of Mathematics

Dr. S. Ramakrishnan,
Chairman, BoS / H&S
(Professor and Head, H&S)