APPLIED ECONOMICS MA AND GRADUATE CERTIFICATE IN DATA SCIENCE
(as of 11/14/19)
This note sets out a proposed curriculum for students who wish to pursue a graduate certificate in Data Science while earning the MA in Applied Economics. The Applied Economics MA requires completing 30 credits in 6 core courses (18 credits) and electives (with a total of 12 credits). At least two electives must be in Economics.

The core applied economics courses are:

- ECON 6300 Mathematical Methods for Economics
- ECON 6301 Applied Microeconomic Theory
- ECON 6305 Applied Macroeconomic Theory
- ECON 6374 Probability and Statistics for Economics
- ECON 6375 Applied Econometrics
- ECON 6376 Time Series Analysis

Students also complete 12 elective credits, including at least 6 credits in economics electives and up to 6 credits in approved elective courses.

The Data Science graduate certificate requires 12 credits, including 6 credits in required courses and 6 credits in elective courses. Students should take two courses from the following three courses:

- DATS 6101 Introduction to Data Science
- DATS 6102 Data Warehousing
- DATS 6103 Introduction to Data Mining.

Students take two additional DATS courses numbered 6000 or above.

Students pursuing the Applied Economics MA/Data Science graduate certificate may apply two data science courses to meet the non-economics elective requirements for the MA. Students wishing to pursue both degrees must submit a Dual Enrollment form that the directors of both the MA and the graduate certificate programs have signed. A suggested plan of study appears below:

<table>
<thead>
<tr>
<th>Program and Semester of Study</th>
<th>Course</th>
<th>Course</th>
<th>Course</th>
<th>Total credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Econ S1</td>
<td>Econ 6300</td>
<td>Econ 6305</td>
<td>Econ 6374</td>
<td>9</td>
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<tr>
<td>Applied Econ S2</td>
<td>Econ 6301</td>
<td>Econ 6375</td>
<td>Econ elective</td>
<td>9</td>
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<tr>
<td>Applied Econ S3</td>
<td>Econ 6376</td>
<td>Econ elective</td>
<td>DATS 6101*</td>
<td>9</td>
</tr>
<tr>
<td>Data Science S4</td>
<td>DATS 6102* or DATS 6103*</td>
<td>DATS elective</td>
<td>DATS elective</td>
<td>9</td>
</tr>
</tbody>
</table>

* Students choose two of these three courses

For details on the MA, see [http://bulletin.gwu.edu/arts-sciences/economics/ma-applied-economics/](http://bulletin.gwu.edu/arts-sciences/economics/ma-applied-economics/) and for details on the certificate, see [https://datasci.columbian.gwu.edu/academics-0](https://datasci.columbian.gwu.edu/academics-0)