CIRCULAR

Sub: PG Courses offered during I & II Semester of 2019-20-reg.

The following courses are offered for PG Programme(s) for the different Departments of UAS, Dharwad for the I & II Semester 2019-20. All the concerned PG students are directed to note the scheduled courses in the respective Departments.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABM 507</td>
<td>Marketing Management</td>
<td>3+0</td>
<td>Dr. R. A. Yeledhali</td>
</tr>
<tr>
<td>ABM 508</td>
<td>Human Resource Management</td>
<td>2+0</td>
<td>Dr. J. S. Sonnad</td>
</tr>
<tr>
<td>ABM 509</td>
<td>Financial Management</td>
<td>1+1</td>
<td>Dr. S. B. Mahajanshetti</td>
</tr>
<tr>
<td>ABM 511</td>
<td>Research Methodology in Business Management</td>
<td>1+1</td>
<td>Dr. L. B. Kunnal (Rtd.)</td>
</tr>
<tr>
<td>ABM 581</td>
<td>Master’s Inplant Training</td>
<td>0+3</td>
<td>Dr. R. A. Yeledhali</td>
</tr>
<tr>
<td>ABM 602</td>
<td>Advances in Rural Marketing</td>
<td>2+0</td>
<td>Dr. R. A. Yeledhali</td>
</tr>
<tr>
<td>ABM 604</td>
<td>Management of Agribusiness Cooperatives</td>
<td>2+0</td>
<td>Dr. A. D. Naik</td>
</tr>
<tr>
<td>ABM 606</td>
<td>Agri Supply Chain Management</td>
<td>1+1</td>
<td>Dr. R. A. Yeledhali</td>
</tr>
<tr>
<td>ABM 607</td>
<td>Advanced Quantitative Analysis for Business Management</td>
<td>2+1</td>
<td>Dr. S. B. Mahajanshetti</td>
</tr>
<tr>
<td>ABM 501</td>
<td>Principles of Management and Organizational Behaviour</td>
<td>2+1</td>
<td>Dr. R. A. Yeledhali</td>
</tr>
<tr>
<td>ABM 503</td>
<td>Managerial Economics</td>
<td>3+0</td>
<td>Dr. S.B. Mahajanshetti</td>
</tr>
<tr>
<td>ABM 504</td>
<td>Managerial Accounting and Control</td>
<td>1+1</td>
<td>Smt. Manjula Hadapad</td>
</tr>
<tr>
<td>ABM 505 / AEX 502</td>
<td>Communication for Management and Business</td>
<td>2+1</td>
<td>Dr.Nagaratna Biradar</td>
</tr>
<tr>
<td>ABM 601</td>
<td>Commodity Future Trading</td>
<td>2+0</td>
<td>Dr. D. H. Mitrannavar</td>
</tr>
<tr>
<td>ABM 605</td>
<td>Advances in Food Retail Management</td>
<td>1+1</td>
<td>Dr. C. Murthy</td>
</tr>
</tbody>
</table>

AGRICULTURAL ECONOMICS

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 501</td>
<td>Micro Economic Theory and Applications</td>
<td>2+0</td>
<td>Dr. Mahantesh Nayak</td>
</tr>
<tr>
<td>AEC 506</td>
<td>Research Methodology in Social Sciences</td>
<td>1+1</td>
<td>Dr. L. B. Kunnal (Rtd.)</td>
</tr>
<tr>
<td>AEC 508</td>
<td>Linear Programming</td>
<td>1+1</td>
<td>Dr. H. Basavaraja</td>
</tr>
<tr>
<td>AEC 509</td>
<td>Agricultural Finance and Project Management</td>
<td>2+1</td>
<td>Dr. S. S. Guledgudda / Dr. G. N. Kulkarni</td>
</tr>
<tr>
<td>AEC 511</td>
<td>Agricultural Development and Policy Analysis (Advantage)</td>
<td>2+0</td>
<td>Dr. B. L. Patil</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>AEC 601</td>
<td>Advanced Micro-Economic Analysis</td>
<td>1+1</td>
<td>Dr. B. K. Naik</td>
</tr>
<tr>
<td>AEC 602</td>
<td>Advanced Macro Economic Analysis</td>
<td>2+0</td>
<td>Dr. V. R. Kiresur</td>
</tr>
<tr>
<td><strong>II SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEC 502</td>
<td>Macro Economics and Policy</td>
<td>2+0</td>
<td>Dr. S. S. Guledagudda</td>
</tr>
<tr>
<td>AEC 504</td>
<td>Agricultural Production Economics</td>
<td>1+1</td>
<td>Dr. L. B. Kunnal (Rtd)</td>
</tr>
<tr>
<td>AEC 507</td>
<td>Econometrics</td>
<td>2+1</td>
<td>Dr. B. K. Naik</td>
</tr>
<tr>
<td>AEC 516 / AEC 607</td>
<td>Commodity Future Trading</td>
<td>2+0</td>
<td>Dr. Mahantesh Nayak</td>
</tr>
<tr>
<td>AEC 603</td>
<td>Advanced Econometrics</td>
<td>2+1</td>
<td>Dr. H. Basavaraja</td>
</tr>
<tr>
<td>AEC 604</td>
<td>Advanced Production Economics</td>
<td>2+1</td>
<td>Dr. V. R. Kiresur</td>
</tr>
<tr>
<td>AEC 609</td>
<td>Environmental Economics</td>
<td>2+1</td>
<td>Dr. B. L. Patil</td>
</tr>
</tbody>
</table>

**AGRICULTURAL ENTOMOLOGY**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENT 501</td>
<td>Insect Morphology</td>
<td>1+1</td>
<td>Dr. D. N. Kambrekar</td>
</tr>
<tr>
<td>ENT 505</td>
<td>Insect Ecology</td>
<td>1+1</td>
<td>Dr. A. S. Vastrad</td>
</tr>
<tr>
<td>ENT 507</td>
<td>Biological Control of Crop Pests &amp; Weeds</td>
<td>1+1</td>
<td>Dr. C. P. Mallapur and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. D. N. Kambrekar</td>
</tr>
<tr>
<td>ENT 510</td>
<td>Principles of Integrated Pest Management</td>
<td>1+1</td>
<td>Dr. S. B. Patil</td>
</tr>
<tr>
<td>ENT 511</td>
<td>Pests of Field Crops</td>
<td>1+1</td>
<td>Dr. R. S. Giraddi and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dr. R. A. Baliwal</td>
</tr>
<tr>
<td>ENT 513</td>
<td>Storage Entomology (Once in Two years)</td>
<td>1+1</td>
<td>Dr. Rohini Sugandhi</td>
</tr>
<tr>
<td>ENT 518</td>
<td>Techniques in Entomology</td>
<td>0+1</td>
<td>Dr. P. S. Tippannavar</td>
</tr>
<tr>
<td>ENT 520</td>
<td>Plant Quarantine</td>
<td>2+0</td>
<td>Dr. P. S. Hugar</td>
</tr>
<tr>
<td>ENT 604</td>
<td>Advanced Insect Ecology (Once in two years)</td>
<td>1+1</td>
<td>Dr. M. G. Hegde</td>
</tr>
<tr>
<td>ENT 611</td>
<td>Molecular Approaches in Entomological Research</td>
<td>1+1</td>
<td>Dr. Ravikumar Hosamani</td>
</tr>
<tr>
<td><strong>II SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENT 502</td>
<td>Insect Anatomy, Physiology and Nutrition</td>
<td>2+1</td>
<td>Dr. M. G. Hegde</td>
</tr>
<tr>
<td>ENT 504</td>
<td>Classification of Insects</td>
<td>2+1</td>
<td>Dr. Subhash Kanadakoor</td>
</tr>
<tr>
<td>ENT 508</td>
<td>Toxicology of Insecticides</td>
<td>2+1</td>
<td>Dr. Guruprasad G. S.</td>
</tr>
<tr>
<td>ENT 605</td>
<td>Insect Behaviour</td>
<td>1+1</td>
<td>Dr. A. S. Vastrad</td>
</tr>
<tr>
<td>ENT 606</td>
<td>Recent Trends in Biological Control</td>
<td>1+1</td>
<td>Dr. C.P. Mallapur</td>
</tr>
<tr>
<td>ENT 612</td>
<td>Advanced Integrated Pest Management</td>
<td>2+0</td>
<td>Dr. S. S. Udikeri</td>
</tr>
</tbody>
</table>

**AGRICULTURAL EXTENSION EDUCATION**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEX 501</td>
<td>Development Perspectives of Extension Education</td>
<td>1+1</td>
<td>Dr. N. Manjula</td>
</tr>
<tr>
<td>AEX 503</td>
<td>Diffusion and Adoption of Innovations</td>
<td>2+1</td>
<td>Dr. S. V. Halakatti</td>
</tr>
<tr>
<td>AEX 504</td>
<td>Research Methods in Behavioural Sciences</td>
<td>2+1</td>
<td>Dr. A. Bheemappa</td>
</tr>
<tr>
<td>AEX 506</td>
<td>Entrepreneurship Development and Management in Extension</td>
<td>2+1</td>
<td>Dr. S. S. Dolli</td>
</tr>
<tr>
<td>AEX 507</td>
<td>Human Resource Development</td>
<td>2+1</td>
<td>Dr. L. Manjunath (E. Scientist)</td>
</tr>
<tr>
<td>AEX 601</td>
<td>Advances in Agricultural Extension</td>
<td>2+1</td>
<td>Dr. J.G. Angadi</td>
</tr>
<tr>
<td>AEX 603</td>
<td>Advances in Training Technology</td>
<td>2+1</td>
<td>Dr. K. V. Natikar</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------------------------------------------------</td>
<td>--------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>AEX 502</td>
<td>Development Communication and Information Management</td>
<td>2+1</td>
<td>Dr. Nagaratna Biradar</td>
</tr>
<tr>
<td>AEX 505</td>
<td>e-Extension</td>
<td>2+1</td>
<td>Dr. A. Bheemappa</td>
</tr>
<tr>
<td>AEX 602</td>
<td>Advanced Design and Techniques in Social Science Research</td>
<td>2+1</td>
<td>Dr. J. G. Angadi</td>
</tr>
<tr>
<td>AEX 604</td>
<td>Organizational Development</td>
<td>2+1</td>
<td>Dr. S. S. Dolli</td>
</tr>
<tr>
<td>AEX 605</td>
<td>Advanced Instructional Technology</td>
<td>2+1</td>
<td>Dr. S. V. Halakatti</td>
</tr>
<tr>
<td></td>
<td><strong>AGRICULTURAL METEOROLOGY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGM 501</td>
<td>Fundamentals of Meteorology and Climatology</td>
<td>2+1</td>
<td>Dr. K. G.Sumesh</td>
</tr>
<tr>
<td>AGM 502</td>
<td>Fundamentals of Agricultural Meteorology and Instrumentation</td>
<td>2+2</td>
<td>Dr. R.H. Patil</td>
</tr>
<tr>
<td>AGM 503</td>
<td>Micrometeorology</td>
<td>2+1</td>
<td>Dr. K. G.Sumesh</td>
</tr>
<tr>
<td>AGM 511</td>
<td>Climate change and sustainable development</td>
<td>2+0</td>
<td>Dr. R.H. Patil</td>
</tr>
<tr>
<td></td>
<td><strong>II SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGM 504</td>
<td>Weather Forecasting and Agromet Advisories</td>
<td>1+1</td>
<td>Dr. K. G.Sumesh</td>
</tr>
<tr>
<td>AGM 505</td>
<td>Evapotranspiration and Water Balance Climatology</td>
<td>1+1</td>
<td>Dr. K. G.Sumesh</td>
</tr>
<tr>
<td>AGM 506</td>
<td>Analytical Tools and Methods for Agrometeorology</td>
<td>1+1</td>
<td>Dr. R.H. Patil</td>
</tr>
<tr>
<td>AGM 507</td>
<td>Crop Weather Models</td>
<td>1+2</td>
<td>Dr. R.H. Patil</td>
</tr>
<tr>
<td></td>
<td><strong>AGRICULTURAL MICROBIOLOGY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMB 501</td>
<td>Principles of Microbiology</td>
<td>2+1</td>
<td>Dr. P. U. Krishnaraj and Dr. Santosh G P</td>
</tr>
<tr>
<td>AMB 504</td>
<td>Soil Microbiology</td>
<td>2+1</td>
<td>Dr. P. Jones Nirmalnath</td>
</tr>
<tr>
<td>AMB 505</td>
<td>Environmental Microbiology</td>
<td>2+1</td>
<td>Dr. Geeta Shrimalli and Dr. Geeta D. Goudar</td>
</tr>
<tr>
<td>AMB 506</td>
<td>Food and Dairy Microbiology</td>
<td>2+1</td>
<td>Dr. Ashwini M.</td>
</tr>
<tr>
<td>AMB 601</td>
<td>Advances in Fermentation</td>
<td>2+1</td>
<td>Dr. Vithal Navi</td>
</tr>
<tr>
<td>AMB 602</td>
<td>Advanced Microbial Physiology</td>
<td>2+0</td>
<td>Dr. C. R. Patil</td>
</tr>
<tr>
<td></td>
<td><strong>II SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMB 502</td>
<td>Microbial Physiology and Metabolism</td>
<td>2+1</td>
<td>Dr. C. R. Patil</td>
</tr>
<tr>
<td>AMB 503</td>
<td>Microbial Genetics and Biotechnology</td>
<td>3+0</td>
<td>Dr. P. U. Krishnaraj</td>
</tr>
<tr>
<td>AMB 507</td>
<td>Bio fertilizer Technology</td>
<td>1+1</td>
<td>Dr. Vithal Navi</td>
</tr>
<tr>
<td>AMB 604</td>
<td>Current Topics in Soil Microbiology</td>
<td>2+0</td>
<td>Dr. M. N. Sreenivasa</td>
</tr>
<tr>
<td>AMB 605</td>
<td>Plant –Microbe Interactions</td>
<td>3+0</td>
<td>Dr. P. U. Krishnaraj and Dr. P. Jones Nirmalnath</td>
</tr>
<tr>
<td>AMB 605 /</td>
<td>Advances in Microbial Biotechnology</td>
<td>3+0</td>
<td>Dr. P. Jones Nirmalnath and Dr. Basavaraj Bagewadi</td>
</tr>
<tr>
<td>MBB 603</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMB 603</td>
<td>Regulation of Microbial Biosynthesis</td>
<td>2+0</td>
<td>Dr. C. R. Patil</td>
</tr>
<tr>
<td></td>
<td><strong>AGRONOMY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGR 501</td>
<td>Modern Concepts in Crop Production</td>
<td>3+0</td>
<td>Dr. S. C. Alagundagi</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>AGR 503 *</td>
<td>Principles and Practices of Weed Management</td>
<td>2+1</td>
<td>Dr. Ramesh Babu</td>
</tr>
<tr>
<td>AGR 506</td>
<td>Agronomy of Major Cereals and Millets</td>
<td>2+1</td>
<td>Dr. V. S. Kubsad</td>
</tr>
<tr>
<td>AGR 507</td>
<td>Agronomy of Fiber and Commercial Crops</td>
<td>2+1</td>
<td>Dr. C. P. Chandrashekara</td>
</tr>
<tr>
<td>AGR 513</td>
<td>Principles and Practices of Organic Farming</td>
<td>2+1</td>
<td>Dr. D. P. Biradar</td>
</tr>
<tr>
<td>AGR 514</td>
<td>Agronomy of Major Pulses and Oilseeds</td>
<td>2+1</td>
<td>Dr. H. T. Chandranath</td>
</tr>
<tr>
<td>AGR 601</td>
<td>Current Trends in Agronomy</td>
<td>3+0</td>
<td>Dr. D. P. Biradar</td>
</tr>
<tr>
<td>AGR 603 *</td>
<td>Crop Production and System Modeling</td>
<td>2+1</td>
<td>Dr. R. H. Patil</td>
</tr>
<tr>
<td>AGR 605</td>
<td>Advances in Irrigation Management</td>
<td>2+1</td>
<td>Dr. S. S. Angadi</td>
</tr>
</tbody>
</table>

**II SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGR 502 *</td>
<td>Principles and Practices of Soil Fertility and Nutrient Management</td>
<td>2+1</td>
<td>Dr. G. B. Shashidhara</td>
</tr>
<tr>
<td>AGR 504 *</td>
<td>Principles and Practices of Water Management.</td>
<td>2+1</td>
<td>Dr. S. S. Angadi</td>
</tr>
<tr>
<td>AGR 505</td>
<td>Agro meteorology and Crop Weather Forecasting.</td>
<td>2+1</td>
<td>Dr. J.A. Hosmath</td>
</tr>
<tr>
<td>AGR 511</td>
<td>Cropping Systems and Sustainable Agriculture.</td>
<td>1+1</td>
<td>Dr. Rajakumara, S.</td>
</tr>
<tr>
<td>AGR 512</td>
<td>Dry land Farming and Watershed Management.</td>
<td>2+1</td>
<td>Dr. S. C. Alagundagi</td>
</tr>
<tr>
<td>AGR 604 *</td>
<td>Advances in Crop Growth and Productivity</td>
<td>2+1</td>
<td>Dr. B. S. Yenagi</td>
</tr>
<tr>
<td>AGR 607</td>
<td>Advances in Integrated Farming Systems</td>
<td>2+0</td>
<td>Dr. Chidanand P. Mansur</td>
</tr>
</tbody>
</table>

* Compulsory Courses

**AGRICULTURAL STATISTICS**

**I SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 511</td>
<td>Statistical Methods for Applied Sciences (Compulsory for all Master's degree students)</td>
<td>1+1</td>
<td>Dr. Ashalatha K.V. / Outsourcing teacher</td>
</tr>
<tr>
<td>AST 531</td>
<td>Data Analysis Using Statistical Packages</td>
<td>1+1</td>
<td>Dr. Ashalatha K.V. and</td>
</tr>
<tr>
<td>AST 560 **</td>
<td>Probability Theory</td>
<td>1+1</td>
<td>Outsourcing teacher</td>
</tr>
<tr>
<td>AST 561 **</td>
<td>Statistical Methods</td>
<td>2+1</td>
<td>Outsourcing teacher</td>
</tr>
<tr>
<td>AST 564</td>
<td>Design of Experiments</td>
<td>2+1</td>
<td>Outsourcing teacher</td>
</tr>
<tr>
<td>MAT 501</td>
<td>Mathematical Methods for Applied Sciences</td>
<td>1+1</td>
<td>Mrs. M. R. Sangam</td>
</tr>
</tbody>
</table>

**II SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>AST 562 **</td>
<td>Statistical Inference</td>
<td>2+1</td>
<td>Outsourcing teacher</td>
</tr>
<tr>
<td>AST 563</td>
<td>Multivariate Analysis</td>
<td>2+1</td>
<td>Dr. Ashalatha K. V.</td>
</tr>
<tr>
<td>AST 565</td>
<td>Sampling Techniques</td>
<td>2+1</td>
<td>Outsourcing teacher</td>
</tr>
<tr>
<td>AST 567</td>
<td>Applied Regression Analysis</td>
<td>2+1</td>
<td>Dr. Ashalatha K.V. / Outsourcing teacher</td>
</tr>
<tr>
<td>MAT 551</td>
<td>Mathematical Methods - I</td>
<td>2+1</td>
<td>Mrs. M. R. Sangam</td>
</tr>
<tr>
<td>MAT 552</td>
<td>Mathematical Methods - II</td>
<td>1+1</td>
<td>Mrs. M. R. Sangam</td>
</tr>
</tbody>
</table>

**BIOCHEMISTRY**

**I SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 501</td>
<td>Basic Biochemistry</td>
<td>2+1</td>
<td>Dr. Kiran K. Mirajkar</td>
</tr>
<tr>
<td>BCH 502</td>
<td>Intermediary Metabolism</td>
<td>3+0</td>
<td>Mrs. Nagaratna S. Olekar</td>
</tr>
<tr>
<td>BCH 507</td>
<td>Plant Biochemistry</td>
<td>2+0</td>
<td>Dr. Md. Akbar</td>
</tr>
</tbody>
</table>

**II SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCH 503</td>
<td>Enzymology</td>
<td>2+1</td>
<td>Dr. Md. Akbar</td>
</tr>
<tr>
<td>BCH 505</td>
<td>Techniques in Biochemistry</td>
<td>1+2</td>
<td>Dr. Kiran K. Mirajkar</td>
</tr>
<tr>
<td>BCH 506 / MBB 512</td>
<td>Immunology and Molecular Diagnostics</td>
<td>2+1</td>
<td>Dr. Narayan Moger</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------------------------------------------------</td>
<td>--------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>BCH 510</td>
<td>Carbon and Nitrogen Metabolism</td>
<td>2+1</td>
<td>Mrs. Nagaratna S. Olekar</td>
</tr>
</tbody>
</table>

**BIOTECHNOLOGY**

**I SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBB 501</td>
<td>Principles of Recombinant DNA Technology</td>
<td>2+0</td>
<td>Dr. Basavaraj Bagewadi</td>
</tr>
<tr>
<td>MBB 502</td>
<td>Fundamentals of Plant Molecular Biology</td>
<td>2+0</td>
<td>Dr. Spurthi N. Nayak</td>
</tr>
<tr>
<td>MBB 505</td>
<td>Techniques in Molecular Biology I</td>
<td>0+2</td>
<td>Dr. Nagabhushan Nayidu</td>
</tr>
<tr>
<td>MBB 510</td>
<td>Biosafety, IPR and Bioethics</td>
<td>2+0</td>
<td>Dr. Narayan Moger</td>
</tr>
<tr>
<td>MBB 513</td>
<td>Nanobiotechnology</td>
<td>3+0</td>
<td>Dr. Ravikumar Hosamani</td>
</tr>
<tr>
<td>MBB 601</td>
<td>Advances in Plant Molecular Biology</td>
<td>3+0</td>
<td>Dr. Narayan Moger</td>
</tr>
<tr>
<td>MBB 602</td>
<td>Advances in Genetic Engineering</td>
<td>3+0</td>
<td>Dr. Ramesh Bhat</td>
</tr>
<tr>
<td>MBB 605</td>
<td>Advances in Functional Genomics and Proteomics</td>
<td>2+0</td>
<td>Dr. Ramesh Bhat</td>
</tr>
<tr>
<td>MBB 606</td>
<td>Commercial Biotechnology</td>
<td>2+0</td>
<td>Dr. Ravikumar Hosamani</td>
</tr>
</tbody>
</table>

**II SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBB 504</td>
<td>Plant Tissue Culture and Genetic Transformation</td>
<td>2+1</td>
<td>Dr. Ravikumar Hosamani</td>
</tr>
<tr>
<td>MBB 506/</td>
<td>Microbial Genetics and Biotechnology</td>
<td>3+0</td>
<td>Dr. Krishnaraj P. U.</td>
</tr>
<tr>
<td>AMB 503</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBB 509</td>
<td>Techniques in Molecular Biology-II</td>
<td>0+2</td>
<td>Dr. Ramesh Bhat</td>
</tr>
<tr>
<td>MBB 512/</td>
<td>Immunology and Molecular Diagnostics</td>
<td>2+1</td>
<td>Dr. Narayan Moger</td>
</tr>
<tr>
<td>BCH 506</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MBB 555</td>
<td>Introduction to Bioinformatics</td>
<td>1+1</td>
<td>Dr. Spurthi N. Nayak</td>
</tr>
<tr>
<td>MBB 603/</td>
<td>Advances in Microbial Biotechnology</td>
<td>3+0</td>
<td>Dr. Basavaraj Bagewadi</td>
</tr>
<tr>
<td>AMB 606</td>
<td></td>
<td></td>
<td>Dr. P. Jones Nirmalath</td>
</tr>
<tr>
<td>MBB 604</td>
<td>Advances in Crop Biotechnology</td>
<td>3+0</td>
<td>Dr. Nagabhushan Nayidu</td>
</tr>
</tbody>
</table>

**CROP PHYSIOLOGY**

**I SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPH 501</td>
<td>Principles of Plant Physiology- I: Cell organelles, Water Relations and Mineral Nutrition</td>
<td>2+1</td>
<td>Dr. C. M. Navalagatti</td>
</tr>
<tr>
<td>CPH 502</td>
<td>Principles of Plant Physiology -II: Metabolic Processes and Growth Regulations</td>
<td>2+1</td>
<td>Dr. V. P. Chimmad</td>
</tr>
<tr>
<td>CPH 508</td>
<td>Morphogenesis, Tissue Culture and Transformation</td>
<td>1+1</td>
<td>Dr. R. V. Koti</td>
</tr>
<tr>
<td>CPH 509</td>
<td>Physiology of Crop Plants-Specific Case Studies</td>
<td>2+0</td>
<td>Dr. H. Y. Patil</td>
</tr>
<tr>
<td>CPH 602</td>
<td>Signal Perception Transduction and Regulation of Physiological Processes</td>
<td>2+0</td>
<td>Dr. R. V. Koti</td>
</tr>
<tr>
<td>CPH 605</td>
<td>Climate change and Crop Growth</td>
<td>2+0</td>
<td>Dr. M. B. Doddamani</td>
</tr>
<tr>
<td>CPH 608</td>
<td>Physiological Aspects of Seed Growth and Development</td>
<td>1+1</td>
<td>Dr. B. C. Patil (Emeritus Scientist)</td>
</tr>
</tbody>
</table>

**II SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPH 504</td>
<td>Physiological and Molecular Responses of plants to Abiotic Stresses</td>
<td>2+1</td>
<td>Dr. B. C. Patil (Emeritus Scientist)</td>
</tr>
<tr>
<td>CPH 505</td>
<td>Hormonal Regulation of Plant Growth and Development</td>
<td>2+1</td>
<td>Dr. M. B. Doddamani</td>
</tr>
<tr>
<td>CPH 506</td>
<td>Physiology of Growth and Yield modeling</td>
<td>1+1</td>
<td>Dr. Nethra P.</td>
</tr>
<tr>
<td>CPH 601</td>
<td>Functional genomics and genes associated with a few physiological processes</td>
<td>2+0</td>
<td>Dr. Edna Antony</td>
</tr>
<tr>
<td>CPH 604</td>
<td>Techniques in Plant Physiology</td>
<td>1+2</td>
<td>Dr. V. P. Chimmad</td>
</tr>
<tr>
<td>CPH 606</td>
<td>Post Harvest Physiology</td>
<td>1+1</td>
<td>Dr. K. N. Pawar</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------------------------------------------------</td>
<td>--------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>CPH 607</td>
<td>Weed Physiology and Herbicide action</td>
<td>1+1</td>
<td>Dr. V. P. Chimmad and Dr. C. M. Nawalagatti</td>
</tr>
</tbody>
</table>

**GENETICS AND PLANT BREEDING**

**I SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPB 501</td>
<td>Principles of Genetics</td>
<td>2+1</td>
<td>Dr. S. K. Deshpande / Dr. Sumangala Bhat</td>
</tr>
<tr>
<td>GPB 502</td>
<td>Principles of Cytogenetics</td>
<td>2+1</td>
<td>Dr. O. Sridevi</td>
</tr>
<tr>
<td>GPB 503</td>
<td>Principles of Plant Breeding</td>
<td>2+1</td>
<td>Dr. B. D. Biradar / Dr. S. A. Desai / Dr. Shobha Immadi / Dr. Vijayakumar A. G.</td>
</tr>
<tr>
<td>GPB 506</td>
<td>Population Genetics</td>
<td>1+1</td>
<td>Dr. S. S. Patil and Dr. Shobha Immadi</td>
</tr>
<tr>
<td>GPB 603</td>
<td>Genomics in Crop Improvement</td>
<td>2+1</td>
<td>Dr. B. R. Patil</td>
</tr>
<tr>
<td>GPB 605</td>
<td>Advanced Plant Breeding Systems</td>
<td>2+0</td>
<td>Dr. S. K. Deshpande</td>
</tr>
<tr>
<td>GPB 604</td>
<td>Cellular and Chromosomal Manipulations in Crop Improvement</td>
<td>2+0</td>
<td>Dr. O. Sridevi</td>
</tr>
</tbody>
</table>

**II SEMESTER-2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPB 504</td>
<td>Principles of Quantitative Genetics</td>
<td>2+1</td>
<td>Dr. S. S. Patil / Dr. Sumangala Bhat / Dr. Shobha Immadi</td>
</tr>
<tr>
<td>GPB 507</td>
<td>Heterosis Breeding</td>
<td>1+1</td>
<td>Dr. Rajesh S. Patil</td>
</tr>
<tr>
<td>GPB 508</td>
<td>Cell Biology and Molecular Genetics</td>
<td>3+0</td>
<td>Dr. O. Sridevi</td>
</tr>
<tr>
<td>GPB 509</td>
<td>Biotechnology for Crop Improvement</td>
<td>2+1</td>
<td>Dr. B. R. Patil and Dr. Sumangala Bhat</td>
</tr>
<tr>
<td>GPB 514</td>
<td>Gene Regulation and Expression</td>
<td>2+0</td>
<td>Dr. B. R. Patil</td>
</tr>
<tr>
<td>GPB 505</td>
<td>Mutagenesis &amp; Mutation Breeding</td>
<td>2+1</td>
<td>Dr. S. K. Deshpande</td>
</tr>
<tr>
<td>GPB 513</td>
<td>Breeding for quality traits</td>
<td>1+1</td>
<td>Dr. M. C. Wali / Dr. S. A. Desai / Hanamaratti</td>
</tr>
<tr>
<td>GPB 512</td>
<td>Breeding legumes, Oilseeds and Fibre Crops</td>
<td>2+1</td>
<td>Dr. Rajesh Patil / Dr. G. K. Naidu / Vijaykumar A. G.</td>
</tr>
</tbody>
</table>

**HORTICULTURE**

**I SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 501</td>
<td>Major Tropical and Subtropical Fruits</td>
<td>2+1</td>
<td>Dr. Satish S. Patil</td>
</tr>
<tr>
<td>HRT 502</td>
<td>Commercial Vegetable Crops</td>
<td>2+1</td>
<td>Dr. Sunita Johri</td>
</tr>
<tr>
<td>HRT 503</td>
<td>Production Technology of Major Commercial Flowers</td>
<td>2+1</td>
<td>Dr. S. G. Angadi</td>
</tr>
<tr>
<td>HRT 504</td>
<td>Major Spices and Plantation Crops</td>
<td>2+1</td>
<td>Dr. R. V. Hegde</td>
</tr>
<tr>
<td>HRT 516</td>
<td>Breeding of Vegetable Crops</td>
<td>2+1</td>
<td>Dr. R. M. Hosamani</td>
</tr>
<tr>
<td>HRT 606</td>
<td>Advances in flower Production Technology</td>
<td>2+1</td>
<td>Dr. V. S. Patil</td>
</tr>
</tbody>
</table>

**II SEMESTER 2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRT 506</td>
<td>Growth and Development of Horticulture Crops</td>
<td>2+1</td>
<td>Dr. Satish S. Patil</td>
</tr>
<tr>
<td>HRT 508</td>
<td>Protected Cultivation of Horticulture Crops</td>
<td>2+1</td>
<td>Dr. M. S. Biradar</td>
</tr>
<tr>
<td>HRT 515</td>
<td>Minor Vegetable Crops</td>
<td>1+1</td>
<td>Dr. S. M. Hiremath</td>
</tr>
<tr>
<td>HRT 517</td>
<td>Seed production technology of vegetable crops</td>
<td>2+1</td>
<td>Dr. T. R. Shashidhar</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------------</td>
<td>--------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>HRT 518</td>
<td>Production Technology of Medicinal and Aromatic Crops</td>
<td>2+1</td>
<td>Dr. C. K. Venugopal</td>
</tr>
<tr>
<td>HRT 521</td>
<td>Landscaping and ornamental gardening</td>
<td>2+1</td>
<td>Dr. V. S. Patil</td>
</tr>
<tr>
<td>HRT 603</td>
<td>Advances in Breeding of Vegetable Crops</td>
<td>2+1</td>
<td>Dr. R. M. Hosamani</td>
</tr>
</tbody>
</table>

**PLANT PATHOLOGY**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>PAT 500</td>
<td>Plant Nematology</td>
<td>1+1</td>
<td>Dr. S. Lingaraju (E. Scientist)</td>
</tr>
<tr>
<td></td>
<td>PAT 501</td>
<td>Mycology</td>
<td>2+1</td>
<td>Dr. Yashoda R Hegde</td>
</tr>
<tr>
<td></td>
<td>PAT 502</td>
<td>Plant Virology</td>
<td>1+1</td>
<td>Dr. M.S. Patil</td>
</tr>
<tr>
<td></td>
<td>PAT 503</td>
<td>Plant Bacteriology</td>
<td>1+1</td>
<td>Dr. S. K. Prashanti</td>
</tr>
<tr>
<td></td>
<td>PAT 507</td>
<td>Diseases of field crops</td>
<td>1+1</td>
<td>Dr. P. V. Patil</td>
</tr>
<tr>
<td></td>
<td>PAT 513</td>
<td>Disease Resistance in Plants</td>
<td>2+0</td>
<td>Dr. S. N. Chattanavar</td>
</tr>
<tr>
<td></td>
<td>PAT 515</td>
<td>Biological Control of Plant diseases</td>
<td>1+1</td>
<td>Dr. M. G. Palakshappa</td>
</tr>
<tr>
<td></td>
<td>PAT 516</td>
<td>Integrated Disease Management</td>
<td>1+1</td>
<td>Dr. Shamarao Jahagirdar</td>
</tr>
<tr>
<td></td>
<td>PAT 519</td>
<td>Post Harvest Diseases</td>
<td>1+1</td>
<td>Dr. Sripad Kulakarni</td>
</tr>
<tr>
<td></td>
<td>PAT 603</td>
<td>Advanced Bacteriology</td>
<td>2+1</td>
<td>Dr. V. B. Naragund (E.Sc.)</td>
</tr>
<tr>
<td></td>
<td>PAT 613/</td>
<td>Plant Biosecurity &amp; Biosafety</td>
<td>2+0</td>
<td>Dr. M.S.L. Rao</td>
</tr>
<tr>
<td></td>
<td>ENT 613</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PAT 504</td>
<td>Principles of Plant Pathology</td>
<td>2+0</td>
<td>Dr. P. V. Patil</td>
</tr>
<tr>
<td></td>
<td>PAT 505</td>
<td>Detection &amp; Diagnosis of Plant Diseases</td>
<td>0+2</td>
<td>Dr. M. S. Patil and Dr. Gurupada B. Balol</td>
</tr>
<tr>
<td></td>
<td>PAT 508</td>
<td>Diseases of Fruits &amp; Vegetable Crops</td>
<td>1+1</td>
<td>Dr. S. A. Astaputhre</td>
</tr>
<tr>
<td></td>
<td>PAT 510</td>
<td>Seed Pathology</td>
<td>1+1</td>
<td>Dr. M.S.L. Rao</td>
</tr>
<tr>
<td></td>
<td>PAT 511</td>
<td>Chemicals in Plant Disease Management</td>
<td>1+1</td>
<td>Dr. Shamarao Jahagirdar</td>
</tr>
<tr>
<td></td>
<td>PAT 518</td>
<td>Epidemiology &amp; Forecasting of Plant Diseases</td>
<td>1+1</td>
<td>Dr. S. I. Harlapur</td>
</tr>
<tr>
<td></td>
<td>PAT 601</td>
<td>Advanced Mycology</td>
<td>2+1</td>
<td>Dr. Yashoda R Hegde</td>
</tr>
<tr>
<td></td>
<td>PAT 604</td>
<td>Molecular Basis of Host-Pathogen Interaction</td>
<td>2+1</td>
<td>Dr. S. K. Prashanti</td>
</tr>
<tr>
<td></td>
<td>PAT 605</td>
<td>Principles and Procedures of Certification</td>
<td>1+0</td>
<td>Dr. I. K. Kalappanavar</td>
</tr>
</tbody>
</table>

**SEED SCIENCE & TECHNOLOGY**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>SST 501</td>
<td>Floral Biology, Seed Development and Maturation</td>
<td>1+1</td>
<td>Dr. D.S. Uppar</td>
</tr>
<tr>
<td></td>
<td>SST 502</td>
<td>Principles of Seed Production</td>
<td>2+0</td>
<td>Dr. N. K. Biradarpatil</td>
</tr>
<tr>
<td></td>
<td>SST 503</td>
<td>Seed Production in Field Crops</td>
<td>2+1</td>
<td>Dr. Gurumurthy R.</td>
</tr>
<tr>
<td></td>
<td>SST 506</td>
<td>Seed Legislation and Certification</td>
<td>2+1</td>
<td>Dr. S. S. Chandrashekar</td>
</tr>
<tr>
<td></td>
<td>SST 601</td>
<td>Hybrid Seed Production</td>
<td>1+1</td>
<td>Dr. J. S. Hill</td>
</tr>
<tr>
<td></td>
<td>SST 602</td>
<td>In Situ and Ex Situ Conservation of Germplasm</td>
<td>2+1</td>
<td>Dr. V. K. Deshpande</td>
</tr>
<tr>
<td></td>
<td>SST 603</td>
<td>Testing for Genuineess and Purity of Cultivars</td>
<td>1+1</td>
<td>Dr. S. S. Chandrashekar</td>
</tr>
<tr>
<td></td>
<td>SST 604</td>
<td>DUS testing for Plant Variety Protection</td>
<td>2+1</td>
<td>Dr. Gurumurthy R.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SST 507</td>
<td>Seed Processing and Storage</td>
<td>2+1</td>
<td>Dr. V. K. Deshpande</td>
</tr>
<tr>
<td></td>
<td>SST 508</td>
<td>Seed Quality Testing</td>
<td>2+1</td>
<td>Dr. S. S. Chandrashekar</td>
</tr>
<tr>
<td></td>
<td>SST 509</td>
<td>Seed Physiology</td>
<td>1+1</td>
<td>Dr. D. S. Uppar</td>
</tr>
<tr>
<td></td>
<td>SST 515</td>
<td>Emerging Trends in Seed Quality Enhancement</td>
<td>1+1</td>
<td>Dr. Ravi Hunje</td>
</tr>
<tr>
<td></td>
<td>SST 805</td>
<td>Advances in Seed Science Research</td>
<td>1+0</td>
<td>Dr. N. K. Biradarpatil</td>
</tr>
<tr>
<td></td>
<td>SST 513</td>
<td>Seed Storage and Deterioration</td>
<td>1+1</td>
<td>Dr. S. S. Chandrashekar</td>
</tr>
<tr>
<td></td>
<td>SST 514</td>
<td>Seed Marketing and Management</td>
<td>1+1</td>
<td>Dr. Gurumurthy R.</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>-------------------------------------</td>
<td></td>
</tr>
<tr>
<td>SOL 501</td>
<td>Soil Physics</td>
<td>2+1</td>
<td>Dr. S. S. Gundlur</td>
<td></td>
</tr>
<tr>
<td>SOL 504</td>
<td>Soil Mineralogy, Genesis, Classification and Survey</td>
<td>2+1</td>
<td>Dr. P. L. Patil</td>
<td></td>
</tr>
<tr>
<td>SOL 513</td>
<td>Management of Problematic Soils and Water</td>
<td>2+1</td>
<td>Dr. N. S. Hebsur</td>
<td></td>
</tr>
<tr>
<td>SOL 601</td>
<td>Advances in Soil Physics</td>
<td>2+0</td>
<td>Dr. M. Hebbara</td>
<td></td>
</tr>
<tr>
<td>SOL 507</td>
<td>Geomorphology and Geochemistry</td>
<td>2+0</td>
<td>Dr. G. S. Dasog</td>
<td></td>
</tr>
<tr>
<td>SOL 502</td>
<td>Soil Fertility and Fertilizer Use</td>
<td>2+1</td>
<td>Dr. K. K. Math</td>
<td></td>
</tr>
<tr>
<td>SOL 503</td>
<td>Soil Chemistry</td>
<td>2+1</td>
<td>Dr. M. Hebbara</td>
<td></td>
</tr>
<tr>
<td>SOL 510</td>
<td>Remote Sensing and GIS Techniques for Soil, water and Crop Studies</td>
<td>2+1</td>
<td>Dr. P. L. Patil / Dr. V. B. Kuligod</td>
<td></td>
</tr>
<tr>
<td>SOL 511</td>
<td>Analytical Techniques and Instrumental Methods in Soil and Plant Analysis</td>
<td>1+2</td>
<td>Dr. B. I. Bidari</td>
<td></td>
</tr>
<tr>
<td>SOL 602</td>
<td>Advances in Soil Fertility</td>
<td>2+0</td>
<td>Dr. V. B. Kuligod / Dr. K. K. Math</td>
<td></td>
</tr>
<tr>
<td>SOL 605</td>
<td>Biochemistry of Soil Organic Matter</td>
<td>2+0</td>
<td>Dr. K. K. Math</td>
<td></td>
</tr>
</tbody>
</table>

**HOME SCIENCE EXTENSION AND COMMUNICATION MANAGEMENT**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECM 501</td>
<td>Global Extension Systems</td>
<td>3+0</td>
<td>Rajeshwari N.</td>
</tr>
<tr>
<td>ECM 502</td>
<td>Training and Human Resource Development</td>
<td>1+2</td>
<td>Dr. Annapurna Kalal</td>
</tr>
<tr>
<td>ECM 509</td>
<td>Scientific Writing and Reporting for Media</td>
<td>1+2</td>
<td>Dr. Shobha Naganur</td>
</tr>
<tr>
<td>ECM 510</td>
<td>Educational Technology</td>
<td>2+1</td>
<td>Dr. Surekha Sankagoudar</td>
</tr>
<tr>
<td>ECM 602</td>
<td>Managerial skills for Extension Professionals</td>
<td>2+1</td>
<td>Dr. Surekha Sankagoudar</td>
</tr>
<tr>
<td>ECM 608</td>
<td>Dynamics of Group Behaviour</td>
<td>2+0</td>
<td>Dr. Annapurna Kalal</td>
</tr>
<tr>
<td>ECM 609 / AEX 602</td>
<td>Advanced Designs and Techniques in Social Science Research</td>
<td>2+1</td>
<td>Offered by Agricultural Extension Department</td>
</tr>
</tbody>
</table>

**FAMILY RESOURCE MANAGEMENT**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRM 501</td>
<td>Approaches to Resource Management</td>
<td>3+0</td>
<td>Dr. Rajeshwari Desai</td>
</tr>
<tr>
<td>FRM 502</td>
<td>Consumer Ergonomics</td>
<td>2+1</td>
<td>Dr. Veena Jadhav</td>
</tr>
<tr>
<td>FRM 506</td>
<td>Consumer Guidance and Counseling</td>
<td>1+2</td>
<td>Dr. Geeta Chitagubbi</td>
</tr>
<tr>
<td>FRM 517</td>
<td>Ecology and Environment Management</td>
<td>2+1</td>
<td>Dr. Suma Hasalkar</td>
</tr>
<tr>
<td>FRM 601</td>
<td>Advances in Resource Management</td>
<td>3+0</td>
<td>Dr. Renuka Salunke</td>
</tr>
<tr>
<td>FRM 607</td>
<td>Managerial Dimensions for Special Groups</td>
<td>2+1</td>
<td>Dr. Veena Jadhav</td>
</tr>
<tr>
<td>FRM 504</td>
<td>Advanced Housing</td>
<td>2+1</td>
<td>Dr. Renuka Salunke</td>
</tr>
<tr>
<td>FRM 505</td>
<td>Consumer Issues and Challenges</td>
<td>2+0</td>
<td>Dr. Rajeshwari Desai</td>
</tr>
<tr>
<td>FRM 508</td>
<td>Product Design, Testing &amp; Evaluation</td>
<td>1+2</td>
<td>Dr. Veena Jadhav</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>FRM 602</td>
<td>Occupational Bio-Mechanics</td>
<td>2+1</td>
<td>Dr. Renuka Salunke</td>
</tr>
<tr>
<td>FRM 604</td>
<td>Family Dynamics and Women Power</td>
<td>2+1</td>
<td>Dr. Geeta Chitagubbi</td>
</tr>
<tr>
<td>FRM 605</td>
<td>Consumer Product Design</td>
<td>1+2</td>
<td>Dr. Veena Jadhav</td>
</tr>
<tr>
<td></td>
<td><strong>FOOD SCIENCE AND NUTRITION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>I SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSN 501</td>
<td>Advanced Food Science</td>
<td>2+1</td>
<td>Dr. Sarojani. J. Karakannavar</td>
</tr>
<tr>
<td>FSN 502</td>
<td>Advanced Nutrition</td>
<td>3+0</td>
<td>Dr. Usha Malagi</td>
</tr>
<tr>
<td>FSN 601</td>
<td>Advances in Carbohydrates, Proteins and Lipids</td>
<td>3+1</td>
<td>Dr. Pushpa Bharati</td>
</tr>
<tr>
<td>FSN 603</td>
<td>Minerals in Human Nutrition</td>
<td>2+1</td>
<td>Dr. Usha Malagi</td>
</tr>
<tr>
<td></td>
<td><strong>II SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSN 503</td>
<td>Food Analysis</td>
<td>1+2</td>
<td>Dr. Uma N. Kulkarni</td>
</tr>
<tr>
<td>FSN 504</td>
<td>Advances in Community Nutrition</td>
<td>1+2</td>
<td>Dr. Usha Malagi</td>
</tr>
<tr>
<td>FSN 515</td>
<td>Geriatric Nutrition</td>
<td>2+1</td>
<td>Dr. Pushpa Bharati</td>
</tr>
<tr>
<td>FSN 602</td>
<td>Advances in Vitamins and Hormones</td>
<td>2+0</td>
<td>Dr. Sarojani. J. Karakannavar</td>
</tr>
<tr>
<td></td>
<td><strong>HUMAN DEVELOPMENT AND FAMILY STUDIES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>I SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDF 504</td>
<td>Children with Developmental Challenges</td>
<td>2+1</td>
<td>Dr. Manjula Patil</td>
</tr>
<tr>
<td>HDF 508</td>
<td>Gerontology</td>
<td>2+1</td>
<td>Dr. Lata Pujar</td>
</tr>
<tr>
<td>HDF 515</td>
<td>Research Methods and Techniques in Human</td>
<td>2+1</td>
<td>Dr. Vinuta Muktamath</td>
</tr>
<tr>
<td></td>
<td>Development and Family Studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDF 516</td>
<td>Women and Health</td>
<td>1+1</td>
<td>Dr. Sunanda Itagi</td>
</tr>
<tr>
<td>HDF 601</td>
<td>Adulthood Dynamics</td>
<td>2+1</td>
<td>Dr. Lata Pujar</td>
</tr>
<tr>
<td>HDF 607</td>
<td>Qualitative Research Methods</td>
<td>2+1</td>
<td>Dr. Vinuta Muktamath</td>
</tr>
<tr>
<td></td>
<td><strong>II SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDF 501</td>
<td>Theories of Human Development and Behavior</td>
<td>3+0</td>
<td>Dr. Vinuta Muktamath</td>
</tr>
<tr>
<td>HDF 502</td>
<td>Advances in Life Span Development</td>
<td>2+1</td>
<td>Dr. Manjula Patil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDF 503</td>
<td>Gender issues in human development and family</td>
<td>2+1</td>
<td>Dr. Sunanda Itagi</td>
</tr>
<tr>
<td></td>
<td>Relations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDF 602</td>
<td>Advances in Family Studies</td>
<td>2+1</td>
<td>Dr. Lata Pujar</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>TEXTILE AND APPAREL DESIGNING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>I SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAD 501</td>
<td>Fibre Chemistry</td>
<td>2+1</td>
<td>Dr. Sannappamamma K. J.</td>
</tr>
<tr>
<td>TAD 502</td>
<td>Textile Quality Analysis</td>
<td>2+1</td>
<td>Dr. Sadhana D. Kulloli</td>
</tr>
<tr>
<td>TAD 503</td>
<td>Advanced Textile Design</td>
<td>1+2</td>
<td>Dr. Jyothi V. Vasthrad</td>
</tr>
<tr>
<td>TAD 515</td>
<td>Fashion Accessories</td>
<td>1+1</td>
<td>Dr. Sadhana D. Kulloli</td>
</tr>
<tr>
<td>TAD 601</td>
<td>Functional Clothing</td>
<td>2+1</td>
<td>Dr. Jyothi Vasthrad</td>
</tr>
<tr>
<td>TAD 602</td>
<td>Technical Textiles</td>
<td>2+1</td>
<td>Dr. Sadhana D. Kulloli</td>
</tr>
<tr>
<td>TAD 608</td>
<td>Colour Application in Textiles</td>
<td>1+1</td>
<td>Dr. Geeta Mahale</td>
</tr>
<tr>
<td></td>
<td><strong>II SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAD 504</td>
<td>Advanced Pattern Making</td>
<td>1+2</td>
<td>Dr. Geeta Mahale</td>
</tr>
<tr>
<td>TAD 507</td>
<td>Apparel Quality analysis</td>
<td>1+1</td>
<td>Dr. Sadhana D. Kulloli</td>
</tr>
<tr>
<td>TAD 508</td>
<td>Advanced Dyeing and Printing</td>
<td>1+1</td>
<td>Dr. Jyothi V. Vasthrad</td>
</tr>
<tr>
<td>TAD 603</td>
<td>Textile Ecology</td>
<td>3+0</td>
<td>Dr. Sadhana D. Kulloli</td>
</tr>
<tr>
<td>Course No.</td>
<td>Course Title</td>
<td>Credit Hours</td>
<td>Name of the Teacher/s</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>TAD 605</td>
<td>Textile Auxiliary</td>
<td>1+1</td>
<td>Dr. Jyothi V. Vasthrad</td>
</tr>
<tr>
<td>TAD 610</td>
<td>Non-woven Textiles</td>
<td>2+0</td>
<td>Dr. Sannapapamma K. J.</td>
</tr>
</tbody>
</table>

**Non Credit Compulsory Courses**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGS 501</td>
<td>Library and information services</td>
<td>0+1</td>
<td>Sri. N. D. Ramesh Dr. Shilpa S. Uploankar</td>
</tr>
<tr>
<td>PGS 502</td>
<td>Technical Writing and Communication Skills</td>
<td>0+1</td>
<td>Dr. R. H. Patil</td>
</tr>
<tr>
<td>PGS 505</td>
<td>Agricultural Research, Research Ethics and Rural Development Programmes</td>
<td>1+0</td>
<td>Dr. N. Manjula Dr. R. H. Patil</td>
</tr>
</tbody>
</table>

**I SEMESTER-2019-20**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGS 503</td>
<td>Intellectual Property and its Management in Agriculture</td>
<td>1+0</td>
<td>Dr. B. R. Patil, Dr. G. N. Kulkarni and Dr. S. K. Deshpande</td>
</tr>
<tr>
<td>PGS 504</td>
<td>Basic Concepts in Laboratory Techniques</td>
<td>0+1</td>
<td>Smt. Nagaratna S. Olekar Dr. Kiran K. Mirajkar Dr. B. I. Bidari</td>
</tr>
<tr>
<td>PGS 506</td>
<td>Disaster Management</td>
<td>1+0</td>
<td>Dr. C. P. Chandrashekar</td>
</tr>
</tbody>
</table>

**II SEMESTER-2019-20**

Copy to: All Head of the Departments, AC, Dharwad / CCSc., Dharwad
CC To: Dean (Agri), A.C. Dharwad / Dean (CCSc), CCSc, Dharwad
Dean (Agri.), AC, Vijayapur / AC, Hanumanamatti / Dean (Forestry), COF, Sirsi
CWS to: The Registrar / Director of Research / Director of Extension, UAS, Dharwad
The Director of Education, UAS, Dharwad for kind information.
CIRCULAR

Ref:- This office circular No. Dean (PGS) /35/478A/2019-20 Dtd: 07.09.2019

In addition / modification to the PG courses offered under reference cited above, the following courses are offered during I and II semester of 2019-20.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AGRICULTURAL ENTOMOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I SEMESTER 2019-20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENT 509</td>
<td>Plant Resistance to Insects</td>
<td>1+1</td>
<td>Dr. Shekharappa and Dr. Narendra S. Kulkarni</td>
</tr>
<tr>
<td></td>
<td>SOIL SCIENCE AND AGRICULTURAL CHEMISTRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I SEMESTER 2019-20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOL 511</td>
<td>Analytical Techniques and Instrumental Methods in Soil and Plant Analysis</td>
<td>1+2</td>
<td>Dr. B. I. Bidari</td>
</tr>
<tr>
<td>SOL 602</td>
<td>Advances in Soil Fertility</td>
<td>2+0</td>
<td>Dr. B. I. Bidari</td>
</tr>
<tr>
<td>SOL 604</td>
<td>Soil Genesis and Micropedology</td>
<td>2+0</td>
<td>Dr. P. L. Patil</td>
</tr>
<tr>
<td></td>
<td>II SEMESTER 2019-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOL 504</td>
<td>Soil Mineralogy, Genesis, Classification and Survey</td>
<td>2+1</td>
<td>Dr. P. L. Patil</td>
</tr>
<tr>
<td>SOL 510</td>
<td>Remote Sensing and GIS Techniques for Soil and Crop Studies</td>
<td>2+1</td>
<td>Dr. V. B. Kuligod</td>
</tr>
<tr>
<td>SOL 608</td>
<td>Land use Planning and Watershed Management</td>
<td>2+0</td>
<td>Dr. G. S. Dasog</td>
</tr>
<tr>
<td></td>
<td>PLANT PATHOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I SEMESTER 2019-20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAT 509</td>
<td>Diseases of Plantation, Ornamental and Spice Crops</td>
<td>1+1</td>
<td>Dr. G. M. Hegde</td>
</tr>
<tr>
<td>PAT 601</td>
<td>Advanced Mycology</td>
<td>2+1</td>
<td>Dr. Yashoda Hegde</td>
</tr>
<tr>
<td></td>
<td>AGRICULTURAL MICROBIOLOGY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I SEMESTER 2019-20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMB 602</td>
<td>Advanced Microbial Physiology</td>
<td>2+0</td>
<td>Will be offered during 2020-2021</td>
</tr>
<tr>
<td></td>
<td>II SEMESTER 2019-20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AMB 605</td>
<td>Plant – Microbe interactions</td>
<td>3+0</td>
<td>Will be offered during 2020-2021</td>
</tr>
</tbody>
</table>

P. T. O.
<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEC 509</td>
<td>Agricultural Finance and Project Management</td>
<td>2+1</td>
<td>Dr. B. K. Naik</td>
</tr>
<tr>
<td>AEC 601</td>
<td>Advanced Micro Economic Analysis</td>
<td>1+1</td>
<td>Dr. Vijaykumar</td>
</tr>
<tr>
<td></td>
<td><strong>AGRICULTURAL EXTENSION EDUCATION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>I SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEX 603</td>
<td>Advances in Training Technology</td>
<td>2+1</td>
<td>Dr. K. A. Jahagirdar</td>
</tr>
<tr>
<td></td>
<td><strong>H.SC. EXTENSION AND COMMUNICATION MANAGEMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>I SEMESTER 2019-20</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECM 601</td>
<td>Recent Trends in Extension and Communication</td>
<td>3+0</td>
<td>Dr. Geeta Tamgale</td>
</tr>
<tr>
<td></td>
<td><strong>Food Science and Nutrition</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FSN 507</td>
<td>Nutrition during life cycle</td>
<td>0+3</td>
<td>Dr. Kashibai Khyadagi</td>
</tr>
<tr>
<td>FSN 605</td>
<td>Nutrition and Agricultural Interface</td>
<td>3+0</td>
<td>Dr. Uma Kulkarni</td>
</tr>
</tbody>
</table>

**Non Credit Compulsory Course**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Name of the Teacher/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>PGS 501</td>
<td>Library and information services</td>
<td>0+1</td>
<td>Dr. Shilpa S. Uploankar</td>
</tr>
</tbody>
</table>

CC to: 1. Dean (Agri.), AC, Dharwad / Dean (CSc.), CCSc., Dharwad / All HODs, UAS, Dharwad  
2. University Librarian, UAS, Dharwad  
3. Notice Board  
CWC to: The Registrar / Director of Research/Director of Extension, UAS, Dharwad  
The Director of Education, UAS, Dharwad for kind information.