COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 1231352685A1
ORGANIZATION: University of Pennsylvania
3451 Walnut St., P221 Franklin Bldg.
Philadelphia, PA 19104-6205

DATE: 06/26/2011
FILING REF.: The preceding agreement was dated 06/23/2010

The rates approved in this agreement are for use on grants, contracts and other agreements with the Federal Government, subject to the conditions in Section III.

SECTION I: INDIRECT COST RATES

<table>
<thead>
<tr>
<th>RATE TYPES:</th>
<th>FIXED</th>
<th>FINAL</th>
<th>PROV. (PROVISIONAL)</th>
<th>PRED. (PREDETERMINED)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE (%) LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRED.</td>
<td>07/01/2010</td>
<td>06/30/2012</td>
<td>60.00 On-Campus</td>
<td>Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2010</td>
<td>06/30/2012</td>
<td>62.00 On-Campus</td>
<td>Research DOD Contr.</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2010</td>
<td>06/30/2012</td>
<td>26.00 Off-Campus</td>
<td>Research</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2010</td>
<td>06/30/2012</td>
<td>36.00 On-Campus</td>
<td>Other Spon. Prog.</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2010</td>
<td>06/30/2012</td>
<td>26.00 Off-Campus</td>
<td>Other Spon. Prog.</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2010</td>
<td>06/30/2012</td>
<td>57.00 On-Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED.</td>
<td>07/01/2010</td>
<td>06/30/2012</td>
<td>26.00 Off-Campus</td>
<td>Instruction</td>
</tr>
</tbody>
</table>
Total direct costs excluding capital expenditures (buildings, individual items of equipment; alterations and renovations), that portion of each subaward in excess of $25,000; hospitalization and other fees associated with patient care whether the services are obtained from an owned, related or third party hospital or other medical facility; rental/maintenance of off-site activities; student tuition remission and student support costs (e.g., student aid, stipends, dependency allowances, scholarships, fellowships).
<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM</th>
<th>TO</th>
<th>RATE(%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIXED</td>
<td>7/1/2010</td>
<td>6/30/2011</td>
<td>30.90</td>
<td>All</td>
<td>Full-Time Employees</td>
</tr>
<tr>
<td>FIXED</td>
<td>7/1/2010</td>
<td>6/30/2011</td>
<td>9.70</td>
<td>All</td>
<td>Part-Time Employees</td>
</tr>
<tr>
<td>FIXED</td>
<td>7/1/2011</td>
<td>6/30/2012</td>
<td>31.80</td>
<td>All</td>
<td>Full-Time Employees</td>
</tr>
<tr>
<td>FIXED</td>
<td>7/1/2011</td>
<td>6/30/2012</td>
<td>9.70</td>
<td>All</td>
<td>Part-Time Employees</td>
</tr>
<tr>
<td>PROV.</td>
<td>7/1/2012</td>
<td>Until amended</td>
<td></td>
<td></td>
<td>Use the same rates and conditions as those cited for the fiscal year ending June 30, 2012.</td>
</tr>
</tbody>
</table>

** DESCRIPTION OF FRINGE BENEFITS RATE BASE: Salaries and wages.**
ORGANIZATION: University of Pennsylvania
AGREEMENT DATE: 06/16/2011

SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:
The fringe benefits are charged using the rate(s) listed in the Fringe Benefits Section of this Agreement. The fringe benefits included in the rate(s) are listed below.

TREATMENT OF PAID ABSENCES
Vacation, holiday, sick leave pay and other paid absences are included in salaries and wages and are claimed on grants, contracts and other agreements as part of the normal cost for salaries and wages. Separate claims are not made for the cost of these paid absences.

OFF-CAMPUS DEFINITION: For all activities performed in facilities not owned by the institution and to which rent is directly allocated to the project(s), the off-campus rate will apply. Actual costs will be apportioned between on-campus and off-campus components. Each portion will bear the appropriate rate.
1. The rates in the Agreement have been negotiated to reflect the administrative cap provisions of the revisions to OMB Circular A-21 published by the Office of Management and Budget on May 8, 1996. With the exception of Department of Defense contracts, no rate affecting the institution's fiscal periods beginning on or after October 1, 1991 contains total administrative cost components in excess of that 26 percent cap.

2. Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year, and an acquisition cost of $5,000 or more per unit.

3. Fringe Benefits include:

   Full-Time Employees - FICA, Retirement, Disability Insurance, Life Insurance, Tuition Remission for employees, Sabbatical Leave, FAS No. 106 (post-retirement benefits other than pensions), TIAA/CREF benefits and counseling, Pennflex, Union Legal Funds, Worker's Compensation, Unemployment Insurance and Health Insurance.

   Part-Time Employees - FICA, TIAA/CREF, Unemployment and Workers' Compensation.

Post Doctoral Fellows are not included in the full-time benefit rate. Post Doctoral Fellows are eligible for a separate health insurance plan which is a direct charge. They are also covered by FICA and Workers' Compensation.

This rate agreement updates fringe benefit rates only.
ORGANIZATION: University of Pennsylvania
AGREEMENT DATE: 06/16/2011

SECTION III: GENERAL

A. LIMITATIONS
The rates in this Agreement are subject to any statutory or administrative limitations and apply to a given grant, contract or other agreement only to the extent that funds are available. Acceptance of the rates is subject to the following conditions: (1) Only costs incurred by the organization were included in its facilities and administrative costs pools as finally accepted; such costs are legal obligations of the organization and are allowable under the governing cost principles; (2) The same costs that have been treated as facilities and administrative costs are not claimed as direct costs; (3) Similar types of costs have been accorded consistent accounting treatment; and (4) The information provided by the organization which was used to establish the rates is not later found to be materially incomplete or inaccurate by the Federal Government. In such situations the rate(s) would be subject to renegotiation at the discretion of the Federal Government.

B. ACCOUNTING METHODS
This Agreement is based on the accounting system purported by the organization to be in effect during the Agreement period. Changes to the method of accounting for costs which affect the amount of reimbursement resulting from the use of this Agreement require prior approval of the authorized representative of the cognizant agency. Such changes include, but are not limited to, changes in the charging of a particular type of cost from facilities and administrative to direct. Failure to obtain approval may result in cost disallowances.

C. FIXED RATES
If a fixed rate is in this Agreement, it is based on an estimate of the costs for the period covered by the rate. When the actual costs for this period are determined, an adjustment will be made to a rate of a future year(s) to compensate for the difference between the costs used to establish the fixed rate and actual costs.

D. USE BY OTHER FEDERAL AGENCIES
The rates in this Agreement were approved in accordance with the authority in Office of Management and Budget Circular A-21 Circular, and should be applied to grants, contracts and other agreements covered by this Circular, subject to any limitations in A above. The organization may provide copies of the Agreement to other Federal Agencies to give them early notification of the Agreement.

B. OTHER
If any Federal contract, grant or other agreement reimbursing facilities and administrative costs by a means other than the approved rate(s) in this Agreement, the organization should (1) credit such costs to the affected program, and (2) apply the approved rate(s) to the appropriate base to identify the proper amount of facilities and administrative costs allocable to these programs.

BY THE INSTITUTION:

University of Pennsylvania

[Signature]
Stephen D. Golding
Vice President, Finance and Treasurer

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

[Signature]
Robert J. Aaronson
Director, Northeastern Field Office

[Signature]
Louis Martilotti
Telephone: (213) 264-2069