



## E.G.S. PILLAY ENGINEERING COLLEGE

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

Nagore Post, Nagapattinam – 611 002, Tamilnadu.

### B.E – Computer Science and Engineering

#### 1.1.2 Details of programmes where syllabus revision was carried out during the year

2017-18

Course Code	Course Name	Change Details	Percentage of Change
1701MA101	Engineering Mathematics-I	New Course	100
1701PH101	Applied Physics for Engineers	New Course	100
1701CH101	Applied Chemistry in Informatics	New Course	100
1701EN101	Technical English	New Course	100
1701GEX01	Basic Electrical and Electronics Engineering	New Course	100
1701GEX02	Engineering Graphics	New Course	100
1701GEX03	Programming in C	New Course	100
1701HS151	Physics and Chemistry Lab –I	New Course	100
1701GEX51	Programming in C Lab	New Course	100
1701MA201	Engineering Mathematics-II	New Course	100
1701PH201	Physics of Engineering Materials	New Course	100
1701CH201	Environmental Studies	New Course	100
1701GE201	Basic Civil & Mechanical Engineering	New Course	100
1702CS201	Programming in C++	New Course	100
1701LE201/ 1701LE202	Communicative English/Hindi	New Course	100
1701GEX53	Workshop Practice	New Course	100
1701HS251	Physics and Chemistry Lab –II	New Course	100
1702CS251	Programming in C++ Lab	New Course	100
1701GEX52	Communication Skills Lab	New Course	100
MA6351	Transforms and Partial Differential Equations		0
CS6301	Programming and Data Structure II		0
CS6302	Database Management Systems		0
CS6303	Computer Architecture		0
CS6304	Analog and Digital Communication		0
GE6351	Environmental Science and Engineering		0
CS6311	Programming and Data Structure Laboratory II		0
CS6312	Database Management Systems Laboratory		0
MA6453	Probability and Queueing Theory		0
CS6551	Computer Networks		0
CS6401	Operating Systems		0
CS6402	Design and Analysis of Algorithms		0
EC6504	Microprocessor and Microcontroller		0
CS6403	Software Engineering		0
CS6411	Networks Laboratory		0
CS6412	Microprocessor and Microcontroller Laboratory		0
CS6413	Operating Systems Laboratory		0
MA6566	Discrete Mathematics		0
CS6501	Internet Programming		0
CS6502	Object Oriented Analysis and Design		0



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CS6503	Theory of Computation		0
CS6504	Computer Graphics		0
CS6511	Case Tools Laboratory		0
CS6512	Internet Programming Laboratory		0
CS6513	Computer Graphics Laboratory		0
CS6601	Distributed Systems		0
IT6601	Mobile Computing		0
CS6660	Compiler Design		0
IT6502	Digital Signal Processing		0
CS6659	Artificial Intelligence		0
IT6702	Data Warehousing and Data Mining		0
CS6611	Mobile Application Development Laboratory		0
CS6612	Compiler Laboratory		0
GE6674	Communication and Soft Skills - Laboratory Based		0
CS6701	Cryptography and Network Security		0
CS6702	Graph Theory and Applications		0
CS6703	Grid and Cloud Computing		0
CS6704	Resource Management Techniques		0
IT6801	Service Oriented Architecture		0
EC6703	Embedded and Real Time Systems		0
CS6711	Security Laboratory		0
CS6712	Grid and Cloud Computing Laboratory		0
CS6801	Multi – Core Architectures and Programming		0
CS6010	Social Network Analysis		0
MG6088	Software Project Management		0
CS6811	Project Work		0
		<b>Average</b>	<b>29.23</b>



**E.G.S. PILLAY ENGINEERING COLLEGE**  
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Nagore Post, Nagapattinam – 611 002, Tamilnadu.

Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	01
Date & Time	08.07.2017 & 10.00 A.M.
Venue	CSE A/C Seminar Hall (SJB 108)

1. Chairman / BoS welcomed all members for the 1<sup>st</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - To finalize the curriculum and syllabi of first and second semester B.E CSE Programme and curriculum of 1<sup>st</sup> to 4<sup>th</sup> Semesters and syllabi of first and second semester M.E. CSE Programme.
  - To finalize the curriculum of 3<sup>rd</sup> - 8<sup>th</sup> Semester B.E CSE.
  - To discuss the question paper pattern for UG/PG Programme and Evaluation methodologies.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.
  - The Board of Studies members have gone through the curriculum and syllabi of first and second semester B.E. CSE and M.E. CSE programmes.
  - The Board of Studies Chairman gave a brief presentation on Vision and Mission of the Institution and the Department, PEOs, POs and the PSOs.
  - The feedback from the stakeholders of Employers, Faculty member, Alumnus, Parents, Students and other institution senior faculty members, internal senior faculty members and students and the corresponding resolutions made in the department level academic activities committee meetings discussion were presented by the Chairman of the Board.



## **E.G.S. PILLAY ENGINEERING COLLEGE**

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- In the Department level academic meeting, it is suggested to include the important courses related to improve the skills like programming courses and the curriculum designed as per the local needs of the society and the peoples requirements
- The Board of Studies Chairman agreed to offer those courses and the same accepted by the board
- Students are encouraged to complete NPTEL Courses during the 3<sup>rd</sup> or 4<sup>th</sup> year
- Students are instructed to use the modern tools, interdisciplinary and latest technology in the mini project and doing final year project
- The Board of Studies members have gone through the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester of B.E. CSE and 3<sup>rd</sup> and 4<sup>th</sup> Semesters of M.E. CSE programmes
- The Anna University Nominee suggested that all the mandatory courses include in the curriculum with the reference of UGC guidelines
- Discussed about the Curriculum considering the guidelines of UGC, AICTE, Premier Institutions, PEOs, POs and PSOs of the program and the views of the stakeholders
- It is recommended to put a total number of credits for B.E. CSE programme should be within 184 and for lateral entry students should be within 140
  
- **For B.E. CSE – Undergraduate Programme**
  - The Curriculum and Syllabi framed as per the Guidelines of UGC/AICTE/University/Reputed Institutions/Professional Society/Local needs and the feedback received from the stakeholders
  - Tutorial hours should be added for Mathematics courses
  - Latest versions of five references books are suggested
  - Subjects regarding the preparation for industry readiness and GATE may be included
  - Data Structures Lab is mandatory in the respective semester of the courses
  - Digital System and Digital Lab should be combined as Theory with Lab Component
  - Operating System should be moved to Semester III from Semester IV
  - Computer Networks and Database Management System moved to Semester IV from Semester III



- Distributed System or Distributed Computing is mandatory in either Semester V or Semester VI
- Graph Theory can be removed since it is relevant to Discrete Mathematics
- Compiler Design can be moved to elective list
- System Software can be removed
- It is recommended to include Open Source Programming, Service Oriented Architecture, Deep Learning, Data Centre Virtualization, Internet of Things in the Programme Elective
- It is recommended to include Artificial Intelligence as open elective

- **For M.E. CSE PG Programme**

- Generally in all the subjects include specific Case studies.
- Include Internet of Things as Core subject
- Instead of Computer Networks lab, the Operating System Design Case Studies may be included
- Further reading is needed in all the courses
- Simulator on tools can be added in all the lab courses
- Latest versions of references books are suggested
- Machine Learning Technique courses should be added in First or Semester

- **General**

- The attainment level of Course Outcomes(COs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) discussed
- It is suggested to offer Value Added Courses and One Credit Courses
- Discussed about Students Undertaking internship, field projects, projects related
- Discussed about the Employability Courses, Entrepreneurship and Skill development Courses were suggested by the Stakeholders.
- Discussed the Course outcomes and Program Specific Outcomes related for each courses

- Question Paper Pattern

- UG / PG Programme

Part A – 10x2 = 20 Marks

Part B – 5x12 = 60 Marks (Either or)

Part C – 1x20 = 20 Marks (Either or)

Total Marks = 100 Marks, Duration = 3 hours

- Evaluation Methods

**Theory**

Continuous Assessment = 40%

Semester Examination = 60%

**Practical**

Continuous Assessment = 50%

Semester Examination = 50%

- The accepted PSOs are shown below for approval of Academic Council,

**PSO 1:** The ability to apply software engineering principles and practices to design and develop software systems that meet the automation needs of industrial and societal problems

**PSO 2:** The ability to apply their technical skills and knowledge gained in the fields such as Artificial Intelligence, Data Science, Cloud Computing, Social Network Analysis and Mobile Application development


5. The following resolutions were passed

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E CSE and M.E CSE Programmes to the academic Council for approval.
- It is resolved to recommend the curriculum the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> semester B.E CSE and 3<sup>rd</sup> & 4<sup>th</sup> semester M.E programmes to the academic council for approval.
- It is resolved to recommend the question paper pattern UG/PG programmes and evaluation methodology for approval

The chairman, Board of studies thanked all the members for their valuable suggestions and coordination.

Date: 08. 07. 2017

Place: Nagapattinam

  
Chairman – BoS (CSE)

**CHAIRMAN**

**Board of Studies**

**Department of Computer Science & Engineering**

**EGS Pillay Engineering College (Autonomous)  
Nagapattinam.**

## B.E. – Computer Science and Engineering R 2017 Full Time Curriculum and Syllabus

SEMESTER I										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1701MA101	Engineering Mathematics-I	3	2	0	4	40	60	100	BS	
1701PII101	Applied Physics for Engineers	3	0	0	3	40	60	100	BS	
1701CI1101	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS	
1701EN101	Technical English	3	0	0	3	100	0	100	HSS	
1701GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES	
1701GEX02	Engineering Graphics	2	2	0	3	50	50	100	ES	
1701GEX03	Programming in C	3	0	0	3	40	60	100	ES	
<b>Laboratory Course</b>										
1701HS151	Physics and Chemistry Laboratory –I	0	0	2	1	50	50	100	BS	
1701GEX51	Programming in C Laboratory	0	0	2	1	50	50	100	ES	
Total					24					

SEMESTER II										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1701MA201	Engineering Mathematics-II	3	2	0	4	40	60	100	BS	
1701PII201	Physics of Engineering Materials	3	0	0	3	40	60	100	BS	
1701CI201	Environmental Studies	3	0	0	3	40	60	100	BS	
1701GE201	Basic Civil and Mechanical Engineering	3	0	0	3	40	60	100	ES	
1702CS201	Programming in C++	3	0	0	3	40	60	100	PC	
1701LE201/ 1701LE202	Communicative English/Hindi	3	0	0	3	100		100	HSS	
<b>Laboratory Course</b>										
1701GEX53	Workshop Practice	0	0	2	1	50	50	100	ES	
1701HS251	Physics and Chemistry Laboratory –II	0	0	2	1	50	50	100	BS	
1702CS251	Programming in C++ Laboratory	0	0	2	1	50	50	100	PC	
1701GEX52	Communication Skills Laboratory	0	0	2	1	50	50	100	HSS	
Total					23					







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**Board of Studies Meeting**

**Attendance**

Name of the Department : Computer Science and Engineering

Meeting No. : 01

Date & Time : 08.07.2017 & 10.00 A.M.

Venue : CSE A/C Seminar Hall

S.No	Name	Category	Signature
1	Dr.M.CHINNADURAI	Chairman	
2	Dr.S.MERCY SHALINIE	University Nominee	
3	Dr.A.AMUTHAN	External Expert Members	
4	Dr.G.R.KARPAGAM		
5	Dr.M.ARAMUDHAN		
6	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector	
7	Mr.ANAND THIAGARAJAN		
8	Ms.MERCY MARIA	Alumnus	
9	Mr.S.P.GOPLAN		
10	Dr. T.GANESAN	Internal Member	
11	Prof.N.MURALI		
12	Prof.K.BALASUBRAMANIAN		

Chairman- BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
Department of Computer Science & Engineering  
EGS Pillay Engineering College (Autonomous)  
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### B.E – Computer Science and Engineering

#### 1.1.2 Details of programmes where syllabus revision was carried out during the year

2018-19

Course Code	Course Name	Change Details	Percentage of Change
1701MA101	Engineering Mathematics-I		0
1701PH101	Applied Physics for Engineers		0
1701CH101	Applied Chemistry in Informatics		0
1701EN101	Technical English		0
1701GEX01	Basic Electrical and Electronics Engineering		0
1701GEX02	Engineering Graphics		0
1701GEX03	Programming in C		0
1701HS151	Physics and Chemistry Lab –I		0
1701GEX51	Programming in C Lab		0
1701MA201	Engineering Mathematics-II		0
1701PH201	Physics of Engineering Materials		0
1701CH201	Environmental Studies		0
1701GE201	Basic Civil & Mechanical Engineering		0
1702CS201	Programming in C++		0
1701LE201/ 1701LE202	Communicative English/Hindi		0
1701GEX53	Workshop Practice		0
1701HS251	Physics and Chemistry Lab –II		0
1702CS251	Programming in C++ Lab		0
1701GEX52	Communication Skills Lab		0
1701MA301	Engineering Mathematics III	New Course	100
1702CS301	Data Structures	New Course	100
1702CS302	Computer Organization and Architecture	New Course	100
1702CS303	Software Engineering	New Course	100
1702CS304	Digital Systems	New Course	100
1702CS305	Operating Systems	New Course	100
1702CS351	Data Structures Laboratory	New Course	100
1702CS352	Operating Systems Laboratory	New Course	100
1704GE351	Life Skills: Soft Skills	New Course	100
1701MA401	Probability and Queuing Theory	New Course	100
1702CS401	Computer Networks	New Course	100
1702CS402	Programming Paradigms	New Course	100
1702CS403	Design and Analysis of Algorithms	New Course	100
1702CS404	Microprocessors and Microcontrollers	New Course	100



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1702CSX02	Database Management Systems	New Course	100
1701CH201	Environmental Studies	New Course	100
1702CS451	Networks Laboratory	New Course	100
1702CSX52	Database Management Systems Laboratory	New Course	100
1704GE451	Life Skills: Verbal Ability	New Course	100
MA6566	Discrete Mathematics		0
CS6501	Internet Programming		0
CS6502	Object Oriented Analysis and Design		0
CS6503	Theory of Computation		0
CS6504	Computer Graphics		0
CS6511	Case Tools Laboratory		0
CS6512	Internet Programming Laboratory		0
CS6513	Computer Graphics Laboratory		0
CS6601	Distributed Systems		0
IT6601	Mobile Computing		0
CS6660	Compiler Design		0
IT6502	Digital Signal Processing		0
CS6659	Artificial Intelligence		0
IT6702	Data Warehousing and Data Mining		0
CS6611	Mobile Application Development Laboratory		0
CS6612	Compiler Laboratory		0
GE6674	Communication and Soft Skills - Laboratory Based		0
CS6701	Cryptography and Network Security		0
CS6702	Graph Theory and Applications		0
CS6703	Grid and Cloud Computing		0
CS6704	Resource Management Techniques		0
IT6801	Service Oriented Architecture		0
EC6703	Embedded and Real Time Systems		0
CS6711	Security Laboratory		0
CS6712	Grid and Cloud Computing Laboratory		0
CS6801	Multi – Core Architectures and Programming		0
CS6010	Social Network Analysis		0
MG6088	Software Project Management		0
CS6811	Project Work		0
		<b>Average</b>	<b>28.35</b>





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Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	01
Date & Time	08.07.2017 & 10.00 A.M.
Venue	CSE A/C Seminar Hall (SJB 108)

1. Chairman / BoS welcomed all members for the 1<sup>st</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - To finalize the curriculum and syllabi of first and second semester B.E. CSE Programme and curriculum of 1<sup>st</sup> to 4<sup>th</sup> Semesters and syllabi of first and second semester M.E. CSE Programme.
  - To finalize the curriculum of 3<sup>rd</sup> 8<sup>th</sup> Semester B.E. CSE.
  - To discuss the question paper pattern for UG/PG Programme and Evaluation methodologies.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.
  - The Board of Studies members have gone through the curriculum and syllabi of first and second semester B.E. CSE and M.E. CSE programmes.
  - The Board of Studies Chairman gave a brief presentation on Vision and Mission of the Institution and the Department, PEOs, POs and the PSOs.
  - The feedback from the stakeholders of Employers, Faculty member, Alumnus, Parents, Students and other institution senior faculty members, internal senior faculty members and students and the corresponding resolutions made in the department level academic activities committee meetings discussion were presented by the Chairman of the Board.



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- In the Department level academic meeting, it is suggested to include the important courses related to improve the skills like programming courses and the curriculum designed as per the local needs of the society and the peoples requirements
- The Board of Studies Chairman agreed to offer those courses and the same accepted by the board
- Students are encouraged to complete NPTEL Courses during the 3<sup>rd</sup> or 4<sup>th</sup> year
- Students are instructed to use the modern tools, interdisciplinary and latest technology in the mini project and doing final year project
- The Board of Studies members have gone through the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester of B.E. CSE and 3<sup>rd</sup> and 4<sup>th</sup> Semesters of M.E. CSE programmes
- The Anna University Nominee suggested that all the mandatory courses include in the curriculum with the reference of UGC guidelines
- Discussed about the Curriculum considering the guidelines of UGC, AICTE, Premier Institutions, PEOs, POs and PSOs of the program and the views of the stakeholders
- It is recommended to put a total number of credits for B.E. CSE programme should be within 184 and for lateral entry students should be within 140
- **For B.E. CSE – Undergraduate Programme**
  - The Curriculum and Syllabi framed as per the Guidelines of UGC/AICTE/University/Reputed Institutions/Professional Society/Local needs and the feedback received from the stakeholders
  - Tutorial hours should be added for Mathematics courses
  - Latest versions of five references books are suggested
  - Subjects regarding the preparation for industry readiness and GATE may be included
  - Data Structures Lab is mandatory in the respective semester of the courses
  - Digital System and Digital Lab should be combined as Theory with Lab Component
  - Operating System should be moved to Semester III from Semester IV
  - Computer Networks and Database Management System moved to Semester IV from Semester III

- Distributed System or Distributed Computing is mandatory in either Semester V or Semester VI
- Graph Theory can be removed since it is relevant to Discrete Mathematics
- Compiler Design can be moved to elective list
- System Software can be removed
- It is recommended to include Open Source Programming, Service Oriented Architecture, Deep Learning, Data Centre Virtualization, Internet of Things in the Programme Elective
- It is recommended to include Artificial Intelligence as open elective
  
- **For M.E. CSE PG Programme**
  - Generally in all the subjects include specific Case studies.
  - Include Internet of Things as Core subject
  - Instead of Computer Networks lab, the Operating System Design Case Studies may be included
  - Further reading is needed in all the courses
  - Simulator on tools can be added in all the lab courses
  - Latest versions of references books are suggested
  - Machine Learning Technique courses should be added in First or Semester
  
- **General**
  - The attainment level of Course Outcomes(COs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) discussed
  - It is suggested to offer Value Added Courses and One Credit Courses
  - Discussed about Students Undertaking internship, field projects, projects related
  - Discussed about the Employability Courses, Entrepreneurship and Skill development Courses were suggested by the Stakeholders.
  - Discussed the Course outcomes and Program Specific Outcomes related for each courses

- Question Paper Pattern

- UG / PG Programme

- Part A – 10x2 = 20 Marks

- Part B – 5x12 = 60 Marks (Either or)

- Part C – 1x20 = 20 Marks (Either or)

- Total Marks = 100 Marks, Duration = 3 hours

- Evaluation Methods

- Theory**

- Continuous Assessment = 40%

- Semester Examination = 60%

- Practical**

- Continuous Assessment = 50%

- Semester Examination = 50%

- The accepted PSOs are shown below for approval of Academic Council,

**PSO 1:** The ability to apply software engineering principles and practices to design and develop software systems that meet the automation needs of industrial and societal problems

**PSO 2:** The ability to apply their technical skills and knowledge gained in the fields such as Artificial Intelligence, Data Science, Cloud Computing, Social Network Analysis and Mobile Application development


5. The following resolutions were passed

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E CSE and M.E CSE Programmes to the academic Council for approval.
- It is resolved to recommend the curriculum the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> semester B.E CSE and 3<sup>rd</sup> & 4<sup>th</sup> semester M.E programmes to the academic council for approval.
- It is resolved to recommend the question paper pattern UG/PG programmes and evaluation methodology for approval

The chairman, Board of studies thanked all the members for their valuable suggestions and coordination.

Date: 08.07.2017

Place: Nagapattinam

  
Chairman – BoS (CSE)

**CHAIRMAN**

**Board of Studies**

**Department of Computer Science & Engineering**

**EGS Pillay Engineering College (Autonomous)  
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**Board of Studies Meeting**

**Attendance**

Name of the Department : Computer Science and Engineering

Meeting No. : 01

Date & Time : 08.07.2017 & 10.00 A.M.

Venue : CSE A/C Seminar Hall

S.No	Name	Category	Signature
1	Dr.M.CHINNADURAI	Chairman	
2	Dr.S.MERCY SHALINIE	University Nominee	
3	Dr.A.AMUTHAN	External Expert Members	
4	Dr.G.R.KARPAGAM		
5	Dr.M.ARAMUDHAN		
6	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector	
7	Mr.ANAND THIAGARAJAN		
8	Ms.MERCY MARIA	Alumnus	
9	Mr.S.P.GOPLAN		
10	Dr.T.GANESAN	Internal Member	
11	Prof.N.MURALI		
12	Prof.K.BALASUBRAMANIAN		

Chairman - BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
Department of Computer Science &  
Engineering  
EGS Pillay Engineering College (Autonomous)  
Nagapattinam.



Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	02
Date & Time	21.04.2018 & 09.30 A.M.
Venue	CSE A/C Seminar Hall

**The names of the members present in the Board of Studies are given in Annexure I.**

1. Chairman / BoS welcomed all members for the 2<sup>nd</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous meeting
  - To finalize the syllabi of B.E CSE Programme from third to eight semesters and M.E. CSE Programme from third to fourth semester.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.
  - The Board of Studies members have gone through the syllabi of 3<sup>rd</sup> to 8<sup>th</sup> Semester B.E. CSE and 3<sup>rd</sup> to 4<sup>th</sup> Semester of M.E. CSE programmes.
  - **For B.E. CSE – Undergraduate Programme**
    - As per the approval of 1<sup>st</sup> Academic Council meeting, it is ensured for assessment to go for 50-50 for practical and 40-60 for theory courses.
    - It is to be ensured to have the method to calculate the GPA/CGPA.
    - It is to be ensured to go for 50-50 instead of 40-60 in Internal: External Calculation for theory cum laboratory courses.
    - It is recommended to bring forth the Life Skills, Soft Skills, English Communication and other relevant courses related to placement and to complete them by seventh semester.
    - It is recommended to bring Programming Paradigms to Fourth Semester while COA to Third Semester and Computer Networks shall be pushed to next semester.

- It is recommended to bring courses such as Mobile Computing and Ad hoc Networks to electives.
  - It is recommended not to include any core courses in the eight semesters.
  - It is recommended to offer one mini project by sixth semester.
  - It is recommended to introduce comprehensive viva by Seventh Semester which facilities the competitive examination.
  - It is recommended to offer Data Mining and Data Warehousing as a professional elective.
  - It is recommended to mandate industrial visit and internship by the end of third year
  - It is necessary to include latest edition of reference books.
  - Life Skills can be given with credits.
  - Each semester may be given with the average of 24 credits.
  - For lateral entry students must include additionally Environmental Studies in 4<sup>th</sup> Semester.
  - All the laboratory courses have to include additional experiments or innovative experiments if needed.
- **For M.E. CSE Post Graduate Programme**
    - Project Phase 1 may be given for industrial exposures.
    - It is ensure to publish the journal as project done by the students.
    - It is recommended to include more innovative experiments in the laboratory courses.
    - It is recommended to visit the industries atleast in the final year and submit the report to the department.
    - It is recommended to add the Research Methodology course in the open elective.
    - The board members are insist to participate in the Conferences once in a year.
- **General**
    - All the courses are recommended to include the course outcomes as discussed and approved in this BOS meeting.
    - Further reading can be added.
    - It is necessary to provide credit split up with allotted credits for HSS, BS, PC and PE courses in this regulation.
    - It is recommended to offer Value added courses and one credit courses.





**E.G.S. PILLAY ENGINEERING COLLEGE**  
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The following resolution was passed

- It is resolved to recommend the curriculum and syllabi of third to eighth semester of B.E CSE and third to fourth semester of M.E CSE Programmes to the Academic Council for approval.

The Chairman, Board of Studies thanked all the members for their valuable suggestions and coordination.

Date: 21.4.18

Place: Nagapattinam

Chairman (BoS)

University Nominee

Subject Expert

Subject Expert 21/4/18

Industry Expert

Alumni

Senior Faculty

Senior Faculty

Senior Faculty



## B.E. – Computer Science and Engineering R 2017 Full Time Curriculum and Syllabus

<b>SEMESTER I</b>									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA101	Engineering Mathematics-I	3	2	0	4	40	60	100	BS
1701PH101	Applied Physics for Engineers	3	0	0	3	40	60	100	BS
1701CH101	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS
1701EN101	Technical English	3	0	0	3	100	0	100	HSS
1701GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES
1701GEX02	Engineering Graphics	2	2	0	3	50	50	100	ES
1701GEX03	Programming in C	3	0	0	3	40	60	100	ES
<b>Laboratory Course</b>									
1701HS151	Physics and Chemistry Laboratory –I	0	0	2	1	50	50	100	BS
1701GEX51	Programming in C Laboratory	0	0	2	1	50	50	100	ES
Total									24

<b>SEMESTER II</b>									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA201	Engineering Mathematics-II	3	2	0	4	40	60	100	BS
1701PH201	Physics of Engineering Materials	3	0	0	3	40	60	100	BS
1701CH201	Environmental Studies	3	0	0	3	40	60	100	BS
1701GE201	Basic Civil and Mechanical Engineering	3	0	0	3	40	60	100	ES
1702CS201	Programming in C++	3	0	0	3	40	60	100	PC
1701LE201/ 1701LE202	Communicative English/Hindi	3	0	0	3	100		100	HSS
<b>Laboratory Course</b>									
1701GEX53	Workshop Practice	0	0	2	1	50	50	100	ES
1701HS251	Physics and Chemistry Laboratory –II	0	0	2	1	50	50	100	BS
1702CS251	Programming in C++ Laboratory	0	0	2	1	50	50	100	PC
1701GEX52	Communication Skills Laboratory	0	0	2	1	50	50	100	HSS
Total									23

<b>SEMESTER III</b>									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA301	Engineering Mathematics III	3	2	0	4	40	60	100	BS
1702CS301	Data Structures	3	2	0	4	40	60	100	PC
1702CS302	Computer Organization and Architecture	3	0	0	3	40	60	100	PC
1702CS303	Software Engineering	3	0	0	3	40	60	100	PC
1702CS304	Digital Systems	3	0	2	4	50	50	100	PC
1702CS305	Operating Systems	3	0	0	3	40	60	100	PC

Laboratory Course										
1702CS351	Data Structures Laboratory		0	0	2	1	50	50	100	PC
1702CS352	Operating Systems Laboratory		0	0	2	1	50	50	100	PC
1704GE351	Life Skills: Soft Skills		0	0	2	1	100	-	100	EEC
Total						24				

SEMESTER IV										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1701MA401	Probability and Queuing Theory	3	2	0	4	40	60	100	BS	
1702CS401	Computer Networks	3	0	0	3	40	60	100	PC	
1702CS402	Programming Paradigms	3	2	0	4	40	60	100	PC	
1702CS403	Design and Analysis of Algorithms	3	0	0	3	40	60	100	PC	
1702CS404	Microprocessors and Microcontrollers	3	0	2	4	50	50	100	PC	
1702CSX02	Database Management Systems	3	0	0	3	40	60	100	PC	
1701CH201*	Environmental Studies	3	0	0	3	40	60	100	BS	
<b>Laboratory Course</b>										
1702CS451	Networks Laboratory	0	0	2	1	50	50	100	PC	
1702CSX52	Database Management Systems Laboratory	0	0	2	1	50	50	100	PC	
1704GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC	
Total					24/27*					

\*Applicable for Lateral Entry students

SEMESTER V										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1701MA501	Discrete Mathematics	3	2	0	4	40	60	100	BS	
1702CS501	Object Oriented Analysis and Design	3	0	0	3	40	60	100	PC	
1702CS502	Theory of Computation	3	2	0	4	40	60	100	PC	
1702CS503	Computer Graphics and Multimedia	3	0	0	3	40	60	100	PC	
1703CS002	Software Testing (Elective I)	3	0	0	3	40	60	100	PE	
1703CS006	Mobile Computing(Elective II)	3	0	0	3	40	60	100	PE	
<b>Laboratory Course</b>										
1702CS551	Computer Graphics and Multimedia Laboratory	0	0	2	1	50	50	100	PC	
1704CS552	CASE Tools Laboratory (Mini Project I)	0	0	2	1	50	50	100	EEC	
1704CS553	Technical Seminar	0	0	2	1	100	-	100	EEC	
1704GE551	Life Skills: Aptitude-I	0	0	2	1	100	-	100	EEC	
Total					24					



SEMESTER VI									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MGX01	Professional Ethics	3	0	0	3	40	60	100	HSS
1702CS601	Web Technology	3	2	0	4	40	60	100	PC
1702CS602	Artificial Intelligence	3	0	0	3	40	60	100	PC
1702CS603	Distributed Systems	3	0	0	3	40	60	100	PC
1703CS012/1703MG008	Data Warehousing and Data Mining/Human Rights (Elective III)	3	0	0	3	40	60	100	PE
1703CE032/1703EC020/1703ME011	Global Warming and Climate Change/Soft Computing/Industrial Robotics Elective IV(Open)	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1702CS651	Web Technology Laboratory	0	0	2	1	50	50	100	PC
1704CS652	Mobile Application Development Laboratory (Mini Project II)	0	0	2	1	50	50	100	EEC
1704CS653	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC
1704GE651	Life Skills: Aptitude-II	0	0	2	1	100	-	100	EEC
Total					23				

SEMESTER VII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1702CS701	Cryptography and Network Security	3	0	0	3	40	60	100	PC
1702CS702	Software Project Management	3	0	0	3	40	60	100	PC
1702CS703	Big Data Analytics	3	0	0	3	40	60	100	PC
1702CS704	Cloud Computing	3	0	0	3	40	60	100	PC
1703CS001	Service oriented Architecture (Elective V)	3	0	0	3	40	60	100	PE
1703ED001	Startup Entrepreneurship (Elective VI(Open))	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1702CS751	Cloud Computing Laboratory	0	0	2	1	50	50	100	PC
1702CS752	Network Security Laboratory	0	0	2	1	50	50	100	PC
1704CS753	Software Development Laboratory (Mini Project III)	0	0	2	1	50	50	100	EEC
1704GE751	Life Skills: Competitive Exams Preparation	2	0	0	2	100	-	100	EEC
1704CS754	In-plant Training / Internship Presentation	0	0	0	1	100	-	100	EEC
Total					24				

SEMESTER VIII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1703CS024	Bioinformatics(Elective VII)	3	0	0	3	40	60	100	PE
1703CS027	Data Centre and Virtualization (Elective VIII)	3	0	0	3	40	60	100	PE
1703CS035	Social Network Analysis (Elective IX)	3	0	0	3	40	60	100	PE
<b>Laboratory Course</b>									
1704CS851	Project Work	0	0	18	9	50	50	100	EEC
Total					18				



**List of Programme Electives for B.E. – Computer Science and Engineering**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>ELECTIVE - I</b>									
1703CS016	Wireless Communications	3	0	0	3	40	60	100	PE
1703CS002	Software Testing	3	0	0	3	40	60	100	PE
1703CS003	Information Management	3	0	0	3	40	60	100	PE
1703CS004	C# and .NET framework	3	0	0	3	40	60	100	PE
1703CS005	Advanced Database Technology	3	0	0	3	40	60	100	PE
<b>ELECTIVE - II</b>									
1703CS006	Mobile Computing	3	0	0	3	40	60	100	PE
1703CS007	Network Analysis and Management	3	0	0	3	40	60	100	PE
1703CS008	Open Source Programming	3	0	0	3	40	60	100	PE
1703CS009	Ad hoc and Sensor Networks	3	0	0	3	40	60	100	PE
1703CS010	Digital Signal Processing	3	0	0	3	40	60	100	PE
<b>ELECTIVE - III</b>									
1703CS011	Compiler Design	3	0	0	3	40	60	100	PE
1703MG002	Total Quality Management	3	0	0	3	40	60	100	PE
1703CS012	Data Warehousing and Data Mining	3	0	0	3	40	60	100	PE
1703CS014	Disaster Management	3	0	0	3	40	60	100	PE
1703MG008	Human Rights	3	0	0	3	40	60	100	PE
<b>ELECTIVE - V</b>									
1703CS001	Service Oriented Architecture	3	0	0	3	40	60	100	PE
1703CS017	Digital Image Processing	3	0	0	3	40	60	100	PE
1703CS018	Embedded and Real Time Systems	3	0	0	3	40	60	100	PE
1703CS019	Game Programming	3	0	0	3	40	60	100	PE
1703CS020	Knowledge Management	3	0	0	3	40	60	100	PE
<b>ELECTIVE - VII</b>									
1703CS021	Deep Learning	3	0	0	3	40	60	100	PE
1703CS022	Natural Language Processing	3	0	0	3	40	60	100	PE
1703CS023	Soft Computing	3	0	0	3	40	60	100	PE
1703CS024	Bioinformatics	3	0	0	3	40	60	100	PE
1703CS025	Human Computer Interaction	3	0	0	3	40	60	100	PE
<b>ELECTIVE - VIII</b>									
1703CS026	Enterprise Resource Planning	3	0	0	3	40	60	100	PE
1703CS027	Data Centre and Virtualization	3	0	0	3	40	60	100	PE
1703CS028	Growth Hacking	3	0	0	3	40	60	100	PE
1703CS029	Information Retrieval	3	0	0	3	40	60	100	PE
1703CS030	Cyber Forensics	3	0	0	3	40	60	100	PE
<b>ELECTIVE - IX</b>									
1703CS031	Internet of Things	3	0	0	3	40	60	100	PE
1703CS032	Mainframe Computing	3	0	0	3	40	60	100	PE
1703CS033	Multicore Architecture	3	0	0	3	40	60	100	PE
1703CS034	Graph Theory and Its Applications	3	0	0	3	40	60	100	PE
1703CS035	Social Network Analysis	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVE</b>									
1703CS036	Database Management Systems	3	0	0	3	40	60	100	OE
1703CS037	Web Technology	3	0	0	3	40	60	100	OE
1703CS038	Operating Systems	3	0	0	3	40	60	100	OE
1703CS039	Computer Graphics and Multimedia	3	0	0	3	40	60	100	OE
1703CS040	Software Engineering	3	0	0	3	40	60	100	OE
1703CS041	Artificial Intelligence	3	0	0	3	40	60	100	OE
<b>ONE CREDIT COURSES</b>									
1704CS042	Hardware and troubleshooting	-	-	-	1				OC
1704CS043	Networking Course	-	-	-	1				OC







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### B.E – Computer Science and Engineering

#### 1.1.2 Details of programmes where syllabus revision was carried out during the year

2019-2020

Course Code	Course Name	Change Details	Percentage of Change
1901MA102	Engineering Mathematics –I	New Course	100
1901CH104	Applied Chemistry in Informatics	Revision	47
1901GEX03	Programming for Problem Solving	Revision	38
1901ENX01	English for Engineers	New Course	100
1901GEX52	Computer Programming Laboratory		0
1901GE151	Engineering Intelligence I	New Course	100
1901CHX51	Engineering Chemistry Laboratory	Revision	50
1901HSX51	Communication Skill Laboratory	Revision	5
1901MA202	Engineering Mathematics –II	New Course	100
1901PH201	Physics for Information Science	New Course	100
1901GEX01	Basic Electrical and Electronics Engineering	Revision	90
1901GEX02	Engineering Graphics	New Course	0
1901GE201	Engineering Exploration	New Course	100
1901GE254	Computer Hardware and IT Essentials Lab	New Course	100
1901GE252	Engineering Intelligence - II	New Course	100
1901GEX51	CAD Lab	New Course	100
1901GEX53	Basic Electrical and Electronics Engineering Lab	New Course	100
1901PHX51	Engineering Physics Lab	Revision	70
1701MA301	Engineering Mathematics III		0
1702CS301	Data Structures		0
1702CS302	Computer Organization and Architecture		0
1702CS303	Software Engineering		0
1702CS304	Digital Systems		0
1702CS305	Operating Systems		0
1702CS351	Data Structures Laboratory		0
1702CS352	Operating Systems Laboratory		0
1704GE351	Life Skills: Soft Skills		0
1701MA401	Probability and Queuing Theory		0
1702CS401	Computer Networks		0
1702CS402	Programming Paradigms		0
1702CS403	Design and Analysis of Algorithms		0
1702CS404	Microprocessors and Microcontrollers		0
1702CSX02	Database Management Systems		0





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1702CS451	Networks Laboratory		0
1702CSX52	Database Management Systems Laboratory		0
1704GE451	Life Skills: Verbal Ability		0
1701MA501	Discrete Mathematics	New Course	100
1702CS501	Object Oriented Analysis and Design	New Course	100
1702CS502	Theory of Computation	New Course	100
1702CS503	Computer Graphics and Multimedia	New Course	100
1703CS002	Software Testing (Elective I)	New Course	100
1703CS006	Mobile Computing(Elective II)	New Course	100
1702CS551	Computer Graphics and Multimedia Laboratory	New Course	100
1704CS552	CASE Tools Laboratory	New Course	100
1704CS553	Technical Seminar	New Course	100
1704GE551	Life Skills: Aptitude-I	New Course	100
1701MGX01	Professional Ethics	New Course	100
1702CS601	Web Technology	New Course	100
1702CS602	Artificial Intelligence	New Course	100
1702CS603	Distributed Systems	New Course	100
1703CS012/ 1703MG008	Data Warehousing and Data Mining/Human Rights (Elective III)	New Course	100
1703CE032/ 1703EC020/ 1703ME011	Global Warming and Climate Change/Soft Computing/Industrial Robotics Elective IV(Open)	New Course	100
1702CS651	Web Technology Laboratory	New Course	100
1704CS652	Mobile Application Development Laboratory	New Course	100
1704CS653	Industrial Visit Presentation	New Course	100
1704GE651	Life Skills: Aptitude-II	New Course	100
CS6701	Cryptography and Network Security		0
CS6702	Graph Theory and Applications		0
CS6703	Grid and Cloud Computing		0
CS6704	Resource Management Techniques		0
IT6801	Service Oriented Architecture		0
EC6703	Embedded and Real Time Systems		0
CS6711	Security Laboratory		0
CS6712	Grid and Cloud Computing Laboratory		0
CS6801	Multi – Core Architectures and Programming		0
CS6010	Social Network Analysis		0
MG6088	Software Project Management		0
CS6811	Project Work		0
		<b>Average</b>	<b>52.94</b>





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Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	01
Date & Time	08.07.2017 & 10.00 A.M.
Venue	CSE A/C Seminar Hall (SJB 108)

1. Chairman / BoS welcomed all members for the 1<sup>st</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - To finalize the curriculum and syllabi of first and second semester B.E CSE Programme and curriculum of 1<sup>st</sup> to 4<sup>th</sup> Semesters and syllabi of first and second semester M.E. CSE Programme.
  - To finalize the curriculum of 3<sup>rd</sup> - 8<sup>th</sup> Semester B.E CSE.
  - To discuss the question paper pattern for UG/PG Programme and Evaluation methodologies.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.
  - The Board of Studies members have gone through the curriculum and syllabi of first and second semester B.E. CSE and M.E. CSE programmes.
  - The Board of Studies Chairman gave a brief presentation on Vision and Mission of the Institution and the Department, PEOs, POs and the PSOs.
  - The feedback from the stakeholders of Employers, Faculty member, Alumnus, Parents, Students and other institution senior faculty members, internal senior faculty members and students and the corresponding resolutions made in the department level academic activities committee meetings discussion were presented by the Chairman of the Board.



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- In the Department level academic meeting, it is suggested to include the important courses related to improve the skills like programming courses and the curriculum designed as per the local needs of the society and the peoples requirements
- The Board of Studies Chairman agreed to offer those courses and the same accepted by the board
- Students are encouraged to complete NPTEL Courses during the 3<sup>rd</sup> or 4<sup>th</sup> year
- Students are instructed to use the modern tools, interdisciplinary and latest technology in the mini project and doing final year project
- The Board of Studies members have gone through the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester of B.E. CSE and 3<sup>rd</sup> and 4<sup>th</sup> Semesters of M.E. CSE programmes
- The Anna University Nominee suggested that all the mandatory courses include in the curriculum with the reference of UGC guidelines
- Discussed about the Curriculum considering the guidelines of UGC, AICTE, Premier Institutions, PEOs, POs and PSOs of the program and the views of the stakeholders
- It is recommended to put a total number of credits for B.E. CSE programme should be within 184 and for lateral entry students should be within 140
- **For B.E. CSE – Undergraduate Programme**
  - The Curriculum and Syllabi framed as per the Guidelines of UGC/AICTE/University/Reputed Institutions/Professional Society/Local needs and the feedback received from the stakeholders
  - Tutorial hours should be added for Mathematics courses
  - Latest versions of five references books are suggested
  - Subjects regarding the preparation for industry readiness and GATE may be included
  - Data Structures Lab is mandatory in the respective semester of the courses
  - Digital System and Digital Lab should be combined as Theory with Lab Component
  - Operating System should be moved to Semester III from Semester IV
  - Computer Networks and Database Management System moved to Semester IV from Semester III

• **Question Paper Pattern**

○ **UG / PG Programme**

Part A – 10x2 = 20 Marks

Part B – 5x12 = 60 Marks (Either or)

Part C – 1x20 = 20 Marks (Either or)

Total Marks = 100 Marks, Duration = 3 hours

○ **Evaluation Methods**

**Theory**

Continuous Assessment = 40%

Semester Examination = 60%

**Practical**

Continuous Assessment = 50%

Semester Examination = 50%

- The accepted PSOs are shown below for approval of Academic Council,

**PSO 1:** The ability to apply software engineering principles and practices to design and develop software systems that meet the automation needs of industrial and societal problems

**PSO 2:** The ability to apply their technical skills and knowledge gained in the fields such as Artificial Intelligence, Data Science, Cloud Computing, Social Network Analysis and Mobile Application development

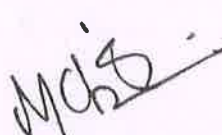
5. The following resolutions were passed

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E CSE and M.E CSE Programmes to the academic Council for approval.
- It is resolved to recommend the curriculum the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> semester B.E CSE and 3<sup>rd</sup> & 4<sup>th</sup> semester M.E programmes to the academic council for approval.
- It is resolved to recommend the question paper pattern UG/PG programmes and evaluation methodology for approval

The chairman, Board of studies thanked all the members for their valuable suggestions and coordination.

Date: 08.07.2017

Place: Nagapattinam

  
Chairman – BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
Department of Computer Science &  
Engineering  
EGS Pillay Engineering College (Autonomous)  
Nagapattinam.

- Distributed System or Distributed Computing is mandatory in either Semester V or Semester VI
- Graph Theory can be removed since it is relevant to Discrete Mathematics
- Compiler Design can be moved to elective list
- System Software can be removed
- It is recommended to include Open Source Programming, Service Oriented Architecture, Deep Learning, Data Centre Virtualization, Internet of Things in the Programme Elective
- It is recommended to include Artificial Intelligence as open elective

- **For M.E. CSE PG Programme**

- Generally in all the subjects include specific Case studies.
- Include Internet of Things as Core subject
- Instead of Computer Networks lab, the Operating System Design Case Studies may be included
- Further reading is needed in all the courses
- Simulator on tools can be added in all the lab courses
- Latest versions of references books are suggested
- Machine Learning Technique courses should be added in First or Semester

- **General**

- The attainment level of Course Outcomes(COs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) discussed
- It is suggested to offer Value Added Courses and One Credit Courses
- Discussed about Students Undertaking internship, field projects, projects related
- Discussed about the Employability Courses, Entrepreneurship and Skill development Courses were suggested by the Stakeholders.
- Discussed the Course outcomes and Program Specific Outcomes related for each courses



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**Board of Studies Meeting**

**Attendance**

Name of the Department : Computer Science and Engineering

Meeting No. : 01

Date & Time : 08.07.2017 & 10.00 A.M.

Venue : CSE A/C Seminar Hall

S.No	Name	Category	Signature
1	Dr.M.CHINNADURAI	Chairman	<i>[Signature]</i>
2	Dr.S.MERCY SHALINIE	University Nominee	<i>S M Shalini</i>
3	Dr.A.AMUTHAN	External Expert Members	<i>A. Amuthan</i>
4	Dr.G.R.KARPAGAM		<i>[Signature]</i>
5	Dr.M.ARAMUDHAN		<i>M. Aramudhan</i>
6	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector	<i>J. Sarathchandar.</i>
7	Mr.ANAND THIAGARAJAN		<i>Anand Thiagarajan</i>
8	Ms.MERCY MARIA	Alumnus	<i>Mercy Maria</i>
9	Mr.S.P.GOPLAN		<i>S.P. Goplan</i>
10	Dr.T.GANESAN	Internal Member	<i>T. Ganesan</i>
11	Prof.N.MURALI		<i>N. Murali</i>
12	Prof.K.BALASUBRAMANIAN		<i>K. Balasubramanian</i>

*[Signature]*  
Chairman - BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
Department of Computer Science &  
Engineering  
EGS Pillay Engineering College (Autonomous)  
Nagapattinam.







### Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	03
Date & Time	01.03.2019 & 02.30 PM
Venue	CSE A/C Seminar Hall

The names of the members present in the Board of Studies are given in Annexure I.

1. Chairman / BoS welcomed all members for the 3<sup>rd</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous meeting
  - Academic activities and regulations.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.
  - The Chairman gave a brief presentation on recently visited Accreditation process and highlighted the important points.
  - Vision and Mission of the Institution and Departments, PEOs and POs were presented to the members of the Board.
  - The Chairman demonstrated the alignment of Programme Specific criteria and aligned with the vision and mission statements of the department and institutional vision and mission statements.

- All the members of the committee suggested to include more skills related to latest technologies and improve the students skills in the emerging technologies
- Board members insist to involve the students to go for internship and industrial visit to improve the industrial exposure
- Board members gave a elaborative detailed description in the latest technology usage and involves students in the modern tools
- Students are encouraged to solve the problems using modern tools

○ **Resolutions:**

It was resolved to incorporate the suggestions given by the BOS members.

Board of Studies recommended the above resolutions to be presented in the Academic Council for further approval.

Finally the Chairman thanked all the members for their presence and valuable suggestions towards the importance of the Syllabus for the Computer Science and Engineering Board.

Date: 01.03.2019

Place: Nagapattinam

*MChS*  
01.03.2019  
Chairman – BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
**Department of Computer Science & Engineering**  
**EGS Pillay Engineering College (Autonomous)**  
**Nagapattinam.**



**E G S PILLAY ENGINEERING COLLEGE**  
(An Autonomous Institution, Affiliated to Anna University, Chennai)  
Nagore Post, Nagapattinam - 617 002, Tamil Nadu.

**Board of Studies Meeting**

**Attendance**

Name of the Department : Computer Science and Engineering

Meeting No. : 03

Date & Time : 01.03.2019 & 2.30 P.M.

Venue : CSE A/C Seminar Hall

S.No	Name	Category	Signature
1	Dr.M.CHINNADURAI	Chairman	
2	Dr.S.MERCY SHALINIE	University Nominee	
3	Dr.A.AMUTHAN	External Expert Members	
4	Dr.G.R.KARPAGAM		
5	Dr.M.ARAMUDHAN		
6	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector	
7	Mr.ANAND THIAGARAJAN		
8	Ms.MERCY MARIA	Alumnus	
9	Mr.S.P.GOPLAN		
10	Dr.T.GANESAN	Internal Member	
11	Dr..N.MURALI		
12	Dr.R.MANIVANNAN		
13	Prof.K.KALAIVANI		
14	Prof.K.BALASUBRAMANIAN		

Chairman- BoS (CSE)

**CHAIRMAN**

**Board of Studies**

**Department of Computer Science & Engineering**

**EGS Pillay Engineering College (Autonomous)  
Nagapattinam.**







**Minutes of Board of Studies (BoS) Meeting**

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	04
Date & Time	18.05.2019&10.30 AM
Venue	CSE A/C Seminar Hall (SJB 108)

The names of the members present in the Board of Studies are given in Annexure I.

1. Chairman / BoS welcomed all members for the 4<sup>th</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous meeting
  - To finalize the curriculum and syllabi of B.E. CSE Programme under new regulations 2019 and to review the implementation of M.E. CSE Programme
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies
  - The Board of Studies members have gone through the curriculum of B.E. CSE from 1<sup>st</sup> to 8<sup>th</sup> Semesters and Syllabi of B.E. CSE from 1<sup>st</sup> to 4<sup>th</sup> Semester Courses
  - The curriculum and syllabi framed as per the AICTE model curriculum
  - Board of Studies members accepted the implementation of AICTE model curriculum, other reputed institutions and Program Specific Criteria CSE R2017, CSE curriculum for drafting the R2019 curriculum
  - The Board is insisted to include the contents in the syllabus of R2019 by referring GATE Syllabus
  - The feedback from the stakeholders viz, employers, alumni, faculty from other institutions, parent, internal faculty and students and the corresponding resolutions made in the Programme Assessment Committee (PAC) meeting were presented by the Chairman of the Board. The BOS resolved to accept the PAC resolution.

- In PAC meetings, either one of C++ and Java can be given as a programming course in Object Oriented Programming course and Mobile Application Development course may be included as a laboratory course

- The board strictly instructed to involve the students in the online courses as per the regulations
- Mapping of the curriculum and syllabi of the proposed regulation R2019 with the program specific criteria was presented to the board of members by the Chairman and the board resolved to accept the mapping
- The components of the courses under R2019 based on having to one or more of the categories were presented to the board by the Chairman. The board resolved to accept the components
- Board of Studies Chairman has agreed to offer the courses related to research thrust areas in the Program Elective Courses

- The Basic Sciences courses are to be specific in the field of computer science field
- For Chemistry and Physics courses are to be ensured in the field of computer science field
- It is recommended to include Hardware and Troubleshooting related experiments in the laboratory courses

- The syllabus of Constitution of India is to be included in the third semester of the programme.
- As per the mandatory courses of AICTE model curriculum should be included in the curriculum
- Operating system should be moved to fourth semester and Digital system can be removed
- It is recommended to remove the credit score to the Environmental Science course.
- It is recommended to introduce new courses related to the field of Entrepreneurship skills development
- The Chairperson presented the panel of evaluators and question paper setters for valuation for approval.
- The BoS Members reviewed and approved the end semester External examiners and scrutiny members for R2019
- Discussed about the mapping of curriculum with Program Specific Criteria and board approved the same
- It is recommended the assessment questions and assessment pattern for the core and elective courses and the board approved the same

- The board analyzed the stakeholders feedback regarding the curriculum and syllabi under R2019 regulation
- For M.E. CSE implementation of curriculum and syllabi were discussed

o **Resolutions:**

It was resolved to incorporate the suggestions given by the BOS members towards the new regulations R2019 curriculum and syllabi (1<sup>st</sup> to 4<sup>th</sup> Semester) for B.E. CSE Programme and discussed about M.E. CSE review the implementation.

Board of Studies recommended the above resolutions to be presented in the Academic Council for further approval.

Finally the Chairman thanked all the members for their presence and valuable suggestions towards the improvement of the B.E. CSE R2019 Curriculum and Syllabus (1<sup>st</sup> to 4<sup>th</sup> Semester) for the Computer Science and Engineering Board.

Date: 18.05.2019

Place: Nagapattinam

*MChS*  
18/05/2019  
Chairman - BOS (CSE)

**CHAIRMAN**  
**Board of Studies**  
**Department of Computer Science & Engineering**  
**EGS Pillay Engineering College (Autonomous)**  
**Nagapattinam.**



**E.G.S. PILLAY ENGINEERING COLLEGE**  
 (An Autonomous Institution, Affiliated to Anna University, Chennai)  
 Nagore Post, Nagapattinam – 611 002, Tamilnadu.

### Board of Studies Meeting

#### Attendance

Name of the Department : Computer Science and Engineering

Meeting No. : 04

Date & Time : 18.05.2019 & 10.00 A.M.

Venue : CSE A/C Seminar Hall

S.No	Name	Category	Signature
1	Dr.M.CHINNADURAI	Chairman	<i>M. Chinnadurai</i>
2	Dr.S.MERCY SHALINIE	University Nominee	<i>S.M. Shalinie</i>
3	Dr.A.AMUTHAN	External Expert Members	<i>A. Amuthan</i>
4	Dr.G.R.KARPAGAM		<i>G.R. Karpagam</i>
5	Dr.M.ARAMUDHAN		<i>M. Aramudhan</i>
6	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector	<i>J. Sarath Chandar</i>
7	Mr.ANAND THIAGARAJAN		<i>A. Thiagarajan</i>
8	Ms.MERCY MARIA	Alumnus	<i>Mercy Maria</i>
9	Mr.S.P.GOPLAN		<i>S.P. Goplan</i>
10	Dr.T.GANESAN	Internal Member	<i>T. Ganesan</i>
11	Dr..N.MURALI		<i>N. Murali</i>
12	Dr.R.MANIVANNAN		<i>R. Manivannan</i>
13	Prof.K.KALAIVANI		<i>K. Kalaivani</i>
14	Prof.K.BALASUBRAMANIAN		<i>K. Balasubramanian</i>

*M. Chinnadurai*  
 Chairman-BoS (CSE)  
**CHAIRMAN**

**Board of Studies**  
 Department of Computer Science & Engineering  
 EGS Pillay Engineering College (Autonomous)  
 Nagapattinam.



**B.E. – Computer Science and Engineering**  
**2019 Regulation: Full Time Curriculum and Syllabus**

SEMESTER I										
Course Code	CourseName	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1901MA102	Engineering Mathematics –I (Calculus and Linear Algebra)	3	2	0	4	40	60	100	BS	
1901CH104	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS	
1901GEX03	Programming for Problem Solving	3	0	0	3	40	60	100	ES	
1901ENX01	English for Engineers	2	0	0	2	40	60	100	BS	
<b>Laboratory Course</b>										
1901GEX52	Computer Programming Laboratory	0	0	2	1	50	50	100	ES	
1901GE151	Engineering Intelligence I	0	0	2	1	100	0	100	HSS	
1901CHX51	Engineering Chemistry Laboratory	0	0	2	1	50	50	100	BS	
1901HSX51	Communication Skill Laboratory	0	0	2	1	50	50	100	BS	
<b>Total</b>					<b>16</b>					

SEMESTER II										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1901MA202	Engineering Mathematics –II (Probability and Statistics)	3	2	0	4	40	60	100	BS	
1901PH201	Physics for Information Science	3	0	0	3	40	60	100	BS	
1901GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES	
1901GEX02	Engineering Graphics	2	0	2	3	50	50	100	ES	
1901GE201	Engineering Exploration	2	0	0	2	100	0	100	ES	
<b>Laboratory Course</b>										
1901GE254	Computer Hardware and IT Essentials Laboratory	0	0	2	1	50	50	100	ES	
1901GE252	Engineering Intelligence - II	0	0	2	1	100	0	100	HSS	
1901GEX51	CAD Laboratory	0	0	2	1	50	50	100	ES	
1901GEX53	Basic Electrical and Electronics Engineering Laboratory	0	0	2	1	50	50	100	ES	
1901PHX51	Engineering Physics Laboratory	0	0	2	1	50	50	100	BS	
<b>Total</b>					<b>20</b>					





SEMESTER III									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA302	Engineering Mathematics III	3	2	0	4	40	60	100	BS
1902CS301	Data Structures	3	2	0	4	40	60	100	PC
1902CS302	Object Oriented Programming	3	0	0	3	40	60	100	PC
1902CS303	Computer Organization and Architecture	3	0	0	3	40	60	100	PC
1902CS304	Digital Logic and Microprocessors	3	0	2	4	40	60	100	ES
1901MCX02	Constitution of India	2	0	0	0	100	0	100	MC
<b>Laboratory Course</b>									
1902CS351	Data Structures Laboratory	0	0	2	1	50	50	100	PC
1902CS352	Object Oriented Programming Laboratory	0	0	2	1	50	50	100	PC
1904GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>21</b>				

SEMESTER IV									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS401	Software Engineering	3	0	0	3	40	60	100	PC
1902CS402	Operating System	3	0	0	3	40	60	100	PC
1902CS403	Computer Networks	3	0	0	3	40	60	100	PC
1902CS404	Design and Analysis of Algorithms	3	0	0	3	40	60	100	PC
1902CS406	Database Management Systems	3	0	0	3	40	60	100	PC
1901GEX04	Biology for Engineers	3	0	0	3	50	50	100	BS
1901MCX01	Environmental Science	2	0	0	0	100	0	100	MC
<b>Laboratory Course</b>									
1902CS451	Networks Laboratory	0	0	2	1	50	50	100	PC
1902CS452	Operating System Laboratory	0	0	2	1	50	50	100	PC
1902CS453	Database Management Systems Laboratory	0	0	2	1	50	50	100	PC
1904GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>22</b>				



SEMESTER V									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA501	Discrete Mathematics	3	2	0	4	40	60	100	BS
1902CS501	Object Oriented Analysis and Design	3	0	0	3	40	60	100	PC
1902CS502	Theory of Computation	3	2	0	4	40	60	100	PC
	PC Elective I	3	0	0	3	40	60	100	PE
	HSS Elective I	3	0	0	3	40	60	100	HSSE
1901MCX03	Essence of Indian Traditional Knowledge	2	0	0	0	100	0	100	MC
<b>Laboratory Course</b>									
1902CS551	CASE Tools Laboratory	0	0	2	1	50	50	100	PC
1902CS552	Mobile Application Development Laboratory	0	0	2	1	50	50	100	PC
1904GE551	Life Skills: Aptitude I	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>20</b>				

SEMESTER VI									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS601	Compiler Design	3	0	0	3	40	60	100	PC
1902CS602	Web Technology	3	2	0	4	40	60	100	PC
1902CS603	Artificial Intelligence	3	0	0	3	40	60	100	PC
	PC Elective II	3	0	0	3	40	60	100	PE
	HSS Elective II	3	0	0	3	40	60	100	HSSE
	Open Elective I	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1902CS651	Compiler Laboratory	0	0	2	1	50	50	100	PC
1902CS652	Web Technology Laboratory	0	0	2	1	50	50	100	PC
1904CS653	Software Prototype development Lab (Mini Project 1)	0	0	2	1	50	50	100	PC
1904CS654	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC
1904GE651	Life Skills: Aptitude II	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>24</b>				





SEMESTER VII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS701	Cloud Computing	3	0	0	3	40	60	100	PC
1902CS702	Cryptography and Network Security	3	0	0	3	40	60	100	PC
1901MG701	Universal Human Values and Ethics	3	0	0	3	40	60	100	PC
	PC Elective III	3	0	0	3	40	60	100	PE
	HSS Elective III	3	0	0	3	40	60	100	HSSE
	Open Elective II	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1902CS751	Cloud Computing Laboratory	0	0	2	1	50	50	100	PC
1902CS752	Network Security Laboratory	0	0	2	1	50	50	100	PC
1904CS753	Software Development Laboratory (Mini Project II)	0	0	2	1	50	50	100	PC
1904GE751	Life Skills: Comprehensive Viva	2	0	0	2	100	-	100	EEC
1904GE752	In plant training/Internship	-	-	-	1	100	-	100	EEC
<b>Total</b>					<b>24</b>				

SEMESTER VIII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
	PC Elective IV	3	0	0	3	40	60	100	PE
	PC Elective V	3	0	0	3	40	60	100	PE
<b>Laboratory Course</b>									
	Project Work	0	0	14	7	50	50	100	EEC
<b>Total</b>					<b>13</b>				



**PC ELECTIVE COURSES**

Sl. No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>Elective I</b>						
1	1903CS001	Mobile Computing	3	0	0	3
2	1903CS002	Computer Graphics and Multimedia	3	0	0	3
3	1903CS003	Data Warehousing and Data Mining	3	0	0	3
4	1903CS004	Software Testing	3	0	0	3
<b>Elective II</b>						
5	1903CS005	Distributed systems	3	0	0	3
6	1903CS006	OpenSource Programming	3	0	0	3
7	1903CS007	Adhoc and sensor networks	3	0	0	3
8	1903CS008	Multicore Architecture	3	0	0	3
<b>Elective III</b>						
9	1903CS009	Embedded and Real Time Systems	3	0	0	3
10	1903CS010	Internet of things	3	0	0	3
11	1903CS011	Digital image processing	3	0	0	3
12	1903CS012	C# and .Net Framework	3	0	0	3
<b>Elective IV</b>						
13	1903CS013	Big data Analytics	3	0	0	3
14	1903CS014	Service oriented Architecture	3	0	0	3
15	1903CS015	Machine learning techniques	3	0	0	3
16	1903CS016	Natural Language Processing	3	0	0	3
<b>Elective V</b>						
17	1903CS017	Information Retrieval	3	0	0	3
18	1903CS018	Cyber forensics	3	0	0	3
19	1903CS019	Data Centre and Virtualization	3	0	0	3
20	1903CS020	Bio Informatics	3	0	0	3

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>OPEN ELECTIVE COURSES</b>						
21	1903CS021	Computer Networks	3	0	0	3
22	1903CS022	Artificial Intelligence	3	0	0	3
23	1903CS023	Database Management Systems	3	0	0	3
24	1903CS024	Web Technology	3	0	0	3
25	1903CS025	Data Structures	3	0	0	3
26	1903CS026	Object oriented Programming	3	0	0	3
27	1903CS027	Cloud Computing	3	0	0	3
28	1903CS028	Mobile Computing	3	0	0	3



<b>ONE CREDIT COURSES</b>						
29	1904CS001	Hardware and troubleshooting	-	-	-	1
30	1904CS002	Networking Course	-	-	-	1
31	1904CS003	Industrial Safety for Engineers	-	-	-	1
32	1904CS004	Introduction to Fisheries Engineering	-	-	-	1
33	1904CS005	Transport and Tourism	-	-	-	1
<b>VALUE ADDED COURSES</b>						
34	1904CS006	Introduction to Data Centre Virtualization and Cloud Computing				
35	1904CS007	Python Programming				
36	1904CS008	Introduction to R				
37	1904CS009	Python for Data Science				

### Humanities, Social Science and Management Electives Courses

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>Elective I</b>						
1.	1901MGX01	Total Quality Management	3	-	-	3
2.	1901MGX02	Project Management and Finance	3	-	-	3
3.	1901MGX03	Operations Research	3	-	-	3
4.	1901MGX04	Principles of Management	3	-	-	3
<b>Elective II</b>						
1.	1901HS001	Innovation & Entrepreneurship fundamentals	3	-	-	3
2.	1901HS002	Intellectual Property Rights for Engineers	3	-	-	3
3.	1901HS003	Startup Entrepreneurship	3	-	-	3
4.	1901HS004	Business Model Innovation	3	-	-	3
<b>Elective III</b>						
1.	1901HS005	Social Entrepreneurship	3	-	-	3
2.	1901HS006	Design Thinking for Innovation	3	-	-	3
3.	1901HS007	Indian Patent Law & Patent Drafting	3	-	-	3
4.	1901HS008	IP Management & Commercialization	3	-	-	3





## B.E. – Computer Science and Engineering R 2017 Full Time Curriculum and Syllabus

<b>SEMESTER I</b>									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA101	Engineering Mathematics-I	3	2	0	4	40	60	100	BS
1701PH101	Applied Physics for Engineers	3	0	0	3	40	60	100	BS
1701CH101	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS
1701EN101	Technical English	3	0	0	3	100	0	100	HSS
1701GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES
1701GEX02	Engineering Graphics	2	2	0	3	50	50	100	ES
1701GEX03	Programming in C	3	0	0	3	40	60	100	ES
<b>Laboratory Course</b>									
1701HS151	Physics and Chemistry Laboratory –I	0	0	2	1	50	50	100	BS
1701GEX51	Programming in C Laboratory	0	0	2	1	50	50	100	ES
Total									24

<b>SEMESTER II</b>									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA201	Engineering Mathematics-II	3	2	0	4	40	60	100	BS
1701PH201	Physics of Engineering Materials	3	0	0	3	40	60	100	BS
1701CH201	Environmental Studies	3	0	0	3	40	60	100	BS
1701GE201	Basic Civil and Mechanical Engineering	3	0	0	3	40	60	100	ES
1702CS201	Programming in C++	3	0	0	3	40	60	100	PC
1701LE201/ 1701LE202	Communicative English/Hindi	3	0	0	3	100		100	HSS
<b>Laboratory Course</b>									
1701GEX53	Workshop Practice	0	0	2	1	50	50	100	ES
1701HS251	Physics and Chemistry Laboratory –II	0	0	2	1	50	50	100	BS
1702CS251	Programming in C++ Laboratory	0	0	2	1	50	50	100	PC
1701GEX52	Communication Skills Laboratory	0	0	2	1	50	50	100	HSS
Total									23

<b>SEMESTER III</b>									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA301	Engineering Mathematics III	3	2	0	4	40	60	100	BS
1702CS301	Data Structures	3	2	0	4	40	60	100	PC
1702CS302	Computer Organization and Architecture	3	0	0	3	40	60	100	PC
1702CS303	Software Engineering	3	0	0	3	40	60	100	PC
1702CS304	Digital Systems	3	0	2	4	50	50	100	PC
1702CS305	Operating Systems	3	0	0	3	40	60	100	PC

Laboratory Course									
1702CS351	Data Structures Laboratory	0	0	2	1	50	50	100	PC
1702CS352	Operating Systems Laboratory	0	0	2	1	50	50	100	PC
1704GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100	EEC
Total					24				

SEMESTER IV									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA401	Probability and Queuing Theory	3	2	0	4	40	60	100	BS
1702CS401	Computer Networks	3	0	0	3	40	60	100	PC
1702CS402	Programming Paradigms	3	2	0	4	40	60	100	PC
1702CS403	Design and Analysis of Algorithms	3	0	0	3	40	60	100	PC
1702CS404	Microprocessors and Microcontrollers	3	0	2	4	50	50	100	PC
1702CSX02	Database Management Systems	3	0	0	3	40	60	100	PC
1701CH201*	Environmental Studies	3	0	0	3	40	60	100	BS
<b>Laboratory Course</b>									
1702CS451	Networks Laboratory	0	0	2	1	50	50	100	PC
1702CSX52	Database Management Systems Laboratory	0	0	2	1	50	50	100	PC
1704GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC
Total					24/27*				

\*Applicable for Lateral Entry students

SEMESTER V									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA501	Discrete Mathematics	3	2	0	4	40	60	100	BS
1702CS501	Object Oriented Analysis and Design	3	0	0	3	40	60	100	PC
1702CS502	Theory of Computation	3	2	0	4	40	60	100	PC
1702CS503	Computer Graphics and Multimedia	3	0	0	3	40	60	100	PC
1703CS002	Software Testing (Elective I)	3	0	0	3	40	60	100	PE
1703CS006	Mobile Computing(Elective II)	3	0	0	3	40	60	100	PE
<b>Laboratory Course</b>									
1702CS551	Computer Graphics and Multimedia Laboratory	0	0	2	1	50	50	100	PC
1704CS552	CASE Tools Laboratory (Mini Project I)	0	0	2	1	50	50	100	EEC
1704CS553	Technical Seminar	0	0	2	1	100	-	100	EEC
1704GE551	Life Skills: Aptitude-I	0	0	2	1	100	-	100	EEC
Total					24				



SEMESTER VI										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1701MGX01	Professional Ethics	3	0	0	3	40	60	100	HSS	
1702CS601	Web Technology	3	2	0	4	40	60	100	PC	
1702CS602	Artificial Intelligence	3	0	0	3	40	60	100	PC	
1702CS603	Distributed Systems	3	0	0	3	40	60	100	PC	
1703CS012/1703MG008	Data Warehousing and Data Mining/Human Rights (Elective III)	3	0	0	3	40	60	100	PE	
1703CE032/1703EC020/1703ME011	Global Warming and Climate Change/Soft Computing/Industrial Robotics Elective IV(Open)	3	0	0	3	40	60	100	OE	
<b>Laboratory Course</b>										
1702CS651	Web Technology Laboratory	0	0	2	1	50	50	100	PC	
1704CS652	Mobile Application Development Laboratory (Mini Project II)	0	0	2	1	50	50	100	EEC	
1704CS653	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC	
1704GE651	Life Skills: Aptitude-II	0	0	2	1	100	-	100	EEC	
Total					23					

SEMESTER VII										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1702CS701	Cryptography and Network Security	3	0	0	3	40	60	100	PC	
1702CS702	Software Project Management	3	0	0	3	40	60	100	PC	
1702CS703	Big Data Analytics	3	0	0	3	40	60	100	PC	
1702CS704	Cloud Computing	3	0	0	3	40	60	100	PC	
1703CS001	Service oriented Architecture (Elective V)	3	0	0	3	40	60	100	PE	
1703ED001	Startup Entrepreneurship (Elective VI(Open))	3	0	0	3	40	60	100	OE	
<b>Laboratory Course</b>										
1702CS751	Cloud Computing Laboratory	0	0	2	1	50	50	100	PC	
1702CS752	Network Security Laboratory	0	0	2	1	50	50	100	PC	
1704CS753	Software Development Laboratory (Mini Project III)	0	0	2	1	50	50	100	EEC	
1704GE751	Life Skills: Competitive Exams Preparation	2	0	0	2	100	-	100	EEC	
1704CS754	In-plant Training / Internship Presentation	0	0	0	1	100	-	100	EEC	
Total					24					

SEMESTER VIII										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1703CS024	Bioinformatics(Elective VII)	3	0	0	3	40	60	100	PE	
1703CS027	Data Centre and Virtualization (Elective VIII)	3	0	0	3	40	60	100	PE	
1703CS035	Social Network Analysis (Elective IX)	3	0	0	3	40	60	100	PE	
<b>Laboratory Course</b>										
1704CS851	Project Work	0	0	18	9	50	50	100	EEC	
Total					18					

**List of Programme Electives for B.E. – Computer Science and Engineering**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>ELECTIVE - I</b>									
1703CS016	Wireless Communications	3	0	0	3	40	60	100	PE
1703CS002	Software Testing	3	0	0	3	40	60	100	PE
1703CS003	Information Management	3	0	0	3	40	60	100	PE
1703CS004	C# and .NET framework	3	0	0	3	40	60	100	PE
1703CS005	Advanced Database Technology	3	0	0	3	40	60	100	PE
<b>ELECTIVE - II</b>									
1703CS006	Mobile Computing	3	0	0	3	40	60	100	PE
1703CS007	Network Analysis and Management	3	0	0	3	40	60	100	PE
1703CS008	Open Source Programming	3	0	0	3	40	60	100	PE
1703CS009	Ad hoc and Sensor Networks	3	0	0	3	40	60	100	PE
1703CS010	Digital Signal Processing	3	0	0	3	40	60	100	PE
<b>ELECTIVE - III</b>									
1703CS011	Compiler Design	3	0	0	3	40	60	100	PE
1703MG002	Total Quality Management	3	0	0	3	40	60	100	PE
1703CS012	Data Warehousing and Data Mining	3	0	0	3	40	60	100	PE
1703CS014	Disaster Management	3	0	0	3	40	60	100	PE
1703MG008	Human Rights	3	0	0	3	40	60	100	PE
<b>ELECTIVE - V</b>									
1703CS001	Service Oriented Architecture	3	0	0	3	40	60	100	PE
1703CS017	Digital Image Processing	3	0	0	3	40	60	100	PE
1703CS018	Embedded and Real Time Systems	3	0	0	3	40	60	100	PE
1703CS019	Game Programming	3	0	0	3	40	60	100	PE
1703CS020	Knowledge Management	3	0	0	3	40	60	100	PE
<b>ELECTIVE - VII</b>									
1703CS021	Deep Learning	3	0	0	3	40	60	100	PE
1703CS022	Natural Language Processing	3	0	0	3	40	60	100	PE
1703CS023	Soft Computing	3	0	0	3	40	60	100	PE
1703CS024	Bioinformatics	3	0	0	3	40	60	100	PE
1703CS025	Human Computer Interaction	3	0	0	3	40	60	100	PE
<b>ELECTIVE - VIII</b>									
1703CS026	Enterprise Resource Planning	3	0	0	3	40	60	100	PE
1703CS027	Data Centre and Virtualization	3	0	0	3	40	60	100	PE
1703CS028	Growth Hacking	3	0	0	3	40	60	100	PE
1703CS029	Information Retrieval	3	0	0	3	40	60	100	PE
1703CS030	Cyber Forensics	3	0	0	3	40	60	100	PE
<b>ELECTIVE - IX</b>									
1703CS031	Internet of Things	3	0	0	3	40	60	100	PE
1703CS032	Mainframe Computing	3	0	0	3	40	60	100	PE
1703CS033	Multicore Architecture	3	0	0	3	40	60	100	PE
1703CS034	Graph Theory and Its Applications	3	0	0	3	40	60	100	PE
1703CS035	Social Network Analysis	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVE</b>									
1703CS036	Database Management Systems	3	0	0	3	40	60	100	OE
1703CS037	Web Technology	3	0	0	3	40	60	100	OE
1703CS038	Operating Systems	3	0	0	3	40	60	100	OE
1703CS039	Computer Graphics and Multimedia	3	0	0	3	40	60	100	OE
1703CS040	Software Engineering	3	0	0	3	40	60	100	OE
1703CS041	Artificial Intelligence	3	0	0	3	40	60	100	OE
<b>ONE CREDIT COURSES</b>									
1704CS042	Hardware and troubleshooting	-	-	-	1				OC
1704CS043	Networking Course	-	-	-	1				OC









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### B.E – Computer Science and Engineering

#### 1.1.2 Details of programmes where syllabus revision was carried out during the year

2020-2021

Course Code	Course Name	Change Details	Percentage of Change
1901MA102	Engineering Mathematics –I		0
1901CH104	Applied Chemistry in Informatics		0
1901GEX03	Programming for Problem Solving		0
1901ENX01	English for Engineers		0
1901GEX52	Computer Programming Laboratory		0
1901GE151	Engineering Intelligence I		0
1901CHX51	Engineering Chemistry Laboratory		0
1901HSX51	Communication Skill Laboratory		0
1901MA202	Engineering Mathematics –II		0
1901PH201	Physics for Information Science		0
1901GEX01	Basic Electrical and Electronics Engineering		0
1901GEX02	Engineering Graphics		0
1901GE201	Engineering Exploration		0
1901GE254	Computer Hardware and IT Essentials Lab		0
1901GE252	Engineering Intelligence - II		0
1901GEX51	CAD Lab		0
1901GEX53	Basic Electrical and Electronics Engineering Lab		0
1901PHX51	Engineering Physics Lab		0
1901MA302	Engineering Mathematics III	Revision	60
1902CS301	Data Structures		0
1902CS302	Object Oriented Programming	New Course	100
1902CS303	Computer Organization and Architecture		0
1902CS304	Digital Logic and Microprocessors	Revision	80
1901MCX02	Constitution of India	New Course	100
1902CS351	Data Structures Laboratory		0
1902CS352	Object Oriented Programming Laboratory	New Course	100
1904GE351	Life Skills: Soft Skills		0
1902CS401	Software Engineering		0
1902CS402	Operating System	Revision	20
1902CS403	Computer Networks		0
1902CS404	Design and Analysis of Algorithms		0



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1902CS406	Database Management Systems	Revision	20
1901GEX04	Biology for Engineers	New Course	100
1901MCX01	Environmental Science	New Course	100
1902CS451	Networks Laboratory	Revision	10
1902CS452	Operating System Laboratory	Revision	5
1902CS453	Database Management Systems Laboratory	Revision	5
1904GE451	Life Skills: Verbal Ability		0
1701MA501	Discrete Mathematics		0
1702CS501	Object Oriented Analysis and Design		0
1702CS502	Theory of Computation		0
1702CS503	Computer Graphics and Multimedia		0
1703CS002	Software Testing		0
1703CS006	Mobile Computing		0
1702CS551	Computer Graphics and Multimedia Lab		0
1704CS552	CASE Tools Laboratory		0
1704CS553	Technical Seminar		0
1704GE551	Life Skills: Aptitude-I		0
1701MGX01	Professional Ethics		0
1702CS601	Web Technology		0
1702CS602	Artificial Intelligence		0
1702CS603	Distributed Systems		0
1703CS012/ 1703MG008	Data Warehousing and Data Mining/Human Rights (Elective III)		0
1703CE032/ 1703EC020/ 1703ME011	Global Warming and Climate Change/Soft Computing/Industrial Robotics		0
1702CS651	Web Technology Laboratory		0
1704CS652	Mobile Application Development Lab		0
1704CS653	Industrial Visit Presentation		0
1704GE651	Life Skills: Aptitude-II		0
1702CS701	Cryptography and Network Security	New Course	100
1702CS702	Software Project Management	New Course	100
1702CS703	Big Data Analytics	New Course	100
1702CS704	Cloud Computing	New Course	100
1703CS001	Service oriented Architecture	New Course	100
1703ED001	Startup Entrepreneurship	New Course	100
1702CS751	Cloud Computing Laboratory	New Course	100
1702CS752	Network Security Laboratory	New Course	100
1704CS753	Software Development Laboratory (Mini Project)	New Course	100
1704GE751	Life Skills: Competitive Exams Preparation	New Course	100



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1704CS754	In-plant Training / Internship Presentation	New Course	100
1703CS024	Bioinformatics	New Course	100
1703CS027	Data Centre and Virtualization	New Course	100
1703CS035	Social Network Analysis	New Course	100
1704CS851	Project Work	New Course	100
		<b>Average</b>	<b>36.98</b>







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Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	01
Date & Time	08.07.2017 & 10.00 A.M.
Venue	CSE A/C Seminar Hall (SJB 108)

1. Chairman / BoS welcomed all members for the 1<sup>st</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - To finalize the curriculum and syllabi of first and second semester B.E CSE Programme and curriculum of 1<sup>st</sup> to 4<sup>th</sup> Semesters and syllabi of first and second semester M.E. CSE Programme.
  - To finalize the curriculum of 3<sup>rd</sup> - 8<sup>th</sup> Semester B.E CSE.
  - To discuss the question paper pattern for UG/PG Programme and Evaluation methodologies.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.
  - The Board of Studies members have gone through the curriculum and syllabi of first and second semester B.E. CSE and M.E. CSE programmes.
  - The Board of Studies Chairman gave a brief presentation on Vision and Mission of the Institution and the Department, PEOs, POs and the PSOs.
  - The feedback from the stakeholders of Employers, Faculty member, Alumnus, Parents, Students and other institution senior faculty members, internal senior faculty members and students and the corresponding resolutions made in the department level academic activities committee meetings discussion were presented by the Chairman of the Board.



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- In the Department level academic meeting, it is suggested to include the important courses related to improve the skills like programming courses and the curriculum designed as per the local needs of the society and the peoples requirements
- The Board of Studies Chairman agreed to offer those courses and the same accepted by the board
- Students are encouraged to complete NPTEL Courses during the 3<sup>rd</sup> or 4<sup>th</sup> year
- Students are instructed to use the modern tools, interdisciplinary and latest technology in the mini project and doing final year project
- The Board of Studies members have gone through the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> Semester of B.E. CSE and 3<sup>rd</sup> and 4<sup>th</sup> Semesters of M.E. CSE programmes
- The Anna University Nominee suggested that all the mandatory courses include in the curriculum with the reference of UGC guidelines
- Discussed about the Curriculum considering the guidelines of UGC, AICTE, Premier Institutions, PEOs, POs and PSOs of the program and the views of the stakeholders
- It is recommended to put a total number of credits for B.E. CSE programme should be within 184 and for lateral entry students should be within 140
- **For B.E. CSE – Undergraduate Programme**
  - The Curriculum and Syllabi framed as per the Guidelines of UGC/AICTE/University/Reputed Institutions/Professional Society/Local needs and the feedback received from the stakeholders
  - Tutorial hours should be added for Mathematics courses
  - Latest versions of five references books are suggested
  - Subjects regarding the preparation for industry readiness and GATE may be included
  - Data Structures Lab is mandatory in the respective semester of the courses
  - Digital System and Digital Lab should be combined as Theory with Lab Component
  - Operating System should be moved to Semester III from Semester IV
  - Computer Networks and Database Management System moved to Semester IV from Semester III



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- Distributed System or Distributed Computing is mandatory in either Semester V or Semester VI
- Graph Theory can be removed since it is relevant to Discrete Mathematics
- Compiler Design can be moved to elective list
- System Software can be removed
- It is recommended to include Open Source Programming, Service Oriented Architecture, Deep Learning, Data Centre Virtualization, Internet of Things in the Programme Elective
- It is recommended to include Artificial Intelligence as open elective
- **For M.E. CSE PG Programme**
  - Generally in all the subjects include specific Case studies.
  - Include Internet of Things as Core subject
  - Instead of Computer Networks lab, the Operating System Design Case Studies may be included
  - Further reading is needed in all the courses
  - Simulator on tools can be added in all the lab courses
  - Latest versions of references books are suggested
  - Machine Learning Technique courses should be added in First or Semester
- **General**
  - The attainment level of Course Outcomes(COs), Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) discussed
  - It is suggested to offer Value Added Courses and One Credit Courses
  - Discussed about Students Undertaking internship, field projects, projects related
  - Discussed about the Employability Courses, Entrepreneurship and Skill development Courses were suggested by the Stakeholders.
  - Discussed the Course outcomes and Program Specific Outcomes related for each courses



## E.G.S. PILLAY ENGINEERING COLLEGE

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- **Question Paper Pattern**

- **UG / PG Programme**

Part A – 10x2 = 20 Marks

Part B – 5x12 = 60 Marks (Either or)

Part C – 1x20 = 20 Marks (Either or)

Total Marks = 100 Marks, Duration = 3 hours

- **Evaluation Methods**

**Theory**

Continuous Assessment = 40%

Semester Examination = 60%

**Practical**

Continuous Assessment = 50%

Semester Examination = 50%

- The accepted PSOs are shown below for approval of Academic Council,

**PSO 1:** The ability to apply software engineering principles and practices to design and develop software systems that meet the automation needs of industrial and societal problems

**PSO 2:** The ability to apply their technical skills and knowledge gained in the fields such as Artificial Intelligence, Data Science, Cloud Computing, Social Network Analysis and Mobile Application development

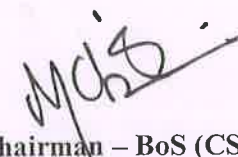
5. The following resolutions were passed

- It is resolved to recommend the curriculum and syllabi of first and second semester of B.E CSE and M.E CSE Programmes to the academic Council for approval.
- It is resolved to recommend the curriculum the curriculum of 3<sup>rd</sup> – 8<sup>th</sup> semester B.E CSE and 3<sup>rd</sup> & 4<sup>th</sup> semester M.E programmes to the academic council for approval.
- It is resolved to recommend the question paper pattern UG/PG programmes and evaluation methodology for approval

The chairman, Board of studies thanked all the members for their valuable suggestions and coordination.

Date: 08. 07. 2017

Place: Nagapattinam

  
Chairman – BoS (CSE)

**CHAIRMAN**

**Board of Studies**

**Department of Computer Science & Engineering**

**EGS Pillay Engineering College (Autonomous)  
Nagapattinam.**





### E.G.S. PILLAY ENGINEERING COLLEGE

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#### Board of Studies Meeting

#### Attendance

Name of the Department : Computer Science and Engineering  
Meeting No. : 01  
Date & Time : 08.07.2017 & 10.00 A.M.  
Venue : CSE A/C Seminar Hall

S.No	Name	Category	Signature
1	Dr.M.CHINNADURAI	Chairman	
2	Dr.S.MERCY SHALINIE	University Nominee	
3	Dr.A.AMUTHAN	External Expert Members	
4	Dr.G.R.KARPAGAM		
5	Dr.M.ARAMUDHAN		
6	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector	
7	Mr.ANAND THIAGARAJAN		
8	Ms.MERCY MARIA	Alumnus	
9	Mr.S.P.GOPLAN		
10	Dr.T.GANESAN	Internal Member	
11	Prof.N.MURALI		
12	Prof.K.BALASUBRAMANIAN		

Chairman- BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
Department of Computer Science &  
Engineering  
EGS Pillay Engineering College (Autonomous)  
Nagapattinam.



Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	02
Date & Time	21.04.2018 & 09.30 A.M.
Venue	CSE A/C Seminar Hall

**The names of the members present in the Board of Studies are given in Annexure I.**

1. Chairman / BoS welcomed all members for the 2<sup>nd</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous meeting
  - To finalize the syllabi of B.E CSE Programme from third to eight semesters and M.E. CSE Programme from third to fourth semester.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies.
  - The Board of Studies members have gone through the syllabi of 3<sup>rd</sup> to 8<sup>th</sup> Semester B.E. CSE and 3<sup>rd</sup> to 4<sup>th</sup> Semester of M.E. CSE programmes.
    - **For B.E. CSE – Undergraduate Programme**
      - As per the approval of 1<sup>st</sup> Academic Council meeting, it is ensured for assessment to go for 50-50 for practical and 40-60 for theory courses.
      - It is to be ensured to have the method to calculate the GPA/CGPA.
      - It is to be ensured to go for 50-50 instead of 40-60 in Internal: External Calculation for theory cum laboratory courses.
      - It is recommended to bring forth the Life Skills, Soft Skills, English Communication and other relevant courses related to placement and to complete them by seventh semester.
      - It is recommended to bring Programming Paradigms to Fourth Semester while COA to Third Semester and Computer Networks shall be pushed to next semester.

- It is recommended to bring courses such as Mobile Computing and Ad hoc Networks to electives.
  - It is recommended not to include any core courses in the eight semesters.
  - It is recommended to offer one mini project by sixth semester.
  - It is recommended to introduce comprehensive viva by Seventh Semester which facilities the competitive examination.
  - It is recommended to offer Data Mining and Data Warehousing as a professional elective.
  - It is recommended to mandate industrial visit and internship by the end of third year
  - It is necessary to include latest edition of reference books.
  - Life Skills can be given with credits.
  - Each semester may be given with the average of 24 credits.
  - For lateral entry students must include additionally Environmental Studies in 4<sup>th</sup> Semester.
  - All the laboratory courses have to include additional experiments or innovative experiments if needed.
- **For M.E. CSE Post Graduate Programme**
    - Project Phase 1 may be given for industrial exposures.
    - It is ensure to publish the journal as project done by the students.
    - It is recommended to include more innovative experiments in the laboratory courses.
    - It is recommended to visit the industries atleast in the final year and submit the report to the department.
    - It is recommended to add the Research Methodology course in the open elective.
    - The board members are insist to participate in the Conferences once in a year.
- **General**
    - All the courses are recommended to include the course outcomes as discussed and approved in this BOS meeting.
    - Further reading can be added.
    - It is necessary to provide credit split up with allotted credits for HSS, BS, PC and PE courses in this regulation.
    - It is recommended to offer Value added courses and one credit courses.



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The following resolutions were passed:

- It is resolved to recommend the curriculum and syllabi of third to eighth semester of B.E CSE and third to fourth semester of M.E CSE Programmes to the Academic Council for approval.

The Chairman, Board of Studies thanked all the members for their valuable suggestions and coordination.

Date: 21.4.18

Place: Nagapattinam

Chairman (BoS)

University Nominee

Subject Expert

Subject Expert 21/4/18

Industry Expert

Alumni

Senior Faculty

Senior Faculty

Senior Faculty







**Minutes of Board of Studies (BoS) Meeting**

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	04
Date & Time	18.05.2019&10.30 AM
Venue	CSE A/C Seminar Hall (SJB 108)

The names of the members present in the Board of Studies are given in Annexure I.

1. Chairman / BoS welcomed all members for the 4<sup>th</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous meeting
  - To finalize the curriculum and syllabi of B.E. CSE Programme under new regulations 2019 and to review the implementation of M.E. CSE Programme
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies
  - The Board of Studies members have gone through the curriculum of B.E. CSE from 1<sup>st</sup> to 8<sup>th</sup> Semesters and Syllabi of B.E. CSE from 1<sup>st</sup> to 4<sup>th</sup> Semester Courses
  - The curriculum and syllabi framed as per the AICTE model curriculum
  - Board of Studies members accepted the implementation of AICTE model curriculum, other reputed institutions and Program Specific Criteria CSE R2017, CSE curriculum for drafting the R2019 curriculum
  - The Board is insisted to include the contents in the syllabus of R2019 by referring GATE Syllabus
  - The feedback from the stakeholders viz, employers, alumni, faculty from other institutions, parent, internal faculty and students and the corresponding resolutions made in the Programme Assessment Committee (PAC) meeting were presented by the Chairman of the Board. The BOS resolved to accept the PAC resolution.

- In FAC meetings, either one of C++ and Java can be given as a programming course in Object Oriented Programming course and Mobile Application Development course may be included as a laboratory course
- The board strictly instructed to involve the students in the online courses as per the regulations
- Mapping of the curriculum and syllabi of the proposed regulation R2019 with the program specific criteria was presented to the board of members by the Chairman and the board resolved to accept the mapping
- The components of the courses under R2019 based on having to one or more of the categories were presented to the board by the Chairman. The board resolved to accept the components
- Board of Studies Chairman has agreed to offer the courses related to research thrust areas in the Program Elective Courses
- The Basic Sciences courses are to be specific in the field of computer science field
- For Chemistry and Physics courses are to be ensured in the field of computer science field
- It is recommended to include Hardware and Troubleshooting related experiments in the laboratory courses
- The syllabus of Constitution of India is to be included in the third semester of the programme.
- As per the mandatory courses of AICTE model curriculum should be included in the curriculum
- Operating system should be moved to fourth semester and Digital system can be removed
- It is recommended to remove the credit score to the Environmental Science course.
- It is recommended to introduce new courses related to the field of Entrepreneurship skills development
- The Chairperson presented the panel of evaluators and question paper setters for valuation for approval.
- The BoS Members reviewed and approved the end semester External examiners and scrutiny members for R2019
- Discussed about the mapping of curriculum with Program Specific Criteria and board approved the same
- It is recommended the assessment questions and assessment pattern for the core and elective courses and the board approved the same

- The Board analyzed the stakeholders feedback regarding the curriculum and syllabi under R2019 regulation
- For M.E. CSE implementation of curriculum and syllabi were discussed

**Resolutions:**

It was resolved to incorporate the suggestions given by the BOS members towards the new regulations R2019 curriculum and syllabi (1<sup>st</sup> to 4<sup>th</sup> Semester) for B.E. CSE Programme and discussed about M.E. CSE review the implementation.

Board of Studies recommended the above resolutions to be presented in the Academic Council for further approval.

Finally the Chairman thanked all the members for their presence and valuable suggestions towards the improvement of the B.E. CSE R2019 Curriculum and Syllabus (1<sup>st</sup> to 4<sup>th</sup> Semester) for the Computer Science and Engineering Board.

Date: 18.05.2019

Place: Nagapattinam

*MChS*  
*18/05/2019*  
Chairman - BOS (CSE)

**CHAIRMAN**  
**Board of Studies**  
**Department of Computer Science & Engineering**  
**EGS Pillay Engineering College (Autonomous)**  
**Nagapattinam.**

*M. Chidambaram*  
*18/05/2019*  
*Chairman*



**E.G.S. PILLAY ENGINEERING COLLEGE**  
(An Autonomous Institution, Affiliated to Anna University, Chennai)  
Nagore Post, Nagapattinam – 631 002, Tamilnadu.

**Board of Studies Meeting**

**Attendance**

Name of the Department : Computer Science and Engineering  
Meeting No. : 04  
Date & Time : 18.05.2019 & 10.00 A.M.  
Venue : CSE A/C Seminar Hall

S.No	Name	Category	Signature
1	Dr.M.CHINNADURAI	Chairman	
2	Dr.S.MERCY SHALINIE	University Nominee	
3	Dr.A.AMUTHAN	External Expert Members	
4	Dr.G.R.KARPAGAM		
5	Dr.M.ARAMUDHAN		
6	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector	
7	Mr.ANAND THIAGARAJAN		
8	Ms.MERCY MARIA	Alumnus	
9	Mr.S.P.GOPLAN		
10	Dr.T.GANESAN	Internal Member	
11	Dr..N.MURALI		
12	Dr.R.MANIVANNAN		
13	Prof.K.KALAIVANI		
14	Prof.K.BALASUBRAMANIAN		

Chairman-BoS (CSE)  
CHAIRMAN

**Board of Studies**  
Department of Computer Science &  
Engineering  
EGS Pillay Engineering College (Autonomous)  
Nagapattinam.





Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	05
Date & Time	08.06.2020 & 10.00 AM
Venue	Online: Google Meet <a href="https://meet.google.com/nky-cnzr-wzj">https://meet.google.com/nky-cnzr-wzj</a>

The names of the members present in the Board of Studies are given in Annexure I.

1. Chairman / BoS welcomed all members for the 5<sup>th</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous meeting
  - Discussion of the implementation of R2017 and R2019 B.E. CSE syllabus and review of M.E. CSE Programme
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies
  - The Board of Studies members have gone through the curriculum and Syllabus of last meeting discussed and reviews the process of implementation of academic regulations.
  - Mapping of Course Outcomes and Program Outcomes were discussed with a sample course file.
  - Python programming can be given as Diploma Course for the CSE Students.
  - It is recommended to visit the industries by the students and the report has to be submitted to the department and based on that report the credit can be assigned.
  - The credit may be given to Inplant and Industrial training.



**E.G.S. PILLAY ENGINEERING COLLEGE**  
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Nagarcop Road, Nagapattinam - 611 002, Tamilnadu



- It is recommended to register the elective course like NPTEL and after completing the course the credit may be incorporated in the mark sheet and the credit transfer for exemption of one equivalent course may be approved by the Academic Council.
- Big Data Analytics and Data Centre may be added in the elective course to fulfill the Program Specific Criteria of some levels.
- It is recommended to split the Mini project into two different semesters.

o **Resolutions:**

It was resolved to incorporate the suggestions given by the BOS members towards the review and implementation of regulations 2019 curriculum and syllabi (1<sup>st</sup> to 4<sup>th</sup> Semester) for B.E. CSE Programme and discussed about M.E. CSE review the implementation.

Board of Studies recommended the above resolutions to be presented in the Academic Council for further approval.

Finally the Chairman thanked all the members for their presence and valuable suggestions towards the improvement of the B.E. CSE R2019 Curriculum and Syllabus (1<sup>st</sup> to 4<sup>th</sup> Semester) and M.E. CSE for the Computer Science and Engineering Board.

Date: 08.06.2020

Place: Nagapattinam

  
Chairman - BoS (CSE)


**CHAIRMAN**  
**Board of Studies**  
**Department of Computer Science &**  
**Engineering**  
**EGS Pillay Engineering College (Autonomous)**  
**Nagapattinam.**



### Board of Studies (BoS) Meeting

Name of the Department **Computer Science and Engineering**  
Meeting No. **5**  
Date & Time **08.06.2020, 10.00 A.M**  
Venue **Online Platform - Google Meet**

S.No.	Name	Category
1	Dr. M. CHINNADURAI	Chairman
2	Dr. S. MARY SAIRA BHANU	University Representative
3	Dr. A. AMUTHAN	External Expert Members
4	Dr. M. ARAMUDHAN	
5	Mr.U.CHANDRASEKAR	Industry / Corporate Sector
6	Ms. MERCY MARIA	Alumnus
7	Mr. P. HARIHARAN	
8	Dr. T. GANESAN	Internal Members
9	Dr. R. MANIVANNAN	
10	Dr. N. MURALI	
11	Prof. K. KALAIVANI	
11	Prof. K. BALASUBRAMANIAN	
12	Prof. G. ARUL SELVAN	

  
Chairman - BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
Department of Computer Science &  
Engineering  
EGS Pillay Engineering College (Autonomous)  
Nagapattinam.



**Sample Screenshots:**

		L T P			
<b>Elective I</b>					
1	1501A551	Mobile Computing	3	0	3
2	1501A552	Computer Graphics and Multimedia	3	0	3
3	1501A553	Data Warehousing and Data Mining	3	0	3
4	1501A554	Software Testing	3	0	3
<b>Elective II</b>					
1	1501A555	Embedded systems	3	0	3
2	1501A556	Open Source Programming	3	0	3
3	1501A557	Mobile and Sensor networks	3	0	3
4	1501A558	Software Architecture	3	0	3
<b>Elective III</b>					
1	1501A559	Artificial Intelligence	3	0	3
2	1501A560	Internet of Things	3	0	3
3	1501A561	Threats and security	3	0	3
4	1501A562	C++ and Net Framework	3	0	3
<b>Elective IV</b>					
1	1501A563	Business Analytics	3	0	3

(9)

- MANIVANNAN R CSE (You)
- Ganesan Thiya
- Ganesan Thiya
- Dr. Amuthan Arjunan

Also in the meeting (5)

- Arul Selvam

(8)

- Ganesan Thiya
- DEEPA AR S&H
- Ganesan Thiya

Also in the meeting (4)

- Arul Selvam
- Dr. Amuthan Arjunan

10:39

(8)

- MANIVANNAN.R CSE (You)
- Ganesan Thiya
- Ganesan Thiya
- Harilalan P

Also in the meeting (4)

- Arul Selvam



**B.E. – Computer Science and Engineering**  
**2019 Regulation: Full Time Curriculum and Syllabus**

**SEMESTER I**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA102	Engineering Mathematics –I (Calculus and Linear Algebra)	3	2	0	4	40	60	100	BS
1901CH104	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS
1901GEX03	Programming for Problem Solving	3	0	0	3	40	60	100	ES
1901ENX01	English for Engineers	2	0	0	2	40	60	100	BS
<b>Laboratory Course</b>									
1901GEX52	Computer Programming Laboratory	0	0	2	1	50	50	100	ES
1901GE151	Engineering Intelligence I	0	0	2	1	100	0	100	HSS
1901CHX51	Engineering Chemistry Laboratory	0	0	2	1	50	50	100	BS
1901HSX51	Communication Skill Laboratory	0	0	2	1	50	50	100	BS
<b>Total</b>					<b>16</b>				

**SEMESTER II**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA202	Engineering Mathematics –II (Probability and Statistics)	3	2	0	4	40	60	100	BS
1901PH201	Physics for Information Science	3	0	0	3	40	60	100	BS
1901GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES
1901GEX02	Engineering Graphics	2	0	2	3	50	50	100	ES
1901GE201	Engineering Exploration	2	0	0	2	100	0	100	ES
<b>Laboratory Course</b>									
1901GE254	Computer Hardware and IT Essentials Laboratory	0	0	2	1	50	50	100	ES
1901GE252	Engineering Intelligence - II	0	0	2	1	100	0	100	HSS
1901GEX51	CAD Laboratory	0	0	2	1	50	50	100	ES
1901GEX53	Basic Electrical and Electronics Engineering Laboratory	0	0	2	1	50	50	100	ES
1901PHX51	Engineering Physics Laboratory	0	0	2	1	50	50	100	BS
<b>Total</b>					<b>20</b>				



SEMESTER III										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1901MA302	Engineering Mathematics III	3	2	0	4	40	60	100	BS	
1902CS301	Data Structures	3	2	0	4	40	60	100	PC	
1902CS302	Object Oriented Programming	3	0	0	3	40	60	100	PC	
1902CS303	Computer Organization and Architecture	3	0	0	3	40	60	100	PC	
1902CS304	Digital Logic and Microprocessors	3	0	2	4	40	60	100	ES	
1901MCX02	Constitution of India	2	0	0	0	100	0	100	MC	
<b>Laboratory Course</b>										
1902CS351	Data Structures Laboratory	0	0	2	1	50	50	100	PC	
1902CS352	Object Oriented Programming Laboratory	0	0	2	1	50	50	100	PC	
1904GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100	EEC	
<b>Total</b>					<b>21</b>					

SEMESTER IV										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1902CS401	Software Engineering	3	0	0	3	40	60	100	PC	
1902CS402	Operating System	3	0	0	3	40	60	100	PC	
1902CS403	Computer Networks	3	0	0	3	40	60	100	PC	
1902CS404	Design and Analysis of Algorithms	3	0	0	3	40	60	100	PC	
1902CS406	Database Management Systems	3	0	0	3	40	60	100	PC	
1901GEX04	Biology for Engineers	3	0	0	3	50	50	100	BS	
1901MCX01	Environmental Science	2	0	0	0	100	0	100	MC	
<b>Laboratory Course</b>										
1902CS451	Networks Laboratory	0	0	2	1	50	50	100	PC	
1902CS452	Operating System Laboratory	0	0	2	1	50	50	100	PC	
1902CS453	Database Management Systems Laboratory	0	0	2	1	50	50	100	PC	
1904GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC	
<b>Total</b>					<b>22</b>					

SEMESTER V									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA501	Discrete Mathematics	3	2	0	4	40	60	100	BS
1902CS501	Object Oriented Analysis and Design	3	0	0	3	40	60	100	PC
1902CS502	Theory of Computation	3	2	0	4	40	60	100	PC
	PC Elective I	3	0	0	3	40	60	100	PE
	HSS Elective I	3	0	0	3	40	60	100	HSSE
1901MCX03	Essence of Indian Traditional Knowledge	2	0	0	0	100	0	100	MC
<b>Laboratory Course</b>									
1902CS551	CASE Tools Laboratory	0	0	2	1	50	50	100	PC
1902CS552	Mobile Application Development Laboratory	0	0	2	1	50	50	100	PC
1904GE551	Life Skills: Aptitude I	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>20</b>				

SEMESTER VI									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS601	Compiler Design	3	0	0	3	40	60	100	PC
1902CS602	Web Technology	3	2	0	4	40	60	100	PC
1902CS603	Artificial Intelligence	3	0	0	3	40	60	100	PC
	PC Elective II	3	0	0	3	40	60	100	PE
	HSS Elective II	3	0	0	3	40	60	100	HSSE
	Open Elective I	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1902CS651	Compiler Laboratory	0	0	2	1	50	50	100	PC
1902CS652	Web Technology Laboratory	0	0	2	1	50	50	100	PC
1904CS653	Software Prototype development Lab (Mini Project 1)	0	0	2	1	50	50	100	PC
1904CS654	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC
1904GE651	Life Skills: Aptitude II	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>24</b>				

SEMESTER VII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS701	Cloud Computing	3	0	0	3	40	60	100	PC
1902CS702	Cryptography and Network Security	3	0	0	3	40	60	100	PC
1901MG701	Universal Human Values and Ethics	3	0	0	3	40	60	100	PC
	PC Elective III	3	0	0	3	40	60	100	PE
	HSS Elective III	3	0	0	3	40	60	100	HSSE
	Open Elective II	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1902CS751	Cloud Computing Laboratory	0	0	2	1	50	50	100	PC
1902CS752	Network Security Laboratory	0	0	2	1	50	50	100	PC
1904CS753	Software Development Laboratory (Mini Project II)	0	0	2	1	50	50	100	PC
1904GE751	Life Skills: Comprehensive Viva	2	0	0	2	100	-	100	EEC
1904GE752	In plant training/Internship	-	-	-	1	100	-	100	EEC
<b>Total</b>					<b>24</b>				

SEMESTER VIII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
	PC Elective IV	3	0	0	3	40	60	100	PE
	PC Elective V	3	0	0	3	40	60	100	PE
<b>Laboratory Course</b>									
	Project Work	0	0	14	7	50	50	100	EEC
<b>Total</b>					<b>13</b>				



**PC ELECTIVE COURSES**

Sl. No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>Elective I</b>						
1	1903CS001	Mobile Computing	3	0	0	3
2	1903CS002	Computer Graphics and Multimedia	3	0	0	3
3	1903CS003	Data Warehousing and Data Mining	3	0	0	3
4	1903CS004	Software Testing	3	0	0	3
<b>Elective II</b>						
5	1903CS005	Distributed systems	3	0	0	3
6	1903CS006	OpenSource Programming	3	0	0	3
7	1903CS007	Adhoc and sensor networks	3	0	0	3
8	1903CS008	Multicore Architecture	3	0	0	3
<b>Elective III</b>						
9	1903CS009	Embedded and Real Time Systems	3	0	0	3
10	1903CS010	Internet of things	3	0	0	3
11	1903CS011	Digital image processing	3	0	0	3
12	1903CS012	C# and .Net Framework	3	0	0	3
<b>Elective IV</b>						
13	1903CS013	Big data Analytics	3	0	0	3
14	1903CS014	Service oriented Architecture	3	0	0	3
15	1903CS015	Machine learning techniques	3	0	0	3
16	1903CS016	Natural Language Processing	3	0	0	3
<b>Elective V</b>						
17	1903CS017	Information Retrieval	3	0	0	3
18	1903CS018	Cyber forensics	3	0	0	3
19	1903CS019	Data Centre and Virtualization	3	0	0	3
20	1903CS020	Bio Informatics	3	0	0	3

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>OPEN ELECTIVE COURSES</b>						
21	1903CS021	Computer Networks	3	0	0	3
22	1903CS022	Artificial Intelligence	3	0	0	3
23	1903CS023	Database Management Systems	3	0	0	3
24	1903CS024	Web Technology	3	0	0	3
25	1903CS025	Data Structures	3	0	0	3
26	1903CS026	Object oriented Programming	3	0	0	3
27	1903CS027	Cloud Computing	3	0	0	3
28	1903CS028	Mobile Computing	3	0	0	3

ONE CREDIT COURSES						
29	1904CS001	Hardware and troubleshooting	-	-	-	1
30	1904CS002	Networking Course	-	-	-	1
31	1904CS003	Industrial Safety for Engineers	-	-	-	1
32	1904CS004	Introduction to Fisheries Engineering	-	-	-	1
33	1904CS005	Transport and Tourism	-	-	-	1
VALUE ADDED COURSES						
34	1904CS006	Introduction to Data Centre Virtualization and Cloud Computing				
35	1904CS007	Python Programming				
36	1904CS008	Introduction to R				
37	1904CS009	Python for Data Science				

### Humanities, Social Science and Management Electives Courses

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>Elective I</b>						
1.	1901MGX01	Total Quality Management	3	-	-	3
2.	1901MGX02	Project Management and Finance	3	-	-	3
3.	1901MGX03	Operations Research	3	-	-	3
4.	1901MGX04	Principles of Management	3	-	-	3
<b>Elective II</b>						
1.	1901HS001	Innovation & Entrepreneurship fundamentals	3	-	-	3
2.	1901HS002	Intellectual Property Rights for Engineers	3	-	-	3
3.	1901HS003	Startup Entrepreneurship	3	-	-	3
4.	1901HS004	Business Model Innovation	3	-	-	3
<b>Elective III</b>						
1.	1901HS005	Social Entrepreneurship	3	-	-	3
2.	1901HS006	Design Thinking for Innovation	3	-	-	3
3.	1901HS007	Indian Patent Law & Patent Drafting	3	-	-	3
4.	1901HS008	IP Management & Commercialization	3	-	-	3



## B.E. – Computer Science and Engineering R 2017 Full Time Curriculum and Syllabus

SEMESTER I									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA101	Engineering Mathematics-I	3	2	0	4	40	60	100	BS
1701PH101	Applied Physics for Engineers	3	0	0	3	40	60	100	BS
1701CH101	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS
1701EN101	Technical English	3	0	0	3	100	0	100	HSS
1701GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES
1701GEX02	Engineering Graphics	2	2	0	3	50	50	100	ES
1701GEX03	Programming in C	3	0	0	3	40	60	100	ES
<b>Laboratory Course</b>									
1701HS151	Physics and Chemistry Laboratory –I	0	0	2	1	50	50	100	BS
1701GEX51	Programming in C Laboratory	0	0	2	1	50	50	100	ES
Total					24				

SEMESTER II									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA201	Engineering Mathematics-II	3	2	0	4	40	60	100	BS
1701PH201	Physics of Engineering Materials	3	0	0	3	40	60	100	BS
1701CH201	Environmental Studies	3	0	0	3	40	60	100	BS
1701GE201	Basic Civil and Mechanical Engineering	3	0	0	3	40	60	100	ES
1702CS201	Programming in C++	3	0	0	3	40	60	100	PC
1701LE201/ 1701LE202	Communicative English/Hindi	3	0	0	3	100		100	HSS
<b>Laboratory Course</b>									
1701GEX53	Workshop Practice	0	0	2	1	50	50	100	ES
1701HS251	Physics and Chemistry Laboratory –II	0	0	2	1	50	50	100	BS
1702CS251	Programming in C++ Laboratory	0	0	2	1	50	50	100	PC
1701GEX52	Communication Skills Laboratory	0	0	2	1	50	50	100	HSS
Total					23				

SEMESTER III									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1701MA301	Engineering Mathematics III	3	2	0	4	40	60	100	BS
1702CS301	Data Structures	3	2	0	4	40	60	100	PC
1702CS302	Computer Organization and Architecture	3	0	0	3	40	60	100	PC
1702CS303	Software Engineering	3	0	0	3	40	60	100	PC
1702CS304	Digital Systems	3	0	2	4	50	50	100	PC
1702CS305	Operating Systems	3	0	0	3	40	60	100	PC

Laboratory Course										
1702CS351	Data Structures Laboratory	0	0	2	1	50	50	100	PC	
1702CS352	Operating Systems Laboratory	0	0	2	1	50	50	100	PC	
1704GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100	EEC	
Total										24

SEMESTER IV										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
Theory Course										
1701MA401	Probability and Queuing Theory	3	2	0	4	40	60	100	BS	
1702CS401	Computer Networks	3	0	0	3	40	60	100	PC	
1702CS402	Programming Paradigms	3	2	0	4	40	60	100	PC	
1702CS403	Design and Analysis of Algorithms	3	0	0	3	40	60	100	PC	
1702CS404	Microprocessors and Microcontrollers	3	0	2	4	50	50	100	PC	
1702CSX02	Database Management Systems	3	0	0	3	40	60	100	PC	
1701CH201*	Environmental Studies	3	0	0	3	40	60	100	BS	
Laboratory Course										
1702CS451	Networks Laboratory	0	0	2	1	50	50	100	PC	
1702CSX52	Database Management Systems Laboratory	0	0	2	1	50	50	100	PC	
1704GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC	
Total										24/27*

\*Applicable for Lateral Entry students

SEMESTER V										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
Theory Course										
1701MA501	Discrete Mathematics	3	2	0	4	40	60	100	BS	
1702CS501	Object Oriented Analysis and Design	3	0	0	3	40	60	100	PC	
1702CS502	Theory of Computation	3	2	0	4	40	60	100	PC	
1702CS503	Computer Graphics and Multimedia	3	0	0	3	40	60	100	PC	
1703CS002	Software Testing (Elective I)	3	0	0	3	40	60	100	PE	
1703CS006	Mobile Computing(Elective II)	3	0	0	3	40	60	100	PE	
Laboratory Course										
1702CS551	Computer Graphics and Multimedia Laboratory	0	0	2	1	50	50	100	PC	
1704CS552	CASE Tools Laboratory (Mini Project I)	0	0	2	1	50	50	100	EEC	
1704CS553	Technical Seminar	0	0	2	1	100	-	100	EEC	
1704GE551	Life Skills: Aptitude-I	0	0	2	1	100	-	100	EEC	
Total										24

SEMESTER VI										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1701MGX01	Professional Ethics	3	0	0	3	40	60	100	HSS	
1702CS601	Web Technology	3	2	0	4	40	60	100	PC	
1702CS602	Artificial Intelligence	3	0	0	3	40	60	100	PC	
1702CS603	Distributed Systems	3	0	0	3	40	60	100	PC	
1703CS012/1703MG008	Data Warehousing and Data Mining/Human Rights (Elective III)	3	0	0	3	40	60	100	PE	
1703CE032/1703EC020/1703ME011	Global Warming and Climate Change/Soft Computing/Industrial Robotics Elective IV(Open)	3	0	0	3	40	60	100	OE	
<b>Laboratory Course</b>										
1702CS651	Web Technology Laboratory	0	0	2	1	50	50	100	PC	
1704CS652	Mobile Application Development Laboratory (Mini Project II)	0	0	2	1	50	50	100	EEC	
1704CS653	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC	
1704GE651	Life Skills: Aptitude-II	0	0	2	1	100	-	100	EEC	
Total					23					

SEMESTER VII										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1702CS701	Cryptography and Network Security	3	0	0	3	40	60	100	PC	
1702CS702	Software Project Management	3	0	0	3	40	60	100	PC	
1702CS703	Big Data Analytics	3	0	0	3	40	60	100	PC	
1702CS704	Cloud Computing	3	0	0	3	40	60	100	PC	
1703CS001	Service oriented Architecture (Elective V)	3	0	0	3	40	60	100	PE	
1703ED001	Startup Entrepreneurship (Elective VI(Open))	3	0	0	3	40	60	100	OE	
<b>Laboratory Course</b>										
1702CS751	Cloud Computing Laboratory	0	0	2	1	50	50	100	PC	
1702CS752	Network Security Laboratory	0	0	2	1	50	50	100	PC	
1704CS753	Software Development Laboratory (Mini Project III)	0	0	2	1	50	50	100	EEC	
1704GE751	Life Skills: Competitive Exams Preparation	2	0	0	2	100	-	100	EEC	
1704CS754	In-plant Training / Internship Presentation	0	0	0	1	100	-	100	EEC	
Total					24					

SEMESTER VIII										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CA	ES	Total		
<b>Theory Course</b>										
1703CS024	Bioinformatics(Elective VII)	3	0	0	3	40	60	100	PE	
1703CS027	Data Centre and Virtualization (Elective VIII)	3	0	0	3	40	60	100	PE	
1703CS035	Social Network Analysis (Elective IX)	3	0	0	3	40	60	100	PE	
<b>Laboratory Course</b>										
1704CS851	Project Work	0	0	18	9	50	50	100	EEC	
Total					18					



**List of Programme Electives for B.E. – Computer Science and Engineering**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>ELECTIVE - I</b>									
1703CS016	Wireless Communications	3	0	0	3	40	60	100	PE
1703CS002	Software Testing	3	0	0	3	40	60	100	PE
1703CS003	Information Management	3	0	0	3	40	60	100	PE
1703CS004	C# and .NET framework	3	0	0	3	40	60	100	PE
1703CS005	Advanced Database Technology	3	0	0	3	40	60	100	PE
<b>ELECTIVE - II</b>									
1703CS006	Mobile Computing	3	0	0	3	40	60	100	PE
1703CS007	Network Analysis and Management	3	0	0	3	40	60	100	PE
1703CS008	Open Source Programming	3	0	0	3	40	60	100	PE
1703CS009	Ad hoc and Sensor Networks	3	0	0	3	40	60	100	PE
1703CS010	Digital Signal Processing	3	0	0	3	40	60	100	PE
<b>ELECTIVE - III</b>									
1703CS011	Compiler Design	3	0	0	3	40	60	100	PE
1703MG002	Total Quality Management	3	0	0	3	40	60	100	PE
1703CS012	Data Warehousing and Data Mining	3	0	0	3	40	60	100	PE
1703CS014	Disaster Management	3	0	0	3	40	60	100	PE
1703MG008	Human Rights	3	0	0	3	40	60	100	PE
<b>ELECTIVE - V</b>									
1703CS001	Service Oriented Architecture	3	0	0	3	40	60	100	PE
1703CS017	Digital Image Processing	3	0	0	3	40	60	100	PE
1703CS018	Embedded and Real Time Systems	3	0	0	3	40	60	100	PE
1703CS019	Game Programming	3	0	0	3	40	60	100	PE
1703CS020	Knowledge Management	3	0	0	3	40	60	100	PE
<b>ELECTIVE - VII</b>									
1703CS021	Deep Learning	3	0	0	3	40	60	100	PE
1703CS022	Natural Language Processing	3	0	0	3	40	60	100	PE
1703CS023	Soft Computing	3	0	0	3	40	60	100	PE
1703CS024	Bioinformatics	3	0	0	3	40	60	100	PE
1703CS025	Human Computer Interaction	3	0	0	3	40	60	100	PE
<b>ELECTIVE - VIII</b>									
1703CS026	Enterprise Resource Planning	3	0	0	3	40	60	100	PE
1703CS027	Data Centre and Virtualization	3	0	0	3	40	60	100	PE
1703CS028	Growth Hacking	3	0	0	3	40	60	100	PE
1703CS029	Information Retrieval	3	0	0	3	40	60	100	PE
1703CS030	Cyber Forensics	3	0	0	3	40	60	100	PE
<b>ELECTIVE - IX</b>									
1703CS031	Internet of Things	3	0	0	3	40	60	100	PE
1703CS032	Mainframe Computing	3	0	0	3	40	60	100	PE
1703CS033	Multicore Architecture	3	0	0	3	40	60	100	PE
1703CS034	Graph Theory and Its Applications	3	0	0	3	40	60	100	PE
1703CS035	Social Network Analysis	3	0	0	3	40	60	100	PE
<b>OPEN ELECTIVE</b>									
1703CS036	Database Management Systems	3	0	0	3	40	60	100	OE
1703CS037	Web Technology	3	0	0	3	40	60	100	OE
1703CS038	Operating Systems	3	0	0	3	40	60	100	OE
1703CS039	Computer Graphics and Multimedia	3	0	0	3	40	60	100	OE
1703CS040	Software Engineering	3	0	0	3	40	60	100	OE
1703CS041	Artificial Intelligence	3	0	0	3	40	60	100	OE
<b>ONE CREDIT COURSES</b>									
1704CS042	Hardware and troubleshooting	-	-	-	1				OC
1704CS043	Networking Course	-	-	-	1				OC









## E.G.S. PILLAY ENGINEERING COLLEGE

(An Autonomous Institution, Affiliated to Anna University, Chennai)  
Nagore Post, Nagapattinam – 611 002, Tamilnadu.

### B.E – Computer Science and Engineering

#### 1.1.2 Details of programmes where syllabus revision was carried out during the year

2021-22

Course Code	Course Name	Change Details	Percentage of Change
1901MA102	Engineering Mathematics –I		0
1901CH104	Applied Chemistry in Informatics		0
1901GEX03	Programming for Problem Solving		0
1901ENX01	English for Engineers		0
1901GEX52	Computer Programming Laboratory		0
1901GE151	Engineering Intelligence I		0
1901CHX51	Engineering Chemistry Laboratory		0
1901HSX51	Communication Skill Laboratory		0
1901MA202	Engineering Mathematics –II		0
1901PH201	Physics for Information Science		0
1901GEX01	Basic Electrical and Electronics Engineering		0
1901GEX02	Engineering Graphics		0
1901GE201	Engineering Exploration		0
1901GE254	Computer Hardware and IT Essentials Lab		0
1901GE252	Engineering Intelligence - II		0
1901GEX51	CAD Lab		0
1901GEX53	Basic Electrical and Electronics Engineering Lab		0
1901PHX51	Engineering Physics Lab		0
1901MA302	Engineering Mathematics III		0
1902CS301	Data Structures		0
1902CS302	Object Oriented Programming		0
1902CS303	Computer Organization and Architecture		0
1902CS304	Digital Logic and Microprocessors		0
1901MCX02	Constitution of India		0
1902CS351	Data Structures Laboratory		0
1902CS352	Object Oriented Programming Laboratory		0
1904GE351	Life Skills: Soft Skills		0
1902CS401	Software Engineering		0
1902CS402	Operating System		0
1902CS403	Computer Networks		0
1902CS404	Design and Analysis of Algorithms		0
1902CS406	Database Management Systems		0
1901GEX04	Biology for Engineers		0



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1901MCX01	Environmental Science		0
1902CS451	Networks Laboratory		0
1902CS452	Operating System Laboratory		0
1902CS453	Database Management Systems Laboratory		0
1904GE451	Life Skills: Verbal Ability		0
1901MA501	Discrete Mathematics	Revision	40
1902CS501	Object Oriented Analysis and Design		0
1902CS502	Theory of Computation	Revision	22
1903CS001	Mobile Computing	New Course	100
1901MGX01	Total Quality Management	New Course	100
1901MCX03	Essence of Indian Traditional Knowledge	New Course	100
1902CS551	CASE Tools Laboratory		0
1902CS552	Mobile Application Development Laboratory		0
1904GE551	Life Skills: Aptitude I		0
1902CS601	Compiler Design	New Course	100
1902CS602	Web Technology		0
1902CS603	Artificial Intelligence	Revision	80
1903CS005	Distributed Systems		0
1901HS003	Startup Entrepreneurship	New Course	100
	Open Elective I	New Course	100
1902CS651	Compiler Laboratory	New Course	100
1902CS652	Web Technology Laboratory		0
1904CS653	Software Prototype development Lab	New Course	100
1904CS654	Industrial Visit Presentation		0
1904GE651	Life Skills: Aptitude II	Revision	10
1702CS701	Cryptography and Network Security		0
1702CS702	Software Project Management		0
1702CS703	Big Data Analytics		0
1702CS704	Cloud Computing		0
1703CS001	Service oriented Architecture		0
1703ED001	Startup Entrepreneurship		0
1702CS751	Cloud Computing Laboratory		0
1702CS752	Network Security Laboratory		0
1704CS753	Software Development Laboratory		0
1704GE751	Life Skills: Competitive Exams Preparation		0
1704CS754	In-plant Training / Internship Presentation		0
1703CS024	Bioinformatics		0
1703CS027	Data Centre and Virtualization		0
1703CS035	Social Network Analysis		0
1704CS851	Project Work		0
		<b>Average</b>	<b>16.43</b>



### Minutes of Board of Studies (BoS) Meeting

Name of the Department	<b>Computer Science and Engineering</b>
Name of the Programmes	B.E. Computer Science and Engineering M.E. Computer Science and Engineering
Meeting No.	06
Date & Time	23.12.2020&10.00 AM
Venue	Online Meeting: Zoom <a href="https://zoom.us/j/91200436101?pwd=dGRuc3RXNGRkbUpwVEJEeVFUR0o3UT09">https://zoom.us/j/91200436101?pwd=dGRuc3RXNGRkbUpwVEJEeVFUR0o3UT09</a>

The names of the members present in the Board of Studies are given in Annexure I.

1. Chairman / BoS welcomed all members for the 6<sup>th</sup> meeting of Board of Studies.
2. Chairman / BoS introduced the members.
3. Chairman / BoS briefed the members about the Agenda.
  - Discussion and action taken about previous meeting
  - To finalize the curriculum and syllabi of new Regulations 2021 for M.E. CSE PG Programmes Curriculum and 1<sup>st</sup> to 2<sup>nd</sup> Semester Syllabi and Syllabi of 5<sup>th</sup> to 7<sup>th</sup> Semester B.E. CSE Programme.
  - Any other matters.
4. The following are the suggestions given by the member of Board of Studies
  - The Board of Studies members have gone through the curriculum and Syllabus of new PG M.E. Regulations 2021 for M.E. CSE PG Programmes Curriculum and 1<sup>st</sup> to 2<sup>nd</sup> Semester Syllabi and Syllabi of 5<sup>th</sup> to 7<sup>th</sup> Semester B.E. CSE Programme under UG Regulation 2019
  - New Regulations 2021 for PG M.E. Programmes were analyzed and discussed

- **For B.E. CSE Programme**

- Vision, Mission, POs and PSOs of the CSE programmes are reviewed with the new regulations curriculum and syllabi

- Some of the important courses like Essence of Indian Traditional Language, TQM and Computer Graphics and Multimedia were added in the UG Curriculum.

- It is recommended to purchase of new versions of Computers for strengthening the advanced technology usage by the Students

- It is recommended to include the cloud computing laboratory course in the seventh semester

- To strengthening the students for the industrial exposure to send the students to the industry through internship and industrial visit

- It is recommended to include the value added and one credit courses and reviewed

- **For PG M.E. Programmes**

- New Regulations 2021 were discussed and suggested points sent for approval by the Academic Council

- It is recommended to include the courses like Research oriented and IPR related courses

- It is recommended to include the Audit courses in the first semester and second semester

- It is recommended to include the mini project with Seminar concept in the second semester

- The Chairman analyzed the feedback from the stakeholders and draft the new PG M.E. Curriculum and 1<sup>st</sup> to 2<sup>nd</sup> Semester Syllabi for approval



**Resolutions.**

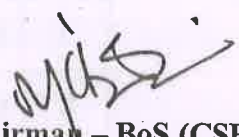
It was resolved to incorporate the suggestions given by the BOS members towards the curriculum and Syllabus of new PG M.E. Regulations 2021 for M.E. CSE PG Programmes Curriculum and 1<sup>st</sup> to 2<sup>nd</sup> Semester Syllabi and Syllabi of 5<sup>th</sup> to 7<sup>th</sup> Semester B.E. CSE Programme under UG Regulation 2019.

Board of Studies recommended the above resolutions to be presented in the Academic Council for further approval.

Finally the Chairman thanked all the members for their presence and valuable suggestions towards curriculum and Syllabus of new PG M.E. Regulations 2021 for M.E. CSE PG Programmes Curriculum and 1<sup>st</sup> to 2<sup>nd</sup> Semester Syllabi and Syllabi of 5<sup>th</sup> to 7<sup>th</sup> Semester B.E. CSE Programme under UG Regulation 2019 for the Computer Science and Engineering Board.

Date: 23.12.2020

Place: Nagapattinam

  
Chairman – BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
**Department of Computer Science &**  
**Engineering**  
**EGS Pillay Engineering College (Autonomous)**  
**Nagapattinam.**



**E.G.S. PILLAY ENGINEERING COLLEGE**  
(An Autonomous Institution Affiliated to Anna University, Chennai)  
Nagore Post, Nagapattinam – 611 002, Tamilnadu.

**Board of Studies Meeting**

**Attendance**

Name of the Department : Computer Science and Engineering  
Meeting No. : 06  
Date & Time : 23.12.2020 & 10.00 A.M.  
Venue : Online Platform- Zoom Meet

S.No	Name	Category
1	Dr.M.CHINNADURAI	Chairman
2	Dr.S.MARY SAIRA BHANU	University Nominee
3	Dr.A.AMUTHAN	External Expert Members
4	Dr.M.ARAMUDHAN	
5	Mr.J.SARATH CHANDAR	Industry/ Corporate Sector
6	Mr.P.HARIHARAN	Alumnus
7	Dr.T.GANESAN	Internal Member
8	Dr..N.MURALI	
9	Dr.R.MANIVANNAN	
10	Dr.M.PRIYA	
11	Prof.K.KALAIVANI	
12	Prof.K.BALASUBRAMANIAN	
13	Prof.G.ARUL SELVAN	

*MCSB*  
Chairman- BoS (CSE)

**CHAIRMAN**  
**Board of Studies**  
Department of Computer Science &  
Engineering  
E.G.S. Pillay Engineering College (Autonomous)  
Nagapattinam.

**B.E. – Computer Science and Engineering**  
**2019 Regulation: Full Time Curriculum and Syllabus**

**SEMESTER I**

Course Code	CourseName	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA102	Engineering Mathematics –I (Calculus and Linear Algebra)	3	2	0	4	40	60	100	BS
1901CH104	Applied Chemistry in Informatics	3	0	0	3	40	60	100	BS
1901GEX03	Programming for Problem Solving	3	0	0	3	40	60	100	ES
1901ENX01	English for Engineers	2	0	0	2	40	60	100	BS
<b>Laboratory Course</b>									
1901GEX52	Computer Programming Laboratory	0	0	2	1	50	50	100	ES
1901GE151	Engineering Intelligence I	0	0	2	1	100	0	100	HSS
1901CHX51	Engineering Chemistry Laboratory	0	0	2	1	50	50	100	BS
1901HSX51	Communication Skill Laboratory	0	0	2	1	50	50	100	BS
<b>Total</b>					<b>16</b>				

**SEMESTER II**

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA202	Engineering Mathematics –II (Probability and Statistics)	3	2	0	4	40	60	100	BS
1901PH201	Physics for Information Science	3	0	0	3	40	60	100	BS
1901GEX01	Basic Electrical and Electronics Engineering	3	0	0	3	40	60	100	ES
1901GEX02	Engineering Graphics	2	0	2	3	50	50	100	ES
1901GE201	Engineering Exploration	2	0	0	2	100	0	100	ES
<b>Laboratory Course</b>									
1901GE254	Computer Hardware and IT Essentials Laboratory	0	0	2	1	50	50	100	ES
1901GE252	Engineering Intelligence - II	0	0	2	1	100	0	100	HSS
1901GEX51	CAD Laboratory	0	0	2	1	50	50	100	ES
1901GEX53	Basic Electrical and Electronics Engineering Laboratory	0	0	2	1	50	50	100	ES
1901PHX51	Engineering Physics Laboratory	0	0	2	1	50	50	100	BS
<b>Total</b>					<b>20</b>				

SEMESTER III									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA302	Engineering Mathematics III	3	2	0	4	40	60	100	BS
1902CS301	Data Structures	3	2	0	4	40	60	100	PC
1902CS302	Object Oriented Programming	3	0	0	3	40	60	100	PC
1902CS303	Computer Organization and Architecture	3	0	0	3	40	60	100	PC
1902CS304	Digital Logic and Microprocessors	3	0	2	4	40	60	100	ES
1901MCX02	Constitution of India	2	0	0	0	100	0	100	MC
<b>Laboratory Course</b>									
1902CS351	Data Structures Laboratory	0	0	2	1	50	50	100	PC
1902CS352	Object Oriented Programming Laboratory	0	0	2	1	50	50	100	PC
1904GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>21</b>				

SEMESTER IV									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS401	Software Engineering	3	0	0	3	40	60	100	PC
1902CS402	Operating System	3	0	0	3	40	60	100	PC
1902CS403	Computer Networks	3	0	0	3	40	60	100	PC
1902CS404	Design and Analysis of Algorithms	3	0	0	3	40	60	100	PC
1902CS406	Database Management Systems	3	0	0	3	40	60	100	PC
1901GEX04	Biology for Engineers	3	0	0	3	50	50	100	BS
1901MCX01	Environmental Science	2	0	0	0	100	0	100	MC
<b>Laboratory Course</b>									
1902CS451	Networks Laboratory	0	0	2	1	50	50	100	PC
1902CS452	Operating System Laboratory	0	0	2	1	50	50	100	PC
1902CS453	Database Management Systems Laboratory	0	0	2	1	50	50	100	PC
1904GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>22</b>				



SEMESTER V									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1901MA501	Discrete Mathematics	3	2	0	4	40	60	100	BS
1902CS501	Object Oriented Analysis and Design	3	0	0	3	40	60	100	PC
1902CS502	Theory of Computation	3	2	0	4	40	60	100	PC
	PC Elective I	3	0	0	3	40	60	100	PE
	HSS Elective I	3	0	0	3	40	60	100	HSSE
1901MCX03	Essence of Indian Traditional Knowledge	2	0	0	0	100	0	100	MC
<b>Laboratory Course</b>									
1902CS551	CASE Tools Laboratory	0	0	2	1	50	50	100	PC
1902CS552	Mobile Application Development Laboratory	0	0	2	1	50	50	100	PC
1904GE551	Life Skills: Aptitude I	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>20</b>				

SEMESTER VI									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS601	Compiler Design	3	0	0	3	40	60	100	PC
1902CS602	Web Technology	3	2	0	4	40	60	100	PC
1902CS603	Artificial Intelligence	3	0	0	3	40	60	100	PC
	PC Elective II	3	0	0	3	40	60	100	PE
	HSS Elective II	3	0	0	3	40	60	100	HSSE
	Open Elective I	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1902CS651	Compiler Laboratory	0	0	2	1	50	50	100	PC
1902CS652	Web Technology Laboratory	0	0	2	1	50	50	100	PC
1904CS653	Software Prototype development Lab (Mini Project 1)	0	0	2	1	50	50	100	PC
1904CS654	Industrial Visit Presentation	0	0	0	1	100	-	100	EEC
1904GE651	Life Skills: Aptitude II	0	0	2	1	100	-	100	EEC
<b>Total</b>					<b>24</b>				



SEMESTER VII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
1902CS701	Cloud Computing	3	0	0	3	40	60	100	PC
1902CS702	Cryptography and Network Security	3	0	0	3	40	60	100	PC
1901MG701	Universal Human Values and Ethics	3	0	0	3	40	60	100	PC
	PC Elective III	3	0	0	3	40	60	100	PE
	HSS Elective III	3	0	0	3	40	60	100	HSSE
	Open Elective II	3	0	0	3	40	60	100	OE
<b>Laboratory Course</b>									
1902CS751	Cloud Computing Laboratory	0	0	2	1	50	50	100	PC
1902CS752	Network Security Laboratory	0	0	2	1	50	50	100	PC
1904CS753	Software Development Laboratory (Mini Project II)	0	0	2	1	50	50	100	PC
1904GE751	Life Skills: Comprehensive Viva	2	0	0	2	100	-	100	EEC
1904GE752	In plant training/Internship	-	-	-	1	100	-	100	EEC
<b>Total</b>					<b>24</b>				

SEMESTER VIII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
<b>Theory Course</b>									
	PC Elective IV	3	0	0	3	40	60	100	PE
	PC Elective V	3	0	0	3	40	60	100	PE
<b>Laboratory Course</b>									
	Project Work	0	0	14	7	50	50	100	EEC
<b>Total</b>					<b>13</b>				

ONE CREDIT COURSES						
29	1904CS001	Hardware and troubleshooting	-	-	-	1
30	1904CS002	Networking Course	-	-	-	1
31	1904CS003	Industrial Safety for Engineers	-	-	-	1
32	1904CS004	Introduction to Fisheries Engineering	-	-	-	1
33	1904CS005	Transport and Tourism	-	-	-	1
VALUE ADDED COURSES						
34	1904CS006	Introduction to Data Centre Virtualization and Cloud Computing				
35	1904CS007	Python Programming				
36	1904CS008	Introduction to R				
37	1904CS009	Python for Data Science				

### Humanities, Social Science and Management Electives Courses

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>Elective I</b>						
1.	1901MGX01	Total Quality Management	3	-	-	3
2.	1901MGX02	Project Management and Finance	3	-	-	3
3.	1901MGX03	Operations Research	3	-	-	3
4.	1901MGX04	Principles of Management	3	-	-	3
<b>Elective II</b>						
1.	1901HS001	Innovation & Entrepreneurship fundamentals	3	-	-	3
2.	1901HS002	Intellectual Property Rights for Engineers	3	-	-	3
3.	1901HS003	Startup Entrepreneurship	3	-	-	3
4.	1901HS004	Business Model Innovation	3	-	-	3
<b>Elective III</b>						
1.	1901HS005	Social Entrepreneurship	3	-	-	3
2.	1901HS006	Design Thinking for Innovation	3	-	-	3
3.	1901HS007	Indian Patent Law & Patent Drafting	3	-	-	3
4.	1901HS008	IP Management & Commercialization	3	-	-	3

**PC ELECTIVE COURSES**

Sl. No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>Elective I</b>						
1	1903CS001	Mobile Computing	3	0	0	3
2	1903CS002	Computer Graphics and Multimedia	3	0	0	3
3	1903CS003	Data Warehousing and Data Mining	3	0	0	3
4	1903CS004	Software Testing	3	0	0	3
<b>Elective II</b>						
5	1903CS005	Distributed systems	3	0	0	3
6	1903CS006	OpenSource Programming	3	0	0	3
7	1903CS007	Adhoc and sensor networks	3	0	0	3
8	1903CS008	Multicore Architecture	3	0	0	3
<b>Elective III</b>						
9	1903CS009	Embedded and Real Time Systems	3	0	0	3
10	1903CS010	Internet of things	3	0	0	3
11	1903CS011	Digital image processing	3	0	0	3
12	1903CS012	C# and .Net Framework	3	0	0	3
<b>Elective IV</b>						
13	1903CS013	Big data Analytics	3	0	0	3
14	1903CS014	Service oriented Architecture	3	0	0	3
15	1903CS015	Machine learning techniques	3	0	0	3
16	1903CS016	Natural Language Processing	3	0	0	3
<b>Elective V</b>						
17	1903CS017	Information Retrieval	3	0	0	3
18	1903CS018	Cyber forensics	3	0	0	3
19	1903CS019	Data Centre and Virtualization	3	0	0	3
20	1903CS020	Bio Informatics	3	0	0	3

S.No.	Course Code	Name of the Course	Number of Hours / Week			Credit
			L	T	P	
<b>OPEN ELECTIVE COURSES</b>						
21	1903CS021	Computer Networks	3	0	0	3
22	1903CS022	Artificial Intelligence	3	0	0	3
23	1903CS023	Database Management Systems	3	0	0	3
24	1903CS024	Web Technology	3	0	0	3
25	1903CS025	Data Structures	3	0	0	3
26	1903CS026	Object oriented Programming	3	0	0	3
27	1903CS027	Cloud Computing	3	0	0	3
28	1903CS028	Mobile Computing	3	0	0	3