

SANATANA DHARMA COLLEGE, ALAPPUZHA



1.3.2: Number of courses that include experiential learning through project work/field work/internship



| | | | | |
|----|-------------------------------------|--|-----|-----|
| IV | CG 1472 | Vocational Course V: Content Writing | 4 | 3 |
| IV | CG 1431 | Complementary Course IV: Literatures of Travel and Tourism | 3 | 3 |
| V | CG 1541 | Core VIII: Film Studies | 4 | 3 |
| V | CG 1542 | Core IX: Indian Literature | 4 | 3 |
| V | CG 1543 | Core X: Criticism and Theory | 5 | 4 |
| V | CG 1571 | Vocational Course VI: Theatre Studies | 3 | 3 |
| V | CG 1572 | Vocational Course VII: English Language Teaching | 3 | 3 |
| V | CG 1573 | Vocational Course VIII: Language for Advertisement and Marketing | 3 | 3 |
| V | CG1551.1 CG1551.2 | Open Course: English for Communication Film Appreciation | 3 | 2 |
| VI | CG 1641 | Core XI: Gender Studies | 5 | 4 |
| VI | CG 1642 | Core XII: Linguistics and Structure of English Language | 5 | 4 |
| VI | CG 1671 | Vocational Course IX: Screen Writing and Subtitling | 4 | 3 |
| VI | CG 1672 | Vocational Course X: Public Relations and Corporate Communication | 4 | 3 |
| VI | CG 1661.1 CG 1661.2 CG 1661.3 | Industry Based Electives: Proof Reading and Copy Editing Academic Writing Professional Communication Practice | 4 | 3 |
| VI | CG 1643 | Project | 3 | 4 |
| | | Total Hours and Credits | 150 | 120 |

COURSE STRUCTURE

| Semester 1 | Core / Elective | Course Code | Name of Paper | Instructional hours/ week | Marks | | |
|--------------------|-----------------|-------------|---|---------------------------|-------|----|-------------|
| | | | | | ESA | CA | Total |
| Paper 1 | Core | EL211 | Chaucer to the Elizabethan Age | 6 | 75 | 25 | 100 |
| Paper 2 | Core | EL212 | Shakespeare Studies | 6 | 75 | 25 | 100 |
| Paper 3 | Core | EL213 | The Augustan Age | 6 | 75 | 25 | 100 |
| Paper 4 | Core | EL214 | Romantics and Victorians | 7 | 75 | 25 | 100 |
| Semester 2 | | | | | | | |
| Paper 5 | Core | EL221 | From Modernism to the Present | 6 | 75 | 25 | 100 |
| Paper 6 | Core | EL222 | Indian Writing in English | 6 | 75 | 25 | 100 |
| Paper 7 | Core | EL223 | American Literature | 6 | 75 | 25 | 100 |
| Paper 8 | Core | EL224 | Critical Studies I | 7 | 75 | 25 | 100 |
| Semester 3 | | | | | | | |
| Paper 9 | Core | EL231 | Linguistics and Structure of the English Language | 6 | 75 | 25 | 100 |
| Paper 10 | Core | EL232 | Critical Studies II | 7 | 75 | 25 | 100 |
| Paper 11 | Elective 1 | EL233._ | | 6 | 75 | 25 | 100 |
| Paper 12 | Elective 2 | EL234._ | | 6 | 75 | 25 | 100 |
| Semester 4 | | | | | | | |
| Paper 13 | Core | EL241 | English Language Teaching | 6 | 75 | 25 | 100 |
| Paper 14 | Core | EL242 | Cultural Studies | 7 | 75 | 25 | 100 |
| Paper 15 | Elective 3 | EL243._ | | 6 | 75 | 25 | 100 |
| Paper 16 | Elective 4 | EL244._ | | 6 | 75 | 25 | 100 |
| Paper 17 | Compr Ppr | EL245 | Comprehensive Paper | | 100 | | |
| Paper 18 | Project | EL246 | Project | | 80 | | 100 |
| | | | Project based Viva Voce | | 20 | | |
| Grand Total | | | | | | | 1800 |

| | | | | |
|---|-----------|---|------|-----|
| 6 | EN 1644 | Core Course 14: World Classics | 4 | 3 |
| 6 | EN 1661.1 | Elective Course: Translation Studies | 3 | 2 |
| 6 | EN 1661.2 | Elective Course: American Literature | -do- | -do |
| 6 | EN 1661.3 | Elective Course: Creative Writing | -do- | -do |
| 6 | EN 1661.4 | Elective Course: English for the Media | -do- | -do |
| 6 | EN 1661.5 | Elective Course: 20 th Century Regional Literatures in English Translation | -do- | -do |
| 6 | EN 1661.6 | Elective Course: Copy Editing | -do- | -do |
| 6 | EN1645 | Project | 3 | 4 |

3

BA English Language and Literature: Programme Outcome

PO 1: A comprehensive understanding of the discipline of literary studies **PO 2:** Realize the divergent and plural voices that come in to the making of the corpus of literary studies.

PO 3: Understand literature as one of the many arts that seeks literary expression and its close connection with other art forms like painting, music, dance, movie and so on down the ages. **PO**

4: Imbibe the importance of multidisciplinary approach to understand the nuances of literary expressions.

PO 5: Understand the specific socio-cultural backdrop of the formation of literary representations.

PO 6: Form an awareness of the multiplicities of such socio-cultural realities that shape literary representations and to critique the inherent hegemony.

PO 7: The ability to trace the development of the English language from the early writings to its present day use in specific contexts.

PO 8: Address the requirements of the language use in a globalized context **PO 9:** Ensure the importance of study of the English language in relation to the study of language and literature of the mother tongue.

PO 10: Have improved competence in translation and to view the same not only as a tool for

| Course Code | Course Type | Course Title | Credit | Lecture Hours/ Week |
|-------------|----------------------|---|--------|---------------------|
| HN 1641 | Core Course XI | Post Modern Hindi Fiction from 1980 to 2000 | 4 | 5 |
| HN 1642 | Core Course XII | Literary Criticism | 4 | 5 |
| HN 1643 | Core Course XIII | Translation: Theory & Practice | 4 | 5 |
| HN 1644 | Core Course XIV | Film: History & Production | 3 | 4 |
| HN 1645 | Project/Dissertation | Dissertation | 4 | 3 |
| HN 1651 | Elective | Journalism And Hindi Journalism in Kerala | 2 | 3 |
| | | | 21-C | 25-L.H. |

S. D. College, Alappuzha

| Sem. No. | Course Code | Course Title | Distribution Hrs per semester | Instructional hours/ weeks | | Duration of ESA | Maximum Marks | | |
|--|-------------|--|-------------------------------|----------------------------|---|-----------------|---------------|-----|--------------------|
| | | | | L | P | | CA | ESA | Total |
| | | | | | | | | | |
| I | ML211 | പ്രാചീനസാഹിത്യം | 90 | 5 | - | 3 | 25 | 75 | 100 |
| | ML212 | മധ്യകാലസാഹിത്യം | 90 | 5 | - | 3 | 25 | 75 | 100 |
| | ML213 | കേരളസംസ്കാരം | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | ML214 | മലയാളവ്യാകരണം | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | | ഗവേഷണരീതിശാസ്ത്രം | 54 | 3 | - | | | | |
| | ML221 | ആധുനികസാഹിത്യം-ഗദ്യം | 90 | 5 | - | 3 | 25 | 75 | 100 |
| | ML222 | ആധുനികസാഹിത്യം-പദ്യം | 90 | 5 | - | 3 | 25 | 75 | 100 |
| | ML223 | ഭാരതീയകാവ്യമീമാംസ | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | ML224 | സാഹിത്യമീമാംസ-പാശ്ചാത്യം | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | | ഗവേഷണരീതിശാസ്ത്രം | 54 | 3 | - | | 25 | | |
| III | ML231 | സമകാലികസാഹിത്യം-ഗദ്യം | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | ML232 | സാഹിത്യചരിത്രവിജ്ഞാനീയം | 126 | 7 | - | 3 | 25 | 75 | 100 |
| | ML233 | Sanskrit Paper I | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | ML234 | മലയാളവിമർശനം | 108 | 6 | - | 3 | 25 | 75 | 100 |
| IV | ML241 | സമകാലികസാഹിത്യം-പദ്യം | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | ML242 | Sanskrit Paper II | 108 | 6 | - | 3 | 25 | 75 | 100 |
| | ML243 | ആധുനികഭാഷാശാസ്ത്രം | 126 | 7 | - | 3 | 25 | 75 | 100 |
| | ML244 | ഐച്ഛികം * 1. താരതമ്യസാഹിത്യം 2. നാടോടി വിജ്ഞാനീയം 3. വിവർത്തനം: തത്ത്വവും പ്രയോഗവും | 108 | 6 | - | 3 | 25 | 75 | 100 |
| ML 245 Dissertation/Project 50+25+25 Comprehensive Viva Total | | | | | | | | | 100 100 1800 |
| L : Lecture, P : Practical, CA : Continuous Assessment, ESA : End Semester Assessment * ഒരു കേന്ദ്രത്തിൽ ഒന്നിൽക്കൂടുതൽ ഐച്ഛികം പാടില്ല. ഒരേണ്ണം മാത്രം തിരഞ്ഞെടുക്കുക. | | | | | | | | | |

| Sem. No. | Course No. | Course Title | International Hours | Credits | Page No. |
|----------|------------|---|---------------------|------------|----------------------|
| | | സെമസ്റ്റർ നാല് | | | |
| 4 | EN1411 | Language Course 8 (English 5) : | 5 | 4 | |
| 4 | ML 1411.1 | Language Course 9 : (Additional Language 4) ദൃശ്യകലാസാഹിത്യം (ദൃശ്യകൗമുദി) | 5 | 4 | 46 |
| 4 | ML 1441 | Core Course - 4 ആധുനിക മലയാളകവിത | 5 | 4 | 48 |
| 4 | ML 1442 | Core Course 5 : നിരൂപണസാഹിത്യം | 4 | 3 | 52 |
| 4 | ML 1431 | Compl. Course 7 : ദളിത് സാഹിത്യം, സ്ത്രീവാദസാഹിത്യം | 3 | 3 | 55 |
| 4 | ML1431.2 | Compl. Course 8 : സംസ്കൃതം -4 | 3 | 3 | |
| | | ആകെ | 25 | 21 | |
| | | സെമസ്റ്റർ അഞ്ച് | | | |
| 5 | ML 1541 | Core Course 6 : ഭാഷാശാസ്ത്രം | 4 | 4 | 58 |
| 5 | ML 1542 | Core Course 7 : ചെറുകഥാപഠനം | 4 | 4 | 61 |
| 5 | ML 1543 | Core Course 8 : വിവർത്തനം സിദ്ധാന്തവും പ്രയോഗവും | 3 | 3 | 65 |
| 5 | ML 1544 | Core Course 9 : ജീവചരിത്രം, ആത്മകഥ യാത്രാസാഹിത്യം | 3 | 3 | 69 |
| 5 | ML 1545 | Core Course 10 : മലയാളഭാഷാ സാഹിത്യചരിത്രം - 1 | 5 | 4 | 71 |
| 5 | ML 1551 | Open Course ML 1551.1 കേരളീയകലകൾ ML 1551.2 ലിംഗനീതിസാഹിത്യവും ഭിന്നശേഷി പഠനവും ML 1551.3 ചലച്ചിത്രപഠനം ML 1551.4 ജനപ്രിയസാഹിത്യപഠനം | 3 | 2 | 74 78 81 85 |
| 5 | | PROJECT/DISSERTATION | 3 | | |
| | | ആകെ | 25 | 20 | |
| | | സെമസ്റ്റർ ആറ് | | | |
| 6 | ML 1641 | Core Course 11: മലയാള ഭാഷാ സാഹിത്യചരിത്രം 2 | 5 | 4 | 88 |
| 6 | ML 1642 | Core Course 12 : മലയാള വ്യാകരണം | 5 | 4 | 91 |
| 6 | ML 1643 | Core Course 13 : ആധുനികപുർവ്വ മലയാള കവിത | 5 | 4 | 95 |
| 6 | ML 1644 | Core Course 14 : നാട്ടറിവുപഠനം | 4 | 3 | 99 |
| 6 | ML1651 | Open Course 2 (Elective) | 3 | 2 | |
| | | ML1651.1 താരതമ്യസാഹിത്യം | | | 102 |
| | | ML1651.2 മാധ്യമലോകം | | | 104 |
| | | ML1651.3 ചലച്ചിത്രപഠനം | | | 107 |
| | | ML1651.4 ദേശീയസൗന്ദര്യശാസ്ത്രം | | | 111 |
| 6 | ML1645 | PROJECT/DISSERTATION | 3 | 4 | |
| | | ആകെ | 25 | 21 | |
| | | Total | 150 | 120 | |

SEMESTER IV

| Courses | Course Code | Course Title | Instructional Hours Per Week | | End Semester Exam Hours | | Credit |
|-------------------------|-------------|---------------------------|------------------------------|-----------|-------------------------|-----------|--------|
| | | | Theory | Practical | Theory | Practical | |
| Language Course VI | EN 1411 | English IV | 3 | - | 3 | - | 3 |
| Core Course VIII | CO 1441 | Indian Financial Markets | 4 | - | 3 | - | 3 |
| Core Course IX | CO 1442 | Banking and Insurance | 4 | - | 3 | - | 4 |
| Core Course X | CO 1443 | Corporate Accounting | 5 | - | 3 | - | 4 |
| Elective Course II | CO 1461 | Elective stream 1/2/3/4/5 | 5(1) | (4) | 3 | (1.5) | 4 |
| Complementary Course IV | CO 1431 | Business Statistics | 4 | - | 3 | - | 3 |
| | | Total | 25(21) | (4) | | | 21 |

Figures in brackets are applicable only for computer application stream

SEMESTER V

| Courses | Course Code | Course Title | Instructional Hours Per Week | | End Semester Exam Hours | | Credit |
|---------------------|-------------|----------------------------|------------------------------|-----------|-------------------------|-----------|--------|
| | | | Theory | Practical | Theory | Practical | |
| Core Course XI | CO 1541 | Fundamentals of Income Tax | 5 | - | 3 | - | 4 |
| Core Course XII | CO 1542 | Cost Accounting | 5 | - | 3 | - | 4 |
| Core Course XIII | CO 1543 | Marketing Management | 4 | - | 3 | - | 4 |
| Open Course I | CO 1551 | Open Course – 1/2/3 | 3 | - | 3 | - | 2 |
| Elective Course III | CO 1561 | Elective stream 1/2/3/4/5 | 5(1) | (4) | 3 | (1.5) | 4 |
| Project | - | Project | 3 | - | - | - | - |
| | | Total | 25(21) | (4) | | | 18 |

Figures in brackets are applicable only for computer application stream

SEMESTER VI

| Courses | Course Code | Course Title | Instructional Hours Per Week | | End Semester Exam Hours | | Credit |
|--------------------|-------------|---|------------------------------|-----------|-------------------------|-----------|--------|
| | | | Theory | Practical | Theory | Practical | |
| Core Course XIV | CO 1641 | Auditing | 4 | - | 3 | - | 4 |
| Core Course XV | CO 1642 | Applied Costing | 5 | - | 3 | - | 4 |
| Core Course XVI | CO 1643 | Management Accounting | 5 | - | 3 | - | 4 |
| Open Course II | CO 1651 | Open Course – 1/2/3 | 3 | - | 3 | - | 2 |
| Elective Course IV | CO 1661 | Elective stream 1/2/3/4/5 | 5(1) | (4) | 3 | (1.5) | 4 |
| Project | CO 1644 | Project | 3 | - | - | - | 4 |
| | | Total | 25(21) | (4) | | | 22 |
| | | Grand Total (SI+SII+SIII+SIV+SV+SVI) | | | | | 120 |

| SEMESTER IV | | | Marks | | |
|--------------------|---------|---|-------|-----|-------------|
| Code | Paper | Subject | CA | ESA | Total |
| CO 241W | Paper1 | Goods and Service tax & Customs Duty-Law and Practice | 25 | 75 | 100 |
| CO 242F | Paper 2 | Risk Management and Derivatives | 25 | 75 | 100 |
| CO 243F | Paper 3 | Accounting Standards | 25 | 75 | 100 |
| CO 244S | Paper 4 | Management Optimization Techniques | 25 | 75 | 100 |
| Total | | | 100 | 300 | 400 |
| Project Report | | | | | 100 |
| Comprehensive Viva | | | | | 100 |
| Grand Total | | | | | 2000 |

Elective - INFORMATION TECHNOLOGY & E-BUSINESS

| SEMESTER III | | | Marks | | | |
|--------------|---------|--|------------|------------|-----------|------------|
| Code | Paper | Subject | CA | ESA | | Total |
| | | | | Written | Practical | |
| CO 231 E | Paper 1 | Office Automation | 25 | 50 | 25 | 100 |
| CO 232 E | Paper 2 | Internet and Web Designing | 25 | 50 | 25 | 100 |
| CO 233 R | Paper 3 | Management of Intellectual Property Rights | 25 | 75 | - | 100 |
| CO 234 E | Paper 4 | Legal Frame work for Information Technology Based Business | 25 | 75 | - | 100 |
| Total | | | 100 | 300 | | 400 |

| | | | | | | | | | | |
|----|---|---|-----|---------|-----|-----|----|--|--|--|
| IV | EN1411 Eng Lang. V | 5 | 4 | 3 hours | 20% | 80% | 25 | | | |
| | 1411Addl Lang. IV | 5 | 4 | „ | | | | | | |
| | PY1441Core Course III | 3 | 3 | „ | | | | | | |
| | PY 1442 Core (Pract I) IV | - | 2 3 | „ | | | | | | |
| | MM1431.1 Compl. Course VII | 5 | - 4 | 3 hours | | | | | | |
| | Compl. Course VIII (CH1431.1/ST1431.2/ PCH1431.7/EL1431) | 3 | - 3 | „ | | | | | | |
| | Compl. (Practical) IX (CH1432.1/ST1432.2/ PCH1432.7/EL1432) | - | 2 4 | „ | | | | | | |
| | | | | | | | | | | |
| V | PY1541 Core Course V | 4 | - 4 | 3 hours | 20% | 80% | 18 | | | |
| | PY1542 Core Course VI | 4 | - 4 | „ | | | | | | |
| | PY1543 Core Course VII | 4 | - 4 | „ | | | | | | |
| | PY1544 Core Course VIII | 4 | - 4 | „ | | | | | | |
| | Core (PracticalII) | - | 4 - | - | | | | | | |
| | Open Course (PY1551.1/PY1551.2/ PY1551.3/PY1551.4/ PY1551.5) | 3 | - 2 | 3 hours | | | | | | |
| | Project | - | 2 - | - | | | | | | |
| VI | PY1641 Core Course IX | 4 | - 4 | 3 hours | 20% | 80% | 26 | | | |
| | PY1642 Core Course X | 4 | - 4 | „ | | | | | | |
| | PY1643 Core Course XI | 4 | - 4 | „ | | | | | | |
| | PY1644 Core Course XII | 4 | - 3 | „ | | | | | | |
| | PY1645 Core (Pract II) XIII | - | 2 2 | „ | | | | | | |
| | PY1646 Core (Pract III) XIV | - | 2 3 | „ | | | | | | |
| | Elective Course (PY1661.1/PY1661.2/ PY1661.3/PY1661.4/ PY1661.5) | 3 | - 2 | „ | | | | | | |
| | PY1647 Project and Research Institute/Science Museum | - | 2 4 | - | | | | | | |
| | | | | | | | | | | |

| | | | | | | | | | |
|--------------------|--------|----------------------------|-----------|-----------|-----------|-----|------------|-------------|-------------|
| IV | PH 262 | Advanced Practicals | ... | ... | 4 | 6 | 25 | 75* | 100 |
| | PH 201 | Project | ... | ... | ... | ... | 25 | 75 | 100 |
| | PH 202 | Viva Voce | ... | ... | ... | ... | ... | 100 | 100 |
| | | Total for Semester IV (S4) | 18 | 5 | 7 | ... | 150 | 550 | 700 |
| Grand Total | | | 72 | 20 | 28 | ... | 425 | 1375 | 1800 |

* 10 marks for records

X: E (Electronics), M (Materials Science)

L - Lecture IA - Internal
Assessment

N (Nuclear Physics), S (Space Physics)

T - Tutorial UE - University
Exam

T (Theoretical Physics)

P - Practical

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STRUCTURE OF CORE COURSES

| Sem | Course Code | Course title | Instr.hrs. per week | Credit |
|-----|-------------|--|---------------------|--------|
| I | MM 1141 | Methods of Mathematics | 4 | 4 |
| II | MM 1221 | Foundations of Mathematics | 4 | 3 |
| III | MM 1341 | Elementary Number Theory and Calculus – I | 5 | 4 |
| IV | MM 1441 | Elementary Number Theory and Calculus – II | 5 | 4 |
| V | MM 1541 | Real Analysis – I | 5 | 4 |
| | MM 1542 | Complex Analysis – I | 4 | 3 |
| | MM 1543 | Abstract Algebra – Group Theory | 5 | 4 |
| | MM 1544 | Differential Equations | 3 | 3 |
| | MM 1545 | Mathematics Software – L ^A T _E X & SageMath (Practical Examination Only) | 4 | 3 |
| | MM 1551 | Open Course | 3 | 2 |
| | — | Project preparation - From selecting the topic to presenting the final report | 1 | |
| VI | MM 1641 | Real Analysis – II | 5 | 4 |
| | MM 1642 | Complex Analysis – II | 4 | 3 |
| | MM 1643 | Abstract Algebra – Ring Theory | 4 | 3 |
| | MM 1644 | Linear Algebra | 5 | 4 |
| | MM 1645 | Integral Transforms | 4 | 3 |
| | MM 1651 | Elective Course | 3 | 2 |
| | MM 1646 | Project | | 4 |

STRUCTURE OF OPEN COURSES


| Sem | Course Code | Course title | Instr.hrs. per week | Credit |
|-----|-------------|----------------------|---------------------|--------|
| V | MM 1551.1 | Operations Research | 3 | 2 |
| V | MM 1551.2 | Business Mathematics | 3 | 2 |
| V | MM 1551.3 | Basic Mathematics | 3 | 2 |

KERALA UNIVERSITY SYLLABUS FOR M.Sc. MATHEMATICS SEMESTER PATTERN IN
AFFILIATED COLLEGES 2020 ADMISSION ONWARDS

M.Sc. MATHEMATICS COURSE STRUCTURE & MARK DISTRIBUTION

| Semester | | Title of the paper | Distribution hrs per semester | Instructional hrs./ week | | Dur ESA hrs. | Maximum Marks | | |
|----------|--------|--|-------------------------------|--------------------------|---|--------------|---------------|-------|-------------|
| | | | | L | P | | CA | ESA | Total |
| I | MM 211 | Linear Algebra | 108 | 6 | - | 3 hrs | 25 | 75 | 100 |
| | MM 212 | Real Analysis - I | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 213 | Ordinary Differential Equations | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 214 | Topology - I | 126 | 7 | - | " | 25 | 75 | 100 |
| II | MM 221 | Abstract Algebra | 108 | 6 | - | 3 hrs | 25 | 75 | 100 |
| | MM 222 | Real Analysis-II | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 223 | Topology-II | 126 | 7 | - | " | 25 | 75 | 100 |
| | MM 224 | Partial differential Equations and Calculus of Variation | 108 | 6 | | " | 25 | 75 | 100 |
| III | MM 231 | Complex Analysis | 126 | 7 | - | 3 hrs | 25 | 75 | 100 |
| | MM 232 | Functional Analysis-I | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 233 | Elective-I | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 234 | Elective-II | 108 | 6 | - | " | 25 | 75 | 100 |
| IV | MM 241 | Analytic Number Theory | 126 | 7 | - | 3 hrs | 25 | 75 | 100 |
| | MM 242 | Functional Analysis-II | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 243 | Elective-III | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 244 | Elective-IV | 108 | 6 | - | " | 25 | 75 | 100 |
| | MM 245 | Dissertation/ Project | | | | | | 80+20 | 100 |
| | | Comprehensive Viva | | | | | | | 100 |
| | | GRAND TOTAL | 1800 | | | | | | 1800 |

L: Lecture; P: Practical; CA: Continuous Assessment; ESA: End Semester Examination

| | | | | |
|----------|--|--|-----|-----|
| V | HY1541 | Core V1 -Major trends in Historical thoughts and writings | 4 | 4 |
| | HY1542 | Core V11 -Colonialism and Resistance movements in India | 4 | 4 |
| | HY1543 | Core V111 -History of Modern World – Part II | 3 | 2 |
| | HY1544 | Core 1X -History of Pre- Modern Kerala | 4 | 4 |
| | HY1545 | Core X -Making of Indian Nation | 3 | 2 |
| | HY 1551.1 | Open Courses- Empowerment of Women with special reference to India | | |
| | HY 1551.2 | An Introduction to Archaeology | 3 | 2 |
| HY1551.3 | History of Human Rights Movement. Project/Dissertation | | | |
| | Historical Method-Mechanics Project Writing | 3 | 0 | |
| | Study Tour | | | |
| | Total | | 25 | 20 |
| V1 | HY1641 | Core XI - Making of Modern Kerala | 5 | 4 |
| | HY 1642 | Core XII - Major trends in Indian Historical thought & writings | 5 | 4 |
| | HY1643 | Core XIII - Contemporary India | 5 | 4 |
| | HY1644 | Core XIV - Twentieth Century Revolutions | 4 | 3 |
| | HY1651.1 | Electives Historical Tourism | 3 | 2 |
| | HY1651.2 | Heritage Studies | | |
| | HY 1651.3 | Contemporary World | | |
| | HY1651.4 | Empowerment of Women with special reference to India | | |
| | HY1651.5 | An Introduction to Archaeology | | |
| | HY1651.6 | History of Human Rights Movement. | | |
| HY1651.7 | Environmental History of Modern India | | | |
| HY1645 | Project/Dissertation  | 3 | 4 | |
| | Total | | 25 | 21 |
| | Grand Total | | 150 | 120 |

| Semester | Course Code | Study Components | Instructional Hrs/week | | Credit | Duration of Univ Exam | Evaluation | | Total Credit |
|----------|-------------|--|------------------------|---|--------|-----------------------|------------|-----|--------------|
| | | | T | P | | | CE | ESE | |
| IV | ZO1341 | Core course Practical of ZO1341 | | 2 | | | | | |
| | EN1411 | English V | 5 | | 4 | 3 Hrs | 20% | 80% | 29 |
| | EN1411 | Additional Language II | 5 | | 4 | 3 Hrs | 20% | 80% | |
| | CH1431.4 | Complementary course VII | 3 | | 3 | 3 Hrs | 20% | 80% | |
| | CH1432.4 | Complementary course Practical of CH1131.4, CH1231.4, CH1331.4, CH1431.4 | | 2 | 4 | 3 Hrs | 20% | 80% | |
| | BO1431 | Complementary course VIII | 3 | | 3 | 3 Hrs | 20% | 80% | |
| | BO1432 | Complementary course Practical of BO1131, BO1231, BO1331, BO1431 | | 2 | 4 | 3 Hrs | 20% | 80% | |
| | ZO1441 | Core course III | 3 | | 3 | 3 Hrs | 20% | 80% | |
| | ZO1442 | Core course IV Practical of ZO1141, ZO1241, ZO1341 | | 2 | 4 | 3 Hrs | 20% | 80% | |
| | V | ZO1541 | Core Course V | 5 | | 4 | 3 Hrs | 20% | 80% |
| ZO1542 | | Core Course VI | 4 | | 4 | 3 Hrs | 20% | 80% | |
| ZO1543 | | Core Course VII | 4 | | 4 | 3 Hrs | 20% | 80% | |
| ZO1551 | | Open Course I | 3 | | 2 | 3 Hrs | 20% | 80% | |
| | | Core Course Practical of ZO1441 | | 6 | | | | | |
| | | Project | | 2 | | 3 Hrs | 20% | 80% | |
| | | Field study/Study tour | | 1 | | | | | |
| VI | ZO1641 | Core Course VIII | 5 | | 4 | 3 Hrs | 20% | 80% | 27 |
| | ZO1642 | Core Course IX | 4 | | 4 | 3 Hrs | 20% | 80% | |
| | ZO1643 | Core Course X | 4 | | 3 | 3 Hrs | 20% | 80% | |
| | ZO1651 | Elective Subject | 3 | | 2 | 3 Hrs | 20% | 80% | |
| | ZO1644 | Core Course XI Practical II of ZO1541, ZO1542, ZO1543, ZO1341 | | 2 | 4 | | | | |
| | ZO1645 | Core Course XII Practical III of ZO1641, ZO1341, ZO1541 | | 2 | 3 | 3 Hrs | 20% | 80% | |
| | ZO1646 | Core Course XIII Practical IV of ZO1642, 1643, 1441 | | 2 | 3 | | | | |
| | ZO1647 | Project Field Study & Study tour | | 3 | 4 | 3 Hrs | 20% | 80% | |

| | | | | |
|-----|----|--|----------|---|
| 3 ✓ | 4 | Core X International Economics | EC1545 | ✓ |
| 2 | 3 | Open Course I – Introductory Economics ✓ | EC1551.1 | |
| 2 ✓ | 3 | Human Resource Management | EC1551.2 | ✓ |
| 2 | 3 | Indian Economy Since Liberalisation ✓ | EC1551.3 | |
| - | 3 | Project / Dissertation | | |
| 20 | 25 | Total | | |

Semester VI

| Credits | Instructional hours | Course Title | Course No | Sem No |
|---------|---------------------|--|-----------|--------|
| 4 ✓ | 5 | Core XI Indian Economy | EC1641 | VI |
| 4 ✓ | 4 | Core XII Banking and Finance | EC1642 | |
| 4 ✓ | 5 | Core XII Public Economics | EC1643 | ✓ |
| 3 ✓ | 4 | Core XII Environment Economics and Disaster Management | EC1644 | ✓ |
| 2 ✓ | 4 | Elective : Kerala Economy | EC1661.1 | ✓ |
| 2 | 4 | Mathematical Economics | 1661.2 | |
| 2 | 4 | Introductory Econometrics | 1661.3 | |
| 2 | 4 | History of Economic Thought | 1661.4 | |
| 3 ✓ | 3 | Project/Dissertation | EC 1645 | ✓ |
| 21 | 25 | | | |
| 120 | 150 | Grand Total | | |

:Complementary Courses Offered

- Complementary I ✓
 EC 1131 Foundations of Economic Theory
 Complementary III ✓
 EC 1231 Money and Banking
 Complementary V ✓
 EC 1331 Introduction to International trade and Public Economics
 Complementary VII ✓
 EC 1431 Indian Economy Since Independence

| | | | | | | | |
|--|--------------------------------------|---|---|----------------------------------|----|----|-------------|
| CH 214 | Inorganic Chemistry Practicals II | | 3 | 6 | 25 | 75 | 100 |
| CH 215 | Organic Chemistry Practicals II | | 3 | 6 | 25 | 75 | 100 |
| CH 216 | Physical Chemistry Practicals II | | 4 | 6 | 25 | 75 | 100 |
| Total marks for Semester II | | | | | | | 600 |
| *Distribution of teaching hours/week: Theory–15 hours, Practical’s –10 hours | | | | | | | |
| SEMESTER III* | | | | | | | |
| CH 231 | Inorganic Chemistry III | 5 | | 3 | 25 | 75 | 100 |
| CH 232 | Organic Chemistry III | 5 | | 3 | 25 | 75 | 100 |
| CH 233 | Physical Chemistry III | 5 | | 3 | 25 | 75 | 100 |
| CH 234 | Inorganic Chemistry Practicals II | | 3 | (To be continued in Semester IV) | | | |
| CH 235 | Organic Chemistry Practicals II | | 3 | (To be continued in Semester IV) | | | |
| CH 236 | Physical Chemistry Practicals II | | 4 | (To be continued in Semester IV) | | | |
| Total marks for Semester III | | | | | | | 300 |
| *Distribution of teaching hours/week: Theory–15 hours, Practical’s –10 hours | | | | | | | |
| SEMESTER IV* | | | | | | | |
| CH 241 | Chemistry of Advanced Materials | 5 | | 3 | 25 | 75 | 100 |
| CH 242 (a) | Inorganic Chemistry IV | 5 | | 3 | 25 | 75 | 100 |
| CH 242 (b) | Organic Chemistry IV | | | | | | |
| CH 242 (c) | Physical Chemistry IV | | | | | | |
| CH 234 | Inorganic Chemistry Practicals II | | 3 | 6 | 25 | 75 | 100 |
| CH 235 | Organic Chemistry Practicals II | | 3 | 6 | 25 | 75 | 100 |
| CH 236 | Physical Chemistry Practicals II | | 4 | 6 | 25 | 75 | 100 |
| CH 243 (a) | Dissertation** | | | | | 50 | 50 |
| CH 243 (b) | Visit to R&D Centre | | | | | 5 | 5 |
| Comprehensive viva-voce | | | | | | 45 | 45 |
| Total marks for Semester IV | | | | | | | 600 |
| Grand Total (for semesters I – IV) | | | | | | | 1800 |
| *Distribution of teaching hours/week: Theory–10 hours, Practical’s –10 hours , 5 hours for discussion on project | | | | | | | |

** 10 marks out of the 50 marks for dissertation will be for dissertation viva-voce.

The remaining 40 marks is to be distributed as follows_

Introduction to the work/ Statement of the Problem – 5, Review of Literature – 5
Materials and Methods – 5, Results and Discussion – 15, Language and style of presentation – 2, References – 3, Quality and Innovation – 5.

| | | | | | | | | | |
|---|---|---|---|---|--------------|----|-----|----|--|
| | | | | | | | | | |
| SEMESTER III | | | | | | | | | |
| EN1311 | EnglishIV | 5 | | 4 | 3hrs | 20 | 80 | 18 | |
| 1311 | Additional LanguageIII | 5 | | 4 | 3hrs | 20 | 80 | | |
| MM1331.2 | Complementary CourseV | 5 | | 4 | 3hrs | 20 | 80 | | |
| PY1331.2 | Complementary CourseVI | 3 | | 3 | 3hrs | 20 | 80 | | |
| | Complementary CourseLabof PY1331.2 | | 2 | - | - | - | - | | |
| CH1341 | CoreCourseII | 3 | | 3 | 3hrs | 20 | 80 | | |
| | Core Course Lab I of CH1341 | | 2 | - | - | - | - | | |
| SEMESTER IV | | | | | | | | | |
| EN1411 | EnglishV | 5 | | 4 | 3hrs | 20 | 80 | 24 | |
| 1411 | Additional LanguageIV | 5 | | 4 | 3hrs | 20 | 80 | | |
| MM1431.2 | Complementary CourseVII | 5 | | 4 | 3hrs | 20 | 80 | | |
| PY1431.2 | Complementary CourseVIII | 3 | 2 | 3 | 3hrs | 20 | 80 | | |
| | Complementary Course Lab of PY1131.2 PY1231.2 PY1331.2 & PY1331.2 | | | 4 | 3hrs | 20 | 80 | | |
| CH1441 | CoreCourseIII | 3 | | 3 | 3hrs | 20 | 80 | | |
| CH1442 | CoreCourseIV-Lab I ofCH1141 | | 2 | 2 | 3hrs | 20 | 80 | | |
| SEMESTER V | | | | | | | | | |
| CH1541 | CoreCourseV | 3 | | 4 | 3hrs | 20 | 80 | 19 | |
| CH1542 | CoreCourseVI | 4 | | 4 | 3hrs | 20 | 80 | | |
| CH1543 | CoreCourseVII | 4 | | 4 | 3hrs | 20 | 80 | | |
| CH1544 | CoreCourse VIII Lab II | | 5 | 3 | 6hrs | 20 | 80 | | |
| CH1545 | CoreCourseIX Lab III | | 4 | 2 | | 20 | 80 | | |
| 1551 | OpenCourse Project | 3 | | 2 | 3hrs | 20 | 80 | | |
| | | | 2 | - | - | - | - | | |
| SEMESTER VI | | | | | | | | | |
| CH1641 | CoreCourseX | 3 | | 4 | 3hrs | 20 | 80 | 23 | |
| CH1642 | CoreCourseXI | 4 | | 4 | 3hrs | 20 | 80 | | |
| CH1643 | CoreCourseXII | 4 | | 4 | 3hrs | 20 | 80 | | |
| CH1644 | CoreCourseXIII Lab IV | | | 3 | 6hrs | 20 | 80 | | |
| CH1645 | CoreCourseXIV Lab V | | | 2 | | 20 | 80 | | |
| CH1661.1/ CH1661.2/ CH1661.3/ CH1661.4 | ElectiveCourse | 3 | | 2 | 3hrs | 20 | 80 | | |
| CH1646 | ProjectandFactory Visit | | 3 | 4 | Vivavo ce | - | 100 | | |

CE -Continuous Evaluation, ESE- End Semester Evaluation

Table 8. Distribution of Contact Hours and Credits
(CORE, FOUNDATION & OPEN COURSES, PROJECT/DISSERTATION)

| Course Code | Course Title | Semester I | | | Semester II | | | Semester III | | | Semester IV | | |
|----------------------------------|--|---------------|----|--------|---------------|---|--------|---------------|---|--------|---------------|---|--------|
| | | Contact hours | | Credit | Contact hours | | Credit | Contact hours | | Credit | Contact hours | | Credit |
| | | T | P | | T | P | | T | P | | T | P | |
| BO1141 | Angiosperm anatomy, Reproductive Botany & Palynology | 2 | 2 | 3 | | | | | | | | | |
| BO1221 | Methodology & Perspectives in Plant Science | | | | 2 | 2 | 3 | | | | | | |
| BO1341 | Microbiology, Phycology, Mycology Lichenology & Plant Pathology | | | | | | | 3 | 2 | 3 | | | |
| BO1441 | Bryology, Pteridology, Gymnosperms & Paleobotany | | | | | | | | | | 3 | 2 | 3 |
| BO1541 | Angiosperm Morphology Systematic botany, Economic botany Ethno botany & Pharmacognosy | | | | | | | | | | | | |
| BO1542 | Environmental Studies & Phytogeography | | | | | | | | | | | | |
| BO1543 | Cell Biology, Genetics & Evolutionary Biology | | | | | | | | | | | | |
| BO1544 | Practical-I (BO1141, BO1221) | | 2* | | 2* | | | | | | | | |
| BO1545 | Practical-II (BO1341 & BO1441) | | | | | | | *2 | | | 2* | | |
| BO1551.1 BO1551.2 BO1551.3 | Horticulture, Mushroom cultivation & Marketing Forestry | | | | | | | | | | | | |
| BO1641 | Plant Physiology & Biochemistry | | | | | | | | | | | | |
| BO1642 | Molecular Biology, General informatics and Bioinformatics | | | | | | | | | | | | |
| BO1643 | Plant breeding, Horticulture& Research methodology | | | | | | | | | | | | |
| BO1644 | Practical-III (BO1541 & BO1542) | | | | | | | | | | | | |
| BO1645 | Practical-IV (BO1543, BO1641, BO1642, 1643) | | | | | | | | | | | | |
| BO1651 | Biotechnology & Nano biotechnology | | | | | | | | | | | | |
| BO1646 | Project report, Tour Diary, Viva-Voce | | | | | | | | | | | | |
| | Total | | | | | | | | | | | | |

L = Lecture P = Practical *Practical hour already distributed in the semester concerned

UNIVERSITY OF KERALA

M.Sc. Degree in Botany (Semester System)

Revised Course structure

| Semester | Paper Code | Title of the Paper | Hours/semester | Hours / week | | ESA hours | Maximum Marks | | | |
|------------------------------|-------------------------------|---|--|--------------|-----------|-----------|---------------|-------------|-------------|------------|
| | | | | L | P | | CA | ESA | Total | |
| I | BO 211 | Phycology, Mycology, Microbiology & Plant Pathology | 108 | 6 | 2 | 3 | 25 | 75 | 100 | |
| | BO212 | Bryophyta, Pteridophyta & Gymnosperms | 108 | 6 | 2 | 3 | 25 | 75 | 100 | |
| | BO213 | Histology, Reproductive Biology, Microtechnique & Histochemistry | 108 | 6 | 3 | 3 | 25 | 75 | 100 | |
| | BO214 | Practical I | 126 | | 7 | 4 | 25* | 75* | Δ | |
| | Total for Semester I | | | 450 | 18 | 7 | 13 | 75 | 225 | 300 |
| | II | BO 221 | Taxonomy of Angiosperms, Economic Botany & Ethnobotany | 108 | 6 | 2.5 | 3 | 25 | 75 | 100 |
| BO 222 | | Environmental Biology, Forest Botany, Phytogeography & Conservation Biology | 108 | 6 | 2 | 3 | 25 | 75 | 100 | |
| BO 223 | | Cell Biology, Genetics & Evolution | 108 | 6 | 2.5 | 3 | 25 | 75 | 100 | |
| | | Practical I | | | | | | | 100* | |
| BO 224 | | Practical II | 126 | | 7 | 4 | 25 | 75 | 100 | |
| BO 225 | | Submission I* (I A+1B) | | | | | | 25+25 | 50 | |
| Total for Semester II | | | 450 | 18 | 7 | 13 | 100 | 350 | 550 | |
| III | BO 231 | Plant Breeding, Horticulture & Biostatistics | 108 | 6 | 1.5 | 3 | 25 | 75 | 100 | |
| | BO 232 | Biochemistry, Plant Physiology & Research Methodology | 108 | 6 | 3 | 3 | 25 | 75 | 100 | |
| | BO 233 | Molecular Biology, Immunology & Plant Biotechnology | 108 | 6 | 2.5 | 3 | 25 | 75 | 100 | |
| | BO 234 | Practical III | 126 | | 7 | 4 | 25** | 75** | Δ Δ | |
| | Total for Semester III | | | 450 | 18 | 7 | 13 | 75 | 225 | 300 |
| IV | BO 241 | Special Paper –I Bioinformatics & Biophysics | 144 | 8 | 2 | 3 | 25 | 75 | 100 | |
| | BO 242 | Special Paper –II Elective | 144 | 8 | 5 | 3 | 25 | 75 | 100 | |
| | | Practical III | | | | | | | 100** | |
| | BO 243 | Practical IV | 126 | | 7 | 4 | 25 | 75 | 100 | |
| | BO 244 | Dissertation | 36 | 2 | | | | 100 | 100 | |
| | BO 245 | Submissions II** | | | | | | 50 | 50 | |
| | BO 246 | Comprehensive Viva Voce | | | | | 25 | 75 | 100 | |
| | Total for Semester IV | | | 450 | 18 | 7 | 10 | 100 | 450 | 650 |
| Grand Total | | | | | | | 400 | 1400 | 1800 | |

L-Lecture, P-practical, ESA-End Semester Assessment, CA-Continuous Assessment (Internal)

Δ The S1 practical examination marks (25*+75*=100*) will be awarded only during II semester practical Examinations.

Δ Δ The S3 practical examination mark (25**+75**=100**) will be awarded only during IV semester practical Examinations.

* Evaluation of the Submission 1(A) will be along with Practical I. Evaluation of the Submission 1(B) will be along with Practical II.

** The evaluation of the Submission II will be along with the Viva Voce at the end of 4th Semester.

Table 1. General Structure of the First Degree Programme in Microbiology

| Sem No | Course Code | Course Title | Instructional Hours/week | | Credits | Uty Exam Duration | Evaluation | | Total Credits |
|----------|----------------------------------|---|--------------------------|------|---------|-------------------|------------|----------|---------------|
| | | | L | P | | | Internal | Uty Exam | |
| I | EN 1111 | English Language I | 5 | - | 4 | 3 | 25% | 75 % | 16 |
| |1111 | Additional Language I | 4 | - | 3 | 3 | | | |
| | EN1121 | Foundation Course I | 4 | - | 2 | 3 | | | |
| | MB1141 | Core Course I | 3 | 1 | 3 | 3 | | | |
| | CH1131 | Complementary Course I* | 2 | 2 | 2 | 3 | | | |
| | BT 1131 | Complementary Course II** | 2 | 2 | 2 | 3 | | | |
| II | EN 1211 | English Language II | 5 | - | 4 | 3 | 25% | 75 % | 17 |
| | EN1212 | English Language III | 4 | - | 3 | 3 | | | |
| | 1211 | Additional Language II | 4 | - | 3 | 3 | | | |
| | MB 1221 | Foundation Course II | 3 | 1 | 3 | 3 | | | |
| | CH 1231 | Complementary Course III | 2 | 2 | 2 | 3 | | | |
| | BT 1231 | Complementary Course IV | 2 | 2 | 2 | 3 | | | |
| III | EN 1311 | English Language IV | 5 | - | 4 | 3 | 25% | 75 % | 17 |
| | 1311 | Additional Language III | 5 | - | 4 | 3 | | | |
| | MB 1341 | Core Course II | 3 | 2 | 3 | 3 | | | |
| | CH1331 | Complementary Course V | 3 | 2 | 3 | 3 | | | |
| | BT 1331 | Complementary Course VI | 3 | 2 | 3 | 3 | | | |
| | IV | EN1411 | English Language V | 5 | - | 4 | | | |
| 1411 | | Additional Language IV | 5 | - | 4 | 3 | | | |
| MB1441 | | Core Course III | 3 | 2 | 3 | 3 | | | |
| CH1431 | | Complementary Course VII | 3 | 2 | 3 | 3 | | | |
| BT1431 | | Complementary Course VIII (CH/BT) | 3 | 2 | 3 | 3 | | | |
| CH1432 | | Complementary Course IX (Practical) | - | (8)* | 4 | 3 | | | |
| BT1432 | | Complementary Course X. (Chemistry/Biotechnology Practical) | - | (8)* | 4 | 3 | | | |
| V | MB1541 | Core Course IV | 4 | 3 | 4 | 3 | 25% | 75 % | 20 |
| | MB1542 | Core Course V | 4 | 2 | 3 | 3 | | | |
| | MB1543 | Core Course VI | 5 | 2 | 4 | 3 | | | |
| | MB1544 | Core (Practical- 1) VII | - | (5)* | 3 | 3 | | | |
| | MB1545 | Core (Practical- 2) VIII | - | (5)* | 4 | 3 | | | |
| | | Open Course I | 3 | - | 2 | 3 | | | |
| | MB1551.1 | Mushroom Culture | | | | | | | |
| | MB1551.2 | Microbial Waste Management | | | | | | | |
| MB1551.3 | Biofertilizer Technology Project | - | 2 | - | | | | | |
| VI | MB1641 | Core Course IX | 4 | 3 | 4 | 3 | 25% | 75 % | 75 |
| | MB1642 | Core Course X | 4 | 2 | 4 | 3 | | | |
| | MB1643 | Core Course XI | 4 | 2 | 4 | 3 | | | |
| | MB1644 | Core (Practical 3) XII | - | (5)* | 3 | 3 | | | |
| | MB1645 | Core (Practical 4) XIII | - | (4)* | 4 | 3 | | | |
| | MB1661 | Elective Course | 3 | - | 2 | 3 | | | |
| | MB1646 | Project | - | 3 | 4 | 3 | | | |
| | | | | | | | | | 120 |

* CH-Chemistry –Same syllabus of complementary Chemistry offered for Botany/Zoology may be followed

** BT-Biotechnology- New syllabus