For Students on Catalog: 2017-2019

**QUANTITATIVE ANALYSIS CONCENTRATION DECLARATION**

CALIFORNIA POLYTECHNIC STATE UNIVERSITY – ORFALEA COLLEGE OF BUSINESS

### REQUIRED Concentration Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECON 440 Advanced Econometrics</td>
<td>4</td>
</tr>
<tr>
<td>STAT 331 Statistical Computing with R</td>
<td>4</td>
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</tbody>
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### ELECTIVE Concentration Courses

**20 units**

Select 5 courses, 20 units, from the following:

**Analytics**
- BUS 393 Database Systems in Business         | 4     |
- BUS 421 Marketing Analytics and Business Intelligence | 4     |
- BUS 441 Computer Applications in Finance     | 4     |
- BUS 491 Decision Support Systems             | 4     |
- ECON 339 Econometrics                       | 4     |
- ECON 395 Programming for Economics and Analytics | 4     |
- or BUS 392 Business Application Development  | 4     |
- or CSC 101 Fundamentals of Computer Science  | 4     |

**Statistics and Decision Analysis**
- ECON 406 Applied Forecasting                 | 4     |
- ECON 409 Probability Models for Economic Decisions | 4     |
- IME 301 Operations Research I                | 4     |
- IME 305 Operations Research II               | 4     |
- STAT 323 Design and Analysis of Experiments I | 4     |
- STAT 324 Applied Regression Analysis         | 4     |
- STAT 330 Statistical Computing with SAS      | 4     |
- STAT 416 Statistical Analysis of Time Series | 4     |
- STAT 419 Applied Multivariate Statistics     | 4     |
- STAT 425 Probability Theory                  | 4     |
- STAT 426 Estimation and Sampling Theory      | 4     |
- STAT 427 Mathematical Statistics             | 4     |

**Mathematical Foundations**
- ECON 408 Mathematical Economics              | 4     |
- MATH 142 Calculus II                         | 4     |
- MATH 143 Calculus III                        | 4     |
- MATH 206 Linear Algebra I                    | 4     |
- MATH 241 Calculus IV                         | 4     |
- MATH 242 Differential Equations I            | 4     |
- MATH 244 Linear Analysis I                   | 4     |
- MATH 248 Methods of Proof in Mathematics     | 4     |
- MATH 304 Vector Analysis                     | 4     |
- MATH 306 Linear Algebra II                   | 4     |
- MATH 344 Linear Analysis II                  | 4     |
- MATH 406 Linear Algebra III                  | 4     |
- MATH 412 Introduction to Analysis I          | 4     |
- MATH 413 Introduction to Analysis II         | 4     |
- MATH 414 Introduction to Analysis III        | 4     |
- MATH 416 Differential Equations II           | 4     |
- MATH 418 Partial Differential Equations      | 4     |
- MATH 437 Game Theory                         | 4     |
- MATH 451 Numerical Analysis I                | 4     |
- MATH 452 Numerical Analysis II               | 4     |
- MATH 453 Numerical Optimization              | 4     |

**Total Units: 28**

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1 Consultation with an advisor is recommended prior to choosing approved electives. Courses in Analytics or in Statistics and Decision Analysis provide a focus in analytics. Courses in Statistics and Decision Analysis or in Mathematical Foundations are recommended for students pursuing post-baccalaureate studies.

2 Economics majors cannot count ECON 339 toward electives in the Quantitative concentration.

3 Economics majors cannot count ECON 395 or BUS 392 or CSC 101 toward electives in the Quantitative concentration.

Revised 06/13/17