SYLLABUS FOR

M.PHIL. ELECTRONICS & COMMUNICATION

(SEMESTER PATTERN)

(For Candidates admitted in the Colleges affiliated to Periyar University from 2017-2018 onwards)
REGULATIONS

1. OBJECTIVE OF THE PROGRAMME:

It is a pre-research degree in Electronics & Communication for Post Graduate in Electronics & Communication /Applied Electronics/ Electronics Instrumentation /Physics/ Computer Science /Telecommunication or any other equivalent programme recognized by this University. It is aimed to explore the various research areas in Electronics & Communication and Applications.

2. ELIGIBILITY:

Candidates who have qualified their Postgraduate degree in Electronics & Communication /Applied Electronics/ Electronics Instrumentation /Physics/ Computer Science /Telecommunication or any other University recognized by the Syndicate as equivalent thereto shall be eligible to register for the Degree of Master of Philosophy (M.Phil.) in Electronics & Communication and undergo the prescribed course of study in an approved institution or Department of this University. Candidates who have qualified their postgraduate degree on or after 1 January 1991 shall be required to have obtained a minimum of 55% of marks in their respective postgraduate degrees to become eligible to register for the Degree of Master of Philosophy (M.Phil.) and undergo the prescribed course of study in an approved institution or department of this University. For the candidates belonging to SC/ST community and those who have qualified for the Master's degree before 01.01.1991 the minimum eligibility marks shall be 50% in their Master's Degree.

3. DURATION:

The M.Phil. Programme spans over a period of one year from the commencement of the programme comprising of two semesters.

4. COURSE OF STUDY:

There are three courses for semester I and Dissertation and viva-voce for semester II. The third course in the first semester shall be a specialization related to the Dissertation. The student in consultation with the research supervisor must select the third course and the research supervisor should frame the syllabus.
5. COURSE OF STUDY AND SCHEME OF EXAMINATION

<table>
<thead>
<tr>
<th>Part</th>
<th>Paper Code</th>
<th>Subject Title</th>
<th>Hrs./Week</th>
<th>Credits</th>
<th>University Examination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Internal</td>
<td>External</td>
<td>Total</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(25%)</td>
<td>(75%)</td>
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</tr>
<tr>
<td>I</td>
<td>Paper I</td>
<td>Research Methodology</td>
<td>4</td>
<td>4</td>
<td>25</td>
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<tr>
<td>I</td>
<td>Paper II</td>
<td>Advanced Electronics</td>
<td>4</td>
<td>4</td>
<td>25</td>
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<tr>
<td>I</td>
<td>Paper III</td>
<td>Special Paper (Guide Paper)</td>
<td>4</td>
<td>4</td>
<td>25</td>
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<tr>
<td>II</td>
<td>Paper IV</td>
<td>Dissertation and Viva voce</td>
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<td>12</td>
<td>50</td>
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Evaluation by external examiner 100 Marks * Joint viva voce 50 Marks
(Research supervisor 25 Marks + External 25 Marks)

The distribution of marks for Sessional Assessment and /External Examination will be 25% and 75% respectively. The Sessional Assessment is distributed to tests, seminar and attendance as 10%, 10% and 5% respectively.

The Examination for courses I, II and III shall be held at the end of the first semester.

The Examination for specialization course will be conducted by the controller of examination along with courses I and II. Two different sets of question papers should be sent to the controller of examinations along with the syllabus for specialization course by the respective research supervisors.

Semester II - Dissertation and Viva Voce

The area of the Dissertation, which should be relevant to the specialization course, shall be intimated to the office of the controller of examinations within a month from the date of the commencement of the second semester. Candidates shall submit two copies of the Dissertation to the controller of examination through the Supervisor and Head of the Department concerned at the end of the second semester. The supervisor should submit a panel of four examiners along with the dissertation
for the evaluation of specialization course, dissertation and to conduct the viva voce. The respective supervisors shall be an internal examiner. The viva board should consist of the research supervisor, head of the department and external examiner.

The Examiners who value the Dissertation shall report on the merit of Candidates as “Highly Commended” (75% and Above) or “Commended” (50% and Above and Below 75%) or “Not Commended” (Below 50%).

Submission or re-submission of the dissertation will be allowed twice a year.

6. PASSING MINIMUM:

A Candidate shall be declared to have passed if he/she secures not less than 50% of the marks in each course.

7. RESTRICTION IN NUMBER OF CHANCES:

No Candidate shall be permitted to reappear for the written examination in any course on more than two occasions or to resubmit a Dissertation more than once. Candidates shall have to Qualify for the Degree passing all the theory courses and Dissertation within a period of four years from the date of commencement of the programme.

8. CONFERMENT OF DEGREE:

No Candidate shall be Eligible for conferment of the M.Phil Degree unless he/she is declared to have passed all the courses of the Examination as per the Regulations.

9. ELIGIBILITY FOR RESEARCH SUPERVISORS CONDUCTING THE M.PHI. PROGRAMME:

As per the regulations of Periyar University.

QUESTION PATTERN

Max. Marks : 75

PART – A

5 X 5 = 25 Marks (Either or Choice)

PART – B

5 X 10 = 50 Marks (Either or Choice)
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PART I

PAPER I - RESEARCH METHODOLOGY

UNIT I: HIGHER EDUCATION AND LEARNING


UNIT II: METHODS AND TECHNIQUES OF TEACHING


UNIT III: RESEARCH METHODOLOGY


UNIT IV: RESEARCH DESIGN


UNIT V: SCIENTIFIC PAPERS, PRESENTATIONS AND REPORT WRITING


REFERENCE BOOK


UNIT I Digital Communication

UNIT II CMOS VLSI Design

UNIT III MEMS & Microsystems

UNIT IV Embedded Systems

8051 Micro controller architecture – Assembly language programming for 8051 micro controller family- Introduction to ARM processor.

UNIT V Thin Film Technology

TEXT BOOKS:


5. David E. Simon, An Embedded software primer Pearson Education.


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PART I

PAPER III- SPECIAL PAPER

(Syllabus will be framed by Guide)