



# Penn State Information Technology Customer Satisfaction Survey

An Overview of Results from the MOR Associates Report

Like higher education, information technology (IT) is continually evolving. These changes and shifts not only create challenges but also provide opportunities to give students, faculty, and staff the technology they need to help fulfill Penn State's mission of teaching, research, and service.

With numerous IT services being offered at each of Penn State's campus locations, providing a high level of customer service and ensuring those services are what end users want and need is vitally important. Findings from the 2011 IT Assessment, in which customer service was identified as an improvement area, led Penn State to partner with MOR Associates, an organization that specializes in continuous improvement, strategic thinking, and leadership development. Through the partnership, Penn State wanted to determine (1) what levels of satisfaction existed and (2) what improvements to services might be needed to better meet student, faculty, and staff needs.

The Penn State IT Customer Survey Team worked with MOR on a survey to determine which services were most important to students, faculty, and staff and how satisfied they were with those services. MOR—which has conducted a number of large-scale satisfaction surveys for IT organizations at such places as Stanford University, Massachusetts Institute of Technology, and the University of Chicago—collected and analyzed the data and prepared a report of the findings. In preparation for strategic planning, the survey focused on the IT Service Desk, training, network access, email and calendaring, telephony, conferencing technologies, technology-enhanced classrooms, instructional support tools, data storage, computer security, computer labs, and software licensing.

The following document presents the survey methodology, an overview of the results, and customer importance and satisfaction ratings.

## **SURVEY METHODOLOGY**

The survey was designed to meet the following goals:

- 1) To establish a baseline on how customers rate the current IT—not just Information Technology Services (ITS)—services and support provided by Penn State
- 2) To ascertain where customers are satisfied or dissatisfied
- 3) To find out what contributes to any dissatisfaction
- 4) To ascertain how important various services are to customers
- 5) To prioritize improvement opportunities for the year ahead
- 6) To foster a stronger customer service orientation
- 7) To foster a continuous improvement mind-set for IT

The survey consisted of questions designed to measure (1) customers' sense of how important a service was to their work and (2) their level of satisfaction with IT-provided services. The survey asked if a particular service had been used. If they responded they had used it, they were questioned further. For example, "How important to you are Penn State computer labs for your studies?" (*Not at All Important to Critically Important*) was followed by "How satisfied are you with Penn State computer labs?" (*Very Dissatisfied to Very Satisfied*). If the response was *Somewhat Dissatisfied, Dissatisfied, or Very Dissatisfied*, the responder was next asked, "Please identify which aspects of Penn State computer labs MOST contribute to your dissatisfaction with this service: Hours, Location, Number of labs, Computer and software, Printers, Furnishings, Other," and were given space to write comments about what contributed most to their dissatisfaction with that service.

This survey was sent to a random sample of 6,472 Penn State faculty, non-IT staff, and students at all locations except the Pennsylvania College of Technology. Of those, 2,193 responded for a 34 percent response rate. Additionally, 1,256 IT staff members were surveyed, but their responses were reported separately to avoid bias. IT staff generally reported lower satisfaction due to higher expectations. Seven hundred and fifty IT staff responded, yielding a rate of 60 percent.

## **OVERVIEW OF THE RESULTS**

Two of the goals for this survey were to measure both the importance to users of the various IT services that are offered across the University and the satisfaction level with those services. In order to do this, for each service, means were calculated for the responses to a five-point scale of importance (from *Not at All Important* to *Critically Important*) and a six-point scale of satisfaction (from *Very Dissatisfied* to *Very Satisfied*). According to the report generated by MOR Associates, the mean rating for satisfaction ranged from a high of 5.20 to a low of 4.37, indicating that respondents generally hold Penn State IT in high regard. Based on previous surveys, a score of 4.75 or above would be considered a *Very Good* rating and a score of 5.00 or above would be an *Excellent* rating.

## RATINGS OF IMPORTANCE

Satisfaction and importance are both significant aspects of customer service, so the committee wanted to examine the relationships between them. With a plan to construct an Importance vs. Satisfaction matrix from the responses, means were calculated for service importance ratings, which ranged between 4.69 (the greatest importance) and 1.87 (least importance). Penn State’s email and calendaring, ANGEL, eLion, IT Service Desk, wireless networking, and Penn State World Campus were considered *Very* or *Critically Important* services by 80 percent or more of the respondents.

**Table 1**  
**Top Rated Services for Importance**

	MEAN	TOTAL VERY/ CRITICALLY IMPORTANT	COUNT
UCS email	4.69	94%	920
ANGEL	4.52	89%	1080
eLion	4.41	86%	1039
IT Service Desk via telephone at 814-865-HELP (4357)	4.12	84%	853
Wireless networking (non-cellular Wi-Fi)	4.31	83%	2032
Penn State World Campus	4.33	80%	221
Technology-enhanced classrooms	4.23	79%	1119
Wired networking (when your device is plugged in to a network jack)	4.12	77%	1961
Other Penn State online courses	4.09	70%	163

## RATINGS OF SATISFACTION

The second part of the matrix, satisfaction, was measured by calculating the means of the responses to the satisfaction questions. A mean score of 4.75 or above would generally be considered a *Very Good* rating, and a score of 5.00 or above would be an *Excellent* rating.

Penn State IT was rated *Excellent* in the services described as “keeps IT systems up and running” (mean 5.14) and “provides services that are valuable to you,” (mean 5.03), two of the top five ratings in the survey. The remaining items, “is responsive to your needs” (mean 4.97) and “provides high-quality services” (mean 4.97) received *Very Good* ratings with only 1 out of 10 indicating any dissatisfaction. The statement “Penn State IT communicates clearly about their services” received a mean rating of 4.64.

Of the thirty-four service areas evaluated, seventeen of them were rated at 4.75 or higher. There were no satisfaction ratings lower than 4.37, indicating that Penn State faculty, staff, and students feel a *Good* to *Excellent* level of satisfaction with services provided by Penn State IT.

**Table 2**  
**Satisfaction Ratings with Means Greater than 4.75**

(A score of 4.75 or above would generally be considered a *Very Good* rating and a score of 5.00 or above would be an *Excellent* rating.)

	MEAN	TOT POS (SS/S/VS)	COUNT
Wired networking (when your device is plugged in to a network jack)	5.20	95%	1648
Penn State IT keeps IT systems up and running	5.14	95%	2092
IT Service Desk in-person help at Wagner Building or Pattee Library	5.13	95%	105
IT Service Desk via telephone	5.05	92%	797
Penn State IT provides services that are valuable to you	5.03	92%	2059
Wired desk phones	5.03	93%	1482
Penn State voice mail	5.02	93%	1452
Penn State IT is responsive to your needs	4.97	91%	2034
Penn State IT provides high-quality services	4.97	91%	2062
lynda.com	4.95	98%	655
IT Service Desk via email at ITServiceDesk@psu.edu	4.95	92%	595
Penn State World Campus	4.94	93%	210
IT Service Desk via a web form at itservicedesk.psu.edu	4.92	91%	319
Other Penn State online courses	4.87	91%	145
ITS Training Services classes (Scheduled Training, Training on Demand, Vendor Training)	4.80	94%	879
eLion	4.78	92%	1001
Penn State-provided audio conferencing	4.77	94%	1119

A comparison of responses between cohorts showed that both graduate and undergraduate students are more satisfied with the World Campus than are faculty and staff. Not surprisingly, wired networking services are more important to faculty and staff than to students. Graduate students are more likely than are undergraduates to be satisfied with help from the IT Service Desk. All groups were *Satisfied* or *Very Satisfied* that “Penn State IT keeps IT systems up and running” (92–97 percent).

**Table 3**  
**Top Satisfaction Ratings by Cohort**

		<b>MEAN</b>	<b>TOT POS (SS/S/VS)</b>	<b>COUNT</b>
<b>Faculty</b>	Wired networking (when your device is plugged into a network jack)	5.18	93%	630
	Penn State IT keeps IT systems up and running	5.08	92%	708
	lynda.com	4.96	98%	180
	Penn State IT provides services that are valuable to you	4.94	89%	705
	Other Penn State online courses	4.90	92%	72
<b>Undergraduate Students</b>	Penn State World Campus	5.14	94%	36
	Penn State IT keeps IT systems up and running	5.09	97%	163
	Other Penn State online courses	5.09	95%	44
	Penn State IT provides services that are valuable to you	5.07	96%	162
	Penn State IT is responsive to your needs	4.93	93%	148
<b>Graduate Students</b>	IT Service Desk in-person help at Wagner Building or Pattee Library	5.15	100%	39
	IT Service Desk via email at ITServiceDesk@psu.edu	5.08	94%	78
	Penn State World Campus	5.06	97%	33
	Penn State IT keeps IT systems up and running	5.04	94%	268
	IT Service Desk via telephone	5.00	92%	50
<b>Staff</b>	Wired networking (when plugged in to a network jack)	5.29	98%	810
	Penn State IT keeps IT systems up and running	5.23	96%	953
	IT Service Desk via telephone at 814-865-HELP (4357)	5.17	96%	435
	Penn State voice mail	5.17	96%	880
	Wired desk phones	5.15	95%	882

## RATINGS OF SATISFACTION FOR SERVICES EVALUATED

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### IT Service Desk

Help service ratings are often those most highly correlated with overall ratings for IT, and this was true for Penn State. The four modes of contacting the IT Service Desk received *Very Good* to *Excellent* ratings, and two of them, *In-Person Help* and *Help Via Telephone*, received two of the top five ratings in the survey. Access to help in person was considered *Very* to *Critically Important* with a satisfaction mean of 5.13 and access by telephone was considered *Very Important* with a satisfaction mean of 5.05, an *Excellent* rating.

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### Computer Training

The online resource lynda.com at Penn State was rated highly by 98 percent of respondents, giving it a *Very Good* mean of 4.95. When asked for comments, users mentioned long download times and difficulty navigating. ITS Training Services classes (Scheduled Training, Training on Demand, Vendor Training) received a satisfaction mean of 4.80 from respondents, and Microsoft IT Academy received a mean of 4.60 from respondents. Five comments cited location of offerings as a reason for dissatisfaction. Tech Tutors, a program offering individual help to faculty and staff, rated a mean of 4.71.

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### Telephone Services

More than 90 percent of staff and faculty respondents gave *Excellent* marks to the wired desk phones (mean 5.03) and 74 percent felt they were *Very* or *Critically Important* to their work. Wired phones are still important to both faculty (81 percent) and staff (94 percent). They gave voice mail a satisfaction rating mean of 5.02 and 70 percent rated it *Very* or *Critically Important*.

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## Network Access at Penn State

The majority of respondents used the computer network services provided throughout Penn State and were largely *Very Satisfied* with the wired network. Ninety-five percent of the respondents gave it positive marks producing a mean of 5.20 for satisfaction. The very few comments of dissatisfaction were about the lack of administrative privileges, blocked ports, or difficulty connecting from remote sites.

Of the respondents who said they used Penn State non-cellular wireless networks, 83 percent said it was *Very* or *Critically Important* and 79 percent rated the wireless networking as *Satisfactory* with a mean of 4.41. Only 5 percent of undergraduates thought the network speed was slow. Comments indicated that the quality and reliability of wireless reception varied by location on campus. No doubt a result of the extent of coverage required, users at University locations other than University Park were generally more satisfied with their wireless services. Tests of significance showed significant differences between responses from University Park (mean 4.23) and from other campuses and colleges (mean 4.60). Comments indicated issues with printing wirelessly, trouble connecting, or difficulty in using the virtual private network (VPN) when working remotely.

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## Email and Calendaring

Email is a huge part of daily life at Penn State. Faculty and staff were asked about the email and calendaring systems they use, and found slightly more than half use the Penn State University Collaboration Suite (UCS). They were generally *Satisfied* (>85 percent) with it, giving it a mean score of 4.58. They indicated that it was *Somewhat* to *Critically Important* to their work. Other systems being used were the following: Outlook (41 percent), Gmail (32 percent), Penn State WebMail (29 percent), Apple Mail (14 percent), Exchange (10 percent), Yahoo (9 percent), Hotmail (4 percent), and Windows Live Mail (1 percent).

UCS calendaring was assigned some level of importance for almost 80 percent of those using it and was rated *Satisfactory* with a mean of 4.48. Other calendaring systems used included Outlook, Google Calendar, Apple Calendar (iCal), and Exchange. Reasons for any dissatisfaction (less than 5 percent) with UCS calendaring included lack of features, ease of use, ease of sharing, or ease of solving problems.

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## Audio/ Videoconferencing Services

Respondents were asked about the audio and the videoconferencing services separately. Audio conferencing provided by Penn State is rated as *Very to Critically Important* and earned a mean of 4.77 in satisfaction. More than half of the faculty, staff, and student respondents felt that audio conferencing was important to some degree and were *Satisfied* or *Very Satisfied* (mean 4.77).

Respondents were generally *Satisfied* as well with room-based videoconferencing (e.g., Polycom), with a satisfaction mean of 4.66. Forty-one percent rated its importance as *Very* or *Critically Important* to their work. It was slightly more important to faculty and staff than to student groups and significantly more important to locations outside of University Park. The Meeting@PennState web conferencing (Adobe Connect) tool was rated as *Important* for 91 percent of the respondents, resulting in a mean of 4.73 for satisfaction.

Other conferencing/collaboration tools mentioned were Skype (41 percent), Google Docs/Drive (39 percent), Google Hangouts (15 percent), Box at Penn State (14 percent), Apple FaceTime (11 percent), WebEx (8 percent), and Yammer (8 percent). Undergraduates used Google Docs/Drive (73 percent) heavily, while graduate students used Skype (65 percent). Faculty and staff also used Google Docs and Skype. Graduate students were more likely (30 percent) to use Google Hangouts than were undergraduates (23 percent), but more undergraduates used Apple FaceTime (28 percent) than did graduate students (21 percent).

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## Technology-Enhanced Classrooms

Classrooms that have been enhanced with technology, in one form or another, are very heavily scheduled at Penn State. More than 60 percent of faculty respondents indicated that these rooms are *Critically Important* to their work and gave them a mean satisfaction rate of 4.59, while the graduate students, including teaching assistants, gave them a mean of 4.77 (*Very Good*). These rooms were satisfactory to 89 percent of the full group of respondents with a mean of 4.65. The remaining 11 percent cited issues with equipment reliability (6 percent of that 11 percent), ease of use of AV equipment (4 percent), and equipment features (4 percent).

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## Instructional Support Tools

Respondents were asked about their use of and levels of satisfaction with Penn State instructional support services such as ANGEL, eLion, Penn State World Campus, Penn State massive open online courses (MOOCs), and other Penn State online courses. Almost all undergraduates had used ANGEL (98 percent) and eLion (96 percent), but only 22 percent reported having used World Campus or other Penn State online courses (28 percent) within the past year.

ANGEL garnered a *Good* (mean of 4.37) level of satisfaction but was more satisfactory to undergraduates (4.6) than to faculty (4.25). Still, 89 percent of respondents described it as *Very* or *Critically Important* to their work. Penn State's eLion received a mean of 4.78 with 92 percent overall rating it as *Very Good*.

Online learning aspects, and particularly MOOCs, were less familiar to the respondents. The 34 respondents who had used a Penn State MOOC rated it as *Good* in satisfaction with a mean of 4.65. Those with experience with World Campus were slightly more satisfied, and those 210 respondents gave the experience a rating mean of 4.94 (*Very Good*). Finally, 145 respondents had experience with other Penn State online courses and were likewise satisfied with them (mean 4.87 or *Very Good*). The rating from just the undergraduate responses was *Excellent* (mean 5.09).

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## Data Storage

Respondents were asked about their level of satisfaction with the various opportunities to store their data and computer files using Penn State resources. Penn State Access Account storage space (PASS), available to all students and employees, earned a mean of 4.66 (*Good*) and was *Very* or *Critically Important* to roughly half of those responding, although it was more important to staff than to faculty or students. Other storage spaces used by students included Box at Penn State (16 percent of graduate students, 6 percent of undergraduates), Dropbox (62 percent of graduate students, 36 percent of undergraduates), Google Drive (55 percent of graduate students, 46 percent of undergraduates), iCloud (24 percent of graduate students, 20 percent of undergraduates), and UDrive (15 percent of graduate students, 20 percent of undergraduates). Graduate students are greater consumers of data storage than are undergraduates.

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## Computer Security

Respondents were asked a series of questions regarding their computer security behaviors. More than 80 percent indicated that their computer required a password in order to use it, and approximately 70 percent changed that password at least once each year, using complicated passwords and different passwords for different sites. Staff and faculty are more compliant than are students in this. Almost 70 percent of all respondents set their operating systems and antivirus software to update automatically.

Several differences between cohorts became obvious. Staff are more likely to search for and remove Personally Identifiable Information (faculty 50 percent and staff 59 percent). Faculty are more likely to have antivirus scanning software enabled (faculty 62 percent and staff 49 percent). Undergraduates are more likely to run a firewall on their computer but less likely to update their application software (49 percent) or to use VPN when accessing Penn State remotely (8 percent).

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## Computer Labs

Like technology-enhanced classrooms, Penn State computer labs are heavily used. More than 90 percent of the student respondents indicated that these labs are *Important* to their coursework (undergraduates more so than graduate students) and that they are fairly well satisfied with them (mean of 4.73), although 6 percent of the undergraduate responders wish there were more labs and wireless printers available. They were satisfied with the locations, hours, and furnishings in these labs, with 97 percent expressing no dissatisfaction with these aspects.

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## Software Licensing

Although the physical store has closed, Penn State continues to negotiate institutional software license agreements with vendors (such as Microsoft and Adobe) in order to (1) offer free software for download and (2) offer for purchase software at reduced institutional prices. Respondents were asked about their satisfaction with the kinds of software offered. The overall mean for the responses was 4.62, with staff being the most satisfied at 4.80 (*Very Good*) and graduate students the least satisfied at 4.24. This opportunity was least important to undergraduates, but they were *Satisfied* with the service (mean 4.46). Faculty and graduate students felt that this software service was *Very* or *Critically Important*, and they would like to see a greater breadth of selection and ease of ordering.

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## Additional Requests

Finally, respondents were asked to identify which IT services or features they wished they did have but do not currently. The most frequently requested items were the following: greater ability to request software or get software support, administrative password privileges, improvement to wireless network, training requests, improved email/calendaring/collaboration tools, newer computer equipment, more communication from IT, and improvements to or an alternative for ANGEL. Undergraduates did not ask for much, but faculty responded in greater numbers.

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## COMPARING LEVELS OF SATISFACTION AT CAMPUS LOCATIONS

As this survey was intended to measure levels of satisfaction at all Penn State locations, tests of significant differences were run and significant differences were found in the following IT service satisfaction levels.

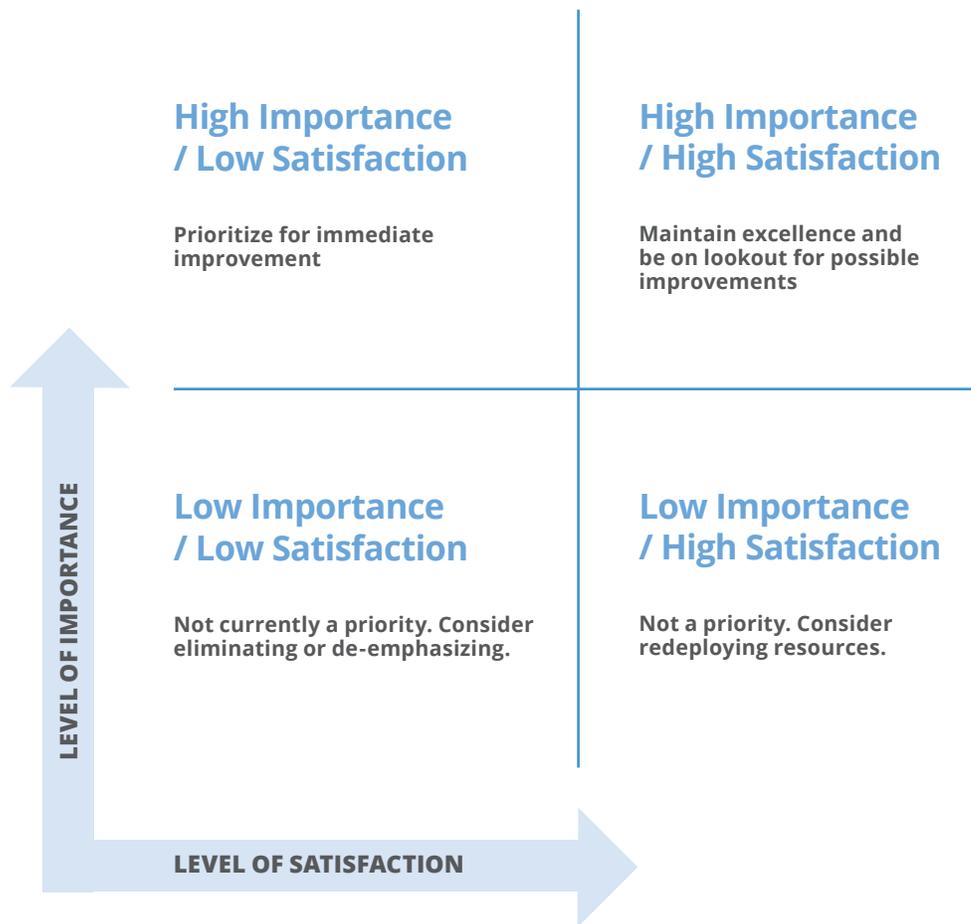
**Table 4**  
**Satisfaction Differences by Location**

	<b>UNIVERSITY PARK</b>	<b>OTHER PENN STATE CAMPUSES</b>	<b>COUNT</b>
IT Service Desk via a web form at itservicedesk.psu.edu	5.08	4.80	0.28
Penn State voice mail	5.17	4.91	0.26
Wired desk phones	5.17	4.92	0.24
Wired networking (when your device is plugged in to a network jack)	5.15	5.24	-0.10
Penn State IT keeps IT systems up and running	5.09	5.20	-0.11
Penn State IT provides services that are valuable to you	4.97	5.09	-0.12
Penn State IT provides high-quality services	4.90	5.05	-0.15
Penn State Access Account Storage Space (PASS)	4.58	4.74	-0.16
Penn State room-based videoconferencing	4.57	4.73	-0.16
Penn State IT is responsive to your needs	4.89	5.06	-0.17
UCS email	4.44	4.64	-0.21
Penn State IT communicates clearly about their services	4.52	4.76	-0.25
ANGEL	4.24	4.49	-0.25
UCS calendaring	4.31	4.57	-0.26
Wireless networking (non-cellular Wi-Fi)	4.23	4.60	-0.37
Average of means	4.75	4.85	

## IMPORTANCE - SATISFACTION INTERACTIONS

Overall, the results of this survey and analysis of its responses indicate that IT across Penn State is providing its services to a high level of satisfaction, but we strive for the highest level of customer service. There is always room for improvement. There are several methods that are useful in identifying priorities for improvement opportunities. The method recommended by MOR Associates is to look at the importance/satisfaction interaction ratings as a matrix.

**Table 5**  
**Importance/Satisfaction Matrix**



Using this method for each service issue, a priority rating was calculated to determine relationships between *High Importance* and *Low Satisfaction*. The table below shows the services where improvements may best be targeted. In several of these areas, investments have already been initiated within the past year. For example, possible replacements for ANGEL and eLion have been evaluated and General Purpose Classrooms are constantly being evaluated for technology needs.

**Table 6**  
**Importance/Satisfaction Interactions**

QUESTION	MEAN	IMPORTANCE	SATISFACTION		BASIS	PRIORITY IF MAX BASIS =100
		TOT IMP VI / CI * (A)	N (B)	TOT VD/D/ SD (C)		
Wireless networking (non-cellular Wi-Fi)	4.41	83%	1838	21%	324	100
ANGEL	4.37	89%	1046	21%	197	61
UCS email	4.58	94%	890	15%	128	39
Technology-enhanced classrooms	4.65	79%	1038	11%	90	28
UCS calendaring	4.48	64%	723	17%	79	24
Wired desk phones	5.03	74%	1482	7%	77	24
Penn State voice mail	5.02	70%	1452	7%	73	23
eLion	4.78	86%	1001	8%	72	22

Calculating the priority basis that compares *High Importance* with *Low Satisfaction* and considers the number of responders evaluating each service, we find that the only two services with improvement priority bases above 50 (maximum 100) were wireless networking and ANGEL. The UCS email and calendaring was calculated at 39, and the bases for all other services fell below 30. This indicates that the IT services that are considered most important to University users are being provided satisfactorily, but additional improvements to the wireless network, ANGEL, and UCS are recommended.

## CONCLUSIONS

Across Penn State, students, faculty, and staff gave University-provided IT services an overall score of *Very Good* to *Excellent*.

<b>EXCELLENT</b>	<b>VERY GOOD TO EXCELLENT</b>
wired networking quality and reliability of IT systems wired desk phones voice mail	IT Service Desk access
<b>VERY GOOD</b>	
IT responsiveness lynda.com at Penn State ITS Training Services classes	World Campus and other Penn State online courses eLion
<b>GOOD TO VERY GOOD</b>	<b>SOMEWHAT GOOD</b>
Penn State-provided audio and videoconferencing services	UCS calendaring wireless networking ANGEL

No service rated a score below *Somewhat Good*. However, a priority basis calculation suggested that the wireless networking system and ANGEL be targeted for additional improvement. UCS calendaring, UCS email, wireless networking, ANGEL, eLion, and World Campus were in the top five most important services rated.

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