

# University of Connecticut Greater Hartford Campus

## *SPACE NEEDS ANALYSIS FOR THE CAMPUS MASTER PLAN*



*June 2004*

*Prepared by*

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**SPACE NEEDS ANALYSIS  
FOR THE CAMPUS MASTER PLAN  
UNIVERSITY OF CONNECTICUT  
GREATER HARTFORD CAMPUS**

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## 1.0 KEY FINDINGS AT A GLANCE

- The utilization of classrooms at the base term, Fall 2002, was 22 hours at 56%. The number was slightly smaller than it might have been because the two classrooms in the Computer Center showed no scheduled use. They are apparently scheduled directly by the Computer Center with faculty. UConn is urged to see that these are in the future dealt with in a way that allows them to be part of campus utilization reporting. Use was highest from 9:00 AM to 1:00 PM, with additional spikes at 2:00 PM and 6:00 PM.
- Teaching labs averaged 10 hours per week at 72% student station occupancy when the rooms were scheduled. The teaching laboratory in the Computer Center again shows no use since it apparently is scheduled directly between the Computer Center and departments. Laboratory utilization was strongest in the afternoon with relatively weak use on Wednesdays and very low use on Fridays.
- This study assumes the move of Hartford-based School of Business Administration programs to Downtown Hartford and the development of the Public Affairs program at this campus.
- The full-time equivalent student target number used for the study is 1,561, which translates to 2,082 headcount students.
- The faculty and staff numbers for the campus show growth similar to the student numbers resulting in needs in the categories of research and offices.
- The library also shows a fairly substantial need for increase for the target year along with student union functions.
- There is a total need projected of over 30,000 ASF of additional space, a 28% increase over current space at the target year. The guideline analysis at the base year showed the campus approximately in balance with a small 3% need primarily driven by needs for the library and offset by a fairly substantial surplus in classroom space.
- The total guideline space shown works out to 89 ASF per full-time equivalent student. The current ratio for this campus is 82 assignable square feet per full-time equivalent student.

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## 2.0 INTRODUCTION

Paulien & Associates, Inc. of Denver, Colorado was contracted in February 2003 to conduct several studies for the University of Connecticut in Storrs; a Classroom & Utilization Study, Classroom Mix Study, and Analysis by Space Type to be used for development of the Campus Master Plan Update, which is being developed under the leadership of SmithGroup JJR, in Ann Arbor Michigan. The study for Greater Hartford was added in the summer of 2003. In February, 2004, University of Connecticut administration provided the consultants with revised student enrollment and staffing information. This report reflects these new parameters for both the Hartford academic programs and the School of Social Work. Other modifications since the preparation of the first draft include the departure of the MBA program from the Greater Hartford Campus and the planned introduction of the Public Affairs program.

As part of the University of Connecticut's umbrella of regional campuses, this study examines the space needs for the University of Connecticut's Greater Hartford Campus in West Hartford, including the School of Social Work. UConn-Greater Hartford is the largest of the five regional campuses. Regional sites in Hartford, Torrington and Waterbury make up the UConn Tri-Campus System. The University's other campuses across the state, including the School of Law in Hartford, are not part of this analysis.

The Greater Hartford campus, at its present West Hartford location since 1970, contains five buildings on 58 acres. The Harleigh B. Trecker Library, which also contains administrative and program offices, as well as research spaces, once housed the Law School before it moved to its present location in the mid-1980's. The Undergraduate Building houses classrooms, laboratories and faculty offices as well as the Gampel Student Center. The School of Social Work building located at the center of campus contains classrooms, offices and support spaces, and the Zachs Community Center. The Computer Center Building was constructed in 2000 with UCONN 2000 funding and houses the campus' computer classrooms and labs. A small facilities structure with garages exists at the edge of campus and houses maintenance personnel. Student and visitor parking are located across the street from Trout Brook Drive.

## 3.0 PROCESS

Originally, Paulien & Associates was provided with enrollment, course, and staffing data from Fall 2002 by various administrative and academic personnel at the University of Connecticut's Greater Hartford Campus. Upon initial request, it was determined that no official facilities inventory existed for the Greater Hartford Campus. The consultant pulled relevant data from building floor plans to create a facilities database and performed an extensive on-site measurement and verification process in mid-October 2003. The consultant utilized this facilities inventory for the space needs analysis.

On-site work sessions and interviews were conducted on September 11, 2003 with the Associate Vice Chancellor of the Tri-Campus administration, the Greater Hartford Campus Director, Librarian, Dean and Associate Dean of the School of Social Work and several members of SmithGroup JJR, the master planning consultants. A noon open forum for the campus community with the consultants was well attended. These work sessions included discussions of future programs and growth as well as verification of existing course, staffing and enrollment

data. During the consultant's time on site, visits were made to individual campus buildings campus to gain familiarity with the spaces and grounds.

In February 2004, University of Connecticut administration asked the consultants to revise the original space needs analysis study based on Fall 2003 enrollment and staffing information for the base and target years. This study reflects the new information.

The findings contained in this report were reviewed on site with representatives of Tri-Campus administration, the Director of the Greater Hartford Campus, and the Associate Dean for Social Work. A change from Tri-Campus administration increasing the percentage of faculty conducting research on-site at the target year has been incorporated into this document.

In May 2004, the Associate Dean for the School of Social Work requested a change in the number of faculty, both current and projected, for the space needs analysis. In June 2004, the request was approved by the Senior Vice Provost for Academic Affairs. This change involved adding six additional faculty positions to the existing faculty headcount at the base year (total of 33 positions), and increasing the faculty headcount projection to equal the new base year data plus three new positions (total of 36), for the target year.

#### 4.0 UTILIZATION OF EXISTING CLASSROOMS & TEACHING LABORATORIES

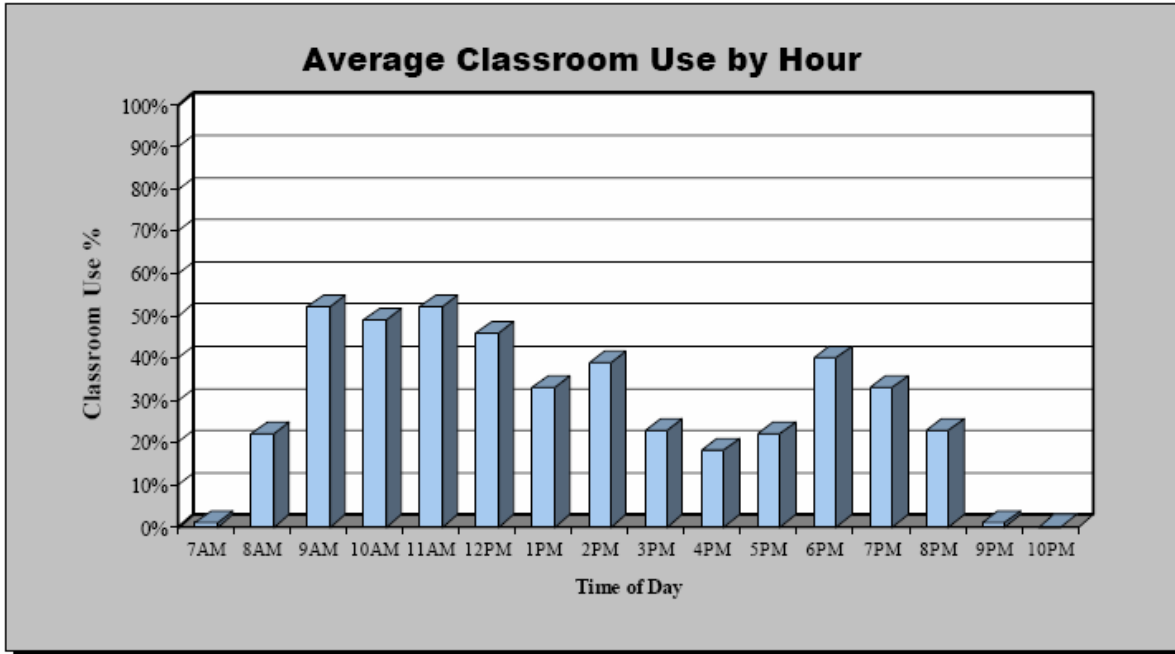
##### Classrooms

As part of the planning process, Paulien & Associates conducted an analysis of the utilization of classrooms and teaching laboratories for Fall 2002. The first pass of classroom utilization showed an average of 19 hours per week with 56% of the seats filled when classes were scheduled. No utilization was shown for the four classrooms on the fourth floor of the Library. Investigation revealed that Business hand-schedules its courses and, therefore, that information was not added to the computerized records. By adding up the 37 sections shown as taught by Business Administration at Hartford in Fall 2002, this produces an average of 28 hours of use for those four rooms. The two classrooms in the Computer Center did not show any scheduled use in Fall 2002. The consultants note that Computer Science courses continue to be shown as scheduled in the Undergraduate Building. The Registrar notes these rooms are directly scheduled by the Computer Center. It is possible that these rooms should be considered open laboratories, or if courses are actually scheduled into them, the location needs to be added or changed on the course records. This is worthy of a UConn follow up. The findings by building were as follows.

	Number of Classrooms	Weekly Room Hours	Student Station Occupancy %
Computer Center	2	0	0%
Library (Business Administration)	4	28	n/a
Social Work	8	20	57%
Undergraduate Building	18	24	55%
Total or Weighted Average	32	22	56%

The consultants are assuming 30 hours per week at 65% occupancy as a planning goal for the Greater Hartford Campus.

Utilization by time of day showed the heaviest use between 9:00 AM and Noon when more than half the classrooms are in use and relatively strong use from 1:00 PM to 3:00 PM in the afternoon and from 6:00 PM to 8:00 PM in the evening. It should be noted that the four rooms for Business Administration in the Library showed no use under this analysis because all of the courses are marked "to be arranged" rather than listed with a particular room. Therefore, those rooms and the Computer Center classrooms discussed above, were removed from the time of day analysis shown below:



NOTE: Average of Monday through Thursday use.

In looking at time of utilization by day, the consultants adjusted the table so that the six rooms that showed no use in the course records the four used by Business Administration and scheduled by them and the two in the Computer Center where Computer Center staff makes the scheduling arrangements with professors. Even with those six classrooms removed, Greater Hartford has a maximum of 20 out of 26 classrooms scheduled at the peak time. It is interesting to note that there is more utilization on Saturday than there is on Friday.

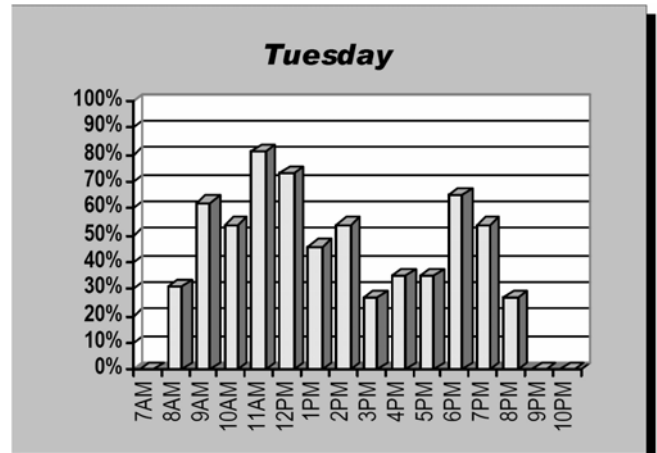
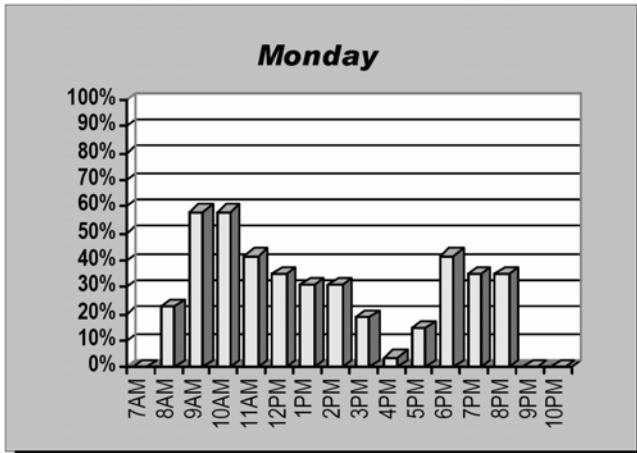
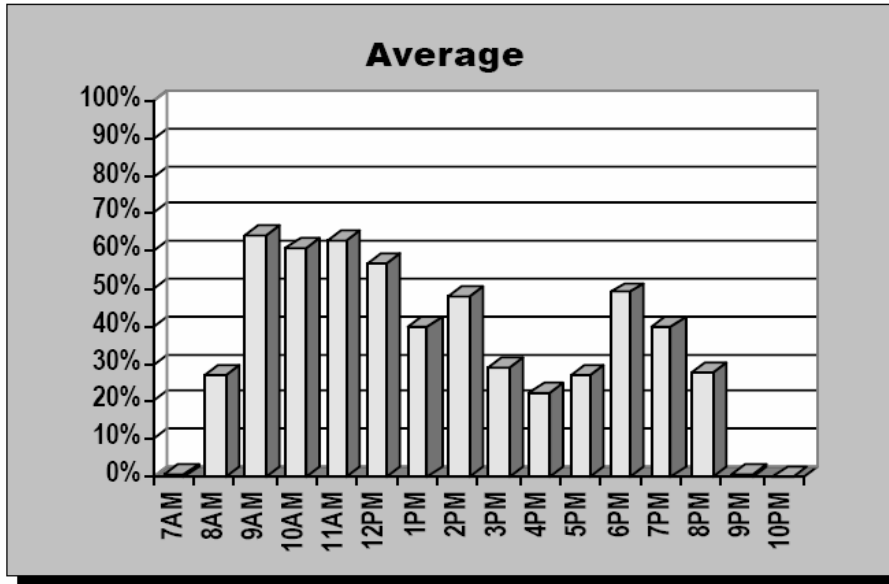
# University of Connecticut • Greater Hartford

Time of Day	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Average*	
	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use	Rooms in Use	% In Use
7:00 AM	0	0%	0	0%	0	0%	1	4%	0	0%	0	0%	0	0%	0	1%
8:00 AM	6	23%	8	31%	7	27%	7	27%	0	0%	4	15%	0	0%	7	27%
9:00 AM	15	58%	16	62%	20	77%	16	62%	4	15%	7	27%	0	0%	17	64%
10:00 AM	15	58%	14	54%	19	73%	15	58%	4	15%	7	27%	0	0%	16	61%
11:00 AM	11	42%	21	81%	15	58%	19	73%	4	15%	7	27%	0	0%	17	63%
12:00 PM	9	35%	19	73%	13	50%	18	69%	4	15%	7	27%	0	0%	15	57%
1:00 PM	8	31%	12	46%	8	31%	14	54%	3	12%	7	27%	0	0%	11	40%
2:00 PM	8	31%	14	54%	11	42%	17	65%	3	12%	2	8%	0	0%	13	48%
3:00 PM	5	19%	7	27%	8	31%	10	38%	3	12%	2	8%	0	0%	8	29%
4:00 PM	1	4%	9	35%	6	23%	7	27%	3	12%	2	8%	0	0%	6	22%
5:00 PM	4	15%	9	35%	8	31%	7	27%	0	0%	0	0%	0	0%	7	27%
6:00 PM	11	42%	17	65%	13	50%	10	38%	0	0%	0	0%	0	0%	13	49%
7:00 PM	9	35%	14	54%	10	38%	9	35%	0	0%	0	0%	0	0%	11	40%
8:00 PM	9	35%	7	27%	6	23%	7	27%	0	0%	0	0%	0	0%	7	28%
9:00 PM	0	0%	0	0%	0	0%	1	4%	0	0%	0	0%	0	0%	0	1%
10:00 PM	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%

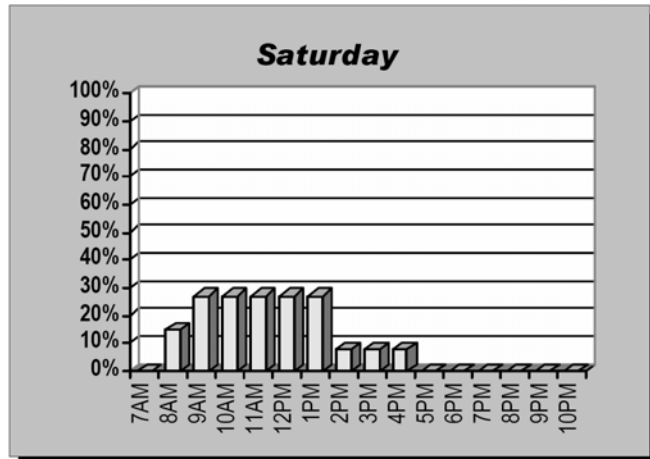
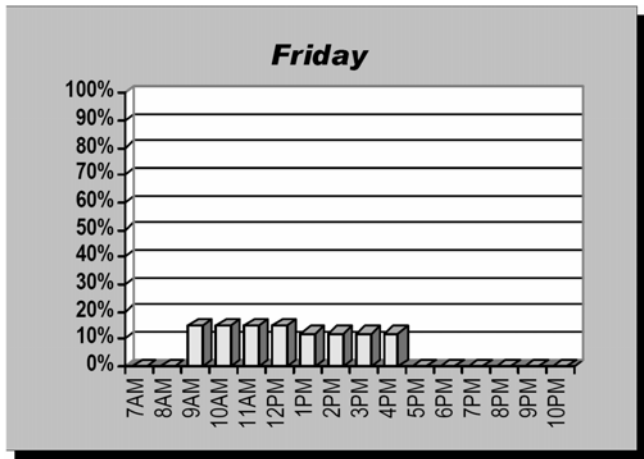
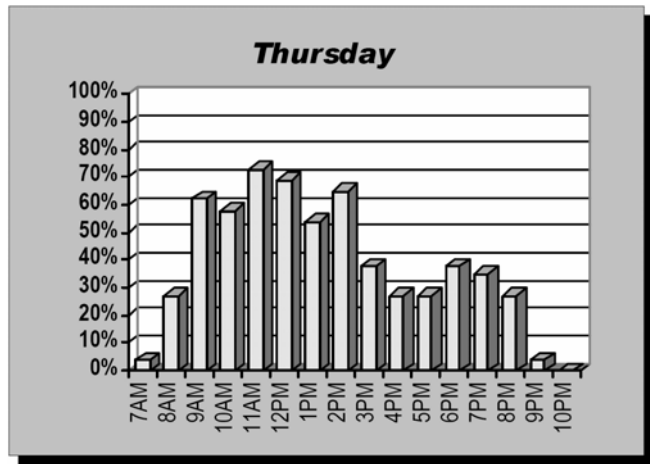
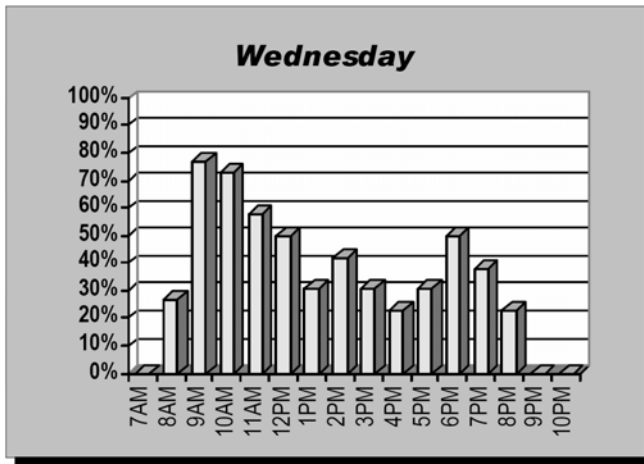
Note: Based on total classrooms of 26

\* Based upon the consultant's experience, Friday is typically underutilized, therefore the average is calculated on Monday thru Thursday use.

## Percent of Classrooms In Use







### Classroom Utilization Analysis by Department Summary

College/Administrative Unit	No. of Rooms	Average Room Size	Average ASF per Station	Average Section Size	Average Weekly Room Hours	Hours in Use Student Station Occupancy %
Hartford	18	722	16	25	24	55%
School of Social Work	8	658	23	16	20	57%
<b>AVERAGE TOTAL</b>	<b>26</b>	<b>702</b>	<b>18</b>	<b>22</b>	<b>23</b>	<b>56%</b>

### Teaching Laboratories

There are five laboratories in the Undergraduate Building which average 12 hours of scheduled use at 72% student occupancy. The laboratory in the Computer Center does not show any scheduled use. This may again be a course file data issue. See the comments under classrooms above. This produces a campuswide average of 10 hours per week for teaching laboratories at 72% occupancy.

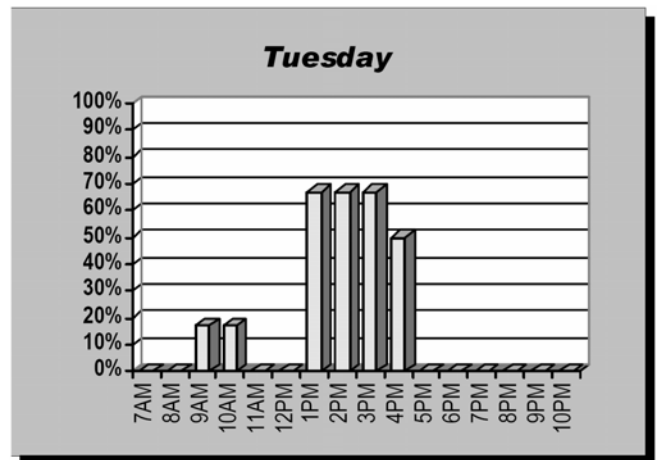
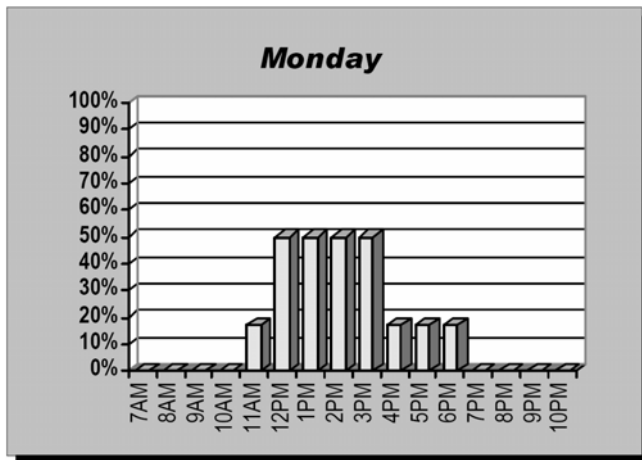
## Teaching Laboratory Utilization Analysis by Department

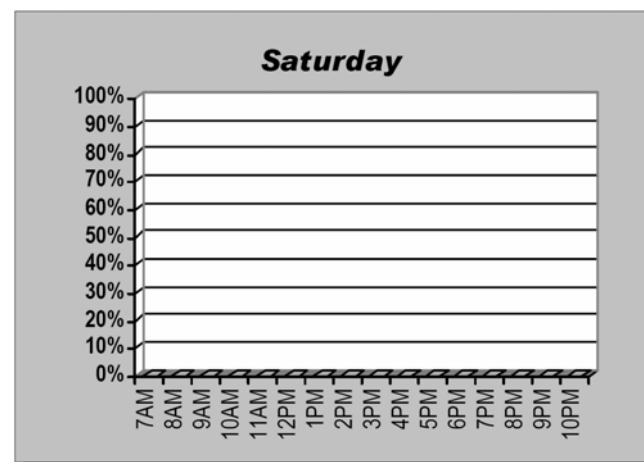
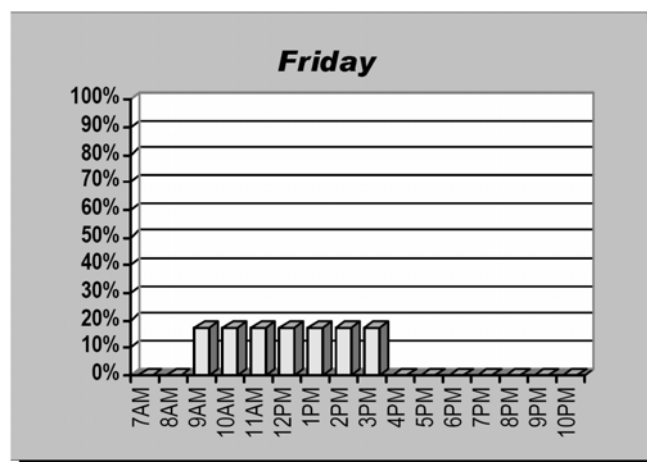
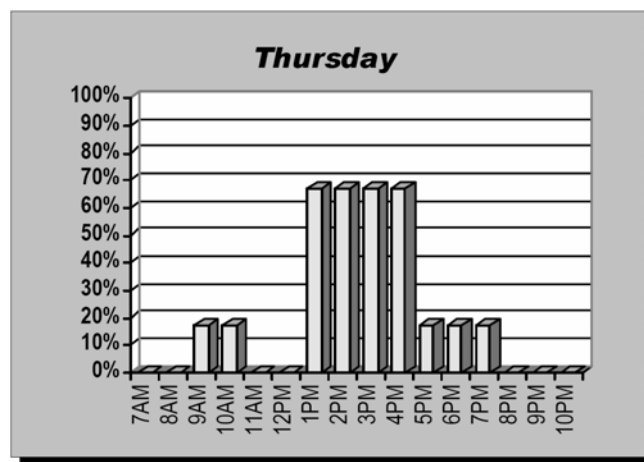
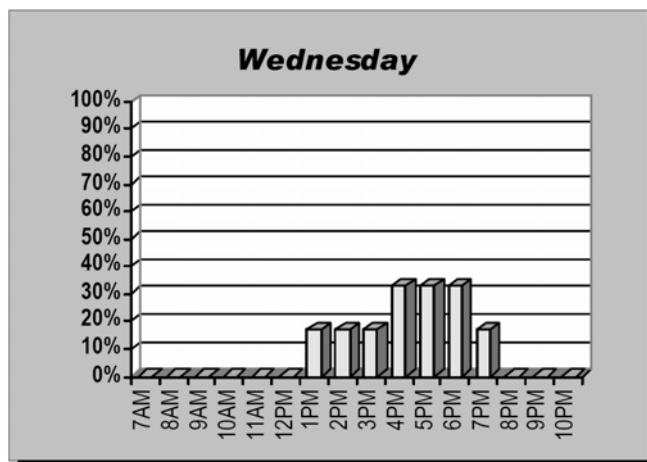
Room Id	Room Use Code	Assignable Sq. Ft.	No. of Stations	Assignable Sq. Ft. Per Station	Average Enrollment	Weekly Student Contact Hours	Weekly Room Hours	Hours in Use Student Station Occupancy %
<i>Art</i>								
Ugr-H 309	210	759	15	51	14	84	6	93%
<i>Biological Sciences</i>								
Ugr-H 206	210	1,050	24	44	15	145	10	60%
<i>Chemistry</i>								
Ugr-H 201	210	1,440	24	60	15	324	21	64%
<i>Computer Lab</i>								
CC 116.1	210	1,064	32	33	0	0	0	0%
<i>Geology &amp; Geophysics</i>								
Ugr-H 214	210	1,200	24	50	23	210	9	97%
<i>Physics</i>								
Ugr-H 203	210	1,280	24	53	15	183	12	64%
<b>AVERAGE</b>		<b>1,132</b>	<b>24</b>	<b>48</b>	<b>14</b>		<b>10</b>	<b>72%</b>
<b>TOTAL ASF</b>		<b>6,793</b>						
<b>NO. OF ROOMS</b>		<b>6</b>						

NOTE: Does not include related lab service space

An average of 20 hours at 75% is the lowest widely used planning goal.

A teaching laboratory analysis by time of day shows the majority of the laboratory use in the afternoon, as would be expected. At no time are more than four of the six laboratories in use.





## 5.0 FUTURE ENROLLMENT & STAFFING ASSUMPTIONS

While the School of Social Work is part of the Greater Hartford Campus, their student enrollment, courses, and staffing data are independent of the other undergraduate and graduate programs on the campus. As a result, future enrollment and staffing assumptions will be analyzed separately; first by the academic programs under the Greater Hartford Campus administration and second, by the School of Social Work.

### Hartford Academic Programs

Over the 10 year span to the target year for this analysis of space needs, the University of Connecticut's Greater Hartford Campus anticipates modest growth in student enrollment, and minor growth in faculty and staffing. The consultants were provided with detailed enrollment data. Enrollment growth for the Hartford academic programs is projected at 7% for Fall 2004, 5% for Fall 2005, and 9% for Fall 2006. From Fall 2006 through Fall 2013, student enrollments are projected to be stable. Headcount and FTE for the Teacher Certification Program for College Graduates (TCPCG) and the Public Affairs program were projected at 60 student headcount each at target year.

Three undergraduate programs are currently offered at the campus as well as some classes for the MBA plus the M.Ed. for the Teacher Certification Program for College Graduates.

In analyzing the growth of academic programs under the Hartford umbrella, the overall projection in enrollment was from a Fall 2003 student headcount of 1,187 to a projected student headcount of approximately 1,519 for the Fall 2013 term, an increase of 28% over the planning period. During the Fall 2003 semester, the Greater Hartford Campus generated 883 full-time equivalent (FTE) students. The consultants projected Fall 2013 FTE of 1,130 based on the current FTE /HC ratio. To make this assumption, the consultants projected no change in the full-time/part-time student mix.

Fall Semester Term	Total Headcount Enrollment
1996	995
1997	904
1998	916
1999	1,009
2000	963
2001	990
2002	1,124
2003	1,187

From an historical perspective, between Fall 1996 and 2003, student enrollment increased certain years and decreased in others but has remained relatively steady as noted in the Hartford Campus Enrollment table. For the last seven years, the campus has averaged enrollments of 1005 students each fall semester with a growth rate of 15% over the eight year period.

Justification of modest growth in target year enrollments includes several programs in the planning stages. Bachelor's degrees are being planned in Psychology, Human Development & Family Studies, and in American Studies. Several master's degrees (Public Affairs, Liberal Studies, Survey Research) are also in various stages of development.

The following table exhibits enrollment and staffing projections:

**University of Connecticut - Greater Hartford Campus**  
Actual and Projected Enrollments & Staffing - Fall 2003 to Fall 2013

**Enrollment**

Campus/College	Total Headcount Enrollment Fall 03	Total FTE - Fall 2003	Ratio FTE/HC	Fall 2004 - 7% Growth HC Enrollment	Fall 2005 - 5% Growth HC Enrollment	Fall 2006 - 9% Growth HC Enrollment	Fall 2007-2013 - Stable HC Enrollment	Fall 2013 FTE Projection
Hartford Academic Programs	1,142	842	0.74	1,222	1,283	1,399	1,399	1,031
TCPCG	45	41	0.90	48	51	55	60	54
Public Affairs Program	0	0	0.75	0	0	0	60	45
<b>Total Hartford Programs</b>	<b>1,187</b>	<b>883</b>		<b>1,270</b>	<b>1,334</b>	<b>1,454</b>	<b>1,519</b>	<b>1,130</b>
School of Social Work	563	431	0.77	563	563	563	563	431
<b>Hartford Campus Enrollment Totals</b>	<b>1,750</b>	<b>1,314</b>		<b>1,833</b>	<b>1,897</b>	<b>2,017</b>	<b>2,082</b>	<b>1,561</b>

**Staffing (Headcount)**

Campus/College	Full-time Faculty 2003	Part Time Faculty Fall 2003	Non-Faculty Staff Fall 2003	Total Faculty and Staff 2003	Full-time Faculty 2013	Part Time Faculty Fall 2103	Non-Faculty Staff Fall 2013	Total Faculty and Staff 2013
Hartford Academic Programs	28	82	25	135	34	100	28	162
College of Continuing Studies			4	4			5	5
Urban & Community Studies			1	1			1	1
Information Technology Center			3	3			4	4
Trecker Library (See Note 3)				-				-
Business Programs	2			2	3			3
Connecticut Small Business Dev. Center			4	4			4	4
Global Training and Development Institute	1			1	1			1
Hartford County Extension Center	2		15	17	2		15	17
UConn Co-Op Bookstore (See Note 3)				-				-
Hartford Facilities/Physical Plant			9	9			10	10
TCPCG	2	6	1	9	3	8	1	12
Public Affairs Program		0	0	0	12	8	13	33
<b>Hartford Subtotal</b>	<b>35</b>	<b>88</b>	<b>62</b>	<b>185</b>	<b>55</b>	<b>116</b>	<b>81</b>	<b>252</b>
School of Social Work	33	20	57	110	36	20	57	113
<b>Hartford Campus Staffing Total</b>	<b>68</b>	<b>108</b>	<b>119</b>	<b>295</b>	<b>91</b>	<b>136</b>	<b>138</b>	<b>365</b>

Notes:

- 1) Students in the TCPCG program are predominately attending full-time
- 2) It is anticipated that 50% of the students in the Public Affairs program will be full time and 50% will be part time.
- 3) Office space for Library staff is included in the Library Guideline while office space for UConn Co-Op employees is generated under the Student Union category.

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Staffing levels will increase 23% over the planning period as noted in the aforementioned Enrollment & Staffing Table. Full and part time faculty growth was based on the change in student FTE growth. The consultants assumed faculty growth based on maintaining the current faculty to student ratio with no change in the full-time to part-time faculty percentages. In most cases, staff growth was projected at approximately 50% of the student growth percentage. While not specifically included in the Enrollment & Staffing Table, space for student workers and graduate assistants was considered in the Office Space Guideline Application.

During the analysis, consultants were informed that a School of Public Affairs program would be established at the Greater Hartford Campus. At the same time, the MBA program, previously on the Hartford campus, has been relocated to downtown Hartford. In addition, two research centers are proposed to relocate to the Greater Hartford Campus. These enrollment changes and assumptions were used to drive both base and target year analysis.

### **School of Social Work**

The School of Social Work currently offers two graduate programs; the master's of social work (MSW) and a recently developed doctoral degree (Ph.D.). The consultants were provided data from University of Connecticut administration noting that the School of Social Work, with a student headcount of 563 and 431 FTE for Fall 2003, will remain at these levels through the planning period.

University of Connecticut administrators noted that the School of Social Work is not anticipating significant staffing changes over the planning period. The 33 full-time faculty will increase to 36 at the target year. The 57 staff at base year will not increase over the planning period, with the same number being projected for the Fall 2013 target year. The number of part-time faculty will also remain steady at 20.

The current research emphasis is on applied service related activities such as program evaluation under contract with foundations, municipalities, and state & federal agencies. The School of Social Work is in the midst of growth in funded research. For fiscal year 2002, research and development (R&D) expenditures totaled \$884,954. This number is expected to grow to \$2,000,000 by 2012. Currently, 15-20 professional staff (most part-time) are housed in the first floor of the Library Building.

In 2002, the School generated \$4.5 million in training grants and expects these numbers to increase slightly to \$4.75 million during the planning period. These training grants are administered off-campus, employing approximately 30 research professionals. This number of research professionals is expected to double in the next several years. There are no plans to bring these employees or the training grants to the Greater Hartford Campus and as a result, they are not included in this study.

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## 6.0 SPACE NEEDS ANALYSIS ASSUMPTIONS

In order to apply the various guidelines and run the space needs analysis, several assumptions were made in this report. The more general assumptions are listed in this section. Those more specific to a space category are listed in the *Space Needs and Guideline Application* section of this report.

While the Greater Hartford Campus will introduce additional graduate courses over the planning period, it is assumed that the mix of classes will remain the same. The application of the guideline is based upon student full-time equivalents (FTE). No differentiation between graduate and undergraduate student headcount was made in the analysis.

The enrollment projection, plus current and projected staffing were provided and reviewed by both the Tri-Campus administration and representatives of the University of Connecticut central administration. These numbers were provided in February 2004 as the most appropriate ones for this planning study.

## 7.0 SUMMARY OF SPACE NEEDS

Due to the different organizational structures of programs on the Greater Hartford Campus, the space needs analysis was divided into three components. The first component includes programs offered under the Tri-Campus umbrella, consisting mostly of undergraduate courses leading to the bachelor's degree and some graduate programs, as delineated in the TCPCG and Public Affairs programs. This component will be labeled "Hartford Academic Programs."

The second component is the School of Social Work, consisting of graduate programs leading to the M.S.W. and the doctoral degree in Social Work. In terms of space needs, this analysis treats all academic space categories (Classroom & Service, Teaching Laboratories & Service, Open Laboratories & Service, Research Space, Offices & Service, and Other Departmental Space) separately for each component.

The third component includes Academic Support Spaces (Library, Assembly & Exhibit, Zachs Community Center, and Physical Plant) as well as Auxiliary Space (Student Union and Recreation). The categories include spaces that will be shared by the academic programs. The space needs analysis for these components includes a determination of the amount of current and future physical space needed for the campus.

## Campuswide Space Needs Analysis

SPACE CATEGORY	Fall 2003 Base Year <i>Student FTE = 1,314</i>				Fall 2013 Target Year <i>Student FTE = 1,561</i>			
	Existing ASF	Guideline ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)	Existing ASF	Guideline ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)
<b>Academic Space</b>								
Classroom & Service	23,481	19,001	4,480	19%	23,481	23,262	219	1%
Teaching Laboratories & Service	8,093	8,140	(47)	(1%)	8,093	8,140	(47)	(1%)
Open Laboratories & Service	1,803	1,971	(168)	(9%)	1,803	2,342	(539)	(30%)
Research Space	3,289	3,349	(60)	(2%)	3,289	7,400	(4,111)	(125%)
Offices & Service	33,685	33,890	(205)	(1%)	33,685	43,900	(10,215)	(30%)
Other Departmental Space	2,329	2,628	(299)	(13%)	2,329	3,122	(793)	(34%)
<i>Academic Space Subtotal</i>	<b>72,680</b>	<b>68,979</b>	<b>3,701</b>	<b>5%</b>	<b>72,680</b>	<b>88,165</b>	<b>(15,485)</b>	<b>(21%)</b>
<b>Academic Support Space</b>								
Library	13,154	17,855	(4,701)	(36%)	13,154	22,306	(9,152)	(70%)
Assembly & Exhibit	4,617	5,600	(983)	(21%)	4,617	5,600	(983)	(21%)
Zachs Community Center	3,664	3,664	0	0%	3,664	3,664	0	0%
Physical Plant	2,800	2,012	788	28%	2,800	2,602	198	7%
<i>Academic Support Space Subtotal</i>	<b>24,235</b>	<b>29,131</b>	<b>(4,896)</b>	<b>(20%)</b>	<b>24,235</b>	<b>34,172</b>	<b>(9,937)</b>	<b>(41%)</b>
<b>Auxiliary Space</b>								
Recreation	1,235	1,708	(473)	(38%)	1,235	2,029	(794)	(64%)
Student Union	10,126	11,826	(1,700)	(17%)	10,126	14,049	(3,923)	(39%)
<i>Auxiliary Space Subtotal</i>	<b>11,361</b>	<b>13,534</b>	<b>(2,173)</b>	<b>(19%)</b>	<b>11,361</b>	<b>16,078</b>	<b>(4,717)</b>	<b>(42%)</b>
<b>INSTITUTION TOTAL</b>	<b>108,276</b>	<b>111,644</b>	<b>(3,368)</b>	<b>(3%)</b>	<b>108,276</b>	<b>138,416</b>	<b>(30,140)</b>	<b>(28%)</b>

ASF = Assignable Square Feet

For this analysis, the space category labeled Academic Space includes the combined analysis of Hartford Academic Programs and the School of Social Work. Together, the space needs analysis found the Greater Hartford Campus to have an overall space surplus in Academic Space of 3,701 ASF when comparing base year guidelines with actual space. When compared to target year guidelines, a deficit in the Academic Space category is projected of 15,485 ASF by the Fall of 2013.

Components shared by Hartford Academic Programs and the School of Social Work include Academic Support Space and Auxiliary Space. This analysis assumes that the Zachs Community Center will remain in the Social Work Building and the space will be sufficient at the target year. The space needs analysis generated an overall space deficit of 4,896 ASF in the Academic Support Space Category when comparing guidelines with actual space. As delineated in the table, a large portion of this deficit is being generated by the need for library space. At target year enrollments, the same guidelines show an Academic Support Space deficit of 9,937 ASF by the year 2013.

In a similar fashion, the space needs analysis generated a modest space deficit of 2,173 ASF in the Auxiliary Space Category when comparing guidelines with actual space. The deficit exists mainly in the amount of Student Union space. At target year enrollments, application of the same guidelines produced an Auxiliary Space deficit of 42% or 4,717 ASF over the planning

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period. This deficit is being produced by growth in the number of students attending the campus.

## **7.1 BASE YEAR – FALL 2002**

At Fall 2002 enrollment and staffing levels, the University of Connecticut's Greater Hartford Campus showed an overall need for an additional 3,368 ASF of space. This is a modest three percent deficit in square footage when comparing guideline assignable square feet to existing assignable square feet at the campus. The largest deficit (4,701 ASF) is in the Library category while the largest surplus (4,480 ASF) is in the Classroom & Service category.

Assignable square footage is defined as the usable space inside classrooms, laboratories, offices, etc. It does not include circulation and building service space or the thickness of walls. For most types of space, gross square footage is 25% to 40% more than assignable square feet.

## **7.2 TARGET YEAR – FALL 2012**

At projected target year enrollment and staffing levels the Greater Hartford Campus shows a campus-wide need for 30,140 ASF. This is a 28% increase over the amount of existing space at the target year. Given projected student enrollment growth at 28%, the target year guideline increases the campus proportionally. The greatest deficits can be found in the Offices and Service and Library categories. The larger deficits are divided between the Academic Space and Academic Support Space categories.

The focus of this report will shift to space needs with the Hartford Academic Programs, followed by the space needs for the School of Social Work.

### **Hartford Academic Programs**

The space needs analysis calculated the Hartford Academic Programs to have an overall surplus of 6,098 assignable square feet (ASF) when comparing base year guidelines with actual space. At target year enrollments, the same guidelines generated a deficit of 10,204 ASF or 19% by the year 2013. This includes space for the TCPCG and Public Affairs programs. Space needs analysis for the Hartford Academic Programs is summarized in the table below, which displays space as assigned to current programs in the Library Building, Computer Center and the Undergraduate Building. The research and office space occupied by the School of Social Work on the first floor of the Library building is not included in the Hartford Academic Programs analysis.



## Hartford Academic Programs Space Needs Analysis

SPACE CATEGORY	Fall 2003 Base Year <i>Student FTE = 883</i>				Fall 2013 Target Year <i>Student FTE = 1,130</i>			
	Existing ASF	Guideline ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)	Existing ASF	Guideline ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)
<b>Academic Space</b>								
Classroom & Service	17,985	15,232	2,753	15%	17,985	19,493	(1,508)	(8%)
Teaching Laboratories & Service	8,093	8,140	(47)	(1%)	8,093	8,140	(47)	(1%)
Open Laboratories & Service	1,803	1,325	479	27%	1,803	1,695	108	6%
Research Space	2,464	2,464	0	0%	2,464	5,400	(2,936)	(119%)
Offices & Service	21,760	18,420	3,340	15%	21,760	26,660	(4,900)	(23%)
Other Departmental Space	1,339	1,766	(427)	(32%)	1,339	2,260	(921)	(69%)
<b>INSTITUTION TOTAL</b>	<b>53,444</b>	<b>47,346</b>	<b>6,098</b>	<b>11%</b>	<b>53,444</b>	<b>63,648</b>	<b>(10,204)</b>	<b>(19%)</b>

ASF = Assignable Square Feet

## School of Social Work

The space needs analysis found the School of Social Work to have an overall space deficit of 2,397 ASF when comparing guidelines with actual space. Since student enrollment and will remain stable over the planning period, there was no change in Classroom & Service, Open Laboratories & Service, and Other Departmental Space categories through the target year. Anticipating greater research awards and needed office space for Ph.D. students and three additional full time faculty in the target year generated a deficit of 5,315 ASF in the Office & Service category. An overall target year deficit of 5,282 ASF was generated. Space needs analysis for the School of Social Work is summarized in the following table, which displays space for programs offered in the School of Social Work building and selected spaces on the first floor of the Library building.

### School of Social Work

#### Space Needs Analysis

SPACE CATEGORY	Fall 2003 Base Year <i>Student FTE= 431</i>				Fall 2013 Target Year <i>Student FTE = 431</i>			
	Existing ASF	Guideline ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)	Existing ASF	Guideline ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)
<b>Academic Space</b>								
Classroom & Service	5,496	3,769	1,727	31%	5,496	3,769	1,727	31%
Open Laboratories & Service	0	647	(647)	n/a	0	647	(647)	n/a
Research Space	825	885	(60)	(7%)	825	2,000	(1,175)	(142%)
Offices & Service	11,925	15,470	(3,545)	(30%)	11,925	17,240	(5,315)	(45%)
Other Departmental Space	990	862	128	13%	990	862	128	13%
<b>SOCIAL WORK TOTAL</b>	<b>19,236</b>	<b>21,633</b>	<b>(2,397)</b>	<b>(12%)</b>	<b>19,236</b>	<b>24,518</b>	<b>(5,282)</b>	<b>(27%)</b>

ASF = Assignable Square Feet

The consultants listed the community room and all support spaces for the Zachs Community Center, a meeting place for campus and community functions, under the "Greater Hartford Campus" heading. This space is not reflected in the space needs analysis for the School of Social Work or Hartford Academic Programs. It must also be noted that the Social Work Program is using 1,992 ASF of space (research and office) in the Library Building due to

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the lack of space in the Social Work Building. During work sessions with Social Work administration, it was noted that all School of Social Work functions (research and offices) should be in close proximity to one another. If an addition was to be added to the School of Social Work building to consolidate the Social Work functions (or if a replacement building were built), the need would have to include office and research space now located in the Library Building.

## 8.0 SPACE NEEDS AND GUIDELINE APPLICATION

This section summarizes the current and projected space needs by functional space category. The Fall 2002 course files, along with the facility inventory file, as generated by the consultants, and Fall 2003 staffing data were assembled for use in projecting base and target year space needs. When appropriate, the consultants used standards established by the Council of Educational Facilities Planners, International (CEFPI) and supplemented with space standards used in previous work of Paulien & Associates, Inc. The specifics for each space type are discussed in the following sections.

### 8.1 CLASSROOM GUIDELINE APPLICATION AND SPACE NEEDS

Classrooms are defined as any room generally used for scheduled instruction requiring no special equipment and referred to as general purpose classroom, seminar room, or lecture hall. Classroom service space directly supports one or more classrooms as an extension of the classroom activities, providing media space, preparation areas, or storage. The classroom station size is considered as including the classroom service area space. However, additional service space can be justified on a program or classroom basis.

A classroom utilization goal of 30 hours of use per week at 65% student station occupancy for lecture courses was specified. A guideline of 20 ASF was used as the average classroom station size. Classroom space requirements were determined by a formula which takes the target utilization of 30 hours per week, multiplies it by the average student occupancy target of 65%, and divides the result into the 20 ASF per student station. This calculation produces a guideline of 1.03 ASF per weekly student contact hour (WSCH) for classrooms.

The example below illustrates how the guideline is used to calculate guideline square footage for classrooms.

<b>Classroom Guideline Application Example</b>	
Step 1	Space per Student Station (20 ASF)
<hr/>	
Weekly room use target (30 hours) x Average student station occupancy (65%) = 19.5	
= (1.03) Assignable square feet per weekly student contact hour	
Step 2	
<hr/>	
Enrollment (20) x Weekly room hours (3) = Weekly student contact hours (60)	
Step 3	
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Weekly student contact hours (60) x ASF/WSCH (1.03) = Guideline square footage (61.8)	

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## **Hartford Academic Programs**

Guideline application for Hartford Academic Programs classroom space for the base year shows a surplus of 2,753 ASF of classroom space over existing space. For the target year the space analysis indicates a deficit of 1,508 ASF in classroom and service space. The guideline application takes into account the FTE generated by the TCPCG and the Public Affairs program.

## **School of Social Work**

Guideline application for the School of Social Work classroom space for the base year shows a surplus of 1,727 ASF classroom space compared with existing space. For the target year the space needs analysis indicates the same surplus of 1,727 ASF in classroom and service space.

## **Greater Hartford Campus**

Guideline application for all the Greater Hartford Campus classroom space for the base year shows a surplus of 4,480 ASF of classroom space compared with existing space. This surplus is largely represented of space in the Hartford Academic Programs. For the target year, the space analysis indicates a small surplus of 219 ASF of classroom and service space. The substantial reduction in the deficit is indicative of space needs for Hartford Academic Programs to accommodate projected student enrollment growth.

## **8.2 TEACHING LABORATORY GUIDELINE APPLICATION AND SPACE NEEDS**

### **Hartford Academic Programs**

Teaching Laboratories are defined as rooms used primarily by regularly scheduled classes that require special purpose equipment to serve the needs of particular disciplines for group instruction, participation, observation, experimentation, or practice. Station sizes in teaching laboratories vary by discipline. The CEFPI space per student station guideline has approximately 50 different subject areas for which it provides teaching laboratory modules. In all cases, these are expressed as a range. The consultants used the figure within the range deemed most appropriate. Unlike the classroom guideline calculation, there are not enough scheduled laboratory weekly contact hours to justify complete laboratories for some disciplines. There the consultants produced guideline needs by using the desired number of students to be taught in the various labs and multiplied by the recommended guideline. The consultants assumed that the types of labs needed through the planning period would not change.

If at some point a major renovation or replacement of the undergraduate building is considered, there should be a hard look at whether four science labs are justified or whether three would be adequate since only the chemistry lab achieves the utilization expectations at the current time. Computer lab utilization is currently not logged through the Registrar. This should change so that the Registrar has this in the course records, if courses are put into this laboratory for a full term. This should not be done with single session meetings where a class still has another room as their primary semester-long home.

The guideline space per station in each discipline includes service space for laboratories and takes into account the need for enough space for new paradigms in teaching methodology

requiring collaborative learning environments such as mediated laboratories. The guideline amount of space per student station used for each discipline for the Hartford programs is listed in the table below.

*Hartford Academic Programs*

**Teaching Laboratory Space Analysis**

	ASF per Student Station	No. of Student Stations	Fall 2003 Base Year					Fall 2013 Target Year				
			Guide line	Guideline ASF	Existing ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)	Guide line	Guideline ASF	Existing ASF	Surplus/ (Deficit)	Percent Surplus/ (Deficit)
Art Lab	60	15	1	900	759	(141)	(19%)	1	900	759	(141)	(19%)
Biology Lab	60	24	1	1,440	1,390	(50)	(4%)	1	1,440	1,390	(50)	(4%)
Chemistry Lab	75	24	1	1,800	2,400	600	25%	1	1,800	2,400	600	25%
Computer Lab	35	32	1	1,120	1,064	(56)	(5%)	1	1,120	1,064	(56)	(5%)
Geology Lab	60	24	1	1,440	1,200	(240)	(20%)	1	1,440	1,200	(240)	(20%)
Physics Lab	60	24	1	1,440	1,280	(160)	(13%)	1	1,440	1,280	(160)	(13%)
<b>TOTAL</b>			<b>6</b>	<b>8,140</b>	<b>8,093</b>	<b>(47)</b>	<b>(1%)</b>	<b>6</b>	<b>8,140</b>	<b>8,093</b>	<b>(47)</b>	<b>(1%)</b>

ASF = Assignable Square Feet

Guideline application for the Hartford campus teaching laboratory space for base year shows a need for 8,140 ASF of space, a deficit of less than 1% or 47 ASF. As enrollments increase at the target year, teaching laboratory space needs analysis show that current labs should be able to accommodate future enrollment growth.

**School of Social Work**

At the time of the analysis, the School of Social Work did not have any dedicated teaching labs. On limited occasions, faculty will request the use of a computer lab on a space available basis.

**8.3 OPEN LABORATORY GUIDELINE APPLICATION AND SPACE NEEDS**

The category of open laboratory space consists of rooms that are open for student use and are not used on a regularly scheduled basis. These rooms provide equipment to serve the needs of particular disciplines for group instruction in informally or irregularly scheduled classes. Alternatively, these rooms are used for individual student experimentation, observation, or practice in a particular field of study. The size of these laboratories is based on equipment size and/or on the station size and student count desired and should be determined on an individual basis.

The types of rooms usually included in this category are computer laboratories, language laboratories, music practice rooms, and tutoring and testing facilities.

In recent benchmarking and consulting work with several statewide systems, the consultant found between five and ten square feet per full-time equivalent student allocated for space in this category. The consultants believe that a reasonable guideline for the Greater Hartford Campus open laboratory space is 1.5 square feet per student FTE. This is a number less than the benchmark range, yet slightly higher than the 1.4 ASF of space the campus as a whole currently provides in this category.

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## **Hartford Academic Programs**

Base year open laboratory space needs analysis show a surplus of 479 ASF. This surplus reflects recently constructed open labs in the new Computer Center Building. At the target year open laboratory needs show a slight surplus at 108 ASF.

## **School of Social Work**

Currently, School of Social Work students use the open computer lab in the Computer Center Building. During work sessions, administration expressed a need for an open lab dedicated to the School. Using the 1.5 ASF per FTE guideline, a 647 ASF deficit was calculated at the base year. At target year, stable FTE created the same 647 ASF deficit in the Open Laboratory and Service category.

## **Greater Hartford Campus**

Guideline application for the Greater Hartford Campus open laboratory space for base year shows a deficit of 168 ASF. As enrollments increase at the target year and the needs of the Social Work Program are met, the space needs analysis in the Open Laboratory & Service category shows the need for an additional 539 ASF of labs. This guideline provides for a small lab or the expansion of existing open labs.

## **8.4 RESEARCH LABORATORY GUIDELINE APPLICATION AND SPACE NEEDS**

Most guidelines used to evaluate research space needs have been developed for large research universities and are not applicable for Greater Hartford Campus needs. However, since research is a growing part of the academic function, especially in the School of Social Work, it was included in this analysis.

Determining research space needs is a complex issue. The consultants have utilized methods based on individual researchers, research teams and research dollars. The methods used at the Greater Hartford Campus are discussed below.

## **Hartford Academic Programs**

A total of 2,464 ASF of space on the first floor of the Library Building during base year was being used as research space for psychology faculty in Hartford programs. It is anticipated that this space will continue to be research oriented through the planning period.

The guideline used was based on the Higher Education Facilities Planning and Management Manuals, as published by the Western Interstate Commission for Higher Education (WICHE). This guideline uses the number of faculty and graduate students involved in research as the most appropriate indicator of research space. Research spaces vary significantly among academic programs and disciplines. A general criterion for research space is noted in the tables below.

**Planning Criteria for Research Space**

<b>Academic Program</b>	<b>ASF per Faculty Member</b>	<b>ASF per Extra Grad Student</b>
<b>Group 1</b>	<b>900-1,300</b>	<b>200-250</b>
Agriculture and Natural Resources		
Engineering		
Biological Sciences		
Physical Sciences		
<b>Group 2</b>	<b>600-900</b>	<b>150-200</b>
Architecture		
Fine Arts		
Psychology		
Communications		
<b>Group 3</b>	<b>150-200</b>	<b>20-25</b>
Education		
Business		
Computer Sciences		
Foreign Languages		
Letters		
Library Science		
Mathematics		
Public Affairs		
Law		
Theology		

The ASF guideline for faculty includes up to four graduate students working with each faculty member. With the University of Connecticut’s focus on research productivity, the consultants assumed that full time faculty at the Greater Hartford Campus would be expected to engage in some type of research endeavor.

Analysis by Tri-Campus administration estimated that 65% of the Tri-Campus full time faculty would be conducting research at the target year. The consultants were told that many of the faculty will continue to utilize wet labs and other types of research labs at the University of Connecticut’s main campus in Storrs.

The research guideline, as applied by the consultants, which best illustrates the type of research programs expected at the target year, is Group 3 in the adjacent table. The consultants

allowed 150 ASF per full-time faculty. Given the small number of graduate students at the campus, the consultants did not apply the graduate student guideline as noted in the table. Again, the 150 ASF guideline assumed up to four graduates assistants per faculty.

The analysis resulted in a calculation of need for 5,400 ASF of research space in the target year, a deficit of 2,936 ASF over the existing amount of space. This deficit can provide space for a call center and additional research space for the incoming Public Affairs program faculty.

**School of Social Work**

All of the research space for the School of Social Work is located on the first floor of the Library Building. This space provides office and specialized space to research professionals and graduate students conducting studies under various grants. After viewing the spaces, the consultants decided to split the space between the Research Space category and the Office and Service category, creating 825 ASF of existing research space.

Using the sponsored research expenditures approach to establishing a guideline, the consultants used 100 ASF per \$100,000 in R&D expenditures for Social Work. For fiscal year 2002, research and development (R&D) expenditures for the School of Social Work totaled \$884,954. This number is expected to grow to \$2.0 million by 2013.

Guideline application for the School of Social Work Research Space category for base year shows a need for 885 ASF of space, a deficit of seven percent or 60 ASF. As R&D expenditures increase toward target year, the deficit increases to 1,175 ASF compared with actual space. No space was generated for the \$4.5 million in training grants since these grants and accompanying personnel are administered off campus.

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## 8.5 OFFICE AND SERVICE GUIDELINE APPLICATION AND SPACE NEEDS

For this analysis, offices used to conduct administrative or academic activities are categorized as office and service space. Office space guidelines are based on CEFPI standards. The CEFPI guideline determines office space needs based on major categories of staff and application of space amounts for office service and conference space needs. Tri-Campus administration provided Greater Hartford Campus staffing information at base year for each category of staff. These were reviewed by members of the University of Connecticut central administration and approved for use in this study.

### Hartford Academic Programs

Full and part time faculty target growth was based on the change in student FTE growth. The consultants assumed faculty growth based on maintaining the current faculty to student ratio with no change in the full-time to part-time faculty percentages. In most cases, staff growth was projected at approximately 50% of the student growth percentage. The consultants then applied appropriate guidelines to each major category. The amount of office space allotted to each position is based on the status and duties of the employee as noted in the Office Space Guideline Application Table.

At base year, the guideline analysis for Hartford Academic Programs showed a surplus of 3,340 ASF in the academic office space category. One reason for the surplus in the base year is removal of MBA teaching faculty, program directors and staff from the staffing file. The consultants were informed during the analysis that the MBA program had moved to a downtown Hartford location.

At the target year, a 4,900 ASF or 23% deficit is generated in this category. The largest need at target year will be for adjunct faculty offices and the 25 faculty and staff that are anticipated for the Public Affairs program. At target year, the Public Affairs program will house one department head, three program directors, 12 full time faculty, four research project directors, eight adjunct faculty, six graduate assistants, and three administrative support staff. The consultants have assumed that each full-time faculty member will have an office.

In addition, office space has been provided for one public safety supervisor. It is assumed that several public safety officers can share office space since their main duty is to patrol the campus and parking lots. Additional space may be needed if the Public Safety Office is linked with the issuance of student ID's and/or parking permits.

A large need at target year will be for "open office" areas where part-time faculty can meet with students and access email and voicemail systems. The consultants assumed that adjunct faculty would be housed four to an office. An alternative could be an Adjunct Resource Center where computers, meeting space, mail, copying and supplies are available on an as needed basis. Such an approach could house the target adjunct population in slightly less space but it suggests having a student worker available to staff the Center during key class times.

## Hartford Academic Programs Office Space Guideline Application

STAFFING TYPE	Office Guideline ASF per Headcount	Fall 2003 Base Year			Fall 2013 Target Year		
		Head- count	Total Guideline ASF	Existing ASF	Head- count	Total Guideline ASF	Existing ASF
Director	200	1	200		1	200	
Managerial - Confidential	180	2	360		2	360	
University Faculty	140	35	4,900		55	7,700	
Adjunct Faculty	35	88	3,080		116	4,060	
Non-Faculty Administrative	120	17	2,040		28	3,360	
Administrative Clerical	110	28	3,080		34	3,740	
Graduate Assistants	60	3	180		12	720	
Facilities Director	140	1	140		1	140	
Maintenance Services	0	8	0		9	0	
Protective Services Office	140	1	140		1	140	
Protective Services - Shared Office	70	2	140		3	210	
Protective Services	0	2	0		2	0	
<b>Total Office Space</b>			<b>14,260</b>	<b>18,849</b>		<b>20,630</b>	<b>18,849</b>
<i>Total Service Space</i>			<i>2,990</i>	<i>2,198</i>		<i>4,240</i>	<i>2,198</i>
<i>Total Conference Room Space</i>			<i>1,170</i>	<i>713</i>		<i>1,790</i>	<i>713</i>
<b>TOTAL</b>		<b>188</b>	<b>18,420</b>	<b>21,760</b>	<b>264</b>	<b>26,660</b>	<b>21,760</b>
<i>Surplus/(Deficit)</i>			<i>3,340</i>			<i>(4,900)</i>	

### School of Social Work

Initially, the consultant was advised by UConn central administration that target year faculty and staff positions will remain at base year levels. The Associate Dean of Social Work asked for a revision of the faculty numbers to reflect the Fall 2004 number of full time faculty at the base year (total of 33 headcount faculty) and project an increase in the number of faculty at the target year by three positions, for a total of 36 faculty headcount positions. The changes were approved by the UConn central administration in June 2004.

Space for Ph.D. students was included in the target year analysis. At base year, the guideline analysis for the School of Social Work showed a deficit of 3,545 ASF in the Academic Office space category. The shortage of office space is illustrated by several Social Work staff sharing office space. At target year, the guideline analysis showed a deficit of 5,315 ASF in the Academic Office and Service space category.



**School of Social Work  
Office Space Guideline Application**

STAFFING TYPE	Office Guideline ASF per Headcount	Fall 2003 Base Year			Fall 2013 Target Year		
		Head- count	Total Guideline ASF	Existing ASF	Head- count	Total Guideline ASF	Existing ASF
University - Exempt	200	3	600		3	600	
Managerial - Confidential	180	4	720		4	720	
University Faculty	140	33	4,620		36	5,040	
Adjunct Faculty	35	20	700		20	700	
Non-Faculty Administration	120	21	2,520		21	2,520	
Research Specialist	70	20	1,400		20	1,400	
Administrative Clerical	110	9	990		9	990	
Ph.D. Students/Grad Assistants	60	0	0		20	1,200	
<b>Total Office Space</b>			<b>11,550</b>	<b>11,275</b>		<b>13,170</b>	<b>11,275</b>
<i>Total Service Space</i>			<i>2,500</i>	<i>320</i>		<i>2,590</i>	<i>320</i>
<i>Total Conference Room Space</i>			<i>1,420</i>	<i>330</i>		<i>1,480</i>	<i>330</i>
<b>TOTAL</b>		<b>110</b>	<b>15,470</b>	<b>11,925</b>	<b>133</b>	<b>17,240</b>	<b>11,925</b>
<i>Surplus/(Deficit)</i>			<i>(3,545)</i>			<i>(5,315)</i>	

ASF= Assignable Square Feet

**Greater Hartford Campus**

The office and service needs for the Greater Hartford Campus are the sum of the Hartford program and the School of Social Work. The space needs analysis generated an overall deficit of 205 ASF in the Office and Service space category when comparing guidelines with actual space. When compared to target year guidelines, a deficit is projected of 10,215 ASF over the planning period. Again, this deficit is being produced by the need for part time faculty office space and the 25 faculty, directors, and staff associated with the Public Affairs program.

**8.6 OTHER DEPARTMENT SPACE NEEDS**

The space classified as other department space includes all other space assigned to an academic department that has not been included in the other classification of classrooms, teaching laboratories, open laboratories, or offices. These areas consist of a variety of spaces. They can include departmental study rooms, greenhouses, animal facilities, and lounges. Due to the diversity of these spaces and the different ways various campuses might classify these spaces, these spaces are not specifically addressed by the published guidelines. In recent benchmarking studies the consultant found other department space to be a wide range between one and 18 square feet per full-time equivalent student. The consultants believe that a reasonable guideline for this campus is two square feet per student FTE in this category.

**Hartford Academic Programs**

Other department space for the Hartford programs includes a multi-media room, writing center, server room and a meeting room in the library for a total of 1,339 ASF. The base year guideline application shows a space deficit of 427 ASF. At the target year this deficit increases to 921 ASF.

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## School of Social Work

The School of Social Work has its own student and faculty lounges totaling 990 ASF. At base year, the School of Social Work guideline analysis for Hartford showed a slight surplus of 128 ASF in the Other Departmental Space category. At the target year, the surplus remains at 128 ASF as student FTE remains stable.

### 8.7 LIBRARY GUIDELINE APPLICATION AND SPACE NEEDS

Most of the guideline systems for library space utilize one set of factors for collections, another for readers, and a third for service space. This approach was used by the consultants.

The library analysis is based on collections data reported by the Greater Hartford Campus librarian and shared with the consultants. The guideline applied assumes that 0.10 ASF per volume is used for the collection space in the Harleigh B. Trecker Library, located within the Library building.

Until recently the reader space calculations have generally been based on seating for 25% of the student body for residential campuses. Published sources suggest that if a college or university has less than 50% housed on site, it would be calculated at one for every five students or 20%. Because many students now do research electronically from non-library locations this percentage of students has begun to lower. The consultant chose to apply a 15% factor to all student FTE and five percent to the total full-time equivalent faculty.

The consultant believes the 25 square feet per reader station recommended by CEFPI is not adequate because of increasing use of electronic library carrels. The 25 ASF per reader station was used for regular study stations but 35 ASF per station was used for electronic study stations. For the Trecker Library, 35% of the stations were considered as electronic seats for this analysis. This is due the large number of students who will use electronic stations to access on-line serials via the Homer Babbidge Library in Storrs.

CEFPI suggests 25% of the total collection and reader station space for service and staff space. The consultant used a 12.5% figure for the Trecker Library based on more recent analysis by the Association of College and Research Libraries. Lounge space is allotted at three assignable square feet per study station. The Library Guideline Application is outlined in the following table.

## Library Guideline Application

						Fall 2003 Base Year	Fall 2013 Target Year
<b>VOLUME GENERATION</b>	<b>Current Items</b>	<b>Conversion Factor</b>	<b>Fall 2003 Volumes</b>	<b>Volume Growth</b>	<b>Fall 2013 Volumes</b>		
Books/Serials (Volumes)	95,348	1.00	95,348	28%	122,437		
Manuscripts & Archives	0	1.00	0	0%	0		
Unbound Serials (Display)	0	0.50	0	0%	0		
Microforms	70,000	80.00	875	0%	879		
Audio/Visual Materials	800	5.00	160	170%	432		
<b>TOTAL VOLUMES</b>						<b>96,383</b>	<b>123,749</b>
<i>No. of Volumes</i>							
<b>COLLECTION SPACE</b>	<b>0 - 150,000</b>	<b>150,001 - 300,000</b>	<b>300,001 - 600,000</b>	<b>600,001 - 4,500,000</b>	<b>4,500,001 and above</b>		
<i>ASF per Volume</i>	<i>0.100</i>	<i>0.090</i>	<i>0.080</i>	<i>0.070</i>	<i>0.035</i>		
Fall 2003 Collection Space	9,638	0	0	0	0		
Fall 2013 Collection Space	12,375	0	0	0	0		
<b>TOTAL COLLECTION SPACE</b>						<b>9,638</b>	<b>12,375</b>
<b>STUDY SPACE</b>	<b>Percent of Headcount</b>	<b>Fall 2003 FTE</b>	<b>Fall 2003 Stations</b>	<b>Fall 2013 FTE</b>	<b>Fall 2013 Stations</b>		
Student FTE	15%	1,314	197	1,561	234		
FT Faculty FTE	5%	62	3	82	4		
<b>Total Study Stations</b>			<b>200</b>		<b>238</b>		
Regular Study Stations	<i>65% @ 25 ASF/Station</i>		3,250		3,875		
Electronic Study Stations	<i>35% @ 35 ASF/Station</i>		2,450		2,905		
<b>TOTAL STUDY SPACE</b>						<b>5,700</b>	<b>6,780</b>
<b>TOTAL COLLECTION &amp; STUDY SPACE</b>						<b>15,338</b>	<b>19,155</b>
<b>Service Space</b> <i>(12.5% of Total Collection and Study Space)</i>						<b>1,917</b>	<b>2,394</b>
<b>Lounge Space</b> <i>(3 ASF per Study Station)</i>						<b>600</b>	<b>714</b>
<b>TOTAL LIBRARY SPACE</b>						<b>17,855</b>	<b>22,263</b>

Overall, the library space needs analysis at the base year shows a guideline of 17,855 ASF of space. Subtracting 13,154 ASF of actual space creates a deficit 4,701 ASF in the base year. At the target year, the guideline produces a library with 22,263 ASF of total space, increasing the deficit to 9,109 ASF.

After touring the current Trecker Library facility, the consultants believe that the ASF generated by the space guideline is credible. First, several of the anticipated programs being planned for the campus could be resource intensive. Currently, stack space is very limited. For every book added to the collection, one must be discarded or placed in storage. The library conference room recently was renovated to open stack and study space, eliminating the final area for group study. Often students queue in line to use the library's on-line terminals for Internet access to the Homer Babbidge Library in Storrs.

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## **8.8 ASSEMBLY & EXHIBIT GUIDELINE APPLICATION AND SPACE NEEDS**

The assembly and exhibit space is defined as any room designed and equipped for the assembly of large numbers of people. This includes theaters, auditoriums, meeting rooms, arenas, and chapels. Exhibit spaces are used for exhibition of materials, works of art, or artifacts intended for general use by students and the public.

For this category of space CEFPI has four options. Option "A," deemed most appropriate by the consultants, uses 5,600 ASF as a minimum core requirement. This option is most appropriate for a small college or university of up to 2,000 students. Application of guidelines at the base and target year shows a deficit of 983 ASF in the assembly and exhibit category. The consultants assume that the auditorium attached to the Library building will serve the needs of the college over the planning period while exhibit and gallery space will grow in proportion to the student population and academic programs.

## **8.9 PHYSICAL PLANT GUIDELINE APPLICATION AND SPACE NEEDS**

Most guidelines suggest a percentage of from seven to eight percent of all square footage on campus, with the exception of existing physical plant space, be used to drive master plan needs in this category. The consultants have found in most cases that this percentage generates greater amounts of space than typically exists on campus. Many physical plant departments are increasing the outsourcing of many typical shop functions and using just-in-time purchasing methods to decrease warehousing needs.

From previous studies the consultants have found that the average percentage actually devoted to physical plant space is approximately four to six percent. The consultants have applied only two percent of all square footage on campus to drive the base and target year needs for space in this category at the Greater Hartford Campus. This is because of the suburban location which allows certain services to be purchased from vendors in the community. At base year guideline analysis shows a surplus of 788 ASF. At the target year, the guideline almost equals the existing space, generating a small surplus of 198 ASF.

## **8.10 STUDENT UNION GUIDELINE APPLICATION AND SPACE NEEDS**

The Gampel Student Center, located in the Undergraduate Building, contains a study-lounge, game room, dining area with serving line, and bookstore. A large portion of the space supports the informal dining function. The CEFPI recommends a formula of nine square feet per student FTE and the Association of College Unions International (ACUI) recommends a formula of 10 square feet per student for each graduate and undergraduate student for generating student union space. These guidelines for space application provide space for the various functions and the room use code designations that are typically found in a comprehensive student union including bookstore, food service, lounge, meeting space, student government/club space, and other student service type space categories. This formula has been applied by the consultant using nine assignable square feet per student for student union space at the Greater Hartford Campus.

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At the base year the application of space guidelines shows a deficit of 1,700 ASF. At the target year, the deficit increases to 3,923 ASF.

### **8.11 RECREATION**

While the Greater Hartford Campus does not provide organized team sports, the university has fields and open areas to support intramural sports such as golf, volleyball and baseball across the street from the campus. A weight training room and fitness center with limited locker and shower facilities is located in the Undergraduate Building. In calculating the need for indoor Recreation space, a minimal guideline of 1.3 assignable square feet per student FTE was used. At campuses with a full recreation program as much as 12 square feet per undergraduate student are utilized to project need. Application of the guidelines showed a deficit of 473 ASF of indoor Recreation space at the base year, increasing to a deficit of 794 ASF at the target year, when compared to existing ASF. This does not develop the indoor recreation spaces that may be needed if the campus grows its full-time undergraduate student population substantially. However, it does allow the fitness center to be expanded, which has proved very popular with students attending the Storrs campus.

### **8.12 RESIDENCE LIFE**

The Greater Hartford Campus has no student housing and does not anticipate construction of student housing during the 10 year facilities planning timeframe.

## **9.0 LIMITATIONS OF ANALYSIS**

The consultant utilized campus data provided by the University of Connecticut - Greater Hartford Campus for staffing, courses, and facilities information. Fall 2003 data were used for the base year. Target year enrollment and staffing data were provided by the UConn central administration with input from Tri-Campus administration.

Space needs analysis for the purpose of master planning is a process through which estimates are made of space amounts likely to be needed by various units of an institution at current and projected enrollment, staffing, and activity levels. Based on the enrollment assumptions and data provided by UConn representatives, findings at the campus level can be considered to be reliable estimates of space needs. While the application of normative guidelines is a good general indicator of relative need, they are not a substitute for facilities programming. Refinement of space needs can be done at the program level. Programming will most accurately determine specific needs and building fit. Further, this study analyzed space needs but did not evaluate the quality of existing space.