DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
PUNJABI UNIVERSITY, PATIALA

SIX YEAR INTEGRATED B.TECH.-M.B.A. PROGRAMME

Applicable to Branches:

1. COMPUTER SCIENCE & ENGINEERING
2. ELECTRONICS AND COMMUNICATION ENGINEERING
3. MECHANICAL ENGINEERING
4. CIVIL ENGINEERING

Teaching Schemes
(Third to Eight Semester & Summer Semesters)

(Batch 2017)
Department of Computer Science & Engineering  
Punjabi University, Patiala.  

General Instructions to the Paper Setters  
(Common for B.Tech. in Computer Science & Engineering, Electronics and Communication Engineering, Mechanical Engineering, Civil Engineering and Integrated B.Tech/MBA Branches)

<table>
<thead>
<tr>
<th>Pattern of Question Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>TITLE OF SUBJECT (CODE----)</td>
</tr>
</tbody>
</table>
| Bachelor of Technology (Branch) Section: ...........

End Semester Exam

| TIME ALLOWED: 3 Hour |
| Roll. No............. |
| Maximum Marks: 50 |
| Pass Marks : 20 |

Note:- Section C is compulsory. Attempt any six questions selection three questions from each section A & B.

Section-A (From Section A of the syllabus)

Q1. .................................................................
Q2. .................................................................
Q3. .................................................................
Q4. ................................................................. 3x5
Q5. .................................................................

Section-B (From Section B of the syllabus)

Q6. .................................................................
Q7. .................................................................
Q8. .................................................................
Q9. ................................................................. 3x5
Q10. .................................................................

Section-C (From whole syllabus)

Q11  
a) .................................................................
b) .................................................................
c) .................................................................
d) .................................................................
e) .................................................................
f) .................................................................
g) .................................................................
h) .................................................................
i) .................................................................
j) ................................................................. 10x2=20

Note for the paper setter:

1. Total numbers of questions to be set are Eleven (11) as per the above format.

2. There will be five questions in each of the Sections A and B. Each question will be of five (05) marks. However, a question may be segregated into subparts. Candidates will be required to attempt SIX questions by selecting three Questions from each Sections A & B.

3. Section C is compulsory and contains ten (10) sub-parts each of two (2) marks.

4. The maximum limit on numerical problems to be set in the paper is 35%.

5. The paper setter shall provide detailed marking instructions and solutions to numerical problems for evaluation purpose in the separate white envelopes provided for solutions.

6. The paper setters should seal the internal & external envelope properly with signatures & cello tape at proper place.

7. Log tables, charts, graphs, Design data tables etc. should be specified, whenever needed.

8. Use of Scientific calculator should be clearly specified.
### SCHEME OF PAPERS

#### THIRD SEMESTER (COMPUTER SCIENCE & ENGINEERING)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>L</th>
<th>T</th>
<th>P</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-201</td>
<td>Digital Circuits &amp; Logic Design</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>2.</td>
<td>CPE-202</td>
<td>Object Oriented Programming using C++</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>3.</td>
<td>CPE-203</td>
<td>Data Structures</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>4.</td>
<td>CPE-204</td>
<td>Computer Networks</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>5.</td>
<td>CPE-205</td>
<td>Discrete Mathematical Structures</td>
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<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>6.</td>
<td>HSS-201</td>
<td>Management Practice &amp; Organization Behaviour and Business Intelligence</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>7.</td>
<td>CPE-252</td>
<td>Object Oriented Programming using C++ Lab</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>8.</td>
<td>CPE-253</td>
<td>Data Structures Lab</td>
<td>0</td>
<td>0</td>
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<tr>
<td>9.</td>
<td>CPE-254</td>
<td>Computer Networks Lab</td>
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<td>0</td>
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<td>1.0</td>
</tr>
<tr>
<td>10.</td>
<td>**</td>
<td>Punjabi</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>21</td>
<td>2</td>
<td>6</td>
<td>22</td>
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</tbody>
</table>

Total Contact Hours = 29

CPE-252, CPE-253 and CPE-254 are practical papers only. There will not be any theory examination for these papers.

** In addition to above mentioned subjects, there will be an additional course on Punjabi as a qualifying subject.
### SCHEME OF PAPERS

#### FOURTH SEMESTER (COMPUTER SCIENCE & ENGINEERING)

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>L</th>
<th>T</th>
<th>P</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-206</td>
<td>Visual Programming using VB.Net</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2.0</td>
</tr>
<tr>
<td>2.</td>
<td>CPE-207</td>
<td>Software Engineering</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>3.</td>
<td>CPE-208</td>
<td>Operating Systems</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>4.</td>
<td>CPE-209</td>
<td>Computer Graphics</td>
<td>3</td>
<td>0</td>
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<td>3.0</td>
</tr>
<tr>
<td>5.</td>
<td>CPE-210</td>
<td>Computer System Architecture</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>6.</td>
<td></td>
<td>Elective – I*</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>7.</td>
<td>CPE-256</td>
<td>Visual Programming using VB.Net Lab</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>8.</td>
<td>CPE-258</td>
<td>Operating Systems Lab</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>9.</td>
<td>CPE-259</td>
<td>Computer Graphics Lab</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>** Environment and Road Safety Awareness</td>
<td>2</td>
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<td></td>
<td></td>
<td>** Total Contact Hours = 29</td>
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#### ELECTIVE SUBJECTS – I *

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>L</th>
<th>T</th>
<th>P</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-211</td>
<td>System Programming</td>
<td>3</td>
<td>1</td>
<td>0</td>
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</tr>
<tr>
<td>2.</td>
<td>CPE-212</td>
<td>E-Commerce</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>3.</td>
<td>CPE-213</td>
<td>Building Enterprise Applications</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
</tbody>
</table>

*Choose any one from the list. Elective under Massive Open Online Courses (MOOCS) available on SWAYAM platform of Govt. of India offered through online mode. The subjects which students can opt from MOOCS will be notified by the department semester wise time to time.

CPE-256, CPE-258 and CPE-259 are practical papers only. There will not be any theory examination for these papers.

** In addition to above mentioned subjects, there will be an additional course on Environment and Road Safety Awareness as a qualifying subject.
B. TECH THIRD YEAR
COMPUTER SCIENCE & ENGINEERING

(Batch 2017)
Session (2019-20)

SCHEME OF PAPERS

FIFTH SEMESTER (COMPUTER SCIENCE & ENGINEERING)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>L</th>
<th>T</th>
<th>P</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-301</td>
<td>Theory of Computation</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>2.</td>
<td>CPE-302</td>
<td>Database Management System</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>3.</td>
<td>CPE-303</td>
<td>Algorithm Analysis &amp; Design</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3.0</td>
</tr>
<tr>
<td>4.</td>
<td>CPE-304</td>
<td>Java Programming</td>
<td>3</td>
<td>0</td>
<td>0</td>
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<tr>
<td>5.</td>
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<td>Elective – II*</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
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<td>6.</td>
<td>CPE-350</td>
<td>IT Workshop</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>7.</td>
<td>CPE-352</td>
<td>Database Management System Lab</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>8.</td>
<td>CPE-353</td>
<td>Algorithm Analysis &amp; Design Lab</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>9.</td>
<td>CPE-354</td>
<td>Java Programming Lab</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>10.</td>
<td>STG-351</td>
<td>Summer Training **</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>11.</td>
<td>***</td>
<td>Drug Abuse: Problem, Management And Prevention (Qualifying Course)</td>
<td>2</td>
<td>0</td>
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</table>

Total 17 2 10 27

Total Contact Hours = 29

ELECTIVE SUBJECTS – II*

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>L</th>
<th>T</th>
<th>P</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-305</td>
<td>System Simulation &amp; Modeling</td>
<td>3</td>
<td>1</td>
<td>0</td>
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<tr>
<td>2.</td>
<td>CPE-306</td>
<td>Multimedia Systems</td>
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<tr>
<td>3.</td>
<td>MBA-5011</td>
<td>Foundation of Financial Accounting</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
</tbody>
</table>

*Choose any one from the list. Elective under Massive Open Online Courses (MOOCS) available on SWAYAM platform of Govt. of India offered through online mode. The subjects which students can opt from MOOCS will be notified by the department semester wise time to time

CPE-350, CPE-352, CPE-353 and CPE-354 are practical papers only. There will not be any theory examination for these papers.

** Summer Training will be of 4 to 6 weeks duration in Industry / In House.

*** In addition to above mentioned subjects, there will be an additional course on 'Drug Abuse: Problem, Management and Prevention' as a qualifying subject
### B. TECH THIRD YEAR
### COMPUTER SCIENCE & ENGINEERING

**(Batch 2017)**
**Session (2019-20)**

#### SCHEME OF PAPERS

### SIXTH SEMESTER (COMPUTER SCIENCE & ENGINEERING)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>L</th>
<th>T</th>
<th>P</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-307</td>
<td>Mobile Apps Development</td>
<td>2</td>
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<tr>
<td>2.</td>
<td>CPE-308</td>
<td>RDBMS Using PL/SQL</td>
<td>3</td>
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</tr>
<tr>
<td>3.</td>
<td>CPE-309</td>
<td>Machine Learning using Python</td>
<td>3</td>
<td>0</td>
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<tr>
<td>4.</td>
<td>CPE-310</td>
<td>Compiler Design</td>
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<tr>
<td>5.</td>
<td>CPE-311</td>
<td>Network Security</td>
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<tr>
<td>6.</td>
<td></td>
<td>Elective-III *</td>
<td>3</td>
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<tr>
<td>7.</td>
<td>CPE-357</td>
<td>Mobile Apps Development Lab</td>
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<tr>
<td>8.</td>
<td>CPE-358</td>
<td>RDBMS Using PL/SQL Lab</td>
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<tr>
<td>9.</td>
<td>CPE-359</td>
<td>Machine Learning using Python Lab</td>
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<td>0</td>
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<td>1.0</td>
</tr>
<tr>
<td>10.</td>
<td></td>
<td>Open Elective**</td>
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</table>

**Total 17 2 8 22**

**Total Contact Hours = 27**

### ELECTIVE SUBJECTS – III*

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
<th>L</th>
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<th>P</th>
<th>Cr.</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-312</td>
<td>Distributed Computing</td>
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<tr>
<td>2.</td>
<td>CPE-313</td>
<td>Agile Software Development</td>
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<tr>
<td>3.</td>
<td>CPE-314</td>
<td>Computer Animation</td>
<td>3</td>
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</tr>
<tr>
<td>4.</td>
<td>MBA-5012</td>
<td>Foundations of Managerial Accounting</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
</tbody>
</table>

*Choose any one from the list. Elective under Massive Open Online Courses (MOOCS) available on SWAYAM platform of Govt. of India offered through online mode. The subjects which students can opt from MOOCS will be notified by the department semester wise time to time

### OPEN ELECTIVE FOR SIXTH SEMESTER (Offered By Computer Sc. & Engg.)**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
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<th>P</th>
<th>Cr.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td>Essentials of Computers</td>
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</tr>
</tbody>
</table>

CPE-357, CPE-358 and CPE-359 are practical papers only. There will not be any theory examination for these papers.

** In addition to above mentioned subjects, there will be an additional 'Open Elective' course as a qualifying subject. The student can opt any one 'Open Elective' subject from the list of Punjabi University approved open elective courses, offered by various University departments, with the consent of ACD/Head/Course Mentor of CSE department.
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
PUNJABI UNIVERSITY, PATIALA

SIX YEAR INTEGRATED B.TECH.-M.B.A. PROGRAMME

Applicable to Branches:

1. COMPUTER SCIENCE & ENGINEERING
2. ELECTRONICS AND COMMUNICATION ENGINEERING
3. MECHANICAL ENGINEERING
4. CIVIL ENGINEERING

(Batch 2017)
(Session 2019-2020)

SUMMER SEMESTER–I (During Summer Vacation after 3rd Year)

SCHEME OF PAPERS  (See Annexure-1)
B. TECH FOURTH YEAR
COMPUTER SCIENCE & ENGINEERING

(Batch 2017)
Session (2020-21)
SCHEME OF PAPERS

SEVENTH SEMESTER (COMPUTER SCIENCE & ENGINEERING)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Subject Code</th>
<th>Subject Name</th>
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<th>P</th>
<th>Cr.</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-401</td>
<td>Cloud Computing</td>
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<tr>
<td>2.</td>
<td>CPE-402</td>
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<tr>
<td>3.</td>
<td>CPE-403</td>
<td>Data Mining &amp; Warehousing</td>
<td>3</td>
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<tr>
<td>4.</td>
<td>CPE-404</td>
<td>Information Security and Cyber Law</td>
<td>3</td>
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<td>0</td>
<td>3.0</td>
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<tr>
<td>5.</td>
<td>Elective- IV *</td>
<td></td>
<td>3</td>
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</tr>
<tr>
<td>6.</td>
<td>CPE-450</td>
<td>Project Work</td>
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<td>0</td>
<td>6</td>
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<tr>
<td>7.</td>
<td>CPE-453</td>
<td>Data Mining &amp; Warehousing Lab</td>
<td>0</td>
<td>0</td>
<td>2</td>
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<tr>
<td>8.</td>
<td>CPE-454</td>
<td>Information Security and Cyber Law Lab</td>
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Total 15 2 10 21

Total Contact Hours = 27

ELECTIVE SUBJECTS – IV*

<table>
<thead>
<tr>
<th>S. No.</th>
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<th>Subject Name</th>
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<th>P</th>
<th>Cr.</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>CPE-405</td>
<td>Neural Computing</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>2.</td>
<td>CPE-406</td>
<td>Digital Image Processing</td>
<td>3</td>
<td>1</td>
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</tr>
<tr>
<td>3.</td>
<td>CPE-407</td>
<td>Embedded System</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>4.</td>
<td>CPE-408</td>
<td>Artificial Intelligence</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>5.</td>
<td>MBA-5013</td>
<td>Foundation of Finance</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
<tr>
<td>6.</td>
<td>MBA-5033</td>
<td>Foundation of International Business</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3.5</td>
</tr>
</tbody>
</table>

*Choose any one from the list. Elective under Massive Open Online Courses (MOOCS) available on SWAYAM platform of Govt. of India offered through online mode. The subjects which students can opt from MOOCS will be notified by the department semester wise time to time

CPE-450, CPE-453 and CPE-454 are practical papers only. There will not be any theory examination for these papers.
EIGHTH SEMESTER (COMPUTER SCIENCE & ENGINEERING)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title of Paper</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRJ-451</td>
<td>Project Based Industrial Training</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>(One Semester Training in Industry)</td>
<td></td>
</tr>
</tbody>
</table>

Breakup of Marks:

**Industrial Visit by Faculty Coordinator (150 Marks)**
(Within 10—12 weeks of commencement of Training)

- Presentation : 60 Marks
- Viva Voce : 60 Marks
- Report (Hard Copy) : 30 Marks

Evaluation by Faculty Coordinator is consolation with Industrial Coordinator during industrial visit.

**Evaluation by a Team of Faculty Members in the Institute (250 Marks)**
(Within One Week of completion of Training)

- Presentation : 100 Marks
- Viva Voce : 100 Marks
- Report (Hard Copy) : 50 Marks

The Final Presentation and viva – voce will be conducted jointly by the faculty coordinator, external examiner and nominee of the Head to be appointed by the Head of the Department.

The Letter grade will be awarded to the students according to marks obtained by him/her out of total 400 marks.
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
PUNJABI UNIVERSITY, PATIALA

SIX YEAR INTEGRATED B.TECH.-M.B.A. PROGRAMME

Applicable to Branches:

1. COMPUTER SCIENCE & ENGINEERING
2. ELECTRONICS AND COMMUNICATION ENGINEERING
3. MECHANICAL ENGINEERING
4. CIVIL ENGINEERING

(Batch 2017)
(Session 2020-2021)

SCHEME OF PAPERS (See Annexures 2-3)
SUMMER SEMESTER-II (During Summer Vacation after 4th Year)

(For Pursuing MBA at Wilkes University or at School of Management Studies, Punjabi University, Patiala)
SIX YEAR INTEGRATED B.TECH.-M.B.A. PROGRAMME

Applicable to Branches:

1. COMPUTER SCIENCE & ENGINEERING
2. ELECTRONICS AND COMMUNICATION ENGINEERING
3. MECHANICAL ENGINEERING
4. CIVIL ENGINEERING

(Batch 2017)
(Session 2019-2020)

SCHEME OF PAPERS

SUMMER SEMESTER –I
(During Summer Vacation after 3rd Year)

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Course No.</th>
<th>Title</th>
<th>L</th>
<th>T</th>
<th>P</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>MBA 501</td>
<td>Foundations of Business</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
</tbody>
</table>

Total Contact Hours: 9

The aforesaid course will be offered during summer vacations after Third Year of Six Year Integrated B.TECH.-M.B.A. Programme. This course will be over and above the B.Tech. Program.

A separate DMC will be issued to the students for this course indicating the grades obtained by the students in this subject.

However, this course will not be included in calculation of CGPA of B.Tech Degree of Six Year Integrated B.TECH.-M.B.A. Programme.

One non-credit course for transition to American culture, language, rules and practices will be taught either by Wilkes faculty or other arrangement will be done.

The number of courses offered during summer semesters may change as per norms of the university.

The evaluation for all summer semesters subjects (to be offered after third year & final year of B. Tech.) will be totally (100%) internal.
SIX YEAR INTEGRATED B.TECH.-M.B.A. PROGRAMME

Applicable to Branches:
1. COMPUTER SCIENCE & ENGINEERING
2. ELECTRONICS AND COMMUNICATION ENGINEERING
3. MECHANICAL ENGINEERING
4. CIVIL ENGINEERING

(Batch 2017)
(Session 2020-2021)

SCHEME OF PAPERS

SUMMER SEMESTER-II (During Summer Vacations after 4th Year)
(For Pursuing MBA at Wilkes University)

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Course No.</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>MBA 512</td>
<td>Business Research Design and Methods ***</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>MBA 536</td>
<td>Advanced Topics in International Business ***</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>MBA 540</td>
<td>Financial Management ***</td>
<td>3</td>
</tr>
</tbody>
</table>

*** The aforesaid courses will be offered during summer vacations after Fourth Year of Six Year Integrated B.TECH.-M.B.A. Programme. These courses will be over and above the B.Tech. Program.

The number of courses offered during summer semesters may change as per norms of the university
A separate DMC will be issued to the students for these courses indicating the grades obtained by the students in these subjects.

However, these courses will not be included in calculation of CGPA of B.Tech Degree of Six Year Integrated B.TECH.-M.B.A. Programme.

Beside the aforesaid three courses, the students will be required to undertake additional courses towards completing the requirements of 2nd year of MBA program at Wilkes University.

The evaluation for all summer semesters subjects (to be offered after third year & final year of B. Tech.) will be totally (100%) internal.
SIX YEAR INTEGRATED B.TECH.-M.B.A. PROGRAMME

Applicable to Branches:

1. COMPUTER SCIENCE & ENGINEERING
2. ELECTRONICS AND COMMUNICATION ENGINEERING
3. MECHANICAL ENGINEERING
4. CIVIL ENGINEERING

(Batch 2017)
(Session 2020-2021)

SCHEME OF PAPERS

SUMMER SEMESTER-II
(During Summer Vacations after 4th Year)
(For Pursuing MBA at School of Management Studies, Punjabi University, Patiala)

SCHEME OF PAPERS

1. The following six courses will be mandatory requirement for those students who are interested to pursue MBA at School of Management Studies, Punjabi University, Patiala under Six Year Integrated B.TECH.-M.B.A. Programme.

i. MBA 122 Marketing Management
ii. MBA 128 Operations Management
iii. MBA 129 Management of Human Resources
iv. MBA 512 Business Research Design & Methods
v. MBA 536 Advanced Topics in International Business
vi. MBA 540 Financial Management

2. The students of 2017 batch onwards (Who want to complete MBA at School of Management Studies, Punjabi University, Patiala) will be pursuing these six Courses after Fourth Year of Six Year Integrated B.TECH.-M.B.A. Programme.

3. The Evaluation Scheme for these courses will be as adopted by School of Management Studies, Punjabi University, Patiala.

4. The number of courses offered during summer semesters may change as per norms of the university

5. The aforesaid courses will be offered during summer vacations after Fourth Year of Six Year Integrated B.TECH.-M.B.A. Programme. These courses will be over and above the B.Tech. Program.

6. A separate DMC will be issued to the students for these courses indicating the Marks / grades obtained by the students in this subject.

7. However these courses will not be included in calculation of CGPA of B.Tech Degree of Six Year Integrated B.TECH.-M.B.A. Programme.

8. The evaluation for all summer semesters subjects (to be offered after third year & final year of B. Tech.) will be totally (100%) internal.
MBA 501 FOUNDATIONS OF BUSINESS

L T P Cr
9 0 0 9

This course provides a foundation of all functional areas of business, including accounting, economics, finance, information systems, international business, management, marketing, law, operations management and statistics.
MBA 512 BUSINESS RESEARCH DESIGN AND METHODS

Research Methodology: Objectives, Role & Scope in Management Research, Process of Research; Research Designs: Exploratory, Descriptive & Experimental Research Designs and their Applications; Sampling Design: Concepts, types and their applicability; Scaling Techniques including Likert, Thurston, Semantic Differential Scaling techniques, etc. Tools & Techniques of Data Collection: Primary & Secondary; Classification & Tabulation of Data.


Recommended Books:
MBA 536 ADVANCED TOPICS IN INTERNATIONAL BUSINESS


Recommended Books:
MBA 540 FINANCIAL MANAGEMENT


Recommended Books:
MBA 122 Marketing Management

Course Overview
The objective of this course is to develop the ability in the students to define and analyze the marketing problems through the formulation of marketing objectives, polices, programmes and strategies.

Course Syllabus

Group I:
Nature, Scope and Concepts and Orientations of Marketing, Marketing Tasks, Modern concepts of marketing, Marketing Environment and Environment Scanning, Marketing information systems and marketing research, Strategic Planning in marketing management, Understanding consumer and Industrial markets, Consumer behaviour: Factors influencing consumer buying behavior, Buying process, Market segmentation, Targeting and Positioning

Group II:

Group III:

Recommended Texts
- Kotler Philip, marketing management, Prentice-Hall of India, New Delhi, 2007
MBA 128 Operations Management

Course Overview
The objective of this course is to have an understanding of Operational issues in Manufacturing & Service Sector Organisations that include Designing, Acquiring, Operating, and Maintaining the facilities and processes; purchasing raw materials; Controlling and Maintaining Inventories; and providing the proper labour needed to produce an good or service so that customer’s expectations are met. At the conclusion of the course students should be able to: (1) build both quantitative and qualitative analysis skills, especially those needed for managing operating systems; and (2) provide common –sense modeling concepts which can be used to help managers evaluate various management problems.

Course Syllabus

Group I:

Group II:
Capacity Planning, Materials requirement planning: procedure, benefits and disadvantages. Scheduling: scheduling jobs on machines, control of schedules, scheduling in services, introduction to statistical quality control: process charts & acceptance sampling, PERT and CPM, application of OR techniques to operations management such as transportation, assignment, sequencing.

Group III:
Inventory management, planning and control: inventory concepts, scope, objectives & functions of inventory control, classification of inventories, inventory costs concepts, selective inventory control systems, inventory control models: Economic Order Quantity (EOQ) with & without shortages, EOQ under fluctuating demand, EOQ with quantity discounts, Economic Production Quantity (EPQ), Fixed Order Cycle (FOC) and Fixed Order Quantity (FOQ) systems.

Recommended Texts
**MBA 129 Management of Human Resources**

**Course Overview**

The Student should be able to critically analyze organizational situations, prescribe courses of action necessary for problem solving and integrate the steps necessary for effective implementation. Upon completion, the student should be able to indicate and explain various human resource management interventions that may be required when dealing with the work environment, people, and problems.

**Course Syllabus**

**Group I:**

- Concept, scope, functions, importance of personnel management, environment scanning, building up skills for effective HR manager. Global HRM. Organization of personnel department and its relationships with other departments. HR in: information technology firms, mergers and acquisitions. Integrating HR strategy with Business strategy, Personnel Policies Manpower Planning, Analyzing work and designing jobs, Managing Separations and Rightsizing. Methods of Manpower search and selection of Human Resources. Induction, Placement, Socializing, Promotion and Succession.

**Group II:**


**Group III:**

- Grievance Handling, Disciplining and Counseling of employees. Concept and present state of industrial relations. A brief idea of Trade Unionism. Industrial Unrest and Remedial Measures.

**Recommended Texts**