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<th>Title</th>
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<th>Credits</th>
<th>Grade Mode</th>
<th>Days Offered</th>
<th>Start Date</th>
<th>End Date</th>
<th>Time</th>
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<td>Critical Readings of the Literature</td>
<td>Dr. Carol Lutz</td>
<td>Approval and confirmation by Course Director. Open to PhD students only.</td>
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<td>Monday and Wednesday</td>
<td>09/09/15</td>
<td>12/17/15</td>
<td>1.00 PM - 2.30 PM</td>
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<td>CBMM 5001Q</td>
<td>Basic Histology</td>
<td>Dr. Grace Pinhal-Enfield</td>
<td>Enrollment limit 30. Open to Masters and PhD students. Masters students need permission of Course Director via email. PhD needs permission of Program/Track Director before seeking permission of Course Director via email. (See below for required text).</td>
<td>3</td>
<td>N</td>
<td>Thursday</td>
<td>08/27/15</td>
<td>12/10/15</td>
<td>5.30 PM - 8.30 PM</td>
<td>Lecture Hall: MSB B-610 Lab: MSB B-516/542</td>
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<td>CBMM 5002Q</td>
<td>Practical Approaches for Studying Protein Function</td>
<td>Dr. Maha Abdellatif</td>
<td>Graduate level Molecular Biology or equivalent.</td>
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<td>CBMM 5300Q</td>
<td>Molecular Medicine of the Heart</td>
<td>Dr. Gopal Babu</td>
<td>Permission of Course Director. Open to Masters and PhD students. (See below for required text).</td>
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<td>N</td>
<td>Tuesday</td>
<td>09/08/15</td>
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<td>9:30 AM - 12:30 PM</td>
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<td>Principles of Pharmacology</td>
<td>Dr. Lester Sultatos</td>
<td>Open to PhD students only.</td>
<td>2</td>
<td>N</td>
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<td>Behavioral and Cognitive Neuroscience</td>
<td>Dr. Kevin Beck</td>
<td>Previous course in Neuroscience.</td>
<td>2</td>
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<td>5.00 PM - 7.00 PM</td>
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<td>Dr. Kevin Pang</td>
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<td><a href="mailto:Kevin.Pang@va.gov">Kevin.Pang@va.gov</a></td>
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<td>Cellular &amp; Developmental Neuroscience</td>
<td>Dr. Teresa Wood</td>
<td>Open to Masters and PhD students. (See below for required text).</td>
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<td>10/23/15</td>
<td>12/18/15</td>
<td>3.00 PM - 5.00 PM</td>
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<td>Dr. Steve Levison</td>
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<td><a href="mailto:levisosw@njms.rutgers.edu">levisosw@njms.rutgers.edu</a></td>
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<td>Critical Readings in CBNP</td>
<td>Dr. Martha Nowicky</td>
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<td>N</td>
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<td><a href="mailto:nowyckmc@njms.rutgers.edu">nowyckmc@njms.rutgers.edu</a></td>
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<td>CBNP 5165Q</td>
<td>Foundations of Integrative Human Physiology</td>
<td>Dr. Jorge Serrador</td>
<td>Open to Masters and PhD students. Physiology course or permission of course director.</td>
<td>2</td>
<td>N</td>
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<td>10/20/15</td>
<td>12/16/15</td>
<td>3.00 PM - 5.00 PM</td>
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<td><a href="mailto:jorge.serrador@rutgers.edu">jorge.serrador@rutgers.edu</a></td>
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<td>Dr. Michael Falvo</td>
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<td><a href="mailto:michael.falvo@va.gov">michael.falvo@va.gov</a></td>
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<td>Dr. Joshua Berlin</td>
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<td><a href="mailto:berlinjr@njms.rutgers.edu">berlinjr@njms.rutgers.edu</a></td>
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<td>Dr. Joseph McArdie</td>
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<td>Lab Rotations in CBNP</td>
<td>Dr. Joshua Berlin&lt;br&gt;<a href="mailto:berlinjr@njms.rutgers.edu">berlinjr@njms.rutgers.edu</a>&lt;br&gt;973-972-1618&lt;br&gt;Dr. Joseph McArdle&lt;br&gt;<a href="mailto:mcardle@njms.rutgers.edu">mcardle@njms.rutgers.edu</a>&lt;br&gt;973-972-4429</td>
<td>Use this course # for all subsequent rotations.</td>
<td>1 to 10</td>
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<td>Completion of course requirements.</td>
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<td>DENT 5145Q</td>
<td>Introduction to Structural Biology</td>
<td>Dr. N. Ramasubbu&lt;br&gt;<a href="mailto:ramasun1@sdm.rutgers.edu">ramasun1@sdm.rutgers.edu</a>&lt;br&gt;973-972-0704</td>
<td>Open to Masters and PhD students.</td>
<td>1</td>
<td>N</td>
<td>Wednesday 08/26/15 12/16/15</td>
<td>10.00 AM - 11.00 AM</td>
<td>Dental School D-986&lt;br&gt;*Note: Class held in DS D-987 on 08/26/15</td>
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<td>DENT 5220Q</td>
<td>Methods in Microscopic Imaging</td>
<td>Dr. Kabilan Vellyagounder&lt;br&gt;<a href="mailto:vellyka@sdm.rutgers.edu">vellyka@sdm.rutgers.edu</a>&lt;br&gt;973-972-5051</td>
<td>Enrollment Limit 12. Open to Masters and PhD students.</td>
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<td>N</td>
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<td>GSND 0596Q</td>
<td>Professional Skills I</td>
<td>Dr. Steve Levison&lt;br&gt;<a href="mailto:levisosw@njms.rutgers.edu">levisosw@njms.rutgers.edu</a>&lt;br&gt;973-972-5162&lt;br&gt;Dr. Mona Batish&lt;br&gt;<a href="mailto:batishmo@njms.rutgers.edu">batishmo@njms.rutgers.edu</a>&lt;br&gt;973-972-6466</td>
<td>Enrollment limit 42. Preference given to 2nd year PhD. All others, permission of Course Directors.</td>
<td>1</td>
<td>S/U</td>
<td>Monday and Wednesday 09/02/15 10/28/15</td>
<td>4.00 PM - 5.30 PM</td>
<td>Cancer Center G-1196&lt;br&gt;*Note: Class MSB B-610 on 10/26</td>
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<td>GSND 5196Q</td>
<td>Gene Expression</td>
<td>Dr. Emanuel Goldman&lt;br&gt;<a href="mailto:egoldman@njms.rutgers.edu">egoldman@njms.rutgers.edu</a>&lt;br&gt;973-972-4367</td>
<td>Open to Masters and PhD students.</td>
<td>3</td>
<td>N</td>
<td>Tuesday 09/01/15 12/15/15</td>
<td>5.00 PM - 7.40 PM</td>
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<tr>
<td>GSND 5135Q Sect. 1</td>
<td>Research Design &amp; Statistics</td>
<td>Dr. Catherine Myers&lt;br&gt;<a href="mailto:catherine.myers2@va.gov">catherine.myers2@va.gov</a>&lt;br&gt;<a href="mailto:cemyers@njms.rutgers.edu">cemyers@njms.rutgers.edu</a>&lt;br&gt;973-676-1000 x1810</td>
<td>Open to PhD students only. Preference given to CBNP &amp; BME students. Others by permission of instructor only. Enrollment limit 20. (See below for required text and software.)</td>
<td>2</td>
<td>N</td>
<td>Monday and Wednesday 10/21/15 12/14/15</td>
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<td>MSB B-609 B+C</td>
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<td>GSND 5135Q Sect. 2</td>
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<td>3:00 PM - 5:00 PM</td>
<td>MSB B-617 B+C</td>
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# FALL 2015 PhD COURSE SCHEDULE

**Graduate School of Biomedical Sciences**

Consult [http://njms.rutgers.edu/gsbs/index.cfm](http://njms.rutgers.edu/gsbs/index.cfm) or Respective Instructors for up to date information.

Please note that it is the responsibility of the student to contact the respective instructor for the correct time, dates and room assignment information. Instructor e-mail addresses and phone numbers are provided for your convenience.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Title</th>
<th>Course Director</th>
<th>Prerequisites</th>
<th>Credits</th>
<th>Grade Mode</th>
<th>Days Offered</th>
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<th>End Date</th>
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<tr>
<td>GSND 5200Q</td>
<td>Introduction to Biomedical Sciences (CORE)</td>
<td>Dr. Frederick Coffman <a href="mailto:coffmanf@njms.rutgers.edu">coffmanf@njms.rutgers.edu</a> 973-972-2861</td>
<td></td>
<td>5</td>
<td>N</td>
<td>Monday, Wednesday, and Friday</td>
<td>08/26/15</td>
<td>12/11/15</td>
<td>9.30 AM - 11.30 AM</td>
<td>MSB C-600</td>
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<tr>
<td>GSND 5235Q</td>
<td>Principles of Clinical and Translational Research in Oncology</td>
<td>Dr. Robert Wieder <a href="mailto:wiederro@njms.rutgers.edu">wiederro@njms.rutgers.edu</a> 973-972-3558</td>
<td>Open to Master's and PhD students. Enrollment limit 50. (See below for suggested text).</td>
<td>2</td>
<td>N</td>
<td>Monday</td>
<td>09/07/15</td>
<td>12/07/15</td>
<td>6.00 PM - 8.15 PM</td>
<td>Cancer Center G-1196</td>
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<tr>
<td>GSND 5325Q</td>
<td>Introduction to Biomedical Ethics</td>
<td>Dr. Michael E. Shapiro <a href="mailto:Mes362@njms.rutgers.edu">Mes362@njms.rutgers.edu</a> 973-972-6639</td>
<td>Open to Masters &amp; PhD students. Enrollment limit 30.</td>
<td>2</td>
<td>N</td>
<td>Thursday</td>
<td>09/10/15</td>
<td>12/17/15</td>
<td>10.00 AM - 12.00 PM</td>
<td>MSB B-609 B+C</td>
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<tr>
<td>GSND 5910Q</td>
<td>MD/PhD Seminar/Journal Club</td>
<td>Dr. Padmini Salgama <a href="mailto:salgampa@njms.rutgers.edu">salgampa@njms.rutgers.edu</a> 973-972-8647</td>
<td>Restricted to students in MD/PhD program.</td>
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<tr>
<td>MBGC 5070Q</td>
<td>Advances in Nucleic Acids: RNA</td>
<td>Dr. Mukund Modak <a href="mailto:modak@njms.rutgers.edu">modak@njms.rutgers.edu</a> 973-972-5515</td>
<td>Open to 2nd year PhD students with completion of IBMS. Other admitted with permission of the course director.</td>
<td>2</td>
<td>N</td>
<td>Monday and Wednesday</td>
<td>10/14/15</td>
<td>12/02/15</td>
<td>1.30 PM - 3.30 PM</td>
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<tr>
<td>MBGC 5071Q</td>
<td>Advances in Nucleic Acids: DNA</td>
<td>Dr. Mukund Modak <a href="mailto:modak@njms.rutgers.edu">modak@njms.rutgers.edu</a> 973-972-5515</td>
<td>Open to 2nd year PhD students with completion of IBMS. Other admitted with permission of the course director.</td>
<td>2</td>
<td>N</td>
<td>Monday and Wednesday</td>
<td>08/31/15</td>
<td>10/13/15</td>
<td>1.30 PM - 3.30 PM</td>
<td>ICPH E220R</td>
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<td>MBGC 5075Q</td>
<td>Cell Death</td>
<td>Dr. Raymond Birger <a href="mailto:birgera@njms.rutgers.edu">birgera@njms.rutgers.edu</a> 973-972-4497</td>
<td>Open to Masters and PhD students. (See below for required text).</td>
<td>2</td>
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<td>Monday and Thursday</td>
<td>10/19/15</td>
<td>12/21/15</td>
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<td>MSB B-554</td>
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<tr>
<td>MBGC 5910Q</td>
<td>MBGC Seminar Series</td>
<td>Dr. Muriel Lambert <a href="mailto:milambert@njms.rutgers.edu">milambert@njms.rutgers.edu</a> 973-972-4405</td>
<td>Required course for MBGC students. Must register in fall AND spring.</td>
<td>0.5</td>
<td>S/U</td>
<td>Variable</td>
<td>09/01/15</td>
<td>12/18/15</td>
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<tr>
<td>MBGC 593AQ, BQ, CQ*</td>
<td>Lab Rotations in MBGC</td>
<td>Dr. Muriel Lambert <a href="mailto:milambert@njms.rutgers.edu">milambert@njms.rutgers.edu</a> 973-972-4405</td>
<td>Use for first 3 rotations.</td>
<td>2</td>
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<td>By Arrangement</td>
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<tr>
<td>MBGC 5930Q*</td>
<td>Lab Rotations in MBGC</td>
<td>Dr. Muriel Lambert <a href="mailto:milambert@njms.rutgers.edu">milambert@njms.rutgers.edu</a> 973-972-4405</td>
<td>Use this course # for all subsequent rotations.</td>
<td>1 to 10</td>
<td>S/U</td>
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<td>By Arrangement</td>
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</table>
### FALL 2015 PhD COURSE SCHEDULE

**Graduate School of Biomedical Sciences**

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<tr>
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<th>Title</th>
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<th>Prerequisites</th>
<th>Credits</th>
<th>Grade Mode</th>
<th>Days Offered</th>
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<th>End Date</th>
<th>Time</th>
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<td>MICR 5000Q</td>
<td>Thesis Research</td>
<td>Faculty</td>
<td>Completion of course requirements.</td>
<td>5 PT</td>
<td>10 FT</td>
<td>S/U</td>
<td>By Arrangement</td>
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<tr>
<td>MPH 5000Q</td>
<td>Thesis Research</td>
<td>Dr. Padmini Salgame</td>
<td>Restricted to students in MD/PhD program.</td>
<td>5 PT</td>
<td>10 FT</td>
<td>S/U</td>
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<td>Laboratory Research</td>
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<td>Restricted to students in MD/PhD program.</td>
<td>1 - 10</td>
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<tr>
<td>MSBS 5125Q</td>
<td>Teacher Training Internship</td>
<td>Dr. Carol Lutz</td>
<td>Permission of Course Director</td>
<td>1-3</td>
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<tr>
<td>MSBS 5130Q</td>
<td>Stem Cell Biology &amp; Applications in Molecular</td>
<td>Dr. Pranela Rameshwar</td>
<td>Open to Masters and PhD students.</td>
<td>3</td>
<td>N</td>
<td>Monday</td>
<td>08/24/15</td>
<td>11/30/15</td>
<td>6.00 PM - 9.00 PM</td>
<td>MSB B-610</td>
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<tr>
<td></td>
<td>Medicine</td>
<td><a href="mailto:rameshwa@njms.rutgers.edu">rameshwa@njms.rutgers.edu</a></td>
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<tr>
<td>MSBS 520AQ</td>
<td>Advanced Stem Cell Seminar</td>
<td>Dr. Pranela Rameshwar</td>
<td>MSBS 5130Q or concurrent registration. Open to Masters and</td>
<td>2</td>
<td>N</td>
<td>Wednesday</td>
<td>08/26/15</td>
<td>11/18/15</td>
<td>6.00 PM - 8.00 PM</td>
<td>MSB B-562</td>
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<tr>
<td></td>
<td></td>
<td><a href="mailto:rameshwa@njms.rutgers.edu">rameshwa@njms.rutgers.edu</a></td>
<td>PhD students.</td>
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<tr>
<td>NEUR 5000Q</td>
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<td>Faculty</td>
<td>Completion of course requirements.</td>
<td>5 PT</td>
<td>10 FT</td>
<td>S/U</td>
<td>By Arrangement</td>
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<tr>
<td>NEUR 5200Q</td>
<td>Fundamentals of Neuroscience</td>
<td>Dr. Steve Levison</td>
<td>Open to Masters and PhD students. (See below for required text).</td>
<td>3</td>
<td>N</td>
<td>Thursday</td>
<td>08/27/15</td>
<td>12/17/15</td>
<td>5.00 PM - 8.00 PM</td>
<td>MSB B-556</td>
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<tr>
<td></td>
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<td><a href="mailto:levisosw@njms.rutgers.edu">levisosw@njms.rutgers.edu</a></td>
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<td></td>
<td>Dr. Kevin Pang</td>
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<td><a href="mailto:Kevin.Pang@va.gov">Kevin.Pang@va.gov</a></td>
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<td>Completion of course requirements.</td>
<td>5 PT</td>
<td>10 FT</td>
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<td>By Arrangement</td>
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<tr>
<td>PATH 5010Q</td>
<td>General Pathology</td>
<td>Dr. George Studzinski</td>
<td>Knowledge of anatomy and biochemistry to be determined by</td>
<td>2</td>
<td>N</td>
<td>Monday, Wednesday, and Friday</td>
<td>09/02/15</td>
<td>10/16/15</td>
<td>12.00 PM - 2.00 PM</td>
<td>MSB C-555</td>
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<tr>
<td></td>
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<td><a href="mailto:studzins@njms.rutgers.edu">studzins@njms.rutgers.edu</a></td>
<td>Course Director or designee. (See below for required text).</td>
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</table>
# FALL 2015 PhD COURSE SCHEDULE

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<th>End Date</th>
<th>Time</th>
<th>Location</th>
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</thead>
</table>
| PATH      | Cellular Pathology                                         | Dr. Muriel Lambert  
[mlambert@njms.rutgers.edu](mailto:mlambert@njms.rutgers.edu)  
973-972-4405 | Open to Masters and PhD students. (See below for required text). | 2       | N          | Monday and Thursday | 10/19/15 | 12/17/15 | 4.00 PM - 6.00 PM | MSB B-554 |
| PATH      | Molecular and Cellular Immunology                           | Dr. Patricia Fitzgerald-Bocarsly  
bocarsly@rutgers.edu  
973-972-5233 | Open to PhD students only. (See below for required text). | 3       | N          | Monday and Wednesday | 10/19/15 | 02/01/16 | 4.30 PM - 6.00 PM | MSB C-600 |
| PATH      | The Business of Science: Drug Development - From Molecules to Medicines | Dr. Nicholas Ponzio  
ponzio@njms.rutgers.edu  
973-972-5238 | Open to Masters and PhD. Introductory level courses in Biology and Chemistry. Enrollment limit of 20. Permission of Course Director via e-mail. CANCELLED. | 3       | N          | Wednesday | 09/02/15 | 12/23/15 | 5:30 PM - 9:00 PM | MSB C-555 |
| PHMS      | Biomedical Science Thesis Research                         | Faculty                                              | Completion of course requirements.                | 5 to 10 | S/U        |                |            |            | By Arrangement |          |
| PHPY      | Fundamentals of Pharmacology                               | Dr. Martha Nowycky  
nowyckmc@njms.rutgers.edu  
973-972-4391 | Open to Masters and PhD students.                   | 3       | N          | Monday     | 09/14/15 | 12/14/15 | 6.00 PM - 9.00 PM | MSB B-552 |
| PHPY      | Principles of Toxicology                                  | Dr. Ramez Labib  
ramez.labib@avon.com  
Dr. Thomas Visalli  
tvis624@yahoo.com  
201-949-4833 | Open to Masters and PhD students.                   | 3       | N          | Thursday   | 09/10/15 | 12/10/15 | 6.00 PM - 9.00 PM | MSB B-552 |
| PHPY      | Thesis Research                                           | Faculty                                              | Completion of course requirements.                | 5 PT    | 10 FT      | S/U          |            |            | By Arrangement |          |
| TIII      | III Thesis Research                                        | Faculty                                              | Open to PhD students only.                        | 5 PT    | 10 FT      | S/U          |            |            | By Arrangement |          |
| TIII      | Critical Readings in I3 A                                 | Dr. Nikhat Parveen  
parveen@njms.rutgers.edu  
973-972-5218 | PhD only with priority to 1st year I3 students.     | 0.5     | N          | Tuesday    | 08/25/15 | 10/16/15 | 9.30 AM - 11.00 AM | ICPH E220R |
| TIII      | Critical Readings in I3 B                                 | Dr. Amariliz Rivera  
riveraam@njms.rutgers.edu  
973-972-2568 | PhD only with priority to 1st year I3 students.     | 0.5     | N          | Tuesday    | 10/20/15 | 12/15/15 | 9.30 AM - 11.00 AM | MSB F-605  |

*Note: Class in MSB B-555 on 11/23, 11/30, 12/03, 12/07, and 12/10.

*Note: Class in MSB C-680 on 10/20, 11/17, and 12/15.*
# FALL 2015 PhD COURSE SCHEDULE

Graduate School of Biomedical Sciences

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<th>End Date</th>
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<tbody>
<tr>
<td>TIII 5158Q</td>
<td>Critical Readings in Inflammation and Neuromodulation</td>
<td>Dr. Luis Ulloa <a href="mailto:ulloalu@njms.rutgers.edu">ulloalu@njms.rutgers.edu</a> 973-972-3971</td>
<td>IBMS (GSND 5200Q) and Molecular &amp; Cellular Immunology (PATH 5210Q).</td>
<td>0.5</td>
<td>N</td>
<td>Monday</td>
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<td>6:00 PM - 7:00 PM</td>
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<tr>
<td>TIII 5620Q</td>
<td>Classic &amp; 21st Century Pathogens</td>
<td>Dr. David M. Lukac <a href="mailto:lukacdm@njms.rutgers.edu">lukacdm@njms.rutgers.edu</a> 973-972-4868</td>
<td>Open to PhD students only.</td>
<td>2</td>
<td>N</td>
<td>Monday, Wednesday, and Friday</td>
<td>08/26/15</td>
<td>10/26/15</td>
<td>2:00 PM - 3:30 PM</td>
<td>ICPH Auditorium</td>
</tr>
<tr>
<td>TIII 593AQ, BQ, CQ*</td>
<td>Lab Rotations in I³</td>
<td>Dr. David M. Lukac <a href="mailto:lukacdm@njms.rutgers.edu">lukacdm@njms.rutgers.edu</a> 973-972-4868</td>
<td>Dr. Matthew Neiditch <a href="mailto:neiditmb@njms.rutgers.edu">neiditmb@njms.rutgers.edu</a> 973-972-8981</td>
<td>2</td>
<td>N</td>
<td>By Arrangement</td>
<td>By Arrangement</td>
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<tr>
<td>TIII 5930Q*</td>
<td>Lab Rotations in I³*</td>
<td>Dr. David M. Lukac <a href="mailto:lukacdm@njms.rutgers.edu">lukacdm@njms.rutgers.edu</a> 973-972-4868</td>
<td>Dr. Matthew Neiditch <a href="mailto:neiditmb@njms.rutgers.edu">neiditmb@njms.rutgers.edu</a> 973-972-8981</td>
<td>1 to 10</td>
<td>S/U</td>
<td>By Arrangement</td>
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* First three rotations – register for A, B, C respectively – all subsequent rotations register for 1 to 10 cr S/U

COURSES HIGHLIGHTED IN YELLOW ARE NOT AVAILABLE FOR ONLINE REGISTRATION. During the online registration period, students may obtain email permission from the course director and forward the email to the Registrar at leeba@gsbs.rutgers.edu to be manually registered in any course highlighted in yellow. Add/Drop forms are required after online registration has ended.

Last Update: 10/21/2015 BS

## Required Text

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<th>Course #</th>
<th>Title</th>
<th>Author</th>
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<th>Publisher</th>
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<td>CBMM 5350Q</td>
<td>Molecular Medicine of the Heart</td>
<td>Physiology of the heart (fifth edition) by Arnold M. Katz</td>
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NOTE: 1st or 2nd edition can be used
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<td>2. SPSS software (available in MSB Academic Computing lab, or for purchase see <a href="http://www.spss.com/statistics">www.spss.com/statistics</a> for links to student discounts on GradPak Standard – can install on 2 computers, so 2 students can share one license).</td>
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<td>Cell Death</td>
<td>MEANS TO AN END - Apoptosis and Other Cell Death Mechanisms, Douglas Green, 2010, Cold Spring Harbor Laboratory Press</td>
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<td>PATH 5210Q</td>
<td>Molecular and Cellular Immunology</td>
<td>Janeway’s Immunobiology 8th Edition, Garland Scientific</td>
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