

Blue Question Bank or No Blue Question Bank? A Case Study: the UMGC Capstone survey

Ouanessa Boubsil

Darragh McNally

Adam Flanders

August 4, 2021



Project Requirements



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Survey all students taking a capstone course for their selected program.

Be able to compare terms in the capstone reports

Customize each survey based on the student's program

Include sections for School and Institution questions

Create reports based on the capstone/program

Distribute the reports to the program directors and department chairs

Process of Creating Surveys

- Representatives from all schools
- Agreed on consistent questionnaires
 - Institution level questions
 - School level questions
 - Program level questions



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Programs Included



- Graduate Programs
 - BUS (7)
 - CIT (11)
 - SAS (9)
- Undergraduate Programs
 - BUS (7)
 - CIT (6)
 - SAS (13)
- MGMT 670
 - SAS (4)
 - BUS/CIT (9)
- Total: 66
Programs/Specializations

Response Rates

Term	Overall
Fall 2020	51.92%
Winter 2021	60.76%
Spring 2021	48.30%



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Capstone Survey Key Facts



**UNIVERSITY OF MARYLAND
GLOBAL CAMPUS**

Capstone surveys open when the capstone class is at 60% completion of its duration and end on the last day of the class

Surveys are run on the Blue Platform

Students receive an email with link to the survey when the survey opens, and two additional reminders, six days and two days before class end date

Students get a pop up in D2L until they submit the survey or when the class ends

Students can access the survey from the 'course evaluation' link in the D2L class or the pop up

Capstone Surveys

(Institutional Questions)

- Common to both Grad and Undergrad surveys
- Student employment and salary range
- Impact of program on career, education and earnings
- Student military status
- Satisfaction with faculty and specific UMGC administration services
- UMGC recommendation to others



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Undergrad Additional Question

- Are you considering a graduate degree?(Yes/No)
 - If Yes:
 - Are you considering UMGC for your graduate degree? (Yes/No)
 - If No:
 - Why are you not considering UMGC?



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Capstone Surveys

(School Questions)

- Specific to each school
- School extra academic resources available to students
- Student usage of school resources
- Experience and job-related questions about specific fields taught at the school



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Capstone Surveys

(Specialization
Questions)



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

- **Likert Scale [1-5] rating questions :**
 - Importance of the program competencies and outcomes
 - Demonstrability of the program competencies and outcomes in a professional setting
- **Yes/No/Did not know/ type of questions:**
 - Usage of specific school support resources
- **Open ended question**
 - Missed topics that should have been covered in program
 - General feedback on the program

Last Questions on all the surveys



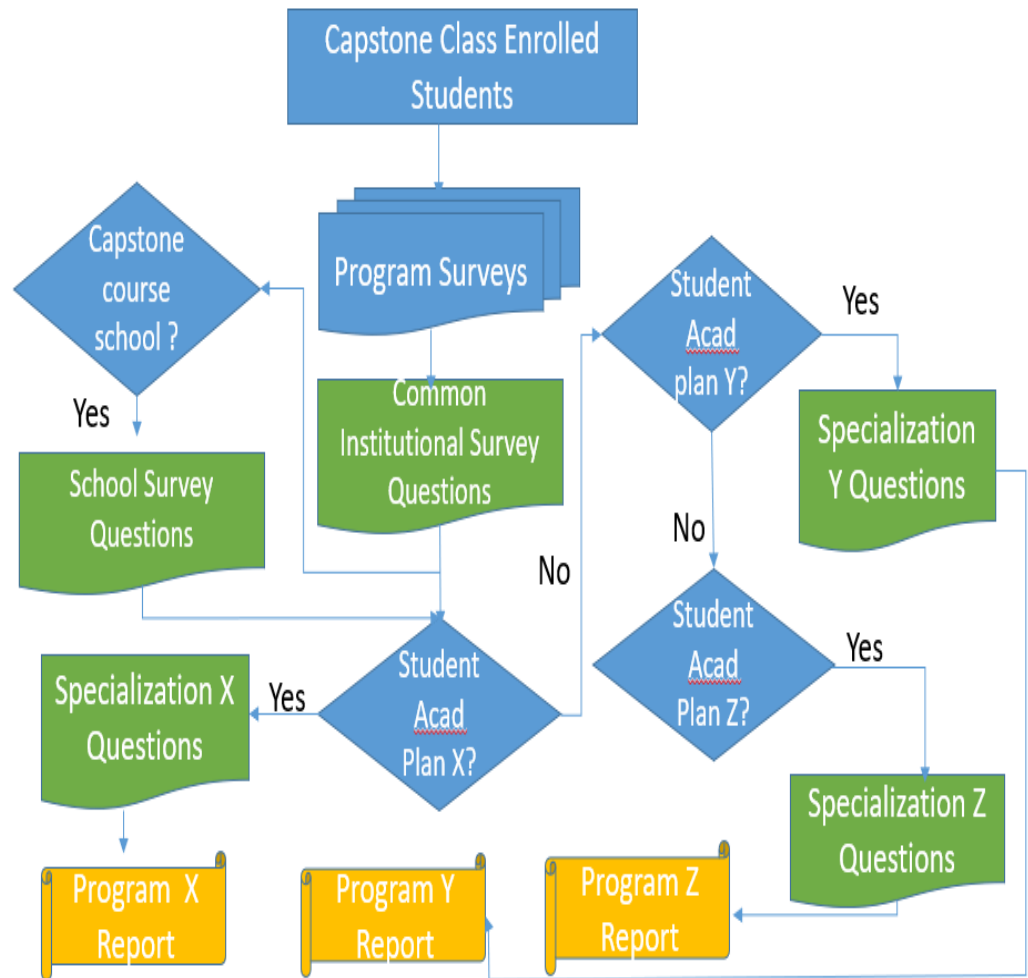
➤ **Undergrad students who responded that they are considering a graduate degree at UMGC**

- You indicated you are considering UMGC for your graduate degree. Please enter your name AND email address or phone number in the text box below if you would like someone from our advising team to contact you with more information.

➤ **Grad and undergrad students who responded that they are considering changing jobs**

- You indicated you may be changing your job or career. Please enter your name AND email address or phone number in the text box below if you would like someone from our Career Services team to contact you with more information.
- **Total Number of Questions per Program: 35-65**
- **Total Number of Questions for Capstone Project: 1200**

Surveys and Reports Flow



Challenges

Blue Limitations handling the
Large number of survey questions
in one project

Programs with more than one
capstone course

Same capstone course for more
than one program

Keeping the list of acad plans
associated with a
program/specialization up-to-date

Keeping the list of capstone
courses up-to-date



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Setup

- We used two different setups to account for structural differences with how our capstone courses are structured.
- Setup 1 – 1 capstone course to 1 program
- Setup 2 – 1 capstone course to multiple programs or multiple capstone courses to 1 program



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Setup 1 (1 to 1 setup)

- This setup contains most of our capstone surveys
- There is 1 capstone course per program and all the students in this capstone course are to get the capstone survey
- Uses the same data sources as the course evaluation surveys
- Uses the Subject Filter under Definition to only bring in the capstone courses included in this project.
- Triggers are used to select which questions a student gets based on the course they are in.
- Reports are generated based on the course and distributed using Dynamic Viewers

Needed 4 projects that are broken up by Career (Grad/Ugrd) and School because of the limitation of 500 questions by project

Issues for Setup 1



- The limit Blue has for the number of questions per project.
 - Solution – Split the capstone project into multiple Blue projects by School and Career
- Accommodating additional users so they can receive the capstone reports but not the normal course evaluations
 - Solution – Add additional Dynamic Viewer Levels by adding a new organizational link and additional groups in the project Definition

Setup 2 (Programs with Exceptions Setup)



- Not one capstone course to one program
 - **Multiple programs per capstone course**
 - **Multiple capstone courses per capstone program**
- Addition of data fields to the User data source to allow additional functionality
 - **Plan's Capstone Course**
 - **Academic Plans for each student**
 - **Plan's Survey Name**
- Subject Filter under Definition to limit inclusion of only the relevant capstone courses
- Triggers to select questions students get based on their Academic Plan field
- Reports are generated based on the Plan's Survey Name

Issues for Setup 2

acad_plan_cd	capstone_course	plan_survey_nm
ACCTFIN-MS	MSAF 670	MS in Accounting and Financial Management
ACCTINS-MS	ACCT 670	MS in Accounting and Information Systems
ACTBUS-MAJ	ACCT 495	BS in Accounting
ACTCRI-MAJ	ACCT 495	BS in Accounting
ACTCSI-MAJ	ACCT 495	BS in Accounting
ACTEAS-MAJ	ACCT 495	BS in Accounting

- Multiple Surveys per Capstone
- Solution – Add a column to the User Data Source for Academic Plan Code
 - Use the Academic Plan Code to trigger the appropriate questions for the code within each class
- Adding a column to the User Data Source that indicates what Survey the student gets based on the student's Academic Plan Code (Needed for Reporting)
- Solution – Create a table that connects the Academic Plan Code to the survey so the data can be added to the Data Source by our Data Warehouse



Issues for Setup 2 (continued)

- Cannot use the course data to build reports
- Solution – Reports are Group by reports using the Survey Name field added to the User Data Source
- Cannot use Dynamic Views to distribute reports since they are not based on the course data
- Solution – Manually upload the Static Viewers using an CSV file



UNIVERSITY OF MARYLAND
GLOBAL CAMPUS

Changes when converted to Blue 8

❖ Convert all projects to Question Bank

➤ What made this possible:

- Use of the Question Bank since the single selection table was no longer a suitable option (useability)
- Project Mapping was now available with Question Bank using the question identifiers

➤ Benefits

- Reduced the number of projects from 5 to 2
- Reduced the number of questions per project to allow for future additional questions

Future Plans

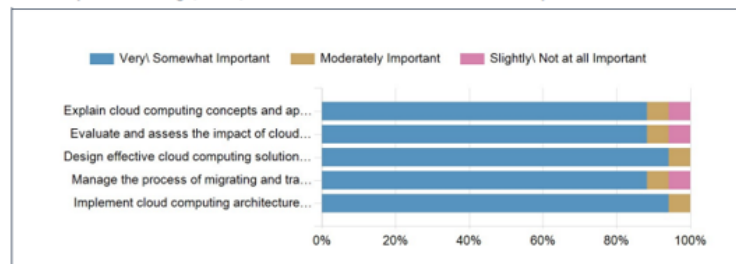


- Issue – Complex triggers and Question Bank build for the project that is not 1 capstone course to 1 program
 - Future Plan – Requested a BLUE enhancement to make the Question Bank mapping use User demographics and not just Course data.
- Issues - Still involves multiple projects
 - Future Plan – Merge the 2 projects into 1 and just run 2 reports
- Issue – Connecting the Academic Plan with the Survey Name
 - Future Plan – Find a more consistent way to make this connection so all students in Setup 2 get a survey.

Reports

Program Level Questions

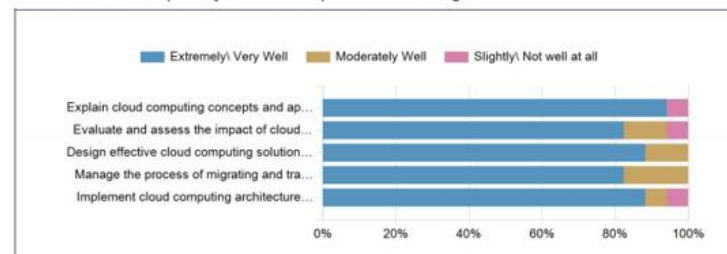
Please review the competencies/outcomes listed below and indicate how important it has been for you to develop the knowledge, skills, and abilities related to each of these competencies/outcomes



Please review the competencies/outcomes listed below and indicate how important it has been for you to develop the knowledge, skills, and abilities related to each of these competencies/outcomes

	Overall Positive (1 and 2)	Very Important (1)	Somewhat Important (2)	Moderately Important (3)	Slightly Important (4)	Not at all Important (5)	Mean	SD	Resp
Explain cloud computing concepts and applicable benefits to business stakeholders	88.24%	76.47%	11.76%	5.88%	5.88%	0.00%	1.41	0.87	17
Evaluate and assess the impact of cloud computing on service management	88.24%	70.59%	17.65%	5.88%	0.00%	5.88%	1.53	1.07	17
Design effective cloud computing solutions that take into account an organization's structure, communications, and operational business processes, as well as financial management and cost model implications	94.12%	94.12%	0.00%	5.88%	0.00%	0.00%	1.12	0.49	17
Manage the process of migrating and transitioning to a cloud environment	88.24%	88.24%	0.00%	5.88%	5.88%	0.00%	1.29	0.85	17
Implement cloud computing architecture solutions that address cloud security and compliance fundamentals, deployment automation and elastic sizing of environments, and multitenant implications	94.12%	88.24%	5.88%	5.88%	0.00%	0.00%	1.18	0.53	17

Please review the program competencies/outcomes again and rate yourself on how well you could demonstrate this competency/outcome in a professional setting



Please review the program competencies/outcomes again and rate yourself on how well you could demonstrate this competency/outcome in a professional setting

	Overall Positive (1 and 2)	Extremely Well (1)	Very Well (2)	Moderately Well (3)	Slightly Well (4)	Not well at all (5)	Mean	SD	Resp
Explain cloud computing concepts and applicable benefits to business stakeholders	94.12%	58.82%	35.29%	0.00%	5.88%	0.00%	1.53	0.80	17
Evaluate and assess the impact of cloud computing on service management	82.35%	47.06%	35.29%	11.76%	5.88%	0.00%	1.76	0.90	17
Design effective cloud computing solutions that take into account an organization's structure, communications, and operational business processes, as well as financial management and cost model implications	88.24%	58.82%	29.41%	11.76%	0.00%	0.00%	1.53	0.72	17
Manage the process of migrating and transitioning to a cloud environment	82.35%	58.82%	23.53%	17.65%	0.00%	0.00%	1.59	0.80	17
Implement cloud computing architecture solutions that address cloud security and compliance fundamentals, deployment automation and elastic sizing of environments, and multitenant implications	88.24%	58.82%	29.41%	5.88%	0.00%	5.88%	1.65	1.06	17

Do you feel confident that the skills you acquired in the program will help you succeed in a cybersecurity career?

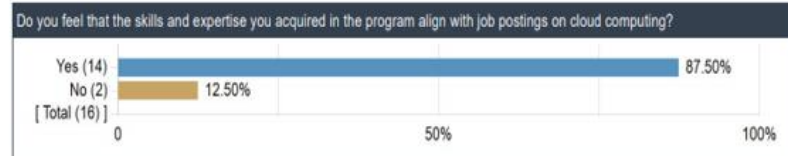


Reports (Continued)

Did you receive enough support from the program faculty to help you succeed in your courses?



Do you feel that the skills and expertise you acquired in the program align with job postings on cloud computing?



Are there any topics, areas, skills, etc. that were not sufficiently well covered in the program? This includes any topics, areas, skills, etc. that were not covered at all, but which you feel should have been.

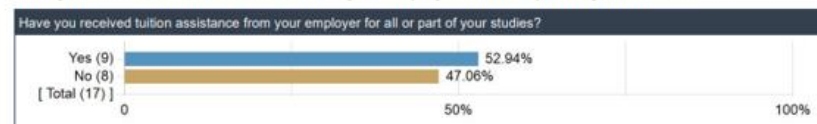
Comments
Terraform is used everyone, nobody even mentioned it.
Java Script Object Notation (JSON). Lightly covered, but execution expectations were beyond what was covered. This section should be expanded to cover more of the concepts required to execute labs.
Please introduce a project on building CI/CD pipeline in cloud environments leveraging various automation tools which is very much important in the DevOps world.
CCA 670 Capstone should be 2 class with 2 projects for each semester. This one was a lot to complete in the 3 month timeframe. It's more important that the student learns this stuff and not feel rushed.
The biggest areas are the support with the labs. The labs were also the most valuable part of the program. I felt the professors couldn't answer issues, and they ended up just telling us that the TA's would help, who never helped. There was a huge disconnect. I eventually just used my own personal aws account - with total charges of over close to \$500. That would be my biggest issue with the program - the amount of time I spent trying to work with the awseducate, and how eventually I just used my own account
security, compliance, and DevOps
None

Is there anything else you would like to tell us about the program?

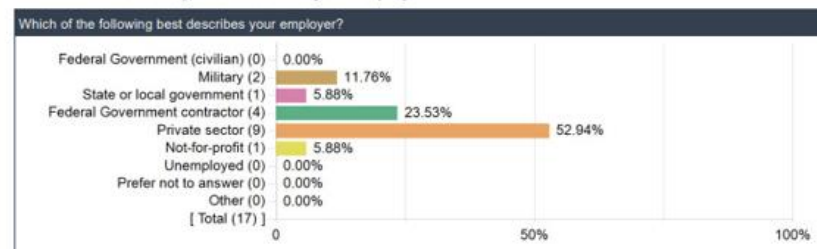
Comments
I can't stress enough how unsupported I felt.
At the start of each class I reached out to professors via email to connect, only 1 responded back to me.
I reached out to the program chair Jeff T, he stopped responding to me.
Professor's provided 1 - 2 sentences of feedback.
There was one single group project.
Professors were not aware of the EdX program.
Overall this program was extremely disappointing and I wish I could go back and choose a different one.
Cybersecurity programs of instruction should be audited more frequently for relevance. A lot of the material was outdated due to the rapid changes in the target environments (AWS, Azure, and third parties).
Thank you for Giving me the opportunity to participate in this program.
There was a huge disconnect in how the professors graded and what was in the lessons. After the first couple of classes, I was able to figure out what the disconnect, but it still was alarming. For example, each project had a list of competencies, but each project also had a template which was completely different from the competencies. If you followed the project template, you didn't do the competencies (and got a bad grade). Also there was a huge disconnect in the page limit. If someone followed the competencies (in order to get a good grade), they would go over the page limit. Some professors graded along the page limit, so if you went over you got a bad grade. It was a issue each course. Is the professor going to grade according to the template, or page length, or competencies.
n/a
Examples are good.

School Level Questions

Have you received tuition assistance from your employer for all or part of your studies?

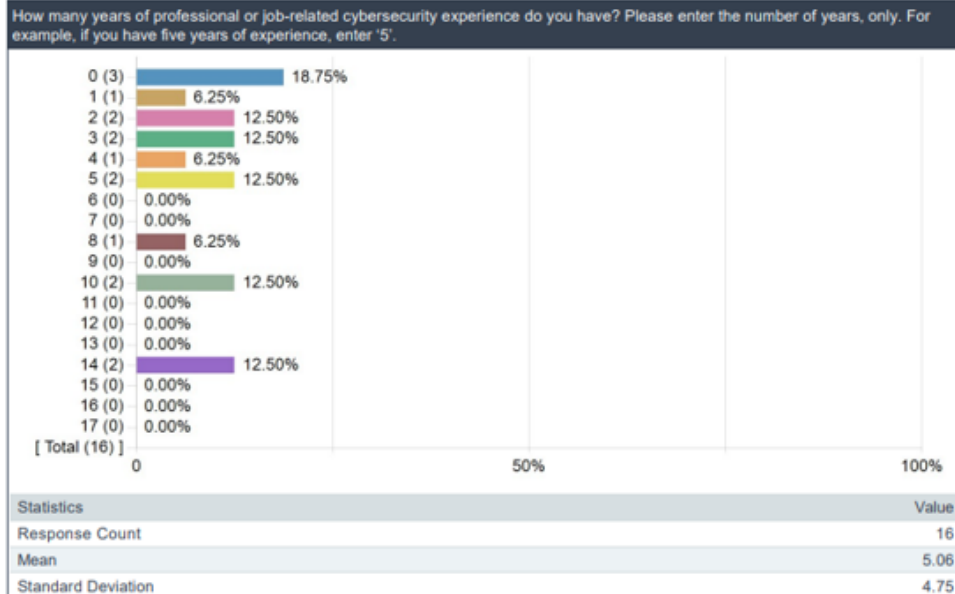


Which of the following best describes your employer?

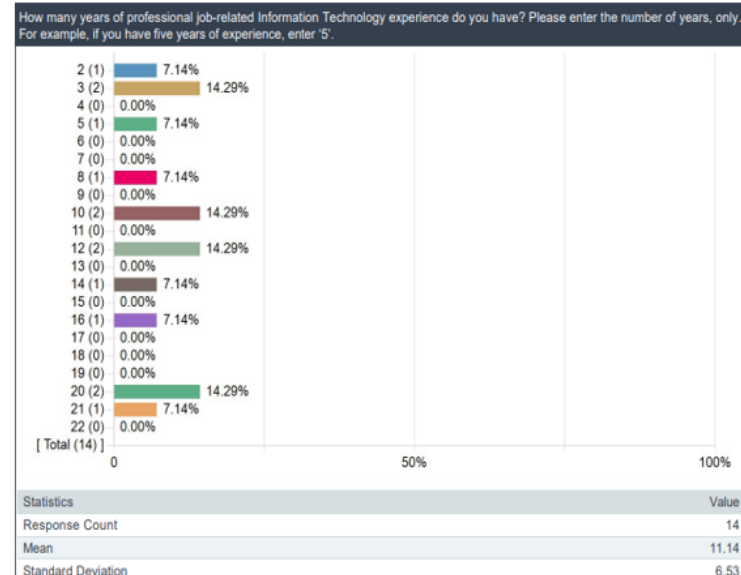


Reports (Continued)

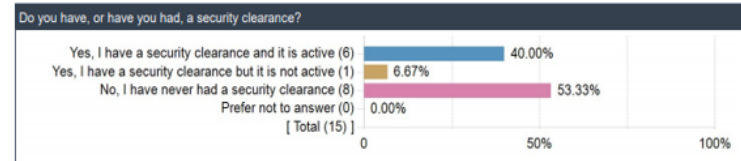
How many years of professional or job-related cybersecurity experience do you have? Please enter the number of years, only. For example, if you have five years of experience, enter '5'.



How many years of professional job-related Information Technology experience do you have? Please enter the number of years, only. For example, if you have five years of experience, enter '5'.

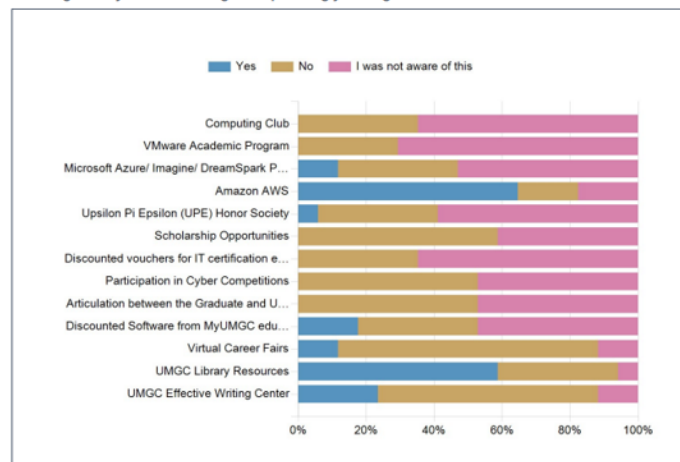


Do you have, or have you had, a security clearance?



Reports (Continued)

UMGC offers several programs, activities, and services to its students. Were you able to take advantage of any of the following while pursuing your degree?

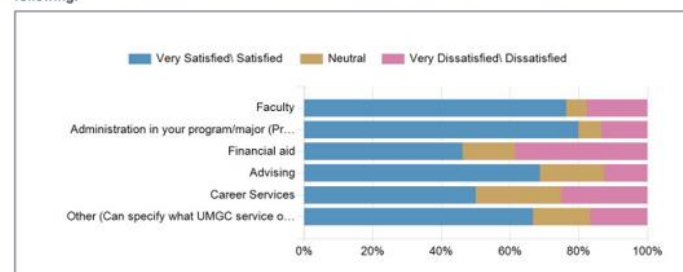


UMGC offers several programs, activities, and services to its students. Were you able to take advantage of any of the following while pursuing your degree?

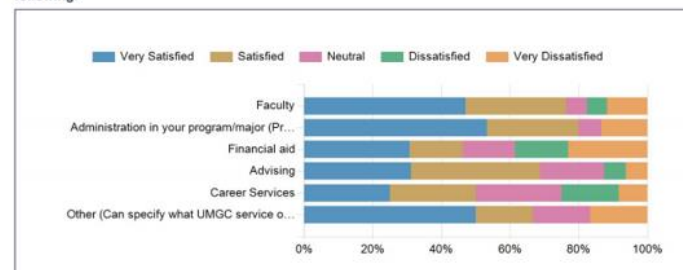
Question	Yes	No	I was not aware of this
Computing Club	0.00%	35.29%	64.71%
VMware Academic Program	0.00%	29.41%	70.59%
Microsoft Azure/ Imagine/ DreamSpark Premium (also known as MSDNAA)	11.76%	35.29%	52.94%
Amazon AWS	64.71%	17.65%	17.65%
Upsilon Pi Epsilon (UPE) Honor Society	5.88%	35.29%	58.82%
Scholarship Opportunities	0.00%	58.82%	41.18%
Discounted vouchers for IT certification exam	0.00%	35.29%	64.71%
Participation in Cyber Competitions	0.00%	52.94%	47.06%
Articulation between the Graduate and Undergraduate Cybersecurity programs	0.00%	52.94%	47.06%
Discounted Software from MyUMGC educational resources	17.65%	35.29%	47.06%
Virtual Career Fairs	11.76%	76.47%	11.76%
UMGC Library Resources	58.82%	35.29%	5.88%
UMGC Effective Writing Center	23.53%	64.71%	11.76%

University Level Questions

On a scale from Very Satisfied to Very Dissatisfied, please indicate your level of satisfaction with the following:



On a scale from Very Satisfied to Very Dissatisfied, please indicate your level of satisfaction with the following:

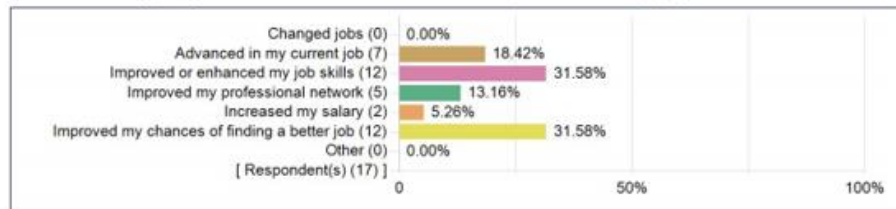


For the question: On a scale from Very Satisfied to Very Dissatisfied, please indicate your level of satisfaction with the following: you selected "Other", what other service at UMGC were you referring to?

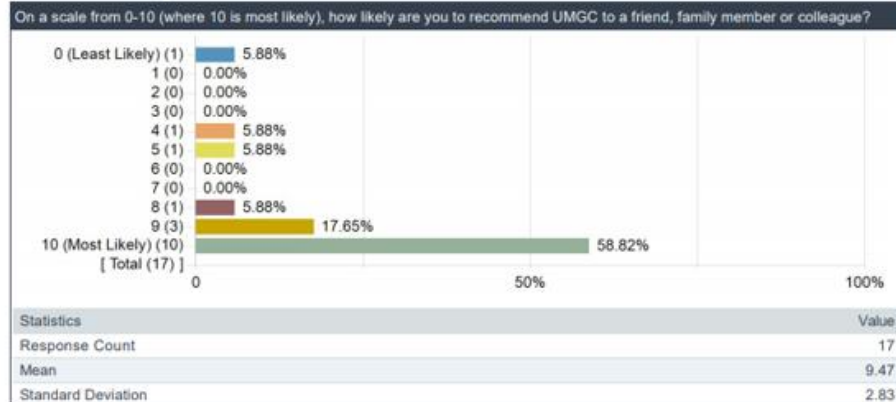
Comments
Very satisfied with the graduation group, working on simple topics but critical like getting my name updated on diploma. Very quick turn around time working with them.
Coursework was challenging.

Reports (Continued)

As a result of my program or coursework at UMGC, I have: (Select all that apply)



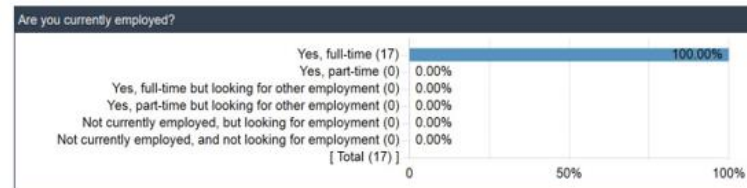
On a scale from 0-10 (where 10 is most likely), how likely are you to recommend UMGC to a friend, family member or colleague?



What is the main reason for your answer?

Comments
The program was not what I wanted at all and nobody listened to any feedback I tried to give
Very relevant program
Total cost of the program was significantly less than most others, format of classes was easy to follow and meet while working full-time.
Online course console, curriculum and material easy to navigate, access, and understand. Zero out of pocket expense for books and an increased network of technical professionals.
I am impressed with the way the course designed to reflect the real-world scenarios helps to improve Cloud infrastructure skills
I am happy with my education that I received from UMGC.
The coursework was lacking academically. The staff were just nothing more than admins. There wasn't much networking. However it was a convenient way to get another masters.
Intuitive course materials and supportive facilities.
I feel in this area being the DMV UMGC ranks second to none in terms of cyber/cloud computing but the theory aspect is more and needs to align the course more to the industry requirements such as compliance and real-world implementations (cloud security, CI/CD Pipeline, etc)
2020 was a tough year in every respect but UMGC was fully prepared and I got full support from my professor to complete the degree on time.
UMGC courses are targeted to current skills and solving industry problems. The curriculum and course material is adequate and covers a larger area of subject learning.

Are you currently employed?

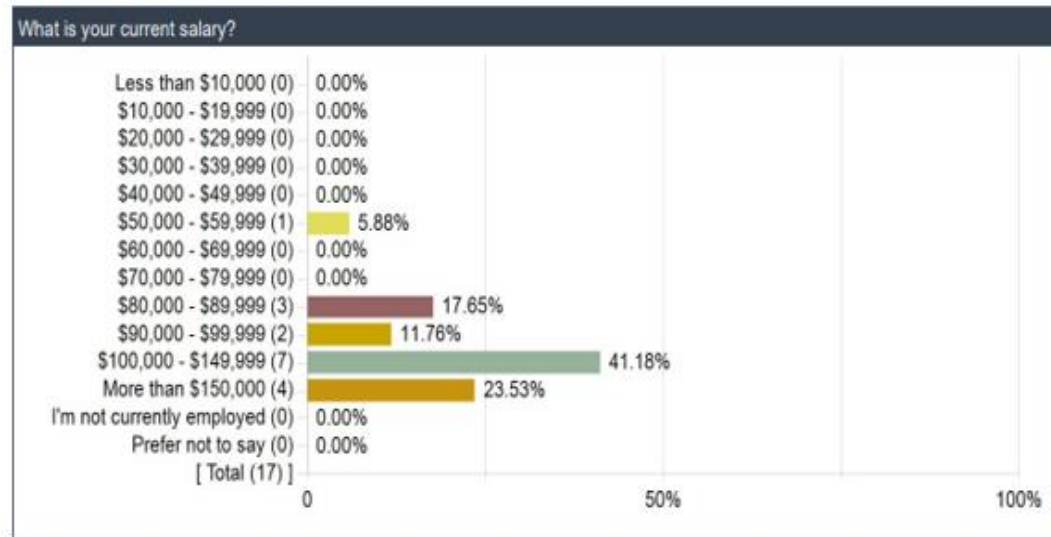


What is your current military status?



Reports (Continued)

What is your current salary?



The background of the slide is a dense, overlapping collage of rectangular sticky notes in various colors: pink, yellow, light blue, and light green. Each sticky note features a large, bold, black question mark. The notes are scattered across the entire frame, creating a textured, busy appearance.

Questions?

- Email:
- course-evaluation-support@umgc.edu

