COLLEGES AND UNIVERSITIES RATE AGREEMENT

EIN: 043:67352
DATE: 11/14/2016
ORGANIZATION: FILING REF.: The preceding
University of Massachusetts at Amherst agreement was dated
340 Whitmore Administration Bldg. 11/23/2015
181 Presidents Drive
Amherst, MA 01003-9313

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: Facilities And Administrative Cost Rates

RATE TYPES: FIXED FINAL PROV. (PROVISIONAL) PRED. (PREDETERMINED)

<table>
<thead>
<tr>
<th>TYPE</th>
<th>FROM DATE</th>
<th>TO DATE</th>
<th>RATE (%)</th>
<th>LOCATION</th>
<th>APPLICABLE TO</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRED</td>
<td>07/01/2016</td>
<td>06/30/2018</td>
<td>59.50</td>
<td>On-Campus</td>
<td>Research</td>
</tr>
<tr>
<td>PRED</td>
<td>07/01/2016</td>
<td>06/30/2018</td>
<td>26.00</td>
<td>Off-Campus</td>
<td>Research</td>
</tr>
<tr>
<td>PRED</td>
<td>07/01/2016</td>
<td>06/30/2018</td>
<td>49.00</td>
<td>On-Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED</td>
<td>07/01/2016</td>
<td>06/30/2018</td>
<td>26.00</td>
<td>Off-Campus</td>
<td>Instruction</td>
</tr>
<tr>
<td>PRED</td>
<td>07/01/2016</td>
<td>06/30/2018</td>
<td>31.50</td>
<td>On-Campus</td>
<td>Other Sponsored Activities</td>
</tr>
<tr>
<td>PRED</td>
<td>07/01/2016</td>
<td>06/30/2018</td>
<td>26.00</td>
<td>Off-Campus</td>
<td>Other Sponsored Activities</td>
</tr>
<tr>
<td>PROV</td>
<td>07/01/2018</td>
<td>Until Amended</td>
<td></td>
<td></td>
<td>Use same rates and conditions as those cited for fiscal year ending June 30, 2018.</td>
</tr>
</tbody>
</table>

*BASE
Modified total direct costs, consisting of all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel and up to the first $25,000 of each subaward (regardless of the period of performance of the subawards under the award). Modified total direct costs shall exclude equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs and the portion of each subaward in excess of $25,000. Other items may only be excluded when necessary to avoid a serious inequity in the distribution of indirect costs, and with the approval of the cognizant agency for indirect costs.
SECTION II: SPECIAL REMARKS

TREATMENT OF FRINGE BENEFITS:

Treatment of Fringe Benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs.

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.

1. Fringe benefits are claimed using approved rates contained in the Massachusetts State-Wide Cost Allocation Plan. The following additional fixed fringe benefit charges are approved for the University:

   FYE 06/30/17
   Workers' Comp. Ins.    .52%(S&W)
   Health & Welfare (1)   $16.00 per week (01/01/14-12/31/16), $16.50 per week
                           (01/01/17- 12/31/17)
   Sick Leave Bank        .66%(S&W)
   Post Doc. Fellows      14.26% (Inclusive of health insurance, terminal
                           leave, payroll tax and worker's Comp. Ins.)

   Graduate Research Assistants 18.66% (Inclusive of health insurance) Effective 07/1/2013

(1) Health and Welfare - The State negotiated rate with collective bargaining units. The rate supports dental, and in some cases vision, health benefits which are provided directly by health and welfare trust funds to employees of the Commonwealth of Massachusetts and the University of Massachusetts.

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.

   This rate agreement updates fringe benefit rates.

** A fringe benefit rate proposal based on actual expenses for fiscal year ending June 30, 2016 is due by December 31, 2016.
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 cost 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 CHANGES:
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 Title 2 of the Code of Federal Regulations, Part 200 (2 CFR 200), and should be applied to grants, contracts and other agreements covered by 2 CFR 200, 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.

E. OTHER:
If any Federal contract, grant or other agreement is 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 programs, 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 Massachusetts at Amherst

[Signature]

ANDREW P. MANGELS
Vice Chancellor
Administration & Finance

[Date]
12-18-16

ON BEHALF OF THE FEDERAL GOVERNMENT:

DEPARTMENT OF HEALTH AND HUMAN SERVICES

[Agency]

Darryl W. Mayes - A

[Signature]

Darryl W. Mayes

[Name]

Deputy Director, Cost Allocation Services

[Title]

[Date] 11/14/2016

[Telephone] (212) 264-2069

WHS REPRESENTATIVE: Michael Stanco