COMMITTEE ON INSTRUCTION AND CURRICULUM

16-17 CIC 20
Monday, June 06, 2016

TO: The Academic Senate

FROM: Committee on Instruction and Curriculum (CIC)

SUBJECT: 16-17 CIC 20: Approval of B.S. Economics

PURPOSE: Approval of the Academic Senate

ACTION REQUESTED: That the Senate approve the request for B.S. Economics. Upon the President’s signature, effective with the semester Catalog, planned for Fall, 2018.

BACKGROUND INFORMATION:
The Senate process for approving transformed degree programs for the semester calendar is defined by 14-15 CIC 36. The Committee discussed the B.S. Economics program at its June 6 meeting, which was attended by representatives from the Department of Economics. It was approved by CIC unanimously with the acknowledgement that some non-substantive changes may occur in the Catalog copy. The proposal may be viewed within Curriculog; the summary is attached as a PDF document per ExCom’s request.

The program is currently a Bachelor’s of Arts and therefore requires Senate approval, as it is a change of degree type. While approving the program, itself, the Committee also approved the change of degree type, as it meets the requirements of a Bachelor’s of Science program.
Bachelor of Science in Economics

2. Semester Conversion Request for Approval of Revision of the Undergraduate Degree Program/Major

General Catalog Information

Select Shared Core unless otherwise instructed by APGS

Select SHARED CORE*  
- Program  
- Shared Core

Year: Fall 2018
Catalog: 2018-2019

Notes: If you want to move an existing degree program to online (i.e. 50% or more of the program can be completed online (a hybrid course counts as .50 online), elevate an option to a degree, or change the degree type, please e-mail Donna Wiley, Interim Associate Vice President, Academic Programs and Graduate Studies; and copy Sarah Aubert, Catalog and Curriculum Specialist, Academic Programs and Graduate Studies, for additional instructions as soon as possible.

Department:*  
Department of Economics

Full and exact title of Major including degree earned:*  
Bachelor of Science in Economics

Has your program received transformation funding?*  
- Yes  
- No

If the program received transformation funding, please summarize the transformative changes made:
Summary of Transformative Changes

1. Change the degree from a B.A. in Economics to a B.S. in Economics.
   • The bulk of the changes outlined below involve strengthening the mathematical and data components of the degree to better reflect a B.S. degree.
2. Create four new required classes:
   • Quantitative Methods for Economists (ECON 210): This class would build on and reinforce the calculus and statistics concepts introduced in MATH 180 and STAT 100 (both pre-requisites). The course will use examples from economics to illustrate concepts, and help support students as we attempt to strengthen the mathematical and statistical components of the degree. This class would be a pre- or co-requisite for Microeconomic Theory I (ECON 300) and a pre-requisite for Introduction to Econometrics (ECON 310).
   • Empirical Analysis (ECON 499): This class will follow from Introduction to Econometrics (now ECON 310) and would be based around 3-4 large assignments that require students to work with data and confront different empirical issues. This is the new capstone class so assignments will touch on micro and macroeconomic topics.
   • Programming for Data Analysts (ECON 211): This class would introduce students to programming, which is useful for econometric analysis. This class may be substituted with an introductory service class on computer programming from the Department of Computer Science that which the Department is current developing (CS 100), or CS 101. Either class would be a pre- or co-requisite for Empirical Analysis (ECON 499) class.
   • Game Theory (ECON 400).
3. Set the number of required electives to 6 classes.
4. Add pre-requisites to several upper division classes. Upper division classes with a 300-level pre-requisite will have a 400-level prefix.
   • Introduction to Labor Economics (ECON 433) will require ECON 300 (Microeconomic Theory I) or ECON 380
   • Introduction to Public Economics (ECON 460) will require ECON 300 (Microeconomic Theory I) or ECON 380
5. Revise the Program Level Outcomes (PLOs) to reflect the program’s greater emphasis on quantitative skills:

   Students graduating with a Bachelor of Science in Economics will be able to:

   - Apply mathematical and modeling techniques to solve microeconomic problems.
   - Apply mathematical and modeling techniques to solve macroeconomic problems.
   - Analyze research data using modern statistical software packages.
   - Construct coherent economic policy arguments, grounded in economic theory.

6. Eliminate the Social Science option. The B.S. in Economics is the only undergraduate program in economics outside of the B.S.B.A. in the
Program Description:

The BS in Economics trains students in the tools of economic analysis and exposes them to a great breadth of areas in which those tools can be used to tackle problems, including international trade and finance, labor markets, industry structure, firms’ business strategy and competition, public policy and management, the environment, health care, economic development and income inequality, corporate governance and entrepreneurship, money markets and Federal Reserve policy, and law. The program provides rigorous analytical training and quantitative and programming skills that equip students to correctly formulate (and solve) complex problems in the preceding areas and in the daily decision-making and financial planning of their everyday lives. Economics students learn techniques for critically analyzing and correctly evaluating key issues in public policy, and those skills can also be applied outside the public sector (e.g., to business).

Career Opportunities:

As an economics training is highly valued by employers, the program prepares students for a broad variety of careers including those in business, law, banking and insurance, government, consulting, journalism, teaching, research, and starting a business.

Program Learning Outcomes (PLOs):

Students graduating with a Bachelor of Science in Economics will be able to:

1. Apply mathematical and modeling techniques to solve microeconomic problems.

2. Apply mathematical and modeling techniques to solve macroeconomic problems.

3. Analyze research data using modern statistical software packages.

4. Construct coherent economic policy arguments, grounded in economic theory.

Please read before completing Major Requirements Section

Instructions:
Start with the View Curriculum Courses icon directly beneath the Major Requirements field. Select the Add Courses button to enter each individual course that will be used in your Major Program. (Optional: Include the Course Units in the Course Title (name) field for ease of review by campus committees).

Next select the View Curriculum Schema icon (to the left of the Curriculum Courses icon). Select Add Core to build the headers and requirements for your catalog page. i.e. add headers for Prerequisites, Core Requirements, Electives, Capstone. (If you have a concentration(s), add a core titled Concentrations and list only the total concentration units. You do not need to list each individual concentration.) Please remember to include total units in core headers.

Preview your catalog chapter by selecting the Preview Curriculum icon.

### Lower Division Core (21 units)

Students are required to take the following 7 courses (21 units). MATH 180 can be substituted with MATH 130. STAT 100 can be substituted with STAT 110. ECON 211 can be substituted with CS 100 or CS 101.

- MATH 115 College Algebra
- MATH 180 Mathematics for Business with Calculus
- STAT 100 Elements of Statistics and Probability
- ECON 200 Principles of Microeconomics
- ECON 205 Principles of Macroeconomics
- ECON 210 Quantitative Methods for Economists
- ECON 211 Programming for Data Analysts

### Upper Division Core (21 units)

Students are required to take the following 7 courses (21 units).

- ECON 300 Microeconomic Theory I
- ECON 301 Microeconomic Theory II
- ECON 305 Macroeconomic Theory
- ECON 306 Money, Banking, & Financial Intermediaries
- ECON 310 Introduction to Econometrics
- ECON 400 Game Theory
- ECON 499 Empirical Analysis

### Electives (18 units)
Choose 6 courses (18 units) from the following list.

ECON 320 History of Economic Thought
ECON 334 Economics of Information and Organizations
ECON 335 Introduction to Urban Economics
ECON 337 Sports Economics
ECON 350 International Economics
ECON 360 Environmental Economics
ECON 370 Health Economics and Public Policy
ECON 397 Issues in Economic Analysis
ECON 430 Introduction to Industrial Organization
ECON 431 Economics of Innovation and Intellectual Property
ECON 433 Introduction to Labor Economics
ECON 456 Introduction to Monetary Theory
ECON 460 Introduction to Public Economics
ECON 497 Special Topics in Economic Analysis

To revise an existing concentration (formerly option) or create a new concentration, select form 3a. Semester Conversion Request for Approval of New or Revised Undergraduate Concentration.

Total Units Required

<table>
<thead>
<tr>
<th>Quarter Based Program:</th>
<th>65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Based Program:</td>
<td>60</td>
</tr>
</tbody>
</table>

Total Units should not exceed 120 Semester Units unless previously approved by Chancellor's Office for exemption.

**B.A. Programs:** Major requirements are a minimum of 24 units with at least 12 upper division units.

**B.S. Programs:** Major requirements are a minimum of 36 units with at least 18 upper division units.

See Unit Calculator for assistance.
If the program has a similar transfer model curriculum (TMC), please e-mail Kyle Burch, Articulation Officer, Academic Programs and Graduate Studies, to verify that the revised program meets the TMC requirements prior to submitting the program revision request form.

Is the major approved as a "similar" degree under the STAR Act (SB 1440)?

- Yes  
- No  
- I'm not sure (Articulation Office will contact you)

If yes, explain how this modification will affect the "similar" degree agreement
Based on the CSUEB GE/GR Framework, SB 1440 students will need to take 9 units of GE and 45 units of major courses. The details are as follows:

**CSUEB GE Framework and Transfer Students’ Units at CSUEB**

<table>
<thead>
<tr>
<th>GE/GR Area</th>
<th>Semester Units at CSUEB for Transfer Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1-A3</td>
<td>0</td>
</tr>
<tr>
<td>B1-B4</td>
<td>0</td>
</tr>
<tr>
<td>B6</td>
<td>3</td>
</tr>
<tr>
<td>C1-C3</td>
<td>0</td>
</tr>
<tr>
<td>C4</td>
<td>3</td>
</tr>
<tr>
<td>D1-D3</td>
<td>0</td>
</tr>
<tr>
<td>D4</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>0 (roadmap for community colleges)</td>
</tr>
<tr>
<td>Code</td>
<td>0 (roadmap for community colleges)</td>
</tr>
<tr>
<td>Writing II</td>
<td>0 (roadmap for community colleges)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3*3 units = 9 units</strong></td>
</tr>
</tbody>
</table>

**CBE's BS Economics (Semester Version)**

<table>
<thead>
<tr>
<th>BS Economics Major Courses</th>
<th>Semester Units at CSUEB for Transfer Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 115</td>
<td>0 (roadmap for community colleges)</td>
</tr>
<tr>
<td>STAT 100/110</td>
<td>0 (roadmap for community colleges)</td>
</tr>
<tr>
<td>MATH 180</td>
<td>0 (roadmap for community colleges)</td>
</tr>
<tr>
<td>ECON 200</td>
<td>0</td>
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<td>ECON 205</td>
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<td>ECON 210</td>
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<td>ECON 211</td>
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<td>ECON 306</td>
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<tr>
<td>ECON 310</td>
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<tr>
<td>ECON 400</td>
<td>3</td>
</tr>
<tr>
<td>ECON 499</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27 + 18 = 45 units</strong></td>
</tr>
</tbody>
</table>

Were any concentrations

☐ Yes ☐ No
General Economics and Social Science options are discontinued.

If yes, please explain below. If no, please enter "N/A" or "not applicable."

Is this major approved as an online degree program?

Yes ☐ No ☐

If no, is there any pathway in the revised degree that is more than 50% online?

Yes ☐ No ☐

Resource implications of the proposed revision, if any:

Relationship of Revised Program to requirements for teaching credentials, accreditation, and/or licensing, if any:

Consultation with other affected departments and programs:
The following department(s) has (have) been consulted and raised no objections:

- CBE departments

The following department(s) has (have) been consulted and raised concerns:

Attachments

Please scroll to the top of this form and select the Files icon to attach the following documents to your proposal:

- Bachelor's Degree Roadmap
- Curriculum Map 1 - PLOs to Courses
- Curriculum Map 2 - PLOs to ILOs
- Five Year Assessment Plan

Did you attach your Curriculum Maps, Five Year Assessment Plan or other supporting documents to this proposal?*

- Yes
- No

Catalog Item Types

- Degree Type*: Bachelor of Science
- Program Type*: Bachelor
Attachments for Bachelor of Science in Economics

BS Degree Roadmap.pdf (uploaded by Ryan Lampe, 5/5/2016 9:29 pm)
Curriculum Map 1.pdf (uploaded by Ryan Lampe, 5/5/2016 9:29 pm)
Curriculum Map 2.pdf (uploaded by Ryan Lampe, 5/5/2016 9:29 pm)
Five Year Assessment Plan.pdf (uploaded by Ryan Lampe, 5/5/2016 9:29 pm)
Rationale for Degree Designation Change.pdf (uploaded by Ryan Lampe, 5/5/2016 9:29 pm)
Comments for Bachelor of Science in Economics

Mitch Watnik
10/18/2016 11:24 am
Committee approves program unanimously at its meeting on 6/6. This is documented as 16-17 CIC 20.

Mitch Watnik
6/6/2016 2:43 pm
Committee recommends removing MATH 115 from the core, as that can be satisfied by testing out (and might cause a degree check problem).

Donna Wiley
5/13/2016 1:43 pm
The proposal looks good.
The Request for Degree Designation Change will need to go through the Senate approval process separately and be approved by the Chancellor's Office.

Decision Summary for Bachelor of Science in Economics

Committee on Instruction and Curriculum
Status: Working
Step Summary
This step requires 100% approval from all participants to move forward.

Participants

<table>
<thead>
<tr>
<th>CIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sophie Rollins *</td>
</tr>
<tr>
<td>Mitch Watnik * 10/18/2016 11:24 AM</td>
</tr>
</tbody>
</table>

Totals

Users Approved: 1
Users Rejected: 0