Riverside City College

Computer Information Systems and Technology (RIST)

Advisory Committee

Minutes – October 2021

## Advisory Committee Membership

Ashley Cacho, Analyst, Credit Risk Mgmt, T-Mobile

Daniel Rowe, Professor of Applied Statistics, Marquette University

John Benoit, USDA Forest Service, Pacific Southwest Research and Riverside Community College District

## Minutes

Over the past six months the advisory group met to review and discuss the content of both the data science-related certificate and degree program. This included phone conferences on October 12, 2021 and October 26, 2021 This program was developed out of an NSF grant with University of California, Riverside. The work culminated with the group agreeing to document their feedback and vote regarding support of the programs .

## Summary of Recommendations:

All members voted to support the Data Analytics Certificate Program and the Associate of Science Degree in Data Science programs.

### Data Analytics Program Feedback

* A. Cacho: The coursework would provide the student a great foundation for Data Analytics. I think one skill that is highly valued in positions targeted for this certificate is visualization (Tableau, PowerBI, etc). This may not be a 3 unit class but a 1, or perhaps as a section in another class (maybe stats?).
* D. Rowe: This certificate program fills a tremendous need in a growing field. The data analytics certificate provides a path for immediate entry level employment in data analytics while at the same time preparing students to continue study for the Data Science Associates degree. There is a tremendous need for workers that can assist in deriving insights from data
* Will MAT-70B, Statistics for STEM, be 3 or 4 units? The Certificate program lists it as 4, but the Assoc. Degree program lists it as 3. If it is 3, the total Required Courses units would need to change to 29. \* The course curriculum seems very appropriate for the Data Science Field. I would expect coordination will be needed between CIS/CSC & MAT disciplines to ensure courses are offered in a sequence that allows completion in 1.5 - 2 years. \* Maybe some topics coming from what is/was known as Operations Research -- Linear Programming, transportation optimization, simulation, etc. -- could be included in the curriculum? These topics may however take too much time for a 1.5 - 2 year program, although many of them are real-world applications (e.g. in business, etc.). \* The difference in total coursework between the two programs (certificate & assoc. degree) seems small -- only a few courses in the 4th semester. Would there be much demand for the certificate, if students can take 2 more classes (albeit more difficult) and get the associate's degree? They could perhaps incidentally earn the certificate while taking courses in pursuit of a different AD (maybe math or computer science), but I am not sure how many would take the approximately 1/2-math, 1/2CSC/CIS course blend to qualify for the certificate. There may be a lot of demand for it, if offered -- I'm just not sure how much

### Associate of Science Degree in Data Science Program Feedback

* A. Cacho: The list of coursework Is a great starting point for a person wanting to become a data scientist or any analytics career. The data scientist title is not on the list of careers in Item 1. I believe that a final data science project would be very helpful for the end of this degree. There are several open-source data sets for them to practice their skills and continue to sharpen, long after the program is complete. Going through the practice, end-to-end would be extremely valuable, starting from what business problem is being solved to how the business can use the model.
* D. Rowe: The associate degree in Data Science continues along the path begun by the certificate program in Data Analytics. It provides students more advanced study in mathematics that leads to a deeper understanding of data methods. These additional mathematics courses lay the foundation for entry into the labor market at an intermediate level while simultaneously preparing students for more advanced study via transfer to a four year university such as a CSU or UC. The need for workers that can make sense of data has exploded and we are experiencing a new information data age.
* J. Benoit: \* Item 2 - Catalog Description doesn't really list a 'description' (comparing it to the Certificate doc). Would the description be the same as in Item 1? \* Item 2 has "Program Learning Outcomes". Should those go in Item 1? (Compare to the Certificate doc). \* Will MAT-70B, Statistics for STEM, be 3 or 4 units? The Certificate program lists it as 4, but the Assoc. Degree program lists it as 3. If it is 4, the total Required Courses units would need to change to 38. \* The course curriculum seems very appropriate for the Data Science Field. I would expect coordination will be needed between CIS/CSC & MAT disciplines to ensure courses are offered in a sequence that allows completion in 2 years. \* Maybe some topics coming from what is/was known as Operations Research -- Linear Programming, transportation optimization, simulation, etc. -- could be included in the curriculum? These topics may however take too much time for a 1.5 - 2 year program, although many of them are real-world applications (e.g. in business, etc.). \* The difference in total coursework between the two programs (certificate & assoc. degree) seems small -- only a few courses in the 4th semester. Would there be much demand for the certificate, if students can take 2 more classes (albeit more difficult) and get the associate's degree? They could perhaps \*incidentally\* earn the certificate while taking courses in pursuit of a different AD (maybe math or computer science), but I am not sure how many would take the approximately 1/2-math, 1/2-CSC/CIS course blend to qualify for the certificate. There may be a lot of demand for it, if offered -- I'm just not sure how much.

## Results/Vote of Support

The group unanimously voted to support both the Data Analytics Program and the Associate of Science Degree in Data Science

Appendix – Documentation – Vote of Support

Do you support the development of RCC's AS Degree in Data Science program?

 Answered: 3 Skipped: 0

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Yes

No

 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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| --- | --- | --- | --- |
| **ANSWER CHOICES** | **RESPONSES** |  |  |
| Yes | 100.00% |  | 3 |
| No | 0.00% |  | 0 |
| TOTAL |  |  | 3 |

Do you support the development of RCC's Data Analytics Certificate program?

 Answered: 3 Skipped: 0

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Yes

No

 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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| --- | --- | --- | --- |
| **ANSWER CHOICES** | **RESPONSES** |  |  |
| Yes | 100.00% |  | 3 |
| No | 0.00% |  | 0 |
| TOTAL |  |  | 3 |