

# Improve lighting on campus

For Grant Miller

UBC Director of Planning: Development Services.

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i) 1<sup>st</sup>

ii) 2<sup>nd</sup>

iii) 3<sup>rd</sup>

iv) 4<sup>th</sup>

v) 5<sup>th</sup>

vi) Graduated

(2) Degree pg8

i) Arts

ii) Science

iii) Business

iv) Commerce

v) Kinesiology

vi) Engineering

(3) Gender pg. 9

i. Male

ii. Female

iii. Not to say

(4) Question pg. 8

1. Do you feel safe walking around on campus at night?

2. Do you believe certain areas on campus are too dark at night?
3. Do you think UBC should increase the number of streetlights on campus?
4. Are you affected by the limited number of streetlights when taking night time classes?
5. Are majority of your classes within reasonable walking distance (e.g., 5 minutes

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## **Abstract**

**Introduction:** Despite the amazing campus that University of British Columbia (UBC) has, the limited amount of outdoor lighting has caused some safety issues. That is, some areas on campus are considered too dark which may affect the safety of students. For example, drivers would not be able to see students crossing the street and especially during the Winter session as the sky gets dark early. Therefore, the best option to resolve this issue is to install more streetlights on campus.

**Data Collection:** To collect data, a nine question survey will be given to student through UBC Discord servers. Students are to answer three personal questions and six question 's' regarding their preferences on streetlights on UBC campus.

**Findings:** Most participants are third- or fourth-year students majoring in Arts".

Moreover, most students who filled out the survey are female, and it seems that students are neutral toward each question. Several students agree that UBC campus is dark, which means that significant changes should be made.

**Recommendation:** Having to install more streetlights keeps students safe and brighten up the campus so people could see clearly. Alternatively, changing the voltage of light bulb will also d

## **Introduction**

Having efficient lighting is highly crucial to the safety of students, within a large university campus like the University of British Columbia (UBC). Most importantly, to ensure the safety and security of students, during nighttime activities, adequate lighting must be

provided with sufficient coverage and brightness levels (Yong et al,3). In addition, because the UBC is considered a tourist attraction and a home populated with students, and families the sense of safety must be acknowledged by improving lighting.

### Background of problem

Built on the traditional land of the Musqueam People in 1908 The Canadian Encyclopedia (2013), UBC is truly a large and beautiful campus to visit and walk around. The campus surrounds the ocean, and the various trees, grasses and squirrels that reside on our campus, make UBC beautiful. However, as great as UBC can be, there are still setbacks within the UBC campus and that is the limited number of streetlamps in some areas of the campus. In other words, some areas on campus are considered extremely dark at night.

### Description of Problem

Due to the large number of trees and limited streetlights, walking to class at night can be intimidating at times, especially during the winter months as the sky goes dark sooner. Therefore, it can be very unsafe, especially for female students. As a matter of fact, I sometimes feel uneasy walking from Irving. K, Barber to the Aquatic Center despite the short distance because it was quite dark. Moreover, the lack of streetlights along NW Marine Drive near Wreck Beach had made walking at night dangerous. As recently as last year there was a car accident where two students passed away due to limited visibility of the driver. (CBC News). In addition, because some areas of campus are not brightly lit, criminal activities are likely. This is because people tend to focus on areas which are dark, isolated, and unprotected to commit these acts (Yong et al,13).



Figure 1: Picture of NW Marine Drive near Wreck Beach.

### Purpose and methods

The purpose of this report is to discuss students' points of view regarding safety on campus and ask UBC Director of Planning: Development Services Grant Miller to install more streetlights or intensify the lights on campus grounds. The methods of collecting data are primarily from a questionnaire filled out by students online through Google Forms. The survey will then be posted on UBC Discord for students to fill out.

### Scope of this inquiry

The report will focus on five inquiry questions:

- (1) Do students feel safe walking on campus?
- (2) Should we have more streetlights installed? (3)
- (3) Do students think the campus is too dark? (4)
- (4) How far apart are they between classes (analysis on how long they will walk if it gets late)
- (5) What type of classes do they prefer? (Morning or late classes).

The report will conclude with a set of recommendations that will brighten up the campus for the safety of UBC students, faculty, staff, and visitors. More specifically, in which locations on campus do we need the most lights.

## **Data Collection**

### *Methods*

Whether to install more lights on campus is a big decision and it needs to be approved by the people in charge of on-campus operations, it also needs to consider the thoughts of students, faculty, and staff. To figure out how people think about installing more lights, a survey would be the best option. Students are to fill out a survey with a total of 8 questions. The first three questions are based on personal information and the other five are based on individual preferences about improving lighting on campus.

### *Participants and analysis*

Participants are to fill out a nine-question survey through Google forms for data collection. The surveys are sent through UBC Discord servers. Before answering the questions, participants are to first identify themselves based on their:

(2) Year of study

- a. 1<sup>st</sup>
- b. 2<sup>nd</sup>
- c. 3<sup>rd</sup>
- d. 4<sup>th</sup>
- e. 5<sup>th</sup>
- f. Graduated

(3) Degree

- a. Arts
- b. Science
- c. Business
- d. Commerce
- e. Kinesiology
- f. Engineering

(4) Gender

- a. Male
- b. Female
- c. Not to say

and the following questions:

1. Do you feel safe walking around on campus at night?
2. Do you believe certain areas on campus are too dark at night?
3. Do you think UBC should increase the number of streetlights on campus?
4. Are you affected by the limited number of streetlights when taking night time classes?
5. Are majority of your classes within reasonable walking distance (e.g., 5 minutes

The questions about streetlights will be based on a linear scale, where 1= Strongly Agree, and 10= Strongly Disagree.

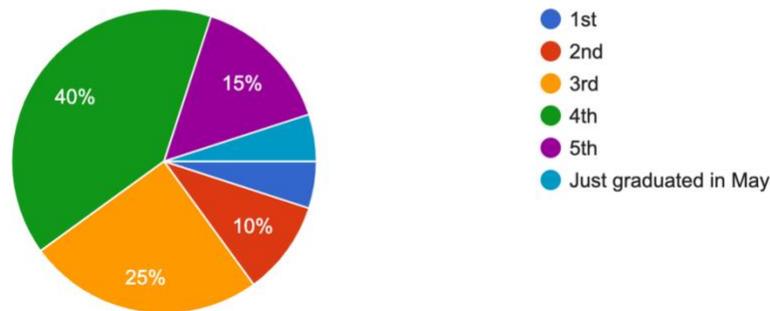
# Results

## Analysis of Survey Participants

A total of 20 students have participated in the survey. Participants vary from year of study, gender and degree in the survey.

### Year of study

Year of study  
20 responses



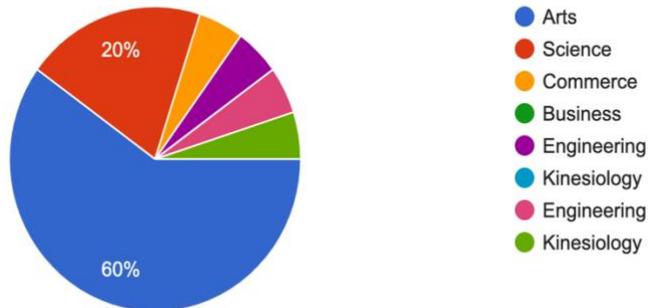
**Figure 2: Graph of students' year of study**

### Analysis of Survey question: Year of study)

Based on (Figure 2) most people who have filled out my survey are students from upper years of studies. For example, 25% of students who filled out are in their 3<sup>rd</sup> year of study, 40% of students are in their 4<sup>th</sup> year of study. In addition, 15% of students who filled are in their 5<sup>th</sup> year and only one graduated making 5%. While most people that filled out the survey are in upper years, there are however very few lower year standing students who filled out the survey. For example, 10% of students who fill out the survey are in 2<sup>nd</sup> year and 5% is 1<sup>st</sup> year.

### Degree

Degree  
20 responses



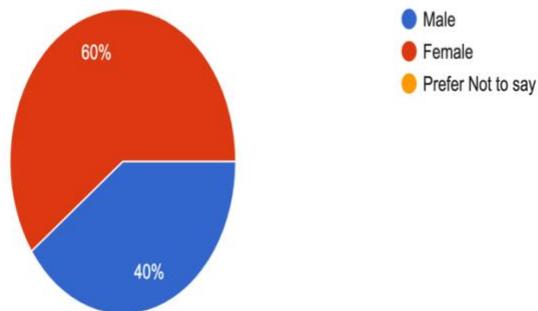
**Figure 3**

*Analysis of Survey question: Degree*

Figure 3 shows that most students who filled out the survey majored in Arts 63.2% and 20% of students who majored in science, 10.6% of students majored in Kinesiology and Engineering. 5.3% of student majored in Commerce and no one majored in Business. This could say most students who filled it out the form are majored in Arts which also means that 63% of student interested in filing out the form are Art majors.

### Gender

Gender  
20 responses



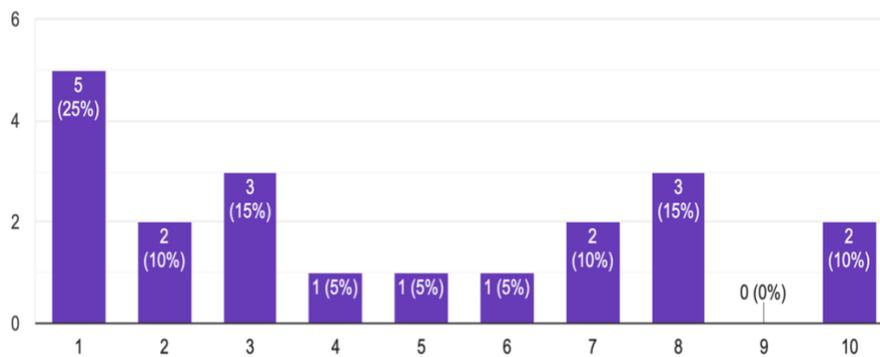
**Figure 4**

Analysis of Survey question: Gender

Upon analysis, it seems that there have been more females who filled out the survey by 20 percent. As shown in (Figure 4), approximately 60% are female and 40% of people who filled out the survey are males. This is probably because females are at risk of assault and kidnapping or rape. In fact, [82% of all juvenile victims are female. 90% of adult rape victims are female. Most importantly, women ages 18-24 who are college students are 3 times more likely than women in general to experience sexual violence] (RAINN). Thus, this is important because this tells us of how safe the UBC community really is. Finally, upon analysis, there are no prefer not to say answers meaning that they are open minded. This is because some people do not want to share their personal life.

Do you feel safe walking around on campus at night?

Do you feel safe walking around on campus at night?  
20 responses



**Figure 5**

Analysis of survey question: safety

As shown from the graph 25% of students strongly agree that they feel safe at night, while 15% of students are in somewhat agreeing range and 15% are at somewhat disagreeing range.

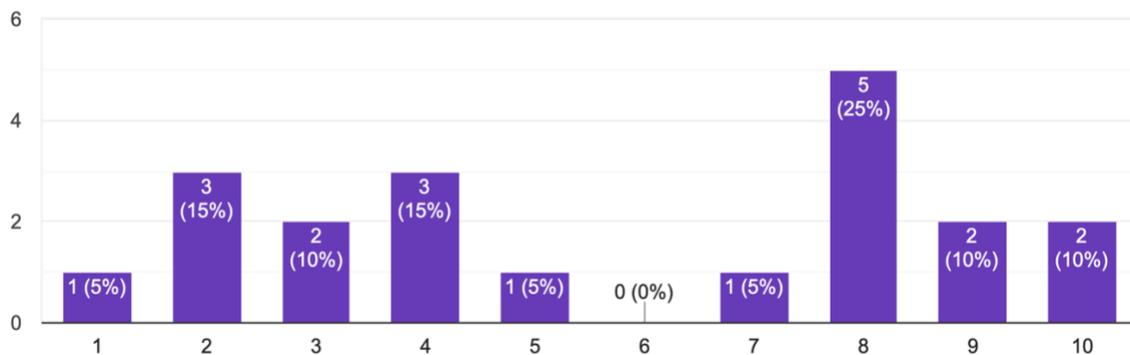
Whereas 10% of students are either agreeing or slightly disagreeing toward the question.

Moreover, 10% of students are neutral regarding safety preferences on campus. Overall, we can conclude that students think UBC is considered a safe place regardless it is dark or light outside

Do you believe certain areas on campus are too dark at night?

Do you believe certain areas on campus are too dark at night?

20 responses

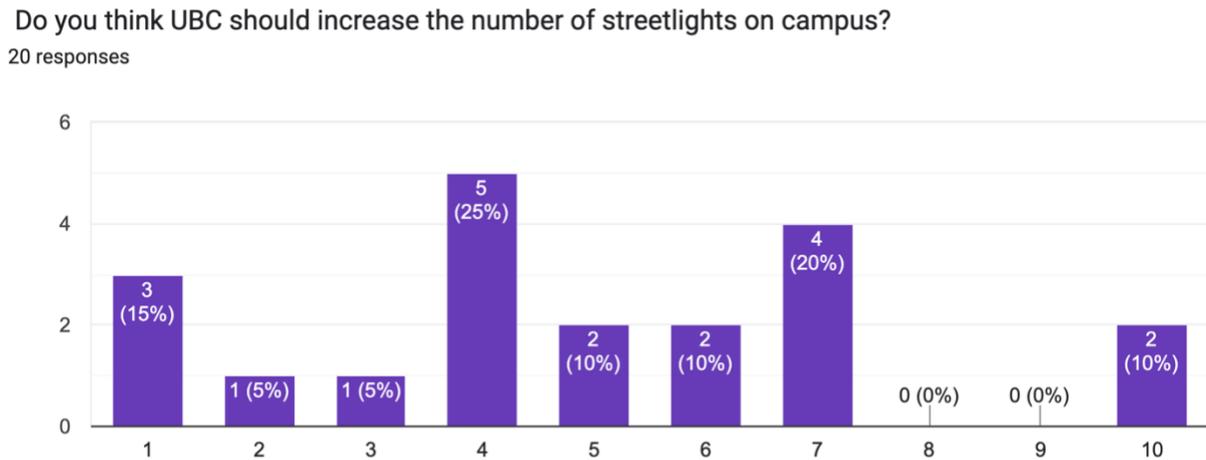


**Figure 6**

Analysis of Survey question: areas on campus are too dark at night?

Upon further analysis on the linear scale, it looks like 25% of students who filled out the survey are somewhat disagree that certain areas on campus are too dark at night, which is surprising to me because I was expecting somewhere like: agree or somewhat agree. Moreover, about 15% of people do agree that there are certain areas on campus are too dark at night, therefore, it is best to install more lights.

Do you think UBC should increase the number of streetlights on campus?



**Figure 7**

Analysis of survey question: increase the number of streetlights

After looking over the results in (Figure7), it seems that most students slightly agree upon installing more streetlights on campus. That is, 25% of students slightly agree that there should be more streetlights on certain areas of campus. Similarly, 20% of student also slightly disagree regarding the installment of more streetlights. Though most would either slightly agree or slightly disagree, 15% of student strongly agree about having more streetlight lights throughout campus. Whereas 10% of students feel neutral toward the installment of streetlights Overall, most students prefer having more streetlights throughout certain areas on campus.

Are you affected by the limited number of streetlights when taking nighttime classes?

Are you affected by the limited number of streetlights when taking night time classes?

20 responses

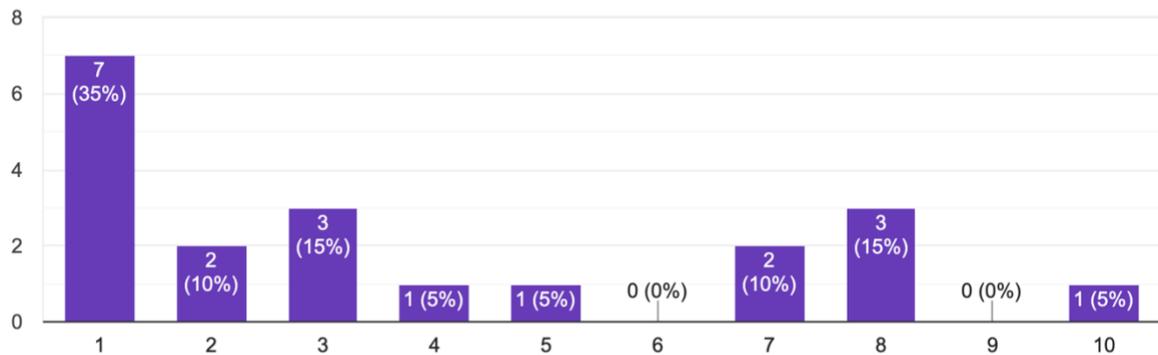


Figure 8

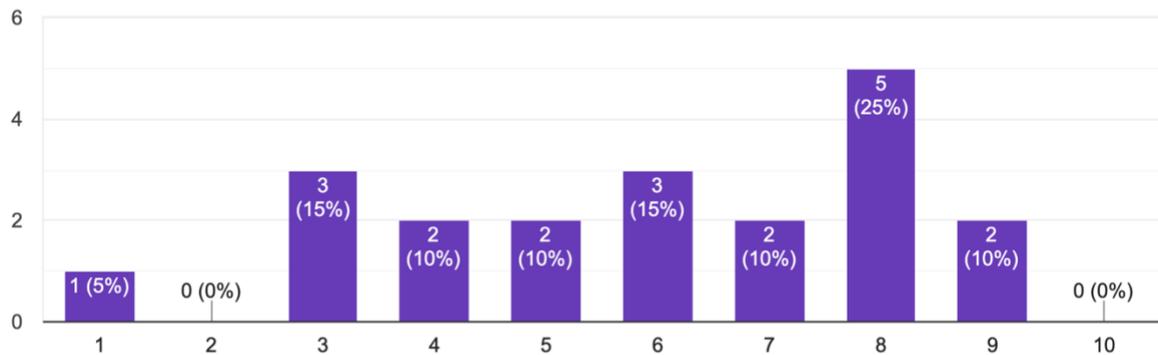
Analysis of nighttime classes

In (Figure 8), the results indicate that 35% of people who filled out the survey would strongly agree that night classes are adversely affected by the limited number of streetlights on campus. In addition, 15% of people who fill out the survey somewhat agreed that the limited number of streetlights affects, and more 10% agree they are affected. However, 15% of participants also somewhat disagree that the limited streetlights affected them. As shown above, it is evident enough that the limited number of streetlights is a huge issue that needs to be looked into.

Are majority of your classes within reasonable walking distance (e.g., 5 minutes

Are majority of your classes within reasonable walking distance (e.g. 5 minutes)?

20 responses



**Figure 9:**

Analysis of survey question: walking distance between classes

Approximately 25% of students do not have classes that are within reasonable walking distance of their homes. That is 25% of students somewhat disagree that their classes are in a reasonable walking distance. Whereas 15% of students claim that their classes are somewhat at a reasonable distance. Furthermore, the graph shows that 10% of students slightly agree and another 10% that is neither agree nor disagree about walking distance between classes. To conclude, participants do need to walk long distances between classes which means that it is common for them to walk in the dark during the winter months.

## Conclusion

Although the University of British Columbia (UBC) is an amazing place to visit, there are still some limitations. One of which is that the campus lacks streetlights which can make the campus dark at night, especially during the winter months; thus, it has made the safety of students questionable. Further analysis on the survey results shows, most students would agree that UBC quite safe at night, but the limited number of streetlights is an issue. In addition, so would also say

that certain areas around campus is too dark at night, so the best option is to increase the amount of streetlight on campus.

## Recommendations

All in all, the best solution to this is to install more streetlights on the campus grounds. Having more streetlights on campus allows students, to see better at night and most importantly, it will make drivers see better and thus, safe for both pedestrians and drivers themselves. For example, there should be streetlights near the UBC Aquatic center and Irving K. Barber. In addition, lights should also be installed between the club and the Aquatic Center. Moreover, streetlights should be installed in more secreted areas like areas with more trees and areas that is considered dark at night. Most importantly, there should be more streetlights around Marine Drive and the road near Wreck Beach for the safety of students as the visibility is poor and a bit secreted. Therefore, it could be very dangerous for people crossing the street and drivers.



**Figure 10**

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# Appendix

[https://docs.google.com/forms/d/1Axz7\\_Ps7mlNDaeohBwBJ2-dNYKtkfB3po8PiE6QRz9k/edit](https://docs.google.com/forms/d/1Axz7_Ps7mlNDaeohBwBJ2-dNYKtkfB3po8PiE6QRz9k/edit)