

Economics, History, & Political Science Department

Economics Program Review

2017-2022

## Table of Contents

Overview and Vision .....	5
I. Program’s Vision, Mission, and Objectives .....	5
II. Brief overview of the department .....	6
III. Relationship to the university mission, vision, and strategic plan and to the university strategic plan .....	8
IV. Overview of program .....	11
a. Degree Requirements of the Program.....	11
b. Discipline specific best practices.....	11
c. Balance between breadth and depth designed in the program.....	12
V. Internal demand of the program or department.....	12
Enrolment in Service courses .....	12
VI. Recommendations and actions from previous five-year review .....	13
VII. Departmental/program initiatives and significant changes during the five years since the last review. ....	17
Assessment.....	20
I. Program Inputs.....	20
a. Program reputation.....	20
b. Students by program.....	21
c. Faculty .....	23
d. Staff support .....	25
e. Resources .....	25
II. Program Processes.....	26
a. Curriculum .....	26
b. Students .....	34
c. Faculty .....	35
d. Quality Improvement Initiatives.....	35
III. Program Outcomes.....	35

a. Program.....	35
b. Student.....	36
Analysis and Action Plan for Future.....	54

## Executive Summary of Comprehensive Plan for Improvement

The economics program at Fitchburg State University is distinguished by the faculty's emphasis on studying economics as a social science beyond the mainstream neo-classical approach to the discipline. Since the last program review for economics in 2016, the economics faculty expanded the curriculum by designing new courses that align the program to the faculty's emphasis on a hands-on political economic approach. Specifically, faculty incorporated courses such as Geographic Information System, Basic Data Skills for Economics and Business, the Political Economy of Gender, and the Economics of Inequality into the economics electives. The economists also passed the Economics Senior Seminar course through governance to give it a permanent place in our major program and provide students a capstone course in which to explore their own research students. Furthermore, the faculty are in the process of designing a field lab course, tentatively called Urban Political Economy-Fitchburg Field Lab that will provide high-impact learning opportunities to students.

In the field lab course, faculty plan to engage students in an experiential learning environment by interacting with the Fitchburg community stakeholders to solve the socio-economic problems of the larger Fitchburg area. Moreover, since the last program review in 2016, the faculty carried out key new initiatives in community outreach, collaborative research, and assessment. In particular, the economics faculty founded the academic research center known as the Fitchburg Local Innovation Project (FLIP) to collect, analyze and interpret data addressing issues in Fitchburg and neighboring cities for the purpose of increasing faculty student research collaboration. With the foundation of FLIP, the economics faculty aim to support the university's mission of building a better community and maximizing collaboration between FSU and the community. Furthermore, the faculty's emphasis on faculty-student research collaboration via independent studies has resulted in the publication of two peer-reviewed journal articles and a working paper authored by economics faculty and students. The economists have also been proactive in applying for the learning outcomes in the new general education curriculum so as to create new routes to feed into the economics major and the minor.

With only three full time faculty, the economics program still offers four upper-level courses per semester on average. Because of this small size, the economics faculty find themselves in a bind to offer more sections of introductory courses and FYE classes to recruit more students into the major and offer upper-level core and elective courses to ensure timely graduation of the students. This has contributed in our view to the decrease of graduates from their previously stable level of five students in 2016, 2017, and 2018 AYs to four and then to two students in 2019 and 2020 AY, respectively. Despite this recent decrease in the number of graduating students, both course enrollments and number of students minoring in economics have been strong. The economists developed a robust assessment plan in 2020 and decided to shift their focus into maintaining full course enrollments and increasing the number of students minoring in economics.

The economics faculty plan to sustain the growth in course enrollments and the number of students minoring in economics and are committed to support the University's mission of preparing students to lead, serve, and succeed by fostering lifelong learning and civic and global responsibility.

## Overview and Vision

### I. Program's Vision, Mission, and Objectives

The economics program at Fitchburg State University is distinguished by the faculty's emphasis on studying economics as a social science beyond the mainstream neo-classical approach to the discipline. The faculty are distinguished by their research on the subject of inequality in income, gender, and race, and other social groups in the economy. Hence, the curriculum is also characterized by course offerings that train students in applied research methods of these issues in a hands-on fashion, such as Geographic Economic System, Econometrics, and Basic Data Skills.

In addition to the core courses such as Money and Banking and Intermediate Microeconomics and Intermediate Macroeconomics, the faculty also offer courses that foster a pluralistic view of the discipline such as Economics of Inequality, Political Economy of Gender, and Development Economics. Being scholars themselves who use pluralistic approaches in terms

of the methodologies utilized in their research and the lenses they apply to understand current economic issues, the faculty and the curriculum emphasize the importance of diversity of ideas, methodologies, and different schools of thought in studying economics. Moreover, another distinguishing feature of the program is to offer History of Economic Thought as one of the core courses to contextualize the current dominant economic paradigm of neoclassical economics in a historical framework.

The mission of the economics program is to provide accessible yet rigorous economic education in context through hands-on learning experiences to prepare students as citizens and for professional careers. Students in the economics program develop critical-thinking skills by learning about competing and/or complementary economic schools of thought to explain the world and justify economic policies. The economics program emphasizes economic inclusion by recognizing, measuring, and evaluating inequality with respect to race, gender, income, and other social stratifiers. Students study how global, national, and local economic forces affect their lives and career options and how these forces work beyond the realms of markets and trade to interact with social structures and cultural norms. Our vision is that we are committed to creating and sustaining the conditions that afford all students a transformative experience through an inclusive and accessible education.

## II. [Brief overview of the department](#)

The economics major is housed in the department of economic, history and political science. The BHE authorized the economics major in 1983. Dr. Caroline Murphy, who retired in 1999, was the first full-time economist to teach at Fitchburg State. The economics major created a curriculum for teaching macroeconomics and microeconomics with both introductory surveys and electives and developed to play a critical role in supporting general education, as well as other majors, most notably business administration, and to serve economics majors and minors.

Economics was part of what was then called the department of social sciences at Fitchburg State College. In 2008, the department changed its name from social sciences to the department of economics, history, and political science (EHPS), communicating more accurately to students the three disciplines comprising the department. This change reinforced the transitioning status of the institution. In 2010, Fitchburg State became a university. For the EHPS

department overall, fifteen full-time, tenured or tenure-track faculty members offer courses and degree programs in three distinct disciplines, with nine historians, three economists, and three political scientists.

The economics major experienced a major period change and renewal that began just before the last program review and has continued into period covered by this program review. After a search conducted the 2014-2015, Dr. Adem Elveren and Dr. Christa Marr joined the faculty to replace Dr. Pirudas Lwamugira and Dr. Michael Turk who had retired. In 2015, Dr. Luis Rosero left the department when he accepted a position at another state university in Massachusetts. After a search conducted in 2015-2016, another national search resulted in the hiring of Dr. Ozge Ozay, who joined the faculty in the fall of 2016. Together, this new team of Dr. Elveren, Dr. Marr, and Dr. Ozay have built on the existing major, and have both expanded the curriculum and carried out key new initiatives in community outreach, collaborative research, and assessment.

Under the three new professors, four courses have gone through governance to become part of the Economics program (Economics of Inequality, Basic Data Skills, Economic Senior Seminar, Political Economy of Gender). A multitude of additional courses have successfully earned general education designations in both the old and newly adopted Liberal Arts and Sciences curriculum ranging from Procedural and Logical Thinking designations to Ethical Reasoning to Diverse Perspective to Civic Learning, proving the dynamic reach of the program. Further, two of our program courses are cross-listed with Mathematics (Game Theory) and Women, Gender, and Sexuality Studies, bringing a strong interdisciplinary approach to our program. Other courses, such as Geographic Economic Studies, continue to be cross-listed with other programs.

While the faculty in each of the three major disciplines direct their respective programs and enjoy considerable professional autonomy within the department, the EHPS department functions as a unified body with one chair, nominated by secret ballot by full-time members of the department and appointed by the university's president for a three-year term, with a limit of three consecutive terms. The department also has a curriculum committee and a peer evaluation committee, each elected annually by the entire membership of the department. The department

meets every month with a formal agenda. Minutes of the meetings are kept by the recording secretary, the department's administrative assistant.

### III. Relationship to the university mission, vision, and strategic plan and to the university strategic plan

The university's mission is given as:

Fitchburg State University is committed to excellence in teaching and learning and blends liberal arts and sciences and professional programs within a small college environment. Our comprehensive public University prepares students to lead, serve, and succeed by fostering lifelong learning and civic and global responsibility. A Fitchburg State education extends beyond our classrooms to include residential, professional, and co-curricular opportunities. As a community resource, we provide leadership and support for the economic, environmental, social, and cultural needs of North Central Massachusetts and the Commonwealth.

The university's 2020-2025 strategic plan centers around the concept of education justice and identifies six strategic goals for the university:

Goal One: Forge innovative paths to knowledge acquisition, career readiness, social mobility, and lifelong learning

Goal Two: Become a model student-ready University and narrow the achievement gap

Goal Three: Be an engine of social, economic, civic, and cultural development in our city and region

Goal Four: Establish inclusive excellence, innovation, and environmental stewardship as signature strengths

Goal Five: Assert our distinctive value proposition and institutional learning outcomes boldly and widely

Goal Six: Steward physical and financial resources responsibly and navigate a path to long-term organizational sustainability



To help meet this mission, the EHPS department's curriculum focuses on:

- a. A global perspective. As such, our courses have a multicultural, international, gender-equal emphasis.
- b. The mastery of the written word. We stress reading and writing skills in all of our courses.
- c. Interdisciplinary approaches and, thus, developing the interconnectedness of courses and programs and teamwork among the EHPS faculty.
- d. The necessity of computer literacy. Therefore, we are dedicated to mastering technologies and training our students in their use as it applies to each discipline.
- e. A liberal arts and sciences education that complements the professional disciplines.

Furthermore, the economics program supports the university's mission and strategic goals by:

- 1) Innovating faculty teaching via workshops (such as Civic Engagement, Inclusive Teaching, Culturally Responsive Teaching) and training that will improve the methods they use to facilitate learning for FSU's diverse student body. Our continued efforts to innovate our pedagogy is related to the university's mission of excellence in teaching and learning within a small college environment.
- 2) Providing high-impact learning opportunities for students in the form of collaborated research projects to work in compiling, analyzing, and interpreting data with faculty (Corresponds to the Strategic Goal 1 of FSU). Some of these works have produced publications of working papers or journal articles. Specifically, Drs. Elveren and Marr have published an article "Feminization of labor and profit rates: evidence from OECD countries" with economics student Yvonne Renard in *Applied Economics Letters* in 2016 (please see Appendix E for Faculty C.V.). Dr. Elveren has also collaborated with economics students Rachel Dunning and Joseph Bourgeois, which resulted in a working paper "Do Military Expenditures Boost Profit Rates?" in 2017 and in the journal article "Informality, Inequality, and Profit Rate" in *Applied Economics Letters* in 2020, respectively. Within the classroom, develop research projects in a multitude of higher level economics electives which have resulted in presentations at Fitchburg State's

Undergraduate Research Conference, UMass Undergraduate Research Conference, and the Eastern Economic Association Conference. Further, several economics students have earned internship credits by seeking opportunities in public and private corporations to hone their economic skills. Some internships have included Anai Capital in Toronto and The Washington Center.

The economics program has also established the Fitchburg Local Innovation Project (FLIP), an academic research center that will collect, analyze, and interpret data addressing economic issues in Fitchburg and neighboring cities for the purpose of increasing faculty-student research collaboration. In the summer of 2021, Drs. Elveren, Marr, Ozay worked with economics students Muchafara Punungwe, Ryan Dupell, and Samuel Flint as first FLIP interns to provide them with an opportunity to carry out community-related economic research.

- 3) Designing courses providing high-impact learning opportunities to students such as Fitchburg Field Lab to study socio-economic issues using the Fitchburg area as a laboratory and in order to propose solutions to the city (Corresponds to the Strategic Goals 1 and 3 of FSU). This course is inspired by the Harvard Kennedy School course “Innovation Field Lab: Public Problem Solving in Massachusetts Cities” that focuses on five different cities in Massachusetts, including Fitchburg, to find innovative ways to solve urban public problems. The faculty are planning to run this as a topic course first and are in the process of reaching out to the Harvard Kennedy School Professor Jorrit de Jong to design the course.
- 4) Preparing students for professional careers, particularly by offering courses such as Econometrics and Basic Data Skills that use and/or teach statistical software and spreadsheet programs such as Excel and Stata (Corresponds to the Strategic Goals 1 and 6 of FSU).

#### IV. Overview of program

##### a. Degree Requirements of the Program

The Bachelor of Science degree in economics requires that students take 36 credits:

[ECON 1100 - Principles of Economics: Macroeconomics](#) 3 cr. (MAJ Procedural and Logical Thinking)

[ECON 1200 - Principles of Economics: Microeconomics](#) 3 cr.

[ECON 2400 - Money and Banking](#) 3 cr.

[ECON 3000 - History of Economic Thought](#) 3 cr.

[ECON 3650 - Intermediate Macroeconomics](#) 3 cr.

[ECON 3660 - Intermediate Microeconomics](#) 3 cr.

[MATH 2200 - Calculus for Business](#) 3 cr.

Students then choose 12 credits from economics electives and also take [SPCH 1000 - Introduction to Speech Communication](#) 3 cr.

In addition, students take [MATH 1800 - Business Statistics](#) (3 cr.) for their mathematics requirement in the general education curriculum.

For the economics minor, students take:

[ECON 1100 - Principles of Economics: Macroeconomics](#) 3 cr.

[ECON 1200 - Principles of Economics: Microeconomics](#) 3 cr.,

and four courses selected from among the courses listed for the economics major.

##### b. Discipline specific best practices

The economics program at Fitchburg State has a standard curriculum design. The required mathematics and statistics courses, Math 1800 Business Statistics and Math 2200 Calculus for Business, provide students with the minimum mathematical skills they need to utilize in some upper-level courses fully, such as Money and Banking, Intermediate Microeconomics, Intermediate Macroeconomics, and Econometrics. Another conventional

practice of the department is to specify the course Money and Banking as a degree requirement. Money and Banking is not just one of the most popular courses of the program, but it is also a great link to other financial economics/business courses students might prefer to take.

#### c. Balance between breadth and depth designed in the program

The economics program provides a wide selection of courses, ranging from Public Finance to Money and Banking, from Basic Data Skills to Game Theory. Offering such a wide selection of courses, particularly considering that the department has only three faculty, is one of the key achievements of the department. The economics faculty, all with Ph.D. degrees and long years of teaching experience, provide a deep understanding of each topic by enriching the content with supplementary teaching materials, such as major articles/popular writings or their own relevant publications. However, it is important to note that keeping such a balance between breadth and depth requires tremendous effort. The program would undeniably benefit from an additional faculty member. As a matter of fact, the program is sometimes unable to meet all of the students' demands for certain electives, or even compulsory courses, in a timely manner. That is, the combined effect of the course load of the economics faculty and the high demand for principles of economics courses makes it difficult to offer all of the courses according to the course rotation schedule in some semesters. Every academic year, faculty find themselves in a position to offer directed study courses to facilitate the timely graduation of our students.

#### V. Internal demand of the program or department

##### Enrolment in Service courses

Enrollment in the two survey classes offered, Principles of Economic-Macroeconomics (ECON 1100) and Principles of Economics-Microeconomics (ECON 1200) has remained robust (Please see Appendix A for enrollment numbers). Despite some semester-to-semester fluctuations, total enrollment in both surveys remained close to 150 students. In addition to serving the economics majors, the courses are central to the business administration major, which requires both economics surveys for all majors. ECON 1100 is required for political

science majors, and all history-secondary education majors are strongly advised to complete the social science minor, which requires an economics course, which in many cases also turns out to be ECON 1100. These courses have also been approved to count for the category of procedural and logical thinking in Fitchburg State University’s new general education program. Table I below shows the enrolment in Principles courses since Fall 16.

**Table I. Enrolment in Principles Courses by Semester**

Semester	Fall 16	Spring 17	Fall 17	Spring 18	Fall 18	Spring 19	Fall 19	Spring 20	Fall 20
Macro	105	60	106	57	91	50	101	50	98
Micro	52	90	61	98	58	79	74	99	50
Total	157	150	167	155	149	129	175	149	148

VI. Recommendations and actions from previous five-year review

Table II below summarizes the recommendations suggested by the last review and the responses given to them.

**Table II: Recommendation and Response: 2016 Program Review**

<b>Recommendation:</b>	<b>Response:</b>
Create new routes to feed into major	<p>In order to create new routes to feed into the major, we have created multiple new courses that are cross-listed and/or apply to the general student population. We continue to create courses that are rooted in the general education curriculum and that apply to multiple majors.</p> <p>The economists have also worked to align the economics major with the new general education curriculum. In AY 2020-2021, we submitted and received approval for designations for eight of our courses in the “critical and creative thinking across disciplines” (CCTAD) part of the new curriculum, including our two core courses, ECON 1100 and ECON 1200, for Procedural and Logical Thinking. We also received outcome and advanced designations for our electives in Diverse Perspectives (ECON 2010: Political Economy of Gender, ECON 2500: Economic Development, and ECON 3550: International Economics); Civic Learning (ECON 2600: Public Finance); and Ethical Reasoning (ECON 3000: History of Economic Thought and ECON</p>

	<p>3001: Economics of Inequality). These designations should help us maintain our full enrollments in these courses and create new routes to feed students into the major.</p> <p>Dr. Marr has been teaching an economics-themed first-year seminar for the First-Year Experience (FYE) seminar, with the goal of recruiting students into the economics major or minor since FYE's launch in the fall of 2018. GEOG3000: Geographic Economic System continues to be offered with no prerequisites. This course is cross-listed between geographic science and technology and economics.</p> <p>Dr. Ozay created ECON 3002: Basic Data Skills for Economics and Business to introduce students across majors to data and Excel skills.</p>
<p>Require intermediate ECON courses (Intermediate Microeconomics and/or Macroeconomics) for minors</p>	<p>While we do not currently <i>require</i> either Intermediate Microeconomics or Intermediate Macroeconomics for our majors, we are now offering them consistently following our program review. Both courses are offered each year, and, as a result, most minors do take one or both of these classes to fulfill their requirements for the economics minor. We offered ECON 3660: Intermediate Microeconomics in the fall of 2020 with 24/25 seats filled, ten of whom were majors, two of whom were minors, and the remaining twelve considering a minor or further economic study. ECON 3650: Intermediate Macroeconomics filled with 20/25 seats. Based on our major size, these courses recruit beyond the major.</p>
<p>Remove Money and Banking from requirements for major</p>	<p>We have not removed this requirement. At this point, it is one of our most popular courses. Therefore, we want to continue to offer it each year, and, with our small faculty size, it best serves the students to allow this course to count for the major. This course also receives strong enrollments from the Business major and is a feeder into our minor. As we seek to increase our minors, this course serves our purpose.</p>

<p>Ensure that the Principles of Economics courses engage students</p>	<p>We have continued to refine our Principles of Economics courses to ensure engagement. Our courses have included open access textbooks, multiple modalities of instruction (in-person, video supplements, audio recordings of slides) as well as assessment (in-class work, exams, quizzes, short response, discussion, etc.), and variety in presentation (real world and current events, simulations, functional examples, etc.). Also, we replaced some advanced theoretical chapters with applied chapters. Students have seemed to respond positively to these courses based on SIR-II survey scores, written feedback collected, and returning enrollment in our courses.</p>
<p>Limit directed studies</p>	<p>We have achieved this by offering ECON 3650: Intermediate Macroeconomics and ECON 3660: Intermediate Microeconomics more frequently and by coordinating course offerings, based on advising information and on student needs. Prior to our program review, we were frequently offering directed studies for these major requirements.</p>
<p>Create and Staff a course <i>Statistics for Social Scientists</i></p>	<p>Our ECON 3002: Basic Data Skills course is the response to this recommendation.</p>
<p>Look over catalog to see what programs require ECON classes</p>	<p>We have done so and have taken meetings with different departments as a result (see, for instance, our response below to “outreach to BSAD students since almost do a minor” as well as with Industrial Technology and Computer Science)</p>
<p>Incorporate own research into class lectures</p>	<p>We routinely do this and have created courses (such as ECON 3001: Economics of Inequality and ECON 2010: Political Economy of Gender) that enable us to frame our own work in the context of our courses. The founding of FLIP, and an eventual course, is also a way we responded to this recommendation.</p>
<p>Reduce number of course preps</p>	<p>We have tried to do this by offering more Principles of Economics courses (ECON 1100: Principles of Macroeconomics and ECON 1200: Principles of Microeconomics). This has allowed faculty in the economics major to, at times, limit their course preparation to two preps. In the semesters that we have taken this approach (such as</p>

	<p>Fall 2019), enrollment in all three sections was strong with 76/75 seats filled in ECON 1100: Principles of Macroeconomics and 74/75 seats filled in ECON 1200: Principles of Microeconomics. We have also scheduled the intermediate courses each year to increase predictability of course offerings, which has reduced our course preparations from one academic year to the next.</p> <p>However, the norm is that each faculty member has three course preparations.</p>
<p>Increase interactions with area/regional economic actors, student projects, internships</p>	<p>Over the academic year 2018-2019, the economists met with the professor and graduate students from the Innovations Field Lab (IFL) at Harvard University to discuss potential collaborations in economic development work in the city of Fitchburg.</p> <p>As a result, in Fall 2019, the economists founded the Fitchburg Local Innovations Project (FLIP) in order to engage students in the community with coursework, research projects, and internships. We have been working with three students during the summer of 2021 on community-related research. We have further goals for this project that align with this recommendation. A copy of the FLIP proposal can be found in the Appendix G.</p> <p>The economists continue to collaborate with the Crocker Center, including serving in the Community Consultants Group and attending the Campus Compact regional conference, to navigate local opportunities for involvement.</p>
<p>Improve website</p>	<p>Yes, without our doing, the university has taken this on and provided a clear outline of the economics program (including program learning outcomes), faculty information, and courses offered.</p>



<p>Increase the number of ECON Minors - outreach to BSAD students since almost do a minor</p>	<p>We have held meetings with the faculty from multiple departments on campus, including but not limited to business administration, industrial technology, mathematics, and the newly-formed public health practice concentration, in the public health science major - in order to offer courses and content that are aligned with their major requirements and make the pathway to an economics minor accessible.</p>
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VII. Departmental/program initiatives and significant changes during the five years since the last review.

We have already discussed some of the major initiatives in Section VI- Recommendations and actions from previous five-year review, Table II above as a response to the last program review. In this section, we will reiterate some important initiatives undertaken by the economics faculty during the five years since the last review. *The Economics Program Review Spring 2016* states that “The economics program at Fitchburg State meets the university’s goal of offering a ‘high-quality program’ with limited resources, requiring three full-time faculty members to offer the range of courses necessary to produce a substantive major in economics, essentially calling up these faculty members to serve as ‘jacks-of-all-trades’.”

The economics faculty supported the political science program by teaching Global Issues, a popular interdisciplinary course at the university. Moreover, the economics department offered some other interdisciplinary/cross-listed courses, namely GEOG 3000: Geographic Economic Systems, ECON 2140: U.S. Economic History, ECON/MATH 2005: Game Theory, and ECON 2010: Political Economy of Gender. We also teach in the university-wide initiative First Year Experience by teaching a freshman seminar course.

The main goal of the economics program noted in *Spring 2016 Program Review* was “to develop a stable curriculum and grow the major.” The program also notes the goal of “revitalizing the economics club.” Overall, while the department did not have substantial progress concerning the latter, there has been significant additions/changes made in the curriculum in an effort to meet this goal. The economics faculty launched the Economics Senior Seminar course (ECON 4000) in the spring of 2017.

The spring 2016 program review suggested that “The economics program, with its current tenure-track faculty members, has a sound background and interest in Economic Inequality. Such a course would be a valuable addition to the pool of elective economics courses considering the fact that economic inequality is a major economic problem in both the U.S. and around the world (and likely to be the greatest challenge in the future).” We designed a course entitled Economics of Inequality (ECON 3001), which has been added to the university curriculum. However, the course has not yet been offered.

The spring 2016 program review recommended that the program “Broaden course offerings by adding courses with inter- or multidisciplinary focus.” To that end, we have made several additions.

- a. “A topics class of Gender Economics will be taught in Fall 2016 by Dr. Elveren, and is expected to be accepted formally into the university curriculum. This course can also serve the Women, Gender, and Sexuality Studies Minor.”

This course, with the title of ECON 2010: Political Economy of Gender, has begun to be offered by Dr. Ozay. This course was offered in spring 2018 (with an enrollment of 20/25 students) and spring 2019 (with an enrollment of 29/25 students).

- b. “Dr. Marr is teaching a course in Geographic Economic Systems that serves both Economics and Geographic Science and Technology majors. Pending enrollment, this course could be an ongoing interdisciplinary teaching and learning opportunity.”

Dr. Marr teaches GEOG3000: Geographic Economic Systems. This course was offered in Fall 2016 and Spring 2020. For the former, 15 of 16 seats were filled while 13 students enrolled in the Spring 2020 delivery. Of note, the Spring 2020 course was taught by an adjunct while Dr. Marr was on maternity leave. This course is also applying for general education designations to increase enrollments from multiple disciplines.

- c. “A course for non-economics majors such as The U.S. in the World Economy or a general introduction to economics course (with a possible title of Economics for Social Scientists) can be developed by either faculty member.”

Due to the current teaching load and enough number of electives we did not introduce the course. However, the economists have committed to teaching a Freshman Seminar course where, while not an economics designation, has served as a general introduction to the discipline.

- d. “A course in Financial Economics would be popular among not only the business students but also those in our major with a concentration in International Business and Economics.”

Currently, no faculty member teaches Financial Economics. However, a similar course, International Finance, will be taught by Dr. Ozay.

- e. “Dr. Marr can develop a course on Quantitative Methods in Economics to bridge mathematics and economics. Such a course, on the one hand, may serve to introduce economics to mathematics majors, and on the other hand, it can improve the quantitative background of economics majors. This type of course is one that is required for graduate work in economics.”

This course, with the title of ECON 3002: Basic Data Skills for Economics and Business, has been offered by Dr. Ozay. This course was offered in spring 2021 with an enrollment of 23/25 students.

“Dr. Elveren can develop a course on Game Theory. Game Theory deals with strategic behavior in an economic framework. We suspect several majors are likely to have interest in the course.” This course was offered by Dr. Elveren as a cross-listed course with Mathematics, ECON/MATH 2005: Game Theory. This course was offered in spring

2017 (with an enrollment of 21/25 students), spring 2019 (with an enrollment of 25/25 students), and Spring 2020 (with an enrollment of 23/25 students).

As mentioned in Section III- Relationship to the University Vision, Mission, and Objectives and Table II of Section VI, the economics program established the academic research center, the Fitchburg Local Innovation Project (FLIP), to provide high-impact learning opportunities for students in the form of internships to work in the process of compiling, and analyzing, and interpreting data as well as collaborative research projects with faculty including but not limited to economics.

## Assessment

- I. Program Inputs
  - a. Program reputation

### *Distinguishing characteristics*

Section II “Program’s Vision and Mission,” is a detailed presentation of the economics program’s distinguishing characteristics. It is sufficient, here, to reiterate that the economics curriculum emphasizes the importance of diversity of ideas, methodologies, and different schools of thought in studying economics. With only three full-time faculty, the program offers a significant number of electives each semester ranging from Political Economy of Gender to Econometrics to give students an advantage in the job market by mastering applied data analysis methods. These classroom experiences are complemented by research collaboration opportunities available to students as mentioned above.

### *National Standards*

While no national standards exist for economics education, the American Economic Association (AEA) has stated that one of the most serious problems in the profession is the lack of diversity.<sup>1</sup> The AEA has reported that in 2018, of the 1197 doctorates in economics awarded

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<sup>1</sup> <https://www.aeaweb.org/resources/best-practices/introduction>

in the United States, less than one-third were awarded to women and only 46 to Blacks, Hispanics, and Native Americans (CSMGEP 2019). This lack of diversity is reflected in the type of questions asked by the economists as well as the methodologies used to answer them. To remedy this problem within the context of undergraduate education and attract a more diverse student body to study economics, the AEA suggests several policies including:

- Using outreach to counter stereotypes about economics and close other information gaps,
- Offering course content relevant for diverse students,
- Use effective and inclusive classroom techniques,
- Build a sense of belonging for all students,
- Help students understand and enjoy the learning process.

Being housed in a university that has a significant percentage of first-generation students, the economics program uses some of the strategies recommended by the AEA, such as hosting internal events to reach out to a wider student body to incite enthusiasm in economics and address the misconceptions and knowledge gaps about economics education. As mentioned in Section I, the economics program offers a pluralistic approach to studying economics, through a wide selection of courses that specifically question and contextualize the current paradigm of economics and incorporate heterodox schools of thought and the economic life from marginalized groups' perspectives into course content. The economics faculty also use effective student engagement techniques such as peer-learning techniques, including think-pair-share activities, small-group discussions, and hands-on assignments, and inquiry-based learning with group case studies. In addition, active-learning strategies using real-world data to ground abstract economic theories are utilized in our classes. The emphasis on peer-learning strategies also helps build a sense of community within the classroom.

#### b. Students by program

#### *New Student Enrollment Trends*

- 1) Economics courses annual enrollment numbers have been strong in the period 2016 AY to 2021 AY. The annual average enrolment for the period is 437 students with 2018 AY

having the highest enrolment number (454) closely followed by 2021 AY (451). We think that sustaining enrolments higher than the period average in 2020 AY (with 442 students) and 2021 AY (451 students) is a major accomplishment of the program and a testament to the positive feedback from students in the form of returning enrolments. It is important to note that this increase has occurred while the university's overall enrolment has declined by 14% from 2020 AY to 2021 AY with the Covid-19 pandemic upended our lives. The program experienced its lowest enrolment in this period in 2017 AY with 412 students. We attribute this relatively lower enrolment to the complete renewal of the economics faculty in 2015 and 2016 AYs (Please see Appendix A for enrollment data).

- 2) The average annual number of graduates in the period 2016 AY to 2020 AY was four students. In 2016, 2017, and 2018 AYs, the number of graduates was five students, while this number has decreased to four in 2019 AY, and then to two in 2020 AY. We attribute the fact that we experienced the lowest number of graduates in 2020 AY to the hardships experienced by some students majoring in economics that were related to the Covid-19 pandemic.

#### *Enrolled Student Profile:*

- Growth and change by gender: We only have data for 2017 AY and 2021 AYs on the gender distribution of our majors. In 2017 AY, 70.8% of the total majors were male students. The percentage has declined slightly to 68% in 2021 AY (please see Appendix C for gender, race/ethnicity data).
- Growth and change by race/ethnicity: We only have data for 2017 AY and 2021 AYs on the racial/ ethnic distribution of our majors. The percentage of students identifying as White within the major has increased from 58% to 63% from 2017 AY to 2021 AY. In the same period, the percentage of the students identifying as African American has increased from 8 to 15.7%, while the percentage of students identifying as Hispanic declined from 25% to 10%. Likewise, Asian identifying students' percentage has risen from 0 to 10.5%. Overall, while non-White identifying student percentage has decreased,

its composition became more diverse with a higher percentage of Asian and African American identifying students compared with 2017 AY (Please see Appendix C for gender, race/ethnicity data).

*Number of majors and minors:*

- The annual average number of majors for the period 2016 AY to 2021 AY is 21.3. During 2019 AY we sustained the highest number of majors with 29 students, while in 2016 AY we experienced the lowest number with 14 students (Please see Appendix B for economics trend data).
- The annual average number of majors for the period 2016 AY to 2021 AY is 30. The number of students minoring in economics showed a drastic increase from 19 to 31 (a 63% growth rate) from 2016 AY to 2017 AY and stayed above 30 students in the rest of the period (Please see Appendix B for economics trend data).

c. Faculty

As mentioned in Section I- Brief Overview of the Department, the economics department has three full-time faculty. While Drs. Christa Marr and Adem Elveren are tenured in 2019-20 AY, Dr. Ozge Ozay is currently going up for tenure evaluation when we are writing this report.

Dr. Christa Marr earned her PhD in Economics at Clark University in 2014. Dr. Marr specializes in Applied Econometrics, Public Economics, and Spatial Economics. She taught at Clark University as a graduate instructor and for one year at Rollins College in Winter Park, Florida as a tenure-track assistant professor before coming to FSU.

Dr. Adem Elveren earned his PhD in Economics at the University of Utah in 2008. Dr. Elveren specializes in Social Policy, Political Economy, and Defense and Peace Economics. He taught at two universities in Turkey, and at the University of Utah, The University of the Incarnate Word, San Antonio, Texas, and Keene State College in Keene, New Hampshire at

different positions, ranging from a graduate instructor to associate professor, before coming to FSU.

Dr. Ozge Ozay earned her PhD in Economics at the University of Utah in 2010. Dr. Ozay specializes in the Political Economy of Gender and Race, International Economics, and Development Economics. She taught at two universities in Turkey, and the University of Utah, American University, and Dickinson College at different positions, ranging from a graduate instructor to visiting assistant professor, before coming to FSU.

**Table III. Faculty Demographic Table**

Demographic Faculty Summary	No. of Full Time Assigned to Unit	No. of Part Time Assigned to Unit
Women	2	0
Men	1	0
Ethnicity		
White/Caucasian	1	0
Asian		0
Hispanic/Latino		0
Black/African American		0
American Indian		0
International or Other	2	0
Credentials – highest degree held		
Bachelor’s Degree		0
Master’s Degree		0
Doctorate	3	0
Experience		
0-3 years		0
4-7 years		0
8-11 years	1	0



12-15 years	1	0
16-24 years	1	0
25+ years		0

d. Staff support

The department of economics, history, and political science is assigned one full-time staff member, Ms. Megan Carkin. Her position title is Administrative Assistant II. The administrative assistant's role is to support the department chair as well as the full-time and adjunct faculty. The administrative assistant's duties include ordering supplies and services; maintaining meeting minutes, department forms, and department policies and procedures manual; maintaining and updating department rosters; scheduling appointments for the department chair; assisting students and the general public with questions and concerns; working with print services to create flyers to advertise department events, the creation of forms, etc., answering telephones and conveying messages. In addition, the department usually has one work-study student, who averages 7 hours of work in the department per week, who is supervised by the administrative assistant.

e. Resources

1. Fiscal Resources

The economics program shares the budget allocated to EHPS with the history and political science programs. The department receives \$2000 on average every year for supplies.

2021 AY department budgets for:

Faculty Incentive Grants: \$2,500

Travel for Conferences: \$3,685

American Collegiate Moot Court Association Competitions: \$5,656.80: The political science program uses these funds to support students competing in the American Collegiate Moot Courts tournaments.

Since the economics program does not receive a budget for software and computer purchases, the economics faculty applied for grants from the Crocker Center and the Provost's

Racial Justice grant initiative in 2021 AY in order to purchase one computer and two STATA statistical software licenses to be used by students taking independent studies courses and collaborating with the economists. Furthermore, the economics faculty also applied for and received fund for student Research Assistants since the last program review.

## 2. Library

On November 15, 2020, meeting with the Dean of the Amelia V. Gallucci-Cirio Library, the economics faculty expressed significant satisfaction with the library resources available for instruction and research. The faculty noted significant improvement over time in the quantity, quality, and accessibility of those resources, while making some suggestions about improving student ease of the electronic resources. Please see the report of economics library resources, Appendix H.

## II. Program Processes

### a. Curriculum

Section IV Degree Requirements of the Program reviewed the requirements for the economics major.

#### *Description of curriculum*

The curriculum builds on a series of foundational courses, and Intermediate Microeconomics and Macroeconomics, along with Business Calculus, and the History of Economic Thought. At the advanced level, students have considerable choice in selecting courses to complete the major. The major provides students with fundamental core knowledge in economics while preserving considerable choice and flexibility.

#### *Plans of study*

Four-year plan of study: [EHPS\\_Economics BS.pdf \(fitchburgstate.edu\)](#)

#### *Curriculum trends in the discipline*

We can sort curriculum trends in the discipline into two main categories: the structure of the curriculum in terms of list/variety of courses and teaching/learning strategies. Regarding the former, the main trend is to build a more quantitative and financial economics curriculum. First of all, requiring and/or providing a strong mathematical skill to economics majors is a must as the students need the skills in order to analyze economic problems/issues both in their careers and in graduate programs, such as master's programs in applied economics or finance, and MBA.

Another core aspect of the quantitative skill is the basic knowledge of econometrics. Econometrics is a hallmark of being an economist. Second, it seems there is a tendency to incorporate a financial economics course, creating specialization in finance among economics majors. Third, Game Theory, a strategic decision making, is an ever-developing subfield, becoming increasingly important part of economics. Fourth, the views regarding History of Economic Thought (HET) are mixed, complicated, and are part of an ongoing discussion within the discipline. On the one hand, the more business/finance-oriented programs have tendency to deemphasize the importance of HET, arguing that comparing and contrasting "old" ideas in economic thought is not essential for being an economist. On the other hand, there has been increasing dissatisfaction among economics majors worldwide, particularly since 2008 economic crises. Various student groups across the world have argued that the current economics curriculum fails to address persisting economic problems.<sup>2</sup> The students have argued that the mathematization of economics without deep understanding of root causes of today's economic issues due to an ahistorical approach and relying only on one school of economic thought, namely neoclassical economics, is the core problem of economics education. Such initiatives have argued for a more pluralistic approach to economics, including students at the department of economics at Harvard University<sup>3</sup>.

It is important to note that such dissatisfaction is not limited to economics students. In fact, there has been a growing critical perspective to understand how the economy really works and critiques toward the status quo in teaching economics and doing economics. For example, among many others, it is worth noting the Queen Elizabeth II's reaction to the economic crisis of

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<sup>2</sup> See for example <http://www.isipe.net/open-letterand> <https://www.rethinkeconomics.org/>

<sup>3</sup> <https://www.washingtonpost.com/news/wonk/wp/2013/11/30/colleges-are-teaching-economics-backwards/>

2008<sup>4</sup>, Pope Francis's call for a new economic model in 2020<sup>5</sup>, or critiques of the Nobel prize awarded economists Paul Krugman<sup>6</sup> and Paul Romer<sup>7</sup> regarding the excessive use of mathematics, making mathematics an end rather than a means to analyze real-life economic problems. In addition, the increased publicity of Modern Monetary Theory over the past few years can be considered another outcome of dissatisfaction with the current economic models/understanding/structure.

Overall, while there is a constant pressure to push economic curricula toward more mathematical/financial approaches by deemphasizing alternative thoughts and historical analysis, there is also growing reaction to the current biased economic paradigm that leads to major economic and social problems, such as global warming and growing income inequality and polarization. Therefore, it has been argued that teaching and doing economics is problematic, and perhaps we need courses like the History of Economic Thought more than ever to build a more pluralistic approach to understand and analyze the economy to better address persisting economic problems of twenty first century.

Regarding the teaching and learning strategies, the trend is clearer: active learning and the use of experiments. Many universities have emphasized experiential learning, especially as it relates to 'community-engaged approaches' as one core aspect of their teaching strategy. Also, creating a macroeconomics-microeconomics combined course is gaining some popularity as well.

### *Course delivery methods*

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<sup>4</sup> On November 5, 2008, about two months after the Lehman Brothers bankruptcy, Queen Elizabeth II, referring to the financial crisis, asked the economics professors: "Why did nobody notice it?"

<sup>5</sup> In his speech, the Pope noted that "We need to set to work urgently to generate good policies, to design systems of social organization that reward participation, care and generosity, rather than indifference, exploitation and particular interests."(<https://www.catholicnewsagency.com/news/46027/pope-francis-calls-for-new-economic-model-to-rebuild-post-coronavirus-world>)

<sup>6</sup> <https://www.nytimes.com/2009/09/06/magazine/06Economic-t.html>

<sup>7</sup> Paul M. Romer (2015). "Mathiness in the Theory of Economic Growth" *American Economic Review*, 105(5): 89-93.

The economics major has employed all course delivery methods. The major offers courses in the traditional in-person format. Economists have also offered courses as hybrids that combine in-person with online teaching and learning. The economists also offer courses in an online format.

Along, with courses that span a traditional semester, the economists have also added accelerated classes, in particular for students pursuing majors in Business online.

The economics program offers courses in all three available formats at the university: the traditional face-to-face teaching, online, and hybrid format. Table IV shows the percentage of online and hybrid courses offered since Fall 2015, while Table V shows a more detailed distribution of delivery mechanisms by year and semester.

**Table IV. Share of online + hybrid courses to total number of courses offered each semester**

Semester	Percentage
Fall 2015	16.7
Spring 2015	18.2
Fall 2016	37.5
Spring 2016	40
Fall 2017	15.4
Spring 2017	44.4
Fall 2018	41.7
Spring 2018	35.7
Fall 2019	23.1
Spring 2019	33.3
Fall 2020	100
Spring 2020	50
Fall 2021	12.5
Spring 2021	100

**Table V. Face to face, Online and Hybrid Course Numbers by Semester and Year**

Year	Delivery Mode	Fall and Winter	Spring and Summer	Total
2015	face-to-face	10	9	19
2015	online	2	2	4

2015	hybrid	0	0	0
2016	face-to-face	10	9	19
2016	online	2	6	8
2016	hybrid	4	0	4
2017	face-to-face	11	10	21
2017	online	1	5	6
2017	hybrid	1	3	4
2018	face-to-face	7	9	16
2018	online	2	3	5
2018	hybrid	3	2	5
2019	face-to-face	10	10	20
2019	online	3	4	7
2019	hybrid	0	1	1
2020	face-to-face	0	5	5
2020	online	5	5	10
2020	hybrid	7	0	7
2021	face-to-face	7	0	7
2021	online	1	7	8
2021	hybrid	0	4	4

### *Concentrations and minors*

In addition to the economics major, the concentration in international business and economics is also available to students. The requirements for a B.S. in international business and economics consists of:

#### *1) LAS Requirements*

BSAD 1700: Introduction to Computer Information Systems for Business 3 cr.

MATH 1800: Business Statistics 3 cr.

MATH 2200: Calculus for Business 3 cr.

IDIS 1200: Introduction to International Studies 3 cr. or

IDIS 1800: Global Issues 3 cr.

SPCH 1000: Introduction to Speech Communication 3 cr.

Two of the following nine English courses or two courses in the same language:

ENGL 2400: World Literature I 3 cr. or

ENGL 2500: World Literature II 3 cr. or

ENGL 3070: European Literature I 3 cr. or

ENGL 3080: European Literature II 3 cr. or

ENGL 3100: World Novel 3 cr. or

ENGL 3710: South Asian Literature 3 cr. or

ENGL 3720: Caribbean Literature 3 cr.

ITAL 2000: Intermediate Italian I 3 cr.

ITAL 2100: Intermediate Italian II 3 cr. or

SPAN 2000: Intermediate Spanish I 3 cr.

SPAN 2100: Intermediate Spanish II 3 cr. or

FREN 2000: Intermediate French I 3 cr.

FREN 2100: Intermediate French II 3 cr.

## 2) *Major Requirements*

BSAD 2010: Introduction to Financial Reporting 3 cr.

BSAD 2030: Principles of Management 3 cr.

BSAD 2040: Fundamentals of Marketing 3 cr.

BSAD 3500: Business Law I 3 cr.

BSAD 4330: International Marketing 3 cr.

BSAD 4880: International Business Management 3 cr.

ECON 1100: Principles of Economics: Macroeconomics 3 cr.

ECON 1200: Principles of Economics: Microeconomics 3 cr.

ECON 2400: Money and Banking 3 cr.

ECON 3000: History of Economic Thought 3 cr.

ECON 3550: International Economics 3 cr.

ECON 3650: Intermediate Macroeconomics 3 cr.

ECON 3600: International Finance 3 cr.

ECON 3660: Intermediate Microeconomics 3 cr.

HIST 1100: World Civilizations II 3 cr.

Students also need to take two additional electives from economic courses above the 2000 level.

Students can also minor in economics, which requires taking ECON 1100: Principles of Economics: Macroeconomics, ECON 1200: Principles of Economics: Microeconomic, and four selected courses listed for the economics major.

#### *Department/Program policies or processes that affect curriculum*

Since our last program review in 2016, there have been nine curricular changes. The full list, with links to the proposals, are below:

- 1) AUC 044 (2016-17) [AUC044-revised \(fitchburgstate.edu\)](#)

This is a new course request for ECON 2010: Political Economy of Gender which could be used to fulfill the Women, Gender, and Sexuality Studies minor and economics minor.

- 2) AUC 142 (2017) [Economics Senior Seminar AUC New Course Request form \(fitchburgstate.edu\)](#)



This is a new course request for ECON 4000: Economics Senior Seminar. It is a capstone course in which the students develop a portfolio of work in the major that demonstrates their mastery of the skills needed to earn a bachelor's degree in economics and engage in original research.

- 3) AUC 141 (2017) [New Course Request Form \(fitchburgstate.edu\)](#)

This is a new course request for ECON 3001: Economics of Inequality, which is an upper-level elective course on the main understanding of the causes and consequences of economic inequality both in the United States and globally, teaching the theory and different measures.

- 4) AUC 140 (2017) [AUC140 \(fitchburgstate.edu\)](#)

This is a new course request for ECON 3002: Basic Data Skills for Economics and Business. The course aims to introduce students to the basic data skills using mainly economic data sets.

- 5) AUC 33 (2021) [AUC33-Marr-LAS Course Designation Request of PL for 2 ECON Courses.pdf \(fitchburgstate.edu\)](#)

This proposal requested Procedural and Logical Thinking designation for ECON 1100: Principles of Economics Macroeconomics and ECON 1200: Principles of Economics Microeconomics.

- 6) AUC 87 (2021) [Microsoft Word - AUC 87-Ozay-LAS Designation Request for DP and AIA for 3 ECON Courses.docx \(fitchburgstate.edu\)](#)

This proposal requested the Diverse Perspectives designation for ECON 2010: Political Economy of Gender, ECON 2500: Economic Development, and ECON 3550: International Economics.

- 7) AUC 88 (2021) [Microsoft Word - AUC 88-Elveren-LAS Designation-ER and AIA for ECON-MATH Courses.docx \(fitchburgstate.edu\)](#)

This proposal requested the Ethical Reasoning designation for ECON/MATH 2005: Game Theory, ECON 3000: History of Economic Thought, and ECON 3001: Economics of Inequality. However, the request for ECON/MATH 2005: Game Theory was cancelled.

- 8) AUC 92 (2021) [AUC92-Marr-LAS Designation Request for CL and AIA for ECON 2600-Public Finance.pdf \(fitchburgstate.edu\)](#)

This proposal requested the Civic Learning designation for ECON 2600: Public Finance.

- 9) AUC 154 (2021) [Microsoft Word - AUC 154 LAS MAJ Designation Form Economics Updated.docx \(fitchburgstate.edu\)](#)

This proposal requested the major requirement designation for ECON 1100: Principles of Economics: Macroeconomics.

#### b. Students

##### *Learning expectations and learning supports*

The economics faculty encourage students in their classes to use the Student Support Services available at our university. Faculty cite resources, such as the Academic Coaching and Tutoring Center (ACT) and Disability Services in their syllabi, and routinely announce in classes that these resources are available. While we could not gather information about how many students use the Disability Services, since their data system does not allow pulling students by major or class, ACT reported that they had 9 and 6 economics tutoring appointments and in AY 20/21 and in AY 21/22, respectively. The faculty aim to increase usage of ACT by economics students in the future.

##### *Retention Initiatives*

Recruitment and retention initiatives are topics of discussion of almost all monthly departmental meetings of EHPS. In recent years, the faculty have developed internal marketing strategies for these purposes, including using social media platforms such as Instagram and Facebook to more effectively promote the courses offered by the faculty during advising sessions. The economists have also hosted events to bring interested students in to informally discuss the course offerings with the faculty and ask any questions prior to registering. Starting with the pandemic period, the faculty also began to utilize SSC texting function to check in with students as well as their advisors with attendance issues. In their individual courses, the

economics faculty also conduct mid-semester surveys to develop interventions and to modify course assessments, teaching techniques, and the pace of the content delivery in order to respond to student needs and concerns. In addition, the economics faculty teach directed studies to guarantee timely graduation of economics majors in case a required course they need to graduate is not offered in a particular semester.

#### c. Faculty

As mentioned in Section I c of Assessment, there are three full-time faculty members in the economics program, each with a standard 4/4 teaching load. All faculty teach a mix of introductory-level core classes, namely ECON 1100: Principles of Economics: Macroeconomics and ECON 1200: Principles of Economics: Microeconomics, as well as upper-level electives. Each faculty member is assigned 5-6 advisees every year on average.

#### d. Quality Improvement Initiatives

Quality improvement initiatives are discussed above in Section V- Departmental/program Initiatives and Significant Changes. It is important to reiterate that with only three full-time faculty, we find ourselves challenged to offer more introductory and FYE courses to recruit more students into the program on the one hand and to offer upper-level core and elective courses with enough frequency to make sure students can graduate on time while being exposed to a wide variety of subfields of economics on the other. Since spring 2020, we have decided to shift our focus and efforts to expand our course enrolments and number of student minoring in economics as this seemed to be a more viable route for the program (See Appendix F for our most recent Assessment Plan).

### III. Program Outcomes

#### a. Program

Fitchburg State University conducts a voluntary survey of graduating students, as well as of recent alumni. However, since economics is a relatively small program, both the number of graduates and the response rate have been very low. As a result, the economics faculty conducted

their own survey of alumni in order to prepare this report. A short questionnaire to gather information on the employment status of the graduates, their current job, job responsibilities, and an open-ended question of how their FSU economics program education prepared them for their jobs was emailed to alumni who graduated with an economics degree since 2015. Eight students responded to the survey. Among these eight students, two graduates stated that they are in a post-graduate program (one in law school, one in an MBA program). The remaining six are employed as a risk consultant, a sales manager, a program manager, an accountant, an athletic coach, and an insurance adjuster. In response to how their economics education prepared them for their job, students noted Econometrics, intermediate-level courses (in terms of understanding how economic policy works) History of Economic Thought, Money and Banking (interest rate calculations), and Basic Data Skills (due to the use of Excel beyond the basics) as pivotal courses. One student mentioned that they found the faculty relatable, which helped engagement in classes, and engagement helped them the most. They also noted that being successful at their workplace has a lot to do with speaking and suggested scheduling presentations for students to help build their confidence in public speaking. Another former student reported the importance of “business sense and number skills” and spreadsheet programs.

#### b. Student

##### *Learning outcomes*

The economics program has the following learning outcomes:

- 1) Students will be able to critically analyze and evaluate issues in local, national, and global economic life using evidence-based arguments.
- 2) Students will be able to articulate economic models in a multidisciplinary context.
- 3) Students will be able to demonstrate understanding key economic concept through quantitative reasoning and through written communication.
- 4) Students will be able to apply economic theory through experiential learning.
- 5) Students will be able to communicate economic ideas effectively through the use of statistical analysis, through the use of writing, and through the use of oral skills.
- 6) Students will be able to identify assumptions and assess implications of diverse economic perspectives.

### *Assessment overview of the program*

The economics faculty most recently carried out an online anonymous survey of our graduates to indirectly assess the success of our program learning outcomes in spring 2021. In the questionnaire, the faculty asked students to reflect on how the FSU economics major prepared students to accomplish PLO 1-6. Eight students responded to the survey. The following section summarizes the students' responses:

Regarding PLO #1: Students report that the economics program did a phenomenal job of challenging their understanding of the world in general. One student mentioned Development Economics, Public Finance, Political Economy of Gender, and History of Economic Thought as courses that were noteworthy in terms of using evidence-based arguments to explain the real-world economic issues.

Regarding PLO #2: Students cited several ways that they discuss economic issues in multidisciplinary contexts in their economics classes. For example, they noted that in many economics courses, political science can influence the way economic issues are studied since many economic fluctuations are based on government policy such as taxes and subsidies, etc. They also mention the influence of psychological science on economics regarding how consumers act and why they make the choices they make.

Regarding PLO #3: A student noted the use of solving demand and supply models as well as graphing microeconomic production and cost curves in Intermediate Microeconomics course in improving their quantitative skills in economics and helping them understand the key economic concepts.

Regarding PLO #4: One student cited the multiplier process simulation conducted in their Public Finance course. This hands-on simulation helped the student understand how the multiplier process works in real life.

Regarding PLO #5: A student noted that in the Money and Banking course, they had an opportunity to make a short presentation about a topic related to monetary economics. Another student mentioned that the economics program showed them how to work through an economic problem “whether it is a short question or a more advanced open response.”

Regarding PLO #6: A student noted that one of the favorite parts of learning about economics for them was the criticism of economic assumptions. Regarding diverse economic perspectives, they stated that Development Economics and Political Economy of Gender provided diverse economic perspectives that were accompanied by various economic models that they otherwise would never have seen in another class. Another student notes that in the Intermediate Macroeconomics course, they discussed the implications of macroeconomic models on different countries’ labor markets.

The economics faculty also developed student learning outcomes for individual courses. The following section presents the course learning outcomes for all economics courses.

### Student Learning Outcomes (SLOs)/Objectives

#### Course Learning Outcomes:

##### ECON 1100: Principles of Macroeconomics

1. Distinguish between macroeconomic and microeconomic issues.
2. Describe the mechanisms of supply and demand for a particular market.
3. Describe how to calculate Gross Domestic Product (GDP), unemployment rate, inflation rate.
4. Describe how fiscal and monetary policies work.
5. Describe Keynesian Aggregate Demand/Aggregate Supply (AD/AS) model explanation of national output determination.

##### ECON 1200: Principles of Microeconomics

1. Communicate using economic language and principles such as “supply and demand” or “marginal analysis.”

2. Apply economic theory and models using graphs, calculations, and written communication.
3. Identify how individuals/households and firms interact in various market structures to determine market outcomes through simulations and applications.
4. Analyze the efficiency and equity implications of government interference in markets
5. Connect theoretical concepts introduced in class and real world issues, events, and behaviors.
6. Demonstrate understanding of the insight and limits of our models.

#### ECON 2005: Game Theory

1. Find out effective strategies for agents in strategic situations to address social issues.
2. Analyze the main assumptions and limitations of rational choice theory from multiple behavioral and social perspectives.
3. Cross disciplinary boundaries to reveal new patterns and connections that reframe knowledge.
4. Analyze the assumptions and actions of society from multiple perspectives.
5. Develop and apply appropriate quantitative problem solving skills in the context of various economic and social issues.

#### ECON 2010: Political Economy of Gender

1. Students will demonstrate understanding of current developments in economics of gender
2. Students will demonstrate understanding of gender division of labor in paid and unpaid spheres, gendered patterns of employment and unemployment, segregation and discrimination in labor markets, gender wage gap, gender inequalities in ownership of assets such as land, access to resources such as credit, and feminization of poverty.
3. Students will analyze feminist approaches to the field of economics that aims to incorporate gender into economics at the macro and micro levels.
4. Students will be able to critically assess race, class and ethnicity and other important categories of economic analysis that connect to and work alongside gender in a multidisciplinary framework.

### ECON 2140: U.S. Economic History

1. Describe reasons for key developments in American economic history.
2. Explain the connection between the economy, government policy and work over time;
3. Think creatively and with complexity about the implication of economic developments for upward mobility, social and cultural influence, and politics.
4. Connect key theories and ideas about how the economy works to specific historical contexts.
5. Communicate intelligently and with information about the variety of experiences with capitalism and its development.
6. Read the landscape of American cities and towns to apply the economic past to the future potential of these spaces.
7. Engage with the creativity and risk-taking of past entrepreneurs and consider how these developments came about.
8. Produce engaging, intelligent interpretations of physical artefacts of economic history accessible to a general audience.

### ECON 2400: Money and Banking

1. Display an understanding of news relating to monetary policies reported in such publications as *The Wall Street Journal* or the *Economist*.
2. Discuss how banks and other financial institutions create money and allocate credit.
3. List and describe the factors that affect the equilibrium interest rate in the bond market.
4. Apply techniques related to interest rate calculations.
5. Describe the causes and consequences of the global financial crisis of 2007-2009.
6. Identify the factors that affect the monetary base and discuss their effects on the Federal Reserve's balance sheet.

### ECON2500: Economic Development

1. Students will be able to demonstrate understanding of and describe economic development within the context of major problems such as poverty, inequality, population growth, the impact of very rapid urbanization and expansion of megacities,



environmental decay along with the twin challenges of government failure and market failure.

2. Students will be able to critically analyze economic underdevelopment and the interaction between developed and developing countries.

#### ECON 2600: Public Finance

1. Analyze basic economic models related to public finance such (i.e., economic welfare).
2. Critically assess and discuss current economic issues related to government's role in the economy.
3. Define, quantify, and graphically represent key public finance concepts such as but not limited to public goods, externalities, the free-rider problem, median voter theorem, subsidies, and pigouvian taxes.
4. Exemplify different types of government interventions in the economy (i.e., taxation) and identify their use in the real world.
5. Identify and critically assess the societal costs and benefits related to the imposition of a tax or other government tools of intervention.
6. Describe the effects of taxation graphically, in words, and mathematically on labor supply decisions.
7. Explain the political economy aspects of public finance in a multidisciplinary context such as how different levels of government interact as well as the strategies that can be taken to combat these behaviors.
8. Describe and model the US taxation and budgeting system and identify the main areas of spending using individual and firm tax records along with economic data.

#### ECON 3000: History of Economic Thought

1. Students will be able to assess the continuity and discontinuity between classical political economy, neoclassical economics, Keynesian, the Post-Keynesian Economics, and other contemporary diversity in economic thought.
2. Students will be able to discuss the links between the evolution of Western economies and the emergence of economics as a distinct discipline.

3. Students will be able to define and discuss the mercantilist, early institutionalist, and heterodox schools of economics, including Marxian theory, which have challenged mainstream economics.
4. Students will be able to trace the development of neoclassical marginalism, and to identify the areas of agreement and disagreement between the classical and neoclassical approaches in economics.
5. Students will be able to discuss the historical context and content of the Keynesian revolution, as well as the subsequent developments and criticisms of Keynesianism.

#### ECON 3002: Basic Data Skills

- 1) Construct frequency tables and their graphical representations for qualitative and quantitative datasets using Excel.
- 2) Calculate numerical measures of central tendency for quantitative data using Excel,
- 3) Construct a crosstabulation for datasets involving more than one variable using pivot tables on Excel.
- 4) Use FRED add-in on Excel to download time series of unemployment rate, real and nominal GDP levels, various prices indices, change their aggregation frequency, calculate their growth rates, and study the scatter plots of these macroeconomic variables.
- 5) Deflate nominal variables such as nominal disposable income by using CPI.
- 6) Calculate gendered occupational segregation for the U.S. economy for the recent years by downloading the detailed occupation distribution datasets from BLS.
- 7) Reproduce a histogram of the temperature anomalies in the Northern Hemisphere from a *New York Times* article and study the change in the distribution of temperature anomalies between 1951-80 and 1981-2020 period to measure climate change.

#### ECON 3550: International Economics

1. Discuss different trade theories that have been developed historically.
2. Demonstrate comparative advantage of a country in 2 country 2 goods framework.
3. Demonstrate how trade allows a country to consume beyond its ability to produce.
4. Discuss how the Stolper-Samuelson theory explains gains from trade.

5. Articulate the characteristics of global systems, including the specific structure and functions of various international institutions as well as the roles played by nation-states, multinational corporations, and a wide variety of non-governmental organizations and social institutions.
6. Discuss the arguments in favor of protection from international trade by historically tracing their use by developed countries of today.
7. Examine the process of intra-industry trade with real data sets U.S. sectoral exports and imports.
8. Work with a group to research an international organization/ policy/ or international trade dispute case study and make a presentation on it.
9. Critically explore the implications of international trade theories such as comparative advantage for developing countries and how they might create a race to the bottom for these countries using perspectives beyond neoclassical economics.
10. Critically explore the consequences of integrated trade and capital mobility at the global level for the bargaining power of labor in developed and developing countries using perspectives beyond neoclassical economics.

#### ECON 3650: Intermediate Macroeconomics

1. Calculate various macroeconomic indicators, multipliers, solve various economic models namely the IS-LM model, and the IS-LM-PC model.
2. Apply the course materials to historical and current macroeconomic problems.
3. Research the values of current macroeconomic indicators and variables.

#### ECON 3660: Intermediate Microeconomics

1. Quantify microeconomic models and methodologies and apply them to economic issues
2. Explain consumer and producer optimizing behavior under various conditions
3. Identify conditions under which market behavior leads to inefficient outcomes and assess societal costs and benefits
4. Demonstrate understanding of the insight and limits of our models
5. Connect theoretical concepts introduced in class to real world issues, behaviors and between disciplines in applications, writing and discussions

6. Demonstrate understanding of economic models and variant outcomes by engaging in experiments

#### ECON 3700: Econometrics

1. Test economic theories using econometric methods by developing hypotheses relevant to general economic or policy question.
2. Demonstrate understanding of economic theory through the use of data.
3. Explain econometric findings and significance in context.
4. Conduct and present, either in writing or in a class presentation, results from a multivariate statistical analysis using appropriate econometric techniques.
5. Use statistical software to analyze data and perform econometric analyses.
6. Identify problems in data analysis and interpretation arising from methodological or data problems.

#### GEOG 3000: Geographic Economic Systems

1. Recognize and explain the causes and patterns of spatial economic systems.
2. Display competency in using the ArcGIS software by mapping economic systems and patterns.
3. Compare the historical development of the capitalist economy to the contemporary geography and spatial organization of production and consumption on a local to global scale.
4. Analyze the processes that constitute globalization and the connections between economic, political, and social processes shaping our globe.
5. Evaluate global economic restructuring by analyzing local and regional economic policies.
6. Understand the origin and geography of spatial inequality as it relates to specific groups including but not limited to workers, gender, and people of specific ethnicities.

#### ECON 4000: Economics Senior Seminar

1. Demonstrate mastery of the skills needed to earn a degree in economics.
2. Engage in individual economic research.

## SLO mapping to courses

The following tables map the course outcomes to program learning outcomes:

1. Students will be able to critically analyze and evaluate issues in local, national, and global economic life using evidence-based arguments

Course	Course LO
ECON 1100: Principles of Macroeconomics	LO3
ECON 1200: Principles of Microeconomics	LO4
ECON 2005: Game Theory	LO1
ECON 2010: Political Economy of Gender	LO1, LO2, LO3, LO4
ECON 2140: US Economic History	LO1, LO3, LO5
ECON 2400: Money and Banking	LO5
ECON 2500: Economic Development	LO1, LO2
ECON 2600: Public Finance	LO1
ECON 3000: History of Economic Thought	LO4
ECON 3002: Basic Data Skills	LO4, LO5, LO6, LO7
ECON 3550: International Economics	LO3, LO8
ECON 3650: Intermediate Macroeconomics	LO1
ECON 3660: Intermediate Microeconomics	LO3, LO5
ECON 3700: Econometrics	LO1, LO3
GEOG 3000: Geographic Economic Systems	LO5

ECON 4000: Economics Senior Seminar	LO1, LO2
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2. Students will be able to articulate economic models in a multidisciplinary context

Course	Course LO
ECON 1100: Principles of Macroeconomics	LO4
ECON 1100: Principles of Macroeconomics	LO3, LO5
ECON 2005: Game Theory	LO3
ECON 2010: Political Economy of Gender	LO4
ECON 2140: US Economic History	LO2, LO3, LO4
ECON 2500: Economic Development	LO1
ECON 2600: Public Finance	LO7
ECON 3000: History of Economic Thought	LO5
ECON 3002: Basic Data Skills	LO6, LO7
ECON 3550: International economics	LO1
ECON 3650: Intermediate Macroeconomics	LO2
ECON 3660: Intermediate Microeconomics	LO5
ECON 3700: Econometrics	LO3, LO6
GEOG 3000: Geographic Economic Systems	LO3, LO4, LO6

3. Students will be able to demonstrate understanding key economic concepts

Course	Course LO
ECON 1100: Principles of Macroeconomics	LO1, LO2, LO4, LO5
ECON 1200: Principles of Microeconomics	LO1, LO3, LO6
ECON 2005: Game Theory	LO2
ECON 2010: Political Economy of Gender	LO2
ECON 2140: US Economic History	LO4
ECON 2400: Money and Banking	LO2, LO3
ECON 2600: Public Finance	LO1
ECON 3000: History of Economic Thought	LO1, LO2, LO3
ECON 3002: Basic Data Skills	LO4, LO5
ECON 3550: International Economics	LO3, LO6
ECON 3650: Intermediate Macroeconomics	LO3
ECON 3660: Intermediate Microeconomics	LO2, LO4, LO4, LO6
ECON 3700: Econometrics	LO1
GEOG 3000: Geographic Economic Systems	LO1
ECON 4000: Economics Senior Seminar	LO1, LO2

- a. through the use of quantitative reasoning

Course	Course LO
ECON 1100: Principles of Macroeconomics	LO3

ECON 1200: Principles of Microeconomics	LO2
ECON 2005: Game Theory	LO5
ECON 2400: Money and Banking	LO4
ECON 2600: Public Finance	LO3, LO6
ECON 3002: Basic Data Skills	LO2
ECON 3550: International economics	LO2
ECON 3650: Intermediate Macroeconomics	LO1
ECON 3660: Intermediate Microeconomics	LO1
ECON 3700: Econometrics	LO3

4. Students will be able to apply economic theory through experiential learning

Course	Course LO
ECON 1100: Principles of Macroeconomics	
ECON 1200: Principles of Microeconomics	LO3
ECON 3700: Econometrics	LO1
ECON 2005: Game Theory	LO1
ECON 2140: US Economic History	LO7
ECON 2400: Money and Banking	LO1
ECON 2600: Public Finance	LO8
ECON 3002: Basic Data Skills	LO1
ECON 3550: International economics	LO5, LO8
ECON 3650: Intermediate Macroeconomics	LO3



ECON 3660: Intermediate Microeconomics	LO6
ECON 3700: Econometrics	LO1
GEOG 3000: Geographic Economic Systems	LO1, LO4, LO5
ECON 4000: Economics Senior Seminar	LO2

5. Students will be able to communicate economic ideas effectively
- a. through the use of statistical analysis

Course	Course LO
ECON 2600: Public Finance	LO8
ECON 3002: Basic Data Skills	LO1, LO2, LO3
ECON 3550: International economics	LO5
ECON 3650: Intermediate Macroeconomics	LO3
ECON 3700: Econometrics	LO1, LO5, LO6
GEOG 3000: Geographic Economic Systems	LO2
ECON 4000: Economics Senior Seminar	LO2

- b. through the use of writing

Course	Course LO
ECON 1100: Principles of Macroeconomics	LO2, LO4, LO5

ECON 1200: Principles of Microeconomics	LO1
ECON 2005: Game Theory	LO2
ECON 2010: Political Economy of Gender	LO3, LO4
ECON 2140: US Economic History	LO5, LO8
ECON 2400: Money and Banking	LO2, LO3, LO5
ECON 2500: Economic Development	LO1
ECON 2600: Public Finance	LO6, LO7, LO8
ECON 3000: History of Economic Thought	LO1
ECON 3550: International Economics	LO1, LO3
ECON 3660: Intermediate Microeconomics	LO3, LO5
ECON 3700: Econometrics	LO4
GEOG 3000: Geographic Economic Systems	LO4, LO5, LO6
ECON 4000: Economics Senior Seminar	LO2

c. through the use of oral skills

Course	Course LO
ECON 1100: Principles of Macroeconomics	LO2, LO4, LO5
ECON 1200: Principles of Microeconomics	LO1

ECON 2010: Political Economy of Gender	LO4
ECON 2140: US Economic History	LO2, LO5
ECON 2400: Money and Banking	LO2, LO5
ECON 2500: Economic Development	LO1
ECON 2600: Public Finance	LO2, LO3, LO5
ECON 3000: History of Economic Thought	LO2, LO3, LO5
ECON 3550: International Economics	LO1, LO4
ECON 3660: Intermediate Microeconomics	LO2, LO5
ECON 3700: Econometrics	LO3
GEOG 3000: Geographic Economic Systems	LO1
ECON 4000: Economics Senior Seminar	LO1, LO2

6. Students will be able to identify assumptions and assess implications of diverse economic perspectives

Course	Course LO
ECON 1100: Principles of Macroeconomics	LO2, LO4
ECON 1200: Principles of Microeconomics	LO4
ECON 2005: Game Theory	LO1
ECON 2010: Political Economy of Gender	LO2

ECON 2140: US Economic History	LO3, LO6, LO7
ECON 2400: Money and Banking	LO5
ECON 2500: Economic Development	LO1, LO2
ECON 2600: Public Finance	LO2, LO3, LO5
ECON 3000: History of Economic Thought	LO1
ECON 3550: International Economics	LO9, LO10
ECON 3650: Intermediate Macroeconomics	LO2
ECON 3660: Intermediate Microeconomics	LO3, LO4
ECON 3700: Econometrics	LO6
GEOG 3000: Geographic Economic Systems	LO6
ECON 4000: Economics Senior Seminar	LO1, LO2

### Annual Assessment Report findings

The economics assessment plan was completed in summer 2020. To directly assess our program, we plan to use research papers from our capstone economics course (ECON 4000: Economics Senior Seminar) and to evaluate them using components of the AAC&U Value Rubrics (details of the plan can be found in Appendix F the Assessment Report). The capstone course is currently offered every other year to minors and majors in their third or fourth year due to our program size. In order to assess our program annually, we will also disseminate a survey each year to third- and fourth-year majors and minors to indirectly assess our program. We will also consider input from an external examiner of our program at the end of every five-year assessment cycle.

## Direct and indirect assessment data and analyzation

As described in the previous section the economists developed a very robust new assessment plan (See Appendix F). This assessment plan focuses on collection of data from the Economics Senior Seminar, which will be available for the first time under the new assessment plan at the end of the spring 2022 semester.

In the interim, as this plan was being developed, the economists collected other data to help to evaluate and make changes in the economics program. They administered a survey to all of our students and had a fairly large response with well over 100 responses in spring of 2018.

Based on that survey, the economists launched new courses and altered the availability of other courses. The faculty made changes to how frequently we offer Intermediate Macroeconomics and Intermediate Microeconomics, and the number of introductory macroeconomics and microeconomics courses offered each semester based on student feedback and our reviewer's (Dr. Mary Dugan) comments and suggestions.

Other changes have been made based on our collective observations and experiences with students in terms of what they need to graduate as well as meeting with other programs (like business and CIS). For example, the economists adjusted the course requirements to better suit our students, specifically in conjunction with changes to the mathematics program.

FLIP has also influenced the economics program in terms of creating courses and research opportunities and FLIP came from our experiences with Harvard Innovations Lab as well as the Crocker Center.

## *Internship and service learning scores/evaluations*

Since the economics program is not highly prescriptive, there is a lot of scope for students to undertake internships, and the economics faculty have been strongly encouraging students to do internships. The following is a list of students who have carried out internship programs since the last economics program review and the place in which the internship took place:

Joseph Bourgeois: Accounting Department of Fitchburg State University (2020)

Nicholas Fortin: Washington Center- Government Relations Intern (Fall 2018)

Keith Leblanc: Enterprise Rent a Car (2018)

Mackenzie Gray: Mayor's Office for the City of Fitchburg (Summer 2018)

Adam Stephano: Community and Economic Development Office for Town of Gardner (2017)

Erol Kilicarslan: Oak Lawn International (2016)

Jon Johannesson: ANAI Global Investments (2016)

### *Trend Data Reflection/Analysis*

Overall, trend data show that the economics program attained a higher trajectory level for both the number of students majoring and minoring in economics since 2017 AY (For time to degree completion numbers, please see Appendix D). This was made possible by providing a diverse range of upper-level economics courses with only three faculty working full-time. Moreover, as mentioned above, faculty have been designing new economics courses, such as FYE: Economics of Behavior, Game Theory, and Basic Data Skills for Economics and Business to attract more students to study economics.

### *Analysis and Action Plan for Future*

During the self-study of the economics program, we found many notable strengths. First, all three faculty members are committed to work in inequality and gender. Therefore, there is harmony between the courses we have created for our program (i.e., Political Economy of Gender, Economics of Inequality) as well as a strong focus on how we teach and how students experience our core and existing elective courses.

We have also been able to provide hands-on, real-world experiences for our students through student-faculty research. Not only have we published a paper authored by two economics faculty and an economics student, but we have also collaborated with several research assistants over the past several years. Based on the synergy of the shared faculty and student research interests, we founded Fitchburg Local Innovation Project (FLIP) to offer students the

opportunity to engage with the community in a meaningful way through economic research. We created a series of goals for this project which included a new course and internship opportunities. These types of initiatives display our high investment per student in the economics program.

We also found opportunities to improve our major, minor, and concentrations during our self-study. We are a small major. In trying to explore the cause of our low numbers, we found that students either (1) chose not to pursue the economics major because they cannot complete the course of study in a timely manner, or (2) chose not to pursue the economics major because of the lack of variety in course offerings. Both of these issues are a direct result of our small faculty base.

As a group of three full-time faculty members, we are constantly forced to choose between offering our core courses consistently enough to move our students through the program in four years or offer a variety of courses so that students experience different fields and topics in our discipline to prepare them for careers and graduate studies. Therefore, we face the longer-term issue of growth as we are choosing to satisfy immediate needs of our students (i.e., offering a course or even directed study to allow our major to graduate) rather than building a complementary set of core and elective courses that would optimize the student experience and, inevitably, return on investment. We have also lost students enrolled in the International Business and Economics concentration since we have not been able to offer the full range of courses required to complete the concentration.

We have been proactive in dealing with this hurdle. The economics faculty have targeted minor growth over the last three years. Overall, we have been successful in this feat. We have grown our minors consistently throughout our seven-year tenure and have reached (and often exceeded) enrollment in both our principles and upper-level courses. Table VI below displays the data for fall 2019 to spring 2020:

**Table VI. Requirement and Elective Course Enrolments**

<i>Source: FSU Registrar seat list</i>	Fall 2019 Enrollment	Spring 2020 Enrollment	Summer 2019 Enrollment
ECON1100	76/75	50/50	
ECON1200	74/75	74/75	15/25
Electives	69/75	62/66	
Major Requirements*	47/50	25/25	

We have tried to take an interdisciplinary approach within our program in order to attract more minors and students interested in an economics concentration. Most recently, we have done this by founding FLIP. However, we also have difficulty meeting the goals for this project given our limited resources. Moving forward, we would like to revisit this initiative in the classroom and explore opportunities for offering FLIP as a concentration housed in the economics program which draws from courses in both our and other disciplines exploring community-based inequality. Further, we plan to revisit the international business and economics concentration and amend the requirements to include more multidisciplinary courses (i.e., business course) and courses we teach consistently while dropping courses that we do not offer (i.e., International Finance).

We also address this issue by offering cross-listed courses, such as Game Theory and Geographic Economic Systems, which count toward both the economics major and other majors. Since economics is not a highly prescriptive major, these courses allow the opportunity for students to experience economics and possibly explore a double major or minor. The economists have also been proactive in applying for course designations in the new general education curriculum in order to reach students from other majors (or pre-majors) with our principles courses.

While we are interested in continuing to grow our minor and increase the number and quality of concentrations in our program, we are committed to the economics major student experience. One way we intend to improve our major is to require the Economics Senior Seminar course to graduate. The course teaches invaluable skills in the economics field including research methods and applications. Since we consistently struggle with enrollment in ECON 4000: Economics Senior Seminar, we are willing to explore how this course could teach the same skills to a broader (less senior) audience. We are currently thinking that a Research Methods or Topics in Economics course could be appropriate.

We are a small but mighty program, and we believe a few initiatives could improve our program without further straining our limited resources. Fortunately, we have been able to dedicate a lot of our resources to each major by writing letters of recommendation, facilitating



and/or supervising internships and research assistant work, and offering our network to potential graduates. The economics program has been fortunate to graduate many students who go on to successful careers, and we are proud to be able to provide them a high-quality experience in the classroom and out.

## Appendices

### Appendix A Course Enrollment Data

Semester	Course	Enrolment
Fall 16	Macroeconomics	105
Fall 16	Microeconomics	52
Fall 16	Money and Banking	20
Fall 16	Economic Development	13
Fall 16	Public Finance	14
Fall 16	Internship	1
Fall 16	Total	205
Spring 17	Macroeconomics	60
Spring 17	Microeconomics	90
Spring 17	Game Theory	21
Spring 17	Senior Seminar	5
Spring 17	Economic History	9
Spring 17	International Economics	18
Spring 17	Intermediate Macroeconomics	2
Spring 17	Intermediate Microeconomics	2
Spring 17	Total	207
Fall 17	Macroeconomics	106
Fall 17	Microeconomics	61
Fall 17	Money and Banking	28
Fall 17	Public Finance	16
Fall 17	HET	15
Fall 17	Intermediate Microeconomics	13
Fall 17	Total	239
Spring 18	Macroeconomics	57
Spring 18	Microeconomics	98
Spring 18	Political Economy of Gender	20
Spring 18	US Economic History	12
Spring 18	Intermediate Macroeconomics	26
Spring 18	Internship	2
Spring 18	Total	215
Fall 18	Macroeconomics	91
Fall 18	Microeconomics	58
Fall 18	Money and Banking	25
Fall 18	HET	19
Fall 18	International Economics	20
Fall 18	Econometrics	14
Fall 18	IS:Gov't & Bus in the New Econ	1
Fall 18	Internship	1
Fall 18	Total	229
Spring 19	Macroeconomics	50

Spring 19	Microeconomics	79
Spring 19	Game Theory	25
Spring 19	Senior Seminar	8
Spring 19	Political Economy of Gender	29
Spring 19	Intermediate Macroeconomics	1
Spring 19	Intermediate Microeconomics	20
Spring 19	Total	212
Fall 19	Macroeconomics	101
Fall 19	Microeconomics	74
Fall 19	Money and Banking	22
Fall 19	Economic Development	21
Fall 19	HET	24
Fall 19	Total	242
Spring 20	Macroeconomics	50
Spring 20	Microeconomics	99
Spring 20	Game Theory	23
Spring 20	Money and Banking	1
Spring 20	Intermediate Macroeconomics	26
Spring 20	Independent Research	1
Spring 20	Total	200
Fall 20	Macroeconomics	98
Fall 20	Microeconomics	50
Fall 20	Money and Banking	26
Fall 20	Economic Development	12
Fall 20	HET	6
Fall 20	International Economics	20
Fall 20	Intermediate Microeconomics	24
Fall 20	Total	236

## Appendix B- Economics Trend Data

<b>Economics Trend Data</b>									
<b>Undergraduate Day</b>									
	<b>AY 13</b>	<b>AY 14</b>	<b>AY 15</b>	<b>AY 16</b>	<b>AY 17</b>	<b>AY 18</b>	<b>AY 19</b>	<b>AY 20</b>	<b>AY 21</b>
<b>Total Enrollment in ECON classes</b>	<b>425</b>	<b>422</b>	<b>469</b>	<b>424</b>	<b>412</b>	<b>454</b>	<b>441</b>	<b>442</b>	<b>451</b>
Total Enrollment in All Classes	32,683	33,952	34,081	34,062	34,169	34,257	33,695	31,983	27,479
<b>Percentage of total enrollment: ECON classes</b>	<b>1.30%</b>	<b>1.24%</b>	<b>1.38%</b>	<b>1.24%</b>	<b>1.21%</b>	<b>1.33%</b>	<b>1.31%</b>	<b>1.38%</b>	<b>1.64%</b>
<b>Graduates in the Major</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>2</b>	
Economics, B.S.	2	1	3	3	4	3	4	1	
International Business and Economics	1	0	2	2	1	2	0	1	
<b>Graduates in the Minor</b>									
Economics Minor	9	5	6	3	11	10	13	12	
<b>Number of Majors<sup>2</sup></b>	<b>24</b>	<b>19</b>	<b>23</b>	<b>14</b>	<b>22</b>	<b>23</b>	<b>29</b>	<b>21</b>	<b>19</b>
Overall declared majors <sup>3</sup>	3,748	3,824	3,806	3,840	3,862	3,837	3,805	3,604	3,287
<b>Percentage of overall declared majors</b>	<b>0.64%</b>	<b>0.50%</b>	<b>0.60%</b>	<b>0.36%</b>	<b>0.57%</b>	<b>0.60%</b>	<b>0.76%</b>	<b>0.58%</b>	<b>0.58%</b>
International Business and Economics	6	6	7	4	8	7	7	3	2
Economics, B.S. (Undeclared)	18	13	16	10	14	16	22	18	17
<b>Number of incoming freshmen majors</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>1</b>
<b>Number of incoming transfer majors</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>
<b>Number of Minors</b>									
Economics Minor	17	14	19	19	31	31	34	32	31
<b>Retention Rates<sup>5</sup></b>									
Number in the Cohort	3	3	0	2	0	5	2	2	1
Retention Rate in Major	33.33%	0.00%		50.00%		60.00%	50.00%	0.00%	100.00%
Retention Rate Changed Major	33.33%	66.66%		0.00%		20.00%	50.00%	0.00%	0.00%
Retention Rate in Major Institutional	57.91%	62.52%	62.15%	58.75%	62.36%	65.17%	61.38%	61.71%	62.99%
Retention Rate Changed Major Institutional	16.11%	15.56%	15.19%	16.11%	12.55%	12.80%	11.98%	11.78%	13.58%
<b>Undergraduate Evening</b>									
	<b>AY 13</b>	<b>AY 14</b>	<b>AY 15</b>	<b>AY 16</b>	<b>AY 17</b>	<b>AY 18</b>	<b>AY 19</b>	<b>AY 20</b>	<b>AY 21</b>
<b>Total Enrollment in ECON classes</b>	<b>41</b>	<b>52</b>	<b>40</b>	<b>24</b>	<b>21</b>	<b>41</b>	<b>42</b>	<b>38</b>	
Total Enrollment in All Classes	3,879	4,015	4,103	3,750	3,510	3,759	3,798	4,454	
<b>Percentage of total enrollment: ECON classes</b>	<b>1.06%</b>	<b>1.30%</b>	<b>0.97%</b>	<b>0.64%</b>	<b>0.60%</b>	<b>1.09%</b>	<b>1.11%</b>	<b>0.85%</b>	
<b>Graduates in the Minor</b>									
Economics Minor	0	0	0	0	1	0	0	1	
<b>Number of Minors</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>

## Appendix C- Gender, Race and Ethnicity Data

	AY 17			AY 21		
	Male	Female	Total	Male	Female	Total
American Indian or Alaskan Native	0	0	0	0	0	0
Asian	0	0	0	1	1	2
Black or African American	2	0	2	3	0	3
Hispanic	2	4	6	0	2	2
More than one	0	1	1	0	0	0
Native Hawaiian or Pacific Islander	0	0	0	0	0	0
Unknown	1	0	1	0	0	0
White	12	2	14	9	3	12
<b>Total</b>	<b>17</b>	<b>7</b>	<b>24</b>	<b>13</b>	<b>6</b>	<b>19</b>

## Appendix D- Time to Degree Completion and Graduation Rates

Cohort	6 Year Graduation Rates ECON Majors				Other major at graduation, if applicable	Time to Degree
	Initial Number in Cohort	Graduated Overall	Graduated in the Major	Graduated in Another Major		Average Time to Degree
Fall 2015	2	0	0	0		NA
Fall 2014	1	1	1	0		2
Fall 2013	0	0	0	0		NA
Fall 2012	3	1	0		1 graduated with BSAD major and ECON minor	4
Fall 2011	3	2	1		1 graduated with BSAD major	4.5
Overall	9	4	2	2		

# Appendix E: Faculty C.V.

**CHRISTA MARR, Ph.D.**  
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## **Education**

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Ph.D. Economics, Clark University (2014)  
Fields: Applied Econometrics, Public Economics, Spatial Economics  
Dissertation: *Exploring Income Inequality in the United States through Redistribution Preferences, Intergenerational Mobility, and Political Polarization*  
M.A. Economics, Clark University (2012)  
B.A. Economics & International Studies, *Summa Cum Laude*, University of Southern Maine (2008)  
GPA: 3.99

## **Certifications**

Courses towards *Certificate in College Teaching*, Worcester College Consortium (2010)

## **Professional Experience**

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Tenured Associate Professor Department of Economics, History, and Political Science. Fitchburg State University, Fitchburg, Massachusetts. (2015-Present)  
Assistant Professor (tenure-track), Department of Economics. Rollins College, Winter Park, Florida. (2014-2015)

## **Skills and Languages**

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STATA, R, LatentGOLD, ArcGIS, GeoDa, CHAID, Excel, French (intermediate)

## **Teaching Experience**

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### **Instructor**

#### **Fitchburg State University**

*Introduction to Microeconomics*, Department of EHPS, Fall 2015- 2020  
*Intermediate Microeconomics*, Department of EHPS, Fall 2015-Fall 2020  
*First Year Experience*, Fall 2018 (Pilot)-2020  
*Economics Senior Seminar*, Department of EHPS, Spring 2017 and 2019  
*Current Events and Service Learning*, Honors Program, Spring 2016-2019  
*Econometrics*, Department of EHPS, Spring 2016 and Fall 2018  
*Public Finance*, Department of Economics, History, and Political Science, Fall 2015-2017  
*Global Issues*, Department of Interdisciplinary Studies, Spring 2017 and 2018  
*Introduction to Macroeconomics*, Department of EHPS, Winter 2017  
*Geographic Economic Systems*, Departments of EHPS and Earth and Geographic Sciences, Fall 2016

#### **Rollins College**

*Statistics for Social Science*, Interdisciplinary, Hamilton Holt Evening School, Spring 2015.  
*Intermediate Microeconomics*, Department of Economics, Fall 2014-Spring 2015.  
*Economics of Contemporary Issues*, Department of Economics, Fall 2014.

#### **Clark University**

*Introduction to Statistics*, Department of Economics, Fall 2013-Spring 2014  
*Principles of Economics (Microeconomics)*, Dept. of Economics, Spring 2013  
*Statistics*, Department of Math, College of Professional and Continuing Education (COPACE), Spring-Summer 2012

### **Teaching Assistant**

#### **Clark University**

*Intermediate Macroeconomics, Introduction to Microeconomics, Introduction to Statistics, Intermediate Microeconomics* Department of Economics, Clark University, Fall 2009-Spring 2012

## Research

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### *Publications*

“Local Intergenerational Mobility” with Andros Kourtellos and Chih Ming Tan, *European Economic Review*, vol. 126 (C), 2020.

“Robust Determinants of Intergenerational Mobility in the Land of Opportunity” with Andros Kourtellos and Chih Ming Tan, *European Economic Review*, 81, p. 132-147, 2016.

“Feminization of Labor and Profit Rates: Evidence from OECD Countries” with Adem Elveren and Yvonne Renard, *Applied Economic Letters*, July 2016.

### *Working Papers*

“Understanding Changes in Attitudes towards Redistribution and Government after the Great Recession” with Chih Ming Tan, 2020 (*under review*)

**Abstract:** Using the first release of the three-wave, four-year General Social Survey panel dataset, we find that changes in redistribution preferences are associated with changes in confidence in government after the Great Recession. We use latent class analysis to systematically account for heterogeneity and uncover four distinct preference groups. A variety of personal characteristics define group membership, yet movement between and within groups can be partially explained by changes confidence in government. Republicans in particular are more likely to associate government mistrust with low (no) demand for government action in reducing income differences. We also find that those who are downwardly mobile as well as those who become unemployed over the observed period demand more redistribution. This paper suggests potential effects of the Great Recession on redistribution preferences, confidence in government, and the relationship between the two.

“Assessing the Effect of Income Inequality and Intergenerational Mobility on Political Polarization: A State-Level Analysis,” 2017

**Abstract:** This paper explores how income inequality and intergenerational mobility affect political polarization in the United States in years surrounding the financial crisis. Following Garand (2010), I look at how state-level income inequality directly and indirectly impacts polarization of state legislators. I find that state income inequality has a stronger direct impact on senator polarization from 2006 to 2015 than from Garand's (2010) 1985 to 2002 analysis. Polarization within the electorate also has a stronger impact on senator partisanship. Results show that intergenerational income mobility impacts political polarization indirectly through their impact on demand for redistribution. Higher income persistence leads to stronger individual demand for redistribution, which leads Congressmen to vote more liberally. There is limited evidence to show that state-level mobility directly impacts senator roll-call polarization.

### *Works in Progress*

“Political Polarization and the Trump Vote: Using Latent Class Methodology to Understand Confidence in Government and Voting Behavior,” with Chih Ming Tan 2019

**Abstract:** uses General Social Survey data (1972-2018) and latent class modeling to explore trends of heightened political polarization in recent years. This paper explores how the recession and the past three elections have changed views on government and redistribution preferences. We uncover groups based on views on government and redistribution preferences who share similar education, income, race, (perceived) mobility and other demographics. Interestingly, we find specific groups have become increasingly polarized in the years since the Great Recession (2008-2018). We plan to relate these findings to recent existing literature on groups that voted strongly for Trump (such as the “left behind” thesis explored in Mutz (2018) and “status threats” as covered in Morgan (2018)) or who have otherwise demonstrated polarized political views.

“Profit Rates, Informality, and Feminization of Labor” with Adem Elveren and Ceyhun Elgin 2019.

**Abstract:** The informal economy refers to all economic activities that contribute to the officially calculated national income but are not registered. The feminization of labor is defined as women’s increased participation in paid work as well as to the deterioration of working conditions in previously male jobs. Although there has been growing literature on the effects of these two phenomena on economic growth or income inequality, there is not any study that addresses their relationship with the profit rates, which is the key indicator of a capitalist economy. The goal of this project is to empirically investigate this relationship with global data.



“Is the American Dream in Crisis? Temporal and Spatial Dimensions of Intergenerational Mobility in the United States,” 2017

**Abstract:** This paper explores the spatial and temporal dimensions of intergenerational mobility using the leading sources of intergenerational income elasticity measurements in the United States. I compare changes in the persistence of income between parents and their children using the Panel Study for Income Dynamics (PSID), two cohorts from the National Longitudinal Survey of the Youth (NLSY), and comprehensive mobility estimates based on tax record data made available through the Equality of Opportunity Project. This paper seeks to examine how and if intergenerational mobility has changed in the United States since the 1970s, a decade that marks the beginning of rising income inequality. Further, by accessing geocode and restricted data, I measure how intergenerational mobility varies at different spatial scales including commuting zone and voting district.

### Selected Honors, Grants, Fellowships and Awards

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Invited Speaker, Siena College Department of Economics Seminar Series, 2016.  
Junior Faculty Mentoring Workshop, Committee for the Status of Women in the Economics Profession, 2015  
Graduate Student Association Travel Award, Clark University, 2013  
Sheftel Travel Award, Department of Economics, Clark University, 2013  
Dissertation Fellowship, Department of Economics, Clark University, 2012  
Summer Research Assistantship, Department of Economics, Clark University, 2011-13  
Sheftel Fund Grant, Department of Economics, Clark University, 2011  
Faculty Development Grant with Chih Ming Tan, Clark University, 2010-2011  
Outstanding Teaching Assistant Award, Clark University, 2010

### Presentations

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Presentation of “Assessing the Effect of Income Inequality and Intergenerational Mobility on Political Polarization: A State-Level Analysis,” 2017

- Eastern Economics Association 44<sup>th</sup> Annual Conference, *Determinants of Electoral Outcomes*, Boston, March 2018.

Presentations of “Local Intergenerational Mobility” formerly “Local Measures of Intergenerational Mobility of Income, Cognitive, and Noncognitive Skills”:

- Eastern Economics Association 46<sup>th</sup> Annual Conference, *Immigration, Intergenerational Mobility and Desegregation*, Boston, February 2020.
- 86<sup>th</sup> Southern Economic Association Conference. *Applied Econometrics*. Washington, D.C., November 2016.
- Siena College Department of Economics Seminar Series. Loudonville, New York, April 2016.
- 79<sup>th</sup> International Atlantic Economic Conference. *Human Capital: Intergenerational Transfers and Individual Accumulation*. Boston, Massachusetts, October 2015.

Presentations of “Robust Determinants of Intergenerational Mobility in the Land of Opportunity”:

- 2015 Econometric Society World Congress. *Redistribution*. Montreal, Quebec, August 2015.

Presentations of “Understanding Changes in Attitudes towards Redistribution and Government after the Great Recession”:

- Fitchburg State University Faculty Research Symposium. *Session 1*. Fitchburg, Massachusetts. May 2019.
- 78<sup>th</sup> International Atlantic Economic Conference. *Demographic Economics*. Savannah, Georgia, October 2014.
- Canadian Economics Association 47<sup>th</sup> Annual Conference of the CEA. *Giving, Redistribution and Social Preferences*, Canadian Public Economics Group Session. Montreal, Quebec, June 2013.
- Eastern Economics Association 39<sup>th</sup> Annual Conference. *Some Lessons from the 2008 Financial Crisis*. New York, New York, May 2013.
- Clark University Graduate Student Council 11<sup>th</sup> Annual Multidisciplinary Conference. *Economic Exchanges*. Worcester, Massachusetts, April 2013.
- Clark University Graduate Student Council Multidisciplinary Conference. Worcester, Massachusetts, April 2012.
- Eastern Economic Association 38<sup>th</sup> Annual Conference. *Modeling Uncertainty and Heterogeneity in Economic Growth and Development*. Boston, Massachusetts, March 2012. (Under alternative title: “Chutes and Ladders: Understanding the Interplay Between Preferences for Redistribution and Intergenerational Mobility.”)

- University of Southern Maine Department of Economics Presentation Event. Portland, Maine, December 2012.

Other presentations and professional service:

- Attendee Eastern Region Campus Compact Biennial Conference (March 2019) and Massachusetts Department of Higher Education's Civic Learning and Engagement Conference (May 2018)
- Discussant 38<sup>th</sup>, 39<sup>th</sup>, 44<sup>th</sup> , and 46<sup>th</sup> Eastern Economic Association Conferences, 85<sup>th</sup> and 86<sup>th</sup> Southern Economic Association Conferences, 78<sup>th</sup> and 79<sup>th</sup> International Atlantic Economic Society Conference, 47<sup>th</sup> Canadian Economic Association Conference
- Teaching Assistant Grading Workshop, Clark University Center for Excellence in Teaching and Learning (CETL). Host and Organizer. Worcester, Massachusetts, November 2012 and February 2013
- Northeastern Agricultural and Resource Economics (NAREA) Annual Conference. Professional Service. Lowell, Massachusetts, June 2012

### **Professional Affiliations**

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Member of Eastern Economic Association, American Economic Association, Canadian Economics Association, and Southern Economic Association; active participant in the Committee for the Status of Women in the Economics Profession (CSWEP); Project: Activate Mill Street Committee; referee for *Feminist Economics*



**ADEM YAVUZ ELVEREN**

Associate Professor

Department of Economics, History and Political Science  
Fitchburg State University, 160 Pearl Street, Fitchburg, MA 01420[www.ademyelveren.com](http://www.ademyelveren.com)Email: [aelveren@fitchburgstate.edu](mailto:aelveren@fitchburgstate.edu)**Education**

2008	Ph.D.	Economics	University of Utah
2004	M.A.	Economics	Boston University
2000	B.A.	Economics	Ankara University

**Research Fields**

Gender and Social Protection, Economics of Gender, Gender and Labor Market, Political Economy of Militarization, Gender and Human Security, Defense Economics

**Professional Positions**

Jan. 2019 -	Research Fellow	Economic Research Forum, Egypt
09/2015 – 08/2019	Asst. Professor	Fitchburg State University
06/2017 - 05/2019	Visit. Researcher	The Institute for the Study of Muslim Societies and Civilizations, Boston University
Spr. 14 – Spr. 15	Adjunct Lecturer	Keene State College, Keene, NH
09/2011-08/2013	Post-Doc. Fellow	Economics, Middle East Technical Uni., Turkey
Fall 2012	Lecturer	Social Policy, Middle East Technical Uni., Turkey
07/2009 – 09/2011	Asst. Prof.	Sutcu Imam University, Kahramanmaras, Turkey
02/2009 – 06/2009	Research Asst. Dr.	Sutcu Imam University, Kahramanmaras, Turkey
Spring 2008	Researcher	University of Texas Inequality Project, Austin, TX
Spring 2008	Adjunct Inst.	University of the Incarnate Word, San Antonio, TX
Spring 06- Fall 07 & Summer 08	Graduate Inst.	University of Utah, Salt Lake City, UT
Fall 2005	Teaching Asst.	University of Utah, Salt Lake City, UT

Assoc. Professor of Social Policy, granted by the Council of Higher Education, Turkey, 2012

**Visiting Positions**

Summer 2011	Visiting Scholar	Department of Statistics, Columbia University, NY
Summer 2010	Visiting Scholar	LBJ School, University of Texas at Austin, TX

## Other Activities

08/2008 – 01/2009	Compulsory Military Service	Kilis, Turkey
Fall 2005	Volunteer Instructor	Utah Refugee Center, Utah

## Projects/Funds

*Consultant*, UN WOMEN, Entity for Gender Equality and the Empowerment of Women, 2021

*Researcher*, Security in Context, 2021

*Senior Gender Mainstreaming Expert*, EU Funded Technical Assistance for Promoting Women's Employment in Turkey, The Turkish Employment Agency, 2012

## Professional Activities

### Guest Editor:

*Research and Policy on Turkey*, Vol. 1 Issue 1, 2016 (with Umit Sonmez).

*Women's Studies International Forum*, Special Issue of Gendering Social Policy and Welfare State in Turkey, Vol. 41, Part 1, 2013 (with Saniye Dedeoglu).

### Member of the Editorial Board:

2018 - present	<i>Economics Literature</i>
2014 - present	<i>Word Journal of Applied Economics</i>
2013 - present	<i>Marmara Journal of European Studies</i>

### Ad hoc Committee Member:

Experts on the Sustainability of the Social Security System for the 10<sup>th</sup> Five-Year Plan, The Ministry of Development, Ankara, Turkey, 2012.

### Refereeing for Journals/Publishers:

*Applied Economics Letters (twice)*, *Defence and Peace Economics (three times)*, *Economic Modelling*, *Economics Literature*, *Economics of Peace and Security Journal*, *Emerging Markets Finance and Trade*, *Estudios de Economia*, *Feminist Economics*, *Global Constitutionalism*, *International Journal of Social Welfare*, *International Migration*, *Journal of European Social Policy*, *Journal of Peace Research*, *Journal of Social Policy*, *Journal of Women, Politics & Policy*, *Marmara Journal of European Studies*, *Mülkiye Dergisi*, *New Perspectives on Turkey (twice)*, *Peace Economics*, *Peace Science and Public Policy*, *Review of Development Economics*, *Review of Radical Political Economics*, *Review of Social Economy*, *Routledge (twice)*, *Structural Change and Economic Dynamics*, *World Journal of Applied Economics*

### Conference Organizations:

*Member of Scientific Committee*, The 22<sup>nd</sup> Annual International Conference on Economics and Security, June 27-30, 2018, The Middle East Technical University, Güzelyurt (Morphou) in Northern Cyprus.

*Member of Referee Committee, The 11<sup>th</sup> and 12<sup>th</sup> Mülkiye Genç Sosyal Politikacılar Kongresi, Ankara University, Turkey [Mülkiye Young Social Politicians Congress]*

*Member of Organizing Committee, The 16<sup>th</sup> Annual International Conference on Economics and Security, June 21-22, 2012, The American University in Cairo.*

*Research Assistant, 7<sup>th</sup> GEM-IWG International Conference: Engendering Macroeconomics and International Economics, July 2-3, 2006, University of Utah, Salt Lake City, Utah.*

## **Publications**

### **Works in Progress**

Book

*Militarization and Gender: Theoretical and Empirical Perspective*, conditional contract with The University of Michigan Press

This is the first book that provides a comprehensive empirical analysis of the relationship between militarization and gender inequality with special attention to the Middle East and North Africa, and Islamic countries to better understand the mechanisms whereby militarization and patriarchy interact.

Under Review

“Militarization and Gender Inequality: Exploring the Impact” (with Valentine M. Moghadam), *Journal of Women, Politics & Policy*

“The Effects of Militarization on Sustainable Development” (with Ceyhun Elgin, Gokcer Ozgur and Gul Dertli), *Review of Development Economics*

### **Books**

**2021**

*Askerî Harcamalar ve Ekonomi Eleştirel Bir Yaklaşım*, İletişim Yayınları, İstanbul  
(Revised Turkish translation of *The Economics of Military Spending A Marxist Perspective*)

Interviewed by

*Evrensel Gazetesi* (A major Turkish newspaper)

Medyascope.tv (A popular Turkish media outlet)

**2019**

*The Economics of Military Spending A Marxist Perspective*, Routledge, (paperback edition in 2020)

Reviewed in

<https://thenextrecession.wordpress.com/2019/11/18/milex-and-the-rate-of-profit/> by Michael Roberts

*Review of Keynesian Economics*, by David M. Fields

*Defence and Peace Economic*, by Can Kakışım

**2018**

*Brain Drain and Gender Inequality in Turkey*, Palgrave Pivot.

### **Edited Books**

**2015**

*2000'ler Türkiye'sinde Sosyal Politika ve Toplumsal Cinsiyet* [Social Policy and Gender in Turkey in the 2000s] (with Saniye Dedeoğlu), İmge Kitabevi Yayınları, Ankara.

**2012**

*Gender and Society in Turkey: The Impact of Neo-Liberal Policies, Political Islam and EU Accession* (with Saniye Dedeoğlu), I.B. Tauris Publishers: London & New York.

Reviewed in

*Gender and Development*, by Ipek Ilkcaracan

*Insight Turkey*, by Feride Aslı Ergül

*Türkiye'de Refah Devleti ve Kadın* [The Welfare State and Woman in Turkey], İletişim Yayınevi, İstanbul. (Second Edition, 2017) (The Revisited Turkish Edition of *Gender and Society in Turkey*)

### **Journal Articles**

**2021**

“Informality, Inequality, and Feminization of Labor” (with Ceyhun Elgin), *Women's Studies International Forum*, <https://doi.org/10.1016/j.wsif.2021.102505>

“Soft Modelling of Military Expenditure, Income Inequality, and Profit Rates” (with Ali Cevat Taşiran), *Peace Economics, Peace Science and Public Policy*, <https://doi.org/10.1515/peps-2020-0013>

“Informality, Inequality and Profit Rate” (with Ceyhun Elgin and Joseph Bourgeois), *Applied Economics Letters*, 28(12): 1017-1020.

**2020**

“Military Spending and Profit Rate: A Circuit of Capital Model with a Military Sector” *Defence and Peace Economics*, <http://dx.doi.org/10.1080/10242694.2020.1832394>

Is Informality a Barrier to Sustainable Development? (with Gokcer Ozgur and Ceyhun Elgin), *Sustainable Development*, 29(1): 45-65.

**2019**

“Hidden Gender Dimensions of the Brain Drain: the Case of Turkey” (with Gülay Toksöz), *New Perspectives on Turkey*, 60(1): 33-59.

**2018**

“The Effect of Military Expenditure on Profit Rates: Evidence from Major Countries” (with Sara Hsu) *World Journal of Applied Economics*, 4(2):75-94.

“The Pious Predator State: The New Regime in Turkey” *Challenge*, 61(1): 85-91.

**2017**

“The Nexus of Economic Growth, Military Expenditures, and Income Inequality” (with Unal Tongur), *Quality and Quantity*, 51(4): 1821-1842.

“Feminization of Labor and Profit Rates: Evidence from OECD Countries” (with Christa Marr and Yvonne Renard), *Applied Economics Letters*, 24 (7): 481-484, 2017.

**2016**

“The Effect of Informal Economy on Income Inequality: Evidence from Turkey” (with Gökçer Özgür), *Panoeconomicus*, 63 (3): 293-312.

“Military Expenditures and Profit Rates: Evidence from OECD Countries” (with Sara Hsu), *Metroeconomica*, 67 (3): 551-577.

“The Impact of Military Spending and Income Inequality on Economic Growth in Turkey” (with Unal Tongur), *Defence and Peace Economics*, 27(3): 433-452 (published online in 2014).

**2015**

“Military Expenditures, Income Inequality, and Welfare and Political Regimes: A Dynamic Panel Data Analysis” (with Unal Tongur), *Defence and Peace Economics*, 26(1), 49-74. (Also



published in *Defense Spending, Natural Resources, and Conflict* edited by C. Kollias and H. E. Ali, Routledge, 2016.)

“Military Expenditures and Political Regimes: Evidence from Global Data, 1963-2000” (with Unal Tongur and Sara Hsu), *Economic Modelling*, 44, 68-79.

## 2014

“A Minimum Pension Guarantee Application for Turkey: A Gendered Perspective” (with Şule Sahin) *Journal of Women, Politics & Policy*, 35(3), 242-270.

“Women’s labour force participation and pay inequality: evidence from panel cointegration” *Applied Economics Letters*, 21(12), 862-865.

“Deunionization and Pay Inequality in OECD Countries: A Panel Granger Causality Approach” (with Unal Tongur), *Economic Modelling*, 38, 417-425.

“Does Income Inequality Derive Separatist Terrorism in Turkey?” (with Pinar Derin-Güre) *Defence and Peace Economics*, 25(3), 311-327.

## 2013

“A critical analysis of the pension system in Turkey from a gender equality perspective” *Women’s Studies International Forum*, 41, Part 1, 35-44.

## 2012

“Military Spending and Income Inequality: Evidence on Cointegration and Causality for Turkey, 1963-2007” *Defence and Peace Economics*, 23(3), 289-301.

“Internationalisation, growth and pay inequality: a cointegration analysis for Turkey, 1970–2007” (with Ibrahim Ornek and Gunay Akel) *International Review of Applied Economics*, 26(5), 579-595.

“Defence Expenditures, Education and Health Expenditures and Income Inequality in Turkey, 1970-2008: An Econometric Analysis” (with Gül Aksoğan, in Turkish), *Sosyoekonomi*, 2012/1, 263-280

## 2011

“Assessing a Minimum Pension Guarantee for the voluntary IPS in Turkey” (with Şule Şahin) *International Social Security Review*, 64(3), 39-61 (also available in French, German and Spanish)

## 2010

“The Transformation of the Welfare Regime in Turkey and the Individual Pension System” (with Mehmet Ali Elveren, in Turkish), *Mülkiye*, 34(266), 243-258

“Wage Inequality in Turkey: Decomposition by Statistical Regions, 1980-2001” *Review of Urban & Regional Development Studies*, 22(1), 55-72.

“The Individual Pension System in Turkey: A Gendered Perspective” (with Şule Şahin and Helga Rittersberger-Tılıç), *Ekonomik Yaklaşım*, 21(77), 115-142.

## 2009

“Pay Inequality in Turkey in the Neo-Liberal Era, 1980-2001” (with James K. Galbraith), *European Journal of Comparative Economics*, 6(2), 177-206.

## 2008

“An Analysis of Gender Gaps in the Private Pension Scheme in Turkey” (with Cihan Bozkuş) *Ekonomik Yaklaşım*, 19(69), 89-106.

“Assessing Gender Inequality in the Turkish Pension System” *International Social Security Review*, 61(2), 39-58. (also available in French, German and Spanish)

“Gender-Based Earning Differentials in Private Pension Systems: The Case of Turkey” (with Muhsin Kar, in Turkish), *TİSK Akademi*, 3(5), 68-99.

“Social Security Reform in Turkey: A Critical Perspective” *Review of Radical Political Economics*, 40(2), 212-232.

## Book Chapters

### Forthcoming

“The Political Economy of Militarism,” in *The Oxford Handbook of Economic Imperialism* (Eds. Immanuel Ness and Zak Cope), Oxford University Press, 2022.

## 2021

“Financing the Welfare State in Turkey” (with Kerem Cantekin and Ceyhun Elgin) in *Financing Welfare State Systems in Asia* (Ed. Christian Aspalter), Routledge, 2021.

## 2018

“The Brain Drain Literature in Turkey and a Survey” (with Gülay Toksöz, in Turkish), in *Gürhan Fişek’in İzinde Ortak Emek Ortak Eylem*, Siyasal Kitabevi, Ankara, 2018.

## 2017

“Functional Finance and Social Security: Rereading Abba Lerner”, in *Imperiled Economies 2018* (eds. P. Cooney, A. Davis, J. Huato, P. Quick, G. Schneider, R. Vasudevan, and M. Vernengo), pp. 61-68, Dollars & Sense, 2017.

“The Turkish Welfare State System: With Special Reference to Human Capital Development” (with Tuba I. Agartan), in *The Routledge International Handbook to Welfare State Systems* (ed. Christian Aspalter), pp. 317-331, Routledge, 2017.

## 2015

“Türkiye’de Sosyal Güvenlik Sisteminin Toplumsal Cinsiyet Eşitliği Açısından Bir Değerlendirmesi” in *2000’ler Türkiye’sinde Sosyal Politika ve Toplumsal Cinsiyet* (eds. Saniye Dedeoğlu and Adem Y. Elveren), İmge Kitabevi: Ankara, 2015. [Revisit of “A critical analysis of the pension system in Turkey from a gender equality perspective” *Women’s Studies International Forum*, 41(1), 35-44, 2013].

## 2012

“Gender Gaps in the Individual Pension System in Turkey” (with Şule Şahin), in *Gender and Society in Turkey: The Impact of Neo-Liberal Policies, Political Islam and EU Accession* (eds. Saniye Dedeoğlu and Adem Yavuz Elveren), I.B. Tauris Publishers: London & New York, 2012.

“Introduction: Gender, Society and Welfare in Turkey” (with Saniye Dedeoğlu), in *Gender and Society in Turkey: The Impact of Neo-Liberal Policies, Political Islam and EU Accession* (eds. Saniye Dedeoğlu and Adem Yavuz Elveren), I.B. Tauris Publishers: London & New York, 2012.

## 2011

“The Crisis of Social Security: Rereading Abba Lerner” (in Turkish), in *Kriz ve Maliye Düşüncesinde Değişim: İzzettin Önder’e Armağan* (eds. A. Pınar, A. H. Köse and N. Falay), Sosyal Araştırmalar Vakfı, İstanbul, Mart 2011.

## 2010

“European Employment Strategy and Turkey’s Adaptation” (in Turkish), in *Avrupa Bütünleşmesi ve Türkiye Ortak Politikalarının Oluşumu ve Uyumlaştırılması*, ed. Muhsin Kar, Ekin Yayınevi: Bursa, 2010, pp. 467-499.

## 2008

“Turkey’s Economic Integration into the EU: Challenges and Opportunities” (with Muhsin Kar), in *Economic Integration – New Global Dynamics* (ed. Preeti Phuskele), ICFAI University Press, 2008, pp. 112-138.

## Working/Conference Papers

- 2021** “Financialization and Militarization: An Empirical Investigation” (with Pelin Akçagün) Political Economy Research Institute Working Paper No: 545, University of Massachusetts, Amherst.
- 2019** “The Impact of Militarization on Gender Inequality and Female Labor Force Participation Rate” (with Valentine Moghadam) Economic Research Forum Working Paper No 1307.
- “Informality, Inequality, and Feminization of Labor” (with Ceyhun Elgin) University of Massachusetts, Amherst, Political Economy Research Institute Working Paper Series No: 483.
- 2018** “The Effect of Military Expenditures on the Profit Rates in Turkey” (with Gokcer Ozgur), MPRA No: 88848, [https://mpra.ub.uni-muenchen.de/88848/1/MPRA\\_paper\\_88848.pdf](https://mpra.ub.uni-muenchen.de/88848/1/MPRA_paper_88848.pdf)
- 2017** “Do Military Expenditures Boost Profit Rates?” (with Rachel Dunning), MPRA No: 81143, 2017. [https://mpra.ub.uni-muenchen.de/81143/1/MPRA\\_paper\\_81143.pdf](https://mpra.ub.uni-muenchen.de/81143/1/MPRA_paper_81143.pdf)
- “Why Don’t Highly Skilled Women Want to Return? Turkey’s Brain Drain from a Gender Perspective” (with Gülay Toksöz), MPRA No: 80290. <https://mpra.ub.uni-muenchen.de/80290/>
- “Soft Modelling of Military Expenditures, Inequality and Profits” (with Ali Cevat Tasiran), <https://www.aeaweb.org/conference/2017/preliminary/paper/DRSifQkh>. Allied Social Science Association Annual Meeting, Chicago, IL.
- 2016** “The Nexus of Economic Growth, Military Expenditures, and Income Inequality” (with Unal Tongur), EconWorld Working Paper No: 2016-003.
- 2015** “Military Expenditures and Profit Rate: Evidence from OECD Countries” (with Sara Hsu) University of Massachusetts, Amherst, Political Economy Research Institute Working Paper Series No: 374.
- 2013** “A Brief Note on Deunionization and Pay Inequality in Turkey” The University of Texas Inequality Project Working Paper, No.63.
- “Military Expenditures and Political Regimes: An Analysis Using Global Data, 1963-2001” (with Unal Tongur and Sara Hsu) Middle East Technical University ERC Working Paper No: 13/07.

“Deunionization and Pay Inequality in OECD Countries: A Panel Granger Causality Approach” (with Unal Tongur), Middle East Technical University ERC Working Paper No: 13/06.

**2012**

“Military Expenditures, Income Inequality, and Welfare and Political Regimes: A Dynamic Panel Data Analysis” (with Unal Tongur), The University of Texas Inequality Project Working Paper, No.61 and Middle East Technical University ERC Working Paper No: 12/10.

**2010**

“The formalization of the labour market and social security deficits in Turkey: What should be done?” The International Social Security Association International Policy and Research Conference on Social Security, Luxembourg.

“Pay Inequality in the Turkish Manufacturing Sector by Statistical Regions, 1980-2001” The University of Texas Inequality Project Working Paper, No.59.

**2009**

“A Cost Analysis of a Minimum Pension Guarantee for the Individual Pension System in Turkey” (with Sule Sahin), The University of Utah, Department of Economics, Working Paper, No. 13.

**2008**

“Pay Inequality in Turkey in the Neo-Liberal Era: 1980-2001” (with James K. Galbraith), The University of Texas Inequality Project Working Paper, No.49.

**2007**

“Gender Gaps in the Individual Pension System in Turkey” (with Sara Hsu), The University of Utah, Department of Economics, Working Paper No. 6.

**2005**

“Turkey’s Economic Integration into the EU: Challenges and Opportunities” (with Muhsin Kar), University of Utah, Department of Economics, Working Paper No. 10.

### **Other Popular Writings**

**2020**

“Dindar yağmacı devlet ve çörek-kapan köpekbalığı” *BirGün Pazar*, August 23, 2020  
<https://www.birgun.net/haber/dindar-yagmaci-devlet-ve-corek-kapan-kopekbaligi-312989>

“The Pious Predator State: The Cookiecutter Shark and the New Regime in Turkey” *naked capitalism*, July 27, 2020

<https://www.nakedcapitalism.com/2020/07/the-pious-predator-state-the-cookiecutter-shark-and-the-new-regime-in-turkey.html>

“Sermayenin silahlarıyla sosyal mesafe kurabilme” *Gazete Duvar*, March 23, 2020

<https://www.gazeteduvar.com.tr/forum/2020/03/23/sermayenin-silahlariyla-sosyal-mesafekurabilme/>

**2012**

“Gülay Toksöz ile Söyleşi” *Varlık Dergisi*, Mart 2012.

### **Conference Presentations/Workshops/Seminars**

**2021**

Yüksek Nitelikli Göç Paneli, Göç Araştırmaları Derneği, Webinar

**2020**

ICAPE, San Diego, California

**2019**

The Eastern Economic Association, 45th Annual Conference, New York City, New York.

**2018**

URPE 50th Anniversary Conference and Celebration, University of Massachusetts, Amherst.  
IAFFE, SUNY-New Paltz.

*Seminar*, The Institute for the Studies of Muslim Societies and Civilizations, Boston University.

*Seminar*, FSU Speakers Series, Fitchburg State University, Fitchburg, MA.

ICAPE, Philadelphia, Pennsylvania.

**2017**

*Seminar*, The Institute for the Studies of Muslim Societies and Civilizations, Boston University.  
Allied Social Science Association Annual Meeting, Chicago, IL.

**2016**

The Eastern Economic Association, 42nd Annual Conference, Washington D.C.

**2015**

The Eastern Economic Association, 41st Annual Conference, New York City, New York.

**2013**

The Third Anadolu International Conference in Economics, Anadolu University, Eskisehir, Turkey

17th Annual International Conference on Economics and Security, SIPRI, Stockholm, Sweden.

The Eastern Economic Association, 39th Annual Conference, New York City, New York.

**2012**

*Invited speaker*, Atakum Municipality, Samsun, Turkey

3. International Conference on Economics, Turkish Economic Association, Cesme, Izmir, Turkey

*Seminar*, Department of Political Science, Bilkent University, Ankara, Turkey

*Seminar*, Department of Economics, National Tsing Hua University, Hsinchu, Taiwan

16th Annual International Conference on Economics and Security, The American University in Cairo, Egypt

*Seminar*, Department of Economics, Middle East Technical University, Ankara, Turkey

Annual Conference on International Political Economy: Challenges to the Welfare State, Gediz University, Izmir, Turkey

*Seminar*, Department of Economics, Hacettepe University, Ankara, Turkey

Economic Crisis, Poverty and Time Use Conference, Ankara University, Turkey  
*Invited speaker*, Akdeniz University, Antalya, Turkey  
*Seminar*, Contemporary Turkish Studies, London School of Economics, London, UK

**2011**

*Invited speaker*, TOBB Economics and Technology University, Ankara, Turkey.  
The Eastern Economic Association, 37th Annual Conference, New York City, New York.  
*Seminar*, The Institute of Health, The University of Warwick, Coventry, UK.  
Erasmus Training Mobility Program, Department of Sociology, The University of Essex,  
Colchester, UK.

**2010**

*Invited speaker*, Department of Labour Economics and Industrial Relations, Faculty of Political  
Sciences, Ankara University, Turkey.  
The International Social Security Association International Policy and Research Conference on  
Social Security, Luxembourg (granted a full travel allowance by ISSA).  
*Co-organizer and presenter*, Changing Structure of the Welfare Regime in Turkey and Gender  
Workshop, Faculty of Political Science, Ankara, Turkey.  
The Eastern Economic Association, 36th Annual Conference, Philadelphia, Pennsylvania.  
(granted a travel allowance by the Scientific and Technological Research Council of  
Turkey)

**2009**

Erasmus Teaching Mobility Program, The University of Business in Wroclaw, Poland.  
International Multidisciplinary Women's Congress, Izmir, Turkey.  
The 7<sup>th</sup> Public Administration Forum, Kahramanmaras, Turkey.  
Anadolu University International Conference in Economics, Eskisehir, Turkey.

**2007**

MECA International Conference (Moderator), Salt Lake City, Utah.  
ICAPE conference on "Economic Pluralism for the 21st Century" Salt Lake City, Utah.

**2006**

MECA International Conference, Salt Lake City, Utah.  
7<sup>th</sup> International Conference of Engendering Macroeconomics and International Economics, Salt  
Lake City, Utah.  
AFIT Conference, Phoenix, Arizona.

**2005**

MECA International Conference, Salt Lake City, Utah.  
EUSA Ninth Biennial International Conference, Austin, Texas.

### **Memberships**

Union of Radical Political Economics, International Association for Feminist Economics

### **Scholarships**

The project on "the Brain Drain in Turkey" by Prime Ministry of Turkey Presidency for Turks  
Abroad and Related Communities, May 2015- May 2016

Teaching Assistantship from the Department of Economics, University of Utah, 2005-2008

Full Graduate Scholarship from the Ministry of Education of Turkey, 2002-2005

Scholarship from The Capital Markets Board of Turkey, 1996-1997



# Özge Özay

## PERSONAL DATA

### *Home Address*

417 Shrewsbury Street #1  
Worcester, MA 01604

### *Telephone Number*

Cell: (717) 422-23-21

Email: oozay@fitchburgstate.edu

## MAJOR FIELDS OF CONCENTRATION

Political Economy of Gender and Race, International Economics, Development Economics.

## EDUCATION

PhD	Economics	University of Utah	2010
BS	Economics	Middle East Technical University	1999

## ACADEMIC EMPLOYMENT

### **Full-time Associate Professor**

**Fitchburg State University, Fitchburg MA**

**September 2020- Present**

***Courses Taught:* Principles of Macroeconomics, Money and Banking, International Economics, Intermediate Macroeconomics, Basic Data Skills.**

### **Full-time Assistant Professor**

**Fitchburg State University, Fitchburg MA**

**September 2016- September 2020**

***Courses Taught:* Principles of Macroeconomics, Money and Banking, Global Issues, International Economics, Intermediate Macroeconomics, Political Economy of Gender, Principles of Microeconomics, Introduction to Women, Gender, and Sexuality Studies.**

### **Visiting Full-time Assistant Professor**

American University, Washington D.C.

September 2015- May 2016

***Courses Taught:* Gender Roles in the Economy, Introduction to Microeconomics (2 semesters), Intermediate Microeconomics.**

### **Visiting Full-time Assistant Professor**

Dickinson College, Carlisle, PA

July 2013- July 2015

***Courses Taught:* Money and Banking, Political Economy of the Third World, Mathematical Economics, Intermediate Macroeconomics (2 semesters), Principles of Macroeconomics (2 semesters), International Economics.**

### **Full-time Assistant Professor**

Istanbul Aydin University, Istanbul, Turkey

July 2012- July 2013

***Courses Taught:* International Economics, Intermediate Macroeconomics, Intermediate Microeconomics, Principles of Economics (2 semesters), Labor Economics.**

Cag University, Adana, Turkey

September 2010- June 2012

***Courses Taught:* International Economics, Intermediate Macroeconomics, Intermediate Microeconomics, Principles of Economics (2 semesters), International Trade and Economic Organizations.**

## **Instructor**

University of Utah, SLC, UT

September 2002-July 2009

*Courses Taught:* Principles of Macroeconomics (2 semesters), Mathematics for Economics (4 semesters), Intermediate Macroeconomics (3 semesters), Intermediate Microeconomics (3 semesters), Introduction to Statistics (2 semesters).

## **Research Assistant**

University of Utah, The International Working Group on Gender, Macroeconomics, and International Economics (GEM-IWG) Intensive Course and Conference: 2003, 2005, 2006

## **PUBLICATIONS**

### **Peer-Reviewed Journal Articles**

**“An Intersectional Analysis of COVID-19 Unemployment”**, *Journal of Economics, Race, and Policy*, (2020) (with Armagan Gezici)

DOI: [10.1007/s41996-020-00075-w](https://doi.org/10.1007/s41996-020-00075-w)

**“Changing structure of exports and product sophistication in the East and Southeast Asian region”**, *The International Trade Journal*, (2018) (with Emel Memis)

DOI: [10.1080/08853908.2018.1445050](https://doi.org/10.1080/08853908.2018.1445050)

“Is Capital Deepening Process Male-Biased?” *Structural Change and Economic Dynamics* (indexed in SSCI), (2015).

DOI: 10.1016/j.strueco.2015.09.002

“Implications of Trade Policy Changes on Gender Inequalities”, *Feminist Critique* (indexed in EBSCO), Ankara University Press (2011).

### **Working Papers**

**“How Race and Gender Shape COVID-19 Unemployment Probability”**, *UMASS Political Economy Research Institute*, (2020) (with Armagan Gezici).

[https://peri.umass.edu/publication/item/download/889\\_9bdaaa0590a66d74e3f83e98cc603f83](https://peri.umass.edu/publication/item/download/889_9bdaaa0590a66d74e3f83e98cc603f83)

### **Book Chapters and Books**

**“Expanding Understanding of Poverty: Time Poverty Revealed Time-Use Data”**, in *Harnessing Time-Use Data for Evidence-based Policy, the 2030 Agenda for Sustainable Development and the Beijing Platform for Action: A Resource for Data Analysis*, United Nations ESCAP (2021).

“From Domestic Activities to Unpaid Labor” (in Turkish), in *Women Studies in Turkey: 1975-2011*, edited by S. Sancar, Koc University Press (2011) (with Emel Memis).

“Unpaid Work”, (in Turkish) entry in *Dictionary of Economic Institutions and Concepts*, edited by Fikret Başkaya and Aydın Ördek (2011) (with Emel Memis and Hande Togrul).

*Gender Inequalities, Capital Deepening and Trade in Turkey’s Manufacturing Industry: 1990-2001*, VDM (Verlag Dr. Müller), Germany, 2010.

## **PRESENTATIONS**

**“An Intersectional Analysis of COVID-19 Unemployment”, presented in Fitchburg State University, Development Day, May 2021, Fitchburg MA.**

**“How Race and Gender Shape COVID-19 Unemployment Probability”, presented in Eastern Economic Association Conference, February 2021, Boston MA.**

**“Time Poverty of Women and Men in Different Household Structures in Turkey”, presented in Midwest Economics Association Conference, March 15-17, 2019, St. Louis, MO.**

**“Teaching Feminist Ways of Knowing”, presented in NEPES (New England Philosophy of Education Society), October 20, 2018, Tufts University, MA.**

**“Time Poor Women in the U.S.”, presented in International Association for Feminist Economists Annual Conference, June 19-21, 2018, SUNY New Paltz, New Paltz, NY.**

**“Women’s Time Poverty in Turkey” presented in International Association for Feminist Annual Conference, June 29- July 1, 2017, Seoul, South Korea.**

**“Price-Wage Determination Mechanisms in the Turkish Textile Sector: 1980-2005” presented in Union of Radical Political Economics panel at the Allied Social Sciences Association, January 5-7, 2007, Chicago, IL.**

**“Essay on Feminist Economics Paradigm: Reiterating the Manifestations of Gender Inequalities” (with Emel Memis), presented in Association for Institutional Thought, April 19-22, 2006, Phoenix, AZ.**

## **GRANTS AND AWARDS**

**Provost’s Racial Justice and Special Project Grants Fund: received \$3,500 to purchase STATA software and a laptop on behalf of FLIP (Fitchburg Local innovation Project) internship projects with Drs. Adem Elveren and Christa Marr, Fall 2021.**

**Crocker Center Mini-Grant: received \$1,157 purchase STATA software and a laptop to be used in FLIP (Fitchburg Local innovation Project) internship projects with Drs. Adem Elveren and Christa Marr, Spring 2021.**

Full Scholarship for Graduate Studies at the University of Utah 2001-2004

## **Ph.D. DISSERTATION COMMITTEES, MEMBER**

Mungo Terbish, “Three Essays on Women’s Bargaining Power in the Household and Its Implication”, Proposal Defended in January 2016, American University, Washington D.C.

Chang He, “Three Essays on Female Labor and Intra-Household Labor Division”, Proposal Defended in January 2016, American University, Washington D.C.

## **PROFESSIONAL DEVELOPMENT**

**Crocker Summer Civic Engagement Institute, May 2019, Fitchburg State University Fitchburg MA.**

**Time-Use Workshop, organized by Political Economy Research Institute (PERI) and Institute for Social Science Research (ISSR) March 2019, UMASS Amherst, MA.**

**Going Beyond the Rubrics: The Impact of Community Engagement on Our Campuses Workshop, January 2019, Massachusetts College of Pharmacy and Health Sciences, Worcester, MA.**

**Leading for Change's Year Long Equity and Justice Institution, November 2018, hosted by MGH Institute, Sommerville, MA.**

**Inclusive Teaching Workshop, Center for Teaching, May 2018, Fitchburg State University, Fitchburg MA.**

**Course Redesign Workshop, Center for Teaching, May 23, 2017 and August 14, 2017, Fitchburg State University, Fitchburg MA.**

### **OTHER PROFESSIONAL ACTIVITIES**

**Served as the Treasurer of MSCA Fitchburg Chapter, 2018-2021 Academic Years, Fitchburg State University, Fitchburg MA.**

**Organizer of Nancy Kelly Lecture Spring 2021, "The Economic Case of LGBT Equality: Changing the World with a New Idea" by Lee M. V. Badgett, March 2021, Fitchburg State University, Fitchburg MA.**

**Served as the Coordinator of Women, Gender, Sexuality Studies Program at Fitchburg State University in 2019-2020 Academic Year, Fitchburg State University, Fitchburg MA.**

Organizer of Gender Seminar Series Fall 2015 and Spring 2016, Program on Gender Analysis in Economics, American University, Washington, D.C.

**Reviewer for *Structural Change and Economic Dynamics*; *Feminist Economics*; *Review of Radical Political Economics*; *Economies*, *Journal of Economics*, *Race, and Policy*; and *Journal of Urban Affairs*.**

**Member; American Economic Association (AEA), International Association for Feminist Economists (IAFFE), Union for Radical Political Economics (URPE).**

Member, the Heterodox Economics Student Association, in the Department of Economics, University of Utah: 2001-2009.

### **STATISTICAL SOFTWARE**

STATA, E-Views, SPSS.

### **FOREIGN LANGUAGES**

Turkish: Native

English: Excellent

French: Elementary Level

Appendix F: Economics Program Assessment Plan  
ECONOMICS PROGRAM  
ASSESSMENT PLAN

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

**INTRODUCTION**

The Economics Assessment Plan/Annual Report is a document that has been created and prepared as part of an alternative assignment for the Spring 2020 semester. The following plan and report originated from the Summer 2019 Assessment Workshop (and, therefore, follows the structure provided in that workshop). Elements from this workshop, including the program mission, vision, and learning outcomes evolved from a collaborative effort between the Economics Faculty.

The Economics Program Assessment Plan is meant to demonstrate the mission and vision of the Economics Program in the broader context of the divisional and university mission and vision. We seek to use this plan to show our program's alignment to the institutional learning priorities and learning outcomes of the School of Liberal Arts and Sciences. We also use this plan to show how we incorporate our program learning objectives into our courses and how our PLOs are scaffolded throughout our program.

We have identified ways in which we intend to directly and indirectly assess our program and offers potential avenues for expansion into further assessment and tracking. A sample rubric for direct assessment is included. This plan outlines an assessment cycle timeline and recognizes dates to which our assessment plan is tied.

This document was prepared by Christa Marr and still requires review and approval from the other members of the Economics Faculty (Associate Professors Ozge Ozay and Adem Elveren). Review and recommendations from the Economics faculty members along with Director of Assessment Cathy Kaluzny are necessary to finalize the Economic Assessment Plan.

Appendix F: Economics Program Assessment Plan

ECONOMICS PROGRAM  
ASSESSMENT PLAN

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*Spring/Summer 2020*

**MISSION**

The mission of the Economics Program is to provide accessible yet rigorous economic education in context through hands-on learning experiences to prepare students as citizens and for professional careers. Students in the Economics Program develop critical thinking skills by learning competing and/or complementary economic schools of thought to explain the world and justify economic policies. The Economics Program emphasizes economic inclusion by recognizing, measuring, and evaluating inequality with respect to race, gender, income and other social stratifiers. Students study how global, national, and local economic forces affect their lives and career options, and how these forces work beyond the realms of markets and trade to interact with social structures and cultural norms.

**VISION**

We are committed to creating and sustaining the conditions that afford all students a transformative experience through an inclusive and accessible education.

## Appendix F: Economics Program Assessment Plan

**ECONOMICS PROGRAM  
ASSESSMENT PLAN***Prepared by Christa Marr (Assistant Professor of Economics)**Spring/Summer 2020***TABLE OF CONTENTS****PART I: Student Learning Outcomes**

- |  |         |
|--|---------|
| a. Institutional Learning Priorities         | p. 4    |
| b. Liberal Arts & Sciences Learning Outcomes | p. 5-6  |
| c. Program Learning Outcomes                 | p. 7    |
| d. Course Learning Outcomes                  | p. 8-11 |

**PART II: Curriculum Mapping**

- |   |          |
|---|----------|
| a. Course Learning Outcome Alignment with Program Learning Outcomes                                     | p. 12-15 |
| b. Level of Integration of Program Learning Outcomes in Courses   | p. 16    |
| c. Program Learning Outcome Alignment with Institutional Learning Priorities and LA&S Learning Outcomes | p. 17    |

**PART III: Assessment Measures, Timelines, and Targets**

- |  |          |
|--|----------|
| a. Assessment Overview                 | p. 18    |
| b. Direct Assessment                   | p. 19-20 |
| c. Sample Rubric for Direct Assessment | p. 21-24 |
| d. Indirect Assessment                 | p. 25-26 |
| e. Department Performance Measures     | p. 27    |

**PART IV: Assessment Cycle Timeline** p. 28**PART V: Intended Analysis, Responsibility, and Communication** p. 28

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

**PART I:**  
**INSTITUTIONAL LEARNING PRIORITIES**

The following table illustrates Fitchburg State Universities Institutional Learning Priorities (ILPs)

ILP Code	Institutional Learning Priorities (ILPs)
ILP 1	Graduates have a deep understanding of the world.
	<b>Accomplished through:</b>
	ILP 1A. Foundational Skills and Disciplinary Breadth – Students will demonstrate attainment of the Learning Outcomes of the Liberal Arts and Sciences program.
	ILP 1B. Mastery in a Defined Body of Knowledge – Students will attain the specialized academic objectives of their major or program.
	ILP 1C. Engagement with Campus and Community – Students will develop personal and professional skills, goals, and ethical standards of behavior through co-curricular experiences.
ILP 2	Graduates know how to learn and how to apply their knowledge.
	Accomplished through:
	ILP 2A. Creative and Critical Thinking – Students will use evidence and context to increase knowledge, reason ethically, assess the quality of information, solve problems, and innovate in imaginative ways.
	ILP 2B. Effective Communication – Students will carefully consider and clearly articulate ideas for a range of audiences and purposes in written, spoken, technology-mediated, visual, or other forms of communication.
	ILP 2C. Integrative Learning – Students will apply their breadth and depth of knowledge, skills, and experience to address complex issues.
ILP 3	Graduates are engaged citizens who demonstrate integrity and continuous personal growth.
	Accomplished through:
	ILP 3A. Respect for People and Cultures – Students will appreciate the contributions and needs of diverse individuals and groups and understand themselves in solidarity with others locally, nationally, and globally.
	ILP 3B. Civic Participation in Wider Communities – Students will demonstrate their ability to work within and across communities, to apply their knowledge in the service of others, and to promote social justice.



Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

ILP 3C. Continuous Learning and Personal Growth – Students will approach the world with confidence and curiosity, appreciate the complex identities of themselves and others, and reflect critically on their experiences throughout life to make informed choices that advance their own well-being and that of the larger community.
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**PART I:**  
**LA&S LEARNING OUTCOMES**

The following tables details the Liberal Arts and Sciences Learning Outcomes adopted in a 2019 AUC Proposal (AUC 60) to be implemented starting in Fall 2021.

LO Code	LA&S Learning Outcomes (LA&S LOs)	Alignment to ILPs
LA&S 1	<p><b><i>Foundations for Lifelong Learning</i></b>            Lifelong learning is undertaken on an ongoing basis with the aim of improving knowledge, skills and competence (AAC&amp;U LEAP rubric). Fitchburg State students will build a foundation for ongoing learning by developing the following skills:</p> <p>1.1 <b><i>Information Literacy</i></b>: Recognize what information is needed and have the ability to locate, evaluate, and use that information effectively and ethically.</p> <p>1.2 <b><i>Quantitative Reasoning</i></b>: analyze and interpret mathematical information as a means to evaluate arguments and make informed choices.</p> <p>1.3 <b><i>Reading</i></b>: Read to extract and construct meaning through interaction and involvement with written language and other media.</p> <p>1.4 <b><i>Speaking and Listening</i></b>: Develop and apply skills for communicating effectively in any spoken or signed language, in order to disseminate knowledge, reach a broader audience, and foster understanding.</p> <p>1.5 <b><i>Writing</i></b>: Craft original texts to develop and express ideas working with different media including words, data and images.</p>	ILP 3C  ILP 1A, 2A ILP 1A,2A ILP 1A, 2A ILP 1A, 2B ILP 1A, 2B
LA&S 2	<p><b><i>Critical and Creative Thinking Across the Curriculum</i></b>            Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion, while creative thinking is both the capacity to combine or synthesize</p>	ILP 2A

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

	<p>existing ideas, images, or expertise in original ways and the experience of thinking, reacting, and working in an imaginative way (AAC&amp;U LEAP VALUE rubrics). Fitchburg State students will engage in Critical and Creative thinking in a variety of ways across the Liberal Arts and Sciences disciplines:</p> <p>2.1 <b><i>Fine Arts Expression and Analysis:</i></b> Articulate, by engaging with art, music, or theater, an understanding of the expressive languages and the technical analysis of their relation to specific cultural, historical and theoretical contexts.</p> <p>2.2 <b><i>Civic Learning:</i></b> Articulate the values associated with democratic and public institutions in the context of local, national, and global perspectives, and begin to develop practical skills and knowledge required for engaged citizenship to address issues such as social justice and inequality.</p> <p>2.3 <b><i>Diverse Perspectives:</i></b> Describe and critically examine how different cultural and intellectual frameworks shape our social reality through comparative study of diverse socio-cultural institutions and practices in local or global contexts.</p> <p>2.4 <b><i>Ethical Reasoning:</i></b> Develop their ability to think critically about right and wrong human conduct, assess their own ethical values, recognize ethical issues across a variety of contexts, think about how different ethical values and perspectives might be applied to ethical dilemmas, and consider the ethically relevant ramifications of alternative actions or policies.</p> <p>2.5 <b><i>Historical Inquiry and Analysis:</i></b> Engage with an answer questions about the past by evaluating historiographical interpretations; identifying contextualizing, and critically reading historical evidence; and considering the relevance of chronology, causation, and perspective.</p> <p>2.6 <b><i>Literacy Inquiry and Analysis:</i></b> Engage with and answer questions associated with diverse literary texts in relation to historical periods, themes, genres, and/or critical theories using literary analysis, critical evaluation, and theoretical interpretations.</p> <p>2.7 <b><i>Personal Wellness:</i></b> Develop effective strategies to enhance personal wellness by applying physical, nutritional and behavioral strategies to improve the quality or state of being healthy in body and mind.</p>	<p>ILP 1A,2A</p> <p>ILP 1A, 2A,3B</p> <p>ILP 1A, 2A,3A, 3B</p> <p>ILP 1A, 2A</p> <p>ILP 1A, 2A</p> <p>ILP 1A, 2A</p> <p>ILP 1A</p> <p>ILP 1A, 2A</p> <p>ILP 1A, 2A</p>
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## Appendix F: Economics Program Assessment Plan

 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

	<p>2.8 <b>Procedural and Logical Thinking:</b> Using a rational, systematic procedure to arrive at conclusions, examine or build underlying patterns and structures, or deduce further information.</p> <p>2.9 <b>Scientific Inquiry and Analysis:</b> Engage with and answer questions about the natural, and physical worlds using scientific practices including collecting, analyzing and interpreting data.</p>	
LA&S 3	<p><b>Integrating and Applying LA&amp;S Learning</b>          Fitchburg State students will integrate and apply what they learn in the LA&amp;S curriculum:</p> <p>3.1 <b>Integrative Learning:</b> Integrate and apply knowledge from different disciplines and experiences to solve problems.</p>	ILP 1A, 1C, 2C

Appendix F: Economics Program Assessment Plan

ECONOMICS PROGRAM  
ASSESSMENT PLAN

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

**PART I:**  
**PROGRAM LEARNING OUTCOMES**

The following states the Economics Program Learning Outcomes as developed in the Summer 2019 Assessment Workshop and refined for this assessment plan.

1. Students will be able to critically analyze and evaluate issues in local, national, and global economic life using evidence-based arguments
2. Students will be able to articulate economic models in a multidisciplinary context
3. Students will be able to demonstrate understanding of key economic concepts
  - a. through quantitative reasoning
  - b. through written communication
4. Students will be able to apply economic theory through experiential learning
5. Students will be able to communicate economic ideas effectively
  - a. through the use of statistical analysis
  - b. through the use of writing
  - c. through the use of oral skills
6. Students will be able to identify assumptions and assess implications of diverse economic perspectives

Appendix F: Economics Program Assessment Plan  
ECONOMICS PROGRAM  
ASSESSMENT PLAN

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

**PART I:**  
**COURSE LEARNING OUTCOMES**

The following lists the learning outcomes in each of the economics courses published in the most recent course syllabi.

ECON1100: Principles of Macroeconomics

1. Distinguish between macroeconomic and microeconomic issues.
2. Describe the mechanisms of supply and demand for a particular market.
3. Describe how to calculate Gross Domestic Product (GDP), unemployment rate, inflation rate.
4. Describe how fiscal and monetary policies work.
5. Describe Keynesian Aggregate Demand/Aggregate Supply (AD/AS) model explanation of national output determination.

ECON1200: Principles of Microeconomics

1. Communicate using economic language and principles such as “supply and demand” or “marginal analysis.”
2. Apply economic theory and models using graphs, calculations, and written communication
3. Identify how individuals/households and firms interact in various market structures to determine market outcomes through simulations and applications
4. Analyze the efficiency and equity implications of government interference in markets
5. Connect theoretical concepts introduced in class and real world issues, events, and behaviors.
6. Demonstrate understanding of the insight and limits of our models

ECON2005: Game Theory

1. Find out effective strategies for agents in strategic situations to address social issues.
2. Analyze the main assumptions and limitations of rational choice theory from multiple behavioral and social perspectives.
3. Cross disciplinary boundaries to reveal new patterns and connections that reframe knowledge.
4. Analyze the assumptions and actions of society from multiple perspectives.
5. Develop and apply appropriate quantitative problem solving skills in the context of various economic and social issues.

ECON2010: Political Economy of Gender

1. Students will demonstrate understanding of current developments in economics of gender
2. Students will demonstrate understanding of gender division of labor in paid and unpaid spheres, gendered patterns of employment and unemployment, segregation and discrimination in labor

## Appendix F: Economics Program Assessment Plan

**ECONOMICS PROGRAM  
ASSESSMENT PLAN**

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

markets, gender wage gap, gender inequalities in ownership of assets such as land, access to resources such as credit, and feminization of poverty.

3. Students will analyze feminist approaches to the field of economics that aims to incorporate gender into economics at the macro and micro levels.
4. Students will be able to critically assess race, class and ethnicity and other important categories of economic analysis that connect to and work alongside gender **in a multidisciplinary framework**.

**ECON2140: US Economic History**

1. Describe reasons for key developments in American economic history;
2. Explain the connection between the economy, government policy and work over time;
3. Think creatively and with complexity about the implication of economic developments for upward mobility, social and cultural influence, and politics;
4. Connect key theories and ideas about how the economy works to specific historical contexts;
5. Communicate intelligently and with information about the variety of experiences with capitalism and its development;
6. Read the landscape of American cities and towns to apply the economic past to the future potential of these spaces;
7. Engage with the creativity and risk-taking of past entrepreneurs and consider how these developments came about;
8. Produce engaging, intelligent interpretations of physical artefacts of economic history accessible to a general audience.

**ECON2400: Money and Banking**

1. Display an understanding of news relating to monetary policies reported in such publications as The Wall Street Journal or the Economist,
2. Discuss how banks and other financial institutions create money and allocate credit,
3. List and describe the factors that affect the equilibrium interest rate in the bond market.
4. Apply techniques related to interest rate calculations,
5. Describe the causes and consequences of the global financial crisis of 2007-2009,
6. Identify the factors that affect the monetary base and discuss their effects on the Federal Reserve's balance sheet.

**ECON2500: Economic Development**

1. Students will be able to demonstrate understanding of and describe economic development within the context of major problems such as poverty, inequality, population growth, the impact of very rapid urbanization and expansion of megacities, environmental decay along with the twin

## Appendix F: Economics Program Assessment Plan

**ECONOMICS PROGRAM  
ASSESSMENT PLAN**

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

challenges of government failure and market failure.

2. Students will be able to critically analyze economic underdevelopment and the interaction between developed and developing countries.

**ECON2600: Public Finance**

1. Analyze basic economic models related to public finance such (i.e. economic welfare);
2. Critically assess and discuss current economic issues related to government's role in the economy;
3. Define, quantify, and graphically represent key public finance concepts such as but not limited to public goods, externalities, the free-rider problem, median voter theorem, subsidies, and pigouvian taxes;
4. Exemplify different types of government interventions in the economy (i.e taxation) and identify their use in the real world;
5. Identify and critically access the societal costs and benefits related to the imposition of a tax or other government tools of intervention;
6. Describe the effects of taxation graphically, in words, and mathematically on labor supply decisions;
7. Explain the political economy aspects of public finance in a multidisciplinary context such as how different levels of government interact as well as the strategies that can be taken to combat these behaviors;
8. Describe and model the US taxation and budgeting system and identify the main areas of spending using individual and firm tax records along with economic data.

**ECON3000: History of Economic Thought**

1. Students will be able to assess the continuity and discontinuity between classical political economy, neoclassical economics, Keynesian, the Post-Keynesian Economics, and other contemporary diversity in economic thought.
2. Students will be able to discuss the links between the evolution of Western economies and the emergence of economics as a distinct discipline.
3. Students will be able to define and discuss the mercantilist, early institutionalist, and heterodox schools of economics, including Marxian theory, which have challenged mainstream economics.
4. Students will be able to trace the development of neoclassical marginalism, and to identify the areas of agreement and disagreement between the classical and neoclassical approaches in economics.
5. Students will be able to discuss the historical context and content of the Keynesian revolution, as well as the subsequent developments and criticisms of Keynesianism.

**ECON3002: Basic Data Skills**

## Appendix F: Economics Program Assessment Plan

**ECONOMICS PROGRAM  
ASSESSMENT PLAN**

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

1. Students will be able to locate and download major economic data sets.
2. Students will be able to modify and organize the data sets and present the numerical, graphical, and descriptive statistics of the data set.
3. Students will be able to write a short policy debate report in economics.

**ECON3550: International Microeconomics**

1. Discuss different trade theories that have been developed historically
2. Demonstrate comparative advantage of a country in 2 country 2 goods framework
3. Demonstrate how trade allows a country to consume beyond its ability to produce.
4. Discuss how the Stolper-Samuelson theory explains gains from trade.
5. Examine the process of intra-industry trade with real data sets
6. Distinguish tariffs and other import restrictions

**ECON3650: Intermediate Macroeconomics**

1. Calculate various macroeconomic indicators, multipliers, solve various economic models namely the IS-LM model, and the IS-LM-PC model.
2. Apply the course materials to historical and current macroeconomic problems.
3. Research the values of current macroeconomic indicators and variables.

**ECON3660: Intermediate Microeconomics**

1. Quantify microeconomic models and methodologies and apply them to economic issues
2. Explain consumer and producer optimizing behavior under various conditions
3. Identify conditions under which market behavior leads to inefficient outcomes and assess societal costs and benefits
4. Demonstrate understanding of the insight and limits of our models
5. Connect theoretical concepts introduced in class to real world issues, behaviors and between disciplines in applications, writing and discussions
6. Demonstrate understanding of economic models and variant outcomes by engaging in experiments

**ECON3700: Econometrics**

1. Test economic theories using econometric methods by developing hypotheses relevant to general economic or policy question.
2. Demonstrate understanding of economic theory through the use of data.
3. Explain econometric findings and significance in context.
4. Conduct and present, either in writing or in a class presentation, results from a multivariate statistical analysis using appropriate econometric techniques.
5. Use statistical software to analyze data and perform econometric analyses.



Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

6. Identify problems in data analysis and interpretation arising from methodological or data problems.

GEOG3000: Geographic Economic Systems

1. Recognize and explain the causes and patterns of spatial economic systems
2. Display competency in using the ArcGIS software by mapping economic systems and patterns
3. Compare the historical development of the capitalist economy to the contemporary geography and spatial organization of production and consumption on a local to global scale
4. Analyze the processes that constitute globalization and the connections between economic, political, and social processes shaping our globe
5. Evaluate global economic restructuring by analyzing local and regional economic policies
6. Understand the origin and geography of spatial inequality as it relates to specific groups including but not limited to workers, gender, and people of specific ethnicities.

ECON4000: Economics Senior Seminar

1. Demonstrate mastery of the skills needed to earn a degree in economics
2. Engage in individual economic research

PART II.

CURRICULUM MAPPING PROGRAM LEARNING OUTCOMES IN OUR COURSES

The following tables map our *program* learning outcomes into our courses using their respective *course* learning outcomes (see *Part I: Course Learning Outcomes*).

1. Students will be able to critically analyze and evaluate issues in local, national, and global economic life using evidence-based arguments

Course	Course LO
ECON1100: Principles of Macroeconomics	LO3
ECON1200: Principles of Microeconomics	LO4
ECON2005: Game Theory	LO1
ECON2010: Political Economy of Gender	LO1, LO2, LO3, LO4
ECON2140: US Economic History	LO1, LO3, LO5
ECON2400: Money and Banking	LO5
ECON2500: Economic Development	LO1, LO2
ECON2600: Public Finance	LO1
ECON3000: History of Economic Thought	LO4
ECON3002: Basic Data Skills	LO3

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

ECON3550: International Macroeconomics	L03
ECON3650: Intermediate Macroeconomics	L01
ECON3660: Intermediate Microeconomics	L03, L05
ECON3700: Econometrics	L01, L03
GEOG3000: Geographic Economic Systems	L05
ECON4000: Economics Senior Seminar	L01, L02

2. Students will be able to articulate economic models in a multidisciplinary context

Course	Course LO
ECON1100: Principles of Macroeconomics	L04
ECON1100: Principles of Macroeconomics	L03, L05
ECON2005: Game Theory	L03
ECON2010: Political Economy of Gender	L04
ECON2140: US Economic History	L02, L03, L04
ECON2500: Economic Development	L01
ECON2600: Public Finance	L07
ECON3000: History of Economic Thought	L05
ECON3002: Basic Data Skills	L02
ECON3550: International Macroeconomics	L01
ECON3650: Intermediate Macroeconomics	L02
ECON3660: Intermediate Microeconomics	L05
ECON3700: Econometrics	L03, L06
GEOG3000: Geographic Economic Systems	L03, L04, L06

3. Students will be able to demonstrate understanding key economic concepts

Course	Course LO
ECON1100: Principles of Macroeconomics	L01, L02, L04, L05
ECON1200: Principles of Microeconomics	L01, L03, L06
ECON2005: Game Theory	L02
ECON2010: Political Economy of Gender	L02
ECON2140: US Economic History	L04
ECON2400: Money and Banking	L02, L03
ECON2600: Public Finance	L01
ECON3000: History of Economic Thought	L01, L02, L03
ECON3002: Basic Data Skills	L03
ECON3550: International Macroeconomics	L03, L06

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

ECON3650: Intermediate Macroeconomics	L03
ECON3660: Intermediate Microeconomics	LO2, LO4, LO4, LO6
ECON3700: Econometrics	L01
GEOG3000: Geographic Economic Systems	L01
ECON4000: Economics Senior Seminar	L01, L02

- a. through the use of quantitative reasoning

Course	Course LO
ECON1100: Principles of Macroeconomics	L03
ECON1200: Principles of Microeconomics	L02
ECON2005: Game Theory	L05
ECON2400: Money and Banking	L04
ECON2600: Public Finance	L03, L06
ECON3002: Basic Data Skills	L02
ECON3550: International Macroeconomics	L02
ECON3650: Intermediate Macroeconomics	L01
ECON3660: Intermediate Microeconomics	L01
ECON3700: Econometrics	L03

4. Students will be able to apply economic theory through experiential learning

Course	Course LO
ECON1100: Principles of Macroeconomics	
ECON1200: Principles of Microeconomics	L03
ECON3700: Econometrics	L01
ECON2005: Game Theory	L01
ECON2140: US Economic History	L07
ECON2400: Money and Banking	L01
ECON2600: Public Finance	L08
ECON3002: Basic Data Skills	L01
ECON3550: International Macroeconomics	L05
ECON3650: Intermediate Macroeconomics	L03
ECON3660: Intermediate Microeconomics	L06
ECON3700: Econometrics	L01
GEOG3000: Geographic Economic Systems	L01, L04, L05
ECON4000: Economics Senior Seminar	L02

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

5. Students will be able to communicate economic ideas effectively  
 a. through the use of statistical analysis

Course	Course LO
ECON2600: Public Finance	LO8
ECON3002: Basic Data Skills	LO1, LO2
ECON3550: International Macroeconomics	LO5
ECON3650: Intermediate Macroeconomics	LO3
ECON3700: Econometrics	LO1, LO5, LO6
GEOG3000: Geographic Economic Systems	LO2
ECON4000: Economics Senior Seminar	LO2

- b. through the use of writing

Course	Course LO
ECON1100: Principles of Macroeconomics	LO2, LO4, LO5
ECON1200: Principles of Microeconomics	LO1
ECON2005: Game Theory	LO2
ECON2010: Political Economy of Gender	LO3, LO4
ECON2140: US Economic History	LO5, LO8
ECON2400: Money and Banking	LO2, LO3, LO5
ECON2500: Economic Development	LO1
ECON2600: Public Finance	LO6, LO7, LO8
ECON3000: History of Economic Thought	LO1
ECON3550: International Macroeconomics	LO1, LO3
ECON3660: Intermediate Microeconomics	LO3, LO5
ECON3700: Econometrics	LO4
GEOG3000: Geographic Economic Systems	LO4, LO5, LO6
ECON4000: Economics Senior Seminar	LO2

- c. through the use of oral skills

Course	Course LO
ECON1100: Principles of Macroeconomics	LO2, LO4, LO5
ECON1200: Principles of Microeconomics	LO1
ECON2010: Political Economy of Gender	LO4
ECON2140: US Economic History	LO2, LO5
ECON2400: Money and Banking	LO2, LO5
ECON2500: Economic Development	LO1

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

ECON2600: Public Finance	LO2, LO3, LO5
ECON3000: History of Economic Thought	LO2, LO3, LO5
ECON3550: International Macroeconomics	LO1, LO4
ECON3660: Intermediate Microeconomics	LO2, LO5
ECON3700: Econometrics	LO3
GEOG3000: Geographic Economic Systems	LO1
ECON4000: Economics Senior Seminar	LO1, LO2

6. Students will be able to identify assumptions and assess implications of diverse economic perspectives

Course	Course LO
ECON1100: Principles of Macroeconomics	LO2, LO4
ECON1200: Principles of Microeconomics	LO4
ECON2005: Game Theory	LO1
ECON2010: Political Economy of Gender	LO2
ECON2140: US Economic History	LO3, LO6, LO7
ECON2400: Money and Banking	LO5
ECON2500: Economic Development	LO1, LO2
ECON2600: Public Finance	LO2, LO3, LO5
ECON3000: History of Economic Thought	LO1
ECON3550: International Macroeconomics	LO1
ECON3650: Intermediate Macroeconomics	LO2
ECON3660: Intermediate Microeconomics	LO3, LO4
ECON3700: Econometrics	LO6
GEOG3000: Geographic Economic Systems	LO6
ECON4000: Economics Senior Seminar	LO1, LO2

Appendix F: Economics Program Assessment Plan  
**ECONOMICS PROGRAM**  
**ASSESSMENT PLAN**

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

**PART II:**

**LEVEL OF INTEGRATION OF PROGRAM LEARNING OUTCOMES INTO COURSE LEARNING OUTCOMES**

The purpose of this table is to demonstrate the level at which our program learning outcomes appear in our courses. The scale ranges from the PLO being introduced to the PLO being fulfilled and assessed. Therefore, the table allows us to distinguish between the advancement of the PLO in our courses and verify that our courses scaffold our program learning outcomes. It also demonstrates the consistent integration of the PLOs into our courses.

Course	PLO 1	PLO 2	PLO 3	PLO 3A	PLO 4	PLO 5A	PLO 5B	PLO 5C	PLO 6
ECON1100: Principles of Macroeconomics	1	1	1	1	1		1	1	1
ECON1200: Principles of Microeconomics	1	1	1	1	1		1	1	1
ECON2005: Game Theory	2	3	2	2	2				2
ECON2010: Political Economy of Gender	2	3	2				2		2
ECON2140: US Economic History	2	3	2		2		2	2	2
ECON2400: Money and Banking	2	2	2		2		2	2	2
ECON2500: Economic Development	2	2	2				2	2	2
ECON2600: Public Finance	2	2	2	2	2	2	2	2	2
ECON3000: History of Economic Thought	2	2	2				2	2	3
ECON3002: Basic Data Skills	2	2	2	2	2	1	2		
ECON3550: International Macroeconomics	2	2	2	2	2	2	2	2	2
ECON3650: Intermediate Macroeconomics	2	2	2	2	2	1	2		2
ECON3660: Intermediate Microeconomics	2	2	2	2	2		2	2	2
ECON3700: Econometrics	2	2	2	2	2	3	2	2	2
GEOG3000: Geographic Economic Systems	2	3	2		2	2	2	2	2
ECON4000: Economics Senior Seminar	3/A	3/A	3/A	3/A	3/A	3/A	3/A	3/A	3/A

**SCALE**

0	1	2	3	A
Not Addressed	Introducing	Broadening	Fulfilling	Assessed for Program

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

**PART II:**  
**ALIGNING PROGRAM LEARNING OUTCOMES WITH INSTITUTIONAL LEARNING PRIORITIES AND  
 LA&S LEARNING OUTOMES**

Our program is resolved to uphold the institutional learning priorities (ILPs\_ of Fitchburg State and emphasize the learning outcomes (LOs) of the School of Liberal Arts and Sciences. We demonstrate this in the table below by aligning our program learning outcomes with the ILPs and LA&S Los.

Beyond program learning outcomes, we find that our mission and vision articulate all institutional learning priorities to give our graduates a deep understanding of the world, the ability to learn and apply their knowledge, and create engaged citizens who demonstrate integrity and personal growth. The institutional learning priorities are overtly evident in our program learning outcomes as demonstrated above.

PLO #	PLO	Alignment to ILPs	Alignment to LA&S LOs
1	Students will be able to critically analyze and evaluate issues in local, national, and global economic life using evidence-based arguments	ILP2A, ILP3C	LAS2.2, LAS 2.4, LAS2.8
2	Students will be able to articulate economic models in a multidisciplinary context	ILP2C, ILP3A	LAS2.3, LAS2.5, LAS3.1
3	Students will be able to demonstrate understanding key economic concepts	ILP1A, ILP1B	LAS2.8
3a	through quantitative reasoning		LAS1.2
4	Students will be able to apply economic theory through experiential learning	ILP1C, ILP2C, ILP3B	LAS2.9, LAS3.1

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

5	Students will be able to communicate economic ideas effectively	ILP2B, ILP3B, ILP3C	LAS2.8
5a	through the use of statistical analysis		LAS2.9
5b	through the use of writing		LAS1.5, LAS2.6
5c	through the use of oral skills		LAS1.4
6	Students will be able to identify assumptions and assess implications of diverse economic perspectives	ILP3A, ILP3C	LAS2.3, LAS2.4

Further, our program is strongly aligned to the Liberal Arts and Sciences Learning Outcomes. We work not only to enhance our students skills and abilities in foundational skills such as quantitative reasoning but also strive to achieve a variety of outcomes for our students to critically and creatively think across disciplines by considering diverse perspectives, ethically reasoning, using procedural and logical thinking through use of economic models, among others.

**PART III:**

**ASSESSMENT**

To directly assess our program, we will use research papers from our capstone economics course (ECON4000: Economics Senior Seminar) and evaluate them using components of the AAC&U Value Rubrics (see: Sample Rubric). The capstone course is currently offered every other year to minors and majors in their third or fourth year due to our program size. In order to assess our program annually, we will also disseminate a survey each year to third and fourth year majors and minors to indirectly assess our program. We will also consider input from an external examiner of our program at the end of every five year assessment cycle.

The economics program has also identified performance measures for change or improvement using Student Success Collaborative (SSC) Data. We will track course enrollments, minors, and majors each semester. Our goal is to increase enrollments (or remain constant at full capacity) and increase economic minors. As we move forward, we will identify additional uses of the SSC data to track, for instance, freshman retention, bottleneck courses, graduation rates, average time through program completion and/or at-risk student retention.



Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

PART III:

DIRECT ASSESSMENT

The following tables outlines how we plan to directly assess the economics program. As stated, we will use our capstone course (ECON4000: Economics Senior Seminar) which is offered every other year.

PLO #	PLO	Assessment description (written project, oral presentation with rubric, etc.)	Timing of Assessment (annual, semester, bi-annual, etc.)	When assessment is to be administered in student program (internship, 4 <sup>th</sup> year, 1 <sup>st</sup> year, etc.)	To which students will assessments be administered (all, only a sample, etc.)	What is the target set for the PLO? (criteria for success)
1	Students will be able to critically analyze and evaluate issues in local, national, and global economic life using evidence-based arguments	Assessment of student research papers with a standardized rubric	Bi-Annual (Capstone course is only offered every other year)	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
2	Students will be able to articulate economic models in a multidisciplinary context	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
3	Students will be able to demonstrate understanding key economic concepts	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

3a	through quantitative reasoning	Assessment of student research papers with AAC&U Quantitative Reasoning rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
4	Students will be able to apply economic theory through experiential learning	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
5	Students will be able to communicate economic ideas effectively	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
5a	through the use of statistical analysis	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
5b	through the use of writing	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
5c	through the use of oral skills	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed

Appendix F: Economics Program Assessment Plan  
**ECONOMICS PROGRAM**  
**ASSESSMENT PLAN**

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

6	Students will be able to identify assumptions and assess implications of diverse economic perspectives	Assessment of student research papers with a standardized rubric	Bi-Annual	ECON4000: Economics Senior Seminar (3rd or 4th year)	All	At least 80% developed or highly developed
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**PART III.**

**SAMPLE ASSESSMENT RUBRIC**

In order to assess our program using research papers from the capstone course, we will use a rubric. Below is a sample of how such a rubric will look using only the top criterion (Highly Developed). Our intention is to assess over four categories in the rubric (Highly Developed, Developed, Emerging and Initial). The sample rubric uses various AAC&U value rubrics in order to assess our program learning outcomes. The final rubric used for direct assessment will be finalized based on a collaborative work of the economics faculty (See Part IV: Assessment Cycle Timeline)

*\*This sample rubric used criterion from Milestone (3) only in the AACU rubrics. We intend this to be our "Capstone" criterion.*

PLO #	PLO	HIGHLY DEVELOPED	SOURCE ( VALUE RUBRIC)
1	Students will be able to analyze and evaluate issues in economic life using evidence-based arguments	<ol style="list-style-type: none"> <li>Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions. ##Evaluates the global impact of one's own and others' specific local actions on the natural and human world.</li> <li>Identifies multiple approaches for solving the problem, only some of which apply within a specific context.</li> <li>Proposes one or more solutions/ hypotheses that indicates comprehension of the problem. Solutions/ hypotheses are sensitive to contextual factors as well as the one of the following: ethical, logical, or cultural dimensions of the problem.</li> <li>Implements the solution in a manner that addresses multiple contextual factors of the problem in a surface manner. Reviews results relative to the problem defined with some consideration of need for further work.</li> <li>Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis.</li> </ol>	CRITICAL THINKING, GLOBAL DIVERSITY, PROBLEM SOLVING

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

2	Students will be able to articulate economic models in a multidisciplinary context	<ol style="list-style-type: none"> <li>Analyzes knowledge (facts, theories, etc.) from one's own academic study/ field/ discipline making relevant connections to civic engagement and to one's own participation in civic life, politics, and government.</li> <li>Analyzes major elements of global systems, including their historic and contemporary interconnections and the differential effects of human organizations and actions, to pose elementary solutions to complex problems in the human and natural worlds.</li> <li>Independently connects examples, facts, or theories from more than one field of study or perspective.</li> </ol>	CIVIC ENGAGEMENT, GLOBAL DIVERSITY, INTEGRATED LEARNING
3	Students will be able to demonstrate understanding key economic concepts	<ol style="list-style-type: none"> <li>Having selected from among alternatives, develops a logical, consistent plan to solve the problem.</li> <li>Student can name the major theory or theories she/ he uses, can present the gist of said theory or theories, and attempts to explain the details of the theory or theories used, but has some inaccuracies.</li> <li>Effectively selects and develops examples of life experiences, drawn from a variety of contexts (e.g., family life, artistic participation, civic involvement, work experience), to illuminate concepts/ theories/ frameworks of fields of study.</li> <li>Adapts and applies skills, abilities, theories, or methodologies gained in one situation to new situations to solve problems or explore issues.</li> </ol>	CREATIVE THINKING, ETHICAL REASONING, INTEGRATED LEARNING
3A	through quantitative reasoning	<ol style="list-style-type: none"> <li>Provides accurate explanations of information presented in mathematical forms. For instance, accurately explains the trend data shown in a graph.</li> <li>Competently converts relevant information into an appropriate and desired mathematical portrayal.</li> <li>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem..</li> <li>Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.</li> <li>Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.</li> </ol>	QUANTITATIVE LITERACY
4	Students will be able to apply economic theory through experiential learning	<ol style="list-style-type: none"> <li>Engages team members in ways that facilitate their contributions to meetings by constructively building upon or synthesizing the contributions of others.</li> <li>Effectively selects and develops examples of life experiences, drawn from a variety of contexts (e.g., family life, artistic</li> </ol>	TEAMWORK, FOUNDATIONS AND SKILLS FOR LIFELONG LEARNING,

Appendix F: Economics Program Assessment Plan  
**ECONOMICS PROGRAM**  
**ASSESSMENT PLAN**

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

		<p>participation, civic involvement, work experience), to illuminate concepts/ theories/ frameworks of fields of study.</p> <p>3. Reviews prior learning (past experiences inside and outside of the classroom) in depth, revealing fully clarified meanings or indicating broader perspectives about educational or life events.</p>	INTEGRATIVE LEARNING
5	Students will be able to communicate economic ideas effectively	<p>1. Synthesizes ideas or solutions into a coherent whole.</p> <p>2. Student can independently (to a new example) apply ethical perspectives/ concepts to an ethical question, accurately, but does not consider the specific implications of the application.</p> <p>3. Explores a topic in depth, yielding insight and/ or information indicating interest in the subject.</p> <p>4. Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.</p> <p>5. Proposes one or more solutions/ hypotheses that indicates comprehension of the problem.</p>	CREATIVE THINKING, CRITICAL THINKING, PROBLEM SOLVING
5A	through the use of statistical analysis	<p>1. Critical elements of the methodology or theoretical framework are appropriately developed, however, more subtle elements are ignored or unaccounted for.</p> <p>2. Organizes evidence to reveal important patterns, differences, or similarities related to focus.</p> <p>3. States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings. Discusses relevant and supported limitations and implications.</p> <p>4. Accesses information using variety of search strategies and some relevant information sources. Demonstrates ability to refine search.</p> <p>5. Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work</p>	INFORMATION LITERACY, INQUIRY AND ANALYSIS, QUANTITATIVE LITERACY
5B	through the use of writing	<p>1. Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.</p> <p>2. Uses texts in the context of scholarship to develop a foundation of disciplinary knowledge and to raise and explore important questions.</p> <p>3. Chooses a variety of information sources appropriate to the scope and discipline of the research question. Selects sources using multiple criteria (such as relevance to the research question, currency, and authority).</p>	WRITTEN COMMUNICATION, READING, INQUIRY AND ANALYSIS

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

5C	through the use of oral skills	<ol style="list-style-type: none"> <li>1. Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable within the presentation.</li> <li>2. Language choices are thoughtful and generally support the effectiveness of the presentation. Language in presentation is appropriate to audience.</li> <li>3. Supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that generally supports the presentation or establishes the presenter's credibility/ authority on the topic.</li> <li>4. Central message is clear and consistent with the supporting material.</li> </ol>	ORAL COMMUNICATION
6	Students will be able to identify assumptions and assess implications of diverse economic perspectives	<ol style="list-style-type: none"> <li>1. Reflects on how own attitudes and beliefs are different from those of other cultures and communities. Exhibits curiosity about what can be learned from diversity of communities and cultures.</li> <li>2. Incorporates alternate, divergent, or contradictory perspectives or ideas in an exploratory way.</li> <li>3. Identifies own and others' assumptions and several relevant contexts when presenting a position.</li> <li>4. Recognizes new perspectives about own cultural rules and biases (e.g. not looking for sameness; comfortable with the complexities that new perspectives offer.)</li> </ol>	CIVIC ENGAGEMENT, CREATIVE THINKING, CRITICAL THINKING, INTERCULTURAL KNOWLEDGE

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

PART III:

INDIRECT ASSESSMENT

PLO #	PLO	Assessment description (survey, focus group, interviews, etc.)	When assessment is to be administered	Who will give indirect feedback	Criteria for Success or Goal to be Achieved
1	Students will be able to critically analyze and evaluate issues in local, national, and global economic life using evidence-based arguments	SURVEY administered by Economics Faculty via e-mailed survey link	Annual (End of Spring Semester)	Graduating majors and minors	At least 75% report developed or highly developed
2	Students will be able to articulate economic models in a multidisciplinary context	SURVEY administered by Economics Faculty via e-mailed survey link	Annual (End of Spring Semester)	Graduating majors and minors	At least 75% report developed or highly developed
3	Students will be able to demonstrate understanding key economic concepts	SURVEY administered by Economics Faculty via e-mailed survey link	Annual (End of Spring Semester)	Graduating majors and minors	At least 75% report developed or highly developed
3a	through quantitative reasoning	SURVEY administered by Economics Faculty via e-mailed survey link	Annual (End of Spring Semester)	Graduating majors and minors	At least 75% report developed or highly developed
4	Students will be able to apply economic theory through experiential learning	SURVEY administered by Economics Faculty via e-mailed survey link	Annual (End of Spring Semester)	Graduating majors and minors	At least 75% report developed or highly developed
5	Students will be able to communicate economic ideas effectively	SURVEY administered by Economics Faculty via e-mailed survey link	Annual (End of Spring Semester)	Graduating majors and minors	At least 75% report developed or highly developed

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

*Prepared by Christa Marr (Assistant Professor of Economics)*

*Spring/Summer 2020*

5a	through the use of statistical analysis	<i>SURVEY administered by Economics Faculty via e-mailed survey link</i>	<i>Annual (End of Spring Semester)</i>	<i>Graduating majors and minors</i>	<i>At least 75% report developed or highly developed</i>
5b	through the use of writing	<i>SURVEY administered by Economics Faculty via e-mailed survey link</i>	<i>Annual (End of Spring Semester)</i>	<i>Graduating majors and minors</i>	<i>At least 75% report developed or highly developed</i>
5c	through the use of oral skills	<i>SURVEY administered by Economics Faculty via e-mailed survey link</i>	<i>Annual (End of Spring Semester)</i>	<i>Graduating majors and minors</i>	<i>At least 75% report developed or highly developed</i>
6	Students will be able to identify assumptions and assess implications of diverse economic perspectives	<i>SURVEY administered by Economics Faculty via e-mailed survey link</i>	<i>Annual (End of Spring Semester)</i>	<i>Graduating majors and minors</i>	<i>At least 75% report developed or highly developed</i>



Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

**PART III:**  
**DEPARTMENT PERFORMANCE MEASURE**

The Economics Program tracks data using the Student Success Collaborative (SSC) database to assess the program through the numbers of majors and minors as well as course enrollments. Currently, our goal in the Economics Program is to (1) increase enrollment (or remain at full capacity) while offering a variety of core and elective courses as well as to (2) increase minors so as to demonstrate an interest in and commitment to our program. We also track a change in majors yet this number tends to be small and statistically insignificant over the years.

The following table details our program statistics for the past academic year. We used SSC data along with DegreeWorks to validate our numbers. There is inconsistency in numbers reported. We will look further into the validity of these measures.

*Program Statistics for Summer 2019, Fall 2019, and Spring 2020*

Source	Majors	Minors	IBE Concentration
SSC	18		
DegreeWorks	56	49	18

*Note: 10 graduates or transfers in DegreeWorks search*

*Course Enrollments for Summer 2019, Fall 2019, and Spring 2020*

Source: FSU Registrar seat list	Fall 2019 Enrollment	Spring 2020 Enrollment	Summer 2019 Enrollment
ECON1100	76/75	50/50	
ECON1200	74/75	74/75	15/25
Electives	69/75	62/66	
Major Requirements*	47/50	25/25	
Independent Studies			

In the future, we will recruit additional data to better inform our program. Some measures that we may consider tracking include but are not limited to freshman retention, bottleneck courses, retention of at-risk students, and time through program completion. We hope to use our current measures and any future adoptions to ensure that our students are moving through our program in a timely manner to the best of their ability (and with appropriate resources) while meeting program standards. The economics faculty will continue to work to develop data collection and analysis to achieve these goals.

Appendix F: Economics Program Assessment Plan  
 ECONOMICS PROGRAM  
ASSESSMENT PLAN

Prepared by Christa Marr (Assistant Professor of Economics)

Spring/Summer 2020

**PART IV:**  
**ASSESSMENT CYCLE TIMELINE**

<u>ASSESSMENT CYCLE</u>	<u>GOAL</u>	<u>ACADEMIC TERM</u>
YEAR 1	Create Program Learning Outcomes	<i>Fall 2019-Spring 2020</i>
YEAR 2	Create Rubrics and Assess LO 1-6 in ECON4000	<i>Fall 2020-Spring 2021</i>
YEAR 3	Create survey for Indirect Assessment of LO 1-6 and Disseminate Survey	<i>Fall 2021-Spring 2022</i>
YEAR 4	Assess LO 1-6 in ECON4000 and Disseminate Survey	<i>Fall 2022-Spring 2023</i>
YEAR 5	Disseminate Survey	<i>Fall 2023-Spring 2024</i>

**PART V:**

**Intended Analysis, Responsibility, and Communication**

As stated in the introduction, the assessment plan still requires review, edits, and approval from Drs. Elveren and Ozay of the Economics Faculty. This plan also needs review by the Director of Assessment Cathy Kaluzny. It is Christa Marr's responsibility to disseminate this document. Once disseminated, she will incorporate all agreed upon edits to finalize this document. Moving forward, creating rubrics, writing the exit survey and assessing our program using capstone papers will be a joint effort of the Economics Faculty.

# **FITCHBURG LOCAL INNOVATION PROJECT (FLIP)**

Proposed by: Adem Elveren, Christa Marr, and Ozge Ozay

## **OVERVIEW**

We propose to establish the Fitchburg Local Innovation Project (FLIP) to measure the social and economic development of greater Fitchburg area. This institute will work to serve the university and the community at large to track current conditions related to (economic) inequality over time.

Coming from the Economic, History, and Political Science department, this institute is particularly relevant concerning the multidisciplinary and broad-reaching concerns revolving around inequality in our community. A prior economic-based institute, Regional Economic Development Institute (REDI) was deep-seated in EHPS and played a strong role in tracking meaningful statistics and gathering regional data to inform local resident, businesses and the university. This new institute, with a stronger focus on inequality, explores meaningful economic trends and data but also serves a multidisciplinary purpose in discussing inequality in multiple contexts including but not limited to income, gender, racial, and urban.

## **The Mission**

Fitchburg State University's FLIP is an academic research center that serves students, faculty, and the community of greater Fitchburg area. FLIP will collect, analyze and interpret data addressing issues in Fitchburg and neighboring cities. The project is designed so that it is possible to extend its scope to reach further areas and to collaborate with other entities including but not limited to similar institutions, governmental and quasi-public agencies, non-profit organizations, community groups and businesses in Massachusetts.

## **The Opportunity**

FLIP has three major goals.

- **Goal #1:** Collect and analyze data surrounding issues that are most pertinent to the Fitchburg community. We would like to start by exploring the feasibility of collecting and disseminating data on
  - The effects of vacant buildings and/or lots on the surrounding neighborhood (property values, crime, etc.).
  - Connections between green space within neighborhoods and public health/quality of life outcomes.

- Connections between housing code violations and youth emergency-room admissions.

We look forward to having a continuous dialogue with the city and university alike to better understand how our project can serve as an asset to the community. We will evolve the particular data proposed in Goal #1 based on these conversations.

- **Goal #2: FLIP will provide ongoing participation for students through coursework.**

- There are several courses that Economics faculty already offer that will be incorporated into institutional framework of FLIP. These courses are Economics of Inequality, Geographic Economic Systems (GEOG3000), Data Methods for Economists and Business (ECON 3002) course. Further details of the courses that will integrate FLIP's work are detailed in the timeline at the end of this proposal.
- We are also in the process of fostering ties with the graduate students and the professor of Harvard Kennedy School of Government's Innovation Field Lab to create a similar upper level Economics course to their graduate course at Fitchburg State University. The course will be run as a topics course in Spring 2021 and will be co-taught by the economics faculty on its first run. The course will aim to identify socio-economic issues using Fitchburg area as a laboratory and propose solutions to the city. For this course, we aim to utilize the ideaLab that Fitchburg State University founded in January 2019.
- Also, FLIP aims to collaborate with the ALFA program, by offering classes to ALFA students.

- **Goal #3: FLIP will provide high impact learning opportunities for students in the form of internships to work in the process of compiling, and analyzing, and interpreting data as well as collaborative research projects with faculty including but not limited to economics.** AS FLIP grows, we imagine providing students with opportunities to engage with the community to disseminate the survey to better understand the growing needs of our city.

## **OUR PROPOSAL**

The Fitchburg Local Innovation Project (FLIP) is a collaborative effort that seeks to collect, compile, and analyze data to better serve the needs of our community. Using a liberal interpretation of the term inequality, this institute stands to extend into many disciplines and act

as an outward-facing project from the institute into the neighborhood. Originating in the department of Economics, History, and Political Science (EHPS), this institute is particularly relevant in economics, history, and political science; and, as such, one of its mission is to track indices over time as they relate to economic development, gender, and urbanism. Further, this project will take on the responsibility of collecting data from the community that will help inform policy directly and indirectly through further academic research. Finally, the project will benefit students from and in multiple disciplines as it provides the type of growth opportunities that forges a Fitchburg State University experience emphasizing civic knowledge, community engagement and collaboration, as well as skill-enhancement.

## Timeline

FLIP has a tentative timeline outlining deliverables in the first and first three years.

- **In the first year**

1. FLIP will compile and analyze data on at least one of the three datasets to inform local decision-making in ways that can more efficiently allocated scarce resources within the city of Fitchburg. We will consult with city and university constituents to determine which of the three suggested datasets should be prioritized. Findings will be assembled in a short written academic paper for public consumption. Presentations will be prepared based on requests for which times, places, and expectations will be discussed and mutually agreed upon.
2. FLIP will spread word of its mission and work towards its goals by presenting and moderating academic and non-academic panels. We intend to begin by hosting a panel at the 125th Anniversary celebrations for the university. We will also participate in the Fitchburg State University Speaker Series with a presentation on our current data and findings on May 4, 2020.
3. FLIP will develop a course proposal related to its mission and in accord with its goal of collaborating with the Innovation Field Lab at Harvard University.
  - a) One of the learning outcomes of this course will be to engage students in an experiential learning environment by interacting with the Fitchburg community stakeholders
4. FLIP will explore opportunities to obtain a consortium license for ICPSR access by reaching out to neighboring universities including those in the Massachusetts State College system (Framingham State University and Worcester State University), Clark University, Keene University, and University of Massachusetts at Boston. We will follow up with any subsequent paperwork to obtain these licenses based on responses from these universities.

5. FLIP will identify a source of external funding. We will apply for a Henry Luce Foundation Grant to help support and sustain FLIP ([https://www.hluce.org/grants/?programs=5&sort=&date\\_day=&date\\_month=&date\\_year=&keyword](https://www.hluce.org/grants/?programs=5&sort=&date_day=&date_month=&date_year=&keyword)).

- In the first three years

1. FLIP will continue to collect and analyze suggested datasets and areas of interest based on feedback from the university, city, and private clients. In absence of alternative guidance from the city, we will compile and analyze all three of the datasets suggested by the Fitchburg Office of Planning and Community Development and outlined in the project's goals.
2. FLIP will start a working paper series compiling relevant academic research from faculty, students and the community regarding issues in our local area. This working paper series will be freely available and posted on a space made available on our university website.
3. FLIP will have employed more than one student in a dedicated internship.
4. FLIP will identify multiple sources of alternate funding including grants and a proposal for a client fee-based model.
5. FLIP will incorporate its mission and goals into multiple courses across the economics curriculum including
  - a. **Econometrics (ECON3700)** offered in AY20-21. This course will “analyze data and (employ) different statistical techniques for different research problems” to FLIP by collecting, refining, and analyzing city data useful in addressing relevant local economic issues (*Learning Objective #3*). This course has traditionally culminated in individual empirical research projects. We will alter the means of assessment to create a group project focused on local issues to “create testable hypotheses using empirical data and econometrics” (*Learning Objective #4*).
  - b. **Geographic Economic Systems (GEOG3000)** offered in AY21-22. This course will alter its curriculum to “explain the causes and patterns of spatial economic systems” at the city and regional level using Census Data (*Learning Objective #1*). Further, students will “display competency in using the ArcGIS software by mapping economic systems and patterns” in Fitchburg ((*Learning Objective #2*).
  - c. **Senior Seminar (ECON4000)** offered in AY20-21. In the next offering of the senior seminar, economics majors (and minors) will “engage in original research in the field of Economics” based on the ongoing work of FLIP. This will be a key course to integrate our students into the development of a research idea, collection of data, and analysis of results. We will work to work with students through each stage of the project to create an end product that resembles a proper academic

paper. Students are required to present their research in the undergraduate conference, and we will work to develop a session in the conference where students present their contribution to the project. We would welcome further external presentations based on the interest of outside (i.e. city or business) constituents.

- d. **Basic Data Skills (Econ 3002)** offered in AY 21-22: After studying index numbers and Consumer Price Index calculation, students will ask to compute an CPI index for the Fitchburg area and trace its monthly change in groups. Students will also calculate living wages for Fitchburg area for different demographic household characteristics.

## Resources

Implementation of FLIP requires both a physical place and faculty “effort”. We intend to house FLIP under Crocker Center for Community Engagement.

1. **Physical Needs (Space and Materials):** Regarding the physical place, although the department of Economics, History and Political Science serves as the initiator/host department, the inter/multidisciplinary structure of the institution and more importantly its target audience would require an office place in the Theater Block. This would facilitate reaching the community as well as making the FLIP more visible and accessible. The office of FLIP requires a phone and at least two computers with necessary software such as econometric software (i.e. STATA) and GIS software. FLIP will also require access to ICPSR data to help track issues of local concern.

- a. **A Comparison of Stata and SPSS**

This short note aims to show that Stata is superior to SPSS with respect to several aspects. This note is completely based on the statistical software comparison made by New York University (NYU) Libraries (<https://guides.nyu.edu/quant/statsoft>). We preferred to use this comparison instead of other available comparisons, including those provided by the software companies. The reason is that most of the comparisons available on the internet, particularly those provided by the software companies, naturally, are biased as they are prepared for marketing purposes. This is, however, not just a comprehensive comparison but also provided by a major university.

NYU Libraries compare not just Stata and SPSS, but all major statistical and econometric software packages. This is also important because -as the below note demonstrates- in fact Stata is not just superior to SPSS but to all other software packages.

The comparison is made with respect to learning curve, data manipulation, statistical analysis, graphics, and specialties. Except for graphics, where both software packages are graded the same, Stata is graded better than SPSS according to all categories listed above. Among them it is important to emphasize that under ‘specialties’ the comparison suggests that Stata is more suitable for panel data and

survey data analysis, two both critical data types we, the FLIP team -the economists and other fellows from other disciplines-, will be using commonly.

Table 1: Comparison of Stata and SPSS

Software	Interface*	Learning Curve	Data Manipulation	Statistical Analysis	Graphics	Specialties
SPSS	Menus & Syntax	Gradual	Moderate	Moderate Scope Low Versatility	Good	Custom Tables, ANOVA and Multivariate Analysis
JMP	Menus & Syntax	Gradual	Strong	Moderate Scope Medium Versatility	Great	Design of Experiments, Quality Control, Model Fit
Stata	Menus & Syntax	Moderate	Strong	Broad Scope Medium Versatility	Good	Panel Data, Mixed Models, Survey Data Analysis
SAS	Syntax	Steep	Very Strong	Very Broad Scope High Versatility	Very Good	Large Datasets, Reporting, Password Encryption, Components for Specific Fields
R	Syntax	Steep	Very Strong	Very Broad Scope High Versatility	Excellent	Graphic Packages, Machine Learning, Predictive Modeling
MATLAB	Syntax	Steep	Very Strong	Limited Scope High Versatility	Excellent	Simulations, Multidimensional Data, Image and Signal

Source: <https://guides.nyu.edu/quant/statsoft>.

2. **Faculty Needs:** FLIP requires a faculty director. The directors' responsibilities include:
  - a. Locating data from the US Census, city offices, etc. to compile/analyze datasets on local issues.
  - b. Coordinating the data collection process and the internships.
  - c. Communicating with the university and all other non-university entities.

## BUDGET

In order to fulfill such broad opportunities, FLIP would require resources amounting to:

Physical Needs (Space and Materials)	Price
Access to 1-2 desks with lock and key access	In-Kind <sup>1</sup>
Network License STATA/SE for large datasets (one time cost) <a href="https://www.stata.com/order/new/edu/network-licenses/dl/">https://www.stata.com/order/new/edu/network-licenses/dl/</a>	\$1395 (for two users)
IPUMS Data and Data Center Introductory Rate for Individual License	\$3000

<sup>1</sup> We are making an assumption that FSU has access to a desk with at least one drawer with lock and key to keep equipment/paperwork associated with FLIP safe and confidential.



Rate for Consortium License	(first year) TBD (outreach ongoing)
Total <b>Physical Needs</b> Costs	\$1395-\$4395 (first year)
<b>FacFaculty Needs</b>	<b>Price</b>
One 3-credit APR per semester for the director (2 course releases per year)	In-Kind <sup>2</sup>
Two project stipends for up to \$1000 each through the Crocker Center's application process	\$2000
Total Services <b>Faculty Needs</b> Costs	\$2000
<b>Total</b>	<b>\$3395-\$6395</b>

## QUALIFICATIONS

We are uniquely qualified to found and run FLIP based on our background as both scholars and practitioners in the economics discipline. Please find our curriculum vitae attached to support these claims. A brief description of our research areas are listed below:

- **Adem Elveren, Ph.D. and Associate Professor of Economics**

**Areas of expertise:**

Quantitative (Linear and Non-Linear Regression Analysis)  
 Survey data analysis

**Projects recently completed:**

Several journal articles utilizing various linear and non-linear regression methods to examine the relationship between macroeconomic indicators such economic growth, income inequality, women's participation in labor market, and informal sector.

- **Christa Marr, Ph.D. and Assistant Professor of Economics**

**Areas of expertise:**

Quantitative (Linear and Non-Linear Regression Analysis, Latent Class Methodology, Spatial Regressions, Varying Coefficient Modeling, etc.)  
 Economic Evaluation

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<sup>2</sup> While we are sure this has a pecuniary cost, we do not have knowledge of those estimates.

Mixed Methods Research  
Data(base) Management  
Mapping

**Projects recently completed:**

Assessing Determinants of Wage and Income Mobility in U.S. Commuting Zones  
Application for Federal Credit Union Charter in Fitchburg: A Community Narrative Approach  
Characterizing Food Deserts in New England: A Spatial Analysis Using Local and Regional Data

- **Ozge Ozay, Ph.D. and Assistant Professor of Economics**

**Areas of expertise:**

Quantitative research  
Survey Data Analysis  
Economic evaluation  
Regional development

**Projects recently completed:**

Using Time Use Surveys conducted by Turkish Statistical Institute to estimate the time poverty rates of women and men in Turkey  
Studying the import/ export data and constructing a sophistication index of exports in South East Asia to understand the division of labor in the region  
Studying the gendered employment effects of technological change and trade liberalization in Turkey

## **CONCLUSION**

We look forward to creating a project that specifically deals with the issues and needs of the local community and further synergizes the efforts and goals of the university, city, and surrounding enterprises.

Thank you for your consideration,

Adem Elveren, *Ph.D. and Associate Professor of Economics*  
Christa Marr, *Ph.D. and Assistant Professor of Economics*  
Ozge Ozay, *Ph.D. and Assistant Professor of Economics*

# Appendix H: Library Resources.



To: Economics Faculty  
Ben Lieberman, Chair

CC: Sara Levine, Dean of Arts & Sciences

From: Jacalyn Kremer, Dean of Amelia V. Gallucci-Cirio Library  
Renee Fratantonio, Instruction & Research Services Librarian

Date: October 28, 2020

Re: **DRAFT** Library resources and services to support the program review of the Economics program

The New England Commission on Higher Education's Standard 7.22 calls for "access to library and information resources, services, facilities, and qualified staff sufficient to support its teaching and learning environments and its research and public service mission as appropriate." The purpose of this report is to outline the current Amelia V. Gallucci-Cirio Library's resources, services and facilities that support the undergraduate in-person and remote programs in Economics at Fitchburg State University. The material presented in this report will be discussed in a November 15, 2021 meeting with the Economics faculty. Specific items we hope to discuss include:

- Partnering to develop your Economics students' information literacy skills
- Controlled Digital Lending in place of physical reserves
- Open Educational Resources

## **ABOUT Economics at Fitchburg State University**

Undergraduate Students with (first) major as Economics enrolled in Fall 2020	10
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**An analysis of the library support needed for the Economics undergraduate major as well as undergraduates taking Economics courses as non-majors is classified into three categories: resources, services and facilities.**

## RESOURCES for Economics

Researchers in Economics generally focus on the use of academic journals, monographs (books), and films.

### Journals and Databases

The Amelia V. Gallucci-Cirio Library offers access to over 134,000 online journals in 183 databases. Specifically, for the Economics major and classes, we have the following core databases:

1. ABI Inform
2. Columbia International Affairs Online (CIAO)
3. EDGAR
4. IBIS World (new)
5. International Financial Statistics
6. JSTOR (Collections XI, XII and XIV were added this year)
7. Mergent Online (new)
8. Mergent First Research (new)
9. Nexis Uni (formerly Lexis Nexis)

Economics related journal titles in the following sub-categories may be viewed online by subject using the library's ["Journal Locator"](#) tool (items in parenthesis are # of journals):

- Agricultural Economics (218)
- Economic History (2611)
- Economic Theory (628)
- Labor & Workers' Economics (306)
- Transportation Economics (325)
- Commerce - General (195)
- International Commerce (134)
- Local Commerce (327)
- Demography (89)
- Banking (445)
- Credit, Debt & Loans (22)
- Finance - General (160)
- International Finance (47)
- Investment & Speculation (259)
- Money (26)
- Real Estate, Housing & Land Use (153)

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See [Library Table 1: Full-text Journal Databases by Disciplines related to Economics](#). Usage statistics show the overall usage numbers are good.

In fall 2018, the library conducted a journal review project. It looked at the approximately 400 print and online journals to which the library subscribes (outside of the journals available through the databases). The library determined the annual cost per usage by dividing the annual cost for the journal title by the number of times the journal was used in a year. Criteria was established and applied that allowed the library to cancel journals that were not being effectively used. No journals in Economics were cancelled during this review.

This journal review project allowed the library to increase journal offerings in needed areas as determined by interlibrary loan data, as well as to purchase large, multi-disciplinary eBook collections. More information about the new eBook collection is below. New databases purchases related to Economics include IBIS World, Mergent Online, Mergent First Research and new JSTOR collections.

The library collection development policy has been, and continues to be, to provide the core journals and databases appropriate for each discipline. Reviews of databases and journals are consulted, peer comparisons are conducted, and faculty input on the effectiveness of the resource is critical when considering new databases. Funds for new databases and/or journals are then requested, and if granted, they are purchased.

## **Books**

A review of our print collection in the Library of Congress call number ranges specifically associated with Economics shows over 17,300 print books in our collection. This is an adequate depth of collection. See [Library Table 2: Monograph Collection Description and Analysis](#).

Prior to FY19, almost all of our books were in the print collection as the Library offered few eBooks. It was our recommendation that eBook packages that includes Economics books be acquired to meet the needs of the undergraduate and graduate researchers and the faculty. This would not only increase the number of volumes available; it would also increase the number of books published in the past 5 years. Therefore, effective in FY19, the EBSCO Academic Complete eBook package and JSTOR EBA and DDA eBook collections were subscribed to. In addition to these packages, in FY21 we subscribed to the ProQuest eBook Central DDA Collection. Through these 4 eBook packages we have added approximately 51,992 titles in Economics and Business and related areas (12,904 of these titles were published in the last 5 years and 27,533 were published in the last 10 years). This increases the number of books associated with **Economics in total to 69,330** books (print and eBooks) while

providing on and off-campus access. This total number brings the collection well above the advanced instructional support level for graduate research and coursework (over 12,000 books).

### Films and other Media

In 2018, the Library purchased a subscription to the academic streaming film database Kanopy. Over 4,500 videos are available with subjects aligned with Economics (this may include some duplicates). See [Library Table 3: Films and Other Media Collection](#) for a breakdown by category.

## SERVICES for Economics

### Technology

Starting in Fall 2020, the Library offers a robust [Technology Lending Library](#) to ensure that all students, regardless of their financial means, are able to access the technology needed to do their course work, including digital cameras and camcorders. The equipment is available for checkout. Students also have access to a range of technology available in the library building. See below for the Library Facilities section of this report.

### Library Instruction

For all academic departments in the 2021 academic year, faculty librarians taught 111 research sessions and were embedded into 97 courses. Through these efforts, we reached over 4,000 students during the last academic year. With only 7 faculty librarians on staff, the number of classes with research sessions and/or an embedded librarian is impressive and requests continue to increase.

Since FY19, Economics faculty members have collaborated with librarians four times to teach the research process. Librarians have visited and been embedded in sections of the First Year Experience course and in a section of the Senior Seminar.

Library Instruction	FY2019	FY2020	FY2021
Total Embedded Courses	72	68	97
<i>Embedded Economics Courses</i>	1	1	1
Total In-person/Onsync Sessions	194	177	111
<i>In-person Economics Sessions</i>	1	0	0

See [Library Table 4: Research Instruction](#) for more information.

The library has recently completed the [Library's information literacy student learning outcomes](#). We

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welcome the opportunity to discuss how the Library can support your department's information literacy goals.

### **Library Research Guides**

The Library offers 35 subject research guides plus 188 course specific guides, covering all disciplines at Fitchburg State. For Economics, we have created one subject research guide and two course specific research guides. The usage statistics in the Economics research subject guide shows that the guide was accessed a total of 120 times in FY2021. This is about 92% less than the usage the average subject guide receives (1417 views/guide avg.). Starting in fall 2019, the Library's Economics Research Guide was made available at point-of-need within the Blackboard course management system in all courses, including Economics, in order to facilitate access.

The library is interested in working with Economics faculty to increase course-specific use of specialized databases via our embedded research guides.

### **Research Help**

The Library offers one-on-one reference services in a variety of modes, including dropping in at the reference desk, making a personal appointment, email, and chat instant messaging service. Over the past two years, research help questions have transitioned from primarily in-person assistance to primarily virtual assistance via our chat and video call (i.e. Google Meet) services. This medium has led to an increase in the number of research related questions received and answered by librarians. During the academic year, research help is available to students for 52 hours per week. In FY21, librarians answered over 1,500 research questions. Beginning on July 1, 2021, the library has subscribed to 24/7 chat, which allows students to receive reference help for 24 hours per day, 7 days per week. The aggregate trends in research help appear in [Library Table 5: Research Help](#). Statistics on the use of research help by Economics students only are not available.

### **Reserves**

The Library's Reserve system is well used by the Fitchburg State community. In FY20, 98 professors put a total of 595 items on reserves. Checkouts of reserve materials by all students were more than 1,100 during FY20.

Due to COVID-19, print reserves were unavailable in FY21. Because of this, we saw a substantial decrease in reserve items when we moved to digital reserves. In FY21 there was a total of 102 items available for digital reserves that were checked out a total of 279 times, across all disciplines. We hope to discuss with the Economics faculty further opportunities for Economics faculty to utilize the new Controlled Digital Lending program, a digital reserve system. In addition, the Library is currently exploring ways to increase access to materials by students, including the insertion of digital

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library resources into courses, controlled digital lending, and the adoption of Open Educational Resources, which would increase student access to no or low-cost textbooks and other course materials.

### **Interlibrary Loan Services Request**

Data shows students and professors from Economics, History, and Political Science have the 5<sup>th</sup> highest use of Interlibrary Loan Services based on discipline. See [Library Table 6: Interlibrary Services](#) for details.

### **FACILITIES for Economics**

With the Library's recent renovation, students have access to welcoming spaces designed to support individual and group work, and is more than adequate to meet the needs of students, faculty and administration. Building information is in [Library Table 7: Facilities](#)

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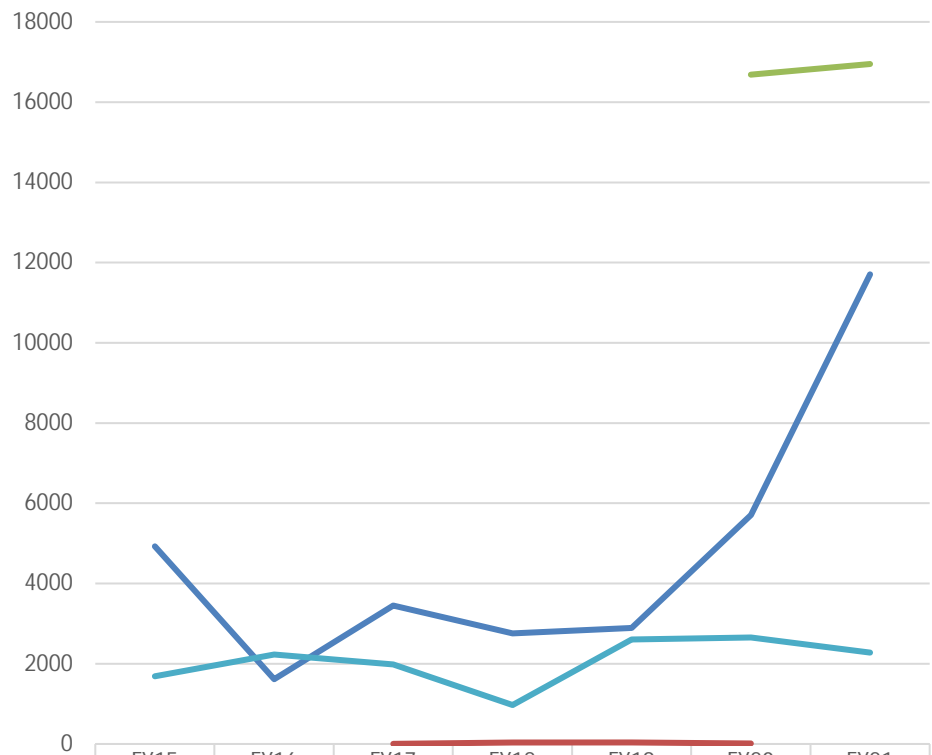
## Library Table 1:

### Full-text Journal Databases by Disciplines related to Economics

The full complement of databases treating Economics can be found on the library website (<https://library.fitchburgstate.edu/research/databases>). Whereas there are 9 directly applicable full-text databases, another 14 full-text databases supplement this core collection. In addition, individual titles stretching across disciplines number in the thousands. Journals are either embedded within databases or are available through individual subscriptions, accessible through Serials Solutions.

<b>Core Full-text Journal Databases</b>
<ol style="list-style-type: none"><li>1. ABI Inform</li><li>2. Columbia International Affairs Online (CIAO)</li><li>3. EDGAR</li><li>4. IBIS World (new)</li><li>5. International Financial Statistics</li><li>6. JSTOR (Collections XI, XII and XIV were added this year)</li><li>7. Mergent Online (new)</li><li>8. Mergent First Research (new)</li><li>9. Nexis Uni (formerly Lexis Nexis)</li></ol>
<b>Supplemental Full-text Journal Databases</b>
<ol style="list-style-type: none"><li>1. Academic OneFile (Gale)</li><li>2. Academic OneFile Select (Gale)</li><li>3. Academic Search Ultimate</li><li>4. Ageline</li><li>5. Business Market Research Collection</li><li>6. CQ Researcher</li><li>7. Credo Reference</li><li>8. Ebook Central (ProQuest)</li><li>9. eBook Collection (EBSCOhost)</li><li>10. GPO Access/FedSys</li><li>11. Hoover's Company Profiles</li><li>12. ProQuest Social Science Database</li><li>13. SocIndex With Full Text</li><li>14. US Newsstream</li></ol>

### Economics Core Database Usage



	FY15	FY16	FY17	FY18	FY19	FY20	FY21
ABI/Inform	4929	1615	3451	2753	2894	5705	11707
Columbia International Affairs Online (CIAO)	39		4	36	38	15	
JSTOR						16685	16950
Mergent Online							1249
Nexis Uni	1686	2234	1983	971	2604	2655	2275

**Notes-**

Database usage data disaggregated by discipline does not exist therefore it is not possible to determine how many articles were accessed only by Economics faculty and students. In total for the Fitchburg State community, over 134,000 articles were accessed through the Library’s 183 databases in FY21.

**Columbia International Affairs Online (CIAO)** – No stats available for FY16 & FY21)

**EDGAR** – Stats are unavailable as this is a free government database

**IBIS World** – Started subscription 1/1/2021. No session stats available.

**International Financial Statistics** – Stats not available as this is a free database.

**JSTOR** - Collections XI, XII and XIV were added 1/1/2021. (No stats prior to FY20.)

**Mergent Online** – Started 1/1/2021.

**Mergent First Research** – Stats are not available.

## Library Table 2:

### Monograph Collection Description and Analysis

Fitchburg State University is, by Carnegie classification, a Master's granting institution. The Economics program offers a Bachelor's degree, and therefore the University must currently uphold at least the standard of 3b, "Intermediate Study" for its collections. (see below).

#### *General Guidelines for Monograph Collection Depth*

1. Minimal – A level that consists mostly of basic works.
2. Basic Information.
  - a. A level that introduces and defines the subject and that indicates the varieties of information available elsewhere.
  - b. Basic Instructional Support – A level that introduces coursework and research for undergraduate courses, including a wide range of basic monographs and reference tools pertaining to the subject and targeted to undergraduate students.
3. Study or Instructional Support.
  - a. Basic Study – A level that supports undergraduate courses.
  - b. Intermediate Study – A level that supports upper division undergraduate courses.
  - c. Advanced Instructional Support – A level that supports coursework and research for graduate and undergraduate courses, including a wide range of basic monographs and reference tools pertaining to the subject.
4. Research – A level that supports independent research and preparation of doctoral dissertations
5. Comprehensive Inclusion – Comprised of all significant works for a defined topic.

#### *Specific Definitions for Monograph Holdings\**

- 1b (or less) Minimal level = less than 2,500.
- 2a Basic introductory level = 2,500 - 5,000 titles.
- 2b Basic advanced level (Community College) = 5,000 - 8,000 titles.
- 3a Instructional support (lower level undergraduate) = 8,000-12,000 titles representing a range of monographs.
- 3b Intermediate support level (advanced undergraduate) = more than 12,000 titles representing a wider range than 3a.
- 3c Advanced support level (Master's degree level) = more than 12,000 titles representing a wider range than 3b.

\*Quantitative WLN Criteria for Determining CL (Current Collection Level) Rating

### Economics Book Collection

LC	Subject Area	2021	2020	2019	2018	2017	2016	2015
HA	Statistics	133	131	130	127	125	123	122
HB	Economic theory	1651	1,638	1631	1612	1578	1547	1527
HC	Economic History & Conditions-Nat'l	3702	3,680	3674	3652	3627	3597	3580
HD1-2320	Economics-Production	3608	3,563	3551	3526	3502	3488	3467
HD2321-4800	Economics-Industry	660	651	649	647	646	644	641
HD4801-8999	Labor-General	2342	2,317	2307	2293	2272	2255	2229
HD9000-9999	Special Industries & Trades	1376	1,361	1354	1346	1336	1318	1309
HE	Transportation & Communication	504	498	498	491	487	484	480
HF1-5000	Commerce & Int'l Business	842	839	834	817	811	806	802
HG	Finance (General)	1419	1,398	1389	1375	1336	1288	1266
HJ	Public Finance	272	271	270	266	259	253	253
JX	International Relations	829	829	829	829	829	825	820
<b>Total</b>		<b>17,338</b>	<b>17,176</b>	<b>17,116</b>	<b>16,981</b>	<b>16,808</b>	<b>16,628</b>	<b>16,496</b>

The total number of print books in the call number ranges associated with Economics is 17,552. This meets the number expected for a collection to support advanced undergraduate coursework and research (12,000+ books). Effective in 2019, the EBSCO Academic Complete eBook package, JSTOR's DDA and EBA packages were subscribed to. In addition to these packages, in 2020 we subscribed to the ProQuest eBook Central DDA collection. Through these 4 eBook packages we have added approximately 51,992 titles in Economics and related areas (12,904 of these titles were published in the last 5 years and 27,533 were published in the last 10 years). This increases the number of books associated with Economics in total to **69,330** books while providing on and off-campus access. This total number brings the collection well above the advanced support level for graduate level research and course work (over 12,000 books).

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**Library Table 3:**

**Film and Other Media Collection**

<b># of Streaming Films by Subject in Kanopy Database</b>	
<b>Business Case Studies</b>	61
<b>Economics &amp; Globalization</b>	517
<b>Global Studies &amp; Language</b>	115
<b>Human Rights</b>	590
<b>Law &amp; Criminal Justice</b>	717
<b>Political Science</b>	905
<b>Politics &amp; Current Affairs</b>	1622
<b>Total (includes duplicates)</b>	<b>4,527</b>

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**Library Table 4:**

**Research Instruction**

	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>
<b>Total Instruction Sessions Conducted:</b>	266	245	208
<b>Economics Sessions Conducted:</b>	2	1	1
<b>Percentage</b>	0.75%	0.41%	0.48%
<b>Total Embedded:</b>	72	68	97
<b>No. of Economics Embedded:</b>	1	1	1
<b>Total In-person/Onsync classes:</b>	194	177	111
<b>No. of Economics In-person/Onsync classes:</b>	1	0	0

Prior to FY20, undergraduate library instruction was mainly provided through in-person classes. Librarians taught lessons on research in every delivery model offered as the university transitioned from all remote to hybrid learning. As the Economics program is revised, consideration should be given to how library instruction will be effectively delivered, particularly if an increase in the number of online courses is anticipated.

*Note: The library offers both discipline-specific and general information literacy instruction sessions.*

## Library Table 5:

### Research Help

#### Library Research Guides

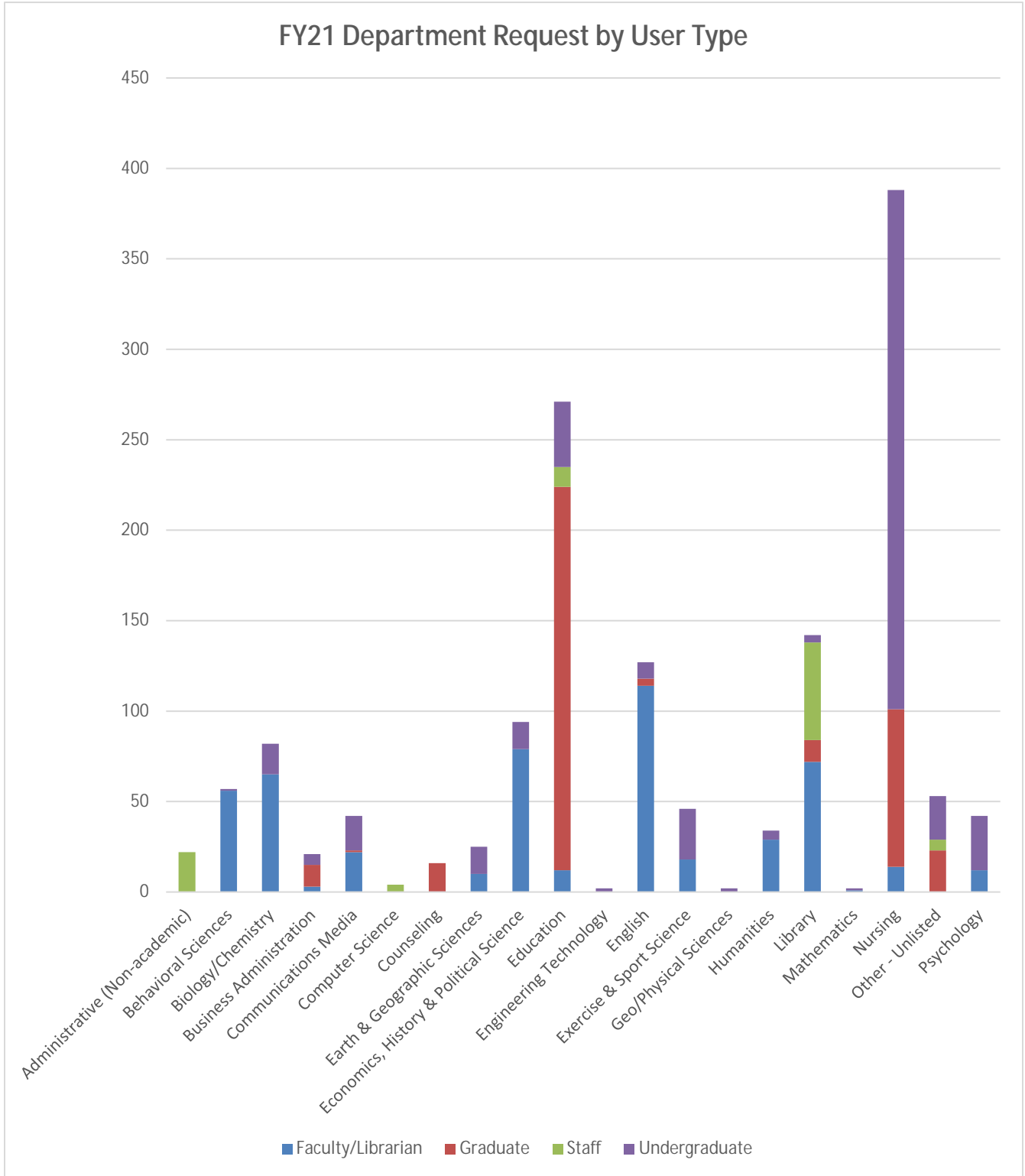
For Economics, we have created 1 subject research guides and two course specific research guides. The usage statistics in the Economics research guides show that the subject guide was accessed a total of 120 times in FY21, about 92% less than the usage the average subject guide receives (1417 views/guide avg.). Effective in summer 2019, the primary subject guide for Economics was embedded into all Blackboard courses; use of the guide (as indicated by page views) has since increased considerably.

#### Reference Statistics for University

	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
<b><u>Total Records</u></b>	<b>2642</b>	<b>2497</b>	<b>1875</b>	<b>2854</b>	<b>2803</b>	<b>2409</b>	<b>2534</b>
<b><u>Mode of Access</u></b>	<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>	<b>FY2018</b>	<b>FY2019</b>	<b>FY2020</b>	<b>FY2021</b>
<b>In Person</b>	1959	1872	1386	2297	2253	1547	838
<b>Chat</b>	548	510	308	268	229	416	1002
<b>Phone/Email</b>	133	112	162	287	320	420	455
<b>Video Call</b>	2	3	19	11	16	42	252
<b>Library FAQ Tickets</b>							26
<b><u>Questions by Patron</u></b>	<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>	<b>FY2018</b>	<b>FY2019</b>	<b>FY2020</b>	<b>FY2021</b>
<b>Student</b>	2438	2320	1674	2632	2538	2091	2286
<b>Faculty</b>	59	66	57	65	116	165	147
<b>Extended Campus/DL</b>	27	21	45	112	180	169	129
<b>Public/Alumni/Other</b>	111	79	89	131	123	134	69
<b>Staff</b>	7	11	10	8	14	29	21
<b>Unknown</b>	0	0	0	0	0	0	0
<b><u>Duration</u></b>	<b>FY2015</b>	<b>FY2016</b>	<b>FY2017</b>	<b>FY2018</b>	<b>FY2019</b>	<b>FY2020</b>	<b>FY2021</b>
<b>0-2 minutes</b>	1104	1006	782	1483	1418	844	666
<b>2-5 minutes</b>	735	683	532	689	634	644	710
<b>5-15 minutes</b>	509	424	327	331	350	433	551
<b>15 minutes or longer</b>	294	384	234	351	401	488	607

**Library Table 6:**

**Interlibrary Loan Services**





**Library Table 7:**

**Facilities**

<b>Space</b>	<b>Specifications</b>
<b>Total Number of Seats in Library</b>	596
<b>Information Commons</b>	Research Help Desk Circulation Desk 61 public computer stations (now distributed in 4 floors due to COVID-19) 3 multi-function printers KIC Scanner
<b>Study Rooms</b>	9 large (up to 8 people) containing conference table, white board, media viewing equipment, and Apple TV. 8 small (2 people) containing a conference table, computer, and whiteboard.
<b>Media Production Room</b>	Seating up to 7 people containing a computer, Apple TV, ceiling mounted projector, DVD player, and document projector.
<b>Quiet Space</b>	2 floors (3 <sup>rd</sup> and 4 <sup>th</sup> )
<b>Archives</b>	47,821 items used in FY20 38 Special Collections totaling 322 boxes. 13 record groups totaling 480 boxes 20 digital collections containing 14,600 items 2,500 rare books Art collection

<b>Study Room Statistics</b>	<b>FY19</b>	<b>FY20</b>	<b>FY21</b>
<b>Unique Users</b>	1743	1552	472
<b>Total Bookings</b>	9454	6330	1849
<b>Hours Booked</b>	16869	11272	3456

*\*This decrease from FY20 to FY21 can be attributed to the limitations imposed by COVID on study room capacity and the library's hours.*