



**KSIT**  
K.S. INSTITUTE OF TECHNOLOGY

Kammavari Sangham (R) 1952  
K.S. GROUP OF INSTITUTIONS

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**K.S. INSTITUTE OF TECHNOLOGY**

Affiliated to VTU, Belagavi & Approved by AICTE, New Delhi, Accredited NAAC & NBA (CSE, ECE and ME)

# 14, Raghuvanahalli, Kanakapura Road, Bengaluru - 560 109.

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To,  
The Registrar Evaluation  
VTU, Belagavi

**Subject:** Feedback on syllabus of 1<sup>st</sup> and 2<sup>nd</sup> Semester (2022 Scheme), VTU Notification  
VTU/BGM/BOS/2023/6557 Dated 2<sup>nd</sup> February 2023

As per the VTU Notification VTU/BGM/BOS/2023/6557 Dated 2<sup>nd</sup> February 2023, please note down the following feedback & suggestions after going through 2022 draft scheme of BE/BTECH I/II Semester and syllabus and also regulations governing the same.

Feedback and Suggestions given by:

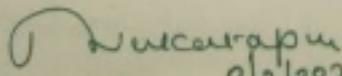
**1. Dr Rekha B Venkatapur, Professor and Head CSE**

1. It is a good initiative to give options for students to select courses under 3 categories (ESC-I) Engineering Science Courses-I (ETC-I ) Emerging Technology Courses-I and (PLC-I) Programming Language Courses-I
2. In place of 22PLC15D Introduction to C++ Programming, Fundamentals of R Programming can be added
3. 22POP13/23 Principles of Programming in C can be made as a mandatory course either in odd or in even semester for all streams as basic programming skills are needed for any stream students & usually when companies visit for campus selection /hiring they expect basic programming skills in C language.
4. Instead of different number of Course Outcomes (Ex- In Course 22MATS11 Mathematics-I for Computer Science and Engineering stream there are 5 COs defined where as in 22PLC15A/22PLC25 A Introduction to Web Programming there are only 4 COs, commonly 5 COs can be defined in all courses.
5. In most of the courses the Course title starts with "Introduction to ....." instead of that the basic course title can be reframed as "Fundamentals of ....."

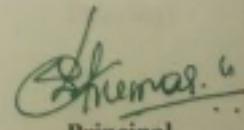
**2. Dr. Prashanth H S, Professor, Computer Science and Engineering**

**Few thoughts about the syllabus for 1st year CSE Branch**

1. In the assessment methodology for the Emerging course, 50% weightage should be given for report making (Literature survey) and 50% for IA (CIE: Report making + IA)
2. Laboratory course for mathematics course (both 1st and 2nd semester) may be handled by respective engineering department to highlight or connect mathematical experiment with application or courses they will be learning in their higher semester

  
HoD 3/2/2023

Head of the Department  
Dept. of Computer Science & Engg  
K.S. Institute of Technology  
Bengaluru -560 109

  
Principal

PRINCIPAL  
K.S. INSTITUTE OF TECHNOLOGY  
BENGALURU - 560 109

**Action Taken Report for the feedback received on Schemes of Computer Science and its alide Programs**

3 messages

Dr. Sanjay H A <sanjay.ha@msrit.edu> Mon, Jul 17, 2023 at 11:37 AM  
To: "Dr. Sanjay H A" <sanjay.ha@msrit.edu>  
Cc: Sadashiv Halbhavi <sbhvtuso@yahoo.com>, VTU VTU <vtubos23@gmail.com>, VTU Belagavi Registrar <registrar@vtu.ac.in>  
Bcc: rekhabvenkatapur@ksit.edu.in

Dear Sir/Madam,

On behalf of the Members of BoS, I thank all the the professors who took the time to provide input on the draft schemes for Computer Science and its related programmes. On July 5th, 2023, a BoS Meeting was held to review the feedback. Valid ideas were evaluated, and the schemes were changed accordingly.

Kindly find the action taken report.

—  
**Thanking You  
With Best Regards**

—  
**Dr. Sanjay H A  
Professor & Head  
Department of Information Science and Engg.  
M S Ramaiah Institute of Technology  
Bangalore - 560054.  
Ph-9342560303**

 **Action\_Taken\_Report\_Feedback\_VTU Scheme.pdf**  
312K

Dr. REKHA B VENKATAPUR <rekhabvenkatapur@ksit.edu.in> Mon, Jul 17, 2023 at 11:47 AM  
To: T V Govindaraju <principal.ksit@gmail.com>, Prashantha H S <hsprashantha@ksit.edu.in>  
Cc: "Dr. Sudha P.N" <pnsudha@ksit.edu.in>  
Bcc: somasekhart@ksit.edu.in

[Quoted text hidden]

Respected Sir,

Please go through the attachment in which our college feedback and remarks are recorded. It will be helpful for NBA/NAAC as authentic document for Criteria 1 and 2 (Teaching learning Process in NBA/NAAC)

—  
**Thanks and Regards**

**Dr. REKHA B VENKATAPUR  
Professor & Head  
Dept. of Computer Science and Engineering  
K.S. Institute of Technology, Bengaluru - 560109  
Member, BOS-CSE/ISE, VTU (2019-22), Belgaum  
Contact Number : 9740295819**

**VISION :**

"To create competent professionals in Computer Science and Engineering with adequate skills to drive the IT industry".



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Date: 17-06-2023

To,  
BoS (CSE),  
VTU,  
Belagavi -590018

As per the VTU Notification VTU/BGM/Aca/BoS/2023/1280 Dated 9th June 2023, the department meeting was held on 13<sup>th</sup> June 2023 with course and module coordinators regarding draft scheme of 3<sup>rd</sup> to 8<sup>th</sup> semesters 2022. The following feed back are suggested.

Feedback on draft 3 - 8 semester 2022 scheme of teaching and examination						
SNo	Semester	Course Code	Course Name	Existing	Changes proposed	Remarks /Feed back
1	5	-	-	BCS501 Software Engineering & Project Management	BCS701 Internet of Things	Interchange of these two will enable students to carryout projects related to IOT Domain Also it will make 7 <sup>th</sup> semester students to focus on multidimensional activities such as placement, Gate exam preparation, Higher studies
2	5	BCS503	Theory of Computation	-	-	Clarity about pre-requisite for this course is required
3	5	BCS586	Mini Project	-	-	4 hr/week is reflected in the scheme, need more clarity about L T P component as 4 hr Lab session (P component) is allotted which need to be investigated

*N. Narayana*  
HOD 17/6/23

Head of the Department  
Dept. of Computer Science  
K.S. Institute of Technology  
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*S. Kumar*

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## BoS in CS/IS , VTU

### Feedback on Scheme of Computer Science Allied Programs

College Name	Program Name	Sem	Course Code / Title	Suggestion	BOS Recommendation/Justification
R. R. Institute of Technology	CSE	3rd	ESC/ETC/PLC Oop's with Java Oops with C++	To add another 2 from below courses: 1. Web Technology 2. Python 3. Java If the students have not opted in 1 <sup>st</sup> year, they will have chance to opt in 3rd semester.	Students must understand Object Oriented Concepts. As lab components, students will leverage Python and web technology topics from other courses.
R. R. Institute of Technology	CSE	4th	1. Discrete Mathematical Structures 2. Graph Theory 3. Optimization Technique	To add 1 from below courses: 1. Probability and Statistics 2. Operational Research & Statistics 3. OR & Analytics	OR and Optimization Technique are nearly identical. Mathematics covers probability and statistics.

R. R. Institute of Technology	CSE	5th	3. Web Technology Lab 4. Mini Project	Add Web lab with Mini Project or Remove Web and Add CG Lab with Mini Project. Remove CG in PE course and Add Software Architecture	Because the Scheme is the same for all programmes, it is not advised. CG is also a prerequisite in the industry.
R. R. Institute of Technology	CSE	Final Year	Internship (Industry/Research) (14 - 20 weeks)	Industries will provide internship opportunities for 6 months to 1 year. We should provide 20-24 weeks in Scheme	The bare minimum is 14 weeks. We will change the upper limit to 24 weeks.
Sambhram Institute of Technology	CSE (Cyber Security)	3rd	BCY306C BCY306D	Subjects are not mentioned	Students must understand Object Oriented Concepts. So we have added only 2 courses.
Sambhram Institute of Technology	CSE (Cyber Security)	6 <sup>th</sup> and 7 <sup>th</sup>	BCYL703 Machine Learning Theory	Machine Learning Theory is offered in the 7th semester while BCYL606 Machine Learning Lab is offered in the 6th semester, this can be reversed or both can be offered in the 6th semester only.	Typo issue, Rectified.
Sambhram Institute of Technology	CSE (Cyber Security)	7 <sup>th</sup>	BCY701 Vulnerability Assessment	These subjects of the 7th semester have the topics of penetration testing which may overlap. The syllabus has to be framed properly and if possible	Both the courses complementary each other and the syllabus content will be prepared accordingly.

	Security)		and Penetration Testing  BCY702 Ethical hacking	any one of the subjects can include penetration testing.	
Sambhram Institute of Technology	CSE (Cyber Security)		BCY801x Online course through NPTEL	This subject offered in the 8th semester should be given more clarity, as to whether students have to attend the offline exams of NPTEL, whether they need to pay money for it, and if yes, it might be a burden on students of lower income.	Yes, Exam fee is Rs 1000/-. Will communicate the message to VTU officials.
Sambhram Institute of Technology	CSE (Cyber Security)			Software Defined Network subjects can be included as an elective in the 6th, 7th, or 8th semesters	Yes. Incorporated
Canara Engineering College, Mangaluru	ISE	3 <sup>rd</sup>	Android Basics - BTS358x	It is recommended to introduce the "Android Basics" course as an elective under the AES Course category.	<b>Progressive app development</b> (like FLUTTER) has been introduced .

Canara Engineering College, Mangaluru	ISE	5 <sup>th</sup>	Software Engineering & Project Management - BIS501	practical will be give knowledge to students to use modern tools to design the solution	This subject has been designated as PCC for all engineering branches. We will add a practical component for an additional 20 Marks.
Canara Engineering College, Mangaluru	ISE	6 <sup>th</sup>	Information Assurance and Security/Software Testing - B15613x	It is recommended to offer the above course which will help the students use state of the art in testing filed.	"Software Quality Assurance" was introduced, which contains software testing content.
Canara Engineering College, Mangaluru	ISE	7 <sup>th</sup>	Embedded Systems - BIS714C	It is suggested to remove the "Embedded Systems (RI5714C)" course and introduce a course on "software Architecture". This change reflects the increasing importance software design and architecture in the IT field.	Students should take an embedded course to better grasp the hardware.
Canara Engineering College	ISE	8 <sup>th</sup>	NPTEL - BIS801x	To List the course, such that students should be the Employer then employee.	Can be considered based on the Course offered by NPTEL
Bangalore Institute of Technology	CSE	3rd		Too many lab components (BCS302-Digital Design & Computer Organization, BCS303 - Operating System, BCSL305 - Data Structures	It is in accordance with the layout provided. Two IPCC subjects and one

				Lab) in third semester. So kindly retain only the OS lab component and DS lab.	PCC subject are required. So there are three labs.
Bangalore Institute of Technology	CSE	3 <sup>rd</sup> to 8 <sup>th</sup>	AEC	Kindly make AEC courses as domain based from 3rd to 8th semester, so that students can learn from basic concepts to advanced level based on their domain interest. The domains considered could be Blockchain, IoT, Cyber Security, and Data Science.	The majority of the domain-related courses have been introduced as Core or Elective courses.
Bangalore Institute of Technology	CSE	1 <sup>st</sup> or 2 <sup>nd</sup>	BUHK.408 - Universal Human Values	Kindly include BUHK.408 - Universal Human Values in either 1st semester or 2nd semester.	We have no control over this; we will discuss it in JBoS.
Bangalore Institute of Technology	CSE	5th	Data Mining and Data Warehousing	Kindly include Data Mining and Data Warehousing course as professional elective.	Introduced “Enterprise Data Warehousing” course
Bangalore Institute of Technology	CSE	5 <sup>th</sup>	Blockchain and IoT	Kindly include Blockchain and IoT courses in 5th Semester so that the students can come up with societal relevance projects.	Fifth semester includes prerequisite courses for Blockchain and IOT.
Bangalore Institute of Technology	CSE	7th	PCC	Some important subjects relevant for project work and research have been included as professional electives in 7th semester, instead make them as PCC.	It is impossible to include as Core courses due to the 160 credit Scheme structure. There is no clarity on the courses you are mentioning.

Bangalore Institute of Technology	CSE			Preferably make all one credit course as online courses.	The syllabus is for over 200 colleges spread throughout Karnataka. Internet connectivity may be an issue.
Canara Engineering College	AI&M L	3 <sup>rd</sup>	BAI301 - Mathematics for AI & ML:	Given that this is a theory course (PCC/BSC), we suggest that introduce practical experiments in each module that enhances the student's mathematical foundation for AIML with practical approaches and this can be included in the IPCC course type.	Sem 3 includes three lab courses. Some colleges may be concerned about infrastructure availability. Departments may assign a tool-driven assignment worth 20 marks.
Canara Engineering College	AI&M L		BAI303 - Operating Systems	We suggest that consider this course as a PCC (Professional Core Course) instead of an IPCC (Integrated Professional Core Course).	Students must study practical topics in OS. It is preferable to keep the OS as IPCC. Unix practical fundamentals are essential.
Canara Engineering College	AI&M L		BAI306B - Python Programming for AI & ML	This course can be enlisted in Ability Enhancement Course (AEC) category in the same semester as a practical course rather than in the Engineering Science Course (ESC/ETC/PLC) category.	BAI306X courses are introduced as integrated courses.
Canara Engineering College	AI&M L		BAI306x - Engineering Science Course	Under this category, OOPS with C++ course can be introduced in the place of BAI306D (No course Name for this course code) which may help the students learn the object-oriented concepts.	Not Recommended, Functional programming with Java introduces OOPs concepts

			(ESC/ETC/PLC)		
Canara Engineering College	AI&ML			To strengthen the P0-6, P0-7, P0-8, P0-9, and P0-10, the Societal Based Surveying Course may be enlisted in the Ability Enhancement Course (AEC) category to assess the impact of the engineering solution/practices in the society w.r.t. health, cultural, environment, and sustainable development.	Green IT and Sustainability has been introduced. Health & Safety course is there in 1st Year
Canara Engineering College	AI&ML	4 <sup>th</sup>	BAI456C - UI/UX OR BAI456B - Capacity Planning for IT (AEC)	We suggest introducing the course Introduction to Artificial Intelligence and IoT in one of these courses (BAI456B, BAI456C) in the AEC category. This will help students develop smart and intelligent IoT devices/products	IOT Analytics has been introduced as an elective in 7th Sem.
Canara Engineering College	AI&ML		BAI405x (ESC/ETC/PLC) OR BAI456x (AEC)	Under this category, we suggest that, the App development (Android App Development, Flutter /Dart) Programming courses can be included to enhance student's skill in designing and developing the mobile applications.	The goal is for students to have good mathematics skills. The courses mentioned above cannot be coupled with tool-based training.

Canara Engineering College	AI&M L	5 <sup>th</sup>	BAI515x - Professional Elective Course	Increase the number of professional elective courses and enlist Data Mining and Applications of AIML in Healthcare Systems courses in this category. This will help students understand various algorithms and applications in healthcare systems and encourage multidisciplinary thinking.	Not recommended. The scheme structure allows for only four optional courses.
Canara Engineering College	AI&M L		BAI515x - Professional Elective Course	Web Programming with JavaScript, PHP, and MySQL course can be included in this course category	MERN is part of AEC. MySql is a part of DBMS
Canara Engineering College	AI&M L	6 <sup>th</sup>	BAI613x - Professional Elective Course	Increase the number of professional elective courses and enlist Introduction to Generative AI (ChatGPT) and Quantum Machine Learning courses in this category. This will help the students in understanding the advancement of AI and ML	Generative AI has been introduced as AEC course
Canara Engineering College	AI&M L		BAI657x - Ability Enhancement Course/Skill	Increase the number of professional elective courses and enlist practical courses that demonstrate the tools, techniques, and frameworks used for AI like TensorFlow, Keras,	Most of these tools are part of the Integrated courses.

			Development Course	MindsDB, MXNet, OpenAI, Scikit-learn, and many more	
Canara Engineering College	AI&ML	7 <sup>th</sup>	BAI714x - Professional Elective Course	Increase the number of professional elective courses and enlist Recommender Systems and Interoperability in AIML models courses that help the students to enhance their skills in the domain of AIML	Not recommended. The scheme structure allows for only four optional courses.
Atria Institute of Technology	CSE	4 <sup>th</sup>	DBMS(BCS403)	For 4 <sup>th</sup> sem, it will be better if students have a practical session on DBMS(BCS403) along with a Mini project	It is an integrated course
Atria Institute of Technology	CSE	4 <sup>th</sup>	Discrete Mathematics & graph theory (BCS405A)	Discrete Mathematics & graph theory (BCS405A) to be included as a core paper, as it is a base for AI & machine learning	Completely packed , Department can create an awareness about different courses under ESC
Atria Institute of Technology	CSE	4 <sup>th</sup>	Ability Enhancement Course(AEC)	A good initiative to include LaTeX(BCS456D) as an Ability Enhancement Course(AEC) for 4 <sup>th</sup> sem, it will help to follow standard typesetting software for project report writing.	NA
Bangalore Institute of Technology	ISE	3 <sup>rd</sup>	Python (BPLCK105B)	Python subject (BPLCK105B) can be included in third semester ( so that the students can study	It is not advised to change the first-year courses. We can think about it during the next revision. Students will study Python

				it after they are familiar with the object-oriented concepts in java (BIS306A) or C++ (BIS306B))	through a variety of practical components that are linked to a handful of courses.
Bangalore Institute of Technology	ISE	4th	Analysis and Design of Algorithms (BIS401) and Data Structures using C++ (BIS304)	It is suggested to include one hour tutorial class for Analysis and Design of Algorithms (BIS401) and Data Structures using C++ (BIS304) since the associated labs are evaluated using Semester End Examination.	We must reduce teaching hours in order to implement Tutorial. It is not advised.
Bangalore Institute of Technology	ISE		Cryptography or cyber security	Cryptography or cyber security can be added as a professional elective course.	Cryptography is part of Information & Network Security during 7th Sem.
Bangalore Institute of Technology	ISE	3rd	Operating Systems	Operating systems theory often focuses on foundational concepts and abstract models.  Covering both the theoretical and practical aspects of operating systems within a single semester may lead to time constraints.	BoS will update the theory content for 42 Hours.

Bangalore Institute of Technology	ISE	6 <sup>th</sup> and 7 <sup>th</sup>	Open Elective Course	suggestion to include Information Science Branch specific subjects related to Management and Networking in the Open Elective Course for Sixth and Seventh Semester scheme as per 2022 scheme of VTU	Not recommended
Sir M V IT	CSE(IO T)	3 <sup>rd</sup> Sem		Digital design and computer organization subject has been included IPCC BCO302: Digital Design & Computer Organization subject with 3 hours of teaching and 2 hours for practical. It becomes difficult to execute lab and to cover up the subject portion framed for each module. we are suggesting to reduce the portion framed for the subject.	BoS will add theory contents for 42 Hours. Lab components are simulation based. Lab components may be from Virtual Labs ( <a href="https://www.vlab.co.in/">https://www.vlab.co.in/</a> )
Sir M V IT	CSE	3 <sup>rd</sup> Sem		As per the draft scheme for 4th semester for Course and Course Code: PCC/BSC BCS401 with Course Title: Analysis & Design of Algorithms, there is no laboratory component which is important for this core subject of Computer Science and Engineering. This is also very important for placement. Hence I request you to include Laboratory for this course.	BCSL404 - ADA Lab is present in the existing scheme.

Sir M V IT	CSE	5 <sup>th</sup> Sem	Computer Network	<p>With reference to the above subject Computer Network (IPCC BCS502). The following prerequisites are:</p> <ol style="list-style-type: none"> <li>1. Data Communication subject needs to be taught in 4th semester else students will find it tough to follow Computer Network in 5th sem.</li> <li>2. Combining the lab with theory will burden syllabus coverage.</li> <li>3. There should be an external practical exam.</li> </ol>	<p>There is no available slot for Data Communication. The CN course will cover all of the essential Layers.</p> <p>BoS will update the theory content for 42 Hours.</p> <p>The components of the lab are based on simulation.</p>
Sir M V IT	CSE	4 <sup>th</sup> Sem	Microcontrolle rs	<p>feedback: 1) External practical exam will be more effective in evaluation of practical part than questions from the practical part of IPCC included in the SEE question paper.</p> <p>2) Combining Practical (2 hours) with theory will be more burden for syllabus coverage</p>	<p>We are unable to provide a separate lab due to credit constraints.</p>
T. John Institute of Technology (TJIT)	CSE	3rd	Digital Design & Computer Organization	<p>The potential impact on student's workload when combining two courses is not reasonable and manageable for the students</p>	<p>We combined the courses due to credit constraints. Workload will be addressed when developing the contents.</p>
T. John Institute of Technology (TJIT)	CSE	3rd	Ability Enhancement Course/Skill	<p>Including MS-Office can be beneficial for students. Students can learn to create professional reports</p>	<p>During the Induction Programme, Microsoft Office may be covered.</p>

			Enhancement Course - III	using Word, analyze data using Excel and develop engaging presentations using PowerPoint.	
T. John Institute of Technology (TJIT)	CSE	3rd	ESC/ETC/PLC	Incorporating OOPs with Java and OOPs with C++ as core subjects can be highly beneficial for students studying computer science and related disciplines. Including courses on Introduction to Bioinformatics and Smart Product Development in curriculum of ESC can provide students with valuable interdisciplinary knowledge and skills.	There is no available slot to add Bioinformatics as an elective.
T. John Institute of Technology (TJIT)	CSE	4th	Ability Enhancement Course/Skill Enhancement Course- IV	Including courses on “Basic Accounting” or “Business Mathematics economics for Engineers” can provide valuable skills and knowledge to engineering students. Basic accounting skills are essential for engineers who may be involved in project management, cost estimation, budgeting, or entrepreneurship. Understanding accounting principles can help engineers make informed financial decisions and effectively manage resources.	Software cost estimation, budgeting, staffing will be included in Software Engineering and Project Management Course
T. John Institute of Technology (TJIT)	CSE	4th	ESC/ETC/PLC	Including courses on “IoT for Smart Cities” and “Human Machine Interaction” in curriculum of	IOT has been introduced as a core course in 7th Sem. .

				<p>ESC can provide students with valuable knowledge and skills relevant to emerging technologies and industry demands. The Internet of Things (IoT) is transforming various industries, including urban development and infrastructure. Including a course on IoT for Smart Cities can expose engineering students to the concepts and technologies used in creating connected and intelligent urban environments. As technology becomes more integrated into our daily lives, understanding human - machine interaction is crucial. Including a course on Human - Machine Interaction can equip engineering students with knowledge about designing user-friendly and intuitive interfaces for various applications.</p>	
T. John Institute of Technology (TJIT)	CSE	5th	Web Technology Lab	<p>Including a Web Technology Lab in the syllabus without a corresponding theory course may not be as beneficial for engineering students. A theory course provides students with a solid foundation in the principles, concepts, and fundamentals of web technologies. It introduces key topics such as</p>	<p>We are unable to provide a separate theoretical course due to credit constraints.</p> <p>Web technologies should be taught through hands-on practice sessions.</p>

				HTML, CSS, JavaScript, web development frameworks, server-side scripting, database integration, and web security. This theoretical understanding is crucial for students to grasp the underlying concepts and make informed decisions during the practical lab sessions.	
T. John Institute of Technology (TJIT)	CSE	5th	Professional Elective Course	Including courses on Video Analytics and Audio-Video Forensics or Cybersecurity as professional elective courses can indeed be highly beneficial for computer science and engineering students. With the proliferation of video content in various domains, including surveillance, entertainment, and social media, understanding video analytics and audio video forensics is crucial. These courses enable students to analyze, process, and extract meaningful information from video data while addressing legal and ethical considerations. Cybersecurity is a critical concern in today's digital landscape. Including a course on cybersecurity equips students with the knowledge and skills to protect computer systems, networks, and data from	There is no available slot to add mentioned courses as an elective. Computer Vision and Introduction to Cyber Security will meet the requirement.

				cyber threats, ensuring the integrity, confidentiality, and availability of information.	
T. John Institute of Technology (TJIT)	CSE	6th	Professional Elective Course	By including a course on Essentials of Data Analytics as a professional elective, engineering students can acquire valuable skills that are highly sought after in today's data-driven world. These skills enhance their employability in a wide range of industries, including engineering, manufacturing, consulting, and technology. Additionally, the ability to analyze and interpret data empowers students to make data-driven decisions and contribute to the advancement of engineering practices. Including a course on Fundamentals of Cyber Law as a professional elective for CSE students helps bridge the gap between technology and legal aspects. It empowers students to develop technology solutions while considering legal requirements, ethical considerations, and cybersecurity implications. By understanding the legal landscape, engineering	7th Sem Electives are related to Data Analytics.  Cyber Law is a component of the first-year Introduction to Cyber Security course.

				students can contribute to the development of secure, compliant, and ethical digital systems.	
T. John Institute of Technology (TJIT)	CSE	6th	Computer Vision	Including a course on Computer Vision in Healthcare Applications as a professional elective prepares engineering students to contribute to the advancement of healthcare technologies. It equips them with the knowledge and skills to develop innovative solutions, improve patient outcomes, and address challenges in the healthcare industry. Furthermore, the intersection of computer vision and healthcare opens diverse career opportunities in medical imaging, telehealth, healthcare analytics, and medical device development.	In computer vision, teachers might refer to healthcare-related applications.
T. John Institute of Technology (TJIT)	CSE	7th	Professional Elective Course	Including a course on Drone Technology as a professional elective for CSE students enables them to explore a cutting-edge technology, gain interdisciplinary skills, and understand the practical applications and challenges associated with drones. It prepares them for roles involving drone development, programming, control systems,	IOT has been introduced as a core course in 7th Sem.  Drone Technology may not be a relevant course for CSE.

			<p>computer vision, and data analysis in industries leveraging drone technology.</p> <p>Including courses on Social IoT and Reinforcement Learning as professional electives for engineering students enables them to explore emerging fields in technology and gain specialized knowledge and skills. These courses prepare students for careers involving the design, development, and deployment of intelligent systems, IoT applications, and decision making algorithms. Additionally, the interdisciplinary nature of these courses fosters collaboration and enhances students' problem-solving abilities and adaptability in various engineering domains</p>	
Alva's Institute of Engg. & Technology, Moodu bidre	CSE		<p>We have gone through the complete scheme of 3rd &amp; 4th Semester BE Computer Science &amp; Engineering. Thank you for the well planned Scheme, which is very related to the industry apt syllabus.</p> <p>We suggest you to include "iOS App Development" as an Ability enhances Lab course,</p>	<p>“Progressive App Development” has been introduced.</p>

				because of its very much essential nowadays to learn for the industry related syllabus.	
SJBIT, Bangalore	ISE	3 <sup>RD</sup>	AEC	R Programming (BIS358B) specified in AEC course of 3 <sup>rd</sup> semester must be included as PLC course (BIS405D) in 4 <sup>th</sup> semester.	It is not advised to club with Mathematical courses.
SJBIT, Bangalore	ISE	7 <sup>th</sup> Sem	Elective	Ethical hacking and Quantum computing courses can be introduced as Professional Elective course in 7 <sup>th</sup> semester in place of Embedded systems (BIS714C) and Distributed File systems (BIS714D).	BoS intends to provide one Hardware-related course (Embedded System). DFS is a requirement for ISE students.
SJBIT, Bangalore	ISE	4 <sup>th</sup>	AEC	Capacity planning (BIS456B) in AEC course of 4 <sup>th</sup> semester can be replaced with 6 <sup>th</sup> semester AEC course in place of Mobile Application Development (BIS657A).	Not recommended.
SJBIT, Bangalore	ISE	3 <sup>rd</sup>		Data ware housing and data mining subject can be included. That helps students to understand Data Analytics with R (BCS358B).	No place
SJBIT, Bangalore	ISE	7 <sup>th</sup>	Open Elective	BCS755D for this open elective course Digital Image Processing subject can be included	Not recommended

KSIT, Bangalore	CSE	5 <sup>th</sup>		Interchange Software Engineering & Project Management course of 5 <sup>th</sup> Sem with IOT of 7 <sup>th</sup> Sem to help the students do project.	Interchanging is not possible due to the structure of the Scheme.
KSIT, Bangalore	CSE	5 <sup>th</sup>	Theory of Computation	Clarify about Pre-requisite	Theory of Computation is equivalent to Finite Automata and Finite Languages
KSIT, Bangalore	CSE	5 <sup>th</sup>	Mini Project	Needs clarity on LTP	Four hours of practical per week is equivalent to 2 credits
RRIT	ISE	3 <sup>rd</sup>	Data structures using C/C++(BIS304):	This subject includes a greater number of applications like Stacks, Queues. Linked list, graphs, trees etc. So I request to allot 4 hrs/week instead of 3 hrs/week only. So that the teacher can effectively teach in details and students can learn the fundamentals and applications effectively and also, they can involve in writing algorithms and research activities.	We are unable to add additional hours due to credit constraints. The content will be tailored to last 42 hours.
RRIT	ISE	3 <sup>rd</sup>	AEC(BIS358x)	The allotted teaching hour is only one hour for all the theory subjects. Since this subject syllabus is like other core subjects, I personally feel it would be better if you allot atleast 3 teaching hours.	Contents will be designed for 14 hours

RRIT	ISE	4th	Advanced JAVA (BIS402)	I suggest to add separate laboratory for this subject to improve the practical knowledge of the students in this subject.	Advanced Java is an integrated course.
Canara Engineering College	CSE	3rd	BCS302 (Digital Design & Computer Organization):	This course can be split into two courses: Computer Organization, which can be introduced as a Professional Core Course (PCC), and Digital Design, which can be enlisted as an Ability Enhancement Course (AEC).	We have combined the courses due to credit constraints. Workload will be addressed when developing the contents.
Canara Engineering College	CSE	3rd	BCS306x:	Currently, only two courses have been introduced under the ESC/ETC/PLC category. However, we would like to have more options for the students by expanding the course offerings in this category.	The goal is to study OOP concepts using either Java or C++.
Canara Engineering College	CSE	4th	BCS402 (Microcontrollers)	can be enlisted as an Ability Enhancement Course (AEC).	Microcontroller is a full pledged subject that all CSE students should take.
Canara Engineering College	CSE	4th	AEC	Unix Shell and PHP programming can be introduced under the Ability Enhancement Course (AEC).	Unix Shell is a practical component of the OS course. While designing the syllabus, we will try to add PHP.

Canara Engineering College	CSE	4 <sup>th</sup>	AEC	HTML and CSS courses can be introduced under the Ability Enhancement Course	Part of 1st year course
Canara Engineering College	CSE	4 <sup>th</sup>	AEC	Pandas and Numpy course can be introduced under the Ability Enhancement Course.	Part of “Data Visualization with Python”
Canara Engineering College	CSE	4 <sup>th</sup>	AEC	BCS456D (Technical writing using LaTeX Lab) can be incorporated as a component or module within the BCS586 (Mini Project) course of the V semester, allowing students to develop their technical writing skills while working on their mini projects.	Students will use the concepts learned in BCS456D for Mini and Major Projects.
Canara Engineering College	CSE	5 <sup>th</sup>	BCSL504 (Web Technology Lab)	BCSL504 (Web Technology Lab) is currently a laboratory course. We suggest introducing a related theory course to complement the practical aspects of web technology. This will provide students with a comprehensive understanding of the subject by combining theoretical concepts with hands-on practical experience.	We are unable to provide a separate theoretical course due to credit constraints.

Canara Engineering College	CSE	5th	Mini Project	In the BCS586 (Mini Project) course, BCS456D (Technical writing using LaTeX Lab) can be incorporated as one of the components. This will allow students to develop their technical writing skills while simultaneously working on their mini projects.	Students will use the concepts learned in BCS456D for Mini and Major Projects.
Canara Engineering College	CSE	7th	BCS657x - BCS657 A (Mobile Application Development):	BCS657x - BCS657 A (Mobile Application Development): can be introduced using FLUTTER as a focused area of study within an existing course.	“ Progressive App Development” has been introduced
Canara Engineering College	CSE	5th	BCS501 (Software Engineering & Project Management):	BCS501 (Software Engineering & Project Management): For this course, practical assignments and case studies can be introduced, enabling students to apply theoretical concepts in real-world scenarios. This course may be enlisted under the IPCC category.	This course is Mandatory PCC subject for all Engineering Program
Canara Engineering College	CSE	8 <sup>th</sup>		NoSQL Database can be introduced as a Professional Elective Course.	No free space

Canara Engineering College	CSE	8th		At least one core course can be introduced in the VIII semester.	The scheme structure is the same for all Engineering Programmes. The goal is to allow students to pursue a full-time internship.
Atria Institute of Technology	CSE	8th	BCS801X/BC S802X	Open elective can be offline course	The scheme structure is the same for all Engineering Programmes. The goal is to allow students to pursue a full-time internship.
BMS College of Engineering, Bengaluru	CSE	3rd & 4th		All such UG programs can have TWO courses in the III semester and TWO courses in the IV semester, and offered by the EC/TC Board. This will make the CSE graduates more competent, as computers are application of Electronics and Data Science is an application of Signal Processing.	Current Scheme is having following courses 1. Digital Organization and Computer Organization 2. Microcontroller
SJBIT	CSE	3rd	Digital Design & Computer Organization	<ul style="list-style-type: none"> <li>• Combination of digital design and Computer Organization will make content huge.</li> <li>• Fundamentals of digital circuit is required before design.</li> </ul>	We have combined the courses due to credit constraints. Workload will be addressed when developing the contents.

				<ul style="list-style-type: none"> <li>• Difficult to cover complete subject syllabus effectively.</li> </ul>	
SJBIT	CSE	3rd	BCS306x	<p>May be introduce Unix Shell Programming subject.</p> <p>May be introduce R Programming subject</p>	<p>Unix Shell is a part of OS practical Component</p> <p>R programming has been introduced as AEC</p>
SJBIT	CSE	4th	Database Management Systems	<ul style="list-style-type: none"> <li>• May be inter change the subject to V semester. Because it can be help for carry out mini project along with Web Technology.</li> </ul>	<p>Prior knowledge on DBMS will help the student to develop software(Mini Project) in 5th Sem effectively.</p>
SJBIT	CSE	4th	BCS405x	<ul style="list-style-type: none"> <li>• May be introduce Operation Research subject</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• May be introduce Linear algebra subject</li> </ul>	<p>Optimisation Technique is already introduced under BCS405x, hence introducing Operation Research is not advised.</p> <p>In the first year, students will learn about linear algebra principles.</p>

SJBIT	CSE	7th	BCS755D	<ul style="list-style-type: none"> <li>• May be introduced as a Data Communication subject, because it gains Networking knowledge for other circuit branches</li> </ul>	It is not advisable to introduce Data Communication after the Computer Network course. The Computer Network Course will cover all of the essential Data Communication principles.
SJBIT	CSE	8th	Professional Elective (Online Courses) Only through NPTEL	<ul style="list-style-type: none"> <li>• Not recommended putting online course as a subject in curriculum.</li> <li>• Can be given more weightage to getting honors degree to do NPTEL courses instead of making mandatory.</li> </ul>	The scheme structure is the same for all Engineering Programmes. The goal is to allow students to pursue a full-time internship.
A. J. Institute of Engineering and Technology Mangaluru	ISE	3rd	Engineering Science Course	<ul style="list-style-type: none"> <li>• Suggested a few different domain courses rather than covering the courses with the same domain.</li> <li>• Suggested to fill relevant courses under BIS306C BIS306D</li> <li>• In the 4th Semester IPCC Course with course code BIS402 titled with advanced</li> </ul>	<p>Intention of BoS is, students should undergo OOPs Concept</p> <p>During the beginning of the third semester, the department should make students aware of the prerequisite of "Advanced Java." If a student has not taken a Java course, encourage them to do so before the fourth semester using</p>

				JAVA is introduced but if the students have not chosen BIS306A (OOPS with JAVA) there will be GAP in basic understanding of the course.	Infosys Springboard. to go through the course through Infosys Springboard before 4th sem.
A. J. Institute of Engineering and Technology Mangaluru	ISE	3rd	Digital design and Computer Organization	<ul style="list-style-type: none"> <li>• Suggested to focus more depth on logic design concept under digital design course.</li> <li>• CO syllabus should go in line with Computer network course.</li> </ul>	Noted
A. J. Institute of Engineering and Technology Mangaluru	ISE	6th	Machine Learning	<ul style="list-style-type: none"> <li>• Prior to 6th Semester suggested to add any datamining related course.</li> <li>• Learning ML without the basic knowledge of data processing will be difficult.</li> </ul>	Due to credit constraints, we are unable to introduce the Data Mining Course. The first unit will cover the prerequisite for ML.
A. J. Institute of Engineering and Technology Mangaluru	ISE	5th	Software engineering and project management	<ul style="list-style-type: none"> <li>• Suggested to include self-learning components like open tools and software used for software engineering.</li> </ul>	Noted

A. J. Institute of Engineering and Technology Mangaluru	ISE	5th	Mini Project	<ul style="list-style-type: none"> <li>• Suggested to include any Web related or User Interface design courses in lower semester.</li> <li>• Suggested to include Mobile Application Development laborato1y m the curriculum so that students will get better hands on experience.</li> <li>• This may help to the students to develop the android applications which are useful for mankind and society. which may help the students implement mini project in better manner front end.</li> </ul>	In the first year, a group of students will take a web course. Others who want to create web-related products, must learn the basics through online resources.
A. J. Institute of Engineering and Technology Mangaluru	ISE	6th	Mobile Application Development	<ul style="list-style-type: none"> <li>• Suggested to include Mobile Application Development laborato1y m the curriculum so that students will get better hands on experience.</li> </ul>	Not advised due to credit constraints. Programming assignment for 20 marks can be introduced.

				<ul style="list-style-type: none"> <li>This may help to the students to develop the android applications which are useful for mankind and society.</li> </ul>	
A. J. Institute of Engineering and Technology Mangaluru	ISE		Information Assurance and Security/Software Testing	<ul style="list-style-type: none"> <li>It is recommended to offer the above course which will help the students use state of the art in testing filed.</li> </ul>	Software Quality Assurance has been introduced as an elective in 7th Sem.
A. J. Institute of Engineering and Technology Mangaluru	ISE	7th	Information and Network Security	<ul style="list-style-type: none"> <li>Only theory course is included. In the same semester Lab inclusion is suggested so that students will get practical knowledge on implementation data base-concepts.</li> <li>Mini project can be added in 4th Semester instead of 5th Semester.</li> </ul>	Not advised due to credit constraints. Programming assignments can be introduced for a 20-marks component. Because the basic courses are introduced up to the fourth semester, it is preferable to keep the Mini Project in the fifth semester.
A. J. Institute of Engineering and Technology Mangaluru	ISE	7th	Big Data Analytics	<ul style="list-style-type: none"> <li>Data Analytics practical approach can be added.</li> <li>If the syllabus contents are very introductory levels, then suggested to</li> </ul>	Not advised due to credit constraints. Programming assignment for 20 marks can be introduced.

				include the basic practical experiments along with theory.	
A. J. Institute of Engineering and Technology Mangaluru	ISE	8th	NPTEL	<ul style="list-style-type: none"> <li>To List the course, such that students should be the Employer then employee. More options can be provided to choose from different online platforms.</li> <li>Clarification regarding mentioning of a 3 hours' theory lecture for NPTEL course.</li> </ul>	Noted, No of credits is 3, so students should spend 3 Hours per Week on the courses opted.
KLE Institute of Technology	CSE	3rd		“Statistics” can be added as a core subject for CS graduates, as it is fundamental in many concepts. It can be used at BCS301	Statistics is a part of Mathematics course

KLE Institute of Technology	CSE	3rd	ESC/ETC/PLC	<p>a. At 3rd sem: Discrete Mathematical Structures, Number theory, Fundamentals of Wireless Communication, Analog and Power Electronics, Material Science</p> <p>b. At 4th Sem: Graph Theory, Matrix Computation, VLSI Design, Introduction to Automation, Earth, water, and Agriculture Science.</p>	Intention is in 3rd sem , we want the students to get the flavor of OOPS concept and in 4th sem, Mathematical concept required for CSE.
KLE Institute of Technology	CSE	6	Advanced Java	Instead of Advanced Java (BCS613D) in professional elective we can introduce Evolutionary Computing course. And Advanced JAVA can be used as AEC Course	Java's market share is around 20%, so it is better to study Java.
KLE Institute of Technology	CSE	5 <sup>th</sup> & 6 <sup>th</sup>	Elective	Instead of Unix System Programming (BCS515C) and Compiler Design (BCS613C) we can use System Programming and Compiler Design as one course. In this way, we can introduce one more elective at BCS613C.	Combining CD with SP is not recommended. CD is required for the students who are aiming to clear GATE.

KLE Institute of Technology	CSE	5 <sup>th</sup> & 6 <sup>th</sup>	Elective	Instead of Distributed Systems (BCS515D) and Blockchain Technology (BCS613A) we can combine Distributed Computing and Blockchain as one course. And hence we can do one more elective at BCS613A	Not recommended, combining the course will make us to skip important topics.
KLE Institute of Technology	CSE	7 <sup>th</sup>	Big Data Analytics	Big Data Analytics (BCS714D) can be made as a core course and Parallel Computing (BCS702) as an Elective course.	Both the courses are important. Interested students will opt for Big Data Analytics course
KLE Institute of Technology	CSE	7 <sup>th</sup>	Elective	Instead of Soft Computing (BCS714C) any other course can be introduced. Since a good book is not available with this title. Moreover, AI, ML, DL, and Evolutionary computing cover these topics.	Replaced with “Enterprise Data Warehousing”

RAJEEV INSTITUTE OF TECHNOLOGY	ISE	3rd	Engineering Science Course	<ul style="list-style-type: none"> <li>• Suggested to add Introduction to Python Programming.</li> <li>• Suggested to Data Visualization with Phyton under ESC.</li> <li>• Suggested to add different domains courses rather than covering the courses with same domain.</li> </ul>	Intention of BoS is, students should undergo OOPs Concept
RAJEEV INSTITUTE OF TECHNOLOGY	ISE	3rd	Engineering Science Course	<ul style="list-style-type: none"> <li>• Instead of java theory it is suggested to include OOPS with JAVA Laboratory so that students are able to learn advanced java in the higher semester</li> </ul>	It's a IPCC course .
RAJEEV INSTITUTE OF TECHNOLOGY	ISE	4th	AEC	<ul style="list-style-type: none"> <li>• Instead of UI/UX it is suggested to include some testing tools like POSTMAN with JAVA and PYTHON which is useful to the students when they go to industry.</li> </ul>	Tosca – Automated Software Testing has been introduced in 6 <sup>th</sup> Sem

RAJEEV INSTITUTE OF TECHNOLOGY	ISE	4th	Biology for Engineers	All modules of course content should be related to Information technology.	Yes, will be considered
RAJEEV INSTITUTE OF TECHNOLOGY	ISE	6th		<ul style="list-style-type: none"> <li>• Prior to 6th Semester suggested to add any datamining related course.</li> <li>• Learning ML without the basic knowledge of data processing will be difficult.</li> </ul>	Due to credit constraints, we are unable to introduce the Data Mining Course. The first unit will cover the prerequisite for ML.
RAJEEV INSTITUTE OF TECHNOLOGY	ISE	6th	BIS657A	<ul style="list-style-type: none"> <li>• Suggested to include Mobile Application Development laboratory in the curriculum so that students will get better hands on experience.</li> <li>• This may help to the students to develop the android applications which are useful for the society.</li> </ul>	For 20 Marks component, plan is to introduce Programming assignments

RAJEEV INSTITUTE OF TECHNOLOGY	ISE	7th	Information and Network Security	<ul style="list-style-type: none"> <li>• Only theory course is included. In the same semester Lab inclusion is suggested so that students will get practical knowledge on implementation data base concepts.</li> <li>• Mini project can be added in 4th Semester instead of 5th Semester</li> </ul>	For 20 Marks component, BoS will add programming assignments.  5th Sem is better for Mini Project.
RAJEEV INSTITUTE OF TECHNOLOGY	ISE	7th	Big Data Analytics	<ul style="list-style-type: none"> <li>• Data analytics practical approach can be added.</li> <li>• If the syllabus contents are very introductory levels. then suggested to include the basic practical experiments along with theory.</li> </ul>	For 20 Marks component, BoS will add programming assignments
RAJEEV INSTITUTE OF TECHNOLOGY	ISE	8th	NPTEL	More options can be provided to choose from different online platforms.	Examination system of other platform need to be robust.

BoS -Chairman