DEPARTMENT OF PHYSICS & ASTRONOMY
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Procedures Governing the Allocation of Research Space

Approved by Department on 28 April, 2017

I. Principles

Space in buildings on the campus of the University of North Carolina at Chapel Hill is allocated to the Physics & Astronomy Department by the University to be used to conduct research pursuant to the University's (and the Department's) mission. The Department then allocates specific spaces for the use of individual faculty members and their research groups. Research space may be used for a variety of tasks pursuant to the research: experimentation, sample or equipment fabrication and construction, computation (using either local machines or links to machines elsewhere), astronomical remote observing, scientific discussions and research group meetings, individual "desk work" by students and postdocs, or storage of scientific equipment. In many cases individual spaces may serve multiple purposes, and may be shared by more than one research group.

It is the policy of the Department of Physics and Astronomy that research space will be allocated so as to maximize the quality and quantity of the research produced by the Department, and to promote excellence in the education of the students and postdocs participating in the research. This principle applies to *the Department as a whole*; in some cases reallocation of research space may have a negative impact on the productivity of one research group that is offset by a larger gain in productivity by another group, so that the degree to which the Department achieves its mission of research and teaching is enhanced overall.

Typically the reallocation of research space from one research group to another will be precipitated by an event such as the hiring of a new faculty member who needs space in which to conduct research, a substantial increase in external funding for a faculty member to carry out a new research project that requires additional space, or the retirement or departure of a faculty member.

II. Criteria to be used in reallocation decisions

The following factors are to be considered in decisions to reallocate research space from one research group to another, in the order stated. If space is freed up for other groups' use (e.g. by the departure of a faculty member who is not replaced by a new hire needing research space, or if additional space is made available to the Department), the allocation of that space among existing research groups will be determined by unmet space needs and by the degree to which a research group is making optimum, efficient, and productive use of the space it already occupies.

- *Is the space being used to its optimum and intended capability?* Space suitable for experimental use that is being used for student desks, meeting space, storage, computation, or other functions that could be carried out in other kinds of space will be considered for reallocation first. Such functions can be moved to space that is not suitable for experimental use, although the location of such available space may be less convenient for the research group.
- *Is the space being used continually or intermittently?* Space that is used for laboratory functions that are carried out only at certain stages of a project, or that are carried out only intermittently

rather than on an ongoing basis, will be considered for reallocation second. If the space is to be reallocated, efforts will be made to find alternative locations in which the displaced activities can be carried out.

- *How efficiently and productively is the space being used?* The metrics to be used for efficiency are: external research funding per square foot of research space (including, as appropriate, external non-monetary allocations such as observing time or beam time, supercomputer time and the like), number of researchers participating in research activities in the space, the number of research trainees participating, and the number of trainees who receive degrees, all per square foot of research space. Space being used with low efficiency by these measures will be considered for reallocation third. The efficiency will be calculated for the previous five years, and the trend of the metric for the past and the future (based e.g. pending grants or contemplated retirement) will also be considered. The quality of the space will also be included as a weighting factor in calculating the efficiency metric: if the space is of low quality (poor environmental control, lacks needed characteristics such as high ceiling), the square footage will be assigned a weighting factor that is smaller than unity. Similarly, if the space is shared with one or more other groups the square footage will be pro-rated among the groups.
- *Does the research group have access to space elsewhere that could accommodate the activities?* Some research groups have access to space outside of Phillips and Chapman Halls (e.g. in Marsico Hall, in Morehead Observatory, or at TUNL) to which research activities could be moved, although this could make the research more difficult to carry out due to crowding and inconvenient location. Such a reallocation of space will be considered fourth.
- *Does the space have a specific functionality?* Space that is fitted for specialized use, such as wet lab or clean room space, will be considered for reallocation fifth. The frequency of use and the possibility of carrying out those functions elsewhere (perhaps less conveniently) will enter in to the consideration.

III. Space reallocation procedure

The Department will maintain a space utilization inventory, which is to be updated annually. As part of the inventory, faculty members whose research activities use multiple rooms will be asked to rank their usage of the various rooms, from most to least critical to their research. They will also be asked to identify unmet space needs. When a precipitating event occurs, the priorities outlined above will be used in the order given to identify specific spaces for potential reallocation. A plan for the reallocation that maximizes the quality and quantity of the Department's research and education will be developed by the Department Chair, in consultation with the Laboratory Space Allocation Committee. In parallel with the development of the plan, the Department Chair will advocate to the University administration for the allocation of additional space not currently assigned to Physics & Astronomy, using the measurements of efficiency and productivity described above to support the case.

If the Department Chair and the Laboratory Space Allocation Committee deem it appropriate, assessment of the need for a reallocation of research space can also be carried out in the absence of a precipitating event, to examine ongoing needs of existing research groups for more or better-quality space. The procedure for reallocation in such cases will follow the guidelines outlined above, including the Chair's advocacy to the University administration for additional space for the Department's research.