SMVITM

Dr. Sudarshan Rao K <qa@sode-edu.in>

Feedback on Tentative 2022 scheme syllabus on 22IDT18

1 message

Dr. Sudarshan Rao K <qa@sode-edu.in> Thu, Nov 10, 2022 at 3:59 PM
To: "academicsyllabus.vtu@gmail.com" <academicsyllabus.vtu@gmail.com>

Respected Sir,
Please find attached the feedback on 2022 scheme syllabus on course Innovation and Design Thinking (22IDT18).

With Thanks & Regards,
Dr. Sudarshan Rao K, B.E., M.Tech, Ph.D.
Dean (Quality Assurance)
Professor and Head, *Department of Mechanical Engineering*
Shri Madhwa Vadiraja Institute of Technology & Management
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Innovation and Designb Thinking 22IDT18-28.pdf
833K

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Innovation and Design Thinking (22IDT18/28)

Feedback on the course syllabus

Respected Sir,

I have handled the course 21IDT19 and 21IFT29 during the AY: 2021-22. The course is very interesting and essential for the engineering graduates.

But the course content can be revised to discuss more about fundamentals of design thinking.

It was observed that, the course content of Innovation and Design Thinking (22IDT18/28) is same as previous scheme (21IDT19/29), no change in the syllabus observed.

Present course content discusses more about the IT tools used in design thinking and use of design thinking in IT sector and strategic management. These topics can be included in higher semesters in department specific design courses like software engineering, product design, electronics circuit design etc.,

I have attended few FDPs on Design thinking; also have completed the Design Thinking course from Courseera and SWAYAM.

I have also referred the course content of Design thinking course of many universities and institutions.

By referring to the course content of few universities, I prepared the course content for Design thinking and conducted a certificate course to our third year mechanical engineering students during 2021-22.

According to me following topics may be considered for Innovation and Design Thinking course.

Proposed Course content

Module 1

Introduction to Innovation and Design Thinking

Introduction, Invention, Innovation, Need of innovation, History of Design Thinking, Definition of Design Thinking, Difference between Product Design and Design Thinking, Design Thinking Mindset

Module 2

Design Thinking Process

Empathize, Define, Ideate, Prototype, Test

Module 3

Design Thinking Tools

Visualization, Journey mapping, Mind mapping, Prototyping, Storytelling, Value chain analysis, Assumption testing, Rapid concept development, Co-creation etc.,

Module 4

Application of Design Thinking

Application of design thinking in healthcare, education, product development, sports, Human Resource, advertising and marketing, automobile, IT industry

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Module 5

Design thinking workshop

In the workshop, learners are formed into groups and activities shall be conducted for each design thinking phases Empathize, Design, Ideate, Prototype and Test

Course Outcome

CO No.	At the end of the course, learner will be able to	Bloom's Level
CO1	Explain theory and practice in design thinking	L2
CO2	Apply various design thinking tools for problem solving	L3
CO3	Explain the application of design thinking techniques	L2
CO4	Develop and present design ideas through different design thinking tools and techniques	L4

In the Semester End Examination for the course 21IDT19 and 21IDT29, questions are set only from the proposed topics only.

I am happy to give further details like teaching learning process for each module, conduction of design thinking workshop, assessment methods.

Thank you

With Regards,

10/11/2022

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SMVITM

Dr. Sudarshan Rao K <qa@sode-edu.in>

Feedback on the course- Fluid Mechanics- BME403

1 message

Dr. Sudarshan Rao K <qa@sode-edu.in> Wed, Sep 20, 2023 at 4:29 PM
To: academicsyllabus.vtu@gmail.com

Respected Sir,
Please find attached the feedback on the 2022 scheme syllabus on the course Fluid Mechanics- BME403.

With Thanks & Regards,

Dr. Sudarshan Rao K, B.E., M.Tech, Ph.D.
Dean (Quality Assurance)
Professor, *Department of Mechanical Engineering*
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Suggestion for FM-BME403.pdf
166K

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(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
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Approved by AICTE, New Delhi & Recognized by Govt. of Karnataka
Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.
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Fluid Mechanics- BME403

Feedback on the course syllabus

Respected Sir,

I sincerely appreciate the changes made in the syllabus by the Chairman and members of the Board of Studies for Mechanical Engineering.

In the previous scheme (2021), some topics in Module 1 were meant for class discussion but were not included in the assessment. However, these topics are fundamental to understanding fluid properties, and it is crucial that all students are acquainted with them.

I have the following suggestions for this course:

In Module 2, Laminar and Turbulent Flow and in Module 3, Fluid Dynamics and Bernoulli's Theorem are included. But for Laminar and turbulent flow, knowledge on Bernoulli's theorem is necessary. To enhance the learning experience, I propose that these topics be interchanged. Specifically, Fluid Dynamics and Bernoulli's Theorem could be moved to Module 2, and Laminar and Turbulent Flow to Module 3.

In Module 3, the topic "Impact of jets on vanes" is included. I recommend that this topic be incorporated into the Turbo Machinery course of the V semester, specifically under the hydraulic turbines module, as it aligns better with that subject.

It would be beneficial to redefine the course outcomes. Some of the current course outcomes contain multiple action verbs, which can be clarified and streamlined for better assessment and comprehension.

Thank You,

With Regards,

20/9/23

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20 September 2023

Udupi

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

B.E. in Computer Science and Engineering

Scheme of Teaching and Examinations 2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

(Effective from the academic year 2023-24)

III SEMESTER

Sl. No	Course	Course Code	Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	PCC/BSC	BCS301	Mathematics for Computer Science	TD: Maths PSB: Maths	3	2	0		03	50	50	100	4
2	IPCC	BCS302	Digital Design & Computer Organization	TD: CS PSB : CS	3	0	2		03	50	50	100	4
3	IPCC	BCS303	Operating Systems	TD: CS PSB : CS	3	0	2		03	50	50	100	4
4	PCC	BCS304	Data Structures and Application	TD: CS PSB : CS	3	0	0		03	50	50	100	3
5	PCCL	BCSL305	Data Structures Lab	TD: CS PSB : CS	0	0	2		03	50	50	100	1
6	ESC	BCS306x	ESC/ETC/PLC	TD: CS PSB : CS	2	0	2		03	50	50	100	3
7	UHV	BSCK307	**Social Connect and Responsibility**	Any Department	0	0	2		01	100	---	100	1
8	AEC/ SEC	BCS358x	Ability Enhancement Course/Skill Enhancement Course - III	TD and PSB: Concerned department	If the course is a Theory: 1	0	0		01	50	50	100	1
					If a course is a laboratory: 0	0	2		02				
9	MC	BNSK359	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK359	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK359	Yoga	Yoga Teacher									
									Total	**550**	**350**	**900**	**21**

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **MC**: Mandatory Course (Non-credit), **AEC**: Ability Enhancement Course, **SEC**: Skill Enhancement Course, **L**: Lecture, **T**: Tutorial, **P**: Practical **S= SDA**: Skill Development Activity, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation.K :This letter in the course code indicates common to all the stream of engineering. ESC: Engineering Science Course, ETC: Emerging

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Technology Course, PLC: Programming Language Course			
.			
Engineering Science Course (ESC/ETC/PLC) (Note- Student should opt for the course which should not be similar to the course opted in 1st Year)			
BCS306A	OOPS with Java	BCS306C	
BCS306B	OOPS with C++	BCS306D	
Ability Enhancement Course – III			
BCS358A	Data analytics with Excel	BCS358C	Version controller with GiT
BCS358B	Data Analytics with R	BCS358D	Data Visualization with Python

Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practicals of the same course. Credit for IPCC can be 04 and its Teaching–Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./B.Tech.) 2022-23 may please be refered.

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

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VARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

B.E. in Computer Science and Engineering

Scheme of Teaching and Examinations2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

(Effective from the academic year 2023-24)

IV SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	Self -Study	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	PCC/BSC	BCS401	Analysis & Design of Algorithms	TD: CS PSB : CS	3	0	0		03	50	50	100	3
2	IPCC	BCS402	Microcontrollers	TD: CS PSB : CS	3	0	2		03	50	50	100	4
3	IPCC	BCS403	Database Management Systems	TD: CS PSB : CS	3	0	2		03	50	50	100	4
4	PCCL	BCSL404	Analysis & Design of Algorithms Lab	TD: CS PSB : CS	0	0	2		03	50	50	100	1
5	ESC	BCS405x	ESC/ETC/PLC	TD: CS/Maths PSB : CS/Maths	2	2	0		03	50	50	100	3
6	AEC/ SEC	BCS456x	Ability Enhancement Course/Skill Enhancement Course- IV	TD and PSB: Concerned department	If the course is Theory 1	0	0		01	50	50	100	1
					If the course is a lab 0	0	2		02				
4	BSC	BBOK407	Biology For Engineers	TD / PSB: BT, CHE,	2	0	0		03	50	50	100	2
7	UHV	BUHK408	Universal human values course	Any Department	1	0	0		01	50	50	100	1
9	MC	BNSK459	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK459	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK459	Yoga	Yoga Teacher									
									Total	**500**	**400**	**900**	**19**

PCC: Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **MC:** Mandatory Course (Non-credit), **AEC:** Ability

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Enhancement Course, **SEC**: Skill Enhancement Course, **L:** Lecture, **T:** Tutorial, **P**: Practical **S= SDA**: Skill Development Activity, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation. K :This letter in the course code indicates common to all the stream of engineering.			
Ability Enhancement Course / Skill Enhancement Course – IV			
BCS456A	Green IT and Sustainability	BCS456C	UI/UX (Lab)
BCS456B	Capacity Planning for IT	BCS456D	Technical writing using LATEX (Lab)
Engineering Science Course (ESC/ETC/PLC)			
BCS405A	Discrete Mathematical Structures	BCS405C	Optimization Technique
BCS405B	Graph Theory	BCS405D	

Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practical of the same course. Credit for IPCC can be 04 and its Teaching–Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./B.Tech.) 2022-23

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses is mandatory for the award of degree.

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

B.E. in Computer Science and Engineering

B.E. in the title of the program

Scheme of Teaching and Examinations2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

(Effective from the academic year 2023-24)

V SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	HSMS	BCS501	Software Engineering & Project Management (This course must be pertaining to economics and management of the concerned degree program. The course syllabus should have both economics and management topics and the course title should bear the word Management.)	TD: CS PSB : CS	3	0	0		03	50	50	100	3
2	IPCC	BCS502	Computer Networks	TD: CS PSB : CS	3	0	2		03	50	50	100	4
3	PCC	BCS503	Theory of Computation	TD: CS PSB : CS	3	2	0		03	50	50	100	4
4	PCCL	BCSL504	Web Technology Lab	TD: CS PSB : CS	0	0	2		03	50	50	100	1
5	PEC	BCS515x	Professional Elective Course	TD: CS PSB : CS	3	0	0		03	50	50	100	3
6	PROJ	BCS586	Mini Project	TD: CS PSB : CS	0	0	4		03	100		100	2
7	AEC	BRMK557	Research Methodology and IPR	TD: HSM PSB : HSM	2	2	0		02	50	50	100	3
8	MC	BESK508	Environmental Studies	TD: HSM PSB : HSM	2	0	0		02	50	50	100	2
9	MC	BNSK559	National Service Scheme (NSS)	NSS coordinator	0	0	2			100		100	0
		BPEK559	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK559	Yoga	Yoga Teacher									

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			Total	**500**	**300**	**800**	**22**
Professional Elective Course							
BCS515A	Computer Graphics	BCS515C	Unix System Programming				
BCS515B	Artificial Intelligence	BCS515D	Distributed Systems				

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **MC**: Mandatory Course (Non-credit), **AEC**: Ability Enhancement Course, **SEC**: Skill Enhancement Course, **L:** Lecture, **T**: Tutorial, **P**: Practical **S= SDA**: Skill Development Activity, **CIE**: Continuous Internal Evaluation, **SCS**: Semester End Evaluation. **K :** The letter in the course code indicates common to al the stream of engineering. **PROJ**: Project /Mini Project. **PEC**: Professional Elective Course

Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practicals of the same course. Credit for IPCC can be 04 and its Teaching–Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./B.Tech.) 2022-23

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

Mini-project work: Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/applications etc. Based on the ability/abilities of the student/s and recommendations of the mentor, a single discipline or a multidisciplinary Mini- project can be assigned to an individual student or to a group having not more than 4 students.

CIE procedure for Mini-project:

(i) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batches mates.

(ii) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

No SEE component for Mini-Project.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering. Each

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B.E. in Computer Science and Engineering

Scheme of Teaching and Examinations2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

(Effective from the academic year 2023-24)

VI SEMESTER

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	IPCC	BCS601	Cloud Computing (Open Stack /Google)	TD: CS PSB : CS	3	0	2		03	50	50	100	4
2	PCC	BCS602	Machine Learning	TD: CS PSB : CS	4	0	0		03	50	50	100	4
3	PEC	BCS613x	Professional Elective Course	TD: CS PSB : CS	3	0	0		03	50	50	100	3
4	OEC	BCS654x	Open Elective Course	TD: CS PSB : CS	3	0	0		03	50	50	100	3
5	PROJ	BCS685	Project Phase I	TD: CS PSB : CS	0	0	4		03	100	--	100	2
6	PCCL	BCSL606	Machine Learning lab	TD: CS PSB : CS	0	0	2		03	50	50	100	1
7	AEC/SDC	BCS657x	Ability Enhancement Course/Skill Development Course V	TD and PSB: Concerned department	If the course is offered as a Theory: 1	0	0		01	50	50	100	1
					If course is offered as a practical: 0	0	2						
8	MC	BNSK658	National Service Scheme (NSS)	NSS coordinator	0	0	2			100	---	100	0
		BPEK658	Physical Education (PE) (Sports and Athletics)	Physical Education Director									
		BYOK658	Yoga	Yoga Teacher									
									Total	**500**	**300**	**800**	**18**

Professional Elective Course

BCS613A	Blockchain Technology	BCS613C	Compiler Design
BCS613B	Computer Vision	BCS613D	Advanced Java

Open Elective Course

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group will provide an option to select one course. The minimum number of students' strengths for offering a professional elective is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

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BCS654A	Introduction to Data Structures	BCS654C	Mobile Application Development
BCS654B	Fundamentals of Operating Systems	BCS654D	Introduction to AI

Ability Enhancement Course / Skill Enhancement Course-V

BCS657A	Mobile Application Development	BCS657C	Agile
BCS657B	Tosca – *Automated* Software Testing	BCS657D	Devops

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **MC**: Mandatory Course (Non-credit), **AEC**: Ability Enhancement Course, **SEC**: Skill Enhancement Course, **L**: Lecture, **T**: Tutorial, **P**: Practical **S= SDA**: Skill Development Activity, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation. **K :** The letter in the course code indicates common to al the stream of engineering. **PROJ**: Project /Mini Project. **PEC**: Professional Elective Course. **PROJ**: Project Phase -I, **OEC**: Open Elective Course

Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practicals of the same course. Credit for IPCC can be 04 and its Teaching–Learning hours (L : T : P) can be considered as (3 : 0 : 2) or (2 : 2 : 2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./B.Tech.) 2022-23

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering. Each group will provide an option to select one course. The minimum number of students' strengths for offering professional electives is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

Open Elective Courses:

Students belonging to a particular stream of Engineering and Technology are not entitled to the open electives offered by their parent Department. However, they can opt for an elective offered by other Departments, provided they satisfy the prerequisite condition if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor. The minimum numbers of students' strength for offering Open Elective Course is 10. However, this condition shall not be applicable to class where the admission to the program is less than 10.

Project Phase-I : Students have to discuss with the mentor /guide and with their helphe/she has to complete the literature survey and prepare the report and finally define the problem statement for the project work.

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VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

B.E. in Computer Science and Engineering

Scheme of Teaching and Examinations2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

(Effective from the academic year 2023-24)

VIISEMESTER (Swappable VII and VIII SEMESTER)

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	IPCC	BCS701	Internet of Things	TD: CS PSB : CS	3	0	2		03	50	50	100	4
2	IPCC	BCS702	Parallel Computing	TD: CS PSB : CS	3	0	2		03	50	50	100	4
3	PCC	BCS703	Cryptography & Network Security	TD: CS PSB : CS	4	0	0		03	50	50	100	4
4	PEC	BCS714x	**Professional Elective Course**	TD: CS PSB : CS	3	0	0		03	50	50	100	3
5	OEC	BCS755x	**Open Elective Course**	TD: CS PSB : CS	3	0	0		01	50	50	100	3
6	PROJ	BCS786	**Major Project Phase-II**	TD: CS PSB : CS	0	0	12		03	100	100	200	6
										400	**300**	**700**	**24**

Professional Elective Course

BCS714A	Deep Learning	BCS714C	Soft Computing
BCS714B	Natural Language Processing	BCS714D	Big Data Analytics

Open Elective Course

BCS755A	Introduction to DBMS	BCS755C	Software Engineering
BCS755B	Introduction to Algorithms	BCS755D	

PCC: Professional Core Course, **PCCL**: Professional Core Course laboratory, **PEC**: Professional Elective Course, **OEC**: Open Elective Course PR: Project Work, **L:** Lecture, **T:** Tutorial, **P**: Practical **S= SDA**: Skill Development Activity, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation. **TD-** Teaching Department, **PSB**: Paper Setting department, **OEC**: Open Elective Course, **PEC**: Professional Elective Course. **PROJ**: Project work

Note: VII and VIII semesters of IV years of the program

(1) Institutions can swap the VII and VIII Semester Schemes of Teaching and Examinations to accommodate research internships/ industry internships after the VI

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semester.

(2) Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether the VII or VIII semesters is completed during the beginning of the IV year or the later part of IV years of the program.

Professional Elective Courses (PEC): A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses that are added supplement the latest trend and advanced technology in the selected stream of engineering. Each group will provide an option to select one course. The minimum number of students' strengths for offering professional electives is 10. However, this conditional shall not be applicable to cases where the admission to the program is less than 10.

Open Elective Courses:

Students belonging to a particular stream of Engineering and Technology are not entitled to the open electives offered by their parent Department. However, they can opt for an elective offered by other Departments, provided they satisfy the prerequisite condition if any. Registration to open electives shall be documented under the guidance of the Program Coordinator/ Advisor/Mentor. The minimum numbers of students' strength for offering Open Elective Course is 10. However, this condition shall not be applicable to class where the admission to the program is less than 10.

PROJECT WORK (21CSP75): The objective of the Project work is

(i) To encourage independent learning and the innovative attitude of the students.

(ii) To develop interactive attitude, communication skills, organization, time management, and presentation skills.

(iii) To impart flexibility and adaptability.

(iv) To inspire team working.

(v) To expand intellectual capacity, credibility, judgment and intuition.

(vi) To adhere to punctuality, setting and meeting deadlines.

(vii) To install responsibilities to oneself and others.

(viii) To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.

CIE procedure for Project Work:

(1) Single discipline: The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.

The CIE marks awarded for the project work, shall be based on the evaluation of the project work Report, project presentation skill, and question and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

(2) Interdisciplinary: Continuous Internal Evaluation shall be group-wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentation skill, and question

and answer session in the ratio 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

SEE procedure for Project Work: SEE for project work will be conducted by the two examiners appointed by the University. The SEE marks awarded for the project work shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the ratio 50:25:25.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

B.E. in Computer Science and Engineering

Scheme of Teaching and Examinations2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS)

(Effective from the academic year 2023-24)

VIII SEMESTER (Swappable VII and VIII SEMESTER)

Sl. No	Course and Course Code		Course Title	Teaching Department (TD) and Question Paper Setting Board (PSB)	Teaching Hours /Week				Examination				Credits
					Theory Lecture	Tutorial	Practical/ Drawing	SDA	Duration in hours	CIE Marks	SEE Marks	Total Marks	
					L	T	P	S					
1	PEC	BCS801x	**Professional Elective (Online Courses) Only through NPTEL**	PSB : CS	3	0	0		03	50	50	100	3
2	OEC	BCS802x	**Open Elective (Online Courses) Only through NPTEL**	PSB : CS	3	0	0		01	50	50	100	3
3	INT	BCS803	**Internship (Industry/Research) (14 - 20 weeks)**		0	0	12		03	100	100	200	10
										200	**200**	**400**	**16**

Professional Elective Course (Online courses)

BCS801A	BOS will publish courses based on the availability	BCS801C	
BCS801B		BCS801D	

Open Elective Courses (Online Courses)

BCS802A	BOS will publish courses based on the availability	BCS802C	
BCS802B		BCS802D	

L: Lecture, **T**: Tutorial, **P**: Practical **S= SDA**: Skill Development Activity, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation. **TD-** Teaching Department, **PSB**: Paper Setting department, **OEC**: Open Elective Course, **PEC**: Professional Elective Course. **PROJ**: Project work, **INT**: Industry Internship / Research Internship / Rural Internship

Note: VII and VIII semesters of IV years of the program

Swapping Facility

- Institutions can swap VII and VIII Semester Scheme of Teaching and Examinations to accommodate **research internships/ industry internships/Rural Internship** after the VI semester.

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- Credits earned for the courses of VII and VIII Semester Scheme of Teaching and Examinations shall be counted against the corresponding semesters whether VII or VIII semester is completed during the beginning of IV year or later part of IV year of the program.
- Note: For BCS801x and BCS802x courses BOS will announce list of courses in 6^{th} , 7^{th} & 8^{th} Sem . Students can register in any of the semester to earn the credits in 8^{th} Sem.

Elucidation:

At the beginning of IV years of the program i.e., after VI semester, VII semester classwork and VIII semester **Research Internship /Industrial Internship / Rural Internship** shall be permitted to be operated simultaneously by the University so that students have ample opportunity for an internship. In other words, a good percentage of the class shall attend VII semester classwork and a similar percentage of others shall attend to Research Internship or Industrial Internship or Rural Internship.

Research/Industrial /Rural Internship shall be carried out at an Industry, NGO, MSME, Innovation center, Incubation center, Start-up, center of Excellence (CoE), Study Centre established in the parent institute and /or at reputed research organizations/institutes.

The mandatory Research internship /Industry internship / Rural Internship is for 14 to 20 weeks. The internship shall be considered as a head of passing and shall be considered for the award of a degree. Those, who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent University examination after satisfying the internship requirements.

Research internship: A research internship is intended to offer the flavor of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

Industry internship: Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints.

Rural Internship: Rural development internship is an initiative of Unnat Bharat Abhiyan Cell, RGIT in association with AICTE to involve students of all departments studying in different academic years for exploring various opportunities in techno-social fields, to connect and work with Rural India for their upliftment.

The faculty coordinator or mentor has to monitor the student's internship progress and interact with them to guide for the successful completion of the internship.

The students are permitted to carry out the internship anywhere in India or abroad. University shall not bear any expenses incurred in respect of the internship.

With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (**within or outside the state or abroad**), provided favorable facilities are available for the internship and the student remains regularly in contact with the internal guide. **University shall not bear any cost involved in carrying out the internship by students.** However, students can receive any financial assistance extended by the organization.

Professional Elective /Open Elective Course: These are ONLINE courses suggested by the respective Board of Studies. Details of these courses shall be made available for students on the VTU web portal.

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ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ವಿಟಿಯು ಅಧಿನಿಯಮ ೧೯೯೪ ರ ಅಡಿಯಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರದಿಂದ ಸ್ಥಾಪಿತವಾದ ರಾಜ್ಯ ವಿಶ್ವವಿದ್ಯಾಲಯ

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

State University of Government of Karnataka Established as per the VTU Act, 1994 "Jnana Sangama" Belagavi-590018, Karnataka, India

Prof. Dr. B. E. Rangaswamy, Ph.D
REGISTRAR

Phone: (0831) 2498100
Fax: (0831) 2405467

REF: VTU/BGM/Aca/BoS/2023/1681

DATE: 3 JUL 2023

CIRCULAR

Subject: Feedback on Draft 3-8 semesters CSE and allied branches Scheme of Teaching and Examination (2022) regarding...

The draft 3- to -8 semesters scheme of Teaching and Examinations of CSE and allied branches are uploaded on the university web portal for stakeholders' information and reference @ https://vtu.ac.in/en/b-e-scheme-syllabus/ [serial number 06 to 21 under the heading of UG Scheme and Syllabus 3rd to 8th Semester (2022 Scheme)].

All the stakeholders are requested to refer to the scheme (2022) and send their **FEEDBACK** to sanjay.ha@msrit.edu

Sd/-
Registrar

To,

1. All the Principals of the Constituent Autonomous and Affiliated Colleges of Engineering under the ambit of the University

Copy to

1. To the Hon'ble Vice-Chancellor through the secretary to VC for information
2. The Registrar (Evaluation) for information
3. The Director (I/c) ITI SMU VTU Belagavi for information and make arrangements to upload it on the VTU web portal.
4. The chairpersons of the Board of Studies of VTU Belagavi for information
5. Office Copy

03/07/23
REGISTRAR

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Vishwothama Nagar, Bantakal - 574115, Udupi District, Karnataka.

SMVITM

Department of Computer Science & Engineering

Feedback on Revised 2022 Curriculum

Faculty Name	Feedback
Soumya J Bhat	The syllabus of 2022 has made great efforts to include the latest technologies in the curriculum. However, there are few shortcomings. These are the few suggestions: 1. In the first year, few students have studied web development as ETC. In the 5th sem again there is web technology lab. It is a compulsory subject all students. So, how the subject should be taught when there are few sections of students who have studied web development & few students not studied. 2. The coding subjects like Java are important for CSE students. But, these subjects have been diluted & made optional. 3. MEAN or MERN stack can be included in syllabus. 4. No sql database can be included in syllabus.
Yashaswini A S	With respect to practical programs, it would be better to include programs related to real time problems.
Raghavendra Hegde	More lab programs need to be added in Computer Network syllabus to understand the topics in depth.
F. Jethi M	2 subjects can be included for 8th semester by removing a few core subjects of 3rd year.
Chaitra Bhat M	4th, 5th and 6th sem courses are more in number.

Sy J Bhat

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