



**BHAVAN'S VIVEKANANDA COLLEGE**  
**OF SCIENCE, HUMANITIES AND COMMERCE**  
(Accredited with 'A' Grade by NAAC)  
Autonomous College – Affiliated to Osmania University

**VALUE ADDED COURSES LIST 2019-2020**

<b>Sl.No.</b>	<b>Course Name</b>
1	Concepts of Packaging
2	Genetic Counselling
3	Redhat Linux Administration
4	Mushroom Cultivation
5	Training in Analytical Techniques (M.Sc Microbiology)
6	Clinical, Molecular Diagnostic Methods and Genetic Counseling
7	Training in Analytical Techniques (M.Sc Biochemistry)
8	Certified Management Accountant
9	Advanced Excel
10	Spoken Sanskrit
11	French
12	Calligraphy
13	Graphic Designing
14	Softskills (CRT)

**Bhavan's Vivekananda College  
of Science, Humanities and Commerce  
Sainikpuri, Secunderabad - 500094  
(Accredited with 'A' Grade by NAAC)  
Autonomous College–Affiliated to Osmania University**

## **Concepts of Packaging**

**Organised by  
(Department of Chemistry)**

**In Collaboration with  
(DBT Star College Scheme)**

Letter no: 317/DBT-STAR COLLEGE SCHEME/ BVC/CHEM/ R/ CERTIFICATE COURSE

Date: 11/01/2020

To  
Principal  
Bhavan's Vivekananda College  
Sainikpuri  
Secunderabad

Sub: Approval for value added certificate course under DBT-STAR COLLEGE SCHEME

Department of Chemistry would like to conduct a value added certificate course on packaging for 31 students under DBT -Star College scheme. The details regarding the value added certificate course are enclosed. We seek your permission and approval for utilisation of the grant under recurring Head.

Amount spent towards Registration fee: Rs.2000/- + 18% GST, per student

Total number of Students: 31

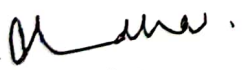
Name of the organisation conducting the course: Indian Institute of Packaging, Hyderabad

Total amount (inclusive of GST): Rs.73,160/-

Through



Dr. Madhumita Bhattacharjee  
Head, Department of Chemistry



(Dr. K. Anuradha)  
Co-ordinator,  
DBT star college scheme

Permitted



19/1

## **SYLLABUS FOR PACKAGING**

- |   |           |
|---|-----------|
| 1. Review of basics of Physical, Inorganic, Organic & Analytical Chemistry  | <b>3h</b> |
| 2. Review of basic concepts of Colours & Shapes   | <b>2h</b> |
| 3. Introduction to Global & Indian Packaging Industry Scenario  | <b>3h</b> |
| 4. Fundamentals of Packaging Materials Science & Technology, Polymerization   | <b>6h</b> |
| 5. I: Detailed study of Traditional Materials of Packaging: Paper & Paper-based, Glass, Metals, Jute, Cellulose & Wood-based materials. 8. Composite & Ancillary Materials: Labels, Tags, Caps, Closures, Reinforcements, Strapping, Tapes, Holograms, Cushioning theory and Materials, Package forms & Shapes Module<br>II: Plastics as Packaging Material . | <b>6h</b> |
| 6. Bio-degradable packaging   | <b>5h</b> |
| 7. On hand training at IIP, Hyderabad   | <b>5h</b> |

### **Outcomes**

- Develop a comprehensive understanding of inter-disciplinary food science, product, innovation, entrepreneurship and packaging at an advanced level.
- Be able to demonstrate advanced knowledge and skills in the interdisciplinary field of food, food packaging and design innovation.
- To identify packaging as a career option



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## **Genetic Counselling**

**Organised by**  
**(Department of Biochemistry)**

**In Collaboration with**  
**(Institute of Genetics, Hyderabad)**



Bharatiya Vidya  
**Bhavan**

(Founded in 1938 by Kulapati Dr. K.M. Munshi)

**BHAVAN'S VIVEKANANDA COLLEGE**  
of Science, Humanities & Commerce

Estd - 1993 - AFFILIATED TO OSMANIA UNIVERSITY  
AUTONOMOUS COLLEGE

SAINIKPURI, SECUNDERABAD - 500 094. Ph : 27111611, 27115878

Date :

BVC/Genetics Counsel/2019-20

2<sup>nd</sup> April, 2019

To  
The Director  
Institute of Genetics & Hospital  
For Genetic Diseases  
Ameerpet, Greenlands Road,  
Near Lal Bunglow,  
Osmania University,  
Begumpet,  
Hyderabad-500 016.

Dear Sir/Madam,

Sub : Request for Practical Training Programme at IOG.

\*\*\*

As per the Letter of Understanding between IOG and our Institute dated 24.01.2017, we would like to send our B.Sc Life Sciences students for practical training to your Institute for a period of four weeks from 22<sup>nd</sup> April to 18<sup>th</sup> May 2019. Our students who completed the training last year, found the internship program very informative and it also helped in enhancing their practical skills.

As agreed upon, the amount to be paid for the training program is Rs.3,000/- per student. We would be thankful if you would oblige us for the same.

Thanking you,

Yours sincerely

Prof. Y Ashok  
PRINCIPAL  
(Dr. Y. ASHOK)  
PRINCIPAL  
Bhavan's Vivekananda College of Science  
Humanities & Commerce  
Sainikpuri, R.R. (Dist.)

**Department of Biochemistry**  
**Academic year 2019-20**  
**Value added course**  
**In collaboration with Institute of Genetics, Hyderabad**  
**under DBT-Star College Scheme**  
**25<sup>th</sup> to 29<sup>th</sup> November-2019**

**Syllabus:**

**Duration:30hrs**

1. Introduction to pre-natal and post-natal diagnostic techniques.
2. Newborn screening for genetic disorders.
3. Cytogenetics and Karyotyping.
4. Introduction to FISH and Micro-array techniques.
5. Genetic counselling- Measures, necessity and implementation.
6. Isolation of DNA from human blood sample and separation of extracted DNA by Agarose Gel Electrophoresis.
7. Amplification of DNA by polymerase chain reaction (PCR).
8. Overview of applications of PCR (PCR-RFLP, Microsatellite repeats, SSCP, Allele-specific PCR, ARMS PCR).
9. Quantitation of serum ceruloplasmin levels by ELISA.
10. Quantitation of serum TSH, 17-OH Progesterone levels.
11. Estimation of urine copper levels.
12. Applications of HPLC in diagnosing Haemoglobinopathies.

**COURSE OUTCOMES:**

At the end of the course students will be able to

1. Understand various chromosomal abnormalities through various cytogenetic methods and related genetic disorders.
2. Relate various biochemical tests and their results in diagnosis of various genetic diseases and appreciate the importance of genetic counselling.



Dr A Sai Padma  
Head, Department of Biochemistry

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## **Redhat Linux Administration**

**Organised by**  
**(Department of Computer Science)**

**In Collaboration with**  
**(Amrita Technologies)**





Permission to start value added course on "LINUX ADMINISTRATION"  
For M.Sc. (CS) IV Semester students

Date: 10-12-2019

To

The Principal,  
Bhavan's Vivekananda College,  
Sainikpuri, Secunderabad.  
Sir,

Subject: Permission to start a value-added course on Linux Administration for M.Sc. (CS) final semester students – Regarding.

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With reference to the discussion regarding the starting of a value-added course for M.Sc. (CS) IV Semester students as part of their career growth, we hereby enclose the details for your acceptance.

We had an introductory lecture by Mr. Rajesh D, GLS Learning and Development Instructor, Red Hat on 05-12-2019 to propose a value added course. He explained the benefits of doing the program, future prospects and job opportunities. It is recommended to introduce a value-added course to M.Sc. (CS) IV Semester students of 2019-20 batch. The schedule of the value added course is as follows:

Course Title: **RED HAT LINUX ADMINISTRATION**

Duration: **30 Hrs.**

Fee: **Rs. 1,200/- per student + 18%**

No. of students: **40**

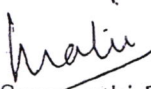
Total Amount: **40 Students @ Rs.1,200/- + 18 % GST = Rs.56,640/-**

Date of classes: **from 11-12-2019 to 30-12-2019 (Time: 12 Noon to 2.00 pm).**

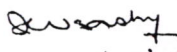
The amount payable can be incurred from the M.Sc. (CS) IV student's contingency fee.

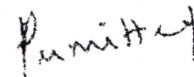
Thanking you sir.

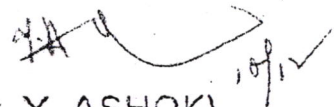
Yours faithfully,

  
(KVB Saraswathi Devi)  
HOD, Dept. of Computer Science, BVC.

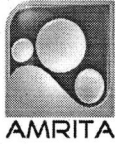
Approved.

  
10/12/2019



  
(Dr. Y. ASHOK)  
PRINCIPAL

Bhavan's Vivekananda College of Science  
Humanities & Commerce  
Sainikpuri, F.R. (Dist.)



# Amrita Technologies

(A Unit of Amrita Enterprises Pvt Ltd)

#201, Swaathi Menors Apt, Nr Aditya Trade Centre, Ameerpet, Hyderabad-16

Tele : (040)2733174, 27737969 E:Mail- admin@amritahyd.org

Website : www.amritahyd.org

College students according to their requirements.

**The importance of Linux in the IT market is growing rapidly, so the Red Hat Academy program enhances career prospects for our graduates**

**More than 90% of Fortune 500 companies currently rely on Red Hat.**

## Red Hat System Administration I (RH124)

### Fundamental Red Hat system administration skills

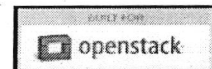
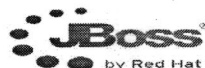
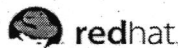
Red Hat® System Administration I (RH124) is designed for IT professionals who are new to Linux® and require core Red Hat Enterprise Linux skills. This course focuses on essential administration tasks that will be encountered in the workplace, including installing the operating system, establishing network connectivity, managing physical storage, and performing basic security administration.

Early in the course, GUI-based tools will be featured to build upon the students' existing technical knowledge. As the course progresses, key command-line concepts will be introduced to provide a foundation for students planning to continue to Red Hat System Administration II with the goal of becoming full-time Linux system administrators.

### Audience

- All Students will develop the in-demand skills employers need and receive discounted certification exams.
- A student interested in working in any IT company, the stream may be Programmer, Database Admin or System Admin
- A non-Linux IT professional on the path to becoming a full-time Linux system administrator.

### Prerequisites





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Previous operating system administration experience is helpful but not required for this course.

## Course outline — RH124

### Core skills for the new Linux Learner

#### Unit 1 - Get started with the GNOME graphical desktop

Get started with GNOME and edit text files with gedit.

#### Unit 2 - Manage files graphically with Nautilus

Objective: Manage files graphically and access remote systems with Nautilus.

#### Unit 3 - Get help in a graphical environment

Objective: Access documentation, both locally and online.

#### Unit 4 - Configure local services

Objective: Configure the date and time, and configure a printer.

#### Unit 5 - Manage physical storage I

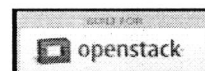
Objective: Understand basic disk concepts and manage system disks.

#### Unit 6 - Manage logical volumes

Objective: Understand logical volume concepts and manage logical volumes.

#### Unit 7 - Monitor system resources

Objective: Manage CPU, memory, and disk utilization.





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## Unit 8 - Manage system software

Objective: Manage system software locally and using Red Hat® Network (RHN).

## Unit 9 - Get started with bash

Objective: Understand basic shell concepts, execute simple commands, and use basic job control techniques.

## Unit 10 - Get help in a textual environment

Objective: Use man and info pages and find documentation in /usr/share/doc.

## Unit 12 - Establish network connectivity

Objective: Understand basic network concepts; configure, manage, and test network settings.

## Unit 13 - Administer users and groups

Objective: Manage users and groups.

## Unit 14 - Manage files from the command line

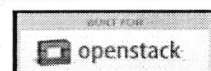
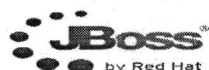
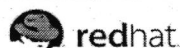
Objective: Understand Linux® file system hierarchy and pathnames; manage files from the command line.

## Unit 15 - Secure Linux file access

Objective: Understand Linux file access mechanisms; manage file access from the GUI and the command line.

## Unit 16 - Administer remote systems

Objective: Share and connect to a desktop; use SSH and rsync.







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## Unit 17 - Configure general services

Objective: Manage services; configure SSH and remote desktops.

## Unit 18 - Manage physical storage II

Objective: Manage file system attributes and swap space.

## Unit 19 - Install Linux graphically

Objective: Install Red Hat Enterprise Linux and configure the system with firstboot.

## Unit 20 - Manage virtual machines

Objective: Understand basic virtualization concepts; install and manage virtual machines.

## Unit 21 - Control the boot process

Objective: Understand runlevels and manage GRUB.

## Unit 22 - Deploy file-sharing services

Objective: Deploy an FTP server and a web server.

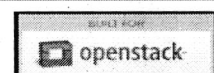
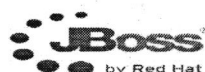
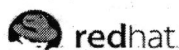
## Unit 23 - Secure network services

Objective: Manage a firewall; understand SELinux concepts and manage SELinux.

## Unit 24 - Comprehensive review

Objective: Get a hands-on review of the concepts covered in this course.

**Note:** Course outline is subject to change with technology advances and as the nature of the underlying job evolves.





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## Red Hat System Administration II with RHCSA Exam (RH135)

### Building command line administration skills

A follow-up course for students that have completed Red Hat® System Administration I (RH124), Red Hat System Administration II with RHCSA Exam (RH135) is designed for IT professionals working to become full-time enterprise Linux® system administrators.

Building on the foundation of command-line skills covered in System Administration I, you'll dive deeper into Red Hat Enterprise Linux to broaden your toolkit of administration skills. By the end of this course, you'll be able to administer and troubleshoot file systems and partitioning, logical volume management, access control, and package management. After attending Red Hat System Administration I and II, you'll be fully prepared to take the Red Hat Certified System

### Course outline — RH134

#### Build command-line administration skills

##### Unit 1 - Automated installations of Red Hat Enterprise Linux

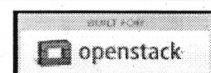
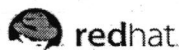
Create and manage Kickstart configuration files; perform installations using Kickstart.

##### Unit 2 - Accessing the command line

Access the command line locally and remotely; gain administrative privileges from the command line.

##### Unit 3 - Intermediate command-line tools

Use hardlinks, archives and compression, and vim.





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## **Unit 4 - Regular expressions, pipelines, and I/O redirection**

Use regular expressions to search patterns in files and output; redirect and pipe output.

## **Unit 5 - Network configuration and troubleshooting**

Configure network settings; troubleshoot network issues.

## **Unit 6 - Managing simple partitions and file systems**

Create and format simple partitions, swap partitions, and encrypt partitions.

## **Unit 7 - Managing flexible storage with the Logical Volume Manager (LVM)**

Implement LVM and LVM snapshots.

## **Unit 8 - Accessing network file-sharing services; NFS and CIFS**

Implement NFS, CIFS, and autofs.

## **Unit 9 - Managing user accounts**

Manage user accounts, including password aging.

## **Unit 10 - Network user accounts with LDAP**

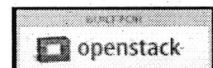
Connect to a central LDAP directory service.

## **Unit 11 - Controlling access to files**

Manage group memberships, file permissions, and access control lists (ACLs).

## **Unit 12 - Managing SELinux**

Activate and deactivate SELinux; set file contexts; manage SELinux Booleans; analyze SELinux logs.





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## Unit 13 - Installing and managing software

Manage software and query information with yum; configure client-side yum repository files.

## Unit 14 - Managing installed services

Manage services; verify connectivity to a service.

## Unit 15 - Analyzing and storing logs

Manage logs with rsyslog and logrotate.

## Unit 16 - Managing processes

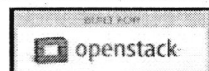
Identify and terminate processes, change the priority of a process, and use cron and at to schedule processes.

## Unit 17 - Tuning and maintaining the kernel

List, load, and remove modules; use kernel arguments.

## Unit 18 - System recovery techniques

Understand the boot process and resolve boot problems.



**Course Outcomes:**

CO1 : Familiarity with Linux environment with installation of Operating Software.

CO2 : Organization and managing of Users and file operations.

CO3 : Configuration of Linux network and manage security of network system.

CO4 : Kernel and management of user accounts.

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## **Mushroom Cultivation**

**Organised by**  
**(Department of Microbiology)**



To  
The Principal  
Bhavan's Vivekananda College  
Sainikpuri

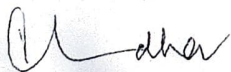
**Sub: Request for permission to utilize special fee - reg**

Dear Sir,

Department of Microbiology in collaboration with S Mushroom Agri tech, Kukatpally is planning a two day workshop on Mushroom cultivation, production and marketing for M.Sc final year students on 4 & 5<sup>th</sup> July. Every year special fee has been collected from the students of M.Sc towards conduct of workshops, industrial visits, Annual lecture series, records purchase, fresher's and fare well parties etc. I seek your permission for utilizing this amount for organizing the workshop with a budget of Rs. 41,300 approximately. In this context i would like to utilize an amount of Rs. 41,300/- towards workshop fees, certificates, Mementos etc. from the special fee collected from the students. Details of the special fee collected from students are enclosed.

Looking forward for your approval and support.

Thanking you, with regards



Dr .K. Anuradha.  
Head, Department of Microbiology.

G-68

Permitted  
9/11  
15/6

## **Value added course on Mushroom cultivation**

### **Course Objective:**

1. Introduction to mushroom cultivation
2. Study on nutritional value of mushrooms
3. Insight into various steps of mushroom cultivation
4. Overview on methods of mushrooms preservation

### **Unit-1**

1. Introduction to mushroom cultivation
2. Importance and history of mushroom cultivation in India
3. Global status of mushroom production
4. Food value of mushroom

### **Unit-2**

1. Steps in mushroom cultivation
2. Selection of site and types of mushroom
3. Mushroom farm structure, design layout
4. Principle and techniques of compost and composting
5. Principle of spawn production
6. Casing and crop production
7. Harvesting and marketing
8. Pest and pathogens of mushrooms
9. Post-harvest handling and preservation of mushrooms

### **REFERENCE:**

1. Mushroom cultivation in India by B.C. Suman and V.P. Sharma. Published by Daya Publishing House, New Delhi.
2. Mushrooms Cultivation, Marketing and Consumption by Manjit Singh Bhuvnesh Vijay Shwet Kamal G.C. Wakchaure Directorate of Mushroom Research (Indian Council of Agricultural Research) Chambaghat, Solan –173213 (HP)

### **Course Outcome:**

1. Knowledge on scope and importance of mushroom cultivation in India and worldwide.
2. Comprehend on principles of mushroom spawn production.
3. Awareness on mushroom cultivation procedure.
4. Detailed Knowledge on pest management methods in mushroom cultivation.



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## **Training in Analytical Techniques**

**Organised by**  
**(Department of Microbiology)**

**In Collaboration with**  
**(Star Tech. Labs Pvt., Ltd., Hyderabad)**



11.12.2019

To,  
The Principal,  
Bhavan's Vivekananda College, Sainikpuri, Secunderabad.

Sir,

**Subject: Permission to organize value added course for M.Sc Microbiology II year students by Dept. of Microbiology, BVC in collaboration with Startech labs Pvt.ltd, Hyderabad -reg:**

The Department of Microbiology is planning to organize a 6-day value added course for M.Sc Microbiology II year students on various analytical techniques like HPLC, GC-MS, FTIR etc.,. The objective of this training program is to enhance the students' technical skills in the area of analytical Microbiology and improve their employment opportunities in the pharmaceutical industries. Startech labs Pvt. Ltd, Hyderabad has extended its support to train the students in these techniques and this lab has been recognized by NABL, USFDA, ISO 9001:2008, Drug control administration and other bodies.

The duration of the programme will be 6 days from 16.12.2019 to 21.12.2019. The quoted cost for conducting this training programme is Rs.1500/- per student excluding GST cost (18%). The total cost for enrolled students (29 in strength) including GST is 51,330/-.

I request you to permit us to organize the workshop on the above mentioned dates and release an amount of Rs. 35,000/- from students' special fee towards this workshop. The remaining amount (Rs.16,330/-) will be collected from students and will be deposited in the college account. The total amount (Rs.51,330/-) for the training program may be transferred to the bank account of Startech labs Pvt. Ltd towards training cost and the bank details will be provided to the office.

Thanking you.

Yours Sincerely,



Dr.K.Anuradha

Head, Dept of Microbiology BVC.

- Enclosure: 1. Special fee details of current academic year 2019-20  
2. List of students attending the workshop.



**Department of Microbiology**  
**Academic Year 2019-2020**  
**Value Added Course in “Training in Analytical Techniques”**  
**In collaboration with StarTech Labs Pvt, Ltd, Madinaguda, Hyderabad**  
**16/12/2019 – 21/12/2019**

**Syllabus:**

**Duration:30hrs**

1. Labelling and recording data of new samples.
2. Overview, introduction and instrumentation of Flame Photometer to identify inorganic elements.
3. Principle and applications of Muffle Furnace, Conductivity meter, UV spectrophotometer, Potentiometer and IR.
4. Water activity analyzer, Vortex mixer.
5. Microbiology - Autoclave/ Destruction Autoclave.
6. Principle and application of Particle size analyzer and X Ray Diffraction (XRD).
7. Standard Operating Procedures (SOP).
8. Good Manufacturing Practices (GMP).
9. Principle and Instrumentation of Gas Chromatography.
10. Principle and Instrumentation of HPLC.
11. Demonstration of Heat stress monitor.
12. Demonstration of Air sampler for Industrial hygiene
13. Environmental Health - Analytical techniques to assess the quality of water, air, soil and dust, Metals, Total Dissolved Solids (TDS)
14. Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD)
15. Calculation of Loss on Dry (LOD) value of samples

**COURSE OUTCOMES:**

At the end of the course students will be able to

1. Implement the practice of standard operating procedures and good laboratory practices while conducting experimental procedures and performing them with accuracy and precision in industry and research labs.
2. Apply the knowledge gained on instrumentation and working of sophisticated equipment's in pharmaceutical and biotech industries during downstream processing.

Dr K Anuradha

Head, Department of Microbiology

**Bhavan's Vivekananda College**  
**of Science, Humanities and Commerce**  
**Sainikpuri, Secunderabad - 500094**  
**(Accredited with 'A' Grade by NAAC)**  
**Autonomous College–Affiliated to Osmania University**

**Clinical, Molecular Diagnostic Methods and Genetic Counseling**

**Organised by**  
**(Department of Biochemistry)**

**In Collaboration with**  
**(Institute of Genetics)**

To,

08.11.2019

The Principal,  
Bhavan's Vivekananda College,  
Sainikpuri, Secunderabad.

Sir,

**Sub:** Permission to conduct five day value added course/workshop on "**Clinical, molecular diagnostic methods and genetic counseling**" for B.Sc (MBBCC) 3<sup>rd</sup> year students under DBT-Star college scheme-Reg.

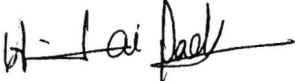
The Department of Biochemistry proposes to organize a five day value added course on "**Clinical, molecular diagnostic methods and genetic counseling**" in collaboration with Institute of Genetics and Hospital for Genetic Diseases, Osmania University, Begumpet, Hyderabad from 25<sup>th</sup> to 29<sup>th</sup> November, 2019. This workshop is being organized under DBT Star College Scheme, to enable the B.Sc Biochemistry students (student strength- 30) to get trained in the field of molecular diagnostics which would help them in getting employed in molecular, clinical and genetic analysis diagnostic labs.

An amount of Rs60,000/- (30students@ Rs.2000/-) may be transferred online to Institute of Genetics and Hospital for Genetic Diseases, Begumpet, Hyderabad and transaction details will be provided to the office.

I request you to permit us to organize this value added course on the specified dates at Institute of Genetics and Hospital for Genetic Diseases, Begumpet, Hyderabad.

Thanking you

Yours sincerely,

  
Dr.A.Sai.Padma  
Head, Dept of Biochemistry  
BVC.

  
9/11

**Department of Biochemistry**  
**Academic year 2019-20**  
**Value added course**  
**In collaboration with Institute of Genetics, Hyderabad**  
**under DBT-Star College Scheme**  
**25<sup>th</sup> to 29<sup>th</sup> November-2019**

**Syllabus:**

**Duration:30hrs**

1. Introduction to pre-natal and post-natal diagnostic techniques.
2. Newborn screening for genetic disorders.
3. Cytogenetics and Karyotyping.
4. Introduction to FISH and Micro-array techniques.
5. Genetic counselling- Measures, necessity and implementation.
6. Isolation of DNA from human blood sample and separation of extracted DNA by Agarose Gel Electrophoresis.
7. Amplification of DNA by polymerase chain reaction (PCR).
8. Overview of applications of PCR (PCR-RFLP, Microsatellite repeats, SSCP, Allele-specific PCR, ARMS PCR).
9. Quantitation of serum ceruloplasmin levels by ELISA.
10. Quantitation of serum TSH, 17-OH Progesterone levels.
11. Estimation of urine copper levels.
12. Applications of HPLC in diagnosing Haemoglobinopathies.

**COURSE OUTCOMES:**

At the end of the course students will be able to

1. Understand various chromosomal abnormalities through various cytogenetic methods and related genetic disorders.
2. Relate various biochemical tests and their results in diagnosis of various genetic diseases and appreciate the importance of genetic counselling.



Dr A Sai Padma  
Head, Department of Biochemistry

**Bhavan's Vivekananda College**  
**of Science, Humanities and Commerce**  
**Sainikpuri, Secunderabad - 500094**  
**(Accredited with 'A' Grade by NAAC)**  
**Autonomous College–Affiliated to Osmania University**

**Training in Analytical Techniques**

**Organised by**  
**(Department of Biochemistry)**

**In Collaboration with**  
**(Star Tech. Labs Pvt., Ltd., Hyderabad)**





11.12.2019

To,  
The Principal,  
Bhavan's Vivekananda College,  
Sainikpuri, Secunderabad.

Sir,

**Subject: Permission to organize value added course for M.Sc Biochemistry 2<sup>nd</sup> year students by Dept. of Biochemistry, BVC in collaboration with Startech labs Pvt.ltd, Hyderabad -reg:**

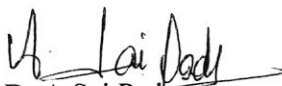
The Department of Biochemistry is planning to organize a 6-day value added course for M.Sc Biochemistry 2<sup>nd</sup> year students on various analytical techniques like HPLC, GC-MS , FTIR etc.,. The objective of this training program is to enhance the students' technical skills in the area of analytical biochemistry and improve their employment opportunities in the pharmaceutical industries. Startech labs Pvt. Ltd, Hyderabad has extended its support to train the students in these techniques and this lab has been recognized by NABL, USFDA, ISO 9001:2008, Drug control administration and other bodies.

The duration of the programme will be 6 days from 16.12.20' to 21.12.2019. The quoted cost for conducting this training programme is Rs.1500/- per student excluding GST cost (18%). The total cost for enrolled students (29 in strength) including GST is 51,330/-.

I request you to permit us to organize the workshop on the above mentioned dates and release an amount of Rs. 35,000/- from students' special fee towards this workshop. The remaining amount (Rs.16,330/-) will be collected from students and will be deposited in the college account. The total amount (Rs.51,330/-) for the training program may be transferred to the bank account of Startech labs Pvt.ltd towards training cost and the bank details will be provided to the office.

Thanking you.

Yours Sincerely,

  
Dr. A. Sai. Padma

Head, Dept of Biochemistry  
BVC.

- Enclosure: 1. Special fee details of current academic year 2019-20.
- 2. List of students attending the workshop.





**Department of Biochemistry**  
**Academic Year 2019-2020**  
**Value Added Course in “Training in Analytical Techniques”**  
**In collaboration with StarTech Labs Pvt, Ltd, Madinaguda, Hyderabad**  
**16/12/2019 – 21/12/2019**

**Syllabus:**

**Duration:30hrs**

1. Labelling and recording data of new samples.
2. Overview, introduction and instrumentation of Flame Photometer to identify inorganic elements.
3. Principle and applications of Muffle Furnace, Conductivity meter, UV spectrophotometer, Potentiometer and IR.
4. Water activity analyzer, Vortex mixer.
5. Microbiology - Autoclave/ Destruction Autoclave.
6. Principle and application of Particle size analyzer and X Ray Diffraction (XRD).
7. Standard Operating Procedures (SOP).
8. Good Manufacturing Practices (GMP).
9. Principle and Instrumentation of Gas Chromatography.
10. Principle and Instrumentation of HPLC.
11. Demonstration of Heat stress monitor.
12. Demonstration of Air sampler for Industrial hygiene
13. Environmental Health - Analytical techniques to assess the quality of water, air, soil and dust, Metals, Total Dissolved Solids (TDS)
14. Chemical Oxygen Demand (COD), Biological Oxygen Demand (BOD)
15. Calculation of Loss on Dry (LOD) value of samples

**COURSE OUTCOMES:**

At the end of the course students will be able to

1. Implement the practice of standard operating procedures and good laboratory practices while conducting experimental procedures and performing them with accuracy and precision in industry and research labs.
2. Apply the knowledge gained on instrumentation and working of sophisticated equipment's in pharmaceutical and biotech industries during downstream processing.



Dr A Sai Padma  
Head, Department of Biochemistry

**Bhavan's Vivekananda College**  
of Science, Humanities and Commerce  
Sainikpuri, Secunderabad - 500094  
(Accredited with 'A' Grade by NAAC)  
Autonomous College-Affiliated to Osmania University

**Certified Management Accountant**

**Organised by**  
**(Department of Commerce)**

**In Collaboration with**  
**(US CMA Integration)**



CIRCULAR For B.Com & B.B.A

The certificate course committee is conducting a certificate course for UG in the following area:

Course Name : Value added course (Commerce and Management) CMA  
Duration : One year  
Fees : Rs 70,000

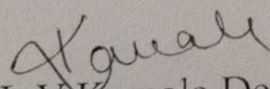
Training Support : Miles Education

Lecturer in charge: Mrs. L V Kamala Devi

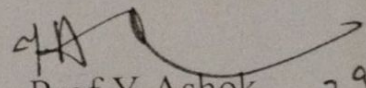
The students are requested to register themselves in the College with Miles Education from 3<sup>rd</sup> Sep 2019.

For Details contact: L.V. Kamala Devi, Assistant Professor, Department of Commerce.

Registration starting date: 3<sup>rd</sup> September 2019.

  
Mrs.L.V.Kamala Devi

Certificate course coordinator

  
Prof.Y.Ashok 29/8

Principal

Proposal for **integration of  
US CMA** with  
**B.Com (Hons.) – Strategic Finance**



The Association of  
Accountants and  
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in Business

WILEY



## US CMA Integration

- CMA is the US equivalent of Indian cost accountant from Institute of Cost Accountants of India (formerly ICWAI)
- Integrated CMA course will help students add to their knowledge and credibility; and provide them with extensive career opportunities with MNCs in finance & accounting

## CMA Content Mapping

# Executive Summary

- **CMA (Certified Management Accountant)** is the highest management accounting qualification in the US with global credibility, and offered by the **IMA (Institute of Management Accountants)**, US. From an Indian perspective, IMA also has a MoU with the ICWAI whereby both institutes mutually recognize each other's members
- The CMA exams comprise **2 exam parts**:
  - **Part 1 - Financial Reporting, Planning, Performance & Control**
  - **Part 2 - Financial Decision-making**
- Miles Education is the "official" partner of IMA to offer CMA training across India using official IMA-licensed Wiley study materials. **IMA-Wiley-Miles** are keen on working with universities to **integrate the CMA course content into their B.Com program**. Benefits:
  - Students would cover CMA exam content as part of their university curriculum. They can appear for and clear their CMA exams even before completing their graduation which, besides adding to their skill-sets, would also make them eligible for differential placement
  - The University would benefit from a unique course offering which would encompass high-quality CMA content specification outline. Further, once the integrated program is launched, the University would also be eligible for IMA's Higher Education Endorsement



# CMA 2 parts => Breakdown to 4 subjects

## Part 1: Financial Reporting, Planning, Performance & Control

- Planning, Budgeting & Forecasting
- Performance Management
- External Financial Reporting Decisions
- Cost Management
- Internal Controls

**CMA1A: Financial Planning & Performance**

**CMA1B: Financial Reporting & Control**

## Part 2: Financial Decision Making

- Financial Statement Analysis
- Corporate Finance
- Decision Analysis
- Risk Management
- Investment Decisions
- Professional Ethics

**CMA2A: Financial Decision Making I**

**CMA2B: Financial Decision Making II**

Section 1

## About US CMA

# Accounting & Finance professional qualifications

## Public Accounting



**India - CA**

- 16 exams
- Graduation not required

**UK - ACCA**

- 14 exams
- Graduation not required

**US - CPA**

- 4 exams
- Graduation required

## Management Accounting



**India - CMA**

- 20 exams
- Graduation not required

**UK - CIMA**

- 16 exams
- Graduation not required

**US - CMA**

- 2 exams
- Graduation required

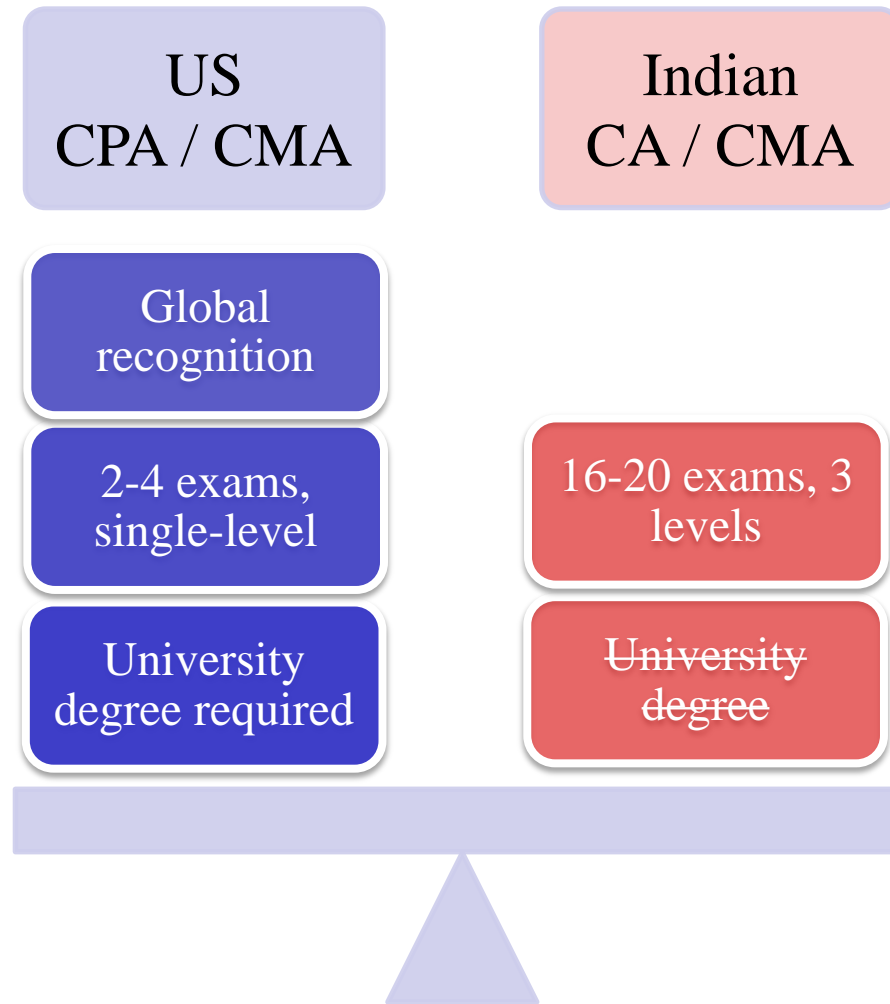


## US CMA Integration

### About US CMA

## Why only 2-4 exams for US CPA/CMA certifications?

- **US professional qualifications “COMPLEMENT” UNIVERSITY EDUCATION** – e.g., to be a CPA, CMA or CFA, a university degree is mandatory
- Therefore, these are crisper in content and **focus only on skill-gaps that are needed to be a F&A professional**
- Designed to be **pursued alongside a full-time job** and to facilitate the **career progression for professionals**



- **Indian (or even UK) professional qualifications tend to “SUBSTITUTE” UNIVERSITY EDUCATION** – e.g., you can be an Indian CA, CMA or CS without being an under-graduate!
- Therefore, these are **lengthy and also encompass what a candidate would have covered (or simultaneously covers) in a university degree**

- CMA = 2 exams:
- Focus on “**FINANCE**”
  - 4-hours exam each with **75% MCQs** and 25% Essays
  - Highest US management accounting qualification

## CMA: 2 parts, focus on finance, 75% MCQs

### Part 1: Financial Reporting, Planning, Performance & Control

- External Financial Reporting Decisions
- Planning, Budgeting & Forecasting
- Performance Management
- Cost Management
- Internal Controls

### Part 2: Financial Decision Making

- Financial Statement Analysis
- Corporate Finance
- Decision Analysis
- Risk Management
- Investment Decisions
- Professional Ethics

## US CMA Integration

- The IMA (US) and ICWAI (India) MoU is testimony to IMA's (and US CMA's) global recognition
- IMA's global presence:
  - **US**
  - **Europe**
  - **Middle East**
  - **China** (exams in Chinese as well)
  - **Singapore**

### About US CMA

## IMA's global recognition | MoU with ICWAI (India)



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The Institute of Cost Accountants of India (formerly ICWAI) has entered into a Memorandum of Understanding (MoU) with the Institute of Management Accountants (IMA), US, to enable mutual recognition and cooperation between the two institutes to develop the profession of Management Accountancy.

**The MoU enables recognition of the professional qualification of the respective Institutes. A member of ICWAI can get enrolled as a member of IMA (US) and vice versa.**

Refer: <http://icmai.in/icmai/aboutus/mou/MOUwithIMA.php>

## US CMA Integration

- Big 4 and MNCs across India sponsor the CPA/CMA program @Miles

About US CMA

## Miles' Corporate Tie-ups for CPA/CMA training



- Many universities have integrated the US CMA program with their B.Com / BBA curriculum reflecting the recognition and credibility of the CMA program

# Miles University partnerships for CMA



**Section 2**

**Integration of US CMA with  
University curriculum**



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in Business

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## CMA 2 parts => Breakdown to 4 subjects

### Part 1: Financial Reporting, Planning, Performance & Control

- Planning, Budgeting & Forecasting
- Performance Management
- External Financial Reporting Decisions
- Cost Management
- Internal Controls

**CMA1A: Financial Planning  
& Performance**

**CMA1B: Financial  
Reporting & Control**

### Part 2: Financial Decision Making

- Financial Statement Analysis
- Corporate Finance
- Decision Analysis
- Risk Management
- Investment Decisions
- Professional Ethics

**CMA2A: Financial Decision  
Making I**

**CMA2B: Financial Decision  
Making II**



## Recommendations for CMA Integration

- **For B.Com (Hons.) :**

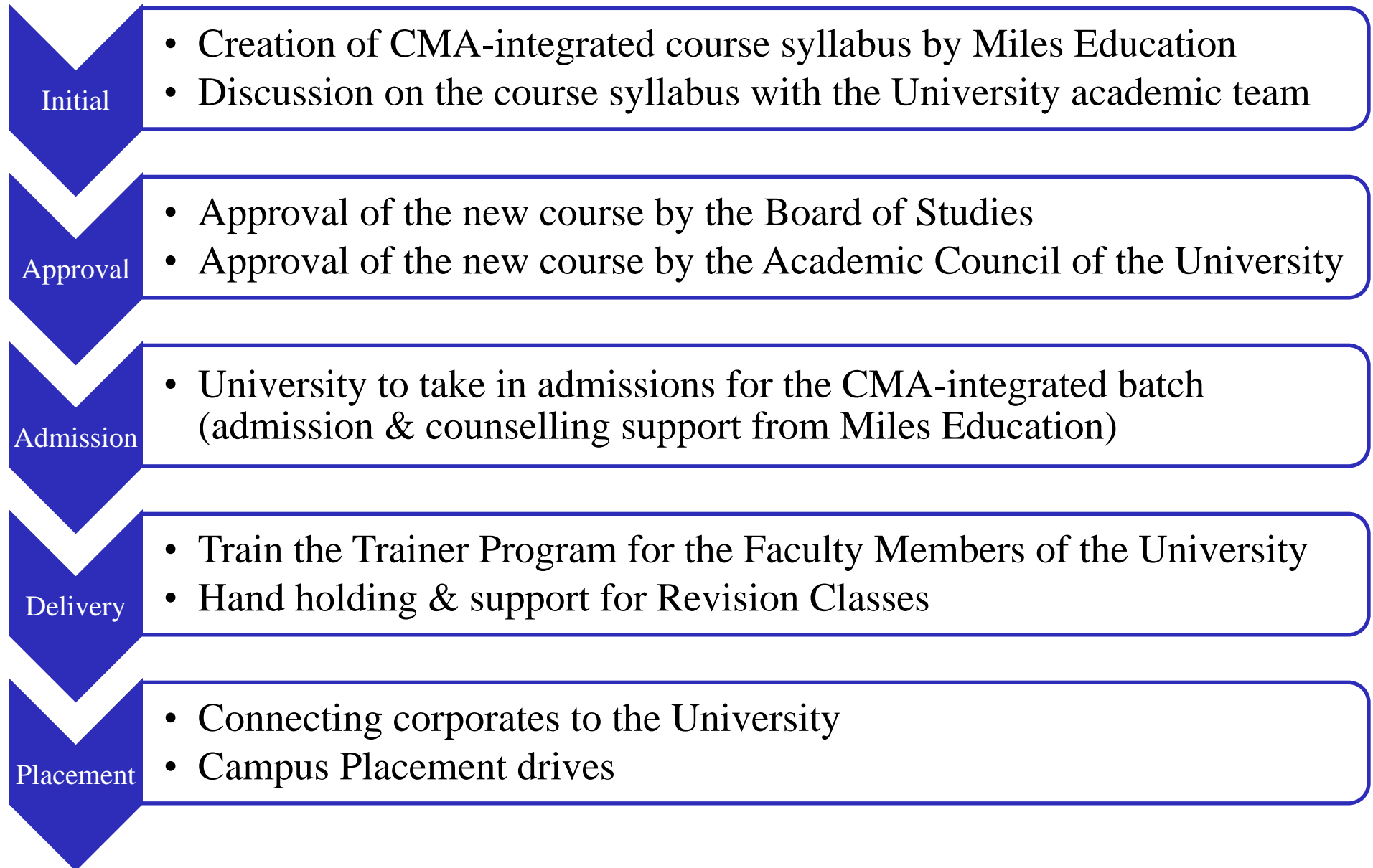
- **Add 4 subjects** covering the entire CMA exam content:

- Financial Planning & Performance,
- Financial Reporting & Control,
- Financial Decision Making I,
- Financial Decision Making II

[These 4 subjects should be included in Semesters I-IV so that the student can clear the CMA exams before he/she completes Semester V; and will be eligible for differential placement as an IMA member who has cleared his/her CMA exams]

- **Eliminate overlap subjects** like Cost Accounting, Management Accounting, Financial Management and Corporate Strategy which are over 80% covered by CMA exam content
- Move certain subjects from Semesters I, II and III to Semesters V and VI to accommodate the increase in intensity of the coursework in the earlier semesters

## Integration Process Flow



## US CMA Integration

- IMA-Wiley-Miles have a tri-party agreement whereby Miles Education is the “official” training partner of IMA in India and offers CMA training using the “official” IMA-licensed Wiley CMA-excel Learning System



## Role of IMA – Wiley – Miles

# IMA-Wiley-Miles Tri-party Arrangement in India



**Institute of Management Accountants, USA** - Offers the CMA certification

**WILEY**

**Wiley** - Publisher of “official” IMA study materials & online test-bank



**Miles Education** - IMA’s “official” training provider in India for CMA

- Use of “official” IMA study materials entitles candidates to a **special discounted bundle pricing** whereby the cost of these study materials is predominantly covered in the IMA fees

ONLY “official” study materials licensed by IMA

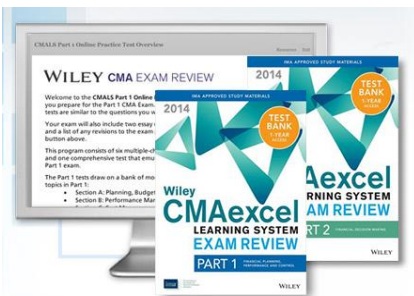


### CMA Learning System (published by Wiley)

- **IMA approved** study material
- Includes:
  - Study material for Part 1 and Part 2 [useful for conceptual understanding]
  - Online test bank access for Part 1 and Part 2 [useful for practice questions and mock exams]

## US CMA Integration

- IMA-Wiley-Miles are working with universities to integrate the CMA course content into their university curriculum
- Wiley is the global publisher of “official” IMA-licensed Wiley CMA-excel Learning System



## Role of IMA – Wiley – Miles

# Role of IMA & Wiley

- **Role of IMA:**
  - IMA conducts the CMA exams and offers the CMA certification
  - IMA would endorse the University program post-integration under the IMA's Higher Education Endorsement Program
  - IMA would provide forums where the faculty members could participate in joint research especially in the areas of management accounting and finance
  - IMA may approve a student chapter at the institution subject to minimum member count requirements and other conditions
- **Role of Wiley:**
  - Wiley is the global publisher of official IMA-licensed study materials (Wiley CMA-excel Learning System) which includes textbooks and an online access. This would be used as the study materials for the 4 subjects that have been recommended to be added as part of the CMA integration

## US CMA Integration

- Miles Education is the “official” partner of IMA to offer CMA training across India using official IMA-licensed Wiley study materials [under a tri-partite agreement between IMA, Wiley and Miles]
- Miles has developed a unique training delivery model for the CMA program

## Role of Miles

- **Role of Miles:**
  - Miles will be responsible for providing the **official IMA study materials (Wiley CMA-excel Learning System)** to the institution
  - Miles would also provide **Miles notes** and **Miles training videos** which would be instructor-aids and would also be used as add-ons for classroom delivery
  - Miles would take up the “**Train The Trainer**” program to train and guide university faculty to take up the classes for the CMA subjects
  - Miles would facilitate a **few hours of revision classes/training by in-house faculty (with industry experience) and/or industry experts** to ensure that:
    - Students are well prepared for the CMA exams
    - Students are able to derive the desired value proposition and are able to apply theory to practice via the use of live examples and case studies
  - Miles would assist the students in **application and other CMA exams and certification formalities**. Further, students may be eligible for **special IMA discounts** provided to Indian candidates via the IMA-Wiley-Miles partnership
  - Miles would assist the students who have cleared the CMA exams with **differential placements** (as part of the campus recruitment drive)

Appendix A

## About Miles Education



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in Business

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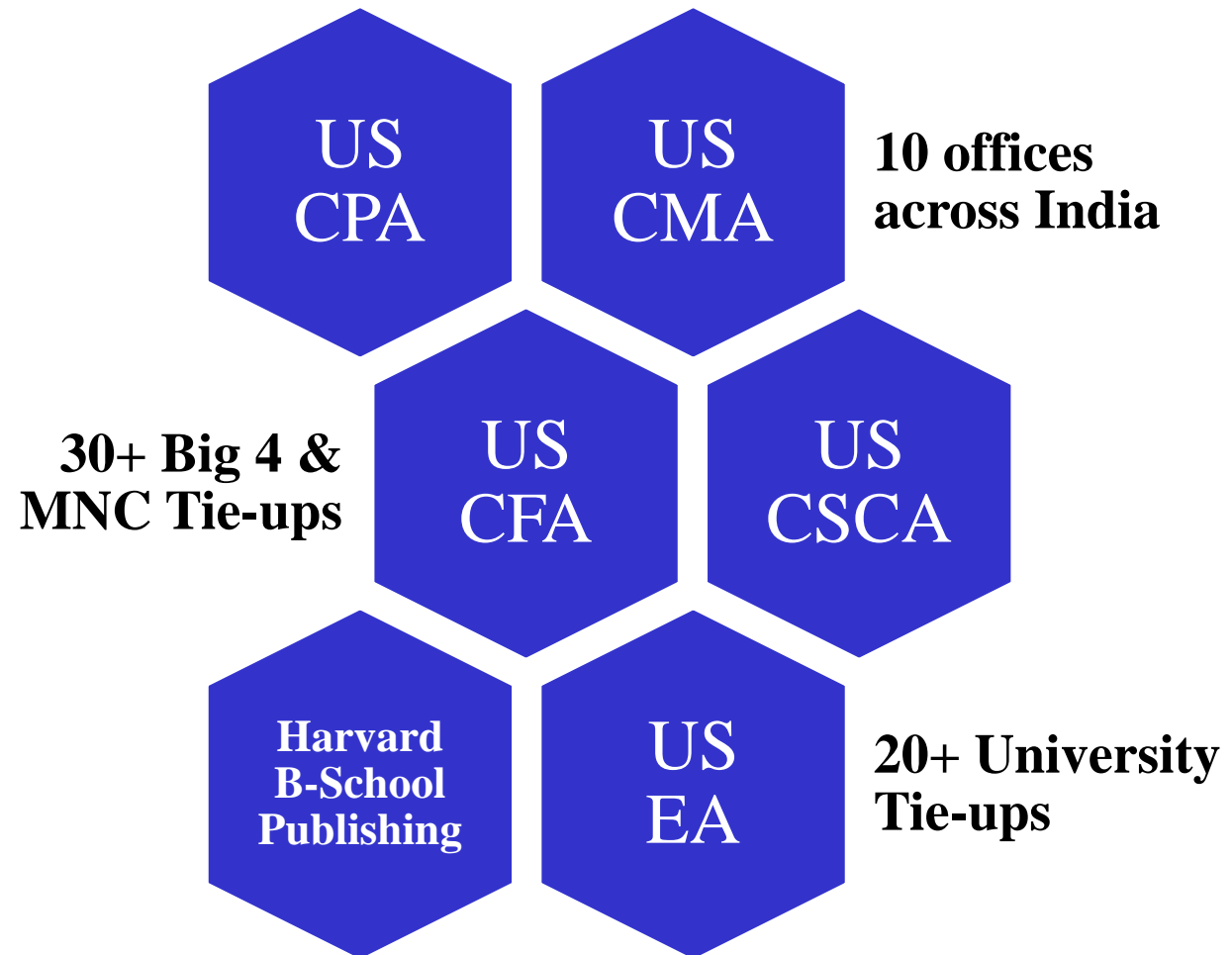


## US CMA Integration

- Miles is the pioneer & largest training provider in India for:
  - US CPA
  - US CMA
  - US CFA IF
- Miles is registered / approved partner of:
  - AICPA, US
  - IMA, US
  - CFA Institute, US

About Miles Education

## Miles Education - Offerings




## US CMA Integration

- Miles has offices and training centres across 10 cities in India

### About Miles Education

# Miles Education - Presence in India

[www.mileseducation.com](http://www.mileseducation.com)



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**MUMBAI**  
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mumbai@mileseducation.com



**PUNE**  
Floor 6, Kumar Business Centre, Bund Garden, Pune 411001.  
+91-20-65005735  
+91-98 67 556444  
pune@mileseducation.com

# B.Com (Hons.) - Strategic Finance Integrated with US CMA



The Association of  
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Financial Professionals  
in Business

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Paper	Course Title	Credits	Comments
<b>SEMESTER I</b>			
1.1	Language -I- Local/Foreign	4	
1.2	Language -II - English	4	
1.3	Financial Accounting	4	
1.4	Indian Financial System	4	Move to Semester V
1.5	Management & Behavioural process	4	
1.6	Corporate Law & Governance	4	
1.7	Quantitative Analysis-1	4	
1.8	CBCS - Indian Constitution	2	
1.9	Value Education	1	
<b>CMA 1A</b>	<b>Financial Planning &amp; Performance</b>		<b>CMA Part 1 content (Section B, C &amp; F)</b>
	<b>Total Credits</b>	<b>31</b>	
<b>SEMESTER II</b>			
2.1	Language - I	4	
2.2	Language - II - English	4	
2.3	Corporate Accounting-1	4	
2.4	Quantitative Analysis-2	4	
2.5	Banking Law and Operations	4	
<b>2.6</b>	<b>Financial Management</b>	<b>4</b>	<b>Remove - Covered in CMA 2A</b>
2.7	Market Behaviour and Cost Analysis	4	
2.8	CBCS - Environmental Science	2	
2.9	Value Education	1	
2.1	Internship in Service Industry	0	
<b>CMA 1B</b>	<b>Financial Analytics &amp; Control</b>		<b>CMA Part 1 content (Section A, D &amp; E)</b>
	<b>Total Credits</b>	<b>31</b>	
<b>SEMESTER III</b>			
3.1	Corporate Accounting-2	4	
<b>3.2</b>	<b>Costing -I</b>	<b>4</b>	<b>Remove - Covered in CMA 1B &amp; 2B</b>
3.3	Service Marketing Management	4	
3.4	Production & Operations Management	4	Move to Semester VI
3.5	International Business	4	
3.6	Soft Skills	4	
3.7	Human Resource Management	4	
3.8	IDC	2	
3.9	CDP (Village Camp)	0	
<b>CMA 1C</b>	<b>Financial Reporting</b>		<b>CMA Part 2 content (Section A &amp; B)</b>
<b>CMA 2A</b>	<b>Financial Decision Making - I</b>		<b>CMA Part 2 content (Section A &amp; B)</b>
	<b>Total Credits</b>	<b>30</b>	

## B.Com (Hons.) - Strategic Finance Integrated with US CMA



The Association of  
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Financial Professionals  
in Business

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Paper	Course Title	Credits	Comments
<b>SEMESTER IV</b>			
4.1	Entrepreneurship Development	4	
4.2	Costing - II	4	Remove - Covered in CMA 1B & 2B
4.3	Supply Chain Management	4	
4.4	Principles of Marketing	4	
4.5	Business Law	4	
4.6	Research Methodology	4	
4.7	Business Information System	4	
4.8	IDC	2	
4.9	Internship in NGO	0	
CMA 2B	Financial Decision Making - II		CMA Part 2 content (Section C, D, E & F)
	<b>Total Credits</b>	<b>30</b>	
<b>SEMESTER V</b>			
5.1	Management Accounting	4	Remove - Covered in CMA 1A, 1B, 2A & 2B
5.2	Taxation-I	4	
5.3	Corporate Reporting & Ind AS	4	
5.4	Advanced Corporate Accounting/International Finance	4	
5.5	IFRS and Financial Reporting/Strategic Financial Management	4	Remove - IFRS covered in CMA 1C / SFM covered in 2A & 2B
5.6	Business Taxation/Security Analysis & Portfolio Management	4	
5.7	Corporate Tax Planning/Financial Risk Management	4	
5.8	Research Project	4	
5.8	Value Education	1	
5.9	Internship in Accounting & Auditing Firms	0	
CPA	International Auditing		CPA content: US & International Auditing Standards
	<b>Total Credits</b>	<b>33</b>	
<b>SEMESTER VI</b>			
6.1	Enterprise Resource Planning (SAP)	4	
6.1	Quantitative techniques	4	
6.2	Taxation - II	4	
6.3	Advanced Corporate Accounting/International Finance	4	
6.4	IFRS and Financial Reporting/Strategic Financial Management	4	Remove - IFRS covered in CMA 1C / SFM covered in 2A & 2B
6.5	Business Taxation/Security Analysis & Portfolio Management	4	
6.6	Corporate Tax Planning/Financial Risk Management	4	
6.7	Value Education	1	
6.8	Project Report	0	
	<b>Total Credits</b>	<b>29</b>	

# Learning Outcome Statements



IMA's Certification for  
Accountants and  
Financial Professionals  
in Business

Effective: January 1, 2020

**Institute of Certified Management Accountants**  
**Certified Management Accountant**  
**Learning Outcome Statements**  
**(Content Specification Outline effective January 2020)**

**Part 1 – Financial Planning, Performance, and Analytics**

**Section A. External Financial Reporting Decisions (15% - Levels A, B, and C)**

**Part 1 – Section A.1. Financial statements**

For the balance sheet, income statement, statement of changes in equity, and the statement of cash flows, the candidate should be able to:

- a. identify the users of these financial statements and their needs
- b. demonstrate an understanding of the purposes and uses of each statement
- c. identify the major components and classifications of each statement
- d. identify the limitations of each financial statement
- e. identify how various financial transactions affect the elements of each of the financial statements and determine the proper classification of the transaction
- f. demonstrate an understanding of the relationship among the financial statements
- g. demonstrate an understanding of how a balance sheet, an income statement, a statement of changes in equity, and a statement of cash flows (indirect method) are prepared

With respect to integrated reporting, the candidate should be able to:

- h. define integrated reporting (IR), integrated thinking, and the integrated report and demonstrate an understanding of the relationship between them
- i. identify the primary purpose of IR
- j. explain the fundamental concepts of value creation, the six capitals, and the value creation process
- k. identify elements of an integrated report; i.e., organizational overview and external environment, governance, business model, risks and opportunities, strategy and resource allocation, performance, outlook, basis of preparation, and presentation
- l. identify and explain the benefits and challenges of adopting IR

**Part 1 – Section A.2. Recognition, measurement, valuation, and disclosure**

The candidate should be able to:

**Asset valuation**

- a. identify issues related to the valuation of accounts receivable, including timing of recognition and estimation of the allowance for credit losses
- b. distinguish between receivables sold (factoring) on a with-recourse basis and those sold on a without-recourse basis, and determine the effect on the balance sheet
- c. identify issues in inventory valuation, including which goods to include, what costs to include, and which cost assumption to use

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- d. identify and compare cost flow assumptions used in accounting for inventories
- e. demonstrate an understanding of the lower of cost or market rule for LIFO and the retail inventory method and the lower of cost and net realizable value rule for all other inventory methods
- f. calculate the effect on income and on assets of using different inventory methods
- g. analyze the effects of inventory errors
- h. identify advantages and disadvantages of the different inventory methods
- i. recommend the inventory method and cost flow assumption that should be used for a firm given a set of facts
- j. demonstrate an understanding of the following debt security types: trading, available-for-sale, and held-to-maturity
- k. demonstrate an understanding of the valuation of debt and equity securities
- l. determine the effect on the financial statements of using different depreciation methods
- m. recommend a depreciation method for a given set of data
- n. demonstrate an understanding of the accounting for impairment of long-term assets and intangible assets, including goodwill

### Valuation of liabilities

- o. identify the classification issues of short-term debt expected to be refinanced
- p. compare the effect on financial statements when using either the assurance warranty approach or the service warranty approach for accounting for warranties

### Income taxes (applies to Assets and Liabilities subtopics)

- q. demonstrate an understanding of interperiod tax allocation/deferred income taxes
- r. distinguish between deferred tax liabilities and deferred tax assets
- s. differentiate between temporary differences and permanent differences and identify examples of each

### Leases (applies to Assets and Liabilities subtopics)

- t. distinguish between operating and finance leases
- u. recognize the correct financial statement presentation of operating and finance leases

### Equity transactions

- v. identify transactions that affect paid-in capital and those that affect retained earnings
- w. determine the effect on shareholders' equity of large and small stock dividends, and stock splits

### Revenue recognition

- x. apply revenue recognition principles to various types of transactions
- y. demonstrate an understanding of revenue recognition for contracts with customers using the five steps required to recognize revenue
- z. demonstrate an understanding of the matching principle with respect to revenues and expenses and be able to apply it to a specific situation

### Income measurement

- aa. define gains and losses and indicate the proper financial statement presentation



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- bb. demonstrate an understanding of the treatment of gain or loss on the disposal of fixed assets
- cc. demonstrate an understanding of expense recognition practices
- dd. define and calculate comprehensive income
- ee. identify the correct treatment of discontinued operations

### GAAP – IFRS differences

Major differences in reported financial results when using GAAP vs. IFRS and the impact on analysis

- ff. identify and describe the following differences between U.S. GAAP and IFRS: (i) expense recognition, with respect to share-based payments and employee benefits; (ii) intangible assets, with respect to development costs and revaluation; (iii) inventories, with respect to costing methods, valuation, and write-downs (e.g., LIFO); (iv) leases, with respect to lessee operating and finance leases; (v) long-lived assets, with respect to revaluation, depreciation, and capitalization of borrowing costs; and (vi) impairment of assets, with respect to determination, calculation, and reversal of loss

## **Section B. Planning, Budgeting, and Forecasting (20% - Levels A, B, and C)**

### Part 1 – Section B.1. Strategic planning

The candidate should be able to:

- a. discuss how strategic planning determines the path an organization chooses for attaining its long-term goals, vision, and mission, and distinguish between vision and mission
- b. identify the time frame appropriate for a strategic plan
- c. identify the external factors that should be analyzed during the strategic planning process and understand how this analysis leads to recognition of organizational opportunities, limitations, and threats
- d. identify the internal factors that should be analyzed during the strategic planning process and explain how this analysis leads to recognition of organizational strengths, weaknesses, and competitive advantages
- e. demonstrate an understanding of how the mission leads to the formulation of long-term business objectives such as business diversification, the addition or deletion of product lines, or the penetration of new markets
- f. explain why short-term objectives, tactics for achieving these objectives, and operational planning (master budget) must be congruent with the strategic plan and contribute to the achievement of long-term strategic goals
- g. identify the characteristics of successful strategic plans
- h. describe Porter's generic strategies, including cost leadership, differentiation, and focus
- i. demonstrate an understanding of the following planning tools and techniques: SWOT analysis, Porter's 5 forces, situational analysis, PEST analysis, scenario

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planning, competitive analysis, contingency planning, and the BCG Growth-Share Matrix

### **Part 1 – Section B.2. Budgeting concepts**

The candidate should be able to:

- a. describe the role that budgeting plays in the overall planning and performance evaluation process of an organization
- b. explain the interrelationships between economic conditions, industry situation, and a firm's plans and budgets
- c. identify the role that budgeting plays in formulating short-term objectives and planning and controlling operations to meet those objectives
- d. demonstrate an understanding of the role that budgets play in measuring performance against established goals
- e. identify the characteristics that define successful budgeting processes
- f. explain how the budgeting process facilitates communication among organizational units and enhances coordination of organizational activities
- g. describe the concept of a controllable cost as it relates to both budgeting and performance evaluation
- h. explain how the efficient allocation of organizational resources are planned during the budgeting process
- i. identify the appropriate time frame for various types of budgets
- j. identify who should participate in the budgeting process for optimum success
- k. describe the role of top management in successful budgeting
- l. demonstrate an understanding of the use of cost standards in budgeting
- m. differentiate between ideal (theoretical) standards and currently attainable (practical) standards
- n. differentiate between authoritative standards and participative standards
- o. identify the steps to be taken in developing standards for both direct material and direct labor
- p. demonstrate an understanding of the techniques that are used to develop standards such as activity analysis and the use of historical data
- q. discuss the importance of a policy that allows budget revisions that accommodate the impact of significant changes in budget assumptions
- r. explain the role of budgets in monitoring and controlling expenditures to meet strategic objectives
- s. define budgetary slack and discuss its impact on goal congruence

### **Part 1 – Section B.3. Forecasting techniques**

The candidate should be able to:

- a. demonstrate an understanding of a simple regression equation
- b. define a multiple regression equation and recognize when multiple regression is an appropriate tool to use for forecasting
- c. calculate the result of a simple regression equation
- d. demonstrate an understanding of learning curve analysis

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- e. calculate the results under a cumulative average-time learning model
- f. list the benefits and shortcomings of regression analysis and learning curve analysis
- g. calculate the expected value of random variables
- h. identify the benefits and shortcomings of expected value techniques
- i. use probability values to estimate future cash flows

### Part 1 – Section B.4. Budget methodologies

For each of the budget systems identified (annual/master budgets, project budgeting, activity-based budgeting, zero-based budgeting, continuous (rolling) budgets, and flexible budgeting), the candidate should be able to:

- a. define its purpose, appropriate use, and time frame
- b. identify the budget components and explain the interrelationships among the components
- c. demonstrate an understanding of how the budget is developed
- d. compare and contrast the benefits and limitations of the budget system
- e. evaluate a business situation and recommend the appropriate budget solution
- f. prepare budgets on the basis of information presented
- g. calculate the impact of incremental changes to budgets

### Part 1 – Section B.5. Annual profit plan and supporting schedules

The candidate should be able to:

- a. explain the role of the sales budget in the development of an annual profit plan
- b. identify the factors that should be considered when preparing a sales forecast
- c. identify the components of a sales budget and prepare a sales budget
- d. explain the relationship between the sales budget and the production budget
- e. identify the role that inventory levels play in the preparation of a production budget and define other factors that should be considered when preparing a production budget
- f. prepare a production budget
- g. demonstrate an understanding of the relationship between the direct materials budget, the direct labor budget, and the production budget
- h. explain how inventory levels and procurement policies affect the direct materials budget
- i. prepare direct materials and direct labor budgets based on relevant information and evaluate the feasibility of achieving production goals on the basis of these budgets
- j. demonstrate an understanding of the relationship between the overhead budget and the production budget
- k. separate costs into their fixed and variable components
- l. prepare an overhead budget
- m. identify the components of the cost of goods sold budget and prepare a cost of goods sold budget

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- n. demonstrate an understanding of contribution margin per unit and total contribution margin, identify the appropriate use of these concepts, and calculate both unit and total contribution margin
- o. identify the components of the selling and administrative expense budget
- p. explain how specific components of the selling and administrative expense budget may affect the contribution margin
- q. prepare an operational (operating) budget
- r. prepare a capital expenditure budget
- s. demonstrate an understanding of the relationship between the capital expenditure budget, the cash budget, and the pro forma financial statements
- t. define the purposes of the cash budget and describe the relationship between the cash budget and all other budgets
- u. demonstrate an understanding of the relationship between credit policies and purchasing (payables) policies and the cash budget
- v. prepare a cash budget

### Part 1 – Section B.6. Top-level planning and analysis

The candidate should be able to:

- a. define the purpose of a pro forma income statement, a pro forma balance sheet, and a pro forma statement of cash flows, and demonstrate an understanding of the relationship among these statements and all other budgets
- b. prepare pro forma income statements based on several revenue and cost assumptions
- c. evaluate whether a company has achieved strategic objectives based on pro forma income statements
- d. use financial projections to prepare a pro forma balance sheet and a pro forma statement of cash flows
- e. identify the factors required to prepare medium- and long-term cash forecasts
- f. use financial projections to determine required outside financing and dividend policy

### **Section C. Performance Management (20% - Levels A, B, and C)**

#### Part 1 – Section C.1. Cost and variance measures

The candidate should be able to:

- a. analyze performance against operational goals using measures based on revenue, manufacturing costs, non-manufacturing costs, and profit depending on the type of center or unit being measured
- b. explain the reasons for variances within a performance monitoring system
- c. prepare a performance analysis by comparing actual results to the master budget, calculate favorable and unfavorable variances from the budget, and provide explanations for variances
- d. identify and describe the benefits and limitations of measuring performance by comparing actual results to the master budget

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- e. analyze a flexible budget based on actual sales (output) volume
- f. calculate the sales-volume variance and the sales-price variance by comparing the flexible budget to the master (static) budget
- g. calculate the flexible-budget variance by comparing actual results to the flexible budget
- h. investigate the flexible-budget variance to determine individual differences between actual and budgeted input prices and input quantities
- i. explain how budget variance reporting is utilized in a management by exception environment
- j. define a standard cost system and identify the reasons for adopting a standard cost system
- k. demonstrate an understanding of price (rate) variances and calculate the price variances related to direct material and direct labor inputs
- l. demonstrate an understanding of efficiency (usage) variances and calculate the efficiency variances related to direct material and direct labor inputs
- m. demonstrate an understanding of spending and efficiency variances as they relate to fixed and variable overhead
- n. calculate a sales-mix variance and explain its impact on revenue and contribution margin
- o. calculate and explain a mix variance
- p. calculate and explain a yield variance
- q. demonstrate how price, efficiency, spending, and mix variances can be applied in service companies as well as manufacturing companies
- r. analyze factory overhead variances by calculating variable overhead spending variance, variable overhead efficiency variance, fixed overhead spending variance, and production volume variance
- s. analyze variances, identify causes, and recommend corrective actions

### Part 1 – Section C.2. Responsibility centers and reporting segments

The candidate should be able to:

- a. identify and explain the different types of responsibility centers
- b. recommend appropriate responsibility centers given a business scenario
- c. calculate a contribution margin
- d. analyze a contribution margin report and evaluate performance
- e. identify segments that organizations evaluate, including product lines, geographical areas, or other meaningful segments
- f. explain why the allocation of common costs among segments can be an issue in performance evaluation
- g. identify methods for allocating common costs such as stand-alone cost allocation and incremental cost allocation
- h. define transfer pricing and identify the objectives of transfer pricing
- i. identify the methods for determining transfer prices and list and explain the advantages and disadvantages of each method
- j. identify and calculate transfer prices using variable cost, full cost, market price, negotiated price, and dual-rate pricing

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- k. explain how transfer pricing is affected by business issues such as the presence of outside suppliers and the opportunity costs associated with capacity usage
- l. describe how special issues such as tariffs, exchange rates, taxes, currency restrictions, expropriation risk, and the availability of materials and skills affect performance evaluation in multinational companies

### Part 1 – Section C.3. Performance measures

The candidate should be able to:

- a. explain why performance evaluation measures should be directly related to strategic and operational goals and objectives; why timely feedback is critical; and why performance measures should be related to the factors that drive the element being measured, e.g., cost drivers and revenue drivers
- b. explain the issues involved in determining product profitability, business unit profitability, and customer profitability, including cost measurement, cost allocation, investment measurement, and valuation
- c. calculate product-line profitability, business unit profitability, and customer profitability
- d. evaluate customers and products on the basis of profitability and recommend ways to improve profitability and/or drop unprofitable customers and products
- e. define and calculate return on investment (ROI)
- f. analyze and interpret ROI calculations
- g. define and calculate residual income (RI)
- h. analyze and interpret RI calculations
- i. compare and contrast the benefits and limitations of ROI and RI as measures of performance
- j. explain how revenue and expense recognition policies may affect the measurement of income and reduce comparability among business units
- k. explain how inventory measurement policies, joint asset sharing, and overall asset measurement policies may affect the measurement of investment and reduce comparability among business units
- l. define key performance indicators (KPIs) and discuss the importance of these indicators in evaluating a firm
- m. define the concept of a balanced scorecard and identify its components
- n. identify and describe the perspectives of a balanced scorecard, including financial, customer, internal process, and learning and growth
- o. identify and describe the characteristics of successful implementation and use of a balanced scorecard
- p. demonstrate an understanding of a strategy map and the role it plays
- q. analyze and interpret a balanced scorecard and evaluate performance on the basis of the analysis
- r. recommend performance measures and a periodic reporting methodology given operational goals and actual results



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### **Section D. Cost Management (15% - Levels A, B, and C)**

#### Part 1 – Section D.1. Measurement concepts

The candidate should be able to:

- a. calculate fixed, variable, and mixed costs and demonstrate an understanding of the behavior of each in the long and short term and how a change in assumptions regarding cost type or relevant range affects these costs
- b. identify cost objects and cost pools and assign costs to appropriate activities
- c. demonstrate an understanding of the nature and types of cost drivers and the causal relationship that exists between cost drivers and costs incurred
- d. demonstrate an understanding of the various methods for measuring costs and accumulating work-in-process and finished goods inventories
- e. identify and define cost measurement techniques such as actual costing, normal costing, and standard costing; calculate costs using each of these techniques; identify the appropriate use of each technique; and describe the benefits and limitations of each technique
- f. demonstrate an understanding of variable (direct) costing and absorption (full) costing and the benefits and limitations of these measurement concepts
- g. calculate inventory costs, cost of goods sold, and operating profit using both variable costing and absorption costing
- h. demonstrate an understanding of how the use of variable costing or absorption costing affects the value of inventory, cost of goods sold, and operating income
- i. prepare summary income statements using variable costing and absorption costing
- j. determine the appropriate use of joint product and by-product costing
- k. demonstrate an understanding of concepts such as split-off point and separable costs
- l. determine the allocation of joint product and by-product costs using the physical measure method, the sales value at split-off method, constant gross profit (gross margin) method, and the net realizable value method; describe the benefits and limitations of each method

#### Part 1 – Section D.2. Costing systems

For each cost accumulation system identified (job order costing, process costing, activity-based costing, life-cycle costing), the candidate should be able to:

- a. define the nature of the system, understand the cost flows of the system, and identify its appropriate use
- b. calculate inventory values and cost of goods sold
- c. demonstrate an understanding of the proper accounting for normal and abnormal spoilage
- d. discuss the strategic value of cost information regarding products and services, pricing, overhead allocations, and other issues
- e. identify and describe the benefits and limitations of each cost accumulation system

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- f. demonstrate an understanding of the concept of equivalent units in process costing and calculate the value of equivalent units
- g. define the elements of activity-based costing such as cost pool, cost driver, resource driver, activity driver, and value-added activity
- h. calculate product cost using an activity-based system and compare and analyze the results with costs calculated using a traditional system
- i. explain how activity-based costing can be utilized in service firms
- j. demonstrate an understanding of the concept of life-cycle costing and the strategic value of including upstream costs, manufacturing costs, and downstream costs

### Part 1 – Section D.3. Overhead costs

The candidate should be able to:

- a. distinguish between fixed and variable overhead expenses
- b. determine the appropriate time frame for classifying both variable and fixed overhead expenses
- c. demonstrate an understanding of the different methods of determining overhead rates, e.g., plant-wide rates, departmental rates, and individual cost driver rates
- d. describe the benefits and limitations of each of the methods used to determine overhead rates
- e. identify the components of variable overhead expense
- f. determine the appropriate allocation base for variable overhead expenses
- g. calculate the per unit variable overhead expense
- h. identify the components of fixed overhead expense
- i. identify the appropriate allocation base for fixed overhead expense
- j. calculate the fixed overhead application rate
- k. describe how fixed overhead can be over- or under-applied and how this difference should be accounted for in the cost of goods sold, work-in-process, and finished goods accounts
- l. compare and contrast traditional overhead allocation with activity-based overhead allocation
- m. calculate overhead expense in an activity-based costing setting
- n. identify and describe the benefits derived from activity-based overhead allocation
- o. explain why companies allocate the cost of service departments such as Human Resources or Information Technology to divisions, departments, or activities
- p. calculate service or support department cost allocations using the direct method, the reciprocal method, the step-down method, and the dual allocation method
- q. estimate fixed costs using the high-low method and demonstrate an understanding of how regression can be used to estimate fixed costs

### Part 1 – Section D.4. Supply chain management

The candidate should be able to:

- a. explain supply chain management
- b. define lean resource management techniques

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- c. identify and describe the operational benefits of implementing lean resource management techniques
- d. define materials requirements planning (MRP)
- e. identify and describe the operational benefits of implementing a just-in-time (JIT) system
- f. identify and describe the operational benefits of enterprise resource planning (ERP)
- g. explain the concept of outsourcing and identify the benefits and limitations of choosing this option
- h. demonstrate a general understanding of the Theory of Constraints
- i. identify the five steps involved in Theory of Constraints analysis
- j. define throughput costing (super-variable costing) and calculate inventory costs using throughput costing
- k. define and calculate throughput contribution
- l. describe how capacity level affects product costing, capacity management, pricing decisions, and financial statements
- m. explain how using practical capacity as the denominator for the fixed cost allocation rate enhances capacity management
- n. calculate the financial impact of implementing the above-mentioned methods

### Part 1. D.5. Business process improvement

The candidate should be able to:

- a. define value chain analysis
- b. identify the steps in value chain analysis
- c. explain how value chain analysis is used to better understand a firm's competitive advantage
- d. define, identify, and provide examples of a value-added activity and explain how the value-added concept is related to improving performance
- e. demonstrate an understanding of process analysis and business process reengineering, and calculate the resulting savings
- f. define best practice analysis and discuss how it can be used by an organization to improve performance
- g. demonstrate an understanding of benchmarking process performance
- h. identify the benefits of benchmarking in creating a competitive advantage
- i. apply activity-based management principles to recommend process performance improvements
- j. explain the relationship among continuous improvement techniques, activity-based management, and quality performance
- k. explain the concept of continuous improvement and how it relates to implementing ideal standards and quality improvements
- l. describe and identify the components of the costs of quality, commonly referred to as prevention costs, appraisal costs, internal failure costs, and external failure costs
- m. calculate the financial impact of implementing the above-mentioned processes

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- n. identify and discuss ways to make accounting operations more efficient, including process walk-throughs, process training, identification of waste and overcapacity, identifying the root cause of errors, reducing the accounting close cycle (fast close), and shared services

### **Section E. Internal Controls (15% - Levels A, B, and C)**

#### Part 1 – Section E.1 Governance, risk, and compliance

The candidate should be able to:

- a. demonstrate an understanding of internal control risk and the management of internal control risk
- b. identify and describe internal control objectives
- c. explain how a company's organizational structure, policies, objectives, and goals, as well as its management philosophy and style, influence the scope and effectiveness of the control environment
- d. identify the board of directors' responsibilities with respect to ensuring that the company is operated in the best interest of shareholders
- e. identify the hierarchy of corporate governance; i.e., articles of incorporation, bylaws, policies, and procedures
- f. demonstrate an understanding of corporate governance, including rights and responsibilities of the CEO, the board of directors, the audit committee, managers and other stakeholders; and the procedures for making corporate decisions
- g. describe how internal controls are designed to provide reasonable (but not absolute) assurance regarding achievement of an entity's objectives involving (i) effectiveness and efficiency of operations, (ii) reliability of financial reporting, and (iii) compliance with applicable laws and regulations
- h. explain why personnel policies and procedures are integral to an efficient control environment
- i. define and give examples of segregation of duties
- j. explain why the following four types of functional responsibilities should be performed by different departments or different people within the same function: (i) authority to execute transactions, (ii) recording transactions, (iii) custody of assets involved in the transactions, and (iv) periodic reconciliations of the existing assets to recorded amounts
- k. demonstrate an understanding of the importance of independent checks and verification
- l. identify examples of safeguarding controls
- m. explain how the use of pre-numbered forms, as well as specific policies and procedures detailing who is authorized to receive specific documents, is a means of control
- n. define inherent risk, control risk, and detection risk
- o. define and distinguish between preventive controls and detective controls
- p. describe the major internal control provisions of the Sarbanes-Oxley Act (Sections 201, 203, 204, 302, 404, and 407)

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- q. identify the role of the PCAOB in providing guidance on the auditing of internal controls
- r. differentiate between a top-down (risk-based) approach and a bottom-up approach to auditing internal controls
- s. identify the PCAOB preferred approach to auditing internal controls as outlined in Auditing Standard #5
- t. identify and describe the major internal control provisions of the Foreign Corrupt Practices Act
- u. identify and describe the five major components of COSO's Internal Control - Integrated Framework (2013)
- v. assess the level of internal control risk within an organization and recommend risk mitigation strategies
- w. demonstrate an understanding of external auditor responsibilities, including the types of audit opinions the external auditors issue

### Part 1 – Section E.2 Systems controls and security measures

The candidate should be able to:

- a. describe how the segregation of accounting duties can enhance systems security
- b. identify threats to information systems, including input manipulation, program alteration, direct file alteration, data theft, sabotage, viruses, Trojan horses, theft, and phishing
- c. demonstrate an understanding of how systems development controls are used to enhance the accuracy, validity, safety, security, and adaptability of systems input, processing, output, and storage functions
- d. identify procedures to limit access to physical hardware
- e. identify means by which management can protect programs and databases from unauthorized use
- f. identify input controls, processing controls, and output controls and describe why each of these controls is necessary
- g. identify and describe the types of storage controls and demonstrate an understanding of when and why they are used
- h. identify and describe the inherent risks of using the internet as compared to data transmissions over secured transmission lines
- i. define data encryption and describe why there is a much greater need for data encryption methods when using the internet
- j. identify a firewall and its uses
- k. demonstrate an understanding of how flowcharts of activities are used to assess controls
- l. explain the importance of backing up all program and data files regularly, and storing the backups at a secure remote site
- m. define business continuity planning
- n. define the objective of a disaster recovery plan and identify the components of such a plan including hot, warm, and cold sites

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### **Part 1 - F. Technology and Analytics (15% - Levels A, B, and C)**

#### Part 1 – Section F.1 Information systems

The candidate should be able to:

- a. identify the role of the accounting information system (AIS) in the value chain
- b. demonstrate an understanding of the accounting information system cycles, including revenue to cash, expenditures, production, human resources and payroll, financing, and property, plant, and equipment, as well as the general ledger (GL) and reporting system
- c. identify and explain the challenges of having separate financial and nonfinancial systems
- d. define enterprise resource planning (ERP) and its characteristics
- e. explain how ERP helps overcome the challenges of separate financial and nonfinancial systems, integrating all aspects of an organization's activities
- f. demonstrate an understanding of a database management system and describe its characteristics
- g. define a data warehouse
- h. define enterprise performance management (EPM) (also known as corporate performance management or CPM and business performance management or BPM)
- i. discuss how EPM can facilitate business planning and performance management

#### Part 1 – Section F.2 Data governance

The candidate should be able to:

- a. define data governance; i.e., managing the availability, usability, integrity, and security of data
- b. demonstrate a general understanding of data governance frameworks, such as COSO's Internal Control and Enterprise Risk Management frameworks and ISACA's COBIT (Control Objectives for Information and Related Technologies)
- c. identify the stages of the data life cycle; i.e., data capture, data maintenance, data synthesis, data usage, data analytics, data publication, data archival, and data purging
- d. discuss the importance of having a documented record retention (or records management) policy
- e. identify and explain controls and tools to detect and thwart cyberattacks, such as penetration and vulnerability testing, biometrics, and advanced firewalls

#### Part 1 – Section F.3 Technology-enabled finance transformation

The candidate should be able to:

- a. define the systems development life cycle (SDLC), including systems analysis, conceptual design, physical design, implementation and conversion, and operations and maintenance
- b. explain the role of business process analysis in improving system performance

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- c. define robotic process automation (RPA) and its benefits
- d. evaluate where technologies can improve efficiency and effectiveness of processing accounting data and information (e.g., artificial intelligence (AI))
- e. define cloud computing and describe how it can improve efficiency
- f. define software as a service (SaaS) and explain its advantages and disadvantages
- g. recognize potential applications of blockchain, distributed ledger, and smart contracts

### Part 1 – Section F.4 Data analytics

The candidate should be able to:

#### Business intelligence

- a. define Big Data and describe the opportunities and challenges of leveraging insight from this data
- b. explain how structured, semi-structured, and unstructured data is used by a business enterprise
- c. describe the progression of data, from data to information to knowledge to insight to action
- d. describe the opportunities and challenges of managing data analytics
- e. explain why data and data science capability are strategic assets
- f. define business intelligence (BI); i.e., the collection of applications, tools, and best practices that transform data into actionable information in order to make better decisions and optimize performance

#### Data mining

- g. define data mining
- h. describe the challenges of data mining
- i. explain why data mining is an iterative process and both an art and a science
- j. explain how query tools (e.g., Structured Query Language (SQL)) are used to retrieve information
- k. describe how an analyst would mine large data sets to reveal patterns and provide insights

#### Analytic tools

- l. explain the challenge of fitting an analytic model to the data
- m. define the different types of data analytics, including descriptive, diagnostic, predictive, and prescriptive
- n. define the following analytic models: clustering, classification, and regression; determine when each would be the appropriate tool to use
- o. identify the elements of both simple and multiple regression equations
- p. calculate the result of regression equations as applied to a specific situation
- q. demonstrate an understanding of the coefficient of determination (or R squared)
- r. demonstrate an understanding of time series analyses, including trend, cyclical, seasonal, and irregular patterns
- s. identify and explain the benefits and limitations of regression analysis and time series analysis
- t. explain how to use predictive analytic techniques to draw insights and make recommendations



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- u. describe exploratory data analysis and how it is used to reveal patterns and discover insights
- v. define sensitivity analysis and identify when it would be the appropriate tool to use
- w. demonstrate an understanding of the uses of simulation models, including the Monte Carlo technique
- x. identify the benefits and limitations of sensitivity analysis and simulation models
- y. demonstrate an understanding of what-if (or goal-seeking) analysis
- z. identify and explain the limitations of data analytics

### **Visualization**

- aa. utilize table and graph design best practices to avoid distortion in the communication of complex information
- bb. evaluate data visualization options and select the best presentation approach
- cc. understand the benefits and limitations of visualization techniques
- dd. determine the most effective channel to communicate results
- ee. communicate results, conclusions, and recommendations in an impactful manner using effective visualization techniques

**Institute of Certified Management Accountants**  
**Certified Management Accountant**  
**Learning Outcome Statements**  
**(Content Specification Outline effective January 2020)**

**Part 2 – Strategic Financial Management**

**A. Financial Statement Analysis (20% - Levels A, B, and C)**

**Part 2 – Section A.1. Basic Financial Statement Analysis**

The candidate should be able to:

- a. for the balance sheet and income statement, prepare and analyze common-size financial statements; i.e., calculate percentage of assets and sales, respectively; also called vertical analysis
- b. for the balance sheet and income statement, prepare a comparative financial statement horizontal analysis; i.e., calculate trend year over year for every item on the financial statement compared to a base year
- c. calculate the growth rate of individual line items on the balance sheet and income statement

**Part 2 – Section A.2. Financial Ratios**

The candidate should be able to:

**Liquidity**

- a. calculate and interpret the current ratio, the quick (acid-test) ratio, the cash ratio, the cash flow ratio, and the net working capital ratio
- b. explain how changes in one or more of the elements of current assets, current liabilities, and/or unit sales can change the liquidity ratios and calculate that impact
- c. demonstrate an understanding of the liquidity of current liabilities

**Leverage**

- d. define solvency
- e. define operating leverage and financial leverage
- f. calculate degree of operating leverage and degree of financial leverage
- g. demonstrate an understanding of the effect on the capital structure and solvency of a company with a change in the composition of debt vs. equity by calculating leverage ratios
- h. calculate and interpret the financial leverage ratio, and determine the effect of a given change in capital structure on this ratio
- i. calculate and interpret the following ratios: debt-to-equity, long-term debt-to-equity, and debt-to-total assets
- j. define, calculate, and interpret the following ratios: fixed charge coverage (earnings to fixed charges), interest coverage (times interest earned), and cash flow to fixed charges
- k. discuss how capital structure decisions affect the risk profile of a firm

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### Activity

- l. calculate and interpret accounts receivable turnover, inventory turnover, and accounts payable turnover
- m. calculate and interpret days sales outstanding in receivables, days sales in inventory, and days purchases in accounts payable
- n. define and calculate the operating cycle and the cash cycle of a firm
- o. calculate and interpret total assets turnover and fixed asset turnover

### Profitability

- p. calculate and interpret gross profit margin percentage, operating profit margin percentage, net profit margin percentage, and earnings before interest, taxes, depreciation, and amortization (EBITDA) margin percentage
- q. calculate and interpret return on assets (ROA) and return on equity (ROE)

### Market

- r. calculate and interpret the market/book ratio, and the price/earnings ratio
- s. calculate and interpret book value per share
- t. identify and explain the limitations of book value per share
- u. calculate and interpret basic and diluted earnings per share
- v. calculate and interpret earnings yield, dividend yield, dividend payout ratio, and shareholder return

### General

- w. identify the limitations of ratio analysis
- x. demonstrate a familiarity with the sources of financial information about public companies and industry ratio averages
- y. evaluate the financial strength and performance of an entity based on multiple ratios

## Part 2 – Section A.3. Profitability analysis

The candidate should be able to:

- a. demonstrate an understanding of the factors that contribute to inconsistent definitions of “equity,” “assets,” and “return” when using ROA and ROE
- b. determine the effect on return on total assets of a change in one or more elements of the financial statements
- c. identify factors to be considered in measuring income, including estimates, accounting methods, disclosure incentives, and the different needs of users
- d. explain the importance of the source, stability, and trend of sales and revenue
- e. demonstrate an understanding of the relationship between revenue and receivables and revenue and inventory
- f. determine and analyze the effect on revenue of changes in revenue recognition and measurement methods
- g. analyze cost of sales by calculating and interpreting the gross profit margin
- h. distinguish between gross profit margin, operating profit margin, and net profit margin and analyze the effects of changes in the components of each
- i. define and perform a variation analysis (percentage change over time)
- j. calculate and interpret sustainable equity growth

## Institute of Certified Management Accountants

### Part 2 – Section A.4. Special issues

The candidate should be able to:

- a. demonstrate an understanding of the impact of foreign exchange fluctuations
  1. identify and explain issues in the accounting for foreign operations (e.g., historical vs. current rate and the treatment of translation gains and losses)
  2. define functional currency
  3. calculate the financial ratio impact of a change in exchange rates
  4. discuss the possible impact on management and investor behavior of volatility in reported earnings
- b. demonstrate an understanding of the impact of inflation on financial ratios and the reliability of financial ratios
- c. describe how to adjust financial statements for changes in accounting treatments (principles, estimates, and errors) and how these adjustments impact financial ratios
- d. distinguish between book value and market value; and distinguish between accounting profit and economic profit
- e. identify the determinants and indicators of earnings quality, and explain why they are important

### **B. Corporate Finance (20% - Levels A, B, and C)**

#### Part 2 – Section B.1. Risk and return

The candidate should be able to:

- a. calculate rates of return
- b. identify and demonstrate an understanding of systematic (market) risk and unsystematic (company) risk
- c. identify and demonstrate an understanding of credit risk, foreign exchange risk, interest rate risk, market risk, industry risk, and political risk
- d. demonstrate an understanding of the relationship between risk and return
- e. distinguish between individual security risk and portfolio risk
- f. demonstrate an understanding of diversification
- g. define beta and explain how a change in beta impacts a security's price
- h. demonstrate an understanding of the Capital Asset Pricing Model (CAPM) and calculate the expected risk-adjusted returns using CAPM

#### Part 2 – Section B.2. Long-term financial management

The candidate should be able to:

- a. describe the term structure of interest rates, and explain why it changes over time
- b. define and identify the characteristics of common stock and preferred stock
- c. identify and describe the basic features of a bond such as maturity, par value, coupon rate, provisions for redeeming, conversion provisions, covenants, options granted to the issuer or investor, indentures, and restrictions

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- d. identify and evaluate debt issuance or refinancing strategies
- e. value bonds, common stock, and preferred stock using discounted cash flow methods
- f. demonstrate an understanding of duration as a measure of bond interest rate sensitivity
- g. explain how income taxes impact financing decisions
- h. define and demonstrate an understanding of derivatives and their uses
- i. identify and describe the basic features of futures and forwards
- j. distinguish a long position from a short position
- k. define options and distinguish between a call and a put by identifying the characteristics of each
- l. define exercise price, strike price, option premium, and intrinsic value
- m. demonstrate an understanding of the interrelationship of the variables that comprise the value of an option; e.g., relationship between exercise price and strike price, and value of a call
- n. define interest rate and foreign currency swaps
- o. define and identify characteristics of other sources of long-term financing, such as leases, convertible securities, and warrants
- p. demonstrate an understanding of the relationship among inflation, interest rates, and the prices of financial instruments
- q. define the cost of capital and demonstrate an understanding of its applications in capital structure decisions
- r. determine the weighted average cost of capital and the cost of its individual components
- s. calculate the marginal cost of capital
- t. explain the importance of using marginal cost as opposed to historical cost
- u. demonstrate an understanding of the use of the cost of capital in capital investment decisions
- v. demonstrate an understanding of how income taxes impact capital structure and capital investment decisions
- w. use the constant growth dividend discount model to value stock and demonstrate an understanding of the two-stage dividend discount model
- x. demonstrate an understanding of relative or comparable valuation methods, such as price/earnings (P/E) ratios, market/book ratios, and price/sales ratios

### Part 2 – Section B.3. Raising capital

The candidate should be able to:

- a. identify the characteristics of the different types of financial markets and exchanges
- b. demonstrate an understanding of the concept of market efficiency, including the strong form, semi-strong form, and weak form of market efficiency
- c. describe the role of the credit rating agencies
- d. demonstrate an understanding of the roles of investment banks, including underwriting, advice, and trading
- e. define initial public offerings (IPOs)

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- f. define subsequent/secondary offerings
- g. describe lease financing, explain its benefits and disadvantages, and calculate the net advantage to leasing using discounted cash flow concepts
- h. define the different types of dividends, including cash dividends, stock dividends, and stock splits
- i. identify and discuss the factors that influence the dividend policy of a firm
- j. demonstrate an understanding of the dividend payment process for both common and preferred stock
- k. define share repurchase and explain why a firm would repurchase its stock
- l. define insider trading and explain why it is illegal

### Part 2 – Section B.4. Working capital management

The candidate should be able to:

#### Working capital

- a. define working capital and identify its components
- b. calculate net working capital
- c. explain the benefit of short-term financial forecasts in the management of working capital

#### Cash

- d. identify and describe factors influencing the levels of cash
- e. identify and explain the three motives for holding cash
- f. prepare forecasts of future cash flows
- g. identify methods of speeding up cash collections
- h. calculate the net benefit of a lockbox system
- i. define concentration banking
- j. demonstrate an understanding of compensating balances
- k. identify methods of slowing down disbursements
- l. demonstrate an understanding of disbursement float and overdraft systems

#### Marketable securities

- m. identify and describe reasons for holding marketable securities
- n. define the different types of marketable securities, including money market instruments, T-bills, treasury notes, treasury bonds, repurchase agreements, federal agency securities, bankers' acceptances, commercial paper, negotiable CDs, Eurodollar CDs, and other marketable securities
- o. evaluate the trade-offs among the variables in marketable security selections, including safety, marketability/liquidity, yield, maturity, and taxability
- p. demonstrate an understanding of the risk and return trade-off

#### Accounts receivable

- q. identify the factors influencing the level of receivables
- r. demonstrate an understanding of the impact of changes in credit terms or collection policies on accounts receivable, working capital, and sales volume
- s. define default risk
- t. identify and explain the factors involved in determining an optimal credit policy

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### Inventory

- u. define lead time and safety stock; identify reasons for carrying inventory and the factors influencing its level
- v. identify and calculate the costs related to inventory, including carrying costs, ordering costs, and shortage (stockout) costs
- w. explain how a just-in-time (JIT) inventory management system helps manage inventory
- x. identify the interaction between high inventory turnover and high gross margin (calculation not required)
- y. demonstrate an understanding of economic order quantity (EOQ) and how a change in one variable would affect the EOQ (calculation not required)

### Short-term credit and working capital cost management

- z. demonstrate an understanding of how risk affects a firm's approach to its current asset financing policy (aggressive, conservative, etc.)
- aa. identify and describe the different types of short-term credit, including trade credit, short-term bank loans, commercial paper, lines of credit, and bankers' acceptances
- bb. estimate the annual cost and effective annual interest rate of not taking a cash discount
- cc. calculate the effective annual interest rate of a bank loan with a compensating balance requirement and/or a commitment fee
- dd. demonstrate an understanding of factoring accounts receivable and calculate the cost of factoring
- ee. explain the maturity matching or hedging approach to financing
- ff. demonstrate an understanding of the factors involved in managing the costs of working capital

### General

- gg. recommend a strategy for managing current assets that would fulfill a given objective

## Part 2 – Section B.5. Corporate restructuring

The candidate should be able to:

- a. demonstrate an understanding of the following:
  - i. mergers and acquisitions, including horizontal, vertical, and conglomerate
  - ii. leveraged buyouts
- b. identify defenses against takeovers (e.g., golden parachute, leveraged recapitalization, poison pill (shareholders' rights plan), staggered board of directors, fair price, voting rights plan, white knight)
- c. identify and describe divestiture concepts such as spin-offs, split-ups, equity carve-outs, and tracking stock
- d. evaluate key factors in a company's financial situation and determine if a restructuring would be beneficial to the shareholders
- e. identify possible synergies in targeted mergers and acquisitions
- f. value a business, a business segment, and a business combination using discounted cash flow method



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- g. evaluate a proposed business combination and make a recommendation based on both quantitative and qualitative considerations

### Part 2 – Section B.6. International finance

The candidate should be able to:

- a. demonstrate an understanding of foreign currencies and how foreign currency affects the prices of goods and services
- b. identify the variables that affect exchange rates
- c. calculate whether a currency has depreciated or appreciated against another currency over time, and evaluate the impact of the change
- d. demonstrate how currency futures, currency swaps, and currency options can be used to manage exchange rate risk
- e. calculate the net profit/loss of cross-border transactions, and evaluate the impact of this net profit/loss
- f. recommend methods of managing exchange rate risk and calculate the net profit/loss of your strategy
- g. identify and explain the benefits of international diversification
- h. identify and explain common trade financing methods, including cross-border factoring, letters of credit, banker's acceptances, forfaiting, and countertrade

### **C. Decision Analysis (25% - Levels A, B, and C)**

#### Part 2 – Section C.1. Cost/volume/profit analysis

The candidate should be able to:

- a. demonstrate an understanding of how cost/volume/profit (CVP) analysis (break-even analysis) is used to examine the behavior of total revenues, total costs, and operating income as changes occur in output levels, selling prices, variable costs per unit, or fixed costs
- b. calculate operating income at different operating levels
- c. differentiate between costs that are fixed and costs that are variable with respect to levels of output
- d. explain why the classification of fixed vs. variable costs is affected by the time frame being considered
- e. calculate contribution margin per unit and total contribution margin
- f. calculate the breakeven point in units and dollar sales to achieve targeted operating income or targeted net income
- g. demonstrate an understanding of how changes in unit sales mix affect operating income in multiple-product situations
- h. calculate multiple-product breakeven points given percentage share of sales and explain why there is no unique breakeven point in multiple-product situations
- i. define, calculate, and interpret the margin of safety and the margin of safety ratio
- j. explain how sensitivity analysis can be used in CVP analysis when there is uncertainty about sales
- k. analyze and recommend a course of action using CVP analysis

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1. demonstrate an understanding of the impact of income taxes on CVP analysis

### Part 2 – Section C.2. Marginal analysis

The candidate should be able to:

- a. identify and define relevant costs (incremental, marginal, or differential costs), sunk costs, avoidable costs, explicit and implicit costs, split-off point, joint production costs, separable processing costs, and relevant revenues
- b. explain why sunk costs are not relevant in the decision-making process
- c. demonstrate an understanding of and calculate opportunity costs
- d. calculate relevant costs given a numerical scenario
- e. define and calculate marginal cost and marginal revenue
- f. identify and calculate total cost, average fixed cost, average variable cost, and average total cost
- g. demonstrate proficiency in the use of marginal analysis for decisions such as (a) introducing a new product or changing output levels of existing products, (b) accepting or rejecting special orders, (c) making or buying a product or service, (d) selling a product or performing additional processes and selling a more value-added product, and (e) adding or dropping a segment
- h. calculate the effect on operating income of a decision to accept or reject a special order when there is idle capacity and the order has no long-run implications
- i. identify and describe qualitative factors in make-or-buy decisions, such as product quality and dependability of suppliers
- j. calculate the effect on operating income of a make-or-buy decision
- k. calculate the effects on operating income of a decision to sell or process further or to drop or add a segment
- l. identify the effects of changes in capacity on production decisions
- m. demonstrate an understanding of the impact of income taxes on marginal analysis
- n. recommend a course of action using marginal analysis

### Part 2– Section C.3. Pricing

The candidate should be able to:

- a. identify different pricing methodologies, including market comparables, cost-based, and value-based approaches
- b. differentiate between a cost-based approach (cost-plus pricing, mark-up pricing) and a market-based approach to setting prices
- c. calculate selling price using a cost-based approach
- d. demonstrate an understanding of how the pricing of a product or service is affected by the demand for and supply of the product or service, as well as the market structure within which it operates
- e. demonstrate an understanding of the impact of cartels on pricing
- f. demonstrate an understanding of the short-run equilibrium price for the firm in (1) pure competition; (2) monopolistic competition; (3) oligopoly; and (4) monopoly using the concepts of marginal revenue and marginal cost

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- g. identify techniques used to set prices based on understanding customers' perceptions of value and competitors' technologies, products, and costs
- h. define and demonstrate an understanding of target pricing and target costing and identify the main steps in developing target prices and target costs
- i. define value engineering
- j. calculate the target operating income per unit and target cost per unit
- k. define and distinguish between a value-added cost and a nonvalue-added cost
- l. define the pricing technique of cost plus target rate of return
- m. calculate the price elasticity of demand using the midpoint formula
- n. define and explain elastic and inelastic demand
- o. estimate total revenue given changes in prices and demand as well as elasticity
- p. discuss how pricing decisions can differ in the short run and in the long run
- q. define product life cycle; identify and explain the four stages of the product life cycle; and explain why pricing decisions might differ over the life of a product
- r. evaluate and recommend pricing strategies under specific market conditions

### **Section D. Risk Management (10% - Levels A, B, and C)**

#### Part 2– Section D.1. Enterprise risk

The candidate should be able to:

- a. identify and explain the different types of risk, including business risk, hazard risks, financial risks, operational risks, and strategic risks
- b. demonstrate an understanding of operational risk
- c. define legal risk, compliance risk, and political risk
- d. demonstrate an understanding of how volatility and time impact risk
- e. define the concept of capital adequacy; i.e., solvency, liquidity, reserves, sufficient capital, etc.
- f. explain the use of probabilities in determining exposure to risk and calculate expected loss given a set of probabilities
- g. define the concepts of unexpected loss and maximum possible loss (extreme or catastrophic loss)
- h. identify strategies for risk response (or treatment), including actions to avoid, retain, reduce (mitigate), transfer (share), and exploit (accept) risks
- i. define risk transfer (e.g., purchasing insurance, issuing debt)
- j. demonstrate an understanding of the concept of residual risk and distinguish it from inherent risk
- k. identify and explain the benefits of risk management
- l. identify and describe the key steps in the risk management process
- m. explain how attitude toward risk might affect the management of risk
- n. demonstrate a general understanding of the use of liability/hazard insurance to mitigate risk (detailed knowledge not required)
- o. identify methods of managing operational risk
- p. identify and explain financial risk management methods
- q. identify and explain qualitative risk assessment tools including risk identification, risk ranking, and risk maps

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- r. identify and explain quantitative risk assessment tools including cash flow at risk, earnings at risk, earnings distributions, and earnings per share (EPS) distributions
- s. identify and explain Value at Risk (VaR) (calculations not required)
- t. define enterprise risk management (ERM) and identify and describe key objectives, components, and benefits of an ERM program
- u. identify event identification techniques and provide examples of event identification within the context of an ERM approach
- v. explain how ERM practices are integrated with corporate governance, risk analytics, portfolio management, performance management, and internal control practices
- w. evaluate scenarios and recommend risk mitigation strategies
- x. prepare a cost-benefit analysis and demonstrate an understanding of its uses in risk assessment and decision making
- y. demonstrate an understanding of the COSO Enterprise Risk Management - Integrated Framework (2017)

### **Section E. Investment Decisions (10% - Levels A, B, and C)**

#### Part 2 – Section E.1. Capital budgeting process

The candidate should be able to:

- a. define capital budgeting and identify the steps or stages undertaken in developing and implementing a capital budget for a project
- b. identify and calculate the relevant cash flows of a capital investment project on both a pretax and after-tax basis
- c. demonstrate an understanding of how income taxes affect cash flows
- d. distinguish between cash flows and accounting profits and discuss the relevance to capital budgeting of incremental cash flow, sunk cost, and opportunity cost
- e. explain the importance of changes in net working capital in capital budgeting
- f. discuss how the effects of inflation are reflected in capital budgeting analysis
- g. define hurdle rate
- h. identify alternative approaches to dealing with risk in capital budgeting
- i. distinguish among sensitivity analysis, scenario analysis, and Monte Carlo simulation as risk analysis techniques
- j. explain why a rate specifically adjusted for risk should be used when project cash flows are more or less risky than is normal for a firm
- k. explain how the value of a capital investment is increased if consideration is given to the possibility of adding on, speeding up, slowing up, or discontinuing early
- l. demonstrate an understanding of real options, including the options to abandon, delay, expand, and scale back (calculations not required)
- m. identify and discuss qualitative considerations involved in the capital budgeting decision
- n. describe the role of the post-audit in the capital budgeting process

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### **Part 2 – Section E.2. Capital investment analysis methods**

The candidate should be able to:

- a. demonstrate an understanding of the two main discounted cash flow (DCF) methods, net present value (NPV) and internal rate of return (IRR)
- b. calculate NPV and IRR
- c. demonstrate an understanding of the decision criteria used in NPV and IRR analyses to determine acceptable projects
- d. compare NPV and IRR focusing on the relative advantages and disadvantages of each method, particularly with respect to independent vs. mutually exclusive projects and the “multiple IRR problem”
- e. explain why NPV and IRR methods can produce conflicting rankings for capital projects if not applied properly
- f. identify assumptions of NPV and IRR
- g. evaluate and recommend project investments on the basis of DCF analysis
- h. demonstrate an understanding of the payback and discounted payback methods
- i. identify the advantages and disadvantages of the payback and discounted payback methods
- j. calculate payback periods and discounted payback periods

### **Section F. Professional Ethics (15% - Levels A, B, and C)**

*Ethics may be tested in conjunction with any topic area.*

#### **Part 2 – Section F.1 Business ethics**

The candidate should be able to:

- a. define business ethics
- b. analyze the concepts of morality and virtue
- c. define moral philosophy
- d. demonstrate an understanding of the following moral philosophies and concepts used in making business decisions: teleology, utilitarianism, deontology, relativism, virtue ethics, and justice
- e. define the concepts of fairness, integrity, due diligence, and fiduciary responsibility, and how they impact ethical decision making

#### **Part 2 – Section F.2 Ethical considerations for management accounting and financial management professionals**

Using the standards outlined in IMA’s Statement of Ethical Professional Practice, the candidate should be able to:

- a. identify and describe the four overarching ethical principles and the four standards
- b. evaluate a given business situation for its ethical implications
- c. identify and describe relevant standards that may have been violated in a given business situation and explain why the specific standards are applicable

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- d. recommend a course of action for management accountants to take when confronted with an ethical dilemma in the business environment
- e. evaluate and propose resolutions for ethical issues such as fraudulent reporting, or improper manipulation of forecasts, analyses, results, and budgets

Using the Fraud Triangle model, the candidate should be able to:

- f. identify the three components of the triangle
- g. use the model to explain how a management accounting and financial management professional can identify and manage the risk of fraud

### Part 2 – Section F.3. Ethical considerations for the organization

The candidate should be able to:

- a. discuss the issues organizations face in applying their values and ethical standards internationally
- b. demonstrate an understanding of the relationship between ethics and internal controls
- c. define corporate culture and demonstrate an understanding of the role corporate culture plays in ethical decision making
- d. demonstrate an understanding of the importance of a code of conduct and how it contributes to an organization's ethical culture
- e. demonstrate an understanding of the ways ethical values benefit an organization
- f. analyze the impact of groupthink on ethical behavior
- g. discuss how diversity of thought can lead to good ethical decisions
- h. apply relevant provisions of IMA's Statement on Management Accounting, "Values and Ethics: From Inception to Practice," to a business situation
- i. demonstrate an understanding of the role of "leadership by example" or "tone at the top" in determining an organization's ethical environment
- j. define ethical leadership and identify and explain the traits of ethical leaders
- k. explain the importance of human capital to an organization in creating a climate where "doing the right thing" is expected (e.g., hiring the right people, providing them with training, and practicing consistent values-based leadership)
- l. explain the importance of an organization's core values and how they promote ethical behavior and ethical decision making
- m. discuss the importance of employee training to maintaining an ethical organizational culture
- n. explain the importance of a whistleblowing framework to maintain an ethical organizational culture
- o. demonstrate an understanding of the differences between ethical and legal behavior
- p. identify the purpose of anti-bribery laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act
- q. define facilitating payments and why these payments create both ethical and legal issues
- r. discuss corporate responsibility for ethical conduct

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- s. define and demonstrate an understanding of the major issues of sustainability and social responsibility
- t. identify and define the four levels of social responsibility: economic, legal, ethical, and philanthropic



**Bhavan's Vivekananda College**  
**of Science, Humanities and Commerce**  
**Sainikpuri, Secunderabad - 500094**  
**(Accredited with 'A' Grade by NAAC)**  
**Autonomous College–Affiliated to Osmania University**

**Advanced Excel**

**Organised by**  
**(Department of Commerce)**



Date: 2/12/2019

To,

The Principal,

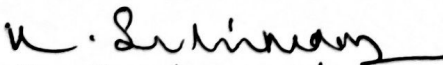
BVC, Sainikpuri.

Respected Sir,

Sub: Request for permitting to conduct Value added course on Advanced Excel for M. Com II year students

Department of Commerce is intending to conduct a Value added Course on Advanced Excel for M. Com II year students in the month of December 2019-20. The Course is intended to improve the knowledge and enhance the Employability skills of M. Com students in the areas of Advanced Excel and Analytical skills. The Course will be organized in association with Impact Education. We Kindly request you to grant the permission for conducting the same.

Thanking You,

  
Yours Sincerely 2/12/19

Dr. K Sreelatha Reddy

Head Dept. of Commerce

Permitted

HA

2/12



# **Bhavan's Vivekananda College**

## **Of Science, Humanities and Commerce**

### **Advanced Excel Course Syllabus**

**COURSE OBJECTIVE:** *To inculcate knowledge in Data analysis with excel.*

**UNIT- WISE OBJECTIVES:**

**COb1:** To acquire basic knowledge in Excel and its applications.

**COb2:** To describe the formatting and data base tools

**COb3:** To classify conditional format, formulae function, group and subtotal

**COb4:** To describe Pivot Tables

**COb5:** To demonstrate Power Query, Power Map, Power BI and ASAP Utilities

**UNIT –I: INTRODUCING TO EXCEL:**

Introduction-Tour of Excel window -Explore the ribbon and toolbars-Create, save and upload Files- working with single and multiple worksheets- Insert, Rename, Delete, Group, customization of Office button, Auto Fill, Custom list. Managing cells (Naming, Moving, Copying, Adding, Deleting, Grouping)

finding, replacing, Comments)

Views- Workbook view, show and hide, zoom features, freeze panes, split window, viewing Multiple windows, Worksheet background, Watermarks

Printing- Page setup, scale to fit, sheet options, Header, Footers, Themes, Templates.

Lab work: Create student workbook with relevant worksheets and implement the above tools.

**UNIT-II : ORGANIZING DATA WITH EXCEL:**

Editing and formatting , Data Rotate- wrap text-Merge and Center-format painter, clear formats.

Conditional formatting

**UNIT –III- FORMULA AND FUNCTIONS:** Mathematical Function, Financial Function, Logical Function, Statistical Function

**UNIT IV: WORKING WITH PIVOT TABLES AND CHARTS:**

Introduction to Pivot tables- Create a pivot table, modify a pivot table layout, summarize pivot table values- Macro with Pivot Table and Power Pivot.

**Unit V :** Power Query, Power Map, Power BI and ASAP Utilities

**COURSE OUTCOMES:**

At the end of the course, the students will be able to

**CO1:** Identify the data analysis methods and tools in excel application.

**CO2:** Interpret formatting, sorting, filtering.

**CO3:** Analyze and implement calculations using formulae and function methods

**CO4:** Apply knowledge for preparing Pivot table

**CO5:** Understanding Power Query, Power Map, Power BI and ASAP Utilities.

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**Autonomous College-Affiliated to Osmania University**

**Spoken Sanskrit**

**Organised by**  
**(Department of Languages)**



# Bhavan's Vivekananda College of Science, Humanities and Commerce

Sainikpuri, Secunderabad-500 094  
(Accredited with 'A' Grade by NAAC)  
Autonomous College - Affiliated to Osmania university

## Department of Languages

Offers

Certificate Courses in

► Spoken Sanskrit ► French ► Calligraphy

Details of the Courses:

Duration - 30 Hours

From - 5<sup>th</sup> December 2019

On - Thursdays & Fridays

From - 3:30p.m.-4:30p.m, 4.30-5.30 p.m

For - Students, Faculty,  
homemakers & professionals

► For further information contact:

► *Calligraphy* - Dr. C. Kameswari-9391136608

► French - Ms. Manali Bose - 9392416562

► Sanskrit – Dr. Y. Suresh-9866786917

**Note: Certificates will be given to the participants on the successful completion of the course.**

16	वस्तूनां नामानि, फलानां नामानि अभ्यासः ( Things and Flowers Names)
17	वर्णानां नामानि, जन्तूनां नामानि अभ्यासः (Colours and Animals Names)
18	शरीरस्य अवयवाः प्रयोगः ( Parts Of Human body )
19	बान्धवानि नामानि अभ्यासः (Names Of Relatives)
20	वृत्तयः अभ्यासः (occupations)
21	वासरः, संख्याः च समयः अभ्यासः (Days, Numbers and Time)
22	प्रत्ययानां परिचयः / अभ्यासः ( Suffixes)
23	शिक्षकः च छात्राः संवादः (conversation between student and teacher)
24	गृह संभाषणम् अभ्यासः (Conversation At Home)
25	वातावरणम् संवादः अभ्यासः (Conversation about Weather)
26	वाणिज्य संवादः अभ्यासः (Conversation At Shop)
27	संभाषण अभ्यासः - रामायण नीति कथाः (Conversation About Ramayana Moral Stories)
28	संभाषण अभ्यासः - महाभारत नीति कथाः (Conversation About Mahabharata Moral Stories)
29	संभाषण अभ्यासः - पञ्चतन्त्र कथाः (Conversation about Panchatantra Stories )
30	<b>मौखिक परीक्षा (Oral Test )</b>

*Dr. C. Kameswari*  
**Head of the Department**  
**Department of Languages**  
**Bharatiya Vidya Bhavan's Vivekananda College**  
**Sainikpuri, Secunderabad - 500 094.**





Bharatiya Vidya  
**Bhavan**

**Bhavan's Vivekananda College  
of Science, Humanities & Commerce  
Sainikpuri, Secunderabad – 500094  
(Accredited with 'A' grade by NAAC)**

**Autonomous College - Affiliated to Osmania University**

**SPOKEN SANSKRIT COURSE (FOR BEGINNERS)**

**Value Added Course: Spoken Sanskrit**

**Names of the Faculty members :** Ms.K.Meena Rani, Dr. Y.Suresh, and Ms.P.Sharada

Department of Languages has offered a short-term certificate course in Sanskrit from December 2019 to March 2020. The faculty members of Sanskrit language who offered the course are Ms.K.Meena Rani, Dr. Y.Suresh, and Ms.P.Sharada.

It was conducted after the college hours during the semester for the academic year 2019-20. Twenty-two students have enrolled for the mentioned course. The 30 hours of systematic classes served as an effective platform to the students.

**Course objectives:**

1. To create awareness among the students and equip them with the richness of Indian traditional Language
2. To learn the basic sentence structure of the language to converse with ease and understand the text better

**Syllabus:**

- Grammar: Shbdaroopani (three genders –Masculine,Feminine and Neuter )  
Conjugations -Dhaturoopani –Parasmaipadi & Atmanepadi) Noun & Pronoun  
Shabdaroopani, Using Tenses and Vakya nirmanam -framing sentences in Sanskrit,  
and Introduction to Sandhis (Ach, Hal and Visarga Sandhis), introduction to Samasas  
(Compounds)
- Communication: Introduce self and others • Greet, congratulate, learning numbers in  
Sanskrit, Relatives and Relationship, Professions, Parts of the body, Vegetable names,  
Birds and animal names Flowers names and colours etc., Reading ,learning and  
describing short stories from Panchatantra and Epics.

**Course Outcomes:**

1. The students developed ability to understand the basic concepts of Sanskrit.
2. Students were trained to communicate orally and in written. They were also initiated to appreciate the richness of the language.

*Dr. C. Kameswari*

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Head.Dept.of Languages  
Bhavan's Vivekananda College  
Sainikpuri, Secunderabad**

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**French**

**Organised by**  
**(Department of Languages)**





# Bhavan's Vivekananda College of Science, Humanities and Commerce

Sainikpuri, Secunderabad-500 094  
(Accredited with 'A' Grade by NAAC)  
Autonomous College - Affiliated to Osmania university

## Department of Languages

Offers

Certificate Courses in

► Spoken Sanskrit ► French ► Calligraphy

Details of the Courses:

Duration - 30 Hours

From - 5<sup>th</sup> December 2019

On - Thursdays & Fridays

From - 3:30p.m.-4:30p.m, 4.30-5.30 p.m

For - Students, Faculty,  
homemakers & professionals

► For further information contact:

► *Calligraphy* - Dr. C. Kameswari-9391136608

► French - Ms. Manali Bose - 9392416562

► Sanskrit – Dr. Y. Suresh-9866786917

**Note: Certificates will be given to the participants on the successful completion of the course.**



# NOTICE

Department of Languages is starting certificate courses in the college from this semester in Spoken Sanskrit, French and Calligraphy for students, faculty, homemakers and professionals. The duration of each course will be 30 hours and will be conducted on Thursdays and Fridays from the 5<sup>th</sup> of December 2019.

The details of the above mentioned courses are as follows:

S.No.	Course	Fee	Time	Days	Resource Person
1	Calligraphy	Rs.1000/-	3:30pm - 4:30 pm 4:30pm - 5:30pm	Thursdays Fridays	Dr. C. Kameswari Ms. Swathina Sash
2	Spoken Sanskrit	Rs.1000/-	3:30pm - 4:30 pm 4:30pm - 5:30pm	Thursdays Fridays	Dr. Y. Suresh Ms. P. Sarada
3	French	Rs.2000/-	3:30 pm - 4:45pm	Thursdays Fridays	Ms. Manali Bose

or further details, contact lecturers from the Department of Languages, Room no. 9.

  
Principal



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### CERTIFICATE COURSE (FOR BEGINNERS) IN FRENCH

#### Objectives:

- To read and write short, simple texts
- To understand a simple dialogue between two French speakers and also take part
- In short, simple conversation using the skills acquired

#### SALIENT FEATURES

##### ➤ Communication

The course intends to develop oral and written skills towards understanding, expressing and exchanging information/interacting on the topics given below:

- Establish contact with someone.
- Introduce self and others.
- Greet, congratulate.
- Spell.
- Count.
- Ask for information.
- Tell the time.
- Advise, order, suggest.
- Invite, accept creation.
- Locate a place.
- Give directions.
- Ask for Give explanations.
- Describe a person, an object, an event, a place.
- Compare.

##### ➤ Phonetics

The course develops the ability to pronounce words, say sentences, questions and give orders using the right accent and intonation:

- To express all positive or negative statements using the right intonation
- To use liaison and enchainment
- To distinguish between vowel sound

*Dr. C. Kameswari*

**Dr. C. Kameswari**  
Head. Dept. of Languages  
Bhavan's Vivekananda College  
Sainikpuri, Secunderabad



## ➤ Grammar

The course develops the ability to construct sentences and frame questions using:

- Nouns - gender and number
- Articles (definite and indefinite), articles contractés
- Pronouns - personal and others
- Verbs - conjugation of regular and irregular verbs (affirmative and negative) in the following tenses indicative mood) - present, present continuous, recent past.
- Imperative mood
- Adjectives - numeric, qualitative, possessive, demonstrative, interrogative.
- Adverbs - simple adverbs of time, place, quantity
- Prépositions - simple prépositions (place, time) Interrogation -- interrogative words, interrogative phrases, inversion

### Course Outcomes :

1. Apply the grammatical structures and vocabulary to comprehend the questions from a given text and respond in full sentences according to the context. To respond orally to basic questions and to give self-presentations.
2. Translate basic texts (using grammar and vocabulary from A1.1 level) from French to English and Vice Versa

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Dr.C. Kameswari  
Head, Dept. of Languages  
Bhavan's Vivekananda College  
Sainikpuri, Secunderabad

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**Sainikpuri, Secunderabad - 500094**  
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**Autonomous College–Affiliated to Osmania University**

**Calligraphy**

**Organised by**  
**(Department of Languages)**



# Bhavan's Vivekananda College of Science, Humanities and Commerce

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## Department of Languages

Offers

Certificate Courses in

► Spoken Sanskrit ► French ► Calligraphy

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On - Thursdays & Fridays

From - 3:30p.m.-4:30p.m, 4.30-5.30 p.m

For - Students, Faculty,  
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► For further information contact:

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# NOTICE

Department of Languages is starting certificate courses in the college from this semester in **Spoken Sanskrit, French and Calligraphy** for students, faculty, homemakers and professionals. The duration of each course will be 30 hours and will be conducted on Thursdays and Fridays from the 5<sup>th</sup> of December 2019.

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For further details, contact lecturers from the Department of Languages, Room no. 9.

  
Principal



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**Value added course : Calligraphy**

Objectives:

- \* To familiarize students with basic & advance strokes of Calligraphy
- \* To enhance their style of writing to use it for different occasions

Syllabus :

- 1) Basic strokes. Nib No: 2
- 2) Small & Capital alphabets of English language
- 3) Advanced strokes with Nib No: 2
- 4) Small & capital alphabets of English, Hindi and Roman numerals
- 5) Different styles of writing with Nib no's : 0, 1, 3, 4, 5 & 6
- 6) Submit assignment :
  - a) 40 pages notebook with all Strokes / alphabets / Style
  - b) Prepare a chart, a greeting card

Outcomes:

- \* Students were able to Learn the art of writing in calligraphy.
- \* Students were well acquainted with all the basic & advanced strokes while writing different letters in alphabet

*Dr. C. Kameswari*  
Dr.C. Kameswari  
Head, Dept. of Languages  
Bhavan's Vivekananda College  
Sainikpuri, Secunderabad

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## **Graphic Designing**

**Organised by**  
**(Certificate Course Committee)**

## CIRCULAR

The certificate course committee is conducting a certificate course for UG in the following area:

**Course Name** : Graphic Designing  
**Duration** : Duration 30 Hours  
**Fees** : Rs.3000

### **Objective of the course:**

- ~~The~~ primary objective of the course is to teach basics and advanced concepts in graphic designing which help the student to develop self made multimedia applications using **Photoshop** and **Illustrator**.
- Demonstrate methods to digitalize, modify and enhance the appearance of still images.

The students are requested to register themselves before the last date as entries are limited for batch.

### **For Registration and More Details contact**

1. **L.V.Kamala Devi, Assistant Professor, Department of Commerce.**  
**Coordinator certificate course committee.**
2. **Ms.S.Jayalaxmi Lecturer Department of Computer Science.**  
**Course Incharge.**

Registration starting date : 2<sup>nd</sup> December 2019

Registration ending date: 30<sup>th</sup> December 2019

The classes are going to commence from 6<sup>th</sup> January 2020

  
Mrs.L.V.Kamala Devi

Certificate course coordinator

  
Prof.Y.Ashok

Principal

(Dr. Y. ASHOK)  
PRINCIPAL

Bhavan's Vivekananda College of Science



**6TH  
JAN-2020**

**CERTIFICATION COURSE**

# **GRAPHIC DESIGNING**

**MODULES OFFERED**

**ADOBE PHOTOSHOP**

**ADOBE ILLUSTRATOR**

**REGISTER BY  
30TH DEC- 2019**



**BHAVAN'S VIVEKANANDA COLLEGE  
OF SCIENCE, HUMANITIES & COMMERCE**

SAINIKPURI, SECUNDERABAD - 500094

AUTONOMOUS COLLEGE, AFFILIATED TO O.U.

ACCREDITED WITH 'A' GRADE BY NAAC

## Graphic Design Classes

### Course Structure: 5 week program

#### Week 1: Photoshop

- Introduction on Graphic design 1. Colour theory, 2. Typography, 3. Images, 4. Composition
- About Photoshop , canvas , layer , saving methods.
- Selection tool
- Move tool, Marquee tool, Lasso Tool, Quick Selection Tool, Pen Tool zoom and hand tool,
- Brush tool, Fill and gradient tool, Shape tool, History brush, Art history brush, Eraser
- Healing tools, Dodge tools, Clone tool
- Type tool
- Blending options, Blending modes
- Adjustment tools

#### Week 2: Photoshop

- Fliters Menu
- Bokeh effect
- Double Exposure
- Image Manipulation
- Typography dispersion and Image dispersion
- Retouching
- 3d text and 3d logo

#### Week 3: Illustrator

- Adobe Illustrator, canvas layer and saving methods
- Illustrator tools, pathfinders
- Abstract background design
- logo design
- Typography design
- Business Card design

#### Week 4: Illustrator

- Poster design
- Brochure design
- Banner design
- Image Illustration

#### Week 5

#### Assignments

Course outcome:

- Working knowledge on layers and how to use them.
- Working knowledge of various editing, filtering, and touchup tools with properties.
- Analyze, synthesize, and utilize design processes and strategy from concept to create layered based image structure.
- Utilize relevant tools for editing and correction of visual images.
- Confidently create professional designs for events and other manifestos.
- Evaluate designs for real-time projects and communicate as a designer.

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**Softskills (CRT)**

**Organised by**  
**(Career Guidance and Placement Cell)**



# CRT CLASSES CIRCULAR AND SCHEDULE 2019-2020

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**Bvcplacementcell**  
July 15, 2019 · 🌐

Campus Recruitment Training (CRT) Classes begins tomorrow  
Venue: N21, New Block  
Reporting Time-batch-1-8:30 am  
Reporting Time-batch-2-2:15 pm  
CRT Classes : 16th July 2019 to 26th July 2019.  
Duration 30 hours  
Batch 1: 8.45 am to 11.45 am (B.Sc (Life Sciences), B.Sc (Physical Sciences), BCA, M.Sc (Biochemistry), M.Sc (Microbiology), M.Sc (Computers) )  
Batch 2: 2:30 pm to 5:30 pm ( B.Com, BBA, BA, M.Com and MBA)  
80% attendance is mandatory for CRT classes to become eligible for campus placements.  
Kindly be on time for the classes according to the streams mentioned above  
for the syllabus click link below  
<https://drive.google.com/.../1YJWdFjrHs.../view...>

Quantitative Aptitude (12hrs)	Logical Aptitude (12hrs)	Soft Skills (6hrs)
Orientation	Clocks	Email Writing
Speed Maths	Calendars	Corporate Ethics

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Facebook (20+) | facebook.com/permalink.php?story\_fbid=2361996310563383&id=676815729081458

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Quantitative Aptitude (12hrs)	Logical Aptitude (12hrs)	Soft Skills (6hrs)
Orientation	Clocks	Email Writing
Speed Maths	Calendars	Corporate Ethics
Fractions	Syllogism	Goal Setting
Percentages	Number Series	Resume Writing
Profit and Loss	Analogy	SWOT Analysis
SI & CI	Odd one out	Time Management
Time and Work	Blood Relations	Just – A - Minute
Time and Distance	Direction Sense	Corporate Behaviour
Permutations & Combinations	Coding and Decoding	Personality Development
Probability	Cubes and colours	Public Speaking
Ratios & Proportions	Seating Arrangement	Group Discussion
Averages, Ages, Allegations	Logical Puzzles	Personal Interview

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# CRT CLASSES CIRCULAR AND SCHEDULE 2019-2020

Facebook (20+) | facebook.com/permalink.php?story\_fbid=2343334402429574&id=676815729081458

**Bvcplacementcell**  
July 4, 2019 ·

**Campus Recruitment Training (CRT) Classes**  
Venue: N21, New Block  
Fees: 1,200  
Last Date for Payment : 11th July 2019  
CRT Classes : 16th July 2019 to 26th July 2019.  
Duration 30 hours

Batch 1: 8.45 am to 11.45 am (B.Sc (Life Sciences), B.Sc (Physical Sciences), BCA, M.Sc (Biochemistry), M.Sc (Microbiology), M.Sc (Computers) )  
Batch 2: 2:30 pm to 5:30 pm ( B.Com, BBA, BA, M.Com and MBA)

Fees should be paid in the office  
80% attendance is mandatory for CRT classes to become eligible for campus placements.  
Interested students who are qualified in PET can also join CRT Classes by making payment.  
For syllabus click the link below:  
<https://drive.google.com/.../TYJWdFjrHs.../view...>

Quantitative Aptitude (12hrs)	Logical Aptitude (12hrs)	Soft Skills (6hrs)
Orientation	Clocks	Email Writing
Speed Maths	Calendars	Corporate Ethics
Fractions	Syllogism	Goal Setting

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# Course Content

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## Module I: Aptitude

<b>Quantitative Aptitude</b>	<b>No of Hours</b>	<b>Logical Reasoning</b>	<b>No of Hours</b>
Orientation	1	Clocks	1
Speed Maths	1	Calendars	1
Fractions	1	Syllogism/ Logical Deductions	1
Percentages	1	Number Series	1
Profit and Loss	1	Letter Series	1
Simple Interest & Compound Interest	1	Odd one out	1
Time and Work & Pipes and Cisterns	1	Blood Relations	1
Time and Distance (Boats &Streams)	1	Direction Sense	1
Permutations and Combinations	1	Coding and Decoding	1
Probability	1	Cubes and colors	1
Mensuration	1	Seating Arrangement	1
Data Sufficiency & Interpretation	1	Logical Puzzles	1
<b>TOTAL</b>	<b>12</b>	<b>TOTAL</b>	<b>12</b>

## Module II: English Verbal & Soft Skills

<b>English Verbal</b>		<b>Soft Skills</b>	
Orientation + Importance		Communication Skills	
Parts of Speech		Group Communication	
Sentence Correction		Presentation	
Spotting Errors		Resume Building	
Ordering Sentences		Interview Preparation	
Vocabulary		Group Discussion	
Reading Comprehension		HR Interview Skills	
<b>TOTAL</b>		<b>TOTAL</b>	

---

**Course Outcomes:**

- 1.** Be prepared for the personal interview through mock interviews while being aware of the various kinds of interviews.
- 2.** Develop thinking ability and polish his expression in group discussions.
- 3.** Students will demonstrate effective oral and written communication skills in the professional context.
- 4.** Students will enhance their logical reasoning and qualitative ability techniques.