

Feedback Report

On

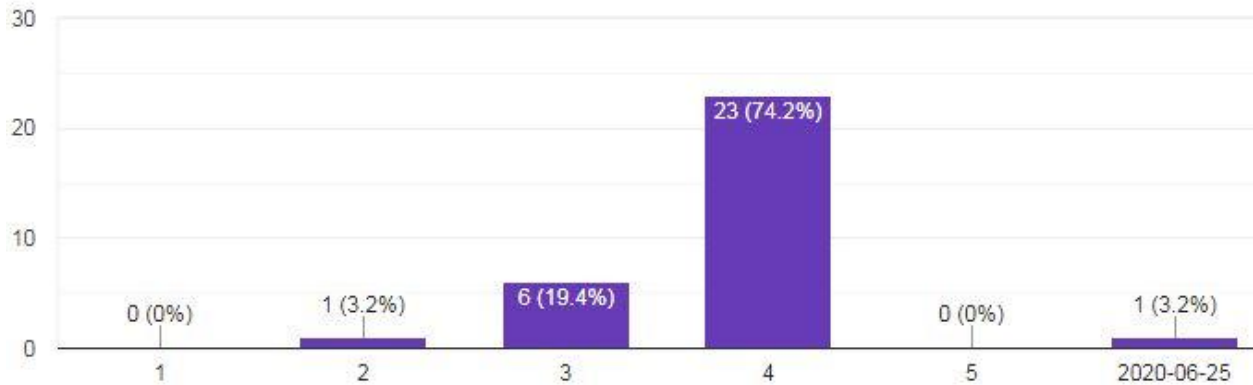
Criminal Justice and Data Analysis - 1

This course was offered from March to June 2020. A questionnaire was sent via electronic mail to all the users of Criminal Justice and Data Analysis after the completion of the course. The **total of 32 responses** received are grouped into **Part A and Part B**. **Part A** summarises all the responses of each multiple choice/rating question in graphical form and **Part B** consists of the responses of all open questions.

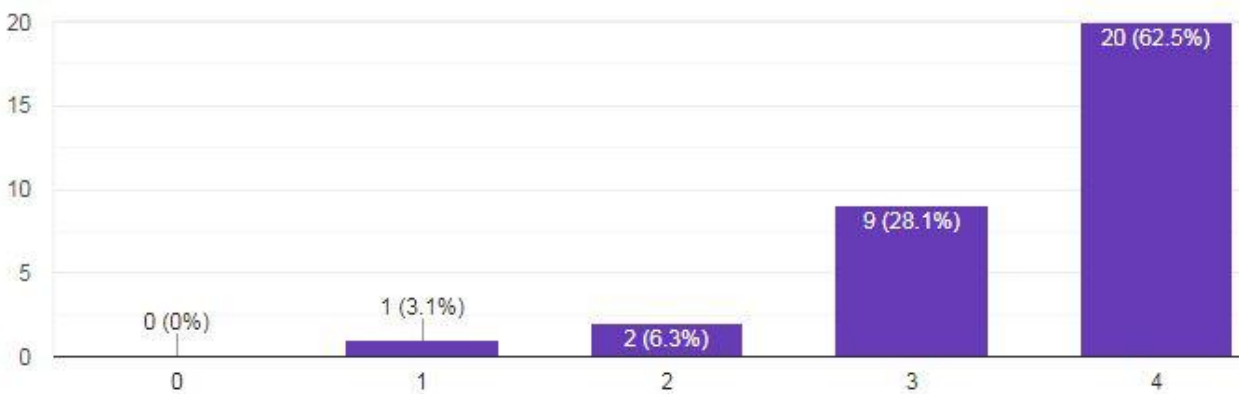
Part - A Instructions	Page nos.
Course Format	1-2
Course Administration	3-4
Learning From the Course	5-8
Course Outcome	9-10
About the various Modules	11-13
 Part - B	
Open Ended Questions	14-26

Course Format

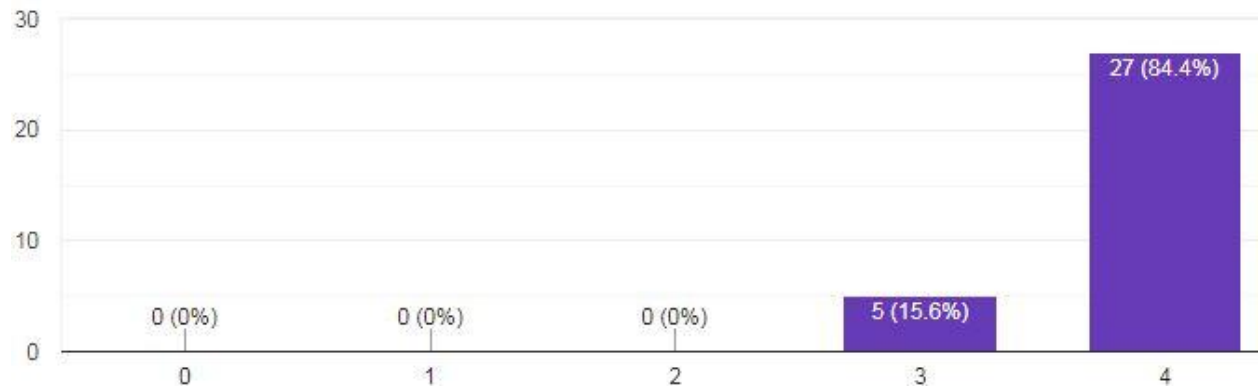
The course objectives were clear to me (31 responses)



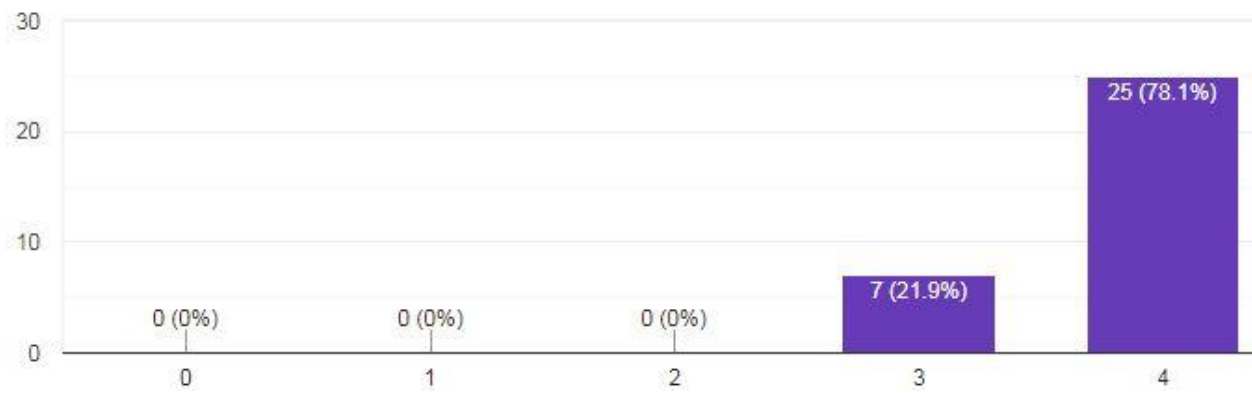
The course design was thoughtful and appropriate for a 12-week duration (32 responses)



The course stimulated my thinking about the topics it covered (32 responses)

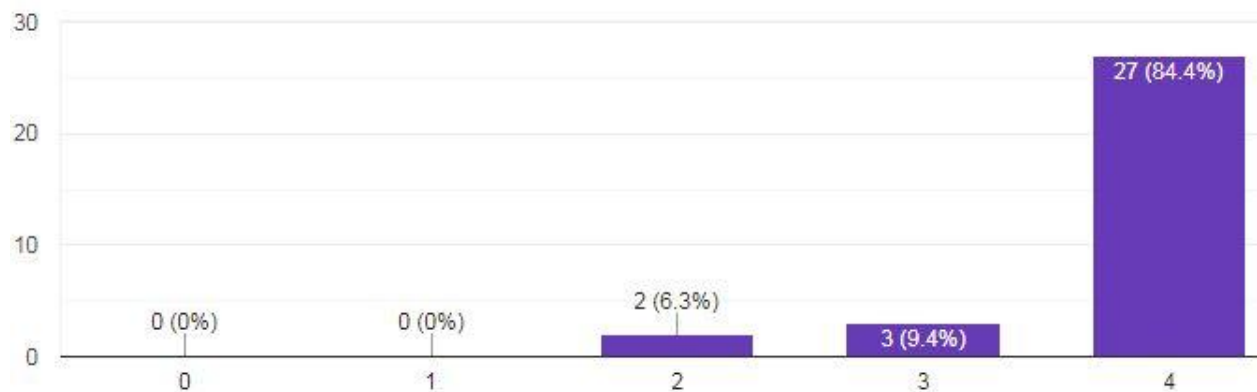


The system of assignments, quizzes, and exercises was helpful in learning (32 responses)

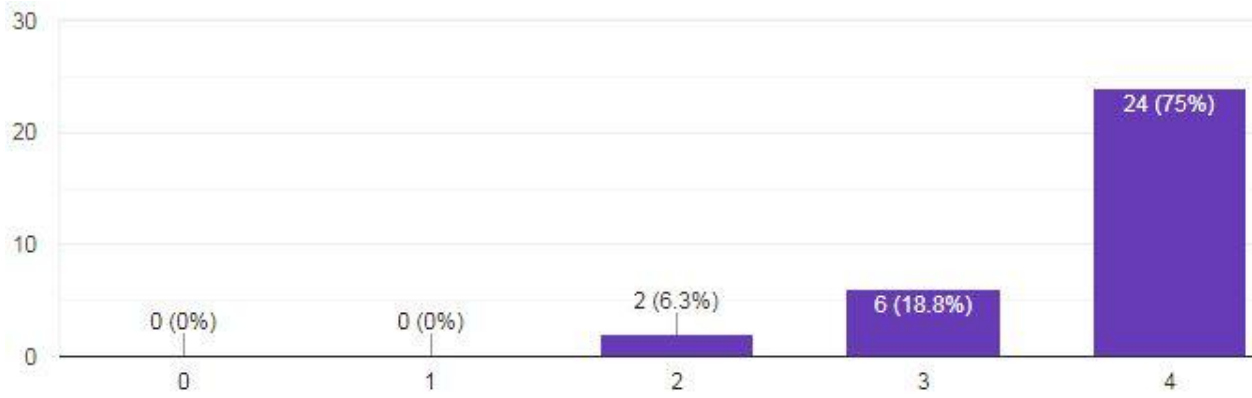


Course Administration

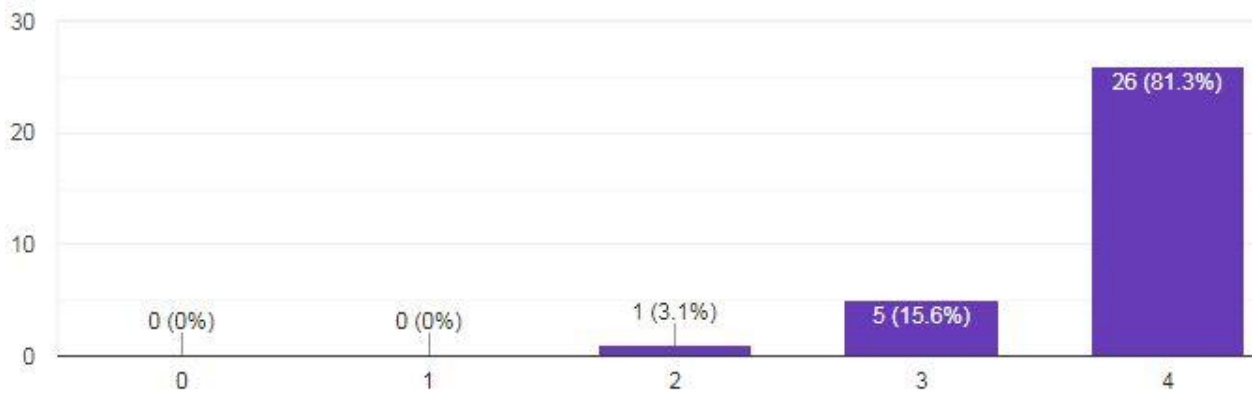
The online system was easy to navigate in learning and submitting assignments
(32 responses)



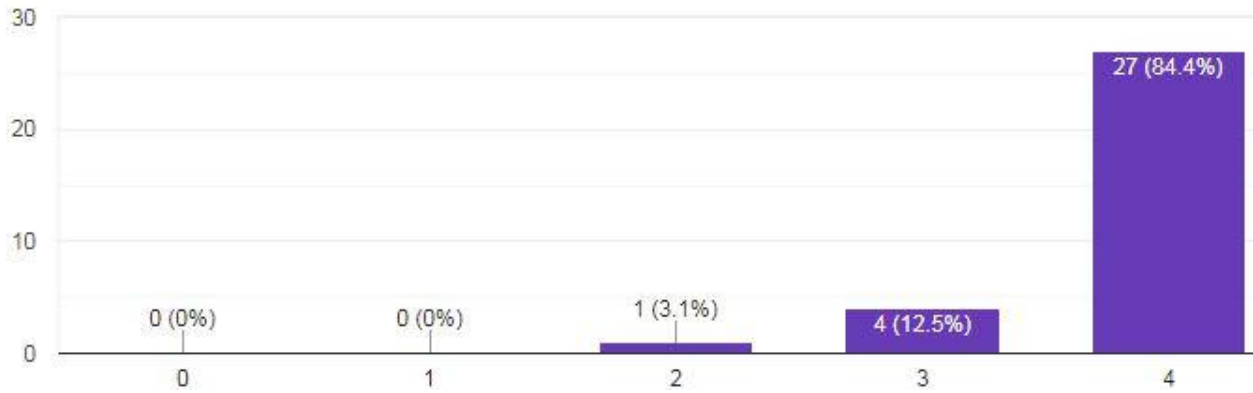
The active learning classroom format was very useful in learning from one another (32 responses)



The course administrators were easily available when needed through email/ system tools and by phone (32 responses)

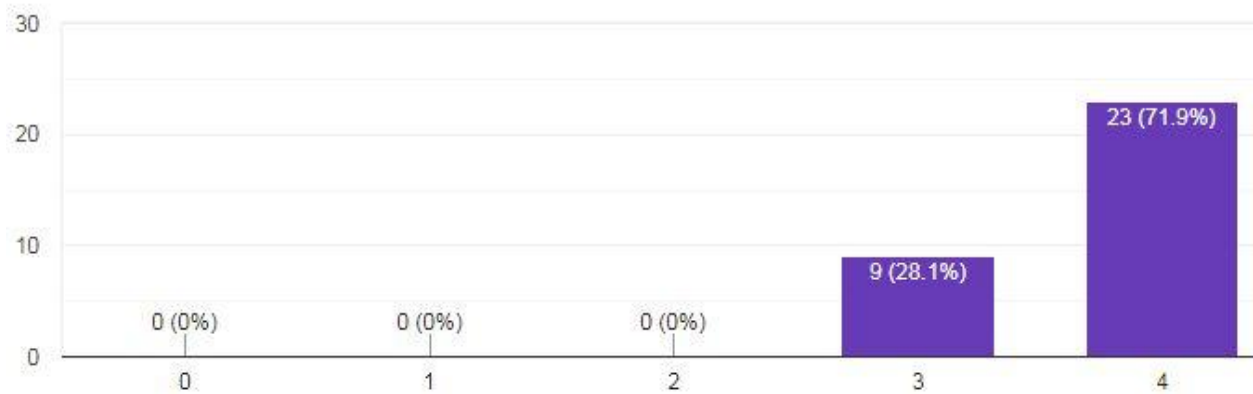


The class format was helpful in asking questions and understanding the contents (32 responses)

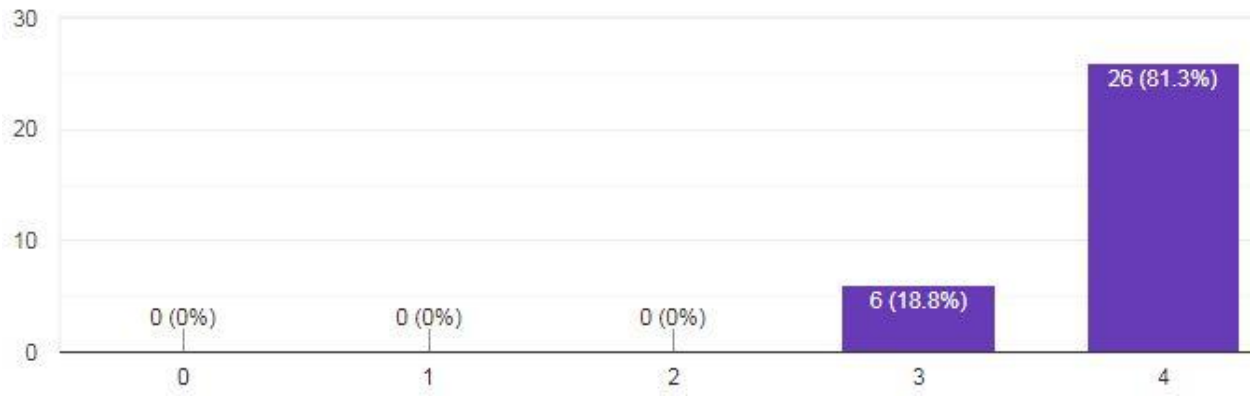


Learning From the Course

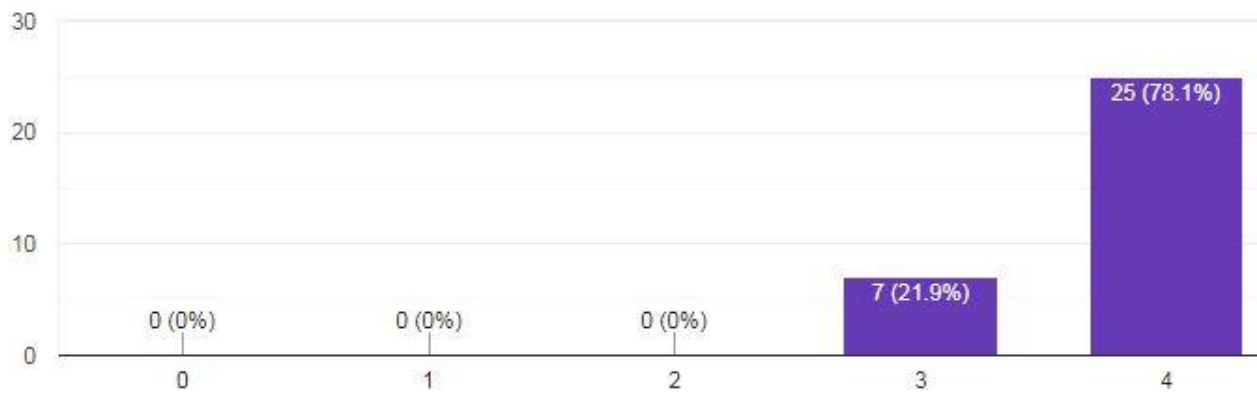
The readings and exercises were very useful in learning about criminal justice issues (32 responses)



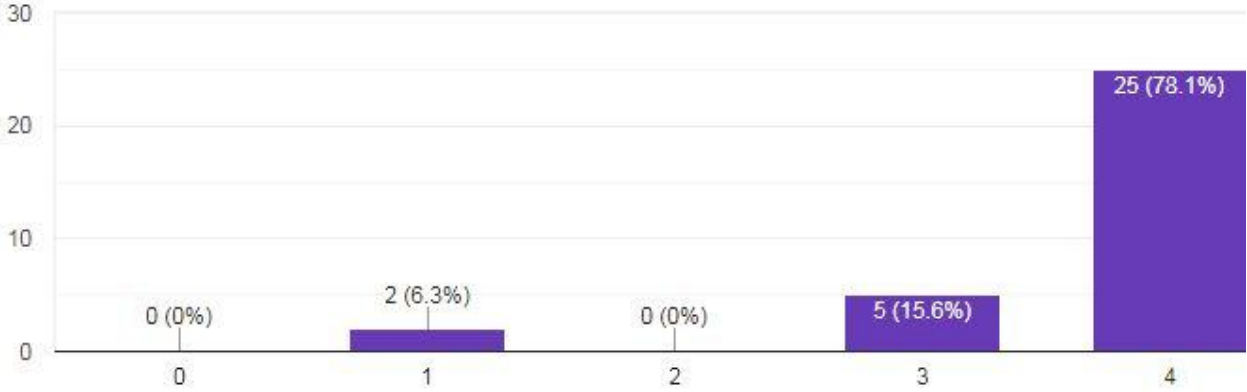
The readings helped introduce new ideas about policing and related issues (32 responses)



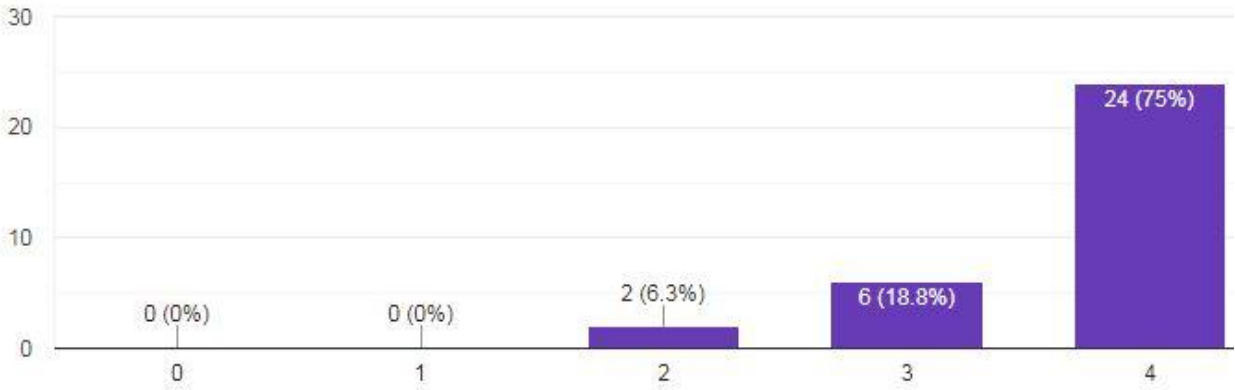
I appreciate efforts made by the instructors to think differently and broadly about Police/ CJUS/Data Issues (32 responses)



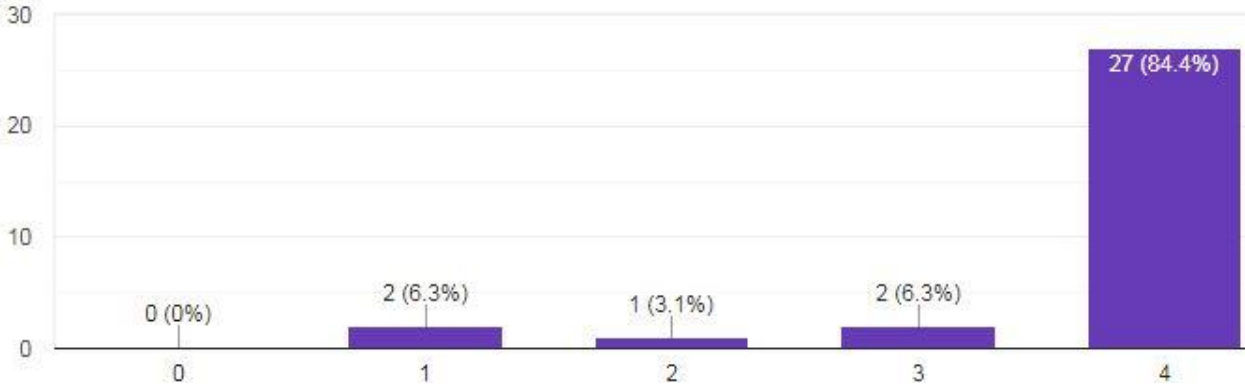
The feedback upon assignments and exercises was useful in understanding the contents of readings (32 responses)



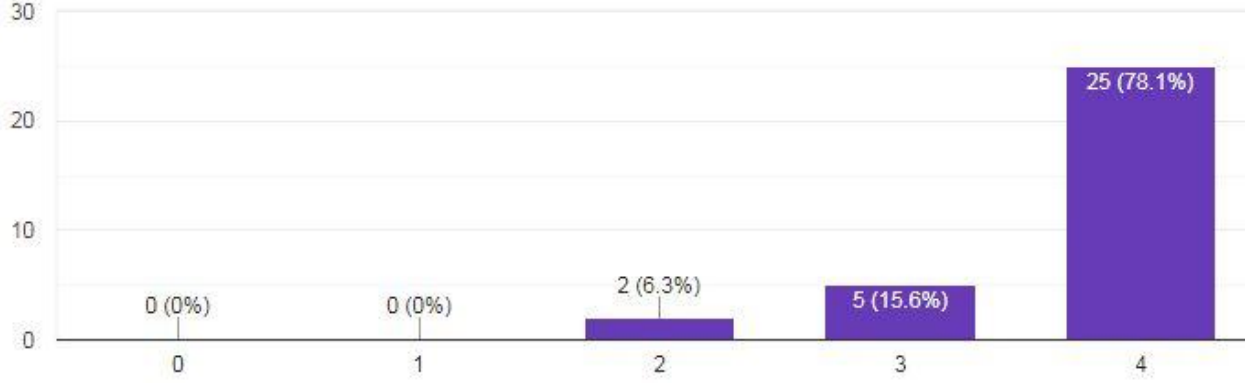
Discussions during class meetings helped in better understanding of policing issues (32 responses)



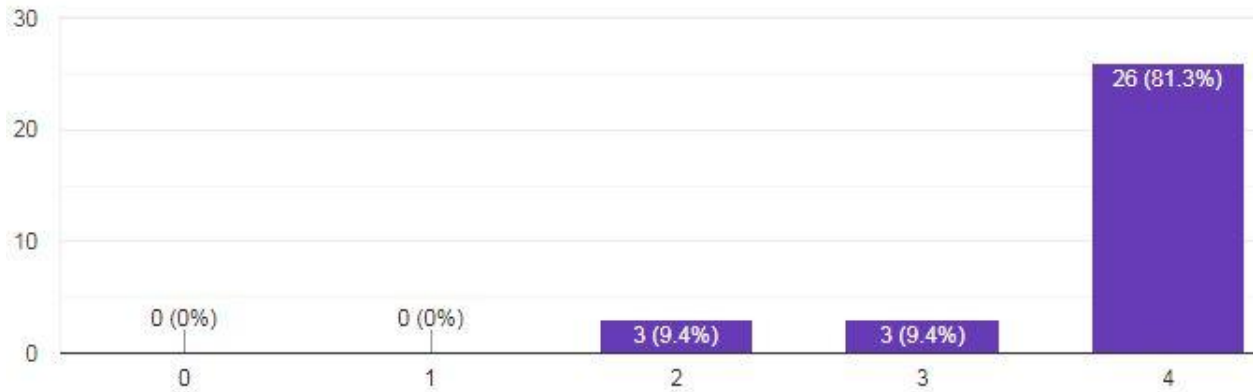
The guest lectures were very useful in learning about new topics (32 responses)



The instructors motivated me to do my best in the course (32 responses)

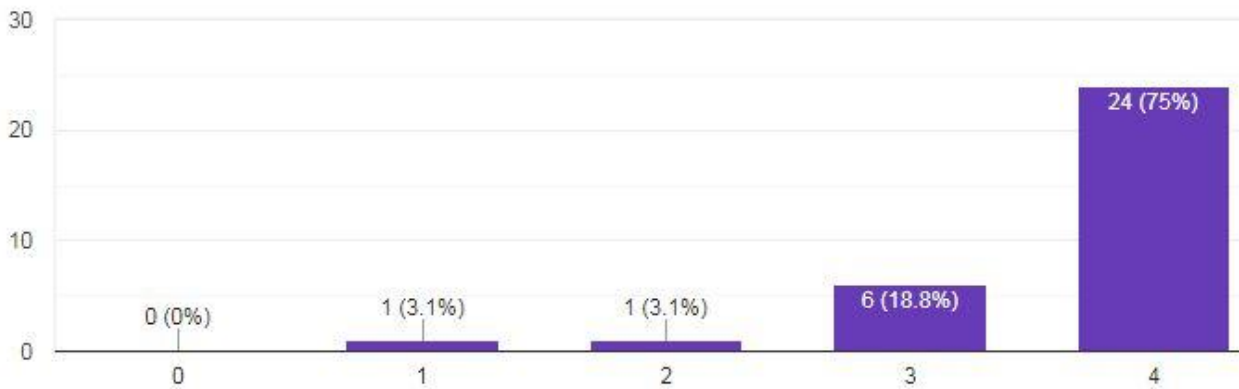


The project was helpful in applying course learning to my work (32 responses)

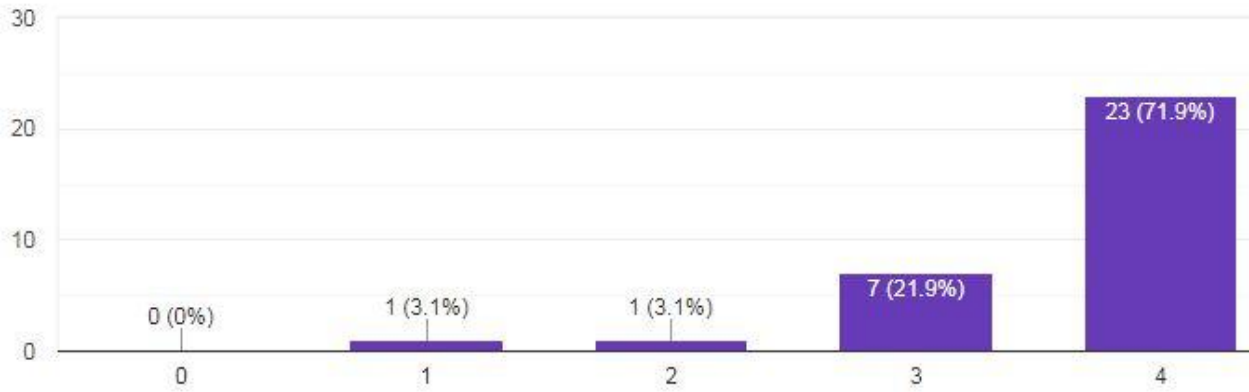


Course Outcome

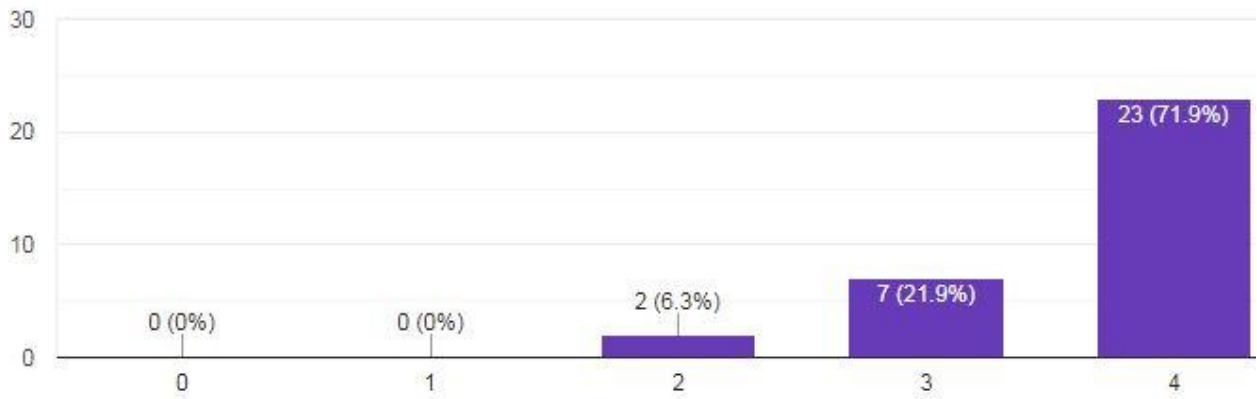
I learned a lot in this course (32 responses)



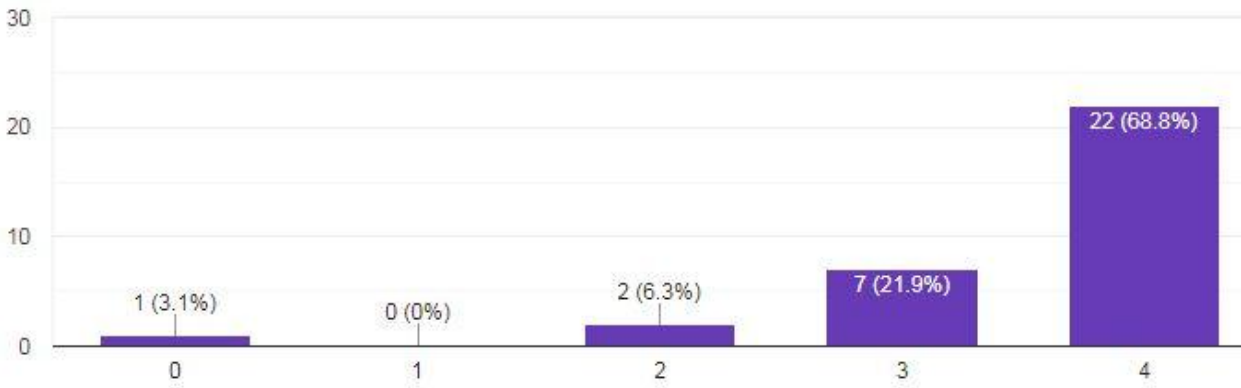
I developed the ability to apply data analytical techniques in criminal justice problems (32 responses)



I believe the course has helped me in being creative about my work-related functions
(32 responses)



Informal class sessions helped me to develop good communication skills
(32 responses)



About the various Modules

Module 1



Module 2



Module 3



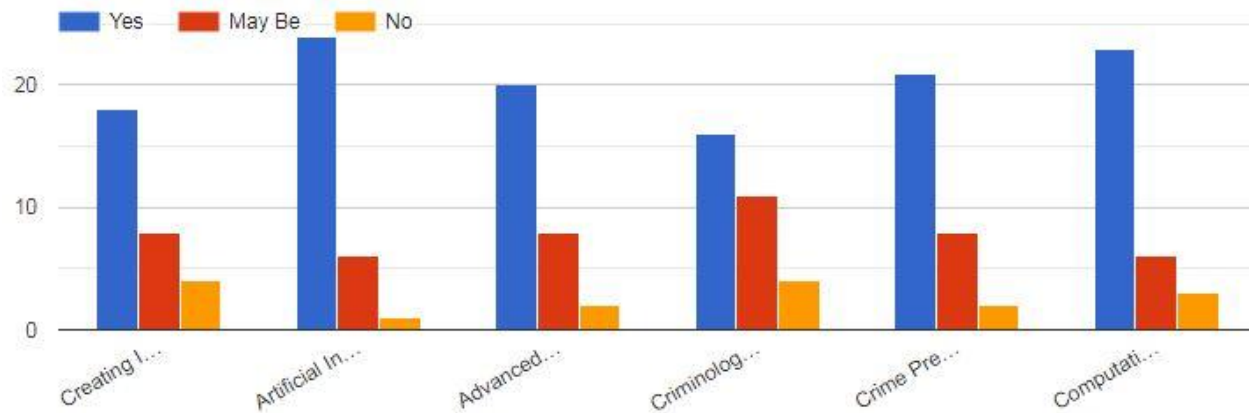
Module 4



Module 5



Would you be interested in taking the following 4-week [8 lectures] course modules that will require some programming/mathematics/qualitative methods?



Part - B

Open-Ended Questions

Q1. What did you like most about the course? Give reasons if possible. (29 responses)

- Course planning, course delivery and active learning
- The course content was so relevant and there is such a need for such knowledge. It was a hunger that was taken care of.
- It was not theoretical. All inputs were practical and the discussions helped integrate the learnings.
- There are people outside the police who have enriched the course and their participation also means they understand the concerns of the police.
- The fact that Shri Arvind steers us is great as here is one person who knows things as on ground and is not talking of a world we dont know of.
- It has given us ready resources to start of with.
- Our chief instructor is as passionate to have us learn as we are to imbibe new learning.
- It is very well designed.
- The fact that we learnt of practices in other states through course participants.
- Course is very professionally designed.I like every aspect of this course. It helps me to develop my professional skill.
- Prof Arvind Sir lectures on Criminology and Policing
- Teaching methodology and applications in policing and Justice delivery system

- Interaction - topics covered
- The practical approach to problem solving was the best thing. Entire course was to discuss a problem, understand what research says, practical real life solutions are discussed and student is asked to think on similar lines to solve a criminal justice problem. The distinguished professors experience was able to solve my queries with real examples. Nothing was theoretical.
- Another most important aspect of the professors was that they really cared about the learning of the students. The course project is an example of this, where the professors are taking the lead in making sure the successful implementation of the project.
- ज्ञानशक्तिसमारूढः तत्त्वमालाविभूषितः ।
- भुक्तिमुक्तिप्रदाता च तस्मै श्रीगुरवे नमः ॥
- That i could complete a course even while i am working.
- To listen first hand experiences from experts working on field through guest lectures.
- module 5 was a new subject for me
- Helped in learning new skills related to Data Science.
- The course has rekindled my interest in learning topics of interest to me - AL & ML in policing, data visualization. its like tailor made for my passion. Active learning methodology is quite a click. Prof Aravind is too nice to handle such a varied set of students and proud to be associated with a genius. Prof Lodha is a gem of a teacher and i like his concern for detail. the resources, the Professors, interaction with participants are beyond expectations.
- The content was appropriate, the methodology was easy to follow add assignments made me to think.
- The guest sessions at 9pm and Arvind Sir's guidance.
- The way the whole course was structured was brilliant
- How data could be more beneficial in crime analysis and policy making. It added new skill set which would be help ful in my professional career.
- Informal interaction and flexible timetable
- The course was well designed and executed. Importantly as course was offered online we could attend it while performing regular duties. The experience sharing by participant from various fields has made it multidimensional and showed a path towards interdisciplinary co-operation.
- Course contents, Active learning part, guest lectures, team member interactions
- The guest sessions !! IT was really amazing to understand the experiences and knowledge from the people who have actually involved in those cases!!! Mind blowing, thought provoking !! Giving new direction !!!
- this course is very unique . First time in India. I have been working as a constable in odisha police since last 18 years and i have studied Ma in Criminology and Police Administration. Thanks to IITK and salute to Arvind sir and the whole team who gave me an golden opportunity . i learned alot from this course. Interacted with top cops and domain experts . all modules are thoroughly prepared, explained and i think this is the best learning of my life.
- I liked a lot about data visualization part. It changed my perception of data presentation and application to my present work.

- Duration and Contents
- Informal interactions, Formal lectures of Module 1-5 and Assignments
- Interactive sessions
- Data Analysis Module was very enriching. It changes the way i looked at the mountain of data.
- All the topics were very useful
- The regular 9PM meetings , guest lectures, detailed discussions
- End to end coverage

2. What did you like least about the course? Give reasons if possible

(29 responses)

- Nothing. But in the ML module, the basics have been elaborated upon.
- The time required was not as per the initial announcement, due to COVID-19 i was able to give attention to the course and complete my assignments. In normal times this course needs to give additional time, since most of the students are also working in organisations.
- We had to put in lot of effort including taking help from external experts to understand and complete Machine Learning assignments. The module was more tilted towards mathematical and programmatical concepts, which are of less use for domain experts in criminal justice.
- The module can be modified to include more readings / practical applications of machine learning in criminal justice and related areas. There can be less emphasis on programming.
- Duration of classes was bit long. Maximum one hour should be given for one class.
- None. But one would like to learn Tableau and D3
- I could not attend all the guest lectures due to COVID duty.
- Actually there were no shortcomings in the course however, due to my lack of expertise in Machine Learning was a limiting factor. I would suggest that some more classes could be given to this topic.
- Nothing to mention here.
- Nothing, the course is well organised.
- ALL MODULES ARE WELL DESIGNED. ALL ARE EQUALLY IMPORTANT IN MODERN DAY POLICING WHEN WE ARE ENGAGED IN NORMAL TRAFFIC DUTY TO COUNTER TERRORISM AND CYBER CRIME . HOPE TO ATTEND SUCH IN FUTURE AS WELL.
- To adjust with timings of Zoom classes was a challenge
- complexity of the machine learning part of the course, require more simplification
- Machine Learning module should be better designed and implemented to make candidates comfortable and better understand concepts in detail.

- The way module 2 was handled. Could not get clarity on anything. Concepts were not clear, execution was not clear.. What was expected was not clear. With due respect to the knowledge of the faculty, overall not gained anything out of it.
- More focus could have been on the hands on ML.
- Module 2 would have been taught in a better way, no link could be established between notebooks and algorithm covered and reason behind it.
- Nothing specific.
- network analysis was difficult to follow
- ML lectures could have been simplified and explained in lay mans terms
- Machine learning is very use full subject, but need to add some practical examples related day to day police operations
- We could have learnt little more in Machine learning .
- Machine learning (Second module). It is too complex to understand the concepts. It might have been presented to the participants in a different way with direct application to real world situations. It is difficult to understand for the one without technical background.

Q3. What other topics would you like to be included in such a course? (27 responses)

- A flavor of Forensic Accounting is important which was missing in the course, almost all crime requires management of proceeds of crime. All such money management is done through legal financial channels. If such aspects are also linked to the criminal justice, i am sure problem solving would be faster.
- Police officers have to interact a lot with Judiciary and many investigations fail due to improper application of legal process. It is proposed to include Court System and Criminal Law in the course. Considering the interest of the participants and recent trend, separate module on Cyber Crime can also be included.
- More time to be allocated for Machine Learning Module
- GIS
- Traffic Management, Crowd Management, disaster managements
- More exposure to statistical tools & techniques, predictive model building and interactive visualizations
- I think some classes on GIS data could add more value to the course
- Crime prevention techniques
- Good practices of community policing
- Study of police practices around the world
- Skills on tools like R, Tableau for Data Visualisation
- More on Terrorists networks/Predictive analytics
- Artificial Intelligence assistance in Courts

- geo spatial analysis on maps in relation to crime. brain storming sessions - each student brings a problem and all participants work on solving the case/ provide suggestions
- More of data analytics
- I think the course is well designed
- Betterment of module 2. Start from basics and reach to some good understanding. Content analysis module can be reduced or even removed in place of extending module 2.
- Machine Learning 101
- Time bound Live problem assessment and solution
- Excel hands on, statistical concepts for data analysis,data visualization tool
- Topics related to cyber crime, data mining and predictive mining.
- For a maiden course i felt all relevant topics were covered
- Geo Spacial knowledge , Statistical analysis is more relevant to tackle present day policing
- I think the content and topics are good for the period of the course.
- Social media data analysis. Now a days, lot of data is available in social media. Analysis of the data to get actionable intelligence and decision making using open source tools.

Q4. What did you like least about the course? Give reasons if possible (29 responses)

- We had to put in lot of effort including taking help from external experts to understand and complete Machine Learning assignments. The module was more tilted towards mathematical and programmatical concepts, which are of less use for domain experts in criminal justice.
- The module can be modified to include more readings / practical applications of machine learning in criminal justice and related areas. There can be less emphasis on programming.
- None. But one would like to learn Tableau and D3
- Nothing to mention here.
- The time required was not as per the initial announcement, due to COVID-19 i was able to give attention to the course and complete my assignments. In normal times this course needs to give additional time, since most of the students are also working in organisations.
- Module 2 would have been taught in a better way, no link could be established between notebooks and algorithm covered and reason behind it.
- network analysis was difficult to follow
- Nothing, the course is well organised.
- Nothing. But in the ML module, the basics have been elaborated upon.
- We could have learnt little more in Machine learning .

- Machine Learning module should be better designed and implemented to make candidates comfortable and better understand concepts in detail.
- I could not attend all the guest lectures due to COVID duty.
- Duration of classes was bit long. Maximum one hour should be given for one class.
- Actually there were no shortcomings in the course however, due to my lack of expertise in Machine Learning was a limiting factor. I would suggest that some more classes could be given to this topic.
- ML lectures could have been simplified and explained in lay mans terms
- The way module 2 was handled. Could not get clarity on anything. Concepts were not clear, execution was not clear.. What was expected was not clear. With due respect to the knowledge of the faculty, overall not gained anything out of it.
- ALL MODULES ARE WELL DESIGNED. ALL ARE EQUALLY IMPORTANT IN MODERN DAY POLICING WHEN WE ARE ENGAGED IN NORMAL TRAFFIC DUTY TO COUNTER TERRORSIM AND CYBER CRIME . HOPE TO ATTEND SUCH IN FUTURE AS WELL.
- Machine learning (Second module). It is too complex to understand the concepts. It might have been presented to the participants in a different way with direct application to real world situations. It is difficult to understand for the one without technical background.
- To adjust with timings of Zoom classes was a challenge
- More focus could have been on the hands on ML.
- Machine learning is very use full subject, but need to add some practical examples related day to day police operations
- complexity of the machine learning part of the course, require more simplification
- None

Q4. What other topics would you like to be included in such a course? (27 responses)

- A flavor of Forensic Accounting is important which was missing in the course, almost all crime requires management of proceeds of crime. All such money management is done through legal financial channels. If such aspects are also linked to the criminal justice, i am sure problem solving would be faster.
- Police officers have to interact a lot with Judiciary and many investigations fail due to improper application of legal process. It is proposed to include Court System and Criminal Law in the course. Considering the interest of the participants and recent trend, separate module on Cyber Crime can also be included.
- More time to be allocated for Machine Learning Module

- GIS
- Traffic Management, Crowd Management, disaster managements
- More exposure to statistical tools & techniques, predictive model building and interactive visualizations
- I think some classes on GIS data could add more value to the course
- Crime prevention techniques
- Good practices of community policing
- Study of police practices around the world
- Skills on tools like R, Tableau for Data Visualisation
- More on Terrorists networks/Predictive analytics
- Artificial Intelligence assistance in Courts
- geo spatial analysis on maps in relation to crime. brain storming sessions - each student brings a problem and all participants work on solving the case/ provide suggestions
- More of data analytics
- I think the course is well designed
- Betterment of module 2. Start from basics and reach to some good understanding. Content analysis module can be reduced or even removed in place of extending module 2.
- Machine Learning 101
- Time bound Live problem assessment and solution
- Excel hands on, statistical concepts for data analysis,data visualization tool
- Topics related to cyber crime, data mining and predictive mining.
- For a maiden course i felt all relevant topics were covered
- Geo Spacial knowledge , Statistical analysis is more relevant to tackle present day policing
- I think the content and topics are good for the period of the course.
- Social media data analysis. Now a days, lot of data is available in social media. Analysis of the data to get actionable intelligence and decision making using open source tools.

Q5. What guest lecture topics you would like to include in such a course? (28 responses)

- investigation of financial crimes

- Guest Lectures were very relevant and supplemented most of the aspects of the course through their knowledge and experience. Judiciary experts can also be invited to cover the gap between police action and judiciary expectations
- Anti Corruption cases
- May be a criminal defense lawyer talking of mistakes he/she finds in the investigation police does and practical suggestions.
- More Guest lectures from successful experiences related to Traffic Management, Crowd Management, disaster managements etc.
- More lectures on pertinent research work
- All the guest lectures were very good and covered most of the topics. However, a judicial officer could also be added to the list.
- Economic offences,
- investigation techniques of property offences.
- Interrogation techniques
- Community policing
- Criminological perspectives through the eyes of other disciplines.
- Contemporary issues in Policing, New age Policing with technology
- Application of techniques to gender sensitive policing
- Analysis of Terrorists activities based on SNA/Crime prediction using Data mining/Using ML Algorithms to analyse Crime Data
- Domain experts of AI & ML in Criminal Justice System (Cyber Crime Investigation & Judicial System)
- innovative and different techniques for solving crime.
- more on data analytics
- Sh. Venkateshwar Rao , Samagra Vedika - Telangana's Integrated Platform
- Cyber investigations case studies. Forensics case studies.
- Experiences from abroad.
- Terrorism investigation - Digital footprinting.
- Fraud detection methodologies used currently and future possibilities
- Data mining, Analytics on unstructured data.
- Was quite comprehensive
- Same as what we had during the maiden course, not much to add
- all the topics
- Couldn't attend guest lectures, so can not tell.
- Corporate frauds and human trafficking. They are the serious crimes now.

- 100% I will participate in another such course.
- Certainly, on Data Science
- I AM VERY ETHUSIASTIC AND WILLING TO LEARN NEW THINGS. I LIKE TO LEARN ALL SUBJECT DOMAINS OF POLICING (CRIMINOLOGY, FORENSIC, CRIME SCENE, CYBER FORENSICS, FINGERPRINTING, VICTIMOLOGY, HUMAN TRAFFICKING, ANTI TERRORISM, PUBLIC HEALTH ETC).
- I will be blessed again to be part of IITK family
- highest possible chances
- Most Likely
- Very much likely.
- Highly likely
- 90%
- Surely, I will opt keeping personal and professional development, in view.
- likely
- Always ready
- very good chance
- very much interested
- Would like to do similar course.
- May be next year

Q8. How likely are you to utilize these techniques learned in this module 5 years from now? (28 responses)

- through constant learning, will definitely apply the techniques specially survey, data vis and network analysis. need a lot insight into ML though i would love to explore the use cases in my sphere of work.
- I am already utilizing the techniques learned in my work place. I have started building solutions to assist the government. Already released a news article. Already working on another topic of court judgement.
- The techniques are very relevant in changing times with crime becoming sophisticated and high value. I look forward to utilise most of the techniques learned in the course in my job in next 5 years.
- 100%
- I am already trying to utilize them with CCTNS data and other Police Station data.
- Already started using as of now. As many advancements are expected in the field of ML, SNA & Visualization in 5 years span, hence can't say as to future.

- I have already started using some of them. Would like to apply ML techniques after developing some more expertise in it.
- Now I m using all these techniques in my day to day working. I will also continue it as these techniques are very much helpful to me to understand police related issues .
- Very likely. As a matter of fact, I am already using it now in my field posting.
- Will try to apply the data visualisation techniques in my field of Digital Forensics and try to get quality reports.
- SIR, I HAVE MA IN PUBLIC ADMINISTRATION, MA IN CRIMINOLOGY AND POLICE ADMINISTRATION, PG DIPLOMA IN HUMAN RIGHTS, PG DIPLOMA IN CYBER SECURITY, PG DIPLOMA IN CRIMINOLOGY AND FORENSIC SCIENCE. CURRENTLY PURSUING MSC CYBER FORENSICS AND INFORMATION SECURITY IN DDCE MODE. THIS COURSE IS HIGH TIME FOR ALL EDUCATIONISTS , RESEARCHERS , PROFESSIONALS AND CRIMINAL JUSTICE SYSTEME STAKEHOLDERS. THIS COURSE WILL HELP ME ALOT IN MY FUTURE. I HAVE APPLIED FOR MPHIL / PHD IN VARIOUS UNIVERSITIES . THIS CERTIFICATION WILL DEFINITELY HELP ME IN MY RESEARCH AND PROFESSION. I AM ALSO WILLING TO DO MY RESEARCH IN INDIAN INSTITUTE OF TECHNOLOGY, KANPUR . I WILL BE GLAD , IF I WILL GET SUCH OPPORTUNITY. I HAVE NEARLY 18 YEARS OF PROFESSIONAL EXPERIENCE IN POLICING. CURRENTLY WORKING IN DISTRICT CYBER CELL, GAJAPATI, ODISHA.
- I've been using and continue to use the techniques
- It will really help in my Cyber Crime Practise
- goes without any doubt
- High Probability as I will keep on refreshing and upgrading knowledge.
- On professional level, that depends on the opportunities that come in. At personal level, will be using the knowledge gained.
- Highly likely within available reosurces
- Implement Data and visualization analysis in district crime review, learn ML and AI for technology oriented policing.
- 60%
- In policy making and for effective, efficient use of resources.
- I've already started off
- Will try and implement it localy at Navi Mumbai police Commissionerate to begin with and keep on updating my self with Professors and automate the process with security at police commissionerate and include local citizens as part of this initiative
- Every where , where ever necessary, I will use all the techniques
- It actually changed the way i look at things. quite useful in professional life.

- I will definitely use the techniques learnt from the course in my day to day work.

Q9. Any other suggestions/ comments? (26 responses)

- Pls continue the engagement and guide us in constant learning.
- a basic suggestion, when on the site, it logs out in just few minutes, pls increase the time and reduce the clicks required for logging again.
- Would be nice if some advanced course in an area of interest is referred, like i may opt data visualization, some may be interested in network analysis...
- also request to guide and assist in identifying resource persons for my project - ML for data wrangling and one for data vis.
- thank you and best wishes.
- This process of learning should not stop. This group can really make a difference to the criminal justice in the country, we should utilise the power of the group to make solutions.
- It was an excellent conceived and perfectly delivered course. Due to Covid pandemic, many of the officers could not join active learning course, but for rest of the participants it was a great learning and bonding exercise.
- The course time frame mentions that participants need to spend 5-7 hours per week to complete this course. This time commitment is not adequate. The actual time required is much higher.
- The full course material and assignment questions can be made available on the dashboard at the beginning of the course itself.
- One should keep meeting so that sharing of ideas continues and it becomes an ongoing exercise
- Looking forward to next course and outcome of project work
- Absolutely impressive course. I would suggest that advance course could be held for the participants of this course after some time and a mechanism should be developed so that all the participants and the faculty could remain connected on some platform.
- Plz inform about next course .
- THANKS TO IITK AND ALL BOARD MEMBERS, FACULTIES AND TEAM MEMBERS OF THIS COURSE. SPECIAL THANKS AND SALUTE TO (PROF.) SHRI ARVIND VERMA, IPS SIR FOR PROVIDING ME SUCH A BIG PLATFORM TO LEARN AND INTERACT WITH ALL TOP COPS, INTELLECTUALS AND SUBJECT DOMAIN EXPERTS. THE COURSE "CRIMINAL JUSTICE DATA ANALYSIS" IS OF GLOBAL STANDARD.
- WITH REGARDS,
- PRASANTA KUMAR PARICHHA

- Overall a great effort by the Team.
- Time is the most valuable investment anyone can do and I am proud of that I invested mine in such an informative, intellectual & thoughtful sessions throughout this valuable course. Eminent learned faculties, guest lectures & content made this journey so awesome!!.
- This course is a milestone in my journey of learning and getting to know about Policing, AI, ML, Network Analysis, Data Visualisation by subject experts.
- Bundle of thanks to Prof Arvind Sir, Prof Nisheeth Sir, Prof Lodha Sir, IIT Kanpur team & batchmates.
- Looking forward to join upcoming courses for professional enrichment.
- Gratitude!!
- very nice course, with great efforts by Prof Verma & Lodha. More face to face interaction with other professors would be good.
- as topic suggest- more data analytics can be included if possible
- Excellent Course. Thanks a lot.
- This course does take much much more time of the students. (compared to the declared 5-7 hours per week). Luckily because of lockdown, most of us could spend more time. Or else, it is difficult to complete in that time frame. The reading material itself takes a very long time to go through.
- Machine learning module need to be rebuild, with more case studies, criminal data to be made available to try on some visualizations
- Expand the scope of this course as "Data Analysis course" - targeting LEA, Industry (Cyber Security, Medical Professionals, Fraud investigators etc.) with optional papers.
- Would love to see more courses and engagements, going forward
- Thank you Prof Arvind Verma for such a valuable and well conducted course, also to Prof Shankar, Prof Nisheeth and Prof Lodha for the wonderful interactions and learnings !!, hope to be in touch with you all from here on. Only suggestion the students have to spend much more than 6 hours per week (as mentioned in your brochure), do change that so the expectations are set, We were lucky that due to lock down we had some more time, in normal times, the assignment and quiz, needs lots of dedicated time to read and understand When do we get our final grading and certifications (if we are eligible for it) ?
- 1. Need more practical exercises on each subject that to on real time data and their individual domain. Then only it is useful to relate their day to day operational purpose.
- 2. Active learning Concept is really useful and we learnt lot, please continue
- 3. For Lodha Sir, All the examples were very useful only request is please add some examples related to present situation.
- 4. @Arvind Sir please add more technologies to improve field policing

- Hope I will be collaborating with you in future also
 - First of all, many thanks to Arvind sir, for starting this course. I learnt a lot from this course, especially from experts/senior officer's discussion. For a field officer like me, it is a very useful course. The course duration may be increased by one more month. Because, by attending to my regular office work, I find it very difficult to complete the assignments within the given time frame
-