



RV Educational Institutions[®]
RV College of Engineering[®]

Autonomous
Institution Affiliated
to Visvesvaraya
Technological
University, Belagavi

Approved by AICTE,
New Delhi, Accredited
By NAAC, Bengaluru
And NBA, New Delhi

RV College of Engineering[®], Bangalore

DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS BOS CONTENT SHEET

Sl. No	Details	Date	Page No.
1.	PG-MCA 2018 Scheme – 4th BoS Meeting	23.06.2018	1 - 9
2.	PG-MCA 2018 Scheme – 5th BoS Meeting	02.09.2019	10 - 23
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4.	PG-MCA 2020 Scheme – 7th BoS Meeting	25.07.2020	31 – 39
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7.	PG-MCA 2022 Scheme – 10th BoS Meeting	30.05.2023	58 - 63

**Department: Master of Computer Applications****Programme: Master of Computer Applications**

The following are the new courses added in the curricula in the respective curricular revisions made in 2018, 2021 and 2022 schemes. Curricular revisions were discussed thoroughly at the respective Board of Studies meetings. The new courses added are reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1	Java Programming	18MCA25	2018
2	NOSQL	18MCA341	2018
3	Machine Learning	18MCA343	2018
4	Software Testing	18MCA41	2018
5	Pattern Recognition	18MCA432	2018
6	Software Architecture	18MCA433	2018
7	Cyber Security	18MCA441	2018
8	Unified Modelling Language	18MCA443	2018
9	Enterprise Application Programming	18MCA453	2018
10	Big Data Analytics	18MCA52	2018
11	Software Performance Engineering.	18MCA532	2018
12	Linux Shell Scripting	20MCA12	2020
13	Professional Practice	20HSS16	2020
14	Basics of Programming	20MCAB17	2020
15	Network Security	20MCA242	2020
16	Natural Language Processing	20MCA253	2020
17	PHP based Software Solutions	20MCA261	2020
18	Java based Software Solutions	20MCA262	2020
19	JavaScript based Software Solutions	20MCA263	2020
20	Web of Things	20MCA333	2020
21	Artificial Intelligence	20MCA341	2020
22	Deep Learning	20MCA343	2020
23	PHP Framework based Full Stack Software Solutions	20MCA351	2020
24	Java Framework based Full Stack Software Solutions	20MCA352	2020

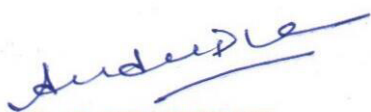


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25	JavaScript Framework based Full Stack Software Solutions	20MCA353	2020
26	Design Thinking	20MCA27	2020
27	2D and 3D Modeling	22MCA254TL	2022
28	DevOps	22MCA261T	2022
29	Digital Marketing	22MCA264T	2022
30	Ability Enhancement Course-I	22HSS16L	2022



BoS-CHAIRMAN
(Master of Computer
Applications)

Director
Department of
Master of Computer Applications
R.V. College of Engineering
Mysore Road, Bengaluru-59



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DEPARTMENT of MCA
RV College of Engineering


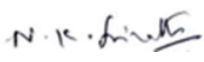


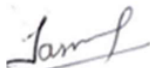


DATE: 18.06.2018

Meeting Notice

4th Board of Studies meeting will be held on 23rd June 2018
Time: 11:00am

Agenda

1. 2018 scheme and detailed syllabus of 1st and 2nd Semester Autonomous syllabus

Committee members	Signature
Dr. Usha.J	
Dr.N.K.Srinath	
Dr. Andhe Dharani	
Dr. Renuka Prasad B	
Dr., Jasmine K S	
Mr Saravanan C	
Dr. Sandhya S	



DIRECTOR, MCA

Minutes of Meeting of 4th Board of Studies held on 23rd June 2018

Members Present:

1. Dr. Usha J	Chairperson
2. Dr.N.K.Srinath	Member
3. Dr. Andhe Dharani	Member
4. Dr. Renuka Prasad B	Member
5. Dr. Jasmine K S	Member
6. Mr Saravanan C	Member
7. Dr. Sandhya S	Member

External Members:

1. Dr H S Guru Prasad	Member
2. Mrs. Shilpa.R	Member

Leave of Absence:

1. Dr.Ajith Danti – Member
2. Mr.R.V.Prasan – Member
3. Dr.Ramakanth Kumar.P - Member

The Chairperson welcomed all the members.

Sub. No. 12 : Achievements of Department of MCA, RVCE

The chairman highlighted about various activities of the institution since the last BoS meeting through a presentation

The members congratulated faculty, staff and students for the achievement and also applauded them for their unstinted efforts for the growth of the department.

Sub. No. 13 : Information about the change in the guidelines and credit structure from VTU/UGC

The chairperson presented the changed rules and regulations and credit structure which is been given by UGC/VTU to the Board Members. The chairperson also told the new scheme and syllabus is been framed as per the guide lines given and seek approval for the same

Minutes of Meeting of 4th Board of Studies held on 23rd June 2018

Sub. No. 14 : Discussion on the proposed scheme for 2018 scheme and detailed syllabus of 1st and 2nd Semester Autonomous syllabus

The chairperson discussed about the VTU regulations and presented the scheme for 2018 scheme and syllabus for 1st and 2nd semester was discussed

The Board Members approved the scheme and following suggestion/input were given for the syllabus of 1st and 2nd semester

Dr. H S Guru Prasad:

- Conduct audit courses for concepts and courses which cater to specific needs
- Clarity in naming of courses required such as Java , Data structures Using C
- Java self-study component to be incorporated to focus on building applications using APIs
- Web Programming, Data structures course to be made 2 hours of theory and one hour lab
- Reduce theory hours, give assignments that require execution based exploration
- Discrete mathematics must have tutorial
- Conduct Audit courses wherever applicable
- Swap DBMS (to 2nd Semester) with OOPS (to 1st Semester)
- Cross platform related exposure to be given in all courses

With respect to OS Course:

- Do not write experiments in lab in the current manner, elaborate with appropriate manual and proper planning for both theory and lab
- Mark mandatory experiments which students should complete for evaluation and assessment; apart from this, include additional challenging tasks
- A set of faculty to be able to conduct the lab in this format
- Record all feedback at the end of the semester from students, faculty regarding the course
- Dr. Renuka Prasad B is accountable for the execution of OS Lab
- Conduct Compliance meeting at the end of first semester with other faculty who have handled the subject, faculty who undergo the FDP . If feasible, proceed with the course else go for regular OS Course

With Respect to SE Course

- Is SE for 3 credits justified? Provide tutorials
- SPM is elective, make it as core and to be handled by industry person
- OOMD may be offered as elective in 3rd semester instead of Core

Minutes of Meeting of 4th Board of Studies held on 23rd June 2018

3rd Semester Subjects:

- ADA can be placed in 3rd semester and Software Testing can be placed in 4th semester
- ADA lab to focus on space, time complexity of algorithms rather than languages or platforms

Minor Project with Electives:

- EAP and Android development are different
- Do not link and complicate
- Interdependency should be avoided between core and electives of various semesters
- Maximum students per elective to be specified
- Minor Project along with Laboratory for suitable courses (eg., Web Programming Lab and Minor Project : 1:1)

All higher semester courses (3rd semester onwards) require scheme and syllabus deliberation's

Dr. Srinath N K:

- Refer to the VTU 2018 Syllabus and guidelines
- Display results and incorporated suggestions from agenda of previous BoS
- 2 Credits of Lab — 4 hours lab as per timetable may not be feasible
- Theory credit: 3:0:0, lab: 0:0:1
- Tutorial should be conducted with lesser number of students than regular class size
- Name the course EAP - I as Java programming
- Allot guides for projects in courses such as data structures, web programming
- OOMD should not be forced upon students as a core, offer it as an elective

With respect to OS Course:

- For the OS Course , student doesn't have any introduction to Unix considering heterogeneous background of students
- In 12 classes will the students be able to complete the experiments
- How will student be evaluated
- Course Outcomes to be changed for OS
- Does this cover theory portions completely

Minutes of Meeting of 4th Board of Studies held on 23rd June 2018

3rd Semester Subjects:

- Consider CN Credits based on syllabus
- ADA should focus on algorithms rather than different language implementations
- Professional Communication and Ethics as a 3 credit course must be given to students through lab faculty available in the institution

Minor Project with Electives:

- Infrastructure requirement how is to be addressed

1st semester Syllabus:

- Course Outcomes be written in all courses
- 3 credits, 33 hours
- Mini Project to be given with suitable courses
- Evaluation rubrics to be defined for projects
- Credits, Syllabus, Cos, CO-PO mapping to be deliberated
- Audit courses to be introduced wherever applicable
- MOOC courses to be introduced in 5th semester
- 1 elective with 4 alternatives and core can be considered during deliberations instead of present structure
- PSO can be refined

Ms. Shilpa K:

- Have more hands on rather than theory keep courses practical oriented
- Let students be thorough with the concepts
- This kind of OS Course is welcome since students struggle with unix in the industry
- Give basic Commands as self-study
- Security as a core should be introduced

Dr. Usha J :

- Can assignments be given as online courses with certifications

Dr. Andhe Dharani:

- DBMS course to include a unit on models

Dr. Jasmine K S:

- Can OOMD be given as core course
- Is it possible to combine ADA and Data structures
- MOOC 4 weeks / 8 weeks courses to be considered
- Can projects be done offline

R.V.COLLEGE OF ENGINEERING
DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

Minutes of Board of Studies Meeting

Meeting date and time: Thursday, 23/06/2018 – 9.30 AM

Following members and special invitees present.

MEMBERS PRESENT

SIGNATURE

1	Dr. Usha J	Chairperson
2	Dr. N. K. Srinath	Member
3	Dr. Andhe Dharani	Member
4	Dr. Renuka Prasad B	Member
5	Dr. Jasmine K. S.	Member
6	Mr. Saravanan C	Member
7	Dr. Sandhya S	Member
8	Dr. H. S. Guru Prasad	Member
9	Ms. Shilpa R	Invitee

N.K. Srinath
Andhe Dharani
Renuka Prasad B
Jasmine K. S.
Saravanan C
Sandhya S
H. S. Guru Prasad
Shilpa R

MEMBERS ABSENT

1.	Dr. Ajit Danti	Member
2.	Dr. Chester Rebeiro	Member
3.	Mr. R V Prasann	Member
4.	Dr. Ramakanth P	Member



RASHTREEYA SIKSHANA SAMITHI TRUST

R. V. COLLEGE OF ENGINEERING

Department of Master of Computer Applications

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Approved by All India Council for Technical Education, New Delhi.

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Date: 30/06/2018

Observations from the 4th BoS Proceeding

Following are the suggestions from the 4th BoS Proceeding

SL No.	Observations
01	Suggested to swap DBMS (to II semester) with Object Oriented Programming (to I semester)
02	Web Programming & Data structures need to be included as theory with lab
03	Suggested to include tutorials in Discrete Mathematics
04	Suggestions from BoS to include Software Project Management course as core instead of elective course.
05	OOMD may be offered as an elective instead of core.
06	Suggestions to place Analysis and Design of Algorithms in III semester and Software Testing in 4th semester.
07	Minor Project: Suggested to extend minor project along with suitable laboratory course.
08	Operating System: Suggestions to mark mandatory experiments which students should complete. Record feedback from the students at the end of the semester.
09	Computer Networks: Credits need to be allocated based on the syllabus.



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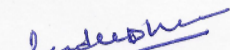
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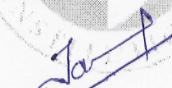
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Action Plan and Implementation

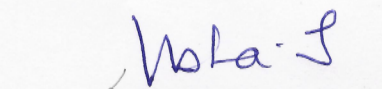
SL No.	Implementation
01	Oops has been swapped with DBMS from I semester to II semester
02	As per the suggestions Web programming and Data structure are included as theory with lab.
03	Discrete mathematics is a core course in I semester with 1 credit for tutorials.
04	Included Software Project Management as core course in V semester of MCA
05	OOMD is removed from the curriculum
06	As per the suggestions it is implemented.
07	Students are suggested to take up the minor project topic based on the courses learnt in previous semesters.
08	In the Operating System course with lab experiments, along with lab program list, program numbers are specified that are to be considered for CIE and SEE
09	Allocated 5 credits based on syllabus contents with tutorial and lab to give more thrust on the fundamentals.


Dr.AD


Dr.BRP

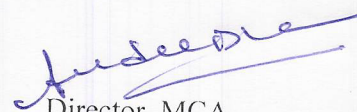

Dr.KSJ


Prof.SC


Director
Department of
Master of Computer Applications
Prof.SS

As indicate above, based on the feedback of stakeholders, the following new courses were suggested to be included in the 2018 MCA Scheme and Syllabus revision. Curricular revisions were discussed in the Board of Studies meetings and the new courses suggested with changes are added and the same is reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1	Java Programming	18MCA25	2018



Director, MCA

Director

Department of

Master of Computer Applications

R.V. College of Engineering

Mysore Road, Bengaluru-59

DEPARTMENT of MCA
RV College of Engineering







DATE: 25.02.2019

Meeting Notice

5th Board of Studies meeting will be held on 02nd March 2019
Time: 10:30am

Agenda

1. Achievements of Department of MCA, RVCE
2. Discussion on the new rules and regulations of VTU to the BoS Members
3. Discussion and suggestion on the syllabus of 3rd and 4th semester syllabus for 2018 Scheme
4. Ratification of BoE Members

Committee members	Signature
Dr. Andhe Dharani	
Dr. Usha.J	
Dr.Vijayalakshmi.M.N	
Dr., Jasmine K S	
Dr. Mohanaradhya	
Prof. Krishnan.R	


DIRECTOR, MCA

Agenda: Board of Studies Meeting – 2nd March 2019

Sub. No. 15: Achievements of Department of MCA, RVCE

Sub. No. 16 : Discussion on the new rules and regulations of VTU to the BoS Members

Sub. No. 17 : Discussion and suggestion on the syllabus of 3rd and 4th semester syllabus for
2018 Scheme

Sub. No. 18: Ratification of BoE Members

Any other subject/s with the permission of the chair

Minutes of Meeting of 5th Board of Studies held on 2nd March 2019

Members Present:

1. Dr. Andhe Dharani	Chairperson
2. Dr. Usha.J	Member
3. Dr.Vijayalakshmi.M.N	Member
4. Dr. Jasmine K S	Member
5. Dr. Mohanaradhya	Member
6. Prof. Krishnan.R	Member

External Members:

1. Dr. Kota Solomon Raju.	Member
2. Dr. N. P. Kavya	Member
3. Mr. Chethak. T.K	Member

The Chairperson introduced the new members and welcomed all the members.

Sub. No. 15 : Achievements of Department of MCA, RVCE

The chairperson gave a brief glimpse of MCA department for the new set of members about the works and activities carried out by the students and faculties.

The members congratulated faculty, staff and students for the achievement and also applauded them for their unstinted efforts for the growth of the department.

Sub.No. 16 : Discussion on the new rules and regulations of VTU to the BoS Members

The chairperson discussed about changed rules and regulations and credit structure which is been given by UGC/VTU to the Board Members. The presentation also consisted of vision, mission, POs, credit system, the differentiating factor between the 2016 and 2018 scheme. The chairperson conveyed details of courses in 2016 which were not carried forward in 2018 scheme and new courses introduced for 2018 Scheme. Some of the courses were revised considering the inputs from the Industry experts. It was suggested and approved to include Skill and Personality development training provided to be considered as an audit course. She also conveyed that the syllabus was framed taking inputs from different stakeholders, alumni, industry experts and students.

List of Dropped Courses from the previous scheme - 2016

- System Programming
- Business Communication
- Network Security
- Modelling and Simulation
- Distributed and Parallel Computing (concepts are linked with Big Data analytics – assignments and case studies)
- Data warehousing & Data Mining (concepts added in Machine learning)

New Courses identified in 2018 Scheme

Minutes of Meeting of 5th Board of Studies held on 2nd March 2019

- Java Programming
- Management Information Systems - E-Commerce
- Machine Learning
- Pattern Recognition
- Software Architecture
- Cyber Security
- Software Performance Engineering
- Unified Modelling Language
- Seminar-1

Dr. Kota Solomon Raju suggested more emphasis to be given to seminars and assignments to be project based where ever applicable. Real time operating systems may be considered for assignments. Algorithmic comparison between RTOS and conventional methods can be considered. Machine Learning should emphasize on real-time applications and collecting the data. Separate course on multi core programming can be included. RTOS can be included in 4th or 5th semester. From the today's industry perspective, Distributed and Parallel Computing (DPC) course can be included in the MCA program. POs and COs are framed properly/good. All the courses offered in MCA programme are relevant and are good choice which are relevant to industry needs.

Mr. Chethak. T.K

Cyber security is a good choice to include it as a course. Java programming should focus more on core Java. Introduction about the course prior to delivery of the course will be effective. Discussion with a problem and solution to the problem will be a good start to any course delivery.

Mr. Anand Chowdhury

DPC is necessary. Student's analytical skills and technical knowledge should be developed with respect to industry needs. Awareness about the courses should be given prior to its delivery.

Dr. Usha.J

The scheme of the MCA program is designed giving more emphasis on computer applications. She briefed about the Continuous Internal Evaluation which is currently followed in the program.

Sub. No. 17 : Discussion and suggestion on the syllabus of 3rd and 4th semester syllabus for 2018 Scheme

The chairperson presented the 3rd and 4th semester MCA syllabus for 2018 scheme and following are the suggestions and input given by the BoS members

Course	Inputs from Members
III Semester	
18MCA31	Dr. Kota Solomon Raju

Minutes of Meeting of 5th Board of Studies held on 2nd March 2019

Research Methodology	<ul style="list-style-type: none"> - The topic titled Research Design can be changed as Research Methods and Techniques - Practical tools for implementation like MS Project and others can be considered - Examples with respect to the correlation with MS word and MS Excel can be included <p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - Course is necessary - Real Life examples can be included <p>Mr. Anand Chowdhury</p> <ul style="list-style-type: none"> - Course is necessary with respect to Industry especially for R&D labs
18MCA33 Computer Networks	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - IPv6 is missing which is back bone for Cyber Physical Systems and IoT - IPv6 can be included
18MCA341 Non-Relational Databases(NOSQL)	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - At least one Tools set can be explored which manages NOSQL servers. This can be included and which give awareness to practical implementation - Protocols used for storing NOSQL data can be included - End to End scenario taking a practical example from storage till deployment can be dealt <p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - Column Oriented database inclusion is a good choice
18MCA342 Operations Research	<ul style="list-style-type: none"> - This course can be a core course for all engineering/MCA discipline
18MCA343 Machine Learning	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - Write name of algorithms specifically which will be considered in each unit - Statistically learning theory can be included - New book for this course was suggested- "Elements of statistical learning, Data Mining, Inference and Prediction" Second edition, Springer Publication <p>Dr. N.P Kavya</p> <ul style="list-style-type: none"> - Reinforcement learning can be included - Activity based learning for assignments can be given
18MCA351 Content Management Systems	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - Inclusion of PHP in the course can be looked into as it does not support low end devices - Emphasis on Practice on Drupal was suggested - Assignments on end to end functionality of CMS can be given <p>Dr. N.P Kavya</p> <ul style="list-style-type: none"> - Course content can be elaborated taking number of credits into consideration

Minutes of Meeting of 5th Board of Studies held on 2nd March 2019

	<p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - Word press is not suggested to include in the course - Course content can be elaborated taking number of credits into consideration <p>Mr. Anand Chowdhury</p> <ul style="list-style-type: none"> - The course is not just valuable with respect to Industry Perspective
18MCA352 Advanced OOPS	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - GUI Programming - Python QT can be included which is a good for front end design - Back end scripts can be included
IV Semester	
18MCA41 Software Testing	<p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - Full life cycle of testing should be included (Module testing, Process testing, Integrating testing, feature testing) - Automation: Scripting should be done based on test plan - Tools for security testing can be included
18MCA42 Mobile Application Development	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - Course has limited content with respect to Web development - Development of an Hybrid applications will be a add on with respect to hardware - Highlight on Mobile as a sensor and develop applications by considering hardware architecture - More detailed explanation about the working and usage of built-in libraries can be incorporated (Eg- GPS location tracking) - Understanding on development of a built in library can be given for assignment
18MCA431 Information Retrieval	<p>Mr. Anand Chowdhary</p> <ul style="list-style-type: none"> - Connectivity between IR and Machine Learning should be there -
18MCA432 Pattern Recognition	<p>Mr. Anand Chowdhary</p> <ul style="list-style-type: none"> - Introduction to the built in libraries and usage of libraries will be an add on
18MCA433 Software Architecture	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - Very important for future of the students make it as a core course <p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - May be a core course
18MCA441 Cyber Security	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - End to End Case studies can be discussed giving importance to practical part <p>Dr. N.P Kavya</p> <ul style="list-style-type: none"> - CO PO mapping should be checked <p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - Security standards can be included - Data Protection can be included with standards - Include other data protection algorithms with counter measures

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18MCA443 Unified Modelling Language	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - No tool exists which looks into the synthesis of the model - A new tool SYSC can be explored <p>Dr.N.P Kavya</p> <ul style="list-style-type: none"> - CO PO to be checked <p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - Design thinking should be considered <p>Mr.Anand Chowdhary</p> <ul style="list-style-type: none"> - Currently IBM has stopped RSA version
18MCA451 Computer Graphics	<ul style="list-style-type: none"> - Should be a core course
18MCA452 Advanced Computer Networks	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - Detailed content to wireless communication protocols like Zig bee, Bee Lee 4.0,5.0, Lora, Bluetooth and others protocols can be included <p>Dr.N.P Kavya</p> <ul style="list-style-type: none"> - Check CO-PO Mapping
18MCA453 Enterprise Application Programming	<p>Mr.Anand Chowdhary</p> <ul style="list-style-type: none"> - Spring Hibernate from data perspective is good - Web Services , REST Services may be included - Introduction to Micro Services can be included
18MCA46 Minor Project-I	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - To check the validity of the minor project which students take up - Projects can be defined based on some research background
V Semester	
18MCA51 Software Project Management	<p>Mr. Chethak. T.K</p> <ul style="list-style-type: none"> - Stake holders management, Communication plan etc. can be included along with brief description through charts - <p>Mr.Anand Chowdhary</p> <ul style="list-style-type: none"> - Include some aspects of agile methodology - Use Agile principles to do some projects
18MCA52 Big Data Analytics	<p>Dr. Kota Solomon Raju</p> <ul style="list-style-type: none"> - Accommodate some practical examples <p>Mr.Anand Chowdhary</p> <ul style="list-style-type: none"> - How to retrieve structure and query can be considered - Introduction of performance management with respect data can be considered - Coverage of the syllabus is good
18MCA532 Software Performance Engineering	<p>Mr.Anand Chowdhary</p> <ul style="list-style-type: none"> - Tools like Load Runner can be explored

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18MCA533 Principles of UI/UX Design	Mr. Chethak. T.K - Design thinking will be a add on to the course
18MCA541 Cloud Computing	Dr. Kota Solomon Raju - Tools related to cloud computing can be included - Explore all different services and functionalities which are available in the tools can be included - Book by Raj Kumar Bhuiya can be as one of the reference book - Difference between cloud, distributed and parallel computing with network concepts can be mentioned in the content Mr. Chethak. T.K - Dev Ops concepts can be added in theory - Automation test cases can be considered in cloud from end to end for practice - Inputs related to Dev Ops and assignment can be sought
18MCA542 Internet of Things	Dr. Kota Solomon Raju - IoT Protocols should be there - Combine the topics names Arudino, Pi and esp8266 and rename it as Introduction to Embedded systems for IoT Applications - More conceptual concepts related to IoT interface and Programing to be include in content delivery - Application layer protocols for networking, embedded and cloud to be incorporated - MQTT,COAP,DDS,XMPP, Web Socket Protocols can be considered - From the above protocols, any one protocol can be dealt in detail
18MCA55 Seminar-1	Dr. Kota Solomon Raju - Extended topics which are not dealt in project can be given as seminar topic
18MCA56 Minor Project-II	Dr. Kota Solomon Raju - Implementation part of the project should be carried out without using any built in API - Emphasis should be on developing a new API
VI Semester	
18MCA61 Project & Viva Voce	Dr. Kota Solomon Raju - Implementation part of the project should be carried out without using any built in API - Emphasis should be on developing a new API
18MCA62 Seminar-2	Dr. Kota Solomon Raju - Extended topics which are not dealt in project can be given as seminar topic

Resolution: After detailed discussion, BoS approved the scheme and syllabus for 2018 - 3rd and 4th semester

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Minutes of Meeting of 5th Board of Studies held on 2nd March 2019


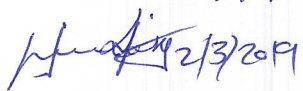
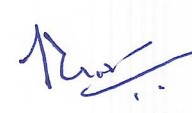


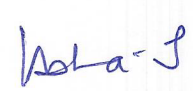

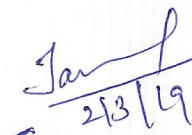

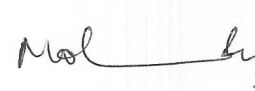

Sub. No. 18: Ratification of BoE Members

The chairperson briefed that the term of nominated Board of Examiners has ceased. Hence the department has changed the Board of Examiners. The chairperson requested to ratified the same

1.	Chair Person	Dr Andhe Dharani	Professor & Director Department of MCA, R V College of Engineering director-mca@rvce.edu.in andhedharani@rvce.edu.in M: +918971720832
2.	External Member	Dr Samitha Kaiyum	Professor & Head , Department of MCA Dayananda Sagar College of Engineering hod-mcavtu@dayanandasagar.edu samitha-mcavtu@dayanandasagar.edu M:9845375302
3.	Internal Members	Dr. Usha J	Professor, Department of MCA R V College of Engineering ushaj@rvce.edu.in M:+919535280674
4.		Dr. B H Chandrasekhar	Associate Professor , Department of MCA R V College of Engineering chandrashekarbh@rvce.edu.in M: 9845750887
5.		Dr S Anupama Kumar	Associate Professor, Department of MCA R V College of Engineering anupamakumar@rvce.edu.in M:+91 9590062772
6.		Mr. Vishal C	Asst. Professor, Department of MCA R V College of Engineering vishal@rvce.edu.in M:+91 9742111344
7.		Dr. S SNagamuthu Krishnan	Asst. Professor, Department of MCA R V College of Engineering ssnk@rvce.edu.in M: 8903582301

Resolution: BoS members approved the new BoE Members

Following Members were present

- | | | |
|--------------------------|----------------------------|--|
| 1. Dr.Andhe Dharani | - Chair Person | Signature

2/3/19 . |
| 2. Dr. Kota Solomon Raju | - Subject Expert – Member | - 
2/3/2019 |
| 3. Dr. N P Kavya | - Subject Expert – Member | - 
02/03/2019 |
| 4. Mr.Anand Chowdhary | - Industry Expert – Member | - 
02/03/2019 |
| 5. Mr. Chethak. T.K | - Alumnus – Member | - 
02/03/2019 |
| 6. Dr.Usha J | - Member | - 
2/03/2019 . |
| 7. Dr.Vijayalakshmi M N | - Member | 
2/3/19 - 
2/3/19 |
| 8. Dr.Jasmine K S | - Member | -  |
| 9. Dr.Mohanardhaya | - Member | - 
2/3/19 |
| 10. Prof. Krishnan.R | -Member | - 
2/3/19. |



RASHTREEYA SIKSHANA SAMITHI TRUST
R. V. COLLEGE OF ENGINEERING®
Department of Master of Computer Applications

*Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka
Approved by All India Council for Technical Education, New Delhi.
Accredited by National Board of Accreditation, New Delhi*

RVE/MCA/ 481/2018-19

Date: 14/02/2019

To,

Dr. Kota Solomon Raju
Sr. Principal Scientist
Internet of Things (IoT) Group
Cyber Physical Systems (CPS) Area
CSIR - CEERI, Pilani - 333031

Dear Sir,

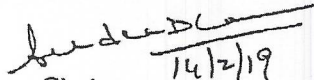
Sub: Request to Attend Board of Studies Meeting Scheduled on 2/03/2019

With reference to above subject, the Board of Studies meeting for framing the 2018 scheme MCA Autonomous Syllabus for III to VI semester is scheduled on 02/03/2019 at 9.30 AM in the Department of Master of Computer Applications, R. V College of Engineering, Bengaluru – 59.

In this regard, you are invited as a BoS Member

You are requested to kindly make it Convenient to attend the above meeting as a BoS Member

Thank you


14/2/19
Chairperson
Board of Studies (BoS)
Department of MCA

Encl:

1. List of BoS Members

Director
Department of
Master of Computer Applications
R.V. College of Engineering
Mysore Road, Bengaluru-59



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Accredited by National Board of Accreditation, New Delhi

RVCE/MCA/481/19-20

Date: 14.02.2019

To,

Mr. Anand Chaudhary
Solution Delivery Lead,
IBM Watson Commerce,
IBM India, Bengaluru.

Dear Sir,

Subject: Request to attend Board of Studies Meeting Scheduled on 2/03/2019

With reference to above subject, the Board of Studies Meeting for framing the 2018 scheme MCA Autonomous Syllabus for III & VI semester is scheduled on 2/03/2019 at 9.30 am in the Department of Master of computer Applications, R V College of Engineering, Bengaluru – 560059.

In this regard, you are invited as a BoS Member.

You are requested to kindly make it Convenient to attend the above meeting as a BoS Member.

Thank you

[Signature]
14/2/2019
Chairperson

Board of Studies (BoS)
Department of MCA
Director

Department of

Master of Computer Applications
R.V. College of Engineering
Mysore Road, Bengaluru-59

Encl:

1. List of BoS Members



RASHTREEYA SIKSHANA SAMITHI TRUST

R. V. COLLEGE OF ENGINEERING

Department of Master of Computer Applications

Affiliated to Visvesvaraya Technological University, Belgaum, Karnataka

Approved by All India Council for Technical Education, New Delhi.

Accredited by National Board of Accreditation, New Delhi

Date: 09/03/2019

Analysis of the 5th BoS Proceeding

Observations and Action plans from 5th BoS conducted.

SL No.	Observations
01	Suggested to emphasize more on seminars and assignments wherever applicable.
02	Java Programming: Suggested to focus on core java.
03	Cloud Computing: To add Distributed and Parallel systems in the syllabus contents and also BoS members suggested to include "Cloud Computing Principles and Paradigms" By Rajkumar Buyya as one of the references books.
04	Seminar-2: suggested to have extended topic of project to be given as seminar topic
05	IoT: Suggestions to include IoT Protocols, more conceptual concepts related to IoT interface and Programing. Application layer protocols for networking, embedded and cloud to be incorporated MQTT, COAP, DDS, XMPP, Web Socket Protocols can be considered.
06	Major Project: One of the BoS members suggested to implement project without using built-in API and emphasis should be given to build new APIs

Action Plan and Implementation

SL No.	Implementation
01	Assignment / Experiential Learning components are included in all courses as a part of CIE component.
02	As per the suggestions in Java Programming course one full unit(UNIT-I) core java is included.
03	Distributed and Parallel systems is included in Unit-II and also "Cloud Computing Principles and Paradigms" By Rajkumar Buyya as one of the references books
04	Students are suggested to take up the seminar topic on the cutting-edge technology
05	Interfacing and Programing with Rasbery Pi and esp8266 is included in Unit-II and Unit-III, application layer protocol like MQTT based dashboard implementation is added in Unit-V and embedded system in Unit-I
06	Majority of the students carry out their project in companies and are supposed to do as per the company requirement

W. K. J.
Dr.UJ

Dr. MNV
Dr.MNV

Dr. KSJ
Dr.KSJ

Dr. MA
Dr.MA

Prof.KR

Director
Department of
Master of Computer Applications
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Mysore

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e-mail: director-mca@rvce.edu.in

Website: www.rvce.edu.in: www.rvinstitutions.com

As indicate above, based on the feedback of stakeholders, the following new courses were suggested to be included in the 2018 MCA Scheme and Syllabus revision. Curricular revisions were discussed in the Board of Studies meetings and the new courses suggested with changes are added and the same is reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1	NOSQL	18MCA341	2018
2	Machine Learning	18MCA343	2018
3	Software Testing	18MCA41	2018
4	Pattern Recognition	18MCA432	2018
5	Software Architecture	18MCA433	2018
6	Cyber Security	18MCA441	2018
7	Unified Modelling Language	18MCA443	2018
8	Enterprise Application Programming	18MCA453	2018
9	Big Data Analytics	18MCA52	2018
10	Software Performance Engineering.	18MCA532	2018


Director
 Department of MCA
 Master of Computer Applications
 R.V. College of Engineering
 Mysore Road, Bengaluru-59

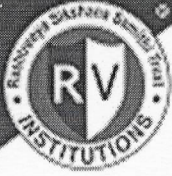
Agenda: Board of Studies Meeting – 23rd June 2018

Sub. No. 12 : Achievements of Department of MCA, RVCE

Sub. No. 13 : Information about the change in the guidelines and credit structure from
VTU/UGC

Sub. No. 14: Discussion on the proposed scheme for 2018 scheme and detailed syllabus of 1st
and 2nd Semester Autonomous syllabus

Any other subject/s with the permission of the chair



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DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

Date : 20.02.2020

CIRCULAR

The 6th Board of Studies meeting will be held on 22nd February 2020 at 10:00 am. The agenda of the meeting is

Sub No. 19: To read and record the minutes of meeting of 5th Board of Studies Meeting held on 2nd March 2019

Sub No. 20: Achievements of MCA department

Sub No. 21: Discussion and Approval of syllabus for V and VI Semester – 2018 Scheme

Sub No. 22: Ratification of SEE component in 16MCA62, Unit-5 Content of 18MCA41

Sub No. 23: Any other subject/s with the permission of the chair

The following faculty are requested to attend the meeting.

Sl. No	Name	Designation	Signature
1	Dr.Andhe Dharani	Professor and Director, Chairperson	<i>[Signature]</i> 20/02/2020.
2	Dr.Usha.J	Professor, Member	<i>[Signature]</i> 20/02/2020.
3	Dr.RenukaPrasad.B	Associate Professor and Associate Dean	<i>[Signature]</i>
4	Dr.Jasmine.K.S	Associate Professor, Member	<i>[Signature]</i> 20/2/2020
5	Dr.Vijayalakshmi.M.N	Associate Professor, Member	<i>[Signature]</i> 20/02/2020
6	Dr.Mohanaradhya	Assistant Professor, Member	<i>[Signature]</i> 20/2/2020
7	Dr.Divya.T.L	Assistant Professor, Member	<i>[Signature]</i> 20/2/2020.

Thanking you,

[Signature]
20/02/2020
DIRECTOR

Director
Department of
Master of Computer Applications
R.V. College of Engineering
Mysore Road, Bengaluru-59.

Department of Master of Computer Applications
Proceedings of the 6th Board of Studies Meeting held on 22nd February 2020

Meeting date and time: Saturday, 22nd February 2020 at 10.00am

Members Present

1. Dr.Andhe Dharani	Chair Person
2. Dr. Kota Solomon Raju	Subject Expert - Member
3. Dr. N P Kavya	Subject Expert – Member
4. Dr. Chetana Prakash	VTU Nominee - Member
5. Dr.Usha J	Member
6. Dr.Vijayalakshmi M N	Member
7. Dr. Jasmine K S	Member
8. Dr.Mohanardhaya	Member
9. Dr.Divya.T.L	Member

Special invitees

10. Ms. Kalapriya Kannan, HP	Special Invitee
11. Dr. Renuka Prasad, Assoc. Dean, MCA	

Leave of Absence:

1. Mr. Chethak. T.K	Alumnus - Member
2. Mr.Anand Chowdhary	Industry Expert- Member
3. Dr. N. Shanmukha	Academics

The chairperson welcomed the members.

After brief introduction of members, the topics listed in the agenda are taken up for discussion. The 2018 scheme detailed syllabus of V and VI Semester Autonomous MCA were presented to the board for it perusal.

Sub No. 19: To read and record the minutes of meeting of 5th Board of Studies Meeting held on 2nd March 2019

The Chairman briefed the members about proceedings of the 5th Board of Studies Meeting held on 2nd March 2019 and action taken thereon.

Since no comments were received from the members, the proceedings and action taken report of 5th Board of Studies meeting were read and recorded.

Sub No. 20: Achievements of MCA department

During the presentation chairperson also conveyed about the student's achievements and the publication details.

The result analysis and SEE and CIE comparison was told by chairperson. The Paper Viewing process (PVP) which has started from the current academic year for examination transparency was also conveyed to the members present.

For the PVP process, **Dr. Kota Solomon Raju** suggested that the autonomy conducting examination should be completely given to course handling faculty. Sir also mentioned this freedom is given in BITS and IIT. Dr. Usha Member, briefed about the transparency of conducting exam, Dr. Vijayalakshmi MN member, told about for CIE open book exam is already in practice at the college level.

During discursion, Ms. Kalapriya Kannan, Invitee also supported to give transparency in examination and teacher should take ultimate decision of result in the respective course.

Finally Chairperson briefed about existing system of SEE and CIE. She told, after each CIE the scheme and solution will be discussed with students.

Sub No. 21: Discussion and Approval of syllabus for V and VI Semester – 2018 Scheme

The course syllabus for the 5th semester was shared and brief discussion was done during the 5th BoS meeting. The changed course wise the syllabus was shown for approval and discussion. Dr. Kota Solomon Raju full sufficient discussion, end to end was done. Following suggestions were given -

18MCA51- Software Project Management - Ms. Kalapriya Kannan – include the tool if feasible for assignment

18MCA531- Wireless Mobile Computing - Dr. Kota Solomon Raju suggested to add a part on 5G and beyond 5G

18MCA532- Software Performance Engineering – Dr. Kota Solomon Raju suggested to explore new tools and to work on any proprietary standards along with open source. Dr. Renuka Prasad mentioned that open source follows full standards. Dr. Kavya specified that we cannot purchase, and we have to be restricted to follow the same. Suggestion by Kota sir, was given to make the students do a comparison on both open and proprietary tools if feasible, given at a lower costs.

18MCA533 - Principles of UI/UX Design - Ms. Kalapriya Kannan suggested it is way of doing user experience, UI involves development and UX – company perspective and as of now the syllabus is fine.

18MCA541- Cloud Computing – Ms. Kalapriya Kannan stated syllabus is fine and the cloud security will can be taken up by her.

18MCA542 - Internet of Things - Dr. Kota Solomon Raju stated that the dashboard is good, if from sensor data to cloud if the usage of IoT is made clear, it will be an add-on, and from physical layer to next levels transition can be considered. Dr. Renuka Prasad said this is not been added, and Kota sir said for MCA in fifth semester the syllabus is ok.

18MCA55 - Seminar-I- Dr. NP Kavya suggested to attach with the minor project for evaluation of SEE

18MCA61 - Project & Viva Voce - Dr. Kota Solomon Raju-Give flexibility to the students. Paper should be published in the peer reviewed journal and conferences. Measure the h-index of the conference and then publish.

Sub No. 22: Ratification of SEE component in 16MCA62, Unit-5 Content of 18MCA41

18MCA41 – Syllabus was displayed and the tool LDRA specified was to be removed and any opensource tools like coverage.pi was to be included.

16MCA62 – The contents were displayed and as the seminar component carries credits, it was requested to consider the SEE component to be added. The committee members agreed to it.

Resolution: The Committee approved and ratified to the above said changes.

Sub No. 23: Any other subject/s with the permission of the chair

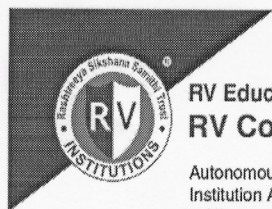
The two years course for MCA was discussed.

Dr. Kavya suggested that the teaching should concentrate on basics in courses, and final semester can include some course. The CIE should be of open book.

Ms. Kala priya suggested to have syllabus to improve the student knowledge to understand the problem, and to solve the problem irrespective of programming language.

Dr.Chetana Prakashsuggested to ensure that keep courses in the below semester and leave the final for the project / internship. Dr. Kota suggested that since computer science place major role, in syllabus bring in computational aspects, concentrate on one or two language. Include data structures, see the approach has concepts and solved certain level of complexity. During change in syllabus, Subject can be slowly transformed with 20% with advanced topics in the first year, later stage 30%. Finally from old syllabus to new syllabus. Concentrate more about 60% hands on.

The meeting concluded with thanks to the chair.



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New Delhi

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8971720832; (O) 080-6717 8074

Date: 28/02/2020

Analysis of the 6th BoS Proceeding

External BoS members reviewed the scheme & syllabus of various courses and provided suggestions wherever necessary.

SL No.	Observations
01	Software Performance Engineering: To explore new tools and to work on any open source or proprietary tools
02	Principles of UI/UX Design: The content of this course was very much appreciated by the BoS members.
03	Major Project: Give flexibility to students to publish technical/research paper in peer-reviewed journal and conference.

Action Plan and Implementation

SL No.	Implementation
01	In Unit V of Software Performance Engineering Case study is included to explore testing tools like JMeter, Locust, The grinder etc.
02	BoS members appreciated contents of Principles of UI/UX Design contents.
03	Students are encouraged to publish their paper pertaining to seminar / project in peer-reviewed journal or conference under the guidance of faculty member

Dr.UJ

Dr.MNV

Dr.BRP

Dr.KSJ

Dr.MA

Director

Dr.DFL

As indicate above, based on the feedback of stakeholders, the following new courses were suggested to be included in the 2018 MCA Scheme and Syllabus revision. Curricular revisions were discussed in the Board of Studies meetings and the new courses suggested with changes are added and the same is reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1	Big Data Analytics	18MCA52	2018
2	Software Performance Engineering.	18MCA532	2018


Director, MCA
Department of
Master of Computer Applications
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Mysore Road, Bengaluru-59



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Mohanaradhya Mr. <mohanaradhya@rvce.edu.in>

7th BoS meeting @ 25th July 2020

Director MCA-RVCE <director-mca@rvce.edu.in>

Tue, Jul 21, 2020 at 10:29 PM

To: SOLOMON RAJU KOTA <kotasolomonraju@gmail.com>, Anand <anand_onnet@yahoo.com>, Chethak T K <chethaktk@yahoo.com>, Kavya Aradhya <npkavya@gmail.com>, chetana.p.m@gmail.com, "Renuka Prasad B." <renukaprasadb@rvce.edu.in>, "Usha J." <ushaj@rvce.edu.in>, jasmineks <jasmineks@rvce.edu.in>, "Vijayalakshmi M.N." <vijayalakshmi@rvce.edu.in>, "Mohanaradhya Mr." <mohanaradhya@rvce.edu.in>, "Divya T.L." <divyatl@rvce.edu.in>

Dear BoS Members,

The 7th BoS meeting (Online) is scheduled on Saturday. 25th July 2020 at 10:00am, Kindly make it convenient to attend and give your valuable inputs

Please find the attached meeting circular and scheme & syllabus of 2020.

with regards

Dr. Andhe Dharani
Professor and Director,
Department of Master of Computer Applications
R V College of Engineering, Mysore Road,
R V Vidyaniketan Post,
Bengaluru, Karnataka, India - 560059
Ph: 080 - 67178074
M: +91 8971720832

2 attachments



7th BoS meeting Circular.pdf

195K



2020_scheme_syllabus_BOS.pdf

1073K



DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

RVE/ MCA / / 2020-21

21 July 2020

Meeting Notice

7th Board of Studies Meeting (Online using Cisco WebEx Platform)

Date: Saturday, 25th July 2020

Time: 10:00 am

Sub No	Agenda
24	To read and record the Minutes of the meeting of 6 th BoS meeting held on 20 th February 2020
25	Achievements of MCA Department
26	Discussion and Approval of 2020 Scheme
27	Discussion and Approval of I year 2020 syllabus
28	Any other subject/s

BoS, Chairperson
Department of MCA

Department of Master of Computer Applications

Office of Director, MCA www.rvce.edu.in; director-mca@rvce.edu.in; (M) 8971720832; (O) 080-6717 8074

Online Meeting (Cisco Webex)

7th BOARD OF STUDIES MEETING

Minutes of Meeting held on Saturday, July 25, 2020 at 10 AM

Agenda	Sub No.	Particulars
	24	To read and record the Minutes of the meeting of 6 th BoS meeting held on 20 th February 2020
	25	Achievements of MCA Department
	26	Discussion and Approval of 2020 Scheme
	27	Discussion and Approval of I year 2020 syllabus
	28	Any other subject/s
Date	Saturday 25 th July 2020	
Time	10 AM	
Venue	Online Meeting (Cisco Webex)	

Members Present				
#	Name	Designation	Organization	Remark
1.	Dr. Andhe Dharani	Professor & Director, Chairperson	RVCE	P
2.	Dr. Shanmukha Nagaraj	Professor & Dean Academics	RVCE	P
3.	Dr. Kota Solomon Raju	Subject Expert, Member		P
4.	Mr. Chethak T K	Distinguished Alumnus, Member		P
5.	Mr. Anand Chowdhary	Industry Expert- Member		P
6.	Dr. N P Kavya	Professor & Head, MCA Dept, RNSIT Subject Expert – Member	RNSIT	P
7.	Dr. Chetana Prakash	Professor & Head, MCA Dept, BIET VTU Nominee	BIET	P
8.	Dr. Usha J	Professor, Member	RVCE	P
9.	Dr. K S Jasmine	Associate Professor, Member	RVCE	P
10.	Dr. M.N. Vijayalakshmi	Associate Professor, Member	RVCE	P
11.	Dr. Renuka Prasad B	Associate Professor & Associate Dean, Invitee	RVCE	P
12.	Dr. Mohanaradhya	Assistant Professor, Member	RVCE	P
13.	Dr. Divya TL	Assistant Professor, Member	RVCE	P

Details of meeting minutes is attached

Sub. No.	24
Subject	To read and record the Minutes of the meeting of 6 th BoS meeting held on 20 th February 2020
Discussions & Resolutions	
The chair, Dr Andhe Dharani welcomed all the BoS members for the 7 th Meeting. The chair briefed the previous BoS Minutes of the Meeting and action taken there on. The proceedings and action taken report of 6 th Board of Studies meeting were read and recorded.	

Sub. No.	25
Subject	Achievements of the MCA Department
Discussions & Resolutions	
The chair presented the achievements of the MCA department, placement statistics, classes conducted online, FDP and webinar attended and conducted by the faculty, publications of the students and faculty and awards conferred on the faculty.	

Sub. No.	26	
Subject	Discussion and Approval of 2020 Scheme	
Discussions & Resolutions		
Dr AD briefed the members that the MCA program which was currently a Three year program has been reduced to a Two year program and from Six semesters to Four Semester by the AICTE in its recent order, from the current year 2020-21 onwards across the country. She also briefed the members on the various autonomous schemes for RVCE-MCA program.		
Autonomous Schemes of MCA Program	Year	Autonomous Scheme
	2016	I
	2018	II
	2020	III
Mr. Chethak queried why the AICTE had reduced the duration to 2 years		
Dr. AD conveyed that Lateral entry (20% of sanctioned intake) of BCA students was permitted in 2015 to the 2 nd year. This resulted in many seats being unfilled in many colleges in the 1 st year resulting in closure of MCA Courses in many engineering colleges across the country. In 2017, AICTE permitted unfilled seats to be filled in the second year resulting in very few students in the first year in those colleges. Many colleges sent representation to AICTE to do away with the Lateral entry system, by making it 2 years or 3 years. In 2020, AICTE reduced the duration to two years to do away with the problem in admissions in many		

colleges running MCA courses.

Credit structure Breakup for TWO year MCA Program

Dr AD conveyed that initially 97 credits were decided and increased to 100 credits to be on par with VTU as per suggestions of the Dean Academics and the Principal. However, we had the flexibility to define 88 – 97 credits since ours is an autonomous program. PG M.Tech, RVCE has 88 credits.

Breakup of Credits in the 2020 Scheme Two Year MCA Program	Semester	No. of Credits
	I	26
	II	27
	III	27
	IV	20
	Total	100

Dr AD presented the draft 2020 scheme for the MCA program. Some of the salient features course wise were:

Professional Practice – will be managed by HSS Board based on the requirements of placement and overall personality development of the students.

Bridge Course- Basics of Programming will be introduced to students from non-computer science backgrounds with 0 credits. But CIE and SEE will be made mandatory and 3 Hrs of Lecture classes / week will be held on Saturdays or during free slots on weekdays.

In the Second Semester, electives are offered to the students. Three streams have been defined viz Networks, Data Sciences and Application development. The students will be able to choose One course in each of the three elective defined thereby providing students an opportunity to have the knowledge of all the three streams depending on their learning levels and this will benefit them for placements. Design thinking lab has been introduced in the second semester. In the 3rd semester, Research Methodology, Minor projects, Computer Vision with AR/VR are offered.

Dr. Kota Solomon Raju intervened and questioned that the students will be forced to study all courses and he conveyed that flexibility be provided by offering electives in clusters like select three out of nine as in other universities thereby enabling students to go in depth in the elective of their choice rather than making them study all electives.

Dr. BRP conveyed that students will be enabled in all the streams based on the legacy systems, current industry needs based on their learning levels and that the syllabus was based on industry inputs. Further, he conveyed that MCA courses cannot be offered in clusters as few courses have prerequisites in the third semester.

Dr. AD also conveyed that merging all the three streams, will lead to operational issues as tutorials have been provided for elective 1 and 2 and practice for elective 3. Also, the student will be able to opt for all the streams based on their understanding level.

about UNIX concepts, course on Shell script has been introduced. Mr. Anand appreciated that Docker has been included. Dr. BRP added that Industry expert would be called to render few sessions and the basics defined will extend support to courses like cloud computing in higher semester.

Computer Networks: Dr BRP conveyed that most of the topics have been retained and some new lab programs have been introduced.

OOP: Dr. KSJ conveyed that in the syllabus all OOP concepts are covered.

Web programming: Dr BRP conveyed that Java scripts added for visualization as it will be basic for the Elective in Solutions development.

Software Engineering: Dr KSJ briefed the contents of the syllabus and mentioned that it is a three credit course. This course includes software testing, software quality assurance according to ISO / IEEE standards. Mr. Anand conveyed that Syllabus is very dry in nature and to avoid that case studies need to be added to Classroom sessions to which Dr. KSJ replied that it will be taken care of in assignment. Dr. AD further added that in assignment, students are given a case study topic and they need to brief about how and where it is applicable in the beginning of the semester itself and this is evaluated phase wise. Mr. Chethak added that Challenges are multi fold and it creates something new. The student should be able to understand Project Management concepts, risk management, Plan driven development, developer, tester, estimation, how to report back, plan at different stages. Guest Lecture or seminar from experts to be planned to make the course interesting. Dr. AD assured that Case studies will be given as assignments and expert lectures will be conducted for all courses.

Data Structures and Algorithms: Dr. AD briefed that related concepts and learning methodology will be covered. Dr. Kavya added that during DSA, when liberty is given to students, they will choose Python. It is better to cover Data structures using C/C++/ Java rather than Python as they will not be able to grasp the structure concepts properly and resort to using import features. Mr. Anand agreed to this and further added that a person should know where the library is created. How the library is implemented and working concept.

DBMS: Dr AD briefed that both structured and unstructured concepts are covered and Mr. Anand added that Lab experience should be domain wise

Networking stream: (Electives)

Mr. Anand conveyed that Students feedback to be taken from the previous semester and that. SDN is booming and its good that its is included in the syllabus. Dr. Kota Solomon Raju: excused himself

Network Security: Mr. Anand questioned whether cloud security is included. Dr. MA conveyed that in the 3rd Sem, Cloud computing is offered, and the security concept is covered there. Further, it is also covered in the existing 2018 scheme, Cloud Computing course. Other courses in the network stream will be Cyber security and Web of Things. Dr Anand appreciated it.

Data sciences Stream (Electives)

Dr. AD conveyed that Machine Learning is defined in the Data Science Stream. Basics will be covered in depth. Dr. Kavya added that Introduction to Reinforcement learning be given with robotics application, statistical learning, neural networks and glimpse of NLP. Dr. AD replied that it will be covered in types of ML and specific names have not been mentioned.

Big Data Analytics: Dr. MNV briefed that most of the previous topics have been retained and new concepts introduced were Spark, data visualization, Tableau. In tutorials, practical components will be addressed. In NLP- syntactic and semantic analytics will be covered.

Dr. KSJ suggested that in Note part, testing to be incorporated in solution development as per Principal suggestion. Mr. Anand added that testing should be included in requirement analysis, design and implementation phases. Dr. BRP added that the same will be incorporated in solution development.

Dr AD shared that HSS Board at the college level will deliver the Professional practice Course and will final content will be sent shortly. Mr. Anand suggested that for Campus recruitment, level of cognitive testing should be introduced and the same to be conducted for two semesters by the HSS Board. Dr. AD replied that operational feasibility would be verified and inform the members. Mr. Chethak commended Introduction of HSS. The key is right attitude and skills can be introduced during training.


Members approved the syllabus of scheme 2020 for 1 year based on the discussions

Sub. No.	28
Subject	Ratification of the CIE marks -18MCA 61 from 150 marks to 100 Marks
Discussions & Resolutions	
Dr AD conveyed that the Max marks for CIE Major Project in 2018 Scheme was 100 marks in all the PG courses and asked the members for approval to ratify the changes from current 150 to 100. The members approved the ratification in CIE marks from 150 to 100.	

The Chairperson thanked all the members for their support. The meeting concluded with thanks to the chairperson.

As indicate above, based on the feedback of stakeholders, the following new courses were suggested to be included in the 2020 MCA Scheme and Syllabus revision. Curricular revisions were discussed in the Board of Studies meetings and the new courses suggested with changes are added and the same is reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1	Linux Shell Scripting	20MCA12	2020
2	Professional Practice	20HSS16	2020
3	Basics of Programming	20MCAB17	2020
4	Network Security	20MCA242	2020
5	Natural Language Processing	20MCA253	2020
6	PHP based Software Solutions	20MCA261	2020
7	Java based Software Solutions	20MCA262	2020
8	JavaScript based Software Solutions	20MCA263	2020
9	Design Thinking	20MCA27	2020


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Mohanaradhya Mr. <mohanaradhya@rvce.edu.in>

8th BoS meeting @ 12th June 2021

Director MCA-RVCE <director-mca@rvce.edu.in>

Thu, Jun 10, 2021 at 5:05 PM

To: SOLOMON RAJU KOTA <kotasolomonraju@gmail.com>, Anand <anand_onnet@yahoo.com>, Chethak T K <chethaktk@yahoo.com>, Kavya Aradhya <npkavya@gmail.com>, Chetana Prakash <chetana.p.m@gmail.com>, "Mohanaradhya Mr." <mohanaradhya@rvce.edu.in>, "Divya T.L." <divyatl@rvce.edu.in>, jasmineks <jasmineks@rvce.edu.in>, "Renuka Prasad B." <renukaprasadb@rvce.edu.in>, "Usha J." <ushaj@rvce.edu.in>, "Vijayalakshmi M.N." <vijayalakshmi@rvce.edu.in>

Dear BoS Members,

The 8th BoS meeting (Online) is scheduled on Saturday. 12th June 2021 at 10:00am, Kindly make it convenient to attend and give your valuable inputs

Please find the attached meeting circular and second year scheme & syllabus of 2020 scheme.
The online Webex link will be shared.

with regards

Dr. Andhe Dharani
Professor and Director,
Department of Master of Computer Applications
R V College of Engineering, Mysore Road,
R V Vidyaniketan Post,
Bengaluru, Karnataka, India - 560059
Ph: 080 - 67178074
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2 attachments



8th BoS meeting Circular.pdf
187K



II Year_2020_Scheme_syllabus _draft.pdf
1185K



DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

RVE/ MCA / / 2020-21

08th June 2021

Meeting Notice

8th Board of Studies Meeting (Online using Cisco WebEx Platform)

Date: Saturday, 12th June 2021

Time: 10:00 am

Sub No	Agenda
29	To read and record the Minutes of the meeting of 7 th BoS meeting held on 25 th July 2020
30	Achievements of MCA Department
31	Discussion and Approval of II year 2020 syllabus
32	Any other subject/s

Sd/-

Dr. Andhe Dharani
BoS, Chairperson
Department of MCA

Department of Master of Computer Applications

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Online Meeting (Cisco Webex)

8th BOARD OF STUDIES MEETING

Minutes of Meeting held on Saturday, June 12, 2021 at 10 AM

Agenda	Sub No.	Particulars
	29	To read and record the Minutes of the meeting of 7 th BoS meeting held on 25 th July 2020
	30	Achievements of MCA Department
	31	Discussion and Approval of II-year 2020 syllabus
	32	Any other subject/s
Date	Saturday 12 th June 2021	
Time	10 AM	
Venue	Online Meeting (Cisco Webex)	

Members Present				
#	Name	Designation	Organization	Remark
1.	Dr. Andhe Dharani	Professor & Director, Chairperson	RVCE	P
2.	Dr. Shanmukha Nagaraj	Professor & Dean Academics	RVCE	P
3.	Dr. Kota Solomon Raju	Subject Expert, Member	CSIR	P
4.	Mr. Chethak T K	Distinguished Alumnus, Member		P
5.	Mr. Anand Chowdhary	Industry Expert- Member	IBM	P
6.	Dr. N P Kavya	Professor & Head, MCA Dept, RNSIT Subject Expert – Member	RNSIT	P
7.	Dr. Chetana Prakash	Professor & Head, MCA Dept, BIET VTU Nominee	BIET	P
8.	Dr. Usha J	Professor, Member	RVCE	P
9.	Dr. K S Jasmine	Associate Professor, Member	RVCE	P
10.	Dr. M.N. Vijayalakshmi	Associate Professor, Member	RVCE	P
11.	Dr. Renuka Prasad B	Associate Professor & Associate Dean, Invitee	RVCE	P
12.	Dr. Mohan Aaradhya	Assistant Professor, Member	RVCE	P
13.	Dr. Divya TL	Assistant Professor, Member	RVCE	P

Details of meeting minutes are attached.

Sub. No.	29
Subject	To read and record the Minutes of the meeting of 7th BoS meeting held on 25th July 2020
Discussions & Resolutions	
<p>The chair, Dr Andhe Dharani welcomed all the BoS members for the 8th Meeting. The chair briefed the previous 7th BoS Minutes of the Meeting by highlighting the 2-year MCA programme structure, credit scheme and the 2020 1st year syllabus which was ratified by the BoS and the Academic Council.</p> <p>The proceedings and action taken report of the 7th Board of Studies meeting were read and recorded.</p>	

Sub. No.	30
Subject	Achievements of MCA Department
Discussions & Resolutions	
<p>The chairperson presented the achievements of the MCA department in accreditation, placement, funded projects and academics.</p> <ul style="list-style-type: none"> • MCA programme at RVCE got NBA accreditation for 5 years from 2021-2022 to 2025-2026 up to 30th June 2026. • Placement statistics – 3 International offers and 93 offers as on date. Placement process is on for the 2018 batch. • Funding received from <ul style="list-style-type: none"> (i) Cisco- Rs 45 lakhs- Dr BRP -PI-Design, development, and implementation of IoT enabled Aquaponics System (ii) AICTE – Rs 2.3 Lakh Dr. Jasmine and Dr Preethi N Patil- Organizing National Conference (iii) VGST – Rs 2 lakh Dr Savitha R and Dr. MN Vijayalakshmi- for Organizing FDP programme. • Conduction of online proctored CIE • AICTE UHV Workshops attended by 16 Faculty and 17 workshops & webinars conducted online. • Karthik NK, student VI Sem won the Runner Up in Gana Chandana -Finale in 24th March 2021 • 2-Internal and 2-External Research Scholars Research Centre completed their Ph.D during 2020-21 and they were awarded in April 2021. In all 3 faculty were awarded Ph.D. in the department. 	

Sub. No.	31
Subject	Discussion and Approval of II-year 2020 syllabus

Discussions & Resolutions

The Director briefed the members about the draft of the II-year MCA program which have been already shared with the members in the email earlier and would take this up for discussion in the meeting. She also briefly recalled the scheme of the III and IV Semester and the courses identified for the same are.

3rd Semester Courses	Course Code	Course Title	Credits
	20MCA31	Project Management	4
	20MCA32	Modern Application Development	5
	20MCA33X	Elective-IV	5
	20MCA34X	Elective-V	5
	20MCA35X	Elective-VI (with Practice)	5
	20MCA36	Minor Project	2

4th Semester Courses	Course Code	Course Title	Credits
	20MCA61	Project & Viva-Voce	20
	20MCA62	Technical Seminar	2

Director presented the draft 2020 scheme of MCA program for III and IV semester. Some of the salient features course wise were:

Project Management: Dr. Jasmine briefed the contents of the Project Management course which is introduced in continuation with Design Thinking course which is dealt in 2nd Semester. Dr. KSJ also conveyed that this course has been kept generic to cover project management for other domains and also since it is required to incorporate New Education Policy, it important to make it a generic course to cover other domains. She also conveyed that inputs are obtained from industry people

Members held deliberation on tools to use to make the course more interesting otherwise it would be dry and theoretical for the students who focus more on technical courses. Members also suggested that case studies should be used to relate and involve industry people in the delivery of part of the course. Mr. Chetak, agreed to help out by providing frameworks and associating himself with the course.. Dr. Kavya suggested certifications to be given some credit in assignments using tools and thus motivate the students.

Mr. Anand mentioned case studies should be from start to finish so that students will be able to relate to the various stages of Project Management and they become involved in the course. Mr. Anand commended that the structure of the course design is good and care to be taken during delivery of case study to get the flow right, He mentioned if students knows about project management it gives the management layer of the organization.

Modern Application Development: Dr AD briefed about the course contents and conveyed that the course structure includes both Android as well as Progressive web application.

Dr: Kavya commented that the syllabus is good, challenging, interesting and can be made better if focus is given for UI aspects also and others also expressed similar opinions.

Members deliberated on the topics covered and appreciated that the students will have a good understanding of the courses and develop better apps which can be scaled up to project level at later stages

Dr. Andhe Dharani described about three elective streams to the BoS members which is a continuation of the 2nd semester.

Networking stream: (Electives)

20MCA321 Cloud Computing: Dr Mohanaradhya conveyed that this course is the continuation of Advanced Computer Networks concepts studied in 2nd semester. He briefed about the topics covered in this course

Dr.Kavya conveyed that Docker and container concepts are very required in the industry and also questioned that how the practical aspects of Docker container as this course do not have practice session. Dr. MA and Dr.BRP replayed that in tutorial class each students will have laptops and students will be guided to learn the practical aspects of Docker. Dr.BRP conveyed that MCA dept. is having cloud infrastructure to provide VMs to students to practice during tutorial hours.

All members appreciated the introduction of the Dockers in the syllabus as it is current requirement in the industry.

20MCA322 Cyber Security: Dr. Usha J briefed the contents of the syllabus covered in this course . She also mentioned that it is a continuation of the Network Security and this course focused on all major aspects of Cyber security from the perspective of an IT user as well as an IT administrator to System Access, digital forensics which is very relevant under the present context. Tools and exercises planned to be covered in the tutorials were also detailed. Certifications to be encouraged.

Dr. Kavya mentioned that awareness about hacking should be provided to the students. Mr. Chethak suggested including the topic of social engineering which is very important to understand the mindset of hackers and this was accepted to be included in the 1st unit.

Mr. Chethak appreciated that the syllabus prepared is well rounded and a lot of thought process has gone into it to cover everything, references, even the tutorials and what needs to be in all the topics there.

Data sciences Stream (Electives)

Artificial Intelligence: Dr Vijayalakshmi explained the contents of the course as a part of the data science stream started in the 2nd semester. She provided the highlights of the course.

Dr.Kavya commented that the syllabus flow is same as the conventional flow followed from the past and suggested to flow some innovative way to deliver the course content.

Members deliberated how to cover the course in an innovative way by using real world examples by making use of videos. They also shared how to plan what to discuss, the algorithms to consider, conduction and delivery of the course. Dr. MNV replied that she is already using videos in teaching and continue with this course also.

Deep learning: Dr MNV briefed that the syllabus covers topics on learning machines, fundamental topics relevant to solving deep learning problems, neural networks, RPNs, RNNs, CNN, convolution neural network, its architecture, the applications of all the above

fundamental concepts, anomaly detection methods.

Deliberations were carried out on conduction of the tutorial component and what tools to use.

Dr MNV gave an outline of the plan for covering the topics with the help of tools and that they are trying to explore what methods to adopt for cyber security problems also and that topics would be decided based on further discussions.

Augmented & Virtual Reality: Dr AD and Dr.MNV briefed about the topics covered in the syllabus. Explained that included AR aspects to the VR contents of the existing 2018 scheme. She also outlined the plan of including the tools in the tutorial sessions as there is no lab component and inclusion of webXR was discussed in detail.

Members gave suggestions to improvise the course delivery to include real time inputs such as aroma for the development of animation, 3D models to get the real feel of the course. .

Software Solution Development stream (Electives with practice)

20MCA35X Elective–VI (with Practice): Dr.BRP outlined that this course would be taught in part collaboration with a industry consortium so that students would benefited with a 6 week course conduction based on syllabus content prepared and requested the BoS members to give their consent to go ahead with the arrangement as this was in initial stages of discussions with the people concerned along with the Principal. He also mentioned that the syllabus would be finalized in discussion and the same would be shared with the BoS members and that it would be ready in a week's time and further suggestions would be sought by BoS members to complete the syllabus framing.

After deliberation, about the course delivery the members conveyed that it is a good idea to benefit the students and that it should be mapped to Major projects and internship and if possible to existing courses. The elective stream consists of a PHP based framework, JavaScript based framework, and Java based framework. During training, students will learn the fundamentals of full stack application development.

Web of Things: Dr BRP outlined how the web of things has come up. He discussed the course contents in detail and members appreciated the content and said it is well framed, well rounded and suggested inclusion of the concept of micro service to be at the top.

Major Project: Dr.AD conveyed the structure , process of conduction and evaluation of Major Project which is in line with all the PG programmes in the college. She also elaborated about the industry projects, in house projects and their evaluation process.

Dr. Kota Solomon Raju pointed out that paper publication would be a burden for the students as part of Major project.

Dr.AD conveyed that paper publication is optional and if student is not publishing he/she will lose only 5 marks

Seminar: Dr AD discussed in detail the structure and format of the evaluation process as outlined in the syllabus. The process of publication of papers was also discussed. Paper publication can be based on the project done or the seminar topic.

Dr. Shanmukha, Dean Academics welcomed all the BoS members and congratulated them

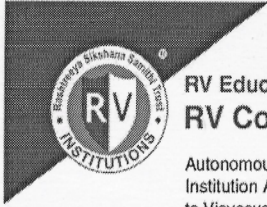
for giving valuable inputs and suggestions in the best interest of the system and briefed about major changes in the outcome of education by implementing National Education Policy by 2022. He outlined the requirements, program for interdisciplinary and multidisciplinary courses that need to be introduced between the branches like Computer science, Information Science. He also implored the members to explore the possibility of having interaction with the other M. Tech programs of related branches and between the various skill based courses. He also emphasized experiential learning, what the students are getting out of it is very important enhancing their innovative and creative skills and thought provoking assessment. He also conveyed that every program to have a collaboration with the industry and also offer the industry based electives, if not completely, at least a unit or two can be dealt by the industry personnel as this, gives a platform for all the students to explore the latest techniques that technology is what is happening in the industry.

Dr AD: elaborated the NEP 2020 which needs to be introduced in the 2022 Scheme where courses are interdisciplinary and also mentioned that MCA is already a multidisciplinary course as students from all streams take admission to the course.

Sub. No.	32
Subject	Any other subject/s
Discussions & Resolutions	
<p>Dr. AD briefed about the bridge course of first semester, and said that VTU circular came on 29th March and as per the circular, it was mentioned that the students who have done BCA and having BSc (CS / IT) degree certificate are only considered as computer science background remaining all to take the bridge course. Based on this we had got addition of 24 students, first we had not considered them as they had BSc with one CS subject studied, to take the bridge course. We have taken extension from VTU to conduct the classes for them and the final exam to be done before the end of first year as the circular came late. The ratification for the list of 31 students, 24 plus the 7 from first list, for the bridge course, Basics of programming was asked from the members. The BoS members approved the same.</p>	

The chairperson thanked all the members and promised to get back with the changes and informed that the AC meeting is also scheduled shortly and that will also be communicated to members for further comments.

The meeting ended with thanks to the chairperson.



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Date: 17/06/2021

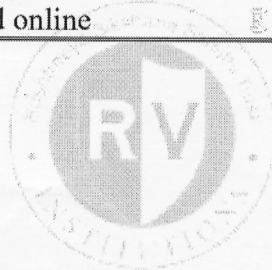
Analysis of the 8th BoS Proceeding


Suggestions:

SL No.	Observations
01	BoS members suggested to include Social Engineering Cyber Security

Action Plan and Implementation

SL No.	Implementation
01	As per the suggestions of the BoS members, the Social Engineering topic is included in the I Unit of Cyber Security. Note : The Meeting was held online




Director
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Department of
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Mysore Road, Bengaluru-59

As indicate above, based on the feedback of stakeholders, the following new courses were suggested to be included in the 2020 MCA Scheme and Syllabus revision. Curricular revisions were discussed in the Board of Studies meetings and the new courses suggested with changes are added and the same is reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1	Web of Things	20MCA333	2020
2	Artificial Intelligence	20MCA341	2020
3	Deep Learning	20MCA343	2020
4	PHP Framework based Full Stack Software Solutions	20MCA351	2020
5	Java Framework based Full Stack Software Solutions	20MCA352	2020
6	JavaScript Framework based Full Stack Software Solutions	20MCA353	2020


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Mohanaradhya Mr. <mohanaradhya@rvce.edu.in>

Invitation for BoS Meeting on 06th April 2023

Director MCA-RVCE <director-mca@rvce.edu.in>

Mon, Apr 3, 2023 at 5:39 PM

To: SOLOMON RAJU KOTA <kotasolomonraju@gmail.com>, dr.reddy@nitgoa.ac.in, akshaykuntur@gmail.com, "Dr.Hanumanthappa M" <hanu6572@hotmail.com>, Saurabh <sauravrvce@gmail.com>, Principal RVCE <principal@rvce.edu.in>, Dean Academics R V College of Engineering <dean.academics@rvce.edu.in>, Vice Principal RV College of Engineering <viceprincipal@rvce.edu.in>
Cc: rvce_mca <rvce_mca@rvce.edu.in>

Respected Sir / Madam

With reference to above subject, the Board of Studies meeting for 2022 scheme MCA Autonomous Syllabus for I semester is scheduled on **6th April 2023 at 10.30 AM** in the Department of Master of Computer Applications, R. V College of Engineering, Bengaluru – 59.

In this regard, we would invite you as an Academic Expert to the Board of Studies(BoS) of MCA programme, RVCE.

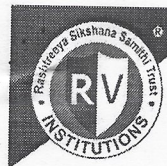
You are requested to kindly make it Convenient to attend the above meeting as a BoS Member

Agenda

Sub No	Agenda
33	To read and record the Minutes of the meeting of 8 th BoS meeting
34	Achievements of MCA Department
35	Discussion and Approval of I year 2022 Scheme & I semester Syllabus
36	Any other subject/s

with warm regards

Dr. Andhe Dharani
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Offline / Online Meeting (Cisco Webex)

9th BOARD OF STUDIES MEETING

Minutes of Meeting held on Thursday, April 6, 2023 at 10:30 AM

Date	Thursday 6 th April 2023
Time	10:30 AM
Venue	Hybrid Meeting (Cisco Webex)

Members Present				
#	Name	Designation	Organization	Signature
1	Dr. K.N. Subramanya	Professor & Principal	RVCE	<i>[Signature]</i>
2.	Dr. Shanmukha Nagaraj	Professor & Dean Academics	RVCE	<i>[Signature]</i>
3.	Dr. Andhe Dharani	Professor & Director, Chairperson	RVCE	<i>[Signature]</i>
4.	Dr. Kota Solomon Raju	VTU Nominee, Member	CSIR-NAL	<i>[Signature]</i>
5.	Dr. Damodar Reddy Edla	Subject Expert, Member	NIT, Goa	<i>[Signature]</i>
6.	Dr. Hanumanthappa M	Subject Expert, Member	Bengaluru University	<i>[Signature]</i>
7	Mr. Akshay Marathe	Industry, Member	eClinical Works, Bengaluru	
8	Mr. Saurabh Chakraborty	Meritorious Alumni, Member	Valtech Inc, Bengaluru	<i>[Signature]</i>
9.	Dr. Usha J	Professor, Member	RVCE	<i>[Signature]</i>
10.	Dr. K S Jasmine	Associate Professor, Member	RVCE	
11.	Dr. Renuka Prasad B	Associate Professor & Associate Dean, Member	RVCE	<i>[Signature]</i>
12.	Dr. Mohan Aradhya	Assistant Professor, Member	RVCE	
13.	Dr. Divya TL	Assistant Professor, Member	RVCE	<i>[Signature]</i>
14.	Mr. Prashanth. K	Assistant Professor, Member	RVCE	<i>[Signature]</i>

[Signature]
DIRECTOR

RV College of Engineering

Department of Master of Computer Applications

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9th BOARD OF STUDIES MEETING

Minutes of Meeting held on Saturday, April 6, 2023 at 10:30 AM

Agenda	Sub No.	Particulars
	33	To read and record the Minutes of the meeting of 8 th BoS meeting held on 12 th June 2021
	34	Achievements of MCA Department
	35	Discussion and Approval of I year 2022 Scheme and I sem Syllabus
	36	Any other subjects
Date	Thursday 6 th April 2023	
Time	10:30 AM	
Venue	Chamber of Director, MCA Mode: Hybrid	

Members Present				
#	Name	Designation	Organization	Remark
1	Dr. K.N. Subramanya	Professor & Principal	RVCE	P
2.	Dr. Shanmukha Nagaraj	Professor & Dean Academics	RVCE	P
3.	Dr. Andhe Dharani	Professor & Director, Chairperson BoS	RVCE	P
4.	Dr. Kota Solomon Raju	VTU Nominee, Member	CSIR	P
5.	Dr. Damodar Reddy Edla	Subject Expert, Member	NIT, Goa	P
6.	Dr. Hanumanthappa M	Subject Expert, Member	Rani Chennamma University, Belagavi	P
7	Mr. Akshay Marathe	Industry, Member	eClinical Works, Bengaluru	P
8	Mr. Saurabh Chakraborty	Meritorious Alumni, Member	Valtech Inc, Bengaluru	P
9.	Dr. Usha J	Professor, Member	RVCE	P
10.	Dr. K S Jasmine	Associate Professor, Member	RVCE	A
11.	Dr. Renuka Prasad B	Associate Professor & Associate Dean, Member	RVCE	P
12.	Dr. Mohan Aradhya	Assistant Professor, Member	RVCE	A
13.	Dr. Divya TL	Assistant Professor, Member	RVCE	P
14.	Mr. Prashanth. K	Assistant Professor, Member	RVCE	P

Details of meeting minutes are attached.

Sub. No.	33
Subject	To read and record the Minutes of the meeting of 8th BoS meeting held on 12th June 2021
Discussions & Resolutions	
<p>Principal welcomed all the BoS members and conveyed to all the members of the BoS that recently VTU has released one notification regarding the new grading pattern to be followed across all the engineering colleges affiliated to VTU having Masters of Computer Applications, in this regard it was immediate requirement for the program to revise the curriculum as per the new NEP 2020 guidelines He requested the team to go through the detailed first semester syllabus and suggest if there are any corrections keeping the number of credits remain the same. The total number of credits for 2 year MCA would be 100 credits and he appealed to the Director, MCA and also all the members of BoS to look into the new inclusions to be done under new NEP guidelines. Further, he also requested to approve the changes of first semester MCA syllabus and scheme of 2022 version.</p>	

Sub. No.	34
Subject	Achievements of MCA Department
Discussions & Resolutions	
<p>Dr AD presented the achievements of the MCA department in accreditation, placement, graduation ceremony details, funded projects, faculty, student contributions, and academics. The Principal briefed about the college level funded projects, Centers of Excellences and how interdisciplinary activities are being taken up with the involvement of students and faculty across all departments. The members appreciated and commended the initiatives.</p>	

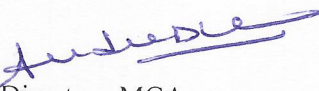
Sub. No.	35
Subject	Discussion and Approval of 2022 Scheme and I Sem Syllabus
Discussions & Resolutions	
<p>Dr. AD displayed the scheme of 2022 Scheme and 1st Semester Syllabus.</p> <p>In the scheme from 2nd to 4th semester points considered were –</p> <ul style="list-style-type: none"> • Research Methodology as compulsory core course in second semester. Remaining Integrated professional courses with labs and Professional elective courses • The Societal Project will be taken up in the course of Design Thinking in Second Semester. • Open Elective in 3rd Semester - The Principal put across his ideas for Open Electives inclusion in the MCA program by listing out few courses of Liberal arts with core courses, Sustainability and Society, Anthropology and Digital world, Media and Communication, Digital Humanities, Philosophy and AI. He also conveyed that necessary training would be provided to the faculty to deliver the course. Dr Hanumanthappa added to include course on Financial Literacy etc.. Dr. Hanumanthappa also suggested to incorporate the Open elective course during the IV Semester and could be conducted in online mode. • Ability Enhancement course – Professional practice I in I semester to be handled by external and Professional Practice II – evaluated in the IV semester will be of online MOOC courses, which the students can complete from I semester to III semester. 	

Dr Damodar appreciated the initiative and conveyed that MOOC courses to be effective, credit to be assigned and grades achieved to be taken into consideration. Principal agreed that it was a good suggestion and would be considered. He also clarified that 2 MOOC Courses are to be completed by the students before the completion of the degree and that one can be technical course certification.


Dean Academics, Dr. Shanmukha Nagaraj, elaborated that across UG and PG in RVCE, CIE for the 2022 Scheme, A minimum of two tests and quizzes would be conducted to facilitate the students to carry out experiential learning. Assignments/EL would be evaluated for 40 Marks, Quizzes for 10 marks each and consolidated for 20 marks, Tests would be conducted for 50 marks and then reduced to 40 marks. It was opined by others that student's performance in SEE may drop due to this. Then Members suggested to retain 30 marks for Experiential Learning rather than 40 marks and best of two tests out of three to be considered

Sub. No.	36																								
Subject	Any other subject/s																								
Discussions & Resolutions																									
<ul style="list-style-type: none"> The AR/VR software and hardware purchased with the training was well appreciated and wished luck for the center to be carried out. As discussed the grade points according to the new VTU regulations to be implemented are – Grading : Grade refers to the qualitative measure of achievement of a student in each course, based on the percentage of marks secured in (CIE plus SEE). Grading is done by Absolute Grading. The rubric to letter grades are as follows : O – Outstanding, A+ - Excellent, A- Very Good, B+ - Good, B – Average, C – Pass and F – Fail <table border="1" style="margin: 10px auto;"> <tr> <th colspan="8">Letter Grade and Corresponding Grade points on a typical 10- point Scale</th></tr> <tr> <td>Letter Grade</td><td>O</td><td>A+</td><td>A</td><td>B+</td><td>B</td><td>C</td><td>F</td></tr> <tr> <td>Grade point</td><td>10</td><td>09</td><td>08</td><td>07</td><td>06</td><td>05</td><td>00</td></tr> </table> <ul style="list-style-type: none"> The MoM would be shared at the earliest and members approved the 1st semester syllabus and the 2022 proposed scheme and regulations 		Letter Grade and Corresponding Grade points on a typical 10- point Scale								Letter Grade	O	A+	A	B+	B	C	F	Grade point	10	09	08	07	06	05	00
Letter Grade and Corresponding Grade points on a typical 10- point Scale																									
Letter Grade	O	A+	A	B+	B	C	F																		
Grade point	10	09	08	07	06	05	00																		

The chairperson thanked all the members and promised to get back with the changes and informed them that the AC meeting is also scheduled shortly and that will also be communicated to members for further meeting ended with thanks to the chairperson.


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Director
Department of
Master of Computer Applications
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Dean Academics
Dean Academics
RV College of Engineering
Bengaluru - 560 059.


Principal
PRINCIPAL
RV COLLEGE OF ENGINEERING
BENGALURU - 560 050



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Mohanaradhya Mr. <mohanaradhya@rvce.edu.in>

Re: Invitation for BoS Meeting on 30th May 2023 -syllabus for reference

Director MCA-RVCE <director-mca@rvce.edu.in>

Sat, May 27, 2023 at 5:56 PM

To: SOLOMON RAJU KOTA <kotasolomonraju@gmail.com>, Saurabh <sauravrvce@gmail.com>, akshaykuntur@gmail.com, dr.reddy@nitgoa.ac.in, Hanumanthappa M <hanu6572@bub.ernet.in>, Dean Academics R V College of Engineering <dean.academics@rvce.edu.in>, Principal RVCE <principal@rvce.edu.in>, "Usha J." <ushaj@rvce.edu.in>, "Renuka Prasad B." <renukaprasadb@rvce.edu.in>, "Mohanaradhya Mr." <mohanaradhya@rvce.edu.in>, "Divya T.L." <divyatl@rvce.edu.in>, "Jasmine K.S." <jasmineks@rvce.edu.in>

Dear Sir/Madam

Please find the attached syllabus for your kind perusal.

Looking forward for your valuable inputs and suggestions in the BoS meeting on 30th May 2023.

With regards

Dr. Andhe Dharani
Professor and Director
Department of MCA
RV College of Engineering
Mob: 8971720832

On Tue, 23 May, 2023, 11:19 am Director MCA-RVCE, <director-mca@rvce.edu.in> wrote:

Respected Sir / Madam

With reference to above subject, the Board of Studies meeting for 2022 scheme MCA Autonomous Syllabus for II to IV semester is scheduled on **30th May 2023 at 10.30 AM** in the Chambers of Director, Department of Master of Computer Applications, R. V College of Engineering, Bengaluru – 59.

In this regard, we would invite you as an Academic Expert to the Board of Studies(BoS) of MCA programme, RVCE.

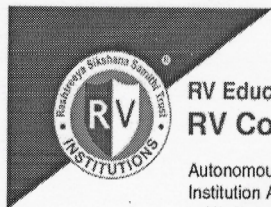
You are requested to kindly make it Convenient to attend the above meeting as a BoS Member. The Detailed scheme and syllabus will be sent before this weekend.

with regards

Dr. Andhe Dharani
Professor and Director,
Department of Master of Computer Applications
R V College of Engineering, Mysore Road,
R V Vidyaniketan Post,
Bengaluru, Karnataka, India - 560059
Ph: 080 - 68188171
M: +91 8971720832



Updated_MCA_I&II-sem_2022 Scheme.pdf
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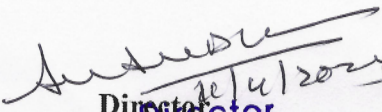
Date: 11/04/2023

Analysis of the 9th BoS Proceeding

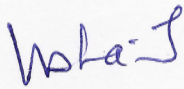
SL No.	Observations
01	BoS members suggested allocating credits to Massive Open Online Course (MOOC) and to consider the grades obtained.

Action Plan and Implementation


SL No.	Implementation
01	In 2022 scheme the students has to pass one 6-8 week Online course recommended by the HSS BoS, to which 2 credits are allocated. Students has to get MOOC certification any time between I to IV semester and it will be considered for evaluation in the course MHS102T in IV semester. 2 MOOC courses were suggested by the principal, but as per BoS suggestions One MOOC course was introduced in the syllabus.



11/4/2023
Director

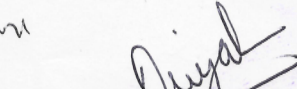
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Master of Computer Applications
R.V. College of Engineering
Mysore Road, Bengaluru-59


Dr.UJ


Dr.BRP


Dr.KSJ


Dr.MA


Dr.DTL



Department of Master of Computer Applications

Office of Director, MCA www.rvce.edu.in; director-mca@rvce.edu.in; (M) 8971720832; (O) 080-6818 8171

19th BOARD OF STUDIES MEETING

Minutes of Meeting held on Tuesday, May 30, 2023 at 10:30 AM

Date	Tuesday 30 th May 2023
Time	10:30 AM
Venue	Director Chamber, MCA, RVCE

Members Present				
Sl.No.	Name	Designation	Organization	Signature
1.	Dr. Shanmukha Nagaraj	Professor & Dean Academics	RVCE	
2.	Dr. Andhe Dharani	Professor & Director, Chairperson	RVCE	
3.	Dr. Kota Solomon Raju	VTU Nominee, Member	NAL, Bengaluru	
4.	Dr. Damodar Reddy Edla	Subject Expert, Member	NIT, Goa	
5.	Dr. Hanumanthappa M	Subject Expert, Member	Rani Channamma University, Belagavi	
6.	Mr. Akshay Marathe	Industry, Member	eClinical Works, Bengaluru	
7.	Mr. Saurabh Chakraborty	Meritorious Alumni, Member	Valtech Inc, Bengaluru	
8.	Dr. Usha J	Professor, Member	RVCE	
9.	Dr. K S Jasmine	Associate Professor, Member	RVCE	
10.	Dr. Renuka Prasad B	Associate Professor & Associate Dean, Member	RVCE	
11.	Dr. Mohan Aradhya	Assistant Professor, Member	RVCE	
12.	Dr. Divya TL	Assistant Professor, Member	RVCE	

DIRECTOR
Director

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10th BOARD OF STUDIES

Minutes of Meeting held on Tuesday, May 30th, 2023 at 10:30 AM

Agenda	Sub No.	Particulars
	37	To read and record the Minutes of the meeting of 9 th BoS meeting held on 6 th April 2023
	38	Discussion and Approval of II semester complete syllabus and III & IV semester Scheme
Date	Tuesday 30 th May 2023	
Time	10:30 AM	
Venue	Chamber of Director, MCA Mode: Hybrid	

Members Present

#	Name	Designation	Organization	Remark
1	Dr. K.N. Subramanya	Professor & Principal	RVCE	
2.	Dr. Shanmukha Nagaraj	Professor & Dean Academics	RVCE	P
3.	Dr. Andhe Dharani	Professor & Director, Chairperson BoS	RVCE	P
4.	Dr. Kota Solomon Raju	VTU Nominee, Member	CSIR	P
5.	Dr. Damodar Reddy Edla	Subject Expert, Member	NIT, Goa	P
6.	Dr. Hanumanthappa M	Subject Expert, Member	Rani Chennamma University, Belagavi	P
7	Mr. Akshay Marathe	Industry, Member	eClinical Works, Bengaluru	P
8	Mr. Saurabh Chakraborty	Meritorious Alumni, Member	Valtech Inc, Bengaluru	P
9.	Dr. Usha J	Professor, Member	RVCE	P
10.	Dr. K S Jasmine	Associate Professor, Member	RVCE	A
11.	Dr. Renuka Prasad B	Associate Professor & Associate Dean, Member	RVCE	P
12.	Dr. Mohan Aradhya	Assistant Professor, Member	RVCE	A
13.	Dr. Divya TL	Assistant Professor, Member	RVCE	P

Details of meeting minutes are attached.

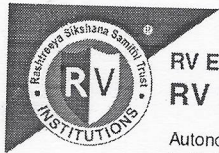


Details of meeting minutes are attached.

Sub. No.	37
Subject	To read and record the Minutes of the meeting of 9 th BoS meeting held on 6 th April 2023
Discussions & Resolutions	
Director welcomed all the BoS members and conveyed to all the members of the BoS about the Approval of II semester complete syllabus and III & IV semester Scheme.	

Sub. No.	38
Subject	Discussion and Approval of II semester complete syllabus and III & IV semester Scheme
Discussions & Resolutions	
<p>Director told that II semester scheme was approved in the previous BoS and briefed about Research Methodology and IPR course.</p> <ul style="list-style-type: none">• Dr.Damodar Reddy suggested to add TWO unit of IPR and THREE units on RM• Mr. Akshay suggested to add international IPR which helps the students who may go abroad for job/higher studies.• Dr.Solomon Raju suggested to combine UNIT-I and UNIT-2 in this course and also told to include case study to understand the process of IPR.• Dr.AD briefed about Design and Analysis of Algorithm, Mr.Saurabh suggested to include laboratory components to the course, for that Dr.AD replayed that in tutorial classes, students will be grouped into batches of 30 members of each and the students will be implementing the concept learnt in theory class using their lap-top with any programming language they are interested.• Dr. Solomon Raju suggested to add note in the tutorial component regarding the implementation of the method.• Dr.AD told we are including Sematic Data Modeling in Data Modeling course, Mr.Akshay told that SQL and MySQL are still in use in IT industry.• Dr.AD and Dr.BRP briefed on contents of Cloud native fullstack Application Development-I which includes Object Oriented Design patterns with Java, this course will be continued as CNFAD-II where students will be able to work with RESTFull API, microservice building and deploying on the cloud. Mr.Saurabh and Mr.Akshay appreciated the course.	

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- In the Elective-I (Theory with Laboratory) basket Dr.BRP briefed on IoT course and the SEELab3.0 tool to introduce basic of electronics which is not included in evaluation process. Dr.Solomon Raju suggested to add architecture of micro controller and interfaces, Dr.BRP conveyed that these concepts will be discussed in UNIT-II of the course.
- Dr.AD explained the contents of Data Science-I, Dr.Hanumanthappa told to remove the word simple from linear regression.
- Dr.KSJ briefed Software Testing Practices course contents, Mr.Saurabh suggested to replace Jmeter with Selenium testing tool. Mr.Akshay told his company still using Jmeter. Dr.KSJ replied that different open testing tool will be discussed in UNIT-II.
- Prof. CC briefed about 2D&3D modeling course, Dr.Solomon Raju suggest to teach mathematics concepts required to better understand 2D & 3D modeling.
- In Elective-II (Theory) basket Dr.BRP briefed on DevOps
- Dr.MA briefed on the contents of Advanced Computer Networks, Dr.Solomon Raju suggested to have Distributed and Parallel system instead of Distributed and Parallel computing.
- Dr.BRP briefed on Cryptography & Network Security, Dr.Solomon Raju suggested to add case study on phishing or any vulnerability, so that students can apply the security basics
- Dr.BRP briefed about Design Thinking Lab and Dr.Damodar Reddy enquired about the evaluation process of DTL
- Dr.AD briefed on the III and IV semester MCA 2022 scheme, all the external BoS members appreciated the syllabus framed.

The chairperson thanked all the members and promised to get back with the changes and informed them that the AC meeting is also scheduled shortly and that will also be communicated to members for further meeting ended with thanks to the chairperson.


Director, MCA
Director

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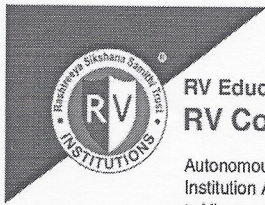

Dean, Academics

DEAN ACADEMICS
R.V. College of Engineering
Bengaluru - 560 059


Principal

PRINCIPAL
R.V. College of Engineering
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(O) 080-6717 8074

Date: 07/06/2023

Analysis of the 10th BoS Proceeding

BoS members have pointed out and suggested the changes in the following courses.

SL No.	Observations
01	Research Methodology and IPR Add 2 Units on IPR and 3 Units on Research Methodology, Include topics on International IPR, Add case study to understand IPR process
02	Software Testing and Practices: To replace JMeter with Selenium
03	2D and 3D Modeling course: To include mathematical concepts for better understanding of 2D and 3D modeling.
04	Advanced Computer networks: Add Distributed and Parallel systems
05	Cryptography and Network Security: Add case study on real time trends.

Action Plan and Implementation

SL No.	Implementation
01	In the course Research methodology and IPR 3 Units with having Research Methodology, Research Design and Reporting and 2 Units of IPR with International concern are added in the syllabus.
02	In Unit 2 of Software Testing and Practices course topics are added to choose the right testing tools either the JMeter, Selenium etc.
03	The basic mathematics required for building models in 2D and 3D are Linear Algebra and Trigonometry which is covered in the 1st semester course Mathematical Foundation for Computer Applications. 2D and 3D modeling course is designed with an intention of creating models as required for the modern courses such as eXtended Reality (XR)
04	As per the suggestions topics are added in UNIT 3 of Advanced Computer Networks.
05	In UNIT 5 of Cryptography and Network Security case study included

Notar-J
Dr.UJ

Dr.BRP
Dr.BRP


Dr.KSJ
Dr.KSJ

Dr.MA
Dr.MA

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Dr.DTL

As indicate above, based on the feedback of stakeholders, the following new courses were suggested to be included in the 2022 MCA Scheme and Syllabus revision. Curricular revisions were discussed in the Board of Studies meetings and the new courses suggested with changes are added and the same is reflected in the revised curricula with the course codes.

Sl. No.	Title of the new course added	Course code	Scheme in which the new course is added
1	2D and 3D Modeling	22MCA254TL	2022
2	DevOps	22MCA261T	2022
3	Digital Marketing	22MCA264T	2022
4	Ability Enhancement Course-I	22HSS16L	2022


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