Faculty of Computer Science & Engineering and Information Technology (CSE, IT, AI & MCA)

II Board of Studies Meeting

Venue: Board Room

Date: 19/05/2023   **Time:** 10:30am to 1.30pm

Agenda and Notes

- Prayer
- Welcome Address

02.01. Confirmation of First BoS meeting minutes held on 12/11/2022 and Decision/Action Taken report.

02.02. Discussion on the Suggestions / Recommendations offered by the members on the I Academic Council meeting and the I Governing Body meeting.

02.03. Presentation of the proposed curriculum and getting recommendations for approval for the II year detailed draft syllabi of both UG and PG Programmes for regulation 2022.

02.04. Ratification for UG programme including Naan Mudhalvan courses and Tamil courses as per the directions of Anna University & Government of Tamilnadu.
Ratification for MCA programme, students admitted under non-computer science category, five bridge courses are being offered and completed as per the direction of Anna University.

➢ **Vote of Thanks**

Chairman

➤ **02.01. Confirmation of First BoS meeting minutes held on 12/11/2022 and Decision/Action Taken report.**

Department: Computer Science and Engineering

➤ The minutes of the first BoS meeting and Action Taken report were presented by Ms.P.R.Sheebha Rani, Head of Computer Science and Engineering Department

Sl.No	Suggestions	Action taken	Remarks
UG			
1.	Probability and Statistics should be considered as a core course based on GATE syllabus	The course "Statistics and Numerical Methods" was included in the second semester. So "Advanced Probability and Statistics for Engineers" is included in the vertical 1 elective.	Confirmed in the BoS meeting.
2.	Computer Organization and Architecture must be considered as a separate course by including MIPS architecture in the syllabus. "Digital Principles and System Design" can also be considered as a separate course	The course "Digital Design and Computer Organization" in the third semester is splitted into two courses as "Digital Principles and System Design"which is included in the third semester and "Computer Organization and Architecture", fully based on MIPS Architecture is included in the fourth semester.	Confirmed in the BoS meeting.
3.	BOS members suggested to add a book titled "Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data" from EMC Educational Services in the syllabus for Data Science course.	On considering the content of the syllabus, it is now included as one of the Reference Books.	Confirmed in the BoS meeting.
4.	Add "Full Stack Development" as an Elective course.	The course "Full Stack Development" is included as one of the Elective courses in vertical 4.	Confirmed in the BoS meeting.
5.	Include NodeJS, ReactJS, AngularJS in "Internet Programming" course.	Included the topic 'AngularJS' in the second unit and 'NodeJS', 'ReactJS' in the fifth unit of "Internet Programming"	Confirmed in the BoS meeting.

		course.	
6.	Include the topic Collections in "Object Oriented Programming" course as it helps a lot during placement.	The topic 'Collections' is included in the fourth unit of "Object Oriented Programming" course.	Confirmed in the BoS meeting.
7.	Include MongoDB and NoSQL as separate unit in "Database Management Systems" course.	In the course "Database Management Systems", the DBMS tools MongoDB and NoSQLis made as separate unit(Unit V).	Confirmed in the BoS meeting.

<table>
<tr><td colspan="4" align="center">PG</td></tr>
<tr><td>1.</td><td>Machine Learning and IoT can be considered as elective courses.</td><td>Futuristic studies of the Post Graduate students are now relying with selecting research options in the area of Artificial Intelligence and so the most opted course of "Machine Learning" is opted as a core part in their curriculum.

The course "Internet of Things" is moved from core to elective course.</td><td>Confirmed in the BoS meeting.</td></tr>
<tr><td>2.</td><td>Include Advanced Operating Systems, Advanced Compiler Design and Network Technologies as core courses.</td><td>The course "Advanced Operating Systems" is included as core course in the second semester.

The course "Network Technologies" was included in professional Elective I. The course "Advanced Compiler Design" was not included, since the course was taken up in the UG course</td><td>Confirmed in the BoS meeting.</td></tr>
<tr><td>3.</td><td>Case studies can be included in the fifth unit of Advance Operating Systems.</td><td>Case studies are included in the fifth unit of "Advance Operating Systems" course.</td><td>Confirmed in the BoS meeting.</td></tr>
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Department: Information Technology

➤ The minutes of the first BoS meeting and Action Taken report were presented by Dr. G Sahaya Stalin Jose, Head of Information Technology department.

Sl.No	Suggestions	Action taken	Remarks
1.	Industry seminar and Industry lectures can be introduced with fractional credit. Assessment can be given in terms of project or MCQ.	The NaanMudhalvan courses with 2 credits can be considered for the industry courses.	Confirmed in the BoS meeting.
2.	The following seven core subjects should be included in the IT curriculum • Database Management Systems • Operating Systems • Computer Networks • Data Structures • Design and Analysis of Algorithms • Digital Principles and System Design • Computer Architecture and Organization	We have included • Database Management Systems (IV semester) • Operating Systems (IV semester) • Computer Network Fundamentals (V semester) • Data Structures (III semester) • Fundamentals of Algorithm Analysis (IV semester) • Digital Systems (III semester) • Computer Architecture (IV semester)	Confirmed in the BoS meeting.
3.	Compiler design, Cloud technologies, Computational Intelligence and cryptography and network security can be included in elective.	Compiler design, Cryptography and network security are included in the core courses. Because, compiler design is required for the GATE exam and a number of students have worked in security based companies. Computational Intelligence, Cloud computing are included in verticals.	Confirmed in the BoS meeting.
4.	Include the topic **Collections** in OOPS as it helps a lot during placement	Topic Collections have included in the OOPS course(III semester)	Confirmed in the BoS meeting.
5.	BOS members suggested adding a book titled "Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data" from EMC Educational Services in the syllabus for the Data Science course.	On considering the content of the syllabus it is now included as one of the Reference Books.	Confirmed in the BoS meeting.

Department: Artificial Intelligence & Data Science

➤ The minutes of the first BoS meeting and Action Taken report were presented by Dr. R. Jemila Rose, Head of Artificial Intelligence & Data Science department.

Suggestions/ Recommendations	Action taken
Course Rearrangement-> Introduction to Computer Networks course, move it to fifth semester and Data Exploration and Visualization move it to third semester. Otherwise students will be overloaded. Machine Learning Theory and Laboratory courses move it into fifth semester, Deep Learning Theory and Laboratory courses move it into sixth semester and Web Technology Theory and Laboratory courses move it into fourth semester.	Third semester-> Data Exploration and Visualization Fourth semester-> Design and Analysis of Algorithms Fourth semester-> Web Technology Theory and Laboratory Fifth semester -> Introduction to Computer Networks Fifth semester -> Machine Learning Theory and Laboratory Sixth semester -> Deep Learning Theory and Laboratory
It is better to have included Design and Analysis of Algorithms course in fourth semester	Included
Data and Information Security course move it to Professional Elective Course (PEC)	Data and Information Security -> Moved to PEC course

Department: Master of Computer Applications

➤ The minutes of the first BoS meeting and Action Taken report were presented by Dr. M. M. Janeela Theresa, Head of Master of Computer Application department.

Sl.No	Suggestions	Action taken	Remarks
1.	Data Science should be included as a core course in Semester II.	"Data Science" was a professional core subject that was offered in the second semester.	Confirmed in the BoS meeting.
2.	Advanced Java Programming is to be shifted as a core course in semester III.	Third semester includes "Advanced Java Programming" as a Professional Core course.	Confirmed in the BoS meeting.

3.	Machine learning and Cyber Security can be considered as elective courses.	The course Cyber Security is included as one of the elective course in Professional elective I and Machine Learning is included in one of the elective course in Professional elective IV.	Confirmed in the BoS meeting.
4.	Mini Project can be included in semester III	The course "Mini Project" is includedas Professional core practical subject in the third semester.	Confirmed in the BoS meeting.

➤ **02.02. Discussion on the Suggestions / Recommendations offered by the members on the I Academic Council meeting and the I Governing Body meeting.**

Suggestions / Recommendations	Decisions / Actions taken	BOS Recommendations
It is suggested to get approval from the BoS for the online courses that are going to be offered from NPTEL/SWAYAM platform before offering them to the students.	The online courses will be offered from the Fifth Semester. It is decided to get the approval from BoS in the next meeting.	All the departments identified the NPTEL/ SWAYAM courses which are equivalent to 5th and 6th semesters Professional Elective courses for UG Programmes and 3rd semester PG programmes and got the recommendation from BoS IIT Spoken tutorial courses with assessment and grade sheet with credits can also be considered.
It is suggested to have One Credit Courses to be handled by Industry Experts.	It will be discussed in the next BoS meetings.	Two credits Naan Mudhalvan courses on cutting edge technologies are offered to the students by industrial experts in each semester, which is one of the initiatives of Tamilnadu Government. In addition to this seminar by Industrial experts can be arranged as per the requirement
It is recommended to have the Journal Publication as optional instead of Mandatory for the	Changed in the Regulation.	The BoS recommended to make the Journal / Conference publications as Desirable and those students who are doing that can be

Programmes.		honoured by providing higher grades in the particular course. It should not be made as a mandate since it required more time.
It is suggested to use Bloom's Taxonomy Keywords while formulating the Course Outcomes.	Incorporated in the syllabi.	Confirmed
It is recommended to include the latest versions of the text books.	Incorporated in the syllabi.	Confirmed
The total credit for the PG programmes may be increased	Will be discussed in the next BoS meeting.	The BOS recommended not to change the minimum total credit required to complete the programme.
It is suggested to avoid 1.5 credits Laboratory Courses.	Will be presented in the next BoS meeting.	For the detailed Hands on Experience it is suggested to have 2 credit Laboratory Courses
It is suggested not to offer NPTEL/SWAYAM online course for P.G. Programmes	Will be presented in the next BoS meeting.	Anna university is offering this facility. On considering the benefit of the students it is recommended to offer NPTEL/SWAYAM online courses to P.G. students also.
It is suggested to rename the course "Research Tools in Engineering to "Research Tool Laboratory" for the P.G. Programmes.	Modified in the Curriculum and Syllbi.	Confirmed
It is suggested to change label for the elective courses track from "Verticals" to some other appropriate label.	Will be presented in the next BoS meeting.	"Verticals" is the generic name used by the Anna University. To avoid the confusion the same terminology is recommended. It is recommended to have a unique name for each verticals and it should be clearly bifurcated from the other verticals.
It is suggested to have two text books and five reference books for UG courses and	Incorporated in the syllabi.	Confirmed

five reference books for PG courses		
It is suggested to change the course title of Placement training courses.	Will be presented in the next BoS meeting.	It is recommended to rename the "Placement training course" to "Skill Development Courses".
It is observed that the number of courses in the 3rd semester of the U.G. Programmes is high in number.	Will be discussed in the next BoS meeting and will do the needful.	The course "Value Education" is made as a 0 credit mandatory course.
It is suggested to change the title of the course "Higher Order Thinking"	Will be presented in the next BoS meeting.	The syllabus of this course includes both Critical Thinking and Creative thinking. So "Higher Order Thinking" is the right title for this course

Department: Computer Science and Engineering

Sl.No	Suggestions / Recommendations of I Academic Council meeting	Decisions / Suggestions during the II Board of Studies Meeting
1.	It is suggested to move the course "Data science" from 3rd semester to 5th or 6th semester.	The courses "Data Science" and "Computer Organization and Architecture" were interchanged among third and fourth semester
2.	It is suggested to merge the vertical "Programming" with other verticals and have 4 verticals as total	Based on the discussion it is decided to have 5 verticals as existing and vertical 4 – "Programming" is renamed as "Web Technology".

Department: Information Technology

Sl.No	Suggestions / Recommendations during the I Academic Council meeting	Decisions / Suggestion during the II Board of Studies Meeting

1.	It is suggested to move the course "Data science" from 3rd sem to 5th or 6th Sem.	The Data Science subject is included in the fourth semester. Therefore, the fourth semester subject Computer Architecture is moved to the third semester.
		Therefore, the credit of Third semester is reduced from 24 to 23 and for the fourth semester is increased from 22 to 23.
2.	It is suggested to avoid Lab Course without corresponding Theory courses.	The Lab Course without corresponding Theory courses with 2 credits (FOSS Lab and Mobile Application Development Lab) have been changed to 1 theory + 2 lab sessions per week (L T P C - 1 0 2 2). Therefore, the courses – Mobile Application Development Lab and FOSS Lab have to be restructured in the syllabus.
3.	It is suggested to redefine the course listed in the Vertical "IT Essential".	i. Vertical IT Essentials to be renamed as **Internet Technologies** by including the following courses • Cloud Computing • IoT based Embedded Systems • Quantum Computing • Next Generation Databases (which is to have more content related to Distributed Database) • Information Storage and Management • DevOps ii. Vertical Data Exploration to be renamed as **Artificial Intelligence and Machine Learning** which is to include the following courses • Machine Learning • Deep Learning • Pattern Recognition • Business Intelligence • Natural Language Processing • Computational Intelligence iii. The course *Applied Social Network Analysis* in the vertical **Information Assurance and Security** has to be moved to the vertical **Data Science** and the course *Cyber Law* is added to the vertical **Information Assurance and Security**.

Department: Artificial Intelligence & Data Science

Programme	Suggestions / 'Recommendations	Decisions / Action taken
Faculty of Computer Science and Engineering and Information Technology - (AI & DS)	It is suggested to change the title of the course "Probability and Statistics "to Probability and Advanced Statistics" in the Fourth semester of the programme	Recommended to change the course title 'Probability and Advanced Statistics'

Department: Master of Computer Applications

Sl.No	Suggestions / Recommendations of IAcademic Council meeting	Decisions / Suggestions during the IIBoard of Studies Meeting
1.	It is suggested to change the course "Crypto Currency and Blockchain Technology" to Blockchain for Business insemester III, Professional Elective II	The course "Crypto Currency and Blockchain Technology" is changed to "Blockchain for Business" in Semester III, Professional Elective II.

➢ **02.03. Presentation of the proposed curriculum and getting recommendations for approval for the II year detailed draft syllabi of both UG and PG Programmes for regulation 2022.**

Department: Computer Science and Engineering

Suggestions for UG Syllabus are as follows:

➢ It is recommended to consider the "Value Education" course as purely, internal zero credit mandatory course.
➢ The syllabus for Placement &Soft skills has to be refined as per the Industry need.
➢ Since the students are undergoing training through NaanMudhalvan scheme,a 2 credit course handled by the Industrial Experts,it is suggested to avoid additional 1 credit courses by the Industrial Experts.
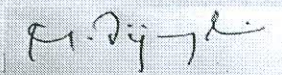
Considering the above suggestions, the BOS recommended the curriculum and the syllabus of 3rd and 4th semester courses of UG and PG Programmes.

Department: Information Technology

- It is recommended to consider the "Value Education" course as a mandatory internal course without any credit.
- The syllabus for Placement & Soft skills has to be refined as per the Industry need.
- Since the students are undergoing training through Naan Mudhalvan scheme which are handled by Industrial experts, no separate course with Industrial Expert is required to train the students.
- In the DBMS laboratory, it is recommended to include MongoDB/Casentra in implementation.
- It is recommended to change the course name **Object Oriented Software Engineering** in the fourth semester to be renamed as **Software Engineering** which should have the practical exercises.
- It is recommended to reframe the course outcome for the course Programming in C by considering the difficulty level of first year students.
- The suggested textbooks and reference books in the syllabus have to be the latest edition i.e., do not exceed 3 or to the most 5 years back.

With the above suggestions, the BoS recommended the curriculum and syllabus of the courses of the Third Semester and Fourth Semester of the UG IT Programme to the Academic Council for approval.

Department: Artificial Intelligence & Data Science

1) Course Rearrangement

The BOS members recommended to rearrange the following third semester courses to fourth semester and fourth semester courses to third semester. Because the Design and Analysis of Algorithm course is mandatory before the study of Artificial Intelligence course.

3rd semester courses to 4th semester

Course Code	Course Name	Credit
AD22301	Digital Principles and Computer Organization	3
AD22303	Artificial Intelligence	3
AD22306	Artificial Intelligence Laboratory	2

4th semester courses to 3rd semester

Course Code	Course Name	Credit
AD22402	Web Technology	3
AD22406	Web Technology Laboratory	3
AD22404	Design and Analysis of Algorithms	2

2) Course Name Change

The BOS members recommended changing the course title Artificial Intelligence (both theory and lab) to Algorithm for Artificial Intelligence. Because Artificial Intelligence is programme specific.

Old Course Title	New Course Title
Artificial Intelligence	Algorithm for Artificial Intelligence
Artificial Intelligence Laboratory	Algorithm for Artificial Intelligence Laboratory
Vertical 1- Analytics	Data Analytics

3) Change of Professional Elective Vertical 1- Analytics last two papers (5 & 6)

In professional elective courses, vertical-1 (Analytics) is related to analytics. So, the BOS members recommended to change AD22711 - Data and Information Security and AD22712 - Cryto Currency and Block Chain Technologies to analytics related paper.

AD22711 - Data and Information Security	AD22711 - Audio Analytics
AD22712 - Cryto Currency and Block Chain Technologies	AD22712- Google Data Analytics

With the above suggestions, the BoS recommended the curriculum and syllabus of the courses of the Third Semester and Fourth Semester of the UG Artificial Intelligence & Data Science Programme to the Academic Council for approval.

Department: Master of Computer Applications

➢ Mini project [MC22305] credit is changed from 1 credit to 2 credits.

➢ Term Paper Writing and Seminar [MC22304] paper is removed from the curriculum.

➢ Before the completion of III semester, Bridge course students should complete one NPTEL /Swayam course.

Considering the above suggestions, the BOS recommended the curriculum and syllabus of 3ʳᵈ and 4ᵗʰ semester courses of MCA Programme.
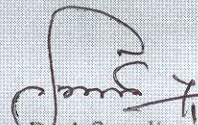
02.04.

➢ Ratification for UG programme including Naan Mudhalvan courses and Tamil courses as per the directions of Anna University & Government of Tamilnadu.

➢ Ratification for MCA programme, students admitted under non-computer science category, five bridge courses are being offered and completed as per the direction of Anna University. They shall be permitted to study two Swayam/ NPTEL courses in lieu of two bridge courses listed in the two year MCA curriculum.
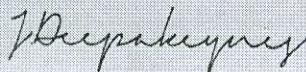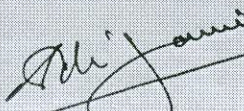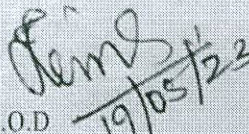
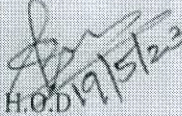➢ **02.05. Other matters if any.**

Nil

(Anna University Nominee)
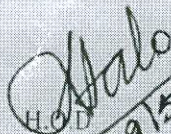
Dr.E.Sivasankar
(Academic Expert)

Dr.A.Suruliandi
(Academic Expert)
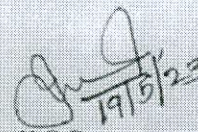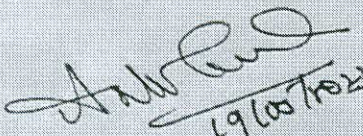
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